CITY OF MILWAUKIE

AGENDA

April 10, 2018

REVISED

PLANNING COMMISSION

City Hall Council Chambers
10722 SS Main Street
www.milwaukieoregon.gov

1.0 **Call to Order - Procedural Matters** — 6:30 PM

2.0 **Planning Commission Minutes** – Motion Needed

2.1 January 9, 2018 — *(sent April 5, 2018)*

3.0 **Information Items**

4.0 **Audience Participation** – This is an opportunity for the public to comment on any item not on the agenda

5.0 **Public Hearings** – Public hearings will follow the procedure listed on reverse

5.1 Summary: Ledding Library Reconstruction
Applicant/Owner: Hacker Architects/City of Milwaukie
Address: 10660 SE 21st Ave
File(s): CSU-2018-002, NR-2018-001, DR-2018-001, P-2018-002
Staff: Vera Kolias

6.0 **Worksession Items**

6.1 Summary: Housekeeping 2018 Part 1 Code Amendments
Staff: Vera Kolias

7.0 **Planning Department Other Business/Updates**

8.0 **Planning Commission Committee Updates and Discussion Items –** This is an opportunity for comment or discussion for items not on the agenda.

9.0 **Forecast for Future Meetings:**

April 24, 2018	1. Public Hearing: VR-2018-002/ADU-2018-001 23rd Ave ADU 2. Public Hearing: CSU-2018-001 Milwaukie High School Lake Rd Athletic Fields
May 8, 2018	1. Public Hearing: CU-2018-001 Covell St Vacation Rental 2. Public Hearing: ZA-2018-001 Housekeeping 2018 Part 1 Code Amendments

Milwaukie Planning Commission Statement

The Planning Commission serves as an advisory body to, and a resource for, the City Council in land use matters. In this capacity, the mission of the Planning Commission is to articulate the Community's values and commitment to socially and environmentally responsible uses of its resources as reflected in the Comprehensive Plan

1. **PROCEDURAL MATTERS.** If you wish to speak at this meeting, please fill out a yellow card and give to planning staff. Please turn off all personal communication devices during meeting. For background information on agenda items, call the Planning Department at 503-786-7600 or email planning@milwaukieoregon.gov. Thank You.
2. **PLANNING COMMISSION MINUTES.** Approved PC Minutes can be found on the City website at www.milwaukieoregon.gov.
3. **CITY COUNCIL MINUTES** City Council Minutes can be found on the City website at www.milwaukieoregon.gov/meetings.
4. **FORECAST FOR FUTURE MEETING.** These items are tentatively scheduled, but may be rescheduled prior to the meeting date. Please contact staff with any questions you may have.
5. **TIME LIMIT POLICY.** The Commission intends to end each meeting by 10:00pm. The Planning Commission will pause discussion of agenda items at 9:45pm to discuss whether to continue the agenda item to a future date or finish the agenda item.

Public Hearing Procedure

Those who wish to testify should come to the front podium, state his or her name and address for the record, and remain at the podium until the Chairperson has asked if there are any questions from the Commissioners.

1. **STAFF REPORT.** Each hearing starts with a brief review of the staff report by staff. The report lists the criteria for the land use action being considered, as well as a recommended decision with reasons for that recommendation.
2. **CORRESPONDENCE.** Staff will report any verbal or written correspondence that has been received since the Commission was presented with its meeting packet.
3. **APPLICANT'S PRESENTATION.**
4. **PUBLIC TESTIMONY IN SUPPORT.** Testimony from those in favor of the application.
5. **NEUTRAL PUBLIC TESTIMONY.** Comments or questions from interested persons who are neither in favor of nor opposed to the application.
6. **PUBLIC TESTIMONY IN OPPOSITION.** Testimony from those in opposition to the application.
7. **QUESTIONS FROM COMMISSIONERS.** The commission will have the opportunity to ask for clarification from staff, the applicant, or those who have already testified.
8. **REBUTTAL TESTIMONY FROM APPLICANT.** After all public testimony, the commission will take rebuttal testimony from the applicant.
9. **CLOSING OF PUBLIC HEARING.** The Chairperson will close the public portion of the hearing. The Commission will then enter into deliberation. From this point in the hearing the Commission will not receive any additional testimony from the audience, but may ask questions of anyone who has testified.
10. **COMMISSION DISCUSSION AND ACTION.** It is the Commission's intention to make a decision this evening on each issue on the agenda. Planning Commission decisions may be appealed to the City Council. If you wish to appeal a decision, please contact the Planning Department for information on the procedures and fees involved.
11. **MEETING CONTINUANCE.** Prior to the close of the first public hearing, *any person* may request an opportunity to present additional information at another time. If there is such a request, the Planning Commission will either continue the public hearing to a date certain, or leave the record open for at least seven days for additional written evidence, argument, or testimony. The Planning Commission may ask the applicant to consider granting an extension of the 120-day time period for making a decision if a delay in making a decision could impact the ability of the City to take final action on the application, including resolution of all local appeals.

The City of Milwaukie will make reasonable accommodation for people with disabilities. Please notify us no less than five (5) business days prior to the meeting.

Milwaukie Planning Commission:

Kim Travis, Chair
John Henry Burns, Vice Chair
Adam Argo
Joseph Edge
Sherry Grau
Greg Hemer
Scott Jones

Planning Department Staff:

Denny Egner, Planning Director
David Levitan, Senior Planner
Brett Kelver, Associate Planner
Vera Kolias, Associate Planner
Mary Heberling, Assistant Planner
Alicia Martin, Administrative Specialist II

CITY OF MILWAUKIE
PLANNING COMMISSION
MINUTES
Milwaukie City Hall
10722 SE Main Street
TUESDAY, JANUARY 9, 2018
6:30 PM

COMMISSIONERS PRESENT
Greg Hemer, Chair
John Burns
Scott Jones
Kim Travis

STAFF PRESENT
Denny Egner, Planning Director
Vera Kolias, Associate Planner
Amy Koski, Resource & Economic Development Specialist
Dan Olsen, City Attorney

COMMISSIONERS ABSENT
Adam Argo, Vice Chair
Sherry Grau

1.0 Call to Order – Procedural Matters*

Chair Hemer called the meeting to order at 6:30 p.m. and read the conduct of meeting format into the record.

***Note**: The information presented constitutes summarized minutes only. The meeting video is available by clicking the Video link at* www.milwaukieoregon.gov/meetings.

2.0 Planning Commission Minutes
2.1 October 24, 2017

Commissioner Travis moved and Commissioner Jones seconded to approve the October 24, 2017 Planning Commission minutes as presented. The motion passed unanimously.

3.0 Information Items

Denny Egner, Planning Director, updated the Commission on the vacant Commissioner position and hoped that the selected member would be appointed at the January 16th City Council meeting.

Mr. Egner also noted that the Volunteer Appreciation Dinner was scheduled for March 29th.

The Planned Development land use application for 13333 SE Rusk Rd was scheduled to be heard at Council again on January 16th and the applicant would likely request a continuance.

The second Comprehensive Plan Advisory Committee (CPAC) meeting was scheduled for January 31st.

4.0 Audience Participation –This is an opportunity for the public to comment on any item not on the agenda. There was none.

5.0 Public Hearings

5.1 Summary: North Milwaukie Industrial Area (NMIA) Code and Comprehensive Plan Amendments
Applicant: City of Milwaukie
File: ZA-2017-003, CPA-2017-002
Staff: Vera Kolias / Amy Koski

Chair Hemer called the hearing to order and read the conduct of legislative hearing format into the record.

Vera Kolias, Associate Planner, presented the staff report via PowerPoint. She reviewed the project's history, goals, and current status as this was the third of three public hearings at the Commission and would focus on the final amendment package for recommendation to City Council.

Ms. Kolias noted the revisions to the proposed amendments based on the previous two hearings regarding the development standards. Revisions included reduced setbacks, reduced front yard setback parking, and increased frontage occupancy requirements, all primarily on the proposed key streets to maximize for buildings to occupy frontages. Additional revisions were made to clarify the applicability of design and development standards that would apply to new development as well as a threshold for redevelopment and additions.

Ms. Kolias reviewed the current and proposed zoning, which would be consolidated into one North Milwaukie Employment (NME) Zone and Tacoma Station Area Mixed Use (MUTSA) Zone. The proposal included the area under consideration for a mixed-use overlay in the southwest corner of the NME which would be the Milport Mixed Use (MMU) Overlay. The MMU Overlay would allow for the same standards as the MUTSA but for standalone residential would not be allowed. The overlay would have a sunset period, the existing nonconforming use could be replaced, and development would be subject to Type II review.

Ms. Kolias noted that staff recommendation was for the Commission to recommend approval to City Council, and reviewed the decision-making options and next steps with a worksession and hearings at City Council.

Staff responded to questions from the Commission:

- Type II review for development in the proposed overlay was recommended because it was an overlay; it was the same for the Flex Space Overlay in Central Milwaukie.
- Regarding the proposed retail uses allowed, as proposed retail marijuana was prohibited in the NME and was a limited use in the MUTSA. Currently, medical and retail marijuana was required to be part of another development. The Commission agreed that retail marijuana should be a limited or conditional use to put it in line with eating and drinking establishments. Staff described the process for the limited use.

Chair Hemer called for public testimony.

Jerry Baysinger, Baysinger Partners 1006 SE Grand Ave Ste. 300 Portland, believed that the next great flood of the Willamette River would destroy the Mill End Store beyond repair, and redevelopment would be too costly without a design that included basement parking. Parking structures were costly therefore residential was needed on the upper levels to make redevelopment economically feasible.

Eric Hovee, Economic and Development Consultant, 2408 Main St Vancouver, WA, noted the ECONorthwest economic assessment for redevelopment of the Mill End Store stated that with industrial uses above parking and retail, the project would be infeasible. He recommended the mixed-use overlay to preserve redevelopment capacity and a feasible use on the site. He added that it would not be in conflict but would complement downtown and the NMIA area.

Peter Stark 2939 NW Cornell Rd Portland, stated he had reviewed the City Council worksession meeting regarding the proposed amendments and he had some points of concern. He clarified that there were neutral parties in support of a mixed-use overlay outside of direct stakeholders. He stated that the site was not directly adjacent to industrial uses on three sides as it was buffered by McLoughlin Blvd and Hwy 224 on two of those sides. He reiterated that if the building was removed and residential was not allowed on the site, there could be no economically-viable development, investment, or employment on the site. He asked the Commission for their support.

Nancy Bishop Dietrich, 9701 SE McLoughlin Blvd, thanked the Commission for listening to the testimony in support of the Mill End Store, which would be 100 years old in May. She stated that they wanted to remain at the site and continue to be good stewards to the community.

Chair Hemer closed the public testimony.

Planning Commission Deliberation

The Commission agreed that the proposed key streets and front yard setbacks were appropriately allocated and identified.

Commissioner Jones stated that although the argument for the Milport Mixed Use Overlay was compelling, the proposal at hand was considering a larger neighborhood and district. It was the Commission's responsibility to make a decision based on the greater integration and framework of the NMIA Plan. He believed that the overlay was in line with the goals of the NMIA Plan and connects the two sides of the district while facilitating and improving employment opportunities. He believed the Commission and Council should approve the overlay.

Commissioner Travis said she had walked around the area quite a bit since the Commission began its review and she agreed that residential use would add a level of vibrancy to the district that would help enhance it overall and advance utilization of employment land. Having a catalyst development may help bring the Plan to life.

Mr. Egner clarified that the overlay would require the use to be constructed during the proposed sunset time period. Once constructed, the use would remain but the residential development eligibility granted under the overlay would end.

Commissioner Burns stated that based on the ECONorthwest economic feasibility report for the area, the mixed-use overlay would create a potentially viable development option. He believed the overlay fit with the Plan and in the district.

Chair Hemer said that, although he agreed that the testimony and arguments in favor of the mixed-use overlay were compelling, the intent of the NMIA Plan was for the area to be an industrial district and the focus should be on how to keep it as an industrial district. Although the Plan was considered an "eco plan," there were no ecological solutions proposed. If the purpose

was industrial, then economic disincentives needed to be in place for residential, such as required affordable housing and required self-provided power for 3-story buildings and above. Consideration needed to be given to the Vision statement and the City Council's Climate Action Plan and Affordable Housing goals. The benefit of industrial and work lands in the NMIA was much greater than residential. If the City's goal was to be net-zero by 2040 but was adopting the NMIA Plan now that did not hold that in consideration then there was no meaning to the 2040 objective. He would not be in favor of the mixed-use overlay.

Commissioner Jones stated he agreed that those goals were noble but he questioned if this Plan was the right mechanism for those goals. He agreed that the zoning code could have more requirements regarding sustainability and affordable housing. However, the requirements Chair Hemer proposed were more stringent than in any other city on the west coast as far as a development incentive for a city that has very little economic incentive to offer back.

Mr. Egner noted that an affordable housing study was currently underway and would look at a wide range of strategies across the community. He suggested that the Commission wait to see what came from that study as well as to look at green building strategies used in downtown and apply those to the NMIA. He added that the Plan outlined a number of projects that addressed eco-district ideas.

Chair Hemer believed the City had a responsibility to lead in sustainability and affordable housing.

Commissioner Jones moved and Commissioner Burns seconded to recommend approval to City Council of the proposed code amendments of ZA-2017-003 and CPA-2017-002 with the findings and conditions as amended to include retail marijuana as a limited and conditional use consistent with other retail uses and the proposed Milport Mixed Use Overlay. The motion passed with Chair Hemer opposing.

6.0 Worksession Items — None

7.0 Planning Department Other Business/Updates

8.0 Planning Commission Discussion Items

Commissioner Travis noted that the next Comprehensive Plan Advisory Committee meeting was scheduled for January 31, 2018.

Chair Hemer asked about a statement by Governor Kate Brown that said that all residential housing would need to have solar panels in six years, and how that would apply to the residential design standards with regard to roof faces and front door orientation to the street.

Mr. Egner responded that it was a complicated issue and would likely be discussed through the Comprehensive Plan Update project.

9.0 Forecast for Future Meetings:

January 23, 2018	1. Public Hearing: HR-2017-002 Milwaukie High School Deletion
February 13, 2018	1. Public Hearing: VR-2017-013 5047 SE Jackson St driveway variance

2. Public Hearing: CSU-2017-009 Ledding Library temporary location
3. Worksession: Comprehensive Plan Update project update VR-2017-0

Meeting adjourned at approximately 7:51 p.m.

Respectfully submitted,

Alicia Martin, Administrative Specialist II

_____

Greg Hemer, Chair

CITY OF **MILWAUKIE**

To: Planning Commission

Through: Dennis Egner, Planning Director

From: Vera Kolias, Associate Planner

Date: April 3, 2018, for April 10, 2018, Public Hearing

Subject: **Master File:** CSU-2018-002 (DR-2018-001; NR-2018-001; P-2018-002)

Applicant: Tyler Nishitani, Hacker Architects

Owner(s): City of Milwaukie; Leila Aman, Development Project Manager

Address: 10660 SE 21st Ave

Legal Description (Map & Tax Lot): 11E36BB01800

NDA: Historic Milwaukie

ACTION REQUESTED

Approve applications CSU-2018-002, DR-2018-001, NR-2018-001, and P-2018-002 and adopt the recommended Findings and Conditions of Approval found in Attachments 1 and 2. This action would allow for the construction of a new library on the existing Ledding Library site at 10660 SE 21st Ave.

BACKGROUND INFORMATION

A. Site and Vicinity

The site is located at 10660 SE 21st Ave. The site contains 1.77 ac and is the location of both the Ledding Library and Scott Park. The site also contains mapped water quality resource areas and habitat conservation areas. The site is in the downtown adjacent to a natural area and a multi-family residential development. The site is in close proximity to the Waldorf School, City Hall, and a residential neighborhood (See Figure 1).

Figure 1. Site vicinity

B. Zoning Designation

The site is zoned Downtown Mixed Use (DMU).

C. Comprehensive Plan Designation

Public – P

D. Land Use History

- **March 27, 2018:** CPA-2018-001 – Planning Commission voted to recommend that the City Council approve an amendment to the Comprehensive Plan removing the Scott Park Master Plan, an ancillary document.
- **May 5, 2016:** CSU-2016-003 – minor modification to a community service use to allow the installation of a curbside bicycle rack in the existing sidewalk adjacent to the driveway in front of library. The location is near the stairs and ramp leading from the parking lot to the building's main entrance.

- **March 25, 1998:** CSO-98-01 – application for a community service overlay review to install 2 16-sq ft wall signs on the east and west exterior walls of the Ledding Library.
- **March 12, 1997:** CSO-97-01 – application for a community service overlay review to make improvements to resolve ADA deficiencies including a redesign to the front entry and stairway.
- **August 14, 1986:** application for a community service overlay review to allow the construction of a 3,275-sq ft addition to the east side of the library.

E. Proposal

In 2016, the City of Milwaukie passed a bond measure to fund improvements and expand the Ledding Library, and as a result, the City proposes to replace the existing library with a new, larger library building.

As proposed, the project involves the complete structural replacement of the Ledding Library resulting in a new 20,000-sq ft one-story library on the existing library site. Site improvements include a reconfigured parking lot, stormwater planters, and other landscape elements. The applicant is seeking a parking modification to allow 28 parking spaces rather than the maximum 24 parking spaces on the site. The application materials show parking spaces that are 6 inches narrower than the minimum required per MMC 19.606.1. The applicant must either redesign the parking lot to comply with the standard or request a variance.

The property includes designated Water Quality Resource (WQR) and Habitat Conservation Area (HCA), including delineated wetlands, and the proposed development would result in some WQR and HCA disturbance, triggering a need for Natural Resource Review (see Figures 3-5).

In addition to a Community Service Use review, the proposal requires a Natural Resources review, a Downtown Design Review, and a parking modification.

This project replaces the existing two-level library with a larger, single-story building. Construction of the proposed library and associated infrastructure will result in impacts to WQR and HCA resources. However, much of the proposed construction within mapped WQR and HCA will occur within the footprint of the existing building and parking lot. The existing building is partially located within WQR and mapped HCA. Construction of the new building, path, and stormwater planter will result in a permanent disturbance of 1,705 sq ft of WQR and 1,926 sq ft of HCA. A natural resources report, including a detailed alternatives analysis and mitigation plan, has been submitted as part of the application. Although a 2-story building would reduce the overall footprint of the new building and minimize disturbance to the WQR and HCA, the proposal is for a 1-story building due to construction cost, staffing requirements, greater accessibility, and more flexibility.

Per MMC 19.605, a minimum of 1 parking space per 1,000 sq ft is required for library uses. The maximum is 1.2 spaces per 1,000 sq ft. For the proposed project, this results in a minimum of 20 and a maximum of 24 parking spaces. Park uses are not addressed in the table of uses to establish required off-street parking standards. The proposal includes 28 parking spaces, including 2 accessible spaces and 2 carpool spaces. In order to exceed the maximum number of parking spaces, the applicant has requested a parking modification to allow the additional 4 parking spaces. This is to account for use of Scott Park. The existing library parking lot serves both the library and Scott Park and has 38 parking spaces, so the request is a reduction in overall parking.

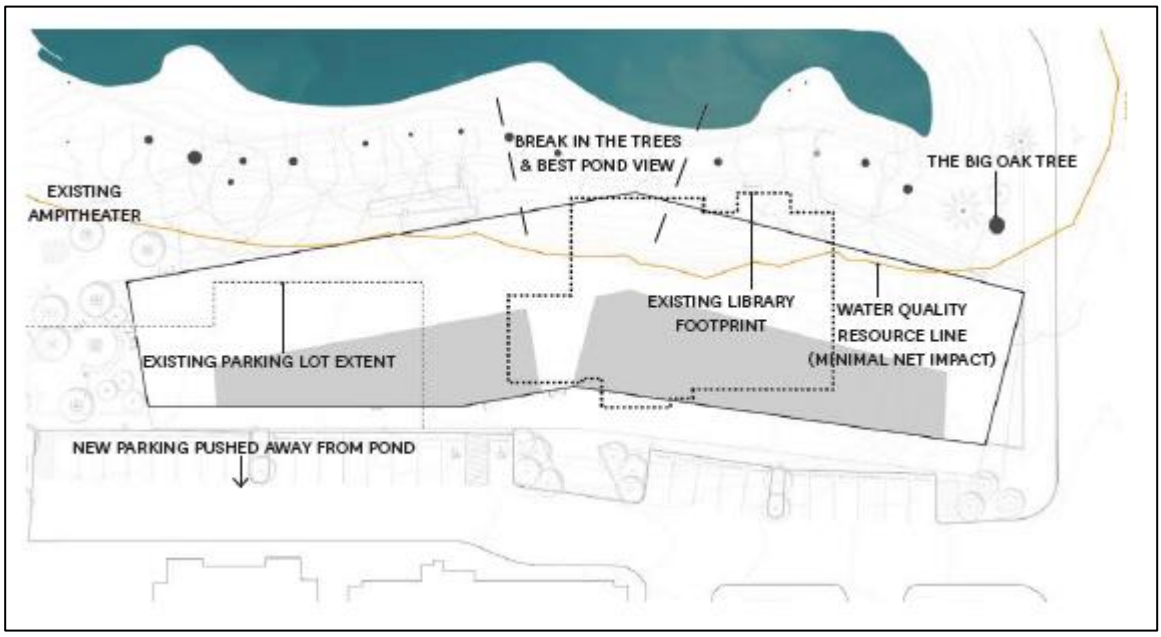


Figure 2. Existing and future conditions.

Figure 3. Proposed site plan.

Figure 4. View from 21st Ave and Harrison St

Figure 5. View of North Garden

F. Land Use Review

The project requires approval of the following applications:

1. Major Modification to a Community Service Use (CSU-2018-002) – Type III

   Demolition and construction of a new library is a major modification to the existing Ledding Library Community Service Use.

2. Downtown Design Review (DR-2018-001) – Type III

   The proposal does not meet 5 of the Downtown Design Standards established in MMC 19.508, so Downtown Design Review, per MMC 19.907, is required. This process requires a review and recommendation by the Design and Landmarks Committee (DLC). The DLC met on March 5, 2018 and provided recommendations to the Planning Commission. Please refer to Key Issue #1 for details.

3. Natural Resources Review (NR-2018-001) – Type III

   Proposed work within the Water Quality Resource Area and Habitat Conservation Area requires a Natural Resources Review.

4. Parking Modification (P-2018-002) – Type II

   The proposal includes 4 more parking spaces over the maximum for a library use. Additional parking spaces requires a parking modification application.

5. Compliance with MMC 19.606.1 – Parking Space and Aisle Dimensions.

   The application materials show parking spaces that are 6 inches narrower than the minimum required per MMC 19.606.1. The applicant must either redesign the parking lot to comply with the standard or request a variance.

KEY ISSUES

Summary

Staff has identified the following key issues for the Planning Commission's deliberation. Aspects of the proposal not listed below are addressed in the Findings (see Attachment 1) and generally require less analysis and discretion by the Commission.

A. Does the proposed design sufficiently address the Downtown Design Guidelines?

B. Is the request for a modification to the off-street parking requirements reasonable?

C. Does the proposal adequately address impacts to natural resources?

Analysis

A. Does the proposed design sufficiently address the Downtown Design Guidelines?

Per MMC 19.907.3.C, an applicant may elect to have a project reviewed through a Type III discretionary review process. In such cases, the applicant can address downtown design review requirements through a combination of satisfying certain design standards and, in instances where they choose not to utilize design standards, they must demonstrate that the proposal satisfies the purpose statement of the applicable standard or standards and the applicable design guidelines instead. In such a case, the public hearing and decision must focus on whether or not the project satisfies the requirements of the applicable design guidelines only and the purpose statement of the applicable design standard.

The proposed design meets the standards of MMC 19.508 except the following:

- Building Façade Details Standard: MMC 19.508.4.A.2.b (2) states that significant breaks shall be created along building facades at least every 150 linear ft by either setting the façade back at least 20 ft or breaking the building into separate structures. The proposed design utilizes glass at the main entry at full building height to break the west elevation into 2 distinct facades.
- Weather Protection Standard: MMC 19.508.4.C.2.a (3) states that weather protection elements shall extend no more than 6 ft over the pedestrian area. Due to its civic use and scale, the proposed design includes a pedestrian area that is significantly wider than a downtown sidewalk, which includes a canopy that is 11-13 ft wide, but does not project into the public right-of-way.

- Windows and Doors Standard: MMC 19.508.4.E.3.a states that 40% of the ground-floor street wall area must consist of openings (windows and doors). Per the application materials, the 3 facets that make up the western façade facing 21st Ave has a combined 19.4% glazing to solid ratio – less than the required 40% of glazing/openings. This decision was made in order to limit thermal gain on the west side and to limit exposure to the less public area (residential development) adjacent to the site. The southern façade facing Harrison St has a 35% glazing ratio, slightly less than the minimum.
- Windows and Doors Standard: MMC 19.508.4.E.5.c states that the bottom edge of windows along pedestrian ways shall be constructed no more than 30 inches above the walkway surface. The proposed design complies in the majority of areas except where the finish floor height inside the building is higher than the walkway (for a maximum of 40 inches rather than 30 inches). The 40-inch disparity refers to the elevational difference between the interior finished floor and the abutting sidewalk (where a code maximum height sill at 30 inches above the sidewalk would be 10 inches below interior finished floor height). The disparity is a result of maximizing accessibility of the site and the building. See Figures 6 and 7 for the building sections where the window sill height exceeds 30 inches above the level of the walkway.

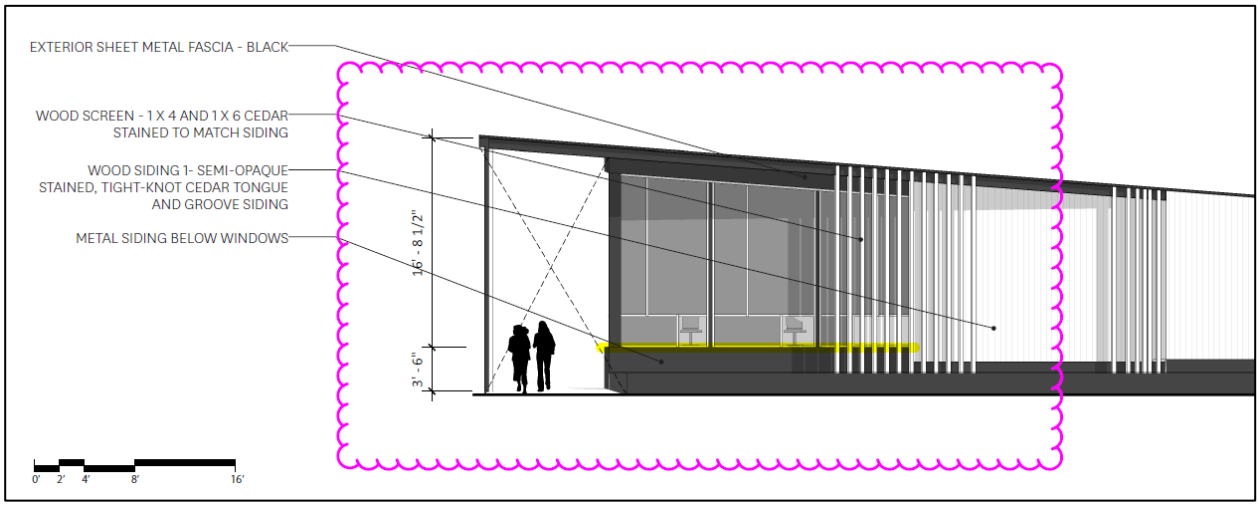


Figure 6. Harrison St elevation - window sill height above 30 inches

Figure 7. West elevation - window sill height above 30 inches

- Roofs Standard: MMC 19.508.4.F provides standards for roofs. The proposed design includes an undulating shed roof which does not include a parapet wall or a cornice as required to meet the shed roof standards in the code. The roof has varying slopes and no parapet is proposed.

Response to the Purpose Statements

1. The purpose of the Building Façade Details standard is:
   - "To provide cohesive and visually interesting buildings, particularly on the ground floor."

     The proposed development addresses this purpose statement by using the glass main entrance area as a divide between the northern and southern "wings" of the building. The main entry area is the full building height. Together with the angle of the building which is not a flat façade, the features provide for an adequate architectural break in the façade.

2. The purpose of the Weather Protection standard is:
   - "To create an all-season pedestrian environment."

     The proposed development addresses this purpose statement by providing a wide pedestrian walkway along the west façade and a complimentary wide canopy measuring between 11 – 13 ft. The proposal provides a large covered pedestrian area that is wider than a typical sidewalk and that can accommodate groups of visitors to the library.

3. The purpose of the Windows and Doors standards is:

- "To enhance street safety and provide a comfortable pedestrian environment by adding interest to exterior façades, allowing for day lighting of interior space, and creating a visual connection between interior and exterior spaces."

  In certain areas, the window sills are 30 inches above the adjacent walkway (see Figures 6 and 7). This is to accommodate accessibility design as well as to accommodate interior power outlets and to provide a moderate level of privacy immediately adjacent to staff areas and workstations.

  The west façade, facing 21st Ave, has less than the minimum required amount of openings/glazing. This is to limit thermal gain on the west side and to reduce the exposure to the adjacent residential development to maintain privacy. However, the building is designed at a human scale using natural construction materials in order to reduce the perceived bulk at the ground level. The use of large windows and native landscaping manages to soften the building and maintain a safe and comfortable pedestrian environment. Windows have been aligned such that one can see through the building from the west to the east to maximize visibility to the natural area at Spring Creek. The focus of the building is toward the natural areas and not to the parking lot to the west. The DLC recommended that this wall meet a minimum of 24% - 30% of the standard, particularly on the northern one-third of the wall.

4. The purpose of the Roofs and Rooftop Equipment standard is:

   - To create a visually interesting condition at the top of the building that enhances the quality and character of the building.

     The proposed design addresses this purpose statement through a roof form that undulates rather than a more traditional flat roof or gable roof design, which differentiates it from adjacent buildings. No parapet is proposed so that the sculptural form of the building is enhanced and to maximize the visibility of the roof-mounted solar photovoltaic panels.

Response to Downtown Design Guidelines

The application materials provide detailed responses to the applicable Downtown Design Guidelines in response to where the proposed design does not meet the standards in 19.508.

Although the application only needs to address the applicable guidelines, the application materials detail how the proposed design responds to each of the Downtown Design Guidelines and the purpose statement of each applicable

design standard. Please refer to the submitted application materials for the full response to the guidelines: https://www.milwaukieoregon.gov/planning/csu-2018-002.

For the purposes of this report, a general discussion of only the Applicable Downtown Design Guidelines for this project are addressed. Please refer to the Findings in Attachment 1 for details. The applicable guidelines are:

- Milwaukie Character Guidelines
- Pedestrian Emphasis Guidelines
- Architectural Guidelines

1. Milwaukie Character Guidelines

These guidelines address Milwaukie's unique "sense of place," its special quality and personality. The guidelines address what gives Milwaukie this feeling, this "character" as a unique collection of spaces and buildings, not simply a group of individual projects that could be anywhere.

The proposed design is oriented to connect the building and its patrons with the adjacent natural area and with Harrison St, providing a gateway into downtown for people traveling west on Harrison St. The new building will be located adjacent to Harrison St, rather than set back, which establishes a key corner and includes interior reading spaces with large windows creating a highly visible and inviting civic building (See Figures 3-5). The proposed design emphasizes a relationship with pedestrians by locating the building close to the sidewalk.

The proposed design reflects the building's proximity to Spring Creek and connects the building to the adjacent natural area by using large windows and natural construction materials. The proposed design strengthens and enhances the setting and thoughtfully fits into its surroundings. The windows are located and sized to optimize views and energy conservation effectively integrating the building into the surrounding environment. The large areas of glazing open the library to Spring Creek and Scott Park. By extending the building north toward Scott Park, more activity is likely to occur there, particularly as the children's area is located at this end so that activities can spill out into the park area. A number of spaces inside the building have been located along the perimeter to take advantage of particular views of the landscape. The interior is aligned in such a way as to allow views through the building from the parking lot to the natural area to the east. Rainwater management features allow visitors to view the stormwater filtration process.

The main entry area is centralized with public library areas located around the perimeter to take advantage of the natural surroundings and locate support functions into the core (See Figures 8 and 9). Integrating the building into the surrounding environment (including the large oak tree), using

numerous planting areas integrating with a variety of native plants and shrubs to promote the connection of the building to the site, creating an important civic gateway, and integrating artwork, are all components of the design which distinguish this building from surrounding development.

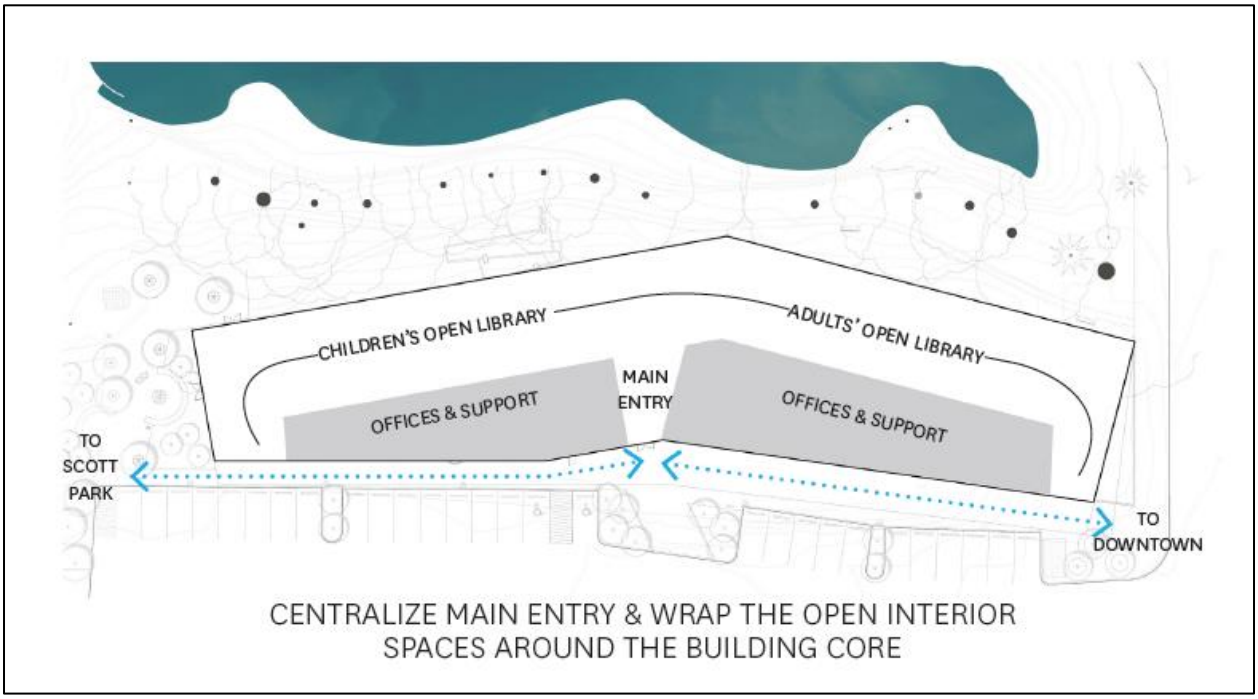


Figure 8. Design concept

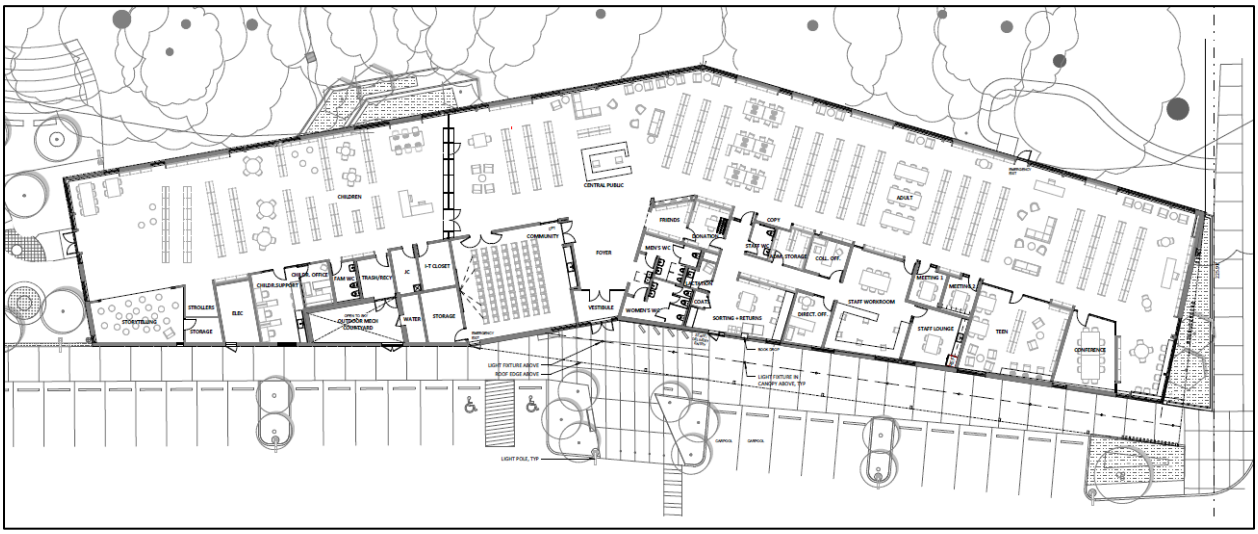


Figure 9. Proposed floor plan

The 1-story building is human scale and is designed to be high performing, includes solar photovoltaic panels, and the project will be enrolled in the Energy Trust of Oregon's Path to Net Zero program. Energy modeling in the design phase indicates that the proposed building will exceed the national

library average energy use by 70% and will exceed Oregon Energy Code.

2. Pedestrian Emphasis Guidelines

The proposed design includes specific design elements intended to provide direct and inviting access to both the library and to Scott Park. The existing library entrance is elevated above the sidewalk, requiring stairs or circuitous ramps. The proposed development will have a finished floor elevation that is essentially flush with the entry walkway.

The extra wide pedestrian walkway will include a similarly wide grand canopy and colonnade and native landscaping to emphasize that pedestrian circulation is the primary access focus. Although windows are limited on the western façade to limit heat gain in the afternoon, building fenestration is provided to includes slices of transparency affording views from the walkway through the building to the trees to the east.

Benches are provided near the main entry and the larger walkway width supports larger gatherings which are appropriate for an important civic building. The design, unlike the existing library, provides direct, barrier-free site access, including the entirety of the single-story library interior.

As noted on Page 15 of this report, the DLC recommended that the wall facing 21st Ave meet a minimum of 25% of the wall opening standard, particularly on the northern one-third of the wall. This would provide an improved experience for pedestrians accessing the library from the parking lot.

3. Architectural Guidelines

The proposed design does not include a main corner entrance. Rather, the design proposes a central entry point mid-block. This allows for the various user groups to enter at a single point and access their respective areas without disrupting other users (children, adults, community groups). To compensate for this, the design places emphasis on the corner of 21st Ave and Harrison St with very large windows at an open reading area mimicking a visible and inviting café-style space. The design also brings the building directly up to the sidewalk at Harrison St rather than maintain the large existing building setback.

The primary wall material is an insulated cedar siding, which is a high performance, renewable and insect-resistant material that will relate to the adjacent natural area. The building facades are broken up with glazing, metal bands, and doors to offer views into the furnished spaces and toward the natural area to the east.

The roof form is sculptural, with an undulating shed roof, which creates a

unique roof line and silhouette (see Figure 10).

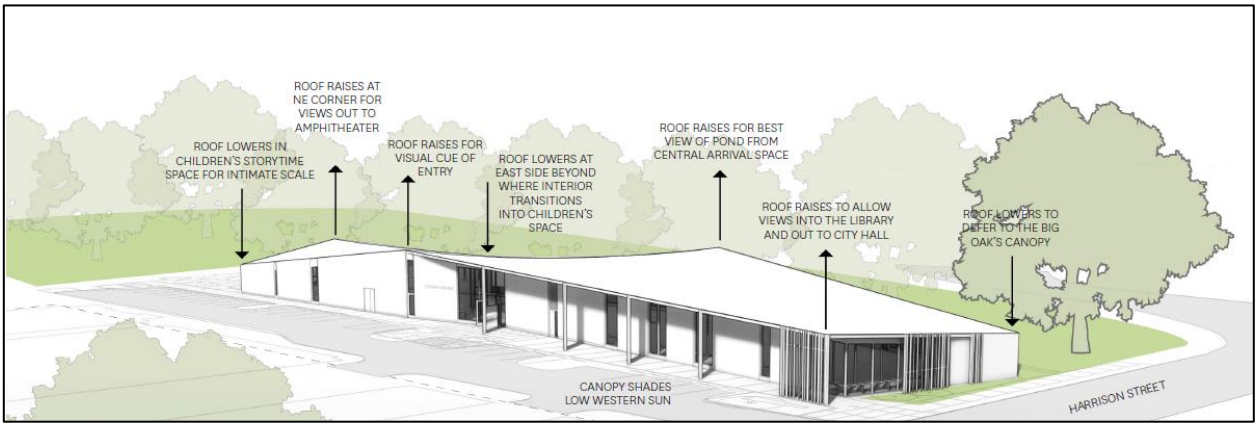


Figure 10. Roof form diagram

The proposed development is committed to sustainable design through the following measures:

- Photovoltaic solar panel array, sized in accordance with the state of Oregon's green technology requirement
- Participation in the Energy Trust of Oregon's Path to Net Zero program and energy use target
- Extensive use of renewable materials (cedar siding and ceiling panels)
- Optimized daylighting and shading to minimize thermal gain
- Highly efficient radiant slab heating and cooling

Design and Landmarks Committee Review

Per MMC 19.907.3.B.3, Type III Downtown Design Review applications require review by the Design and Landmarks Committee (DLC). The proposed development was presented to the DLC on March 5, 2018. The DLC voted (4-0) to recommend approval of the Downtown Design Review application with the following recommendations to the Planning Commission:

- Redesign the northern one-third of west-facing wall to include more transparency or, where windows are not appropriate, include a change of materials to break up the blank wall. As noted above, the wall facing 21st Ave is proposed to have 19.4% consist of openings. The DLC recommends a minimum of 25%.
- The Lighting Guidelines are not applicable to this review, given that there are no lighting standards in MMC 19.508, but the DLC had the following observations and recommendations regarding lighting:
    - The proposed design replaces the existing ornamental light fixtures along 21st Ave with contemporary light fixtures and also proposes to install contemporary fixtures in the parking lot to better control light distribution and limit light pollution along the west side of the site which abuts residential buildings.

- In their review, the DLC recommended that the proposal include an ornamental light fixture on the site closest to Harrison St; the other parking lot light fixtures may be the contemporary fixtures. The applicant concurred with this recommendation. The City is working with PGE to find a comparable fixture that is consistent with the PGE list of approved fixtures.
- Similarly, the DLC recommended that the applicant consider adding lighting to the canopy near Harrison St to ensure that the proposed monument sign is visible.

Other than the above points, the DLC had no issues with the elements of the Downtown Design Standards with which the proposed project does not comply. The DLC's recommendations have been incorporated into the conditions for this project.

B. Is the request for a modification to the off-street parking requirements reasonable?

Per MMC 19.605.1, for the proposed library project a minimum of 20 and a maximum of 24 parking spaces would be permitted. However, park uses are not addressed in the table of uses to establish required off-street parking standards. The proposal includes 28 parking spaces, including 2 accessible spaces and 2 carpool spaces. In order to exceed the maximum number of parking spaces, the applicant has requested a parking modification to allow the additional 4 parking spaces. This is to account for use of Scott Park without impacting library parking needs. The existing library parking lot serves both the library and Scott Park and has 38 parking spaces, so the request is a reduction in overall parking.

C. Does the proposal adequately address impacts to natural resources?

MMC 19.402.12.A requires an impact evaluation and alternatives analysis to determine compliance with the approval criteria for discretionary review and to evaluate alternatives to the proposed development. A technical report prepared by a qualified natural resource professional is required and must include the following components:

- Identification of ecological functions
- Inventory of vegetation
- Assessment of water quality impacts
- Alternatives analysis
- Demonstration that no practicable alternative method or design exists that would have a lesser impact on the resource and that impacts are mitigated to the extent practicable
- Mitigation plan

The applicant's submittal materials include a technical report prepared by Pacific Habitat Services, Inc., a consulting firm with staff experience and expertise in environmental studies, natural system design, regulatory permitting, wetland

delineation, and natural resource assessments. The technical report includes an impact evaluation and alternatives analysis consistent with the required components listed above. The City's environmental consultant, ESA, provided peer review services and the applicant submitted response materials (see Attachments 5 and 6).

In summary, the technical report notes that construction of the proposed library and associated infrastructure will result in impacts to WQR and HCA; however, much of the proposed construction within mapped WQR and HCA will occur within the footprint of the existing building and parking lot (see Figure 13).

The existing library building, parking lot, walkways, stone planters, and concrete seating area encroach into the western portion of the WQR and the total existing encroachment into the WQR is approximately 5,260 sq ft. Construction of the new building and stormwater planter will result in permanent disturbance to approximately 1,705 sq ft of WQR and 1,926 sq ft of HCA outside the footprint of the existing building and parking lot. This is approximately 10.5% and 5.6% respectively of the total amount of resource area on the site. Temporary disturbance to approximately 3,494 sq ft of WQR and approximately 3,185 sq.ft. (0.03 ac.) of HCA will result from the construction of the proposed library building, stormwater planter, and stormwater outfall and the removal of portions of the existing building and walkways that are outside the footprint of the proposed structure. Measures will be taken to limit temporary disturbance to the minimum area necessary for the construction of the new facilities and the removal of existing structures. The proposed library building was sited specifically to overlap the footprint of the existing building and parking lot to the extent practicable to minimize disturbance to the WQR and mapped HCA (see Figure 13).

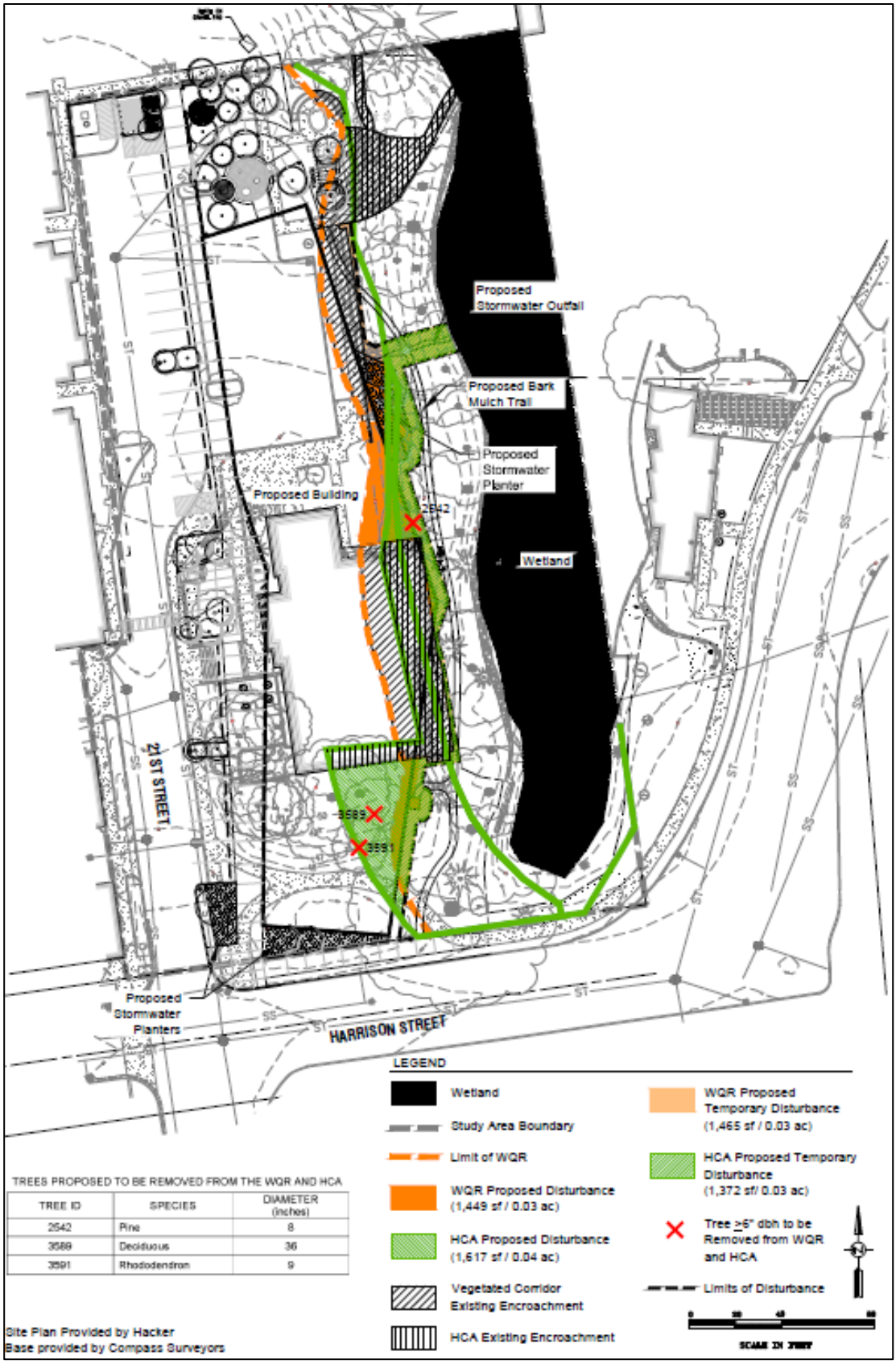


Figure 11. Site plan with resource disturbance.

Much of the proposed library building will be constructed within the footprint of the existing building and parking lot to minimize impacts to the vegetated portion of the WQR. The eastern side of the building foundation will be constructed in a manner that minimizes the extent of temporary encroachment into the WQR. Measures are proposed to minimize the proposed stormwater planter east of the building; it is the minimum size necessary to provide the required treatment of the rooftop runoff in order to minimize permanent disturbance in the WQR. Proposed parking areas will be located entirely outside the WQR and HCA.

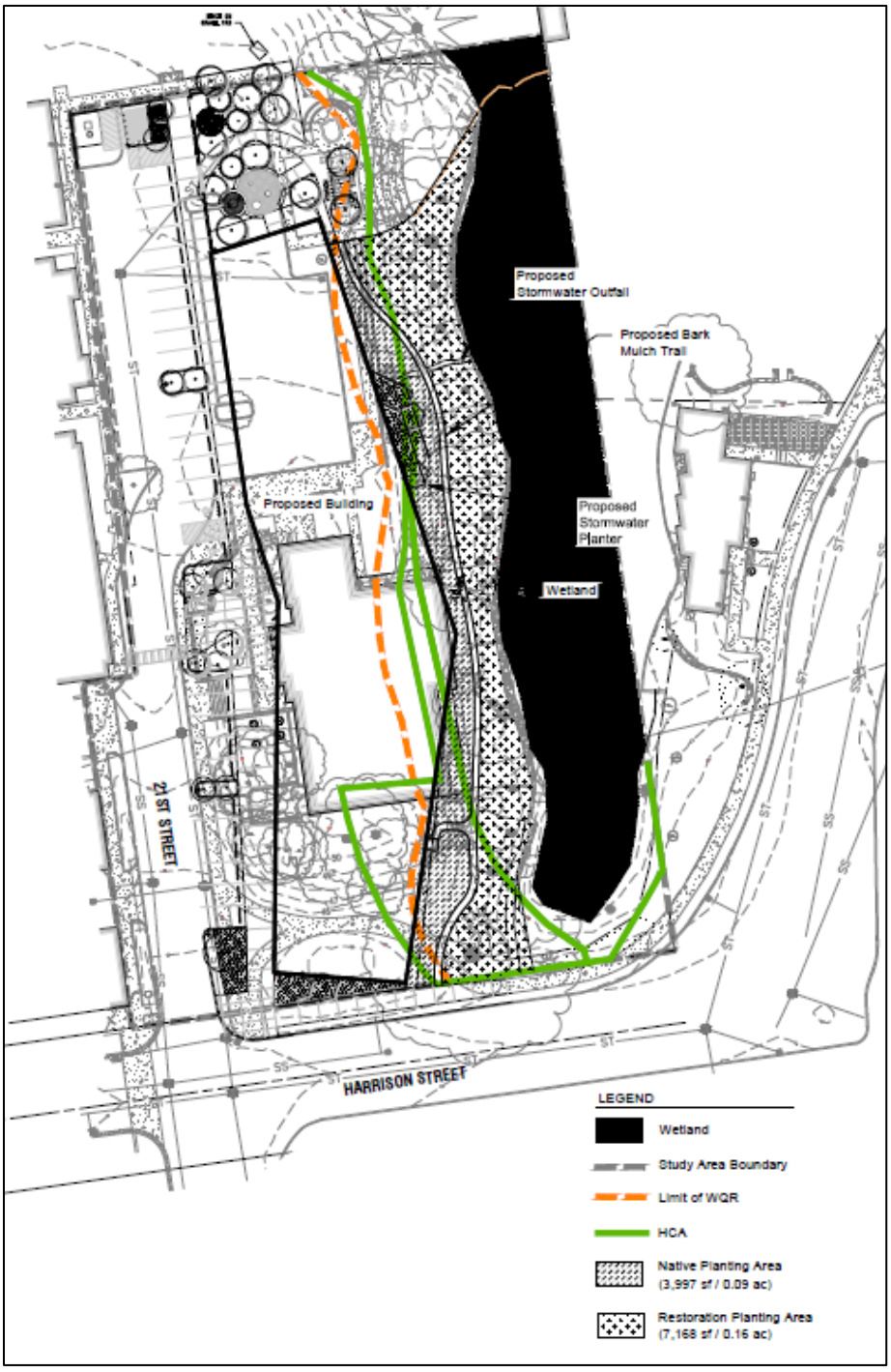


Figure 12. Proposed mitigation plan.

Tree protection measures such as fencing will be used to prevent impacts to existing trees that will remain within the vegetated corridor. Installation of 19 trees and 96 shrubs within the vegetated corridor to enhance and restore a diverse, native plant community. The total planting area proposed is 11,367 sq ft which is 3 times the area of permanent disturbance. Three trees exceeding 6 inches in diameter are identified for removal. Comprehensive planting lists are included to identify tree and plant species, size, and quantity in the ratios listed in MMC Subsection 19.402.11.D.2.b. All species proposed are native species and are identified on the Milwaukie Native Plant List. The native species of trees, shrubs, and groundcover planted will improve the quality of vegetated cover within the WQR and HCA (see Figure 14).

Staff recommends that a portion of the proposed restoration planting and other mitigation addresses the marginal Class B WQR at the southern end of the pond.

The proposed mitigation approach for addressing adverse impacts to the HCA appears to be adequate and commensurate with the impacts.

CONCLUSIONS

A. Staff recommendation to the Planning Commission is as follows:

1. Approve the Community Service Use, Natural Resources Review, Downtown Design Review, and Parking Modification for 10660 SE 21st Ave. This will permit the construction of a new library on the site of the Ledding Library.
2. Adopt the attached Findings, Conditions of Approval, and Other Requirements.

B. Staff recommends the following key conditions of approval (see Attachment 2 for the full list of Conditions of Approval)**:**

- The applicant shall submit a lighting plan showing compliance with MMC 19.606.3, that that all on-site walkways and parking spaces are lit to a minimum level of 0.5 footcandles, and demonstrating that lights are located and/or shielded as necessary to avoid light shining directly into the WQR and HCA.
- The applicant shall submit a detailed planting plan showing all parking lot, site, and mitigation plantings, plant types, and locations. The planting plan shall include restoration plantings in the marginal Class B WQR at the southern end of the pond.
- The applicant shall submit a Construction Management Plan (CMP) that satisfies the requirements of MMC 19.402.9, including details of root protection zones.
- Prior to final inspection of any building permit, the applicant shall submit a letter from the project landscape designer attesting that all required site

plantings have been completed in conformance with the approved site plans and with City standards, including all mitigation plantings. This includes removal of all invasive or nuisance species vegetation (as identified on the Milwaukie Native Plant List) per the Natural Resources report and mitigation plan.

- The applicant shall redesign the northern one-third of west-facing wall to include more transparency or, where windows are not appropriate, include a change of materials to break up the blank wall to meet a minimum of 25% of wall openings.
- The site lighting shall include an ornamental light fixture on the site closest to Harrison St; the other parking lot light fixtures may be the proposed contemporary fixtures.
- The applicant shall add lighting to the canopy near Harrison St to ensure that the proposed monument sign is visible.
- The parking lot in the final plans submitted for development permit review shall comply with the parking space dimensional standards in MMC 19.606.1 or the applicant shall submit an application for a Variance.

CODE AUTHORITY AND DECISION-MAKING PROCESS

The proposal is subject to the following provisions of the Milwaukie Municipal Code (MMC).

- MMC 19.304 Downtown Zones
- MMC 19.402 Natural Resources
- MMC 19.508 Downtown Site and Building Design Standards
- MMC 19.605 Vehicle Parking Quantity Requirements
- MMC 19.700 Public Facility Improvements
- MMC 19.904 Community Service Uses
- MMC 19.907 Downtown Design Review
- MMC 19.1006 Type III Review

This application is subject to Type III review, which requires the Planning Commission to consider whether the applicant has demonstrated compliance with the code sections shown above. In Type III reviews, the Commission assesses the application against review criteria and development standards and evaluates testimony and evidence received at the public hearing.

The Commission has 4 decision-making options as follows:

A. Approve the application subject to the recommended Findings, Conditions of Approval, and Other Requirements.

B. Approve the application with modified Findings, Conditions of Approval, and Other Requirements. Such modifications need to be read into the record.

C. Deny the application upon finding that it does not meet approval criteria.

D. Continue the hearing.

The final decision on these applications, which includes any appeals to the City Council, must be made by June 2, 2018, in accordance with the Oregon Revised Statutes and the Milwaukie Zoning Ordinance. The applicant can waive the time period in which the application must be decided.

COMMENTS

Notice of the proposed changes was given to the following agencies and persons: City of Milwaukie Community Development, Building, Public Works, and Engineering Departments; Clackamas Fire District #1; Historic Milwaukie Neighborhood District Association (NDA); Parks and Recreation Board; North Clackamas Parks and Recreation District; and properties within 300 ft of the subject property. The following is a summary of the comments received by the City. See Attachment 8 for further details.

- **Salena Sanford, 10677 SE 21st Ave:** Ms. Sanford expressed concern about the proposed bicycle racks, stating that they do not appear to provide security for bicycles.

  Staff Response: Staff has taken another look at the proposed bicycle racks and has asked the applicant to provide additional information confirming that they will provide adequate security for bicycles.

- **Tom Madden, Historic Milwaukie NDA Land Use Committee (LUC):** The LUC provided detailed comments stating that: the proposed design does not fit in with the surrounding buildings and it will be an "outlier"; the proposed structure consumes too much property, negatively impacts the natural resources, and visually diminishes the park and wetlands area; the construction process will be very disruptive to surrounding properties and a meeting is recommended to review these impacts – multiple comments about this issue; and the proposed parking is inadequate and will have an impact on the neighborhood.

  Staff Response: The building design was lauded by the DLC, particularly as it is an important civic building designed specifically to relate to the park and the natural resources and not to the surrounding buildings. The DLC found that the proposal meets the Downtown Design Guidelines. While the larger footprint does impact mapped resource areas, the mitigation and restoration plan is sufficient to make improvements to the resources to offset the impact. The Scott Park Master Plan has not been followed since its adoption in 1990 but for the path to the north, and many elements have been added that benefit the area but are not found in the

plan. The proposed parking meets the code requirements for a public library and adjacent park area.

ATTACHMENTS

Attachments are provided as indicated by the checked boxes. All material is available for viewing upon request.

		Early PC Mailing	PC Packet	Public Copies	E-Packet
1.	Recommended Findings in Support of Approval	☐	☒	☒	☒
2.	Recommended Conditions of Approval	☐	☒	☒	☒
3.	Recommended Other Requirements	☐	☒	☒	☒
4.	Applicant's Narrative and Supporting Documentation received January 18, 2018 and revised on February 9, 2018.				
	a. Narrative	☒	☐	☒	☒
	b. Site Plans, floor plans, details, and architectural elevations.	☒	☐	☒	☒
	c. Natural Resources Report prepared by Pacific Habitat Services, Inc. dated January 17, 2018.	☒	☐	☒	☒
	d. Wetlands Delineation prepared by Apex dated March 2, 2017.	☒	☐	☒	☒
	e. Preliminary Stormwater Report prepared by HHPR dated January 11, 2018.	☒	☐	☒	☒
5.	Peer review of Natural Resources Report prepared by ESA dated March 6, 2018.	☒	☐	☒	☒
6.	Pacific Habitat Services response to ESA peer review dated March 19, 2018.	☒	☐	☒	☒
7.	Minutes from March 5, 2018 DLC meeting	☐	☒	☒	☒
8.	Comments Received	☐	☒	☒	☒

Key:

Early PC Mailing = paper materials provided to Planning Commission at the time of public notice 20 days prior to the hearing.

PC Packet = paper materials provided to Planning Commission 7 days prior to the hearing.

Public Copies = paper copies of the packet available for review at City facilities and at the Planning Commission meeting.

Packet = packet materials available online at: https://www.milwaukieoregon.gov/bc-pc/planning-commission-3.

Recommended Findings in Support of Approval
Master File #CSU-2018-001 – Ledding Library

Sections of the Milwaukie Municipal Code not addressed in these findings are found to be inapplicable to the decision on this application.

1. The applicant, Tyler Nishitani, Hacker Architects, on behalf of the City of Milwaukie, has applied for approval to construct a new 20,000-sq ft Ledding Library at 10660 SE 21st Ave. This site is in the Downtown Mixed Use Zone and the proposal requires the following reviews: Community Service Use review, Natural Resources review, Downtown Design Review, and a Parking Modification. The master land use application file number is CSU-2018-002, with associated land use files DR-2018-001, NR-2018-001, and P-2018-002.

2. The project involves the complete structural replacement of the Ledding Library resulting in a new 20,000-sq ft one-story library on the existing library site. Site improvements include a reconfigured parking lot, stormwater planters, and other landscape elements. The applicant is seeking a parking modification to allow 28 parking spaces rather than the maximum 24 parking spaces on the site.

   The property includes areas designated as Water Quality Resource (WQR) and Habitat Conservation Area (HCA), including delineated wetlands. The proposed development would result in some WQR and HCA disturbance, triggering a need for Natural Resource Review.

3. The proposal is subject to the Milwaukie Downtown Design Guidelines and following provisions of the Milwaukie Municipal Code (MMC):
   - MMC 19.304 Downtown Zones
   - MMC 19.402 Natural Resources
   - MMC 19.508 Downtown Site and Building Design Standards
   - MMC 19.605 Vehicle Parking Quantity Requirements
   - MMC 19.700 Public Facility Improvements
   - MMC 19.904 Community Service Uses
   - MMC 19.907 Downtown Design Review
   - MMC 19.1006 Type III Review

4. The application has been processed and public notice provided in accordance with MMC Section 19.1006 Type III Review and MMC Section 19.1011 Design Review Meetings. A public design review meeting was held on March 5, 2018, and a public hearing was held on April 10, 2018, as required by law.

5. MMC 19.304 Downtown Zones

   MMC 304.2 identifies allowed uses in the Downtown Mixed Use Zone DMU.

   Community Service Uses (CSU) are permitted in the DMU subject to Community Service Use Review per MMC 19.904. The proposed development is a major modification of an existing CSU and an application for this review has been submitted.

   The proposed development is consistent with MMC 19.304.2.

   MMC 19.304.4 and 19.304.5 establish the development standards that are

applicable to this site.

Table 1. Compliance with relevant DMU standards

DMU	*Standards*	*Proposed*
FAR	*1:1 min/4.5:1 max with bonus for structured parking*	*1:1 (when excluding park land)*[1]
Min. Building height	*25 ft*	*27 ft-9 in (measured from sidewalk)*
Max Street setback/build to lines	*10 ft*	*0 ft*
Frontage Occupancy	*50% (Harrison St)*	*Same as existing – 50% when excluding natural resources/park land area*[2] *along Harrison St*
Primary entrances	*At least 1 primary entrance facing an abutting street*	*Main entry faces 21st Ave*
Off-street parking	*Min. 1 space/1,000 sq ft; Max. 1.2 spaces/1,000 sq ft*	*Maximum allowed = 24 spaces; 28 spaces proposed* *Parking modification required*

Subject to the approval of the parking modification, this criterion is met.

6. MMC 19.402 Natural Resources Review

MMC 19.402 establishes regulations for designated natural resource areas. The standards and requirements of MMC 19.402 are an acknowledgment that many of the riparian, wildlife, and wetland resources in the community have been adversely impacted by development over time. The regulations are intended to minimize additional negative impacts and to restore and improve natural resources where possible.

a. MMC Subsection 19.402.3 Applicability

MMC 19.402.3 establishes applicability of the Natural Resource (NR) regulations, including all properties containing Water Quality Resources (WQRs) and Habitat Conservation Areas (HCAs) as shown on the City's Natural Resource (NR) Administrative Map.

[1] The site includes both the library, Scott Park, and Spring Creek and Pond. The FAR has been calculated based on the net site area which does not include the Park or creek and pond areas.

[2] The Harrison St frontage includes natural resources, which have been removed for the purpose of this calculation, leaving only the net developable frontage.

The site is adjacent to Spring Creek which is a protected water feature. As per MMC Table 19.402.15, primary protected water features, along with their associated vegetated corridors, constitute a WQR on the site. The City's NR Administrative Map also shows the HCA designation over a large portion of the site between the existing library and the creek below.

As presented in the applicant's submittal materials, the existing library encroaches on 5,260 sq ft of WQR and 3,104 sq ft of HCA. Construction of the new library building, path, and stormwater planter will result in a permanent disturbance of an additional 1,705 sq ft of WQR and 1,926 sq ft of HCA.

	WQR	*HCA*
Total Existing Area	*21,389 sq ft*	*34,026 sq ft*
Current library encroachment	*5,260 sq ft*	*3,104 sq ft*
Proposed additional encroachment	*1,705 sq ft*	*1,926 sq ft*

The Planning Commission finds that the requirements of MMC 19.402 are applicable to the proposed activity.

b. MMC Subsection 19.402.8 Activities Requiring Type III Review

MMC 19.402.8 establishes that certain activities within a designated WQR and/or HCA are subject to Type III review in accordance with MMC 19.1006. As per MMC 19.402.8.A.1, this includes activities allowed in the base zone that are not otherwise exempt or permitted as a Type I or II activity.

The proposed activity is a major modification to a Community Service Use, which is an allowed use in the DMU. The level of disturbance proposed within the WQR and HCA areas on the subject property exceeds the levels allowed by Type I and II review, as provided in MMC 19.402.6 and 402.7, respectively. As such, the activity must be reviewed using Type III review and the discretionary process established in MMC 19.402.12.

The Planning Commission finds that the proposed activity shall be processed with Type III review.

c. MMC Subsection 19.402.9 Construction Management Plans

MMC 19.402.9 establishes standards for construction management plans, which are required for projects that disturb more than 150 sq ft of designated natural resource area. Construction management plans must provide information related to site access, staging of materials and equipment, and measures for tree protection and erosion control.

The applicant's submittal materials do not include a construction management plan that would show the locations of proposed erosion control measures, access to the work area for machinery and people, and a staging area for equipment and materials.

As conditioned, requiring a construction management plan that is sufficient to

satisfy the requirements of MMC 19.402.9, this standard is met.

d. MMC Subsection 19.402.12 General Discretionary Review

MMC 19.402.12 establishes the discretionary review process for activities that substantially disturb designated natural resource areas.

(1) Impact Evaluation and Analysis

MMC 19.402.12.A requires an impact evaluation and alternatives analysis in order to determine compliance with the approval criteria for discretionary review and to evaluate alternatives to the proposed development. A technical report prepared by a qualified natural resource professional is required and should include the following components:

- Identification of ecological functions
- Inventory of vegetation
- Assessment of water quality impacts
- Alternatives analysis
- Demonstration that no practicable alternative method or design exists that would have a lesser impact on the resource and that impacts are mitigated to the extent practicable
- Mitigation plan

The applicant's submittal materials include a technical report prepared by Pacific Habitat Services, Inc., a consulting firm with staff experience and expertise in environmental studies, natural system design, regulatory permitting, wetland delineation, and natural resource assessments. The technical report includes an impact evaluation and alternatives analysis consistent with the required components listed above.

In summary, the technical report notes that construction of the proposed library and associated infrastructure will result in impacts to WQR and HCA; however, much of the proposed construction within mapped WQR and HCA will occur within the footprint of the existing building and parking lot. Construction of the new building and stormwater planter will result in permanent disturbance to approximately 1,705 sq ft of WQR and 1,926 sq ft of HCA outside the footprint of the existing building and parking lot. Temporary disturbance to approximately 3,494 sq ft of WQR and approximately 3,185 sq ft (0.03 ac.) of HCA will result from the construction of the proposed library building, stormwater planter, and stormwater outfall and the removal of portions of the existing building and walkways that are outside the footprint of the proposed structure. Measures will be taken to limit temporary disturbance to the minimum area necessary for the construction of the new facilities and the removal of existing structures. The proposed library building was sited specifically to overlap the footprint of the existing building and parking lot to the extent practicable to minimize disturbance to the WQR and mapped

HCA.

The report presents an analysis of alternatives to the proposed activity. In 2016, the City of Milwaukie passed a bond measure to fund improvements and expand the Ledding Library. The City proposes to replace the existing library with a new, larger library building to meet community needs with a children's library, an adult's library, and a space for community events. Both the existing and proposed buildings are partially located within WQR and mapped HCA. As part of the design process, a two-level design alternative was considered to reduce the overall footprint of the new building and minimize disturbance to the WQR and HCA. However, a two-story building was determined to be not practicable for the following reasons:

- The addition of a second floor to a library building would increase the distance that materials must be moved through the building to provide the expected service, and would result in a loss of efficiency.
- The addition of a second floor to the library would require increased staff to provide direct supervision in all public areas. This additional staffing would result in increased costs to operate the library.
- The addition of a second floor would result in an increase in ongoing expenses associated with maintenance of an elevator.
- The addition of a second floor would result in an increase in ongoing expenses associated with maintenance of additional restrooms and work spaces.

A one-story building was selected as the preferred alternative for the project. The WQR and mapped HCA occupy almost all of the eastern half of the project site. Because of the location and extent of the resources on the site, it is not possible to construct a library building large enough to meet the community's needs and to provide the required parking, walkways, and other required infrastructure and totally avoid impacts to the WQR and HCA.

Development within the WQR and HCA has been limited to the area necessary to allow for the proposed use. The proposed building has been sited as far west on the site as possible to allow for the required parking spaces, provide the minimum amount of space necessary for the construction of a library building of a size that meets community needs, and minimize disturbance to the WQR and mapped HCA. Much of the proposed library building will be constructed within the existing footprint of the existing building and parking lot, to minimize impacts to the vegetated portion of the WQR. The eastern side of the building foundation will be constructed in a manner that minimizes the extent of temporary encroachment into the WQR. Measures are proposed to minimize the proposed stormwater planter east of the building; it is the minimum size necessary to provide the required treatment of the rooftop runoff in order to minimize permanent disturbance in the WQR. Proposed

parking areas will be located entirely outside the WQR and HCA.

Per the WQR and HCA Mitigation Plan, all temporary or permanent disturbances will be either restored or mitigated. Mitigation for the unavoidable impacts will be provided through the following measures:

- Inventory of man-made debris and noxious materials throughout the vegetated corridor that might be present within the WQR and the removal of any such material present;
- Implementation of a stormwater plan that meets City requirements for runoff rates and water quality;
- Tree protection measures to prevent impacts to existing trees to remain within the vegetated corridor. Protective measures will include a 6-foot-high fence installed at a distance of one foot per one inch of trunk diameter at breast height (dbh) to protect the tree's root zone. Pedestrian and vehicular access will also be limited within the tree protection zones to protect the roots of the trees;
- Removal of non-native, invasive plants from the vegetated corridor in the entire area; and
- Installation of 19 trees *and 96 shrub plantings within the vegetated corridor to enhance and restore a diverse, native plant community. The total planting area proposed is 11,367 sq ft which is 3 times the area of permanent disturbance. Comprehensive planting lists are included to identify tree and plant species, size, and quantity in the ratios listed in MMC Subsection 19.402.11.D.2.b. All species proposed are native species and are identified on the Milwaukie Native Plant List. The native species of trees, shrubs, and groundcover planted will improve the quality of vegetated cover within the WQR and HCA. A final planting and restoration plan is required prior to any construction activities, and shall include the marginal Class B WQR area at the southern end of the pond. A condition of approval has been included to address this.*

The technical report demonstrates that the proposed activity is the least impactful option that also restores and improves the streambank area and reduces the likelihood of further slope erosion.

As conditioned, the Planning Commission finds that the applicant's impact evaluation and alternatives analysis is sufficient for purposes of reviewing the proposed activity against the approval criteria provided in MMC 19.402.12. This standard is met.

(2) Approval Criteria

MMC 19.402.12.B provides the approval criteria for discretionary review as follows:

(a) Avoid – The proposed activity avoids the intrusion of development into the WQR and/or HCA to the extent practicable, and has less

detrimental impact to the natural resource areas than other practicable alternatives.

(b) Minimize – If the applicant demonstrates that there is no practicable alternative to avoid disturbance of the natural resource, then the proposed activity shall minimize detrimental impacts to the extent practicable.

(c) Mitigate – If the applicant demonstrates that there is no practicable alternative that will avoid disturbance of the natural resource, then the proposed activity shall mitigate for adverse impacts to the resource area. The applicant shall present a mitigation plan that demonstrates compensation for detrimental impacts to ecological functions, with mitigation occurring on the site of the disturbance to the extent practicable, utilization of native plants, and a maintenance plan to ensure the success of plantings.

The proposed activity would minimize disturbance impacts to the WQR and HCA on the site to the extent practicable while still achieving the goal of constructing a new library to meet community needs.

The report provides rationale for why an alternative with less impact on WQR and HCA (a two-story building) is not practicable. The report notes that the proposed building has been sited as far to the west as possible to avoid impacts to the vegetated portion of the WQR/HCA as much as possible, and it is clear from the site constraints that a one-story library expansion that avoids HCA/WQR entirely is likely not practicable. The fact that the existing, undersized library extends into the WQR and HCA highlights this point.

The report identifies measures that the project will incorporate to minimize impacts to habitat and ecological functions, soil and vegetation, hydrologic conditions, and wildlife corridors. The most significant natural resources on the site are the mature riparian trees that provide the basis for the HCA designation. A Construction Management Plan (CMP) must establish root protection zones (RPZs) around trees in WQR and HCA adjacent to any approved work area. Per 19.402.9, the RPZ shall extend from the trunk to the outer edge of the tree's canopy, or as close to the outer edge of the canopy as is practicable for the approved project. The proposed project involves ground-disturbing activities within the outer edge of the tree canopy, but the report does not mention RPZs or document any analysis of the potential for tree impacts resulting from ground disturbance within default RPZs. Since protecting the existing mature trees on-site is critical to avoiding and minimizing resource impacts, a condition has been added to require a CMP that must provide additional analysis to minimize impacts to mature trees.

The proposed planting area covers the entire temporary disturbance area within the HCA/WQR, as well as additional area within the

HCA/WQR where no disturbance is proposed, totaling 11,367 sq ft. The species proposed in the PHS mitigation plan include bigleaf maple, red alder, and western red cedar trees, along with red-osier dogwood, Indian plum, and snowberry shrubs. The proposed mix of native trees and shrubs is well-suited for the riparian conditions at the site, and most of the proposed species can be found on the site currently, indicating a good potential for planting success. As conditioned, the riparian restoration planting should include removal of English ivy, along with other non-native invasive vegetation. The removal of invasive species and proposed two-year monitoring/maintenance period will help ensure plant establishment. A final planting and restoration plan is required prior to any construction activities, and shall include the marginal Class B WQR area at the southern end of the pond.

The proposed mitigation approach for addressing adverse impacts to the HCA appears to be adequate and commensurate with the impacts.

As conditioned, the Planning Commission finds that the proposed activity meets the approval criteria for discretionary review.

e. MMC Subsection 19.402.15 Boundary Verification and Map Administration

MMC 19.402.15 establishes standards for verifying the boundaries of WQRs and HCAs and for administering the City's Natural Resource (NR) Administrative Map.

The locations of WQRs are determined based on the provisions of MMC Table 19.402.15. For streams, the WQR includes the feature itself and a vegetated corridor that extends 50 ft from the ordinary high-water mark or 2-year recurrence interval flood elevation. Where the slope exceeds 25% for less than 150 ft, the vegetated corridor is measured with a 50-ft width from the break in the 25% slope. For wetlands, a wetland delineation report prepared by a professional wetland specialist and approved by the Department of State Lands (DSL) is required.

For HCAs, the City's NR Administrative Map is assumed to be accurate with respect to location unless challenged by the applicant, using the procedures outlined in either MMC Subsection 19.402.15.A.1 or MMC Subsection 19.402.15.A.2.b.

The applicant's report explains that Spring Creek and its adjacent wetland are Primary Protected Water Features under MMC and that the WQR includes the stream/wetland and the Vegetated Corridor that extends outward 50 feet from the wetland boundary. The applicant submitted a wetlands delineation report prepared by Apex, which was also submitted to DSL. Combining Spring Creek (below ordinary high water) with its adjacent wetland (above ordinary high water) into a single "wetland" feature representing the Primary Protected Water feature is acceptable for establishing the adjacent vegetated corridor and thus the WQR regulated by MMC. It is a conservative approach that

maximizes resource protections.

The applicant is not challenging the accuracy of the NR Administrative Map with respect to the HCA location on the site. Through field reviews of the site, the City's consultant has confirmed that the mapped HCA boundaries are reasonable for planning purposes and are reflective of the resources warranting protection. However, as a result of the disturbance allowed by the approval of the proposed development, the NR Administrative Map shall be adjusted accordingly to remove those HCA locations that will be permanently disturbed by the proposed development.

The Planning Commission finds that the City's NR Administrative Map shall be adjusted to reflect the information provided by the applicant with respect to the location of the permanent disturbance to the HCA.

As conditioned, the Planning Commission finds that the proposed activity, including disturbance and restoration of a portion of the designated natural resource areas on the subject property, meets all applicable standards of MMC 19.402.

7. MMC 19.508 Downtown Site and Building Design Standards

MMC 19.508.4 establishes the building design standards for development in the DMU Zone.

a. Building Façade Details

(1) 19.508.4.A.2.a Vertical Building Façade

Nonresidential and mixed-use buildings 2 stories and above shall provide a defined base, middle, and top.

Not applicable as the proposed development is 1 story.

(2) 19.508.4.A.2.b. Horizontal Building Façade

(a) Horizontal datum lines—such as belt lines, cornices, or upper- floor windows—shall line up with adjacent façades if applicable.

Not applicable as there are no adjacent facades.

(b) Significant breaks shall be created along building façades at least every 150 linear ft by either setting the façade back at least 20 ft or breaking the building into separate structures. Breaks shall be at least 15 ft wide and shall be continuous along the full height of the building. The area or areas created by this break shall meet the standards of Subsection 19.304.5.H.

This standard is not met on the 21st Ave facade. This requirement is mitigated by the main large central glass entry area which breaks up the elevation into 2 distinct facades. The glass entry area is the full building height. The applicant has addressed the applicable Downtown Design Guidelines as detailed in Finding 11).

The proposed development complies with this standard as the 21st Ave façade complies with Downtown Design Guidelines (see Finding 11).

b. 19.508.4.B.2 Corners

Nonresidential or mixed-use buildings at the corner of two public streets— or at the corner of a street and a public area, park, or plaza—shall incorporate two of the following features (for the purposes of this standard an alley is not considered a public street):

(1) The primary entry to the building located within 5 ft of the corner.

The proposed development does not comply with this standard. To reflect the building program, the main entry is centrally located mid-block on the 21st Ave façade.

(2) A prominent architectural element, such as increased building height or massing, a cupola, a turret, or a pitched roof at the corner of the building or within 20 ft of the corner of the building.

The proposed development complies with this standard. The undulating roof form creates a taller building volume at the corner of Harrison St and 21st Ave.

(3) The corner of the building cut at a 45° angle or a similar dimension "rounded" corner.

The proposed development features a building cut that is at a shallower angle for the entire south façade, displaying architectural contrast.

(4) A combination of special paving materials; street furnishings; and, where appropriate, plantings, in addition to the front door.

A broad exterior canopy with large planting areas and seating extends from the SW corner at Harrison St all the way to main entry mid-block on 21st Ave.

The proposed development complies with this standard as two of the required elements are found in the proposed design.

c. 19.508.C.2 Weather Protection

All buildings shall provide weather protection for pedestrians as follows:

(1) Minimum Weather Protection Coverage

(a) All ground-floor building entries shall be protected from the weather by canopies or recessed behind the front building façade at least 3 ft.

(b) Permanent awnings, canopies, recesses, or similar weather protection shall be provided along at least 50% of the ground-floor elevation(s) of a building where the building abuts a sidewalk, civic space, or pedestrian accessway.

(c) Weather protection used to meet the above standard shall extend at least 4 ft, and no more than 6 ft, over the pedestrian area, and a maximum of 4 ft into the public right-of-way. Balconies meeting these dimensional requirements can be counted toward this requirement.

(d) In addition, the above standards do not apply where a building has a ground-floor dwelling, as in a mixed-use development or live-work building, and the dwelling entrance has a covered entrance.

(2) Weather Protection Design

Weather protection shall comply with applicable building codes and shall be designed to be visually compatible with the architecture of a building. Where applicable, weather protection shall be designed to accommodate pedestrian signage (e.g., blade signs) while maintaining required vertical clearance.

The proposed development complies with this standard. A broad canopy 11 ft – 13 ft wide protects pedestrians along the primary pedestrian path from Harrison St to the library's main entrance. Nearly 60% of the fronting sidewalk area is covered by the broad canopy. While the proposed canopy exceeds the maximum 6 ft in width, this is because the pedestrian walkway is much wider than a typical sidewalk.

d. 19.508.D.2 Exterior Building Materials

The following standards are applicable to the street-facing façades of all new buildings. For the purposes of this standard, street-facing façades are those abutting streets, courtyards, and/or public squares in all of the downtown. Table 19.508.4.D specifies the primary, secondary, and prohibited material types referenced in this standard.

(1) Buildings shall utilize primary materials for at least 65% of each applicable building façade.

(2) Secondary materials are permitted on no greater than 35% of each applicable building façade.

(3) Accent materials are permitted on no greater than 10% of each applicable building façade as trims or accents (e.g. flashing, projecting features, ornamentation, etc.).

(4) Buildings shall not use prohibited materials on any exterior wall, whether or not it is a street-facing façade.

The proposed development complies with this standard. The project utilizes primarily of stained, vertically oriented cedar siding, fiberglass-framed insulated glazing units and some dark grey matte finish sheet metal panels. The chosen cedar material is intended to have the building closely relate to the adjacent natural area and act as a transition from downtown development to the natural area and residential neighborhoods.

e. 19.508.4.E Windows and Doors

(1) 19.508.4.E.3 Other Streets

For all other block faces, the exterior wall(s) of the building facing the street/sidewalk must meet the following standards:

(a) 40% of the ground-floor street wall area must consist of openings; i.e., windows or glazed doors.

The proposed development does not comply with this standard. Along 21st Ave, 19.4% of the ground-floor street area consists of openings. Along Harrison St, 35% of the ground-floor street area consists of openings.

The west façade, facing 21st Ave, has less than the minimum required amount of openings/glazing. This is to limit thermal gain on the west side and to reduce the exposure to the adjacent residential development to maintain privacy. However, the building is designed at a human scale using natural construction materials in order to reduce the perceived bulk at the ground level. The use of large windows and native landscaping manages to soften the building and maintain a safe and comfortable pedestrian environment. Windows have been aligned such that one can see through the building from the west to the east to maximize visibility to the natural area at Spring Creek. The focus of the building is toward the natural areas and not to the parking lot to the west.

The applicant responds to this standard by addressing the applicable Downtown Design Guidelines (see Finding 11).

(2) 19.508.4.E.5 General Standards

(a) Windows shall be designed to provide shadowing. This can be accomplished by recessing windows 4 in into the façade and/or incorporating trim of a contrasting material or color.

(b) All buildings with nonresidential ground-floor windows must have a visible transmittance (VT) of 0.6 or higher.

(c) Doors and/or primary entrances must be located on the street-facing block faces and must be unlocked when the business located on the premises is open. Doors/entrances to second-floor residential units may be locked.

(d) The bottom edge of windows along pedestrian ways shall be constructed no more than 30 in above the abutting walkway surface.

(e) Ground-floor windows for nonresidential buildings shall allow views into storefronts, working areas, or lobbies. No more than 50% of the window area may be covered by interior furnishings including, but not limited to, curtains, shades, signs, or shelves.

(f) Signs are limited to a maximum coverage of 20% of the required window area.

The proposed development complies with this standard. However, in certain areas, the window sills are 30 inches above the adjacent walkway. This is to accommodate accessibility design as well as to accommodate interior power outlets and to provide a moderate level of privacy immediately adjacent to staff areas and workstations.

The applicant acknowledges these standards and will ensure compliance with window glass material.

The applicant responds to this standard by addressing the applicable Downtown Design Guidelines (see Finding 11).

(3) 19.508.6 Prohibited Window Elements

For all building windows facing streets, courtyards, and/or public squares in the downtown, the following window elements are prohibited:

(a) Reflective, tinted, or opaque glazing.

(b) Simulated divisions (internal or applied synthetic materials).

(c) Exposed, unpainted metal frame windows.

The application materials, including a statement from the application, confirm that the proposed development will comply with this standard.

f. 19.508.4.F Roofs and Rooftop Equipment

(1) 19.508.4.F.2 Roof Forms

(a) The roof form of a building shall follow one (or a combination) of the following forms:

(i) Flat roof with parapet or cornice.

(ii) Hip roof.

(iii) Gabled roof.

(iv) Dormers.

(v) Shed roof.

(b) All flat roofs, or those with a pitch of less than 4/12, shall be architecturally treated or articulated with a parapet wall that projects vertically above the roofline at least 12 in and/or a cornice that projects from the building face at least 6 in.

The proposed design addresses this purpose statement through a roof form that undulates rather than a more traditional flat roof or gable roof design, which differentiates it from adjacent buildings. No parapet is proposed so that the sculptural form of the building is enhanced and to maximize the visibility of the roof-mounted solar photovoltaic panels.

The applicant responds to this standard by addressing the applicable Downtown Design Guidelines (see Finding 11).

(2) 19.508.4.F.3. Rooftop Equipment and Screening

(a) The following rooftop equipment does not require screening:

(i) Solar panels, wind generators, and green roof features.

(ii) Equipment under 2 ft high, if set back a minimum of 5 ft from the outer edge of the roof.

(b) Elevator mechanical equipment may extend above the height limit a maximum of 16 ft, provided that the mechanical shaft is incorporated into the architecture of the building.

(c) Satellite dishes, communications equipment, and all other roof-mounted mechanical equipment shall be limited to 10 ft high, shall be set back a minimum of 10 ft from the roof edge, and shall be screened from public view and from views from adjacent buildings by one of the following methods:

(i) A screen around the equipment that is made of a primary exterior finish material used on other portions of the building, wood fencing, or masonry.

(ii) Green roof features or regularly maintained dense evergreen foliage that forms an opaque barrier when planted.

(d) Required screening shall not be included in the building's maximum height calculation.

As proposed the development will meet these standards – the only roof top equipment proposed are solar panels.

The proposed design meets the design standards detailed in MMC 19.508, except for 19.508.4.A.2.b (2), 19.508.4.C.2.a (3), 19.508.4.E.3.a, 19.508.4.E.5.c, and 19.508.4.F as described above. Finding 11 details consistency with the applicable Downtown Design Guidelines as they relate to the above-mentioned design standards.

8. MMC 19.600 Off-Street Parking and Loading

MMC 19.600 regulates off-street parking and loading areas on private property outside the public right-of-way. The purpose of these requirements includes providing adequate space for off-street parking, minimizing parking impacts to adjacent properties, and minimizing environmental impacts of parking areas.

a. MMC Section 19.602 Applicability

MMC 19.602 establishes the applicability of the provisions of MMC 19.600. Specifically, MMC Subsection 19.602.3 addresses applicability for development of vacant sites as well as for improvements to existing off-street parking areas for development and changes in use.

The proposed development will construct a new, larger library on the subject

property and will reconfigure the site and associated parking. This represents an increase of more than 50% of the existing floor area and more than 100% of the existing structure footprint, which triggers a requirement for compliance with MMC 19.600 as per MMC Subsection 19.602.3.A.

The Planning Commission finds that the standards of MMC 19.600 are applicable to the proposed development.

b. MMC Section 19.605 Vehicle Parking Requirements

MMC 19.605 establishes standards to ensure that development provides adequate vehicle parking based on estimated parking demand. MMC Table 19.605.1 provides minimum and maximum requirements for a range of different uses. MMC 19.605.1 establishes minimum and maximum off-street parking requirements. The minimum number of off-street parking spaces required for a library is 1 space per 1,000 sq ft; the maximum is 1.2 spaces per 1,000 sq ft.

Subsection 19.605.2 allows for the modification of minimum and maximum parking ratios from Table 19.605.1 as well as the determination of minimum and maximum parking requirements.

For the proposed library project, a minimum of 20 and a maximum of 24 parking spaces would be permitted. Park uses are not addressed in the table of uses to establish required off-street parking standards. The proposal includes 28 parking spaces, including 2 accessible spaces and 2 carpool spaces. In order to exceed the maximum number of parking spaces, the applicant has requested a parking modification to allow the additional 4 parking spaces. This is to account for use of Scott Park without impacting library parking needs. The existing library parking lot serves both the library and Scott Park and has 38 parking spaces, so the request is a reduction in overall parking.

Subject to approval of the parking modification, this criterion is met.

c. MMC Section 19.606 Parking Area Design and Landscaping

MMC 19.606 establishes standards for parking area design and landscaping, to ensure that off-street parking areas are safe, environmentally sound, and aesthetically pleasing, and that they have efficient circulation.

(1) MMC Subsection 19.606.1 Parking Space and Aisle Dimension

MMC 19.606.1 establishes dimensional standards for required off-street parking spaces and drive aisles. For 90°-angle spaces, the minimum width is 9 ft and minimum depth is 19 ft, with a 22-ft-wide drive aisles for either one- or two-way maneuvering.

The applicant has submitted a parking plan that utilizes 90°-angle spaces and a two-way drive aisle. As proposed, the dimensions for new spaces is 6 inches narrower than permitted.

The design requires a variance to remain as proposed, or the parking lot must be redesigned to show spaces that meet the dimensional standard.

(2) MMC Subsection 19.606.2 Landscaping

MMC 19.606.2 establishes standards for parking lot landscaping, including for perimeter and interior areas. The purpose of these landscaping standards is to provide buffering between parking areas and adjacent properties, break up large expanses of paved area, help delineate between parking spaces and drive aisles, and provide environmental benefits such as stormwater management, carbon dioxide absorption, and a reduction of the urban heat island effect.

(a) MMC 19.606.2.C Perimeter Landscaping

In the downtown, there is no minimum width for perimeter landscaping.

The subject property is in the DMU Zone; this standard does not apply.

(b) MMC 19.606.2.D Interior Landscaping

At least 25 sq ft of interior landscaped area must be provided for each parking space. Planting areas must be at least 120 sq ft in area, at least 6 ft in width, and dispersed throughout the parking area. For landscape islands, at least 1 tree shall be planted per island, with the remainder of the buffer planted with grass, shrubs, ground cover, mulch, or other landscaped treatment.

The applicant's site plans show a single aisle of parking for all 28 spaces with 6 planted islands breaking up the spaces. The 28 spaces provided require a total area of 700 sq ft of interior landscaping; the total area of the proposed islands is over 1,000 sq ft. A final landscaping and planting plan is required prior to any construction activity begins.

As conditioned, this standard is met.

(3) MMC Subsection 19.606.3 Additional Design Standards

MMC 19.606.3 establishes various design standards, including requirements related to paving and striping, wheel stops, pedestrian access, internal circulation, and lighting.

(a) MMC Subsection 19.606.3.A Paving and Striping

Paving and striping are required for all required maneuvering and standing areas, with a durable and dust-free hard surface and striping to delineate spaces and directional markings for driveways and accessways.

As proposed, meeting the minimum parking space dimensions or with an approved variance, the modified parking lot will be paved and striped in accordance with the standards of MMC 19.606.3.A.

As conditioned, this standard is met.

(b) MMC 19.606.3.B Wheel Stops

Parking bumpers or wheel stops are required to prevent vehicles from encroaching onto public right-of-way, adjacent landscaped areas, or pedestrian walkways. Curbing may substitute for wheel stops if vehicles will not encroach into the minimum required width for landscape or pedestrian areas.

As proposed, each parking space has a wheel stop meeting these requirements.

This standard is met.

(c) MMC 19.606.3.C Site Access and Drive Aisles

Accessways to parking areas shall be the minimum number necessary to provide access without inhibiting safe circulation on the street. Drive aisles shall meet the dimensional requirements of MMC 19.606.1.

As proposed, the parking area drive aisle is 22 ft wide and meets the relevant dimensional requirements of MMC 19.606.1.

This standard is met.

(d) MMC 19.606.3.D Pedestrian Access and Circulation

Pedestrian access shall be provided so that no off-street parking space is further than 100 ft away, measured along vehicle drive aisles, from a building entrance or a walkway that is continuous, leads to a building entrance, and meets the design standards of Subsection 19.504.9.E.

As proposed, each parking space is adjacent to a pedestrian walkway.

This standard is met.

(e) MMC 19.606.3.E Internal Circulation

The Planning Director has the authority to review the pedestrian, bicycle, and vehicular circulation of the site and impose conditions to ensure safe and efficient on-site circulation. Such conditions may include, but are not limited to, on-site signage, pavement markings, addition or modification of curbs, and modification of drive aisle dimensions.

The Planning Director has reviewed the proposed parking plan. Per Finding 8.c(1), a revised plan showing parking spaces meeting the minimum dimensions, or an approved variance to these standards, are required.

As conditioned, this standard is met.

(f) MMC 19.606.3.F Lighting

Lighting is required for parking areas with more than 10 spaces and must have a cutoff angle of 90 degrees or greater to ensure that

lighting is directed toward the parking surface. Lighting shall not cause a light trespass of more than 0.5 footcandles measured vertically at the boundaries of the site, and shall provide a minimum illumination of 0.5 footcandles for pedestrian walkways in off-street parking areas.

The applicant's submittal materials include a site plan showing the locations of proposed light fixtures. However, a lighting plan was not included confirm the actual illumination levels. A condition has been established to require a lighting plan sufficient to demonstrate that all on-site walkways and parking spaces will be adequately lit. The Lighting Guidelines in the Downtown Design Guidelines are not applicable to this review, given that there are no lighting standards in MMC 19.508, but the DLC made recommendations regarding lighting, which have been incorporated into the conditions of approval.

As conditioned, this standard is met.

As conditioned, the applicable additional design standards of MMC 19.606.3 are met.

As conditioned, the Planning Commission finds that the applicable design and landscaping standards of MMC 19.606 are met.

d. MMC Section 19.608 Loading

MMC 19.608 establishes standards for off-street loading areas and empowers the Planning Director to determine whether or not loading spaces are required. In the case of the new library, the Planning Director has determined that no loading spaces are required.

The Planning Commission finds that this standard is not applicable.

e. MMC Section 19.609 Bicycle Parking

MMC 19.609 establishes standards for bicycle parking, which is required for all new commercial and industrial development. The required quantity of bicycle parking spaces is equivalent to 10% of the minimum vehicle parking required, with a minimum of 2 bicycle spaces. Bicycle parking spaces must be at least 2 ft by 6 ft, with a 5-ft-wide access aisle and securely anchored racks that allow the frame and one wheel of a bike to be locked to the rack using a U-shaped lock. Bicycle parking spaces must be illuminated to a level of at least 0.5 footcandles and located within 50 ft of the main building entrance.

As addressed in Finding 8-b, a minimum of 20 vehicle parking spaces are required for the proposed development, resulting in a minimum requirement of 2 bicycle parking spaces. The applicant's site plan shows 12 bicycle parking spaces located near a main entrance of the building, where they will be illuminated by the exterior building lighting.

The Planning Commission finds that this standard is met.

f. MMC Section 19.610 Carpool and Vanpool Parking

MMC 19.610 establishes parking standards for vehicles used to carpool, which is required for all new commercial and industrial development. The required quantity of carpool parking spaces is equivalent to 10% of the minimum vehicle parking required, with a minimum of 2 bicycle spaces. Carpool parking spaces must be located closer to the main building entrances than other employee parking, except ADA spaces.

As addressed in Finding 8-b, a minimum of 20 vehicle parking spaces are required for the proposed development, resulting in a minimum requirement of 2 carpool parking spaces. The applicant's materials indicate that 2 carpool parking spaces are proposed. However, additional details about the proposed on-site designation of the proposed carpool parking are needed to ensure that it complies with the signage or pavement marking standards of MMC Subsection 19.610.4. A condition has been established to ensure that these standards are met.

As conditioned, the Planning Commission finds that this standard is met.

The Planning Commission finds that, as conditioned, the proposed development meets the applicable off-street parking standards of MMC 19.600.

9. MMC 19.700 Public Facility Requirements

MMC 19.700 establishes provisions to ensure that development provides public facilities that are safe, convenient, and adequate in rough proportion to their public facility impacts.

a. MMC Section 19.702 Applicability

MMC 19.702 establishes the applicability of the provisions of MMC 19.700, including land divisions, new construction, and modification or expansion of an existing structure or a change or intensification in use that result in any projected increase in vehicle trips or any increase in gross floor area on the site.

The applicant proposes to demolish the library and construct a building that is significantly larger, which results in an intensification of use of the site and a projected increase in vehicle trips. The development triggers the requirements of MMC 19.700.

The Planning Commission finds that the standards and requirements of MMC 19.700 are applicable to the proposed development.

b. MMC Section 19.703 Review Process

MMC 19.703 establishes the review process for development that is subject to MMC 19.700.

(1) MMC Subsection 19.703.1 Preapplication Conference

MMC 19.703.1 establishes that all proposed development that is subject to MMC 19.700 shall schedule a preapplication conference with the City prior to submittal of the land use application.

The applicant had a preapplication conference with City staff prior to application submittal, on September 21, 2017.

(2) MMC Subsection 19.703.2 Application Submittal

MMC 19.703.2 requires that all proposed development that is subject to MMC 19.700 and that requires a land use application shall submit a Transportation Facilities Review (TFR) application. For projects that do not require a Transportation Impact Study (TIS) as per MMC Section 19.704, a separate TFR application is not required and compliance with MMC 19.700 will be reviewed with the other concurrent land use application(s).

A TIS was not triggered as discussed in Finding 9-c, other land use applications are required and so compliance with MMC 19.700 will be reviewed as part of this land use application submittal.

(3) MMC Subsection 19.703.3 Approval Criteria

MMC 19.703.3 establishes approval criteria for development subject to MMC 19.700, including requirements for transportation facility improvements and mitigation at the time of development in rough proportion to the potential impacts of the development as per MMC Section 19.705.

The applicant will provide transportation improvements and mitigation in accordance with the standards in 19.700 and the Public Works Standards. Required improvements and mitigation will be in rough proportion to the potential impacts of the development as per MMC 19.705.

(4) MMC Subsection 19.703.4 Determinations

MMC 19.703.4 establishes the 4 key determinations related to transportation facility improvements that occur during the processing of a land use application. These include impact evaluation, street design, proportional improvements, and fee in lieu of construction.

The Engineering Director has determined that the proposed development would result in impacts to the transportation system. The applicant has provided sufficient information for the Engineering Director to determine the Impacts to the transportation system.

The Planning Commission finds that the appropriate review procedures have been followed, and the relevant criteria have been addressed.

c. MMC Section 19.704 Transportation Impact Evaluation

MMC 19.704 establishes the process and requirements for evaluating development impacts on the surrounding transportation system, including determining when a formal Transportation Impact Study (TIS) is necessary and what mitigation measures will be required.

The Engineering Director has determined that the applicant has provided enough information for the Engineering Director to properly evaluate the proposed development's impacts, and the Engineering Director has

determined there is an impact to the transportation system by the proposed development.

Although the existing site use is a library and will continue to remain a library, there is an expected trip increase of 56 PM peak-hour trips from construction of the new building, which includes an additional 7,750 sq ft beyond the floor area of the existing building. The Engineering Director has determined that there is enough data to determine the new impact to the surrounding transportation system, based on the preapplication information; therefore, a TIS was not required.

The Planning Commission finds that this standard is met.

d. MMC Section 19.705 Rough Proportionality

MMC 19.705 requires that transportation impacts of the proposed development be mitigated, as determined by the Engineering Director. Specifically, MMC Subsection 19.705.2 establishes the following guidelines for consideration when determining proportional improvements:

(1) Condition and capacity of existing facilities within the impact area in relation to City standards. The impact area is generally defined as the area within a ½-mile radius of the proposed development. If a TIS is required pursuant to Section 19.704, the impact area is the TIS study area.

(2) Existing vehicle, bicycle, pedestrian, and transit use within the impact area.

(3) The effect of increased demand associated with the proposed development on transportation facilities and on other approved, but not yet constructed, development projects within the impact area.

(4) The most recent use when a change in use is proposed that does not involve new construction.

(5) Applicable Transportation System Plan (TSP) goals, policies, and plans.

(6) Whether any route affected by increased transportation demand within the impact area is listed in any City program including, but not limited to, school trip safety, neighborhood traffic management, capital improvement, and system development improvement.

(7) Accident history within the impact area.

(8) Potential increased safety risks to transportation facility users, including pedestrians and cyclists.

(9) Potential benefit the development property will receive as a result of the construction of any required transportation facility improvements.

(10) Other considerations as may be identified in the review process.

The Engineering Director has determined that the proposed development does not trigger mitigation of impacts beyond the required frontage improvements. The proposed development has potential impacts to Harrison Street and 21st Avenue. The impacts are significant; however, the surrounding

transportation system is anticipated to continue to operate at the level of service prior to the proposed development.

The Engineering Director has determined that rough proportionality guidelines 1, 2, 3, 5, 6, 8, 9, and 10 apply. Condition of approval 7, has been established to ensure that adequate mitigation is provided.

As conditioned, the Planning Commission finds that the proposed development meets the minimum requirements to provide for mitigation to be consistent with MMC 19.705.

e. MMC Section 19.707 Agency Notification and Coordinated Review

MMC 19.707 establishes provisions for coordinating land use application review with other agencies that may have some interest in a project that is in proximity to facilities they manage.

The application was referred to TriMet for comment. None were received.

f. MMC Section 19.708 Transportation Facility Requirements

MMC 19.708 establishes the City's requirements and standards for improvements to public streets, including pedestrian, bicycle, and transit facilities.

(1) MMC Subsection 19.708.1 General Street Requirements and Standards

MMC 19.708.1 requires that all development comply with access management, clear vision, street design, connectivity, and intersection design and spacing standards.

(a) MMC Subsection 19.708.1.A Access Management

Access requirements shall comply with access management standards contained in MMC Chapter 12.16 Access Management.

(i) MMC Section 12.16.040 Access Requirements and Standards

MMC 12.16.040 establishes standards for accesses (driveways).

- MMC 12.16.040 A requires that all properties be provided street access with the use of an accessway.

  The proposed development is consistent with MMC 12.16.040A.

- MMC 12.16.040.B establishes standards for access spacing onto arterial and collector streets.

  The proposed development is not modifying its access to the right-of-way. Harrison St. Access will remain via 21st Avenue.

  The proposed development is consistent with MMC 12.16.040.B.

- MMC 12.16.040.C establishes standards for accessway locations, including double frontage, distance from property line, and distance from intersection.

The site is maintaining its existing accessway on 21st Avenue, which is a local street. The proposed development is consistent with MMC 12.16.040.C.1.

- MMC 12.16.040.D establishes standards for the number of accessway locations.

  The site's single accessway will access the 21st Avenue right-of-way.

  MMC 12.16.040.D.2 and D-3 do not apply to this development, as no new accessways onto arterials or collectors are proposed.

- MMC 12.16.040.E and 12.16.040.F establish standards for accessway design and size, respectively.

  Proposed driveways will conform to MMC 12.16.040.E and 12.16.040.F through compliance with the Public Works Standards.

The Planning Commission finds that the proposed development complies with the applicable criteria of MMC Chapter 12.16 and MMC 19.708.1.A.

(b) MMC Subsection 19.708.1.B Clear Vision

MMC 19.708.1.B establishes standards for maintaining clear vision as required in MMC Chapter 12.24 Clear Vision at Intersections.

(i) MMC Section 12.24.030 Requirements

Proposed driveways, accessways, and intersections will conform to MMC 12.24.030 through compliance with the Public Works Standards.

The Planning Commission finds that the proposed development complies with the applicable criteria of MMC Chapter 12.24 and MMC 19.708.1.B.

(c) MMC Subsection 19.708.1.C Development in Downtown Zones

MMC 19.708.1.C establishes standards for frontages in downtown zones that are on street sections shown in the Public Area Requirements.

The street design for this portion of Harrison Street is addressed in Public Works Standards (PWS) drawing number 714C. The required improvements for this development are as follows: 10-foot curb-tight sidewalk, 5-foot bike lane, and an 11-foot travel lane. 21st Avenue no longer has a downtown design, as the street is no longer planned to extend north to connect to Main Street. The remaining 21st Avenue serves as access for the North Main apartments to the west. Applicant will be responsible for constructing a concrete driveway approach across the 21st Avenue right-of-way that matches the

existing width of the street. Applicant has expressed interest in paying fee in lieu of construction (FILOC). As this portion of Harrison is identified on the City's Capital Improvement Plan, this property is eligible for FILOC.

The existing right-of-way width of Harrison Street in front of development property is 60-feet. The total right-of-way width required for the full street improvements is 60-feet. The southeast corner of development site extends into the existing alignment of Harrison Street. Applicant will be responsible for establishing the right-of-way boundary that matches the alignment of Harrison Street per the Public Works Standards. If applicant elects to construct parking on the north side of Harrison Street, then an additional 8-feet of dedication will be required.

The Planning Commission finds that the proposed development is consistent with the applicable standards of MMC 19.708.1.C.

10. MMC 19.904 Community Service Use Review

MMC 19.904 provides standards and procedures for review of applications for community service uses. These are uses that are not specifically allowed outright in most zoning districts but that address a public necessity or otherwise provide some public benefit. Community service uses may include schools, government buildings, hospitals, religious institutions, utilities, parks, communication facilities, or private or public recreation facilities.

a. MMC 19.904.2 Applicability – lists the various uses that are allowed through the Community Service Use Process.

The applicant is seeking land use approvals for a major modification to a Community Service Use for the purpose of constructing a new 20,000-sq ft single-story library on the existing site of the Ledding Library.

MMC 19.904.2.A lists the Community Service Uses that are categorized as Institutions – Public or Private and Other Public Facilities. Examples of uses are schools, governments office buildings, hospitals, cemetery, nursing or convalescent home, religious institutions, community meeting building, temporary or transitional facility, and other similar uses as determined by the Planning Commission.

The Planning Commission finds that the proposed development is a major modification to a Community Service Use and the standards of MMC 19.904 are applicable to the proposed development.

b. MMC 19.904.3 establishes the review process for CSUs. Except for wireless communication facilities and minor modifications to existing CSUs, applications for new CSUs are subject to Type III review (MMC 19.1006).

The proposed development is the demolition and construction of a new library.

The Planning Commission finds that the proposed development is subject to the procedures for Type III review outlined in MMC 19.1006.

c. MMC 19.904.4 establishes the following approval criteria CSUs:

(1) The building setback, height limitation, and off-street parking and similar requirements governing the size and location of development in the underlying zone. Where a specific standard is not proposed in the CSU, the standards of the underlying zone must be met.

The proposed development complies with the base zone standards for the DMU Zone (see Finding 5).

Parking and Loading – Subject to the approval of a parking modification, the proposed development complies with Chapter 19.600 (see Finding 7). The proposed development will have 28 parking spaces, which requires the provision of 3 bicycle parking spaces. The proposal includes 8 covered bicycle space and 4 uncovered bicycle spaces. The proposed development complies with MMC 19.609.

Landscaping – Landscaping using native plants is proposed to mitigate the and restore the disturbed natural resource areas.

Public Facility Improvements – Chapter 19.700 applies to this project (see Finding 9).

The Planning Commission finds that, as conditioned, this criterion is met.

(2) Specific standards for the proposed uses as found in Subsections 19.904.7-11 are met.

19.904.9 Specific Standards for Institutions—Public, Private, Religious, and Other Facilities not Covered by Other Standards

(a) Utilities, streets, or other improvements necessary for the public facility or institutional use shall be provided by the agency constructing the use.

Utilities, streets, and other infrastructure improvements are existing for the site and are adequate for the proposed development.

(b) When located in or adjacent to a residential zone, access should be located on a collector street if practicable. If access is to a local residential street, consideration of a request shall include an analysis of the projected average daily trips to be generated by the proposed use and their distribution pattern, and the impact of the traffic on the capacity of the street system which would serve the use. Uses which are estimated to generate fewer than 20 trips per day are exempted from this subsection.

The site is accessed from Harrison St, which is classified as an arterial street.

(c) When located in a residential zone, lot area shall be sufficient to allow required setbacks that are equal to a minimum of ⅔ the height of the principal structure. As the size of the structure increases, the depth of the setback must also increase to provide adequate buffering.

The site is located in the DMU Zone. This standard does not apply.

(d) The height limitation of a zone may be exceeded to a maximum height of 50 ft provided Subsection 19.904.9.C of this subsection is met.

The proposed building will be 27 ft high as measured from the sidewalk.

(e) Noise-generating equipment shall be sound-buffered when adjacent to residential areas.

Exterior noise-generating equipment will be isolated within a mechanical courtyard.

(f) Lighting shall be designed to avoid glare on adjacent residential uses and public streets.

Modern exterior light fixtures have been selected to minimize light pollution, particularly toward the adjacent residences. A condition has been included that requires a photometric plan to be submitted showing compliance with applicable regulations.

(g) Where possible, hours and levels of operation shall be adjusted to make the use compatible with adjacent uses.

Proposed operational hours are expected to be similar to the hours for the existing facility. Currently, the library is open 7 days a week, Monday-Thursday 10:00am – 9:00pm, Friday-Saturday 10:00am – 6:00pm, Sunday 12:00pm – 6:00pm.

(h) A spire on a religious institution may exceed the maximum height limitation. For purposes of this subsection, "spire" means a small portion of a structure that extends above the rest of the roofline, or a separate structure that is substantially smaller than the main structure and extends above the roofline of the main structure. "Spire" includes but is not limited to ornamental spires, bell towers, other towers, minarets, and other similar structures or projections. The number of spires on a religious institution property is not limited, so long as the spires remain only a small portion of the area of the structures.

No spire is proposed. The proposed development is not a religious institution. This standard does not apply.

(i) The minimum landscaping required for religious institutions is the lesser of 15% of the total site area and the percentage required by the underlying zone.

The proposed development is not a religious institution. This standard does not apply.

(j) Park-and-ride facilities may be encouraged for institutions along transit routes that do not have days and hours in conflict with weekday uses (e.g., religious institutions or fraternal organizations).

Such uses may be encouraged to allow portions of their parking areas to be used for park-and-ride lots.

No part of this project is being proposed as a park-and-ride facility.

The Planning Commission finds that, as conditioned, this criterion is met.

(k) The hours and levels of operation of the proposed use are reasonably compatible with surrounding uses.

The hours of operation are expected to be the same as the current library. The larger library will likely result in an increase in use, which is compatible with the downtown area, particularly as the library site is located close to City Hall and the Waldorf School, which are both civic uses.

(l) The public benefits of the proposed use are greater than the negative impacts, if any, on the neighborhood.

A library has been located on this site for decades. In 2016, the citizens of Milwaukie supported a bond measure to fund improvements and an expansion to the Ledding Library on the existing site. Any impacts caused by increased use are outweighed by the public benefits of a new, larger public library located in the downtown core.

(m) The location is appropriate for the type of use proposed.

The applicant considered constructing a new library on a different site. However, the property associated with the existing library was donated to the City with a stipulation that the land must be used for a public library. This fact, coupled with the current accessible location in the downtown core, makes this a very appropriate site for a new public library.

11. MMC 19.907 Downtown Design Review

Per MMC 19.907.3.C, an applicant may elect to have a project reviewed through a Type III discretionary review process. In such cases, the applicant can address downtown design review requirements through a combination of satisfying certain design standards and, in instances where they choose not to utilize design standards, they must demonstrate that the proposal satisfies the purpose statement of the applicable standard or standards and the applicable design guidelines instead. In such a case, the public hearing and decision must focus on whether or not the project satisfies the requirements of the applicable design guidelines only and the purpose statement of the applicable design standard.

MMC 19.907.7 establishes the approval criteria for design review applications and the process for modifications to the downtown design standards. The approval authority may approve, approve with conditions, or deny a design review application based on the following criteria:

a. Compliance with Title 19 Zoning Ordinance

As detailed in Findings 3-9, the proposed development complies with Title 19.

As conditioned, this criterion is met.

b. Compliance with applicable design standards in Section 19.508.

As detailed in Finding 7, the proposed development complies with Section 19.508, except for 19.508.4.A.2.b (2), 19.508.4.C.2.a (3), 19.508.4.E.3.a, 19.508.4.E.5.c, and 19.508.4.F which are reviewed against the applicable Downtown Design Guidelines.

c. Substantial consistency with the purpose statement of the applicable design standard and the applicable Downtown Design Guideline(s) being utilized in place of the applicable design standard(s).

The proposed design meets the design standards detailed in MMC 19.508, except for 19.508.4.A.2.b (2), 19.508.4.C.2.a (3), 19.508.4.E.3.a, 19.508.4.E.5.c, and 19.508.4.F, specifically:

- Building Façade Details Standard: The proposed design breaks the west elevation into 2 distinct facades, using the glass at the main entry as the break in the façade, rather than setting the façade back 20 ft or breaking the building into separate structures. The purpose of the Building Façade Details standard is "To provide cohesive and visually interesting buildings, particularly on the ground floor."

  The proposed development addresses this purpose statement by using the glass main entrance area as a divide between the northern and southern "wings" of the building. The main entry area is the full building height. Together with the angle of the building which is not a flat façade, the features provide for an adequate architectural break in the façade.

- Weather Protection Standard: The proposed design includes a pedestrian area that is significantly wider than a downtown sidewalk, which includes a canopy that is wider than 6 ft (11–13 ft), but does not project into the public right-of-way. The purpose of the Weather Protection standard is "To create an all-season pedestrian environment."

  The proposed development addresses this purpose statement by providing a wide pedestrian walkway along the west façade and a complimentary wide canopy measuring between 11 – 13 ft. The proposal provides a large covered pedestrian area that is wider than a typical sidewalk and that can accommodate groups of visitors to the library.

- Windows and Doors Standard: The 21st Ave ground-floor area is 20% short of meeting the minimum required glazing/opening area.

- Windows and Doors Standard: In several areas, the bottom edge of windows along pedestrian ways are more than 30 inches above the walkway surface.

  The purpose of the Windows and Doors standards is "To enhance street safety and provide a comfortable pedestrian environment by adding

interest to exterior façades, allowing for day lighting of interior space, and creating a visual connection between interior and exterior spaces."

In certain areas, the window sills are 30 inches above the adjacent walkway. This is to accommodate accessibility design as well as to accommodate interior power outlets and to provide a moderate level of privacy immediately adjacent to staff areas and workstations.

The west façade, facing 21st Ave, has less than the minimum required amount of openings/glazing. This is to limit thermal gain on the west side and to reduce the exposure to the adjacent residential development to maintain privacy. However, the building is designed at a human scale using natural construction materials in order to reduce the perceived bulk at the ground level. The use of large windows and native landscaping manages to soften the building and maintain a safe and comfortable pedestrian environment. Windows have been aligned such that one can see through the building from the west to the east to maximize visibility to the natural area at Spring Creek. The focus of the building is toward the natural areas and not to the parking lot to the west. The DLC recommended that this wall meet a minimum of 24% - 30% of the standard, particularly on the northern one-third of the wall.

- Roofs Standard: The proposed shed roof has an undulating form and does not include a parapet or cornice. The purpose of the Roofs and Rooftop Equipment standard is "To create a visually interesting condition at the top of the building that enhances the quality and character of the building."

  The proposed design addresses this purpose statement through a roof form that undulates rather than a more traditional flat roof or gable roof design, which differentiates it from adjacent buildings. No parapet is proposed so that the sculptural form of the building is enhanced and to maximize the visibility of the roof-mounted solar photovoltaic panels.

The Applicable Downtown Design Guidelines to review in connection with these areas of non-compliance are:

- *Milwaukie Character Guidelines*
- *Pedestrian Emphasis Guidelines*
- *Architectural Guidelines*

Refer to Table 2 below for detailed findings for Downtown Design Guidelines.

Table 2. Downtown Design Guidelines

MILWAUKIE CHARACTER GUIDELINES	
Guideline	**Recommended Findings**
Reinforce Milwaukie's Sense of Place	*The proposed design is oriented to connect the building and its patrons with the adjacent natural area and with Harrison St, providing a gateway into downtown for people traveling west on Harrison St. The new building would be located adjacent to Harrison St, rather than set back, which establishes a key*

	corner and includes interior reading spaces with large windows creating a highly visible and inviting civic building *The proposed development meets this guideline.*
Integrate the Environment	*The building connects the building to the adjacent natural area by using large windows and natural construction materials. The windows are located and sized to optimize views and energy conservation. The large areas of glazing open the library to Spring Creek and Scott Park. By extending the building north toward Scott Park, more activity is likely to occur there, particularly as the children's area is located at this end so that activities can spill out into the park area. A number of occupiable spaces inside the building have been located along the perimeter to take advantage of particular views of the landscape. The interior is aligned in such a way as to allow views through the building from the parking lot to the natural area to the east. Rainwater management features allow visitors to view the filtration process.* *The proposed development meets this guideline.*
Consider Context	*Beyond the primary concept to visually connect the library's main public spaces to the natural area surrounding Spring Creek, a number of interior spaces have been located along the perimeter of the building to take advantage of particular views of the surrounding landscape and built environment.* *Integrating the building into the surrounding environment (including the large oak tree), using native plants in the planting areas, and creating an important civic gateway, and integrating artwork, are all components of the design which distinguishes this building from surrounding development.* *The proposed development meets this guideline.*
Promote Architectural Compatibility	*The proposed building design includes natural stained cedar siding which is compatible with surrounding natural area. Because of its civic use and utilization of large-scale architectural contrast, more typical commercial or residential architectural vocabulary has been considered to a lesser degree. Scale however, and how it relates to the varying, surrounding site conditions, is a focus of the architectural design. The undulating roof form, in combination with distribution of glazed areas, are the two primary methods that create the scale responses.* *The proposed development meets this guideline.*
Use Architectural Contrast Wisely	*In addition to the materials selection of large glazed areas and cedar siding, the undulating roof form and connection to the adjacent natural area provide contrast.* *The proposed development meets this guideline.*

PEDESTRIAN EMPHASIS GUIDELINES	
Guideline	**Recommended Findings**
Reinforce and Enhance the Pedestrian System Barriers to pedestrian movement and visual and other nuisances should be avoided or eliminated, so that the pedestrian is the priority in all development projects.	*The proposed design includes specific design elements intended to provide direct and inviting access to both the library and to Scott Park. The existing library entrance is elevated above the sidewalk, requiring stairs or circuitous ramps. The proposed development will have a finished floor elevation that is essentially flush with the entry walkway.*
Define the Pedestrian Environment Provide human scale to the pedestrian environment, with variety and visual richness that enhance the public realm.	*The proposed design addresses pedestrians, and creates a human-scale environment, in a number of ways:* • *Marked with a large, sheltering canopy with supporting colonnade and a series of landscaped areas featuring native and symbolic plant species, the pedestrian path is the primary circulation focus.* • *The building is proposed with a zero lot line at Harrison St, establishing a street wall to reflect an urban character* *The proposed development, as conditioned, meets this guideline.*
Protect the Pedestrian from the Elements	*A wide fixed canopy is proposed to protect pedestrians from the elements.* *The proposed development meets this guideline.*
Provide Places for Stopping and Viewing	*A pair of benches near the main entrance give pedestrians an opportunity to sit and rest, wait for the library to open or wait for a ride.* *The proposed development meets this guideline.*
Integrate Barrier-free Design	*One of the primary factors in selecting a single-story library was to provide universal access for patrons. the design, unlike the existing library provides, direct, barrier-free site access, including the entirety of the library interior.*

ARCHITECTURE GUIDELINES	
Guideline	**Recommended Findings**
Corner Doors	*The proposed design does not include a main corner entrance. Rather, the design proposes a central entry point mid-block. This allows for the various user groups to enter at a single point and access their respective areas without disrupting other users (children, adults, community groups). To compensate for this, the design places emphasis on the corner of 21st Ave and Harrison St with very large windows at an open reading area mimicking a visible and inviting café-style space. The design also brings the building directly up to*

	the sidewalk at Harrison St rather than maintain the large existing building setback. *The proposed development meets this guideline.*
Wall Materials	*The proposed development promotes permanence through the primary wall assembly: a well-insulated, cedar siding clad rain screen which is a durable, high performance assembly. Cedar, a renewable, rot and insect resistant, material was selected to better relate to the adjacent Scott Park natural area. Other primary and secondary materials include insulated glazing units, and sheet metal siding and trim* *The proposed development meets this guideline.*
Wall Structure	*The proposed development provides scale defining devices through:* • *Vertical siding* • *Glazing and sheet metal bands* • *Large, central glass main entry* • *Vertical glazing providing views through the building to the natural area* *The proposed development meets this guideline.*
Silhouette and Roofline	*The roof form is sculptural, with an undulating shed roof, which creates a unique roof line and silhouette.* *The proposed development meets this guideline.*
Rooftops	*To accommodate unsightly, otherwise rooftop-mounted mechanical units, an outdoor mechanical courtyard has been created to conceal exterior units.* *The proposed development meets this guideline.*
Green Architecture	*The proposed development is committed to sustainable design through the following measures:* • *Photovoltaic solar panel array, sized in accordance with the state of Oregon's green technology requirement* • *Participation in the Energy Trust of Oregon's Path to Net Zero program and energy use target* • *Extensive use of renewable materials (cedar siding and ceiling panels)* • *Optimized daylighting and shading to minimize thermal gain* • *Highly efficient radiant slab heating and cooling* *The proposed development meets this guideline.*

The Lighting Guidelines are not applicable to this review, given that there are no lighting standards in MMC 19.508, but the DLC made observations and recommendations regarding lighting that have been incorporated into the conditions of approval. The Planning Commission finds that that the proposal, as

conditioned, is substantially consistent with the applicable Downtown Design Guidelines and that this approval criterion has been met.

The Planning Commission finds that with the listed conditions the approval criteria for Downtown Design Review are met.

12. The application was referred to the following departments and agencies of February 11, 2018: City of Milwaukie Community Development, Building, Public Works, and Engineering Departments; Clackamas Fire District #1; and the Historic Milwaukie Neighborhood District Association (NDA). Comments were received as follows:

    - **Tom Madden, Historic Milwaukie NDA Land Use Committee (LUC):** The LUC provided detailed comments stating that: the proposed design does not fit in with the surrounding buildings and it will be an "outlier"; the proposed structure consumes too much property, negatively impacts the natural resources, and visually diminishes the park and wetlands area; the construction process will be very disruptive to surrounding properties and a meeting is recommended to review these impacts – multiple comments about this issue; and the proposed parking is inadequate and will have an impact on the neighborhood.
    - **Salena Sanford, 10677 SE 21st Ave:** Ms. Sanford expressed concern about the proposed bicycle racks, stating that they do not appear to provide security for bicycles.

Recommended Conditions of Approval
Master File # CSU-2018-002
Ledding Library, 10660 SE 21st Ave.

1. The applicant shall submit a Construction Management Plan (CMP) that satisfies the requirements of MMC 19.402.9 and shows the following:
   a. The CMP must establish root protection zones (RPZs) around trees in WQR/HCA adjacent to any approved work area. Per 19.402.9, the RPZ shall extend from the trunk to the outer edge of the tree's canopy, or as close to the outer edge of the canopy as is practicable for the approved project.
   b. Clarify the location of all staging and access areas, and ensure that all temporary disturbance areas have been identified and accounted for the mitigation plan.
   c. The CMP shall Include a tree removal and tree impact study and shall provide information assessing whether or not the WQR/HCA Mitigation Plan needs to be updated. If tree removal numbers are higher than what the Pacific Habitat Services report described (more than 3), then the calculations for tree/shrub plantings would change. If enough trees are removed that the calculations for Option 1 (tree removal) would result in more tree plantings than Option 2 (area of disturbance), then the Mitigation Plan needs to be updated accordingly to stay in compliance with MMC 19.402.
2. Type I Development Review application with final construction plans for construction of the building.
   a. Final plans submitted for development permit review shall be in substantial conformance with plans approved by this action, which are the plans stamped received by the City on January 18, 2018 and revised on February 9, 2018, except as otherwise modified by these conditions.
   b. The parking lot in the final plans submitted for development permit review shall comply with the parking space dimensional standards in MMC 19.606.1 or the applicant shall submit an application for a Variance.
   c. Final plans submitted for development permit review shall include a detailed planting and restoration plan showing all parking lot, site, and mitigation plantings (including plant types and size, and planting locations). The planting plan shall include restoration of the marginal Class B WQR area at the southern end of the pond.
   d. The applicant shall redesign the northern one-third of west-facing wall to include more transparency or, where windows are not appropriate, include a change of materials to break up the blank wall to meet a minimum of 25% of wall openings.
   e. The site lighting shall include an ornamental light fixture on the site closest to Harrison St; the other parking lot light fixtures may be the proposed contemporary fixtures.

f. The applicant shall add lighting to the canopy near Harrison St to ensure that the proposed monument sign is visible.

g. Provide a narrative describing all actions taken to comply with these conditions of approval.

h. Provide a narrative describing any changes made after the issuance of this land use decision that are not related to these conditions of approval.

3. The applicant shall submit a lighting plan showing compliance with MMC 19.606.3, that that all on-site walkways and parking spaces are lit to a minimum level of 0.5 footcandles, and demonstrating that lights are located and/or shielded as necessary to avoid light shining directly into the WQR and HCA.

4. As per Finding 8-f, provide pavement marking and/or signage details for each of the proposed carpool parking spaces.

5. Prior to the issuance of a building permit, the applicant shall submit an access and water supply plan as required by the Clackamas Fire District #1 for full review and approval.

6. Prior to final inspection of any building permit, the following shall be resolved:

   Submit a letter from the project landscape designer attesting that all required site plantings have been completed in conformance with the approved site plans and with City standards, including all mitigation plantings. This includes removal of all invasive or nuisance species vegetation (as identified on the Milwaukie Native Plant List) per the Natural Resources report and mitigation plan.

7. Prior to final occupancy, the following shall be resolved:

   a. Frontage Improvements

      (1) Construct 10-foot curb-tight sidewalks, curb and gutter, and 16-foot half street travel way on Harrison Street frontage, in accordance with the downtown public area requirements and the Milwaukie Public Works Standards.

      (2) Construct driveway approach to meet all guidelines of the Americans with Disabilities Act (ADA) across the accessway at Harrison Street to align with 21st Avenue right-of-way.

   b. Dedication Requirements

      (1) Dedicate right-of-way along the Harrison St to comply with Public Works standards.

   c. If applicant elects to pay Fee In Lieu of Construction, then a FILOC application is required, conditions 7 A-B and items noted in Other Requirements #6 will not be required.

Recommended Other Requirements
Master File # CSU-2018-002
Ledding Library, 10660 SE 21st Ave.

The following items are not conditions of approval necessary to meet applicable land use review criteria. They relate to other development standards and permitting requirements contained in the Milwaukie Municipal Code (MMC) and Public Works Standards that are required at various points in the development and permitting process.

1. The level of use approved by this action shall be permitted only after issuance of a certificate of occupancy. The site may be used in a manner substantially similar to what has been proposed and approved through this land use action, including the hours and levels of proposed activities and services.

2. Limitations on Development Activity

   Development activity on the site shall be limited to 7:00 a.m. to 10:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. Saturday and Sunday, as per MMC Subsection 8.08.070(I).

   Prior to commencement of any earth-disturbing activities, the applicant shall obtain an erosion control permit. One permit will cover on-site as well as work in the right-of-way.

3. Landscaping Maintenance

   As per MMC Subsection 19.606.2.E.3, required parking area landscaping shall be maintained in good and healthy condition. As per MMC Subsection 19.402.11.B.9, a minimum of 80% of all required mitigation plantings for WQR or HCA disturbance shall remain alive on the second anniversary of the date the planting is completed.

4. Requirements from Clackamas Fire District #1 (CFD#1)

   The following requirements are based on review of the applicant's original plan submittal and may not be all inclusive. Review of a full set of scaled revised plans will be required.

   Submit an access and water supply test as required by the Clackamas Fire District #1 for full review and approval.

5. Other Engineering Requirements

   Submit a stormwater management plan to the City of Milwaukie Engineering Department for review and approval. The plan shall be prepared in accordance with Section 2 - Stormwater Design Standards of the City of Milwaukie Public Works Standards. In the event the stormwater management system contains underground injection control devices, submit proof of acceptance of the storm system design from the Department of Environmental Quality.

   The stormwater management plan shall demonstrate that the post-development runoff does not exceed the pre-development, including any existing stormwater management facilities serving the development site.

The stormwater management plan shall demonstrate compliance with water quality standards in accordance with the City of Portland Stormwater Management Manual.

Development/building permits will not be issued for construction until the stormwater management plan has been approved by the City of Milwaukie.

6. Prior to final inspection, the following shall be resolved:
   a. Submit full-engineered plans for construction of all required public improvements, reviewed and approved by the City of Milwaukie Engineering Department.
   b. Obtain a right-of-way permit for construction of all required public improvements listed in these recommended conditions of approval.
   c. Pay an inspection fee equal to 5.5% of the cost of the public improvements.
   d. Provide a payment and performance bond for 100 percent of the cost of the required public improvements.
   e. Provide a final approved set of Mylar and electronic PDF "As Constructed" drawings to the City of Milwaukie prior to final inspection.
   f. Install all underground utilities, including stubs for utility service prior to surfacing any streets.
   g. Clear vision areas shall be maintained at all driveways and accessways and on the corners of all property adjacent to an intersection.
   h. Remove all signs, structures, or vegetation in excess of three feet in height located in "vision clearance areas" at intersections of streets, driveways, and alleys fronting the proposed development.

ATTACHMENT 4

PLANNING DEPARTMENT
6101 SE Johnson Creek Blvd
Milwaukie OR 97206

PHONE: 503-786-7630
FAX: 503-774-8236
E-MAIL: planning@milwaukieoregon.gov

Application for Land Use Action

CSU-2018-002; NR-2018-001; DR-2018-001; P-2018-002 **Master File #:** _____

Review type*: ☐ I ☒ II ☒ III ☐ IV ☐ V

CHOOSE APPLICATION TYPE(S):

- Community Service Use
- Natural Resource Review
- Downtown Design Review
- Parking: Quantity Modification
- ...

Use separate application forms for:
- Annexation and/or Boundary Change
- Compensation for Reduction in Property Value (Measure 37)
- Daily Display Sign
- Appeal

RESPONSIBLE PARTIES:

APPLICANT (owner or other eligible applicant—see reverse): Tyler Nishitani

Mailing address: Hacker Architects 733 SW Oak St., Suite 100 Portland OR Zip: 97205

Phone(s): 503 227 1254 E-mail: tnishitani@hackerarchitects.com

APPLICANT'S REPRESENTATIVE (if different than above):

Mailing address: Zip:

Phone(s): E-mail:

SITE INFORMATION:

Address: 10660 SE 21st Ave Map & Tax Lot(s): 11E36BB01800

Comprehensive Plan Designation: P Zoning: DMU Size of property: 75,716.00 Sq Ft

PROPOSAL (describe briefly):

The Milwaukie Ledding Library proposal is a complete structural improvement resulting in a new, approximate 20,000 square foot one story library on the existing library site. Site improvements include a reconfigured parking lot, stormwater planters, and other landscape elements . The library is an existing use in the DMU zone.

SIGNATURE:

ATTEST: I am the property owner or I am eligible to initiate this application per Milwaukie Municipal Code (MMC) Subsection 19.1001.6.A. If required, I have attached written authorization to submit this application. To the best of my knowledge, the information provided within this application package is complete and accurate.

Submitted by: Tyler Nishitani Date: Jan 17, 2018

IMPORTANT INFORMATION ON REVERSE SIDE

RESET

*For multiple applications, this is based on the highest required review type. See MMC Subsection 19.1001.6.B.1.

WHO IS ELIGIBLE TO SUBMIT A LAND USE APPLICATION (excerpted from MMC Subsection 19.1001.6.A):

Type I, II, III, and IV applications may be initiated by the property owner or contract purchaser of the subject property, any person authorized in writing to represent the property owner or contract purchaser, and any agency that has statutory rights of eminent domain for projects they have the authority to construct.

Type V applications may be initiated by any individual.

PREAPPLICATION CONFERENCE:

A preapplication conference may be required or desirable prior to submitting this application. Please discuss with Planning staff.

REVIEW TYPES:

This application will be processed per the assigned review type, as described in the following sections of the Milwaukie Municipal Code:

- Type I: Section 19.1004
- Type II: Section 19.1005
- Type III: Section 19.1006
- Type IV: Section 19.1007
- Type V: Section 19.1008

THIS SECTION FOR OFFICE USE ONLY:

FILE TYPE	FILE NUMBER	FEE AMOUNT*	PERCENT DISCOUNT	DISCOUNT TYPE	DEPOSIT AMOUNT	DATE STAMP
Master file		$			$	
Concurrent application files		$			$	
		$			$	
		$			$	
		$			$	
SUBTOTALS		$			$	
TOTAL AMOUNT RECEIVED: $			RECEIPT #:			RCD BY:

Associated application file #s (appeals, modifications, previous approvals, etc.):

Neighborhood District Association(s):

Notes:

*After discount (if any)

PLANNING DEPARTMENT
6101 SE Johnson Creek Blvd
Milwaukie OR 97206

PHONE: *503-786-7630*
FAX: *503-774-8236*
E-MAIL: *planning@milwaukieoregon.gov*

For all Land Use Applications
(except Annexations and Development Review)

Submittal Requirements

All land use applications must be accompanied by a signed copy of this form (see reverse for signature block) and the information listed below. The information submitted must be sufficiently detailed and specific to the proposal to allow for adequate review. Failure to submit this information may result in the application being deemed incomplete per the Milwaukie Municipal Code (MMC) and Oregon Revised Statutes.

Contact Milwaukie Planning staff at 503-786-7630 or planning@milwaukieoregon.gov for assistance with Milwaukie's land use application requirements.

1. **All required land use application forms and fees**, including any deposits.

   Applications without the required application forms and fees will not be accepted.

2. **Proof of ownership or eligibility to initiate application** per MMC Subsection 19.1001.6.A.

   Where written authorization is required, applications without written authorization will not be accepted.

3. **Detailed and comprehensive description** of all existing and proposed uses and structures, including a summary of all information contained in any site plans.

   Depending upon the development being proposed, the description may need to include both a written and graphic component such as elevation drawings, 3-D models, photo simulations, etc. Where subjective aspects of the height and mass of the proposed development will be evaluated at a public hearing, temporary on-site "story pole" installations, and photographic representations thereof, may be required at the time of application submittal or prior to the public hearing.

4. **Detailed statement** that demonstrates how the proposal meets the following:

   A. All applicable development standards (listed below):

      1. **Base zone standards** in Chapter 19.300.
      2. **Overlay zone standards** in Chapter 19.400.
      3. **Supplementary development regulations** in Chapter 19.500.
      4. **Off-street parking and loading standards and requirements** in Chapter 19.600.
      5. **Public facility standards and requirements**, including any required street improvements, in Chapter 19.700.

   B. All applicable application-specific approval criteria (check with staff).

   These standards can be found in the MMC, here: www.qcode.us/codes/milwaukie/

5. **Site plan(s), preliminary plat, or final plat** as appropriate.

   See Site Plan, Preliminary Plat, and Final Plat Requirements for guidance.

6. **Copy of valid preapplication conference report**, when a conference was required.

APPLICATION PREPARATION REQUIREMENTS:

- Five hard copies of all application materials are required at the time of submittal (unless submitted electronically). Staff will determine how many additional hard copies are required, if any, once the application has been reviewed for completeness.
- All hard copy application materials larger than 8½ x 11 in. must be folded and be able to fit into a 10- x 13-in. or 12- x 16-in. mailing envelope.
- All hard copy application materials must be collated, including large format plans or graphics.

ADDITIONAL INFORMATION:

- Neighborhood District Associations (NDAs) and their associated Land Use Committees (LUCs) are important parts of Milwaukie's land use process. The City will provide a review copy of your application to the LUC for the subject property. They may contact you or you may wish to contact them. Applicants are strongly encouraged to present their proposal to all applicable NDAs prior to the submittal of a land use application and, where presented, to submit minutes from all such meetings. NDA information: www.milwaukieoregon.gov/citymanager/what-neighborhood-district-association.
- Submittal of a full or partial electronic copy of all application materials is strongly encouraged.

As the authorized applicant I, Tyler Nishitani, attest that all required application materials have been submitted in accordance with City of Milwaukie requirements. I understand that any omission of required items or lack of sufficient detail may constitute grounds for a determination that the application is incomplete per MMC Subsection 19.1003.3 and Oregon Revised Statutes 227.178. I understand that review of the application may be delayed if it is deemed incomplete.

Furthermore, I understand that, if the application triggers the City's sign-posting requirements, I will be required to post signs on the site for a specified period of time. I also understand that I will be required to provide the City with an affidavit of posting prior to issuance of any decision on this application.

Applicant Signature: _____

Date: January 17, 2018

Official Use Only

Date Received (date stamp below):

RESET

LEDDING LIBRARY

VIEW FROM 21ST & HARRISON

PROJECT TEAM

COMMISSIONING

Green Building Services
421 SW 6TH AVE, SUITE 450
PORLTAND, OR 97204-1629
CONTACT: RICHARD MANNING
PHONE: 503-467-4710

CMGC

Swinerton Builders
308 SW 2ND AVE, SUITE 210
PORTLAND, OR 97204
CONTACT: WILLIAM SILVA
PHONE: 503-224-6888

FINANCE DIRECTOR

City of Milwaukie
10722 SE MAIN ST
PORTLAND OR, 97222
CONTACT: HALEY KG FISH
PHONE: 503-786-7522

LANDSCAPE

PLACE
735 NW 18TH AVE
PORLTAND, OR 97209
CONTACT: CHARLES BRUCKER
PHONE: 503-334-2080

CIVIL

HHPR
205 SE SPOKANE, ST #200
PORTLAND, OR 97202
CONTACT: RON PETERSON & JANELLE BRANNAN
PHONE: 503-334-2080

ACOUSTICS

Listen Acoustics
1001 SW 5TH AVE #100
PORTLAND OR, 97204
CONTACT: TOBIN COOLEY
PHONE: 503-241-5255

LIGHTING

O-Lighting
5304 N ALBINA ST
PORTLAND, OR 97217
CONTACT: MARK GODFREY
PHONE: 503-341-7882

SUSTAINABILITY

Lensa Consulting
7205 SE 18TH AVE
PORTLAND, OR 97202
CONTACT: KATRINA SHUM MILLER
PHONE: 503-467-1239

ENVIRONMENTAL GRAPHICS & SIGNAGE

Felt Hat
4072 N WILLIAMS AVE #B
PORTLAND, OR 97227
CONTACT: DON ROOD
PHONE: 503-222-0068

CITY OF MILWAUKIE

City of Milwaukie
6101 SE JOHNSON CREEK BLVD
MILWAUKIE, OR 97206

LIBRARY DIRECTOR

Katie Newell
Milwaukie Public Library
10660 SE 21ST AVE
MILWAUKIE, OR 97222
PHONE: 503-786-7584

ARCHITECT & INTERIOR DESIGN

Hacker
733 SW OAK ST, SUITE 100
PORTLAND OR, 97205
CONTACT: TYLER NISHITANI
PHONE: 503-227-1254

PROJECT MANAGEMENT

Plan B Consulting
CONTACT: AMY WINTEROWD
PHONE: 503-850-9876
503-832-7612

STRUCTURAL

ABHT
1640 NW JOHNSON ST
PORTLAND, OR 97209
CONTACT: CLINTON AMBROSE
PHONE: 503-243-6682

MECH/ELEC/PLMBG

PAE
522 SW 5TH AVE #1500
PORTLAND, OR 97204
CONTACT: RUWAN JAYAWEERA
PHONE: 503-226-2921

TABLE OF CONTENTS

January 16, 2018

Project Statement – Milwaukie Ledding Library - Type III Land Use Review Submittal

List of land use reviews requested

- Downtown Design Review (Type III)
  - Parking Modification (Type II) - Page 2
- Major Modification of a Community Service Use (Type III) - Page 2
- Natural Resources (Type III) – Exhibit 1
- Comprehensive Plan text amendment - Scott Park (Type V) Adjustment – Not included. Initiated by City.

Project Vision

The vision for the new Milwaukie library is driven by four main principals:

People
Provide a vibrant community information hub that brings people together, stimulates imagination and enriches lives.

Prosperity
Provide an innovative, state of the art, future thinking library that supports both community and individual endeavors.

Planet
The architecture enhances the experience of the surrounding landscape and is a model of sustainable and environmentally restorative design.

Place
The library is a welcoming, civic focal point that promotes education and understanding of Milwaukie's culture, community and history.

Project Description

The Milwaukie Ledding Library proposal is a complete structural improvement resulting in a new, approximate 20,000 square foot one-story library on the existing library site. Site improvements include a reconfigured parking lot, stormwater planters, and other landscape elements . The site is not ideal for on-site stormwater infiltration. Stormwater will be treated for quality on site and one planter will discharge into the creek and the other planters will flow to the municipal storm system on site. Post-development runoff does not exceed the pre-development. The electrical transformer will be located underground in a vault as pre-approved by the utility. See Pre-Application Conference notes for street frontage requirements.

Site Opportunities

The site occupies a unique position in the downtown area between a natural area, a city park and City Hall. The proposed design has a civic presence and at the same time takes advantage of the natural park setting.

The civic design elements include:

- a gateway colonnade and direct path to the main library entry and continuing on to Scott Park.
- the building meets the SW urban street corner with large windows providing views out from the library to City Hall while also creating views into and through the library to the wooded area beyond.

The park setting design elements include:

- Parking lot has been reconfigured to occupy the western edge of the site. The building and landscaped areas have also be consolidate to the west, against the narrowed parking lot, minimizing disturbance to natural resource areas on the East edge of the site.
- The park setting inspired the selection of wood siding material and finish.
- The window openings of the proposed façade highlight natural features while being responsive to sun path to prevent unwanted heat gain and glare.
- Sensitivity to the natural setting with no HVAC equipment on the roof or visible on site preserving tree canopy views with a minimum roof height.
- Exterior HVAC units are located on the ground in an enclosed courtyard to effectively mitigate noise pollution.

This project replaces the existing two-story library with a larger, single-story building. A single-story configuration will deliver Milwaukie a more flexible library at a better value for the following reasons:

- Library interior engages more of the park and provides daylight and views to all occupied spaces.
- It is more universally accessible to be on one level. Elevators and stairs can provide code compliant accessibility to a two-story configuration, but stairs used as the primary circulation between floors represent a barrier for equipment, strollers, visitors and staff that don't handle stairs well.
- Most flexible for a long life. No program needs to be upstairs where floor area adjustments are physically limited. With one story space partition adjustments can be more easily made as library needs change over time.
- A two-story solution requires the additional expense of 2 stairs plus 1 elevator equal 1000 sqft. Therefore one story without these requirements gives the library more usable floor area within the budget.

Sustainable Design

This project is enrolled in the Energy Trust of Oregon's Path to Net Zero program. Net Zero Energy means ultimately generating as much energy on the library site through solar photovoltaic panels as the building uses. 'Path' means that a project team first establishes a clear energy-efficiency target and a plan of approach. Through design and specifications of robust insulation and efficient mechanical systems in the design phase, the goal is to drive energy demand down so less solar energy in the future will need to be generated to get to net zero.

State requirement requires 1.5% of the construction cost be spent on green technology. This requirement is met by installing a photovoltaic array on the roof in this project scope.

Energy modeling in the design phase indicates this building will exceed the national library average energy use by 70% and exceed Oregon Energy Code.

MODIFICATION

MMC 19.605.2 **Modification to exceed the maximum number of parking spaces.**

Requirement: Table 19.605.1 requires for Library, museum, art gallery: 1 space per 1,000 sqft of floor area minimum and 1.2 spaces per 1,000 sqft maximum. For this project that is 20 parking spaces minimum and 24 maximum. Parks have no specified minimum or maximum requirement.

Purpose: To ensure that development provides adequate, but not excessive, vehicle parking based on their estimated parking demand. All modifications and determinations must demonstrate that the proposed parking quantities are reasonable.

Proposal: The applicant proposes Per 19.605.C.1 to exceed the maximum of 24 spaces by four for a total of 28 (including 2 ADA spaces and 2 carpool spaces per 19.610). The applicant proposes that the 4 additional spaces are required due to special circumstances of this site (19.605.2.C.3.c) to accommodate visitors to Scott Park without impacting the 24 spaces allowed to meet typical library parking demand. (19.605.2.C.3.a). The existing lot that currently serves Scott Park and the Ledding Library contains 38 spaces. The events at the amphitheater create a seasonal parking demand that further support exceeding the maximum number of spaces by a modest amount.

DEVELOPMENT STANDARDS

Table 19.304.4 Downtown Zones—Summary of Development Standards

A. Lot Standards

1. Minimum lot size (sq ft) 750 Complies
2. Minimum street frontage (ft) 15 Complies

B. Development Standards

1. Floor area ratio 1:1 . Building area 20,000 sqft Site Area: Complies per Habitat Conservation Area and Water Quality Resource reduction of site area.
2. Building height Minimum 25 Complies. Building is 27'-9" measured from the top of sidewalk at Harrison St.

4.a Street setbacks/build-to lines (ft) 0.
Complies. Setback at SE corner = 2'-4" and SW Corner= 9'-10"

4c. Side and rear setbacks not applicable

5. 19.508 Frontage occupancy requirements. The park creates an unusual site shape. Proposed building frontage on Harrison is similar to existing library. See site plan.
6. Primary Entrances. Complies.
7. Off Street Parking. See Proposed Parking Modification Loading space not required per Pre App Conference Notes.

Public Facility Improvements

19.702 Applicability

D. New construction

E. Modification or expansion of an existing structure or a change or intensification in use … section is applicable.

19.708.1 General Street Requirements and Standards

C. Development in Downtown Zones Required improvements will be coordinated and implemented by the City of Milwaukie under a separate improvement project process.

Major Modification of a Community Service Use (Type III)

19.904.4 Approval Criteria

An application for a community service use may be allowed if the following criteria are met:

A. The building setback, height limitation, and off-street parking and similar requirements governing the size and location of development in the underlying zone are met. Where a specific standard is not proposed in the CSU, the standards of the underlying zone are met; See the above responses to "Table 19.304.4 Downtown Zones—Summary of Development Standards"

B. Specific standards for the proposed uses as found in Subsections 19.904.7-11 are met; See the below responses to "19.904.9 Specific Standards for Institutions..."

C. The hours and levels of operation of the proposed use are reasonably compatible with surrounding uses; Complies. Proposed operational hours are to remain the same as the existing facility.

D. The public benefits of the proposed use are greater than the negative impacts, if any, on the neighborhood; Complies. The proposed project is an update and complete improvement of an existing library facility that better addresses the needs of staff and community.

E. The location is appropriate for the type of use proposed. Complies. The location is very appropriate, on the edge of downtown, immediately adjacent to business areas, residential areas, city hall and a school.

19.904.6 Application Requirements

An application for approval of a community service use shall include the following:

A. Name, address and telephone number of applicant and/or property owner; on Application

B. Map number and/or subdivision block and lot; on Application

C. Narrative concerning the proposed request; on Application

D. Copy of deed, or other document showing ownership or interest in property. on Application owner, the written authorization from the owner for the application shall be submitted;

E. Vicinity map and F. Comprehensive plan and zoning designations; page 17

G. A map showing existing uses, structures, easements, and public utilities and showing pages 17 and 19

G.1 proposed development, placement of lot lines, etc. and H. Detailed plans for the specific project; pages 21 and 23

I. Any information required by other applicable provisions of local, state or federal law; see page 3 Pre Application Notes

K. Additional drawings, surveys or other material necessary to understand the proposed use may be required. All pages.

MAJOR MODIFICATION OF A COMMUNITY SERVICE USE SUMMARY

19.904.9 Specific Standards for Institutions—Public, Private, Religious, and Other Facilities Not Covered by Other Standards

A. Utilities, streets, or other improvements necessary for the public facility or institutional use shall be provided by the agency constructing the use. Complies. Refer to Civil drawing series.

B. When located in or adjacent to a residential zone, access should be located on a collector street if practicable. If access is to a local residential street, consideration of a request shall include an analysis of the projected average daily trips to be generated by the proposed use and their distribution pattern, and the impact of the traffic on the capacity of the street system which would serve the use. Uses which are estimated to generate fewer than 20 trips per day are exempted from this subsection. Complies. Site access is from SE Harrison Street, a "Major Road" per the Milwaukie Transportation System Plan.

C. When located in a residential zone, lot area shall be sufficient to allow required setbacks that are equal to a minimum of ⅔ the height of the principal structure. As the size of the structure increases, the depth of the setback must also increase to provide adequate buffering. Not applicable, not located in a residential zone.

D. The height limitation of a zone may be exceeded to a maximum height of 50 ft provided Subsection 19.904.9.C of this subsection is met. Complies. Proposed project does not exceed the zone's maximum height.

E. Noise-generating equipment shall be sound-buffered when adjacent to residential areas. Complies. Exterior noise-generating equipment to be isolated within the mechanical courtyard.

F. Lighting shall be designed to avoid glare on adjacent residential uses and public streets. Complies. Modern exterior light fixtures have been selected to minimize light pollution, especially toward the adjacent residences.

G. Where possible, hours and levels of operation shall be adjusted to make the use compatible with adjacent uses. Proposed operational hours are to remain the same as the existing facility: Open 7 days a week, Monday-Thursday 10:00am – 9:00pm, Friday-Saturday 10:00am – 6:00pm, Sunday 12:00pm – 6:00pm.

H. A spire on a religious institution may exceed the maximum height limitation. For purposes of this subsection, "spire" means a small portion of a structure that extends above the rest of the roofline, or a separate structure that is substantially smaller than the main structure and extends above the roofline of the main structure. "Spire" includes but is not limited to ornamental spires, bell towers, other towers, minarets, and other similar structures or projections. The number of spires on a religious institution property is not limited, so long as the spires remain only a small portion of the area of the structures. Not applicable. Proposed project is not a religious institution.

I. The minimum landscaping required for religious institutions is the lesser of 15% of the total site area and the percentage required by the underlying zone. Not applicable. Proposed project is not a religious institution.

J. Park-and-ride facilities may be encouraged for institutions along transit routes that do not have days and hours in conflict with weekday uses (e.g., religious institutions or fraternal organizations). Such uses may be encouraged to allow portions of their parking areas to be used for park-and-ride lots. No part of this project is being proposed as a park-and-ride facility. Majority of library use hours conflict with a park-and-ride facility use.

INSTITUTIONAL STANDARDS SUMMARY

INTENTIONALLY BLANK

CITY OF MILWAUKIE
PRE-APPLICATION CONFERENCE REPORT

PreApp Project ID #: 17-018PA

This report is provided as a follow-up to a meeting that was held on 9/21/2017 at 10:00am

Applicant Name: Tyler Nishitani
Company: Hacker Architects
Applicant 'Role': Architect
Address Line 1: 733 SW Oak St, Ste. 100
Address Line 2:
City, State Zip: Portland OR 97205

Project Name: Ledding Library Expansion
Description: Ledding Library expansion
ProjectAddress: 10660 SE 21st Ave
Zone: Downtown Mixed Use DMU
Occupancy Group: A-3 Section 303.4
ConstructionType: Minimun Type 1 construction per table 503
Use: Public (P)
Occupant Load: 200-400 Table 1004.1.2
AppsPresent: Scott Mannhard, Tyler Nishitani, Janelle Brannan, Sterling Rung, Amy Winterowd, Andrew Schilling
Staff Attendance: Denny Egner, Vera Kolias, Alma Flores, Chuck Eaton, Alex Roller, Samantha Vandagriff, Leila Aman, Matt Amos, Haley Fish, Katie Newell

BUILDING ISSUES

ADA: This building shall be fully ADA compliant. Chapter 11

Structural: A minimum of two unobstructed exits that are fully ADA complaint shall be provided. If the occupant load exceeds 500, a third exit shall be provided. Additional exits may be required based on travel distance and the common path of egress.

Mechanical:

Plumbing: A backflow device shall be provided at the connection of the fire line to protect the potable water system.

Plumb Site Utilities:

Electrical:

Notes: All code sections are from the 2014 Oregon Structural Specialty Code (OSSC).

Please note all drawings must be individually rolled. If the drawings are small enough to fold they must be individually folded.

FIRE MARSHAL ISSUES

Fire Sprinklers: Fire Sprinklers are required for any fire area over 12,000 sq ft for a type A-3 occupancy, or for an occupant load of 300 or more. 903.2.1.3

Fire Alarms: A manual fire alarm system shall be provided in any group A occupancy with a occupant load of 300 or more. Alarms may be required dependent on layout and final occupant load count. 907.2.1

Fire Hydrants:

Turn Arounds:

Addressing:

Fire Protection:

Fire Access:

Hazardous Mat.:

Fire Marshal Notes:

PUBLIC WORKS ISSUES

Water: A City of Milwaukie 8-inch water main on SE Harrison Street and on the west side of the property provides service to the proposed development. The water System Development Charge (SDC) is based on the size of water meter serving the property. The corresponding water SDC will be assessed with installation of a water meter. Water SDC credit will be provided based on the size of any existing water meter serving the property removed from service. The water SDC will be assessed and collected at the time the building permits are issued.

Sewer: A City of Milwaukie 8-inch wastewater main on SE Harrison Street provides service to the proposed development. Currently, the wastewater System Development Charge (SDC) is comprised of two components. The first component is the City's SDC charge of $1,100 and the second component is the County's SDC for treatment of $6,295 that the City collects and forwards to the County. Both SDC charges are per connection unit. The wastewater SDC will be assessed and collected at the time the building permits are issued.

Storm: Projects that develop or redevelop over 1000 sq feet of impervious surface are required to comply with stormwater management requirements for the new or redeveloped impervious area at the site. The City of Milwaukie has adopted the City of Portland 2016 Stormwater Management Manual for design of water quality facilities. Submission of a storm water management plan by a qualified professional engineer is required as part of the proposed development. The plan shall conform to Section 2 - Stormwater Design Standards of the City of Milwaukie Pubic Works Standards. The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-

Figure 19.304-5 First-Floor Build-To Lines; Subsection 19.304.5.D Street Setbacks/Build-To Lines; Subsection 19.304.5.I Transition Measures; Subsection 19.501.2 Yard Exceptions

Landscape: In the DMU:
a. When a building is set back from the sidewalk, at least 50% of the setback area shall provide usable open space, such as a public plaza or pedestrian amenities, that meets the standards of this subsection. Building setbacks cannot exceed the maximum setbacks established by Subsection 19.304.5.D and the frontage occupancy requirements of Subsection 19.304.5.E.
b. Usable open space shall be abutted on at least two sides by retail shops, restaurants, offices, services, or residences with windows and entrances fronting on the space.
c. Usable open space must be accessible at grade adjacent to the sidewalk.
d. Open space may be hardscaped or landscaped, including plazas, courtyards, gardens, terraces, outdoor seating, and small parks.

Parking: Minimum parking requirements per MMC 19.600 do not apply to the proposed project. All nonresidential uses are exempt from the off-street parking requirements in the DMU Zone. However, if off-street parking is provided, then the maximums and the rest of MMC 19.600 applies. It appears that the proposed number of parking spaces will exceed the maximum number. A parking quantity modification application will be required. Please see Application Procedures section for more details.

Transportation Review: Please see the Public Works notes for any information about the requirements of MMC 19.700

Application Procedures: The proposed work is a complete structural improvement of the Ledding Library and associated site improvements.

Land use applications required:
- Natural Resources (Type III)
- Major Modification of a Community Service Use (Type III)
- Downtown Design Review (Type III)
- Parking Modification (Type II)
- Comprehensive Plan text amendment - Scott Park (Type V)

Natural Resources (MMC 19.402): The regulations in Section 19.402 apply to all properties that contain, or are within 100 ft of a WQR and/or HCA as shown on the Milwaukie Natural Resource Administrative Map. The area of work contains both WQR and HCA and is entirely within 100 ft of the WQR. The proposed work exceeds 150 sf within the HCA and is within 100 ft of a WQR, and therefore is subject to Type III review and approval by the Planning Commission under Section 19.1006.

The application materials should include the following information:

•Information found required in 19.402.9 Construction Management Plans
•Demonstrate compliance with 19.402.11 Development Standards
•Type III Natural Resource review is subject to 19.402.12 General Discretionary Review.
o19.402.12.A describes the Impact Evaluation and Alternatives Analysis. The applicant is encouraged to review this section carefully. A thorough alternatives analysis will be required in order for the City to make a decision on the Natural Resources application.
o19.402.12.B identifies the approval criteria for Type III applications. Application materials should demonstrate how the proposal complies with the listed criteria. The applicant is encouraged to prepare the application with careful thought paid to the code direction for projects to first avoid, then minimize, then mitigate; a demonstration that no practicable alternative is possible is a key point in this application.

Community Service Uses (CSUs)

The library is a Community Service Use (CSU) in the Downtown Mixed-Use Zone. The proposed work constitutes a major modification to a CSU. Applications for major modification to existing CSUs are subject to Type III review as per MMC Subsection 19.904.3. The applicant is encouraged to review the procedures for review a CSU (19.904.5) and the application requirements (19.904.6). The proposal is subject to both the approval criteria for CSUs as well as the specific standards for Institutions (19.904.4 and 19.904.9). The procedures for Type III review are established in MMC Section 19.1006.

Downtown Design Review:

Downtown design review generally includes review of the proposed structure(s) and site improvements for compliance with applicable design standards. Per MMC 19.906.2.B, Type II development review does not apply to development proposals in the downtown zones as these zones have a separate downtown design review process.

Given the nature of the proposal, a civic building that would not likely meet most of the design standards in MMC 19.508, Downtown Site and Building Design Standards, this application would be reviewed through a Type III process.

Through Type III review, applicants address downtown design review requirements through a combination of satisfying certain design standards and, in instances where they elect not to utilize design standards, satisfying the purpose statement of the applicable standard or standards and the applicable design guidelines instead. The applicant is encouraged to focus the design on these aspects, rather than strict adherence to the design standards. The public hearing and decision will focus on whether or not the project satisfies the requirements of the applicable design guidelines.

Per MMC 19.508.5, variances cannot be granted for the design standards of Section 19.508. Projects that cannot meet the design standards in this section must be reviewed through a Type III downtown design review and demonstrate compliance with the Milwaukie Downtown Design Guidelines, pursuant to Section 19.907. A Type III review process would include a review by the Design and Landmark Committee in addition to the Planning Commission.

Applicant is encouraged to carefully review the following zoning code sections applicable to this project:

1. MMC 19.304 – Downtown zones
2. MMC 19.508 – Downtown site and design standards
3. MMC 19.600 – Off-street parking
4. MMC 19.907 – Downtown design review

Comprehensive Plan Text Amendment

The library is located in Scott Park, which has an adopted Master Plan from 1990 and is an ancillary document within the Comprehensive Plan. In the document the site is referred to as the “Scott Park/Ledding Library site”. The Scott Park Master Plan was adopted by City Council 1990 as an “Implementing Document of the Milwaukie Comprehensive Plan”. The Master Plan is quite specific and did not anticipate an expansion of the library as proposed. To move forward with the proposed project, the master plan will need to be amended to acknowledge the proposed expansion.

The City will initiate the Type V application either slightly ahead of, or concurrent with, the remainder of the land use applications.

development, including any existing storm water management facilities serving the development property. Also, the plan shall demonstrate compliance with water quality standards.
Applicant indicated that the groundwater was very shallow, in which case this site would be allowed to flow to the storm main on site. If applicant elects to direct flow to the creek then a downstream analysis would have to be completed. The downstream existing storm pipe system has been analyzed and determined to be insufficiently sized. A capital improvement project has been identified and is on the current Capital Improvement Plan. Private stormwater facilities require the submittal of an Operation and Maintenance plan that is approved by the City and recorded with Clackamas county.
The storm SDC is based on the amount of new impervious surface constructed at the site. One storm SDC unit is the equivalent of 2,706 square feet of impervious surface. The storm SDC is currently $845 per unit. The storm SDC will be assessed and collected at the time the building permits are issued. Sites that provide for quality for the entire site are eligible for a reduced monthly rate of their stormwater fee.

Street:

The proposed development fronts the north side of SE Harrison Street, an arterial street. The portion of Harrison fronting the proposed development has a right-of-way width of 60 feet and a paved width of 36 feet with curb and sidewalk improvements on both sides of the street.

Frontage:

Chapter 19.700 of the Milwaukie Municipal Code, hereafter referred to as “Code”, applies to partitions, subdivisions, and new construction.

Transportation Facility Requirements, Code Section 19.708, states that all rights-of-way, streets, sidewalks, necessary public improvements, and other public transportation facilities located in the public right-of-way and abutting the development site shall be adequate at the time of development or shall be made adequate in a timely manner.

SE HARRISON STREET
According to the Public Works Standards Public Area Requirements, the cross section for this portion of Harrison Street includes the following:

- 11-foot travel lanes
- 5-foot bike lane
- 10-foot curb tight sidewalks
- Street lighting

Applicant will be responsible for the construction of the above components on Harrison Street, from 21st Avenue to the west edge of SE 24th Avenue. Site is eligible for fee in lieu of construction (FILOC). Fee $1,002 per lineal foot (Section 6 of the Master Fee Schedule). See attached FILOC request form.

Right of Way:

The existing right-of-way on SE Harrison Street fronting the proposed development is of adequate width to accommodate the required improvements. If applicant elects to have parking on the north side of Harrison, then a 9-foot dedication will be required. Applicant will be responsible for dedication of the portion of taxlot 1800 that extends into the Harrison Street right-of-way to match the radius that has been established on taxlot 1600.

Driveways:

Without any dedication of 21st Avenue the improvement required on the Harrison Street frontage will be the construction of a driveway approach. This driveway approach will conform to public area requirements in depth. Code Section 12.16.040.A states that access to private property shall be permitted with the use of driveway curb cuts and driveways shall meet all applicable guidelines of the Americans with Disabilities Act (ADA). Driveway approaches shall be improved to meet the requirements of Milwaukie’s Public Works Standards.

Erosion Control:

Per Code Section 16.28.020(C), erosion control and grading permits are required prior to placement of fill, site clearing, or land disturbances, including but not limited to grubbing, clearing or removal of ground vegetation, grading, excavation, or other activities. Erosion control permit is required for any work results in the disturbance or exposure of soils exceeding five hundred square feet. The grading permit trigger is the movement of 10 cubic yards or more of material.

Code Section 16.28.020(E) states that an erosion control permit is required prior to issuance of building permits or approval of construction plans. Also, Section 16.28.020(B) states that an erosion control plan that meets the requirements of Section 16.28.030 is required prior to any approval of an erosion control permit.

Traffic Impact Study:

The Engineering director has determined that a traffic impact study will not be required.

PW Notes:

TRANSPORTATION SDC
The Transportation SDC will be based on the increase in trips generated by the new use per the Trip Generation Handbook from the Institute of Transportation Engineers. The SDC for transportation is $1,921 per trip generated. Credits will be given for any demolished structures, which shall be based upon the existing use of the structures.

PARKS & RECREATION SDC
The parks & recreation System Development Charge (SDC) is triggered when application for a building permit on a new dwelling is received. Currently, the commercial parks and recreation SDC is $60 per employee. Credit is applied to any demolished structures and is based upon the existing use of the structures. The parks and recreation SDC will be assessed and collected at the time the building permits are issued.

REQUIREMENTS AT FINAL PLAT
-Utility easement requirements are covered in the Milwaukie Public Works standards for each utility. Generally, a minimum 15-foot wide easement is required. Multiple utilities may be in one easement.
-If fee in lieu of construction option is selected, then fees must be paid before building permits are approved. If applicant elects to construct the public improvements, then the following is the public improvement process:
•Engineered plans for public improvements (street, sidewalk, and utility) are to be submitted and approved prior to start of building construction., Full-engineered design is required along the frontage of the proposed development.

•Improvements will be completed under a right-of-way permit. The applicant shall pay an inspection fee of 5.5% of the cost of public improvements prior to start of construction.

•The applicant/contractor shall provide a payment and performance bond for 100% of the cost of the public improvements prior to the start of construction.

•The applicant/contractor shall provide a final approved set of Mylar “As Constructed” drawings to the City of Milwaukie prior to the final inspection.

•The applicant/contractor shall provide a maintenance bond for 100% of the cost of the public improvements prior to the final building inspection.

PLANNING ISSUES

Setbacks:

In the Downtown Mixed Use (DMU) Zone: Minimum street setback = 0 feet; maximum street setback = 10-20 feet. Please review the following sections in the zoning code for additional information:

Parking Modification

MMC 19.605.2 provides the process and approval criteria for applications seeking a modification from the maximum allowed parking as calculated in Table 19.605.1. The approval criteria are found in 19.605.2.C.1 (reasonableness) and 19.605.2.3 (specific to the site and use). The applicant is encouraged to include parking for Scott Park as part of the description of the use of the site in order to determine needed off-street parking for the library site.

All applications may be filed together and they will be reviewed concurrently. A concurrent application review consolidates the review of multiple applications into a single review process. The applications shall be processed according to the highest numbered review type required for any part of the application. For example, a concurrent review of a Type II review and a Type III review would be processed through a Type III review. A single decision shall be issued that includes findings for all of the applications that are part of the concurrent review.
The applicant shall submit an application form and application fee for each application type being reviewed. The application shall contain the information and documentation required for each individual application type.

Application fees are based on the current fee schedule. Fees are typically updated on July 1st of each year. Current application fees are as follows: Type I = $200; Type II = $1,000; Type III = $2,000. Note: as the City will initiate the Type V application, no fees will be charged. For concurrent applications, a 25% discount is applied (no discount for the most expensive application).

For the City's initial review, the applicant should submit 5 complete copies of the application, including all required forms and checklists. A determination of the application's completeness will be issued within 30 days. If deemed incomplete, additional information will be requested. If deemed complete, additional copies of the application may be required for referral to other departments, the Historic Milwaukie Neighborhood District Association (NDA), and other relevant parties and agencies. City staff will inform the applicant of the total number of copies needed.

For Type III review, once the application is deemed complete, a public hearing with the Planning Commission will be scheduled. Staff will determine the earliest available date that allows time for preparation of a staff report (including a recommendation regarding approval) as well as provision of the required public notice to property owners and residents within 300 ft of the subject property, at least 20 days prior to the public hearing. A sign giving notice of the application must be posted on the subject property at least 14 days prior to the hearing.

Type III applications are quasi-judicial in nature and are decided by the Planning Commission at a public hearing. The Downtown Design Review application includes a meeting with the DLC, which will scheduled to occur prior to the first Planning Commission hearing so that the DLC may review the application and submit formal comments for consideration.

The Planning Commission hears land use applications on the second and fourth Tuesdays of every month, and completed applications need to be submitted to the Planning Department no later than 45 days prior to the target Planning Commission hearing. In general, staff recommends that applications be submitted one to two weeks before the 45-day deadline in order to ensure that there is time to make the applications complete if they are initially deemed incomplete. Once the Planning Commission renders a decision, there is a fifteen calendar-day appeal period. Permits submitted during the appeal period may be reviewed but are not typically approved until the appeal period has ended.

Prior to submitting the application, the applicant is encouraged to present the project at a regular meeting of the Historic Milwaukie NDA.

Natural Resource Review: The project area includes a designated Water Quality Resource (WQR) area and a Habitat Conservation Area (HCA), extending from the creek up onto the area of work. The proposed project will disturb both the WQR and HCA and is subject to Type III Natural Resources review.

Please refer to application procedures above.

Lot Geography: The subject property is an irregular shaped lot with frontage on Harrison Street and 21st Avenue.

Planning Notes: The applicant submitted questions with the application materials. Select responses are as follows:

1.Is the proposed pedestrian path along the west edge of the pond approvable? Subject to the required Natural Resources review, the path is approvable. Staff notes that 19.402.4.17 describes the requirements for the establishment of trails in the WQR or HCA that would be exempt from review.
2.Regarding the requirement for loading spaces, the library has noted that the size of a required loading space in 19.608.3, is much larger than the size the library needs. A variance, in this case, would not be required, as the Planning Director has the authority to determine whether or not to require off-street loading spaces. Given the nature of the proposed use, the alternate size loading space is acceptable without a variance.

Neighboring properties within 300 ft of the site will receive notice of the proposed development and may submit comments or testify at the hearing. As noted above, it is recommended that the applicant discuss the project with the Historic Milwaukie NDA to gauge support for the project. The NDA's webpage is on-line at http://www.milwaukieoregon.gov/citymanager/historic-milwaukie-nda. Their meetings are held at 6:30pm on the second Monday of the month at Libbie's Restaurant at 11056 SE Main St. The NDA Chairperson is Ray Bryan (503-794-9354, ray1bryan2@gmail.com). Please contact the Chair to coordinate a meeting to discuss the proposal.

The preapplication conference is valid for purposes of submitting future land use applications as described in MMC 19.1002.4. A preapplication conference is valid for 2 years.

The full zoning code is available online at:
http://www.qcode.us/codes/milwaukie/view.php?topic=19&frames=on

ADDITIONAL NOTES AND ISSUES

County Health Notes:

Other Notes:

This is only preliminary preapplication conference information based on the applicant's proposal and does not cover all possible development scenarios. Other requirements may be added after an applicant submits land use applications or building permits. City policies and code requirements are subject to change. If you have any questions, please contact the City staff that attended the conference (listed on Page 1). Contact numbers for these staff are City staff listed at the end of the report.

Sincerely,

City of Milwaukie Development Review Team

BUILDING DEPARTMENT
Samantha Vandagriff - Building Official - 503-786-7611
Vacant - Permit Specialist - 503-786-7613

ENGINEERING DEPARTMENT
Chuck Eaton - Engineering Director - 503-786-7605
Richard Nasiombe - Associate Enginer - 503-786-7694
Alex Roller - Engineering Tech II - 503-786-7695

COMMUNITY DEVELOPMENT DEPARTMENT
Alma Flores - Comm. Dev. Director - 503-786-7652
Leila Aman - Development Manager - 503-786-7616
Alicia Martin - Admin Specialist - 503-786-7600

PLANNING DEPARTMENT
Dennis Egner - Planning Director - 503-786-7654
David Levitan - Senior Planner - 503-786-7627
Brett Kelver - Associate Planner - 503-786-7657
Vera Kolias - Associate Planner - 503-786-7653
Mary Heberling - Assistant Planner - 503-786-7658

CLACKAMAS FIRE DISTRICT
Mike Boumann - Lieutenant Deputy Fire Marshal - 503-742-2673
Matt Amos - Fire Inspector - 503-742-2661

Clackamas County Fire District #1
Fire Prevention Office

E-mail Memorandum

To: City of Milwaukie Planning Department

From: Matt Amos, Fire Inspector, Clackamas Fire District #1

Date: 9/25/2017

Re: Ledding Library 10660 SE 21st Ave, 17-018PA

This review is based upon the current version of the Oregon Fire Code (OFC), as adopted by the Oregon State Fire Marshal's Office. The scope of review is typically limited to fire apparatus access and water supply, although the applicant must comply with all applicable OFC requirements. When buildings are completely protected with an approved automatic fire sprinkler system, the requirements for fire apparatus access and water supply may be modified as approved by the fire code official. The following items should be addressed by the applicant:

COMMENTS:

A Fire Access and Water Supply plan is required for subdivisions and commercial buildings over 1000 square feet in size or when required by Clackamas Fire District #1. The plan shall show fire apparatus access, fire lanes, fire hydrants, fire lines, available fire flow, FDC location (if applicable), building square footage, and type of construction. The applicant shall provide fire flow tests per NFPA 291, and shall be no older than 12 months. Work to be completed by experienced and responsible persons and coordinated with the local water authority.

Access:

1) Provide address numbering that is clearly visible from the street.
2) No part of a building may be more than 150 feet from an approved fire department access road.
3) Provide an approved turnaround for dead end access roads exceeding 150 feet in length.
4) Fire Department turnarounds shall meet the dimensions found in the fire code applications guide.

OVERLAY ZONE STANDARDS
19.508 DOWNTOWN SITE AND BUILDING DESIGN STANDARDS

The design standards contained in this section are intended to encourage building design and construction with durable, high-quality materials. The design standards will support the development of a cohesive, attractive, and safe downtown area and encourage private investment. The design standards do not prescribe a particular building or architectural style.

19.508.1 PURPOSE

All buildings that meet the applicability provisions in Subsection 19.508.2 shall meet the following design standards. An architectural feature may be used to comply with more than one standard.

19.508.4 BUILDING DESIGN STANDARDS

A. Building Façade Details

1. Purpose: To provide cohesive and visually interesting building façades in the downtown, particularly along the ground floor.

RESPONSE: ELECTIVELY NOT APPLICABLE - PER MILWAUKIE DOWNTOWN DESIGN GUIDELINES PERTAINING TO ARCHITECTURAL CONTRAST:

"CONTRAST IS ESSENTIAL TO CREATING AN INTERESTING URBAN ENVIRONMENT. USED WISELY, CONTRAST CAN PROVIDE FOCUS AND DRAMA, ANNOUNCE A SOCIALLY SIGNIFICANT USE, HELP DEFINE AN AREA AND CLARIFY HOW THE DOWNTOWN IS ORGANIZED. ... CONTRAST EMPLOYED AT A LARGE SCALE SHOULD BE RESERVED EXCLUSIVE FOR CIVIC BUILDINGS"

2. Nonresidential and Mixed-Use Buildings - The following standards apply only to nonresidential and mixed-use buildings.

a. Vertical Building Façade
Nonresidential and mixed-use buildings 2 stories and above shall provide a defined base, middle, and top.

RESPONSE: NOT APPLICABLE - PROJECT IS ONE STORY

(1) Base - The base extends from the sidewalk to the bottom of the second story or the belt course/string course that separates the ground floor from the middle of the building. The building base shall be defined by providing all of these elements:
(a) The street-facing ground floor shall be divided into distinct architectural bays that are no more than 30 ft on center. For the purpose of this standard, an architectural bay is defined as the zone between the outside edges of an engaged column, pilaster, post, or vertical wall area.
(b) The building base shall be constructed of brick, stone, or concrete to create a "heavier" visual appearance.
(c) Weather protection that complies with the standards of Subsection 19.508.4.C.
(d) Windows that comply with the standards of Subsection 19.508.4.E.
(2) Middle - The middle of a building extends from the top of the building base to the ceiling of the highest building story. The middle is distinguished from the top and base of the building by use of building elements. The middle of the building shall be defined by providing all of the following elements:
(a) Windows that comply with the standards of Subsection 19.508.4.E.
(b) One of the following elements:
(i) A change in exterior cladding, and detailing and material color between the ground floor and upper floors. Differences in color must be clearly visible.
(ii) Either street-facing balconies or decks at least 2 ft deep and 4 ft wide, or a 6-ft minimum building step-back on the third floor or higher, for at least 25% of the length of the building.
(c) A change in wall plane of not less than 24 in. deep and 24 in. wide. Breaks may include but are not limited to an offset, recess, window reveal, pilaster, pediment, coursing, column, marquee, or similar architectural feature.
(3) Top - The top of the building extends from the ceiling of the uppermost floor to the highest vertical point on the roof of the building, and it is the roof form/element at the uppermost portion of the façade that visually terminates the façade. The top of the building shall provide roofs that comply with the standards of Subsection 19.508.4.F.

19.508.4 BUILDING DESIGN STANDARDS CONTINUED

b. Horizontal Building Façade
(1) Horizontal datum lines—such as belt lines, cornices, or upper floor windows—shall line up with adjacent façades if applicable.

RESPONSE: BECAUSE OF ITS CIVIC USE, THE PROPOSED DESIGN USES "*LARGE SCALE ARCHITECTURAL CONTRAST*" TO DIFFERENTIATE ITSELF FROM NEIGHBORING BUILDINGS.

(2) Significant breaks shall be created along building façades at least every 150 linear ft by either setting the façade back at least 20 ft or breaking the building into separate structures. Breaks shall be at least 15 ft wide and shall be continuous along the full height of the building. The area or areas created by this break shall meet the standards of Subsection

RESPONSE: DOES NOT COMPLY. THE WEST ELEVATION IS BROKEN INTO TWO DISTINCT FACADES AT THE MAIN ENTRY. THE GLASS AT THE ENTRY PROVIDES A FULL BUILDING HEIGHT BREAK. REFER TO BUILDING ELEVATIONS.

3. Residential Buildings
a. Stand-alone multifamily residential buildings are subject to the objective standards of Subsection 19.505.3.D.6 Building Façade Design, with the exception of the private and public open space requirements of Subsections 19.505.3.D.1 and 2. The open space requirements of Subsection 19.508.5 apply to stand-alone multifamily residential buildings in downtown.
b. Rowhouses are subject to the objective standards of Subsection 19.505.5 Rowhouses, as revised by Subsection 19.304.3.B.
c. Live/work units are subject to the objective standards in Subsection 19.505.6 Live/Work Units.

RESPONSE: NOT APPLICABLE - PROJECT IS NOT RESIDENTIAL

19.508.4 BUILDING DESIGN STANDARDS CONTINUED

B. Corners

1. Purpose: To create a strong architectural statement at street corners and establish visual landmarks and enhance visual variety.

2. Nonresidential or Mixed-Use Buildings - Nonresidential or mixed-use buildings at the corner of two public streets—or at the corner of a street and a public area, park, or plaza—shall incorporate two of the following features (for the purposes of this standard an alley is not considered a public street):

a. The primary entry to the building located within 5 ft of the corner.

RESPONSE: DOES NOT COMPLY. FOR PROGRAMMATIC DEMANDS, THE BUILDING'S PRIMARY ENTRANCE IS LOCATED MID-BLOCK, NORTH OF THE INTERSECTION OF SE HARRISON AND 21ST. REFER TO THE "CORNER DOORS" WRITTEN RESPONSE WITHIN THE MILWAUKIE DOWNTOWN GUIDELINES RESPONSES BELOW.

b. A prominent architectural element, such as increased building height or massing, a cupola, a turret, or a pitched roof at the corner of the building or within 20 ft of the corner of the building.

RESPONSE: COMPLIES. THE UNDULATING ROOF FORM PITCHES UPWARD TOWARD THE SOUTHWEST CORNER OF THE SITE, CREATING A TALLER BUILDING VOLUME AT THE CORNER FACING CITY HALL AND THE REST OF DOWNTOWN.

c. The corner of the building cut at a 45° angle or a similar dimension "rounded" corner.

RESPONSE: SOMEWHAT COMPLIANT. THE PROPOSED BUILDING FEATURES BUILDING "CUT," THAT IS AT A SHALLOWER ANGLE (12.3 DEG.), BUT THE ANGLE STRETCHES ACROSS THE ENTIRE SOUTH FACADE, NOT SIMPLY THE SW CORNER. THIS IS ANOTHER EXAMPLE OF *"ARCHITECTURAL CONTRAST."*

d. A combination of special paving materials; street furnishings; and, where appropriate, plantings, in addition to the front door.

RESPONSE: COMPLIES. A BROAD EXTERIOR CANOPY, IN CONJUNCTION WITH (2) LARGE PLANTING AREAS WITH INTEGRAL SEATING, FORM A WELCOMING AND MEMORABLE ENTRANCE GATEWAY TO THE LIBRARY SITE. THE CANOPY EXTENDS ALL THE WAY TO THE PRIMARY MID-BLOCK ENTRANCE CREATING A SHELTERED PATH FOR PATRONS.

C. Weather Protection

1. Purpose

Create an all-season pedestrian environment.

2. Weather Protection Required - All buildings shall provide weather protection for pedestrians as follows:

a. Minimum Weather Protection Coverage

(1) All ground-floor building entries shall be protected from the weather by canopies or recessed behind the front building façade at least 3 ft.

RESPONSE: COMPLIES. A BROAD CANOPY (11' TO 13' DEEP) PROTECTS PATRONS ALONG THE PRIMARY PEDESTRIAN PATH FROM HARRISON TO THE LIBRARY'S MAIN ENTRANCE, WHICH PROTECTS BOTH THE PUBLIC AND STAFF/DELIVERY ENTRANCES.

19.508.4 BUILDING DESIGN STANDARDS CONTINUED

(2) Permanent awnings, canopies, recesses, or similar weather protection shall be provided along at least 50% of the ground-floor elevation(s) of a building where the building abuts a sidewalk, civic space, or pedestrian accessway.

RESPONSE: COMPLIES. OF THE COMBINED ~351' OF FACADE FRONTING SIDEWALK (TO THE SOUTH ALONG SE HARRISON AND TO THE WEST SE 21ST *DRIVEWAY*), ~193' IS COVERED BY A BROAD CANOPY, WHICH EQUATES TO 85% OF FRONTAGE SIDEWALKS BEING PROTECTED.

(3) Weather protection used to meet the above standard shall extend at least 4 ft, and no more than 6 ft, over the pedestrian area, and a maximum of 4 ft into the public right-of-way. Balconies meeting these dimensional requirements can be counted toward this requirement.

RESPONSE: THE PROPOSED DESIGN USES "*LARGE SCALE ARCHITECTURAL CONTRAST*" TO DIFFERENTIATE ITSELF FROM OTHER DOWNTOWN PEDESTRIAN AREAS. THE PROPOSED PEDESTRIAN AREA ON THE WEST SIDE OF THE BUILDING HAS BEEN DESIGNED TO BE SIGNIFICANTLY LARGER THAN A STANDARD DOWNTOWN SIDEWALK INDICATING ITS CIVIC SCALE, APPROPRIATE FOR THE ENTRANCE TO THE LIBRARY AS WELL AS THE PRIMARY ACCESSWAY TO SCOTT PARK BEYOND. IN AN EFFORT TO REINFORCE THE CIVIC SCALE AND PROTECT PARTONS ARRIVING BY VEHICLE, THE CANOPY HAS BEEN EXTENDED BEYOND THE PRESCRIBED MAXIMUM 6 FT. NO PART OF THE CANOPY EXTENDS INTO THE PUBLIC RIGHT OF WAY.

(4) In addition, the above standards do not apply where a building has a ground-floor dwelling, as in a mixed-use development or live-work building, and the dwelling entrance has a covered entrance.

RESPONSE: NOT APPLICABLE, NO PROPOSED DWELLING UNITS.

b. Weather Protection Design - Weather protection shall comply with applicable building codes and shall be designed to be visually compatible with the architecture of a building. Where applicable, weather protection shall be designed to accommodate pedestrian signage (e.g., blade signs) while maintaining required vertical clearance.

RESPONSE: COMPLIES. *REFER TO BUILDING ELEVATION DRAWINGS*

D. Exterior Building Materials

1. Purpose - To encourage the construction of attractive buildings with materials that evoke a sense of permanence and are compatible with downtown Milwaukie and the surrounding built and natural environment.

RESPONSE: COMPLIES. EXTERIOR CLADDING OF THE PROPOSED BUILDING IS COMPRISED PRIMARILY OF SEMI-TRANSPARENT STAINED, VERTICALLY-ORIENTED CEDAR SIDING, FIBERGLASS-FRAMED, INSULATED GLAZING UNITS, AND SOME DARK GREY, MATTE-FINISH PAINTED SHEET METAL PANELS AND METAL TRIM. ALTHOUGH WE WILL UTILIZE HIGH-PERFORMANCE AND DURABLE EXTERIOR WALL ASSEMBLIES, BEING ON THE EDGE OF THE DESIGNATED DOWNTOWN AREA, WE'RE PROPOSING THE USE OF WOOD SIDING TO MORE CLOSELY RELATE THE BUILDING TO THE ADJACENT NATURAL AREA TO THE EAST AND ACT AS A TRANSITION FROM A HARDENED DOWNTOWN PALETTE TO A SOFTER, MORE HUMANE RESIDENTIAL PALETTE.

19.508.4 BUILDING DESIGN STANDARDS CONTINUED

2. Exterior Wall Standards - The following standards are applicable to the street-facing façades of all new buildings. For the purposes of this standard, street-facing façades are those abutting streets, courtyards, and/or public squares in all of the downtown. Table 19.508.4.D specifies the primary, secondary, and prohibited material types referenced in this standard.

a. Buildings shall utilize primary materials for at least 65% of each applicable building façade.

b. Secondary materials are permitted on no greater than 35% of each applicable building façade.

c. Accent materials are permitted on no greater than 10% of each applicable building façade as trims or accents (e.g. flashing, projecting features, ornamentation, etc.).

d. Buildings shall not use prohibited materials on any exterior wall, whether or not it is a street-facing façade.

RESPONSE: COMPLIES. PROJECT UTILIZES, WOOD SIDING AND GLAZING AS PRIMARY MATERIALS WITH LESS THAN 25% SHEET METAL PANELING, GUTTERS AND TRIM AS A SECONDARY MATERIAL.

E. Windows and Doors

1. Purpose - To enhance street safety and provide a comfortable pedestrian environment by adding interest to exterior façades, allowing for day lighting of interior space, and creating a visual connection between interior and exterior spaces.

2. Main Street - For block faces along Main St, 50% of the ground-floor street wall area must consist of openings; i.e., windows or glazed doors. The ground-floor street wall area is defined as the area up to the finished ceiling height of the space fronting the street or 15 ft above finished grade, whichever is less.

RESPONSE: NOT APPLICABLE. PROJECT DOES NOT FRONT MAIN STREET.

3. Other Streets - For all other block faces, the exterior wall(s) of the building facing the street/sidewalk must meet the following standards:

a. 40% of the ground-floor street wall area must consist of openings; i.e., windows or glazed doors.

RESPONSE: THE SOUTH FACADE AFFRONTING HARRISON IS COMPLIANT (44% GLAZING). THE WEST FACADE USES "*LARGE SCALE ARCHITECTURAL CONTRAST*" TO REINFORCE THE DESIGN CONCEPT OF EMPHASIZING A STRONG CONNECTION TO THE NATURAL AREAS ON THE EAST SIDE OF THE BUILDING. MORE OPENINGS ARE PROVIDED ON THE EAST SIDE TO ALLOW FOR VIEWS OF THE POND AREA FROM THE PUBLIC OPEN LIBRARY AREAS. FEWER OPENINGS ARE PROVIDED ON THE WEST SITE TO LIMIT SOLAR THERMAL GAIN AND TO RELATE TO THE LESS PUBLIC (RESIDENTIAL) NATURE OF THE SPACES ALONG THAT FACADE.

b. Along McLoughlin Blvd the required coverage is 30%.

RESPONSE: NOT APPLICABLE, PROJECT DOES NOT AFFRONT McLOUGHLIN

19.508.4 BUILDING DESIGN STANDARDS CONTINUED

4. Upper Level - Along all block faces, the following standards are applicable on the upper level building façades facing a street or public space.

a. Upper building stories shall provide a minimum of 30% glazing. For the purposes of this standard, minimum glazing includes windows and any glazed portions of doors.

b. The required upper-floor window/door percentage does not apply to floors where sloped roofs and dormer windows are used.

c. A minimum of 60% of all upper-floor windows shall be vertically oriented. This vertical orientation applies to grouped window arrays as opposed to individual windows.

RESPONSE: NOT APPLICABLE. BUILDING DOES NOT HAVE UPPER LEVELS

5. General Standards

a. Windows shall be designed to provide shadowing. This can be accomplished by recessing windows 4 in into the façade and/or incorporating trim of a contrasting material or color.

RESPONSE: COMPLIES. *REFER TO DETAILS*

b. All buildings with nonresidential ground-floor windows must have a visible transmittance (VT) of 0.6 or higher.

RESPONSE: COMPLIES.

c. Doors and/or primary entrances must be located on the street facing block faces and must be unlocked when the business located on the premises is open. Doors/entrances to second-floor residential units may be locked.

RESPONSE: COMPLIES.

d. The bottom edge of windows along pedestrian ways shall be constructed no more than 30 in above the abutting walkway surface.

RESPONSE: COMPLIES IN THE MAJORITY OF LOCATIONS. THE EXCEPTION OCCURS WHEN THE FINISH FLOOR HEIGHT INSIDE THE BUILDING IS SIGNIFICANTLY HIGHER THAN THE ABUTTING WALKWAY SURFACE (40" AT ITS LARGEST DISPARITY). THIS DISPARITY IS A DIRECT RESULTANT OF A DESIGN PRIORITY TO MAXIMIZE UNIVERSAL SITE AND BUILDING ACCESSIBILITY.

e. Ground-floor windows for nonresidential buildings shall allow views into storefronts, working areas, or lobbies. No more than 50% of the window area may be covered by interior furnishings including, but not limited to, curtains, shades, signs, or shelves.

RESPONSE: COMPLIES.

f. Signs are limited to a maximum coverage of 20% of the required window area.

RESPONSE: COMPLIES. *REFER TO SIGNAGE DRAWINGS / DETAILS.*

19.508.4 BUILDING DESIGN STANDARDS CONTINUED

6. Prohibited Window Elements - For all building windows facing streets, courtyards, and/or public squares in the downtown, the following window elements are prohibited:

a. Reflective, tinted, or opaque glazing.
b. Simulated divisions (internal or applied synthetic materials).
c. Exposed, unpainted metal frame windows.

RESPONSE: COMPLIES.

F. Roofs and Rooftop Equipment

1. Purpose - To create a visually interesting condition at the top of the building that enhances the quality and character of the building.

2. Roof Forms

a. The roof form of a building shall follow one (or a combination) of the following forms:

(1) Flat roof with parapet or cornice.
(2) Hip roof.
(3) Gabled roof.
(4) Dormers.
(5) Shed roof.

RESPONSE: THE ROOF DESIGN DESIGN USES "*LARGE SCALE ARCHITECTURAL CONTRAST*" TO DIFFERENTIATE THE BUILDING FROM ADJACENT BUILDINGS.

b. All flat roofs, or those with a pitch of less than 4/12, shall be architecturally treated or articulated with a parapet wall that projects vertically above the roofline at least 12 in and/or a cornice that projects from the building face at least 6 in.

RESPONSE: THE PROPOSED DESIGN USES "*LARGE SCALE ARCHITECTURAL CONTRAST*" TO DIFFERENTIATE ITSELF FROM ADJACENT BUILDINGS. THE UNDULATING SHED ROOF FORM HAS VARYING SLOPES, THE MAJORITY OF WHICH ARE FLATTER THAN 4:12. NO PARAPET IS USED TO REINFORCE THE SCULPTURAL FORM OF THE BUILDING AND TO MAXIMIZE THE VISIBILITY OF THE ROOF-MOUNTED SOLAR PV PANELS.

c. All hip or gabled roofs exposed to view from adjacent public or private streets and properties shall have a minimum 4/12 pitch.

RESPONSE: NOT APPLICABLE. THE BUILDING DOES NOT UTILIZE A GABLED OR HIP ROOF FORM.

MILWAUKIE DOWNTOWN DESIGN GUIDELINES

MILWAUKIE CHARACTER GUIDELINES

A. Milwaukie Character Guidelines - These guidelines address Milwaukie's unique "sense of place," its special quality and personality. People's image of Milwaukie is that of an All-American riverfront town which is hospitable and family oriented. The guidelines address what gives Milwaukie this feeling, this "character" as a unique collection of spaces and buildings, not simply a group of individual projects that could be anywhere. The Milwaukie Character Guidelines consist of the following sections:

1. *Reinforce Milwaukie's Sense of Place: Strengthen the qualities that make Milwaukie a unique place.*

RESPONSE: COMPLIES. REFER TO THE *PROJECT DESIGN NARRATIVE* FOR A BROADER EXPLANATION

- ORIENTATION AND CONNECTION TO THE WATER
- RESPECT OF NATURAL RESOURCES
- HIGH ENERGY PERFORMANCE + ON-SITE GENERATION
- REINFORCEMENT OF URBAN EDGES
- HUMBLE HUMAN SCALE
- NATURAL MATERIALITY
- LARGE SPACES DESIGNED SPECIFICALLY FOR CHILDREN AND TEENS

2. *Integrate the Environment: Building design should build upon environmental assets.*

RESPONSE: COMPLIES. THE BUILDING DESIGN TAKES ADVANTAGE OF ITS LOCATION ON THE BANK OF SPRING CREEK POND, FLANKING THE EAST SIDE OF THE SITE.

- LARGE GLAZING AREAS ON THE EAST AND NORTH FACADES OPEN THE LIBRARY UP TO THE VERDANT NATURAL AREAS SURROUNDING SPRING CREEK POND AND SCOTT PARK.
- EXTERIOR WINDOWS AND INTERIOR RELIGHTS HAVE BEEN ALIGNED TO ALLOW FOR VIEWS ALL THE WAY THROUGH THE BUILDING FROM THE PARKING LOT TO THE TREE CANOPY ON THE EAST
- RAINWATER MANAGEMENT FEATURES PUT THE NATURAL FILTRATION PROCESS ON DISPLAY

3. *Promote Linkages to Horticultural Heritage: celebrate Milwaukie's heritage of beautiful green space.*

RESPONSE: COMPLIES. NEW LANDSCAPED AREAS UTILIZE PLANT SELECTIONS THAT HONOR MILWAUKIE'S HORTICULTURE HERITAGE

4. *Establish or Strengthen Gateways: Projects should use arches, pylons, arbors, or other transitions to to mark special entries and/or borders between public and private spaces.*

RESPONSE: COMPLIES. A LARGE, CIVICALLY-SCALED CANOPY, ACTS AS THE PRIMARY GATEWAY TO THE LIBRARY ENTRANCE

- CANOPY CREATES A SENSE OF ARRIVAL AT THE PROMINENT SOUTHWEST CORNER OF THE SITE, SHELTERING PEDESTRIANS TO THE LIBRARY ENTRANCE.
- BECAUSE THERE IS A PEDESTRIAN WAY CONNECTING MAIN STREET TO THE WEST SIDE OF THE LIBRARY SITE (ALIGNED WITH SCOTT ST.), A CROSSWALK AND SIDEWALK, FLANKED BY LANDSCAPED AREAS HAS BEEN PROVIDED, LEADING DIRECTLY TO THE LIBRARY ENTRANCE.

5. *Consider View Opportunities: Building designs should maximize views of natural features or public spaces.*

RESPONSE: COMPLIES. BEYOND THE PRIMARY CONCEPT TO VISUALLY CONNECT THE LIBRARY'S MAIN PUBLIC SPACES TO THE NATURAL AREA SURROUNDING SPRING CREEK POND, A NUMBER OF OCCUPIABLE SPACES HAVE BEEN CAREFULLY LOCATED ALONG THE PERIMETER OF THE BUILDING TO TAKE ADVANTAGE OF PARTICULAR VIEWS OF THE SURROUNDING LANDSCAPE AND URBANSCAPE.

- ACROSS FROM THE MAIN ENTRY FOYER, THE POINT OF THE CHEVRON, HAS BEEN POSITIONED TO ALIGN WITH AN EXISTING BREAK BETWEEN LARGE OAK TREES, AFFORDING EXCEPTIONAL VIEWS OF THE POND AND IMPROVED DAYLIGHTING
- IN THE SOUTH EAST CORNER OF THE BUILDING, GLAZING AND SEATING ALLOWS FOR VIEWS OF THE ADJACENT, PROMINENT LARGE OAK.
- IN THE SOUTH WEST CORNER, THE LARGE GLAZING AND SEATING AREAS ARE ORIENTED TO CREATE A VIEW TOWARDS CITY HALL AND THE REST OF DOWNTOWN WHILE SIMULTANEOUSLY CREATING AN ACTIVE URBAN EDGE FOR THE LIBRARY SITE

6. *Consider Context: A building should strengthen and enhance the characteristics of its setting, or at least maintain key unifying patterns.*

RESPONSE: COMPLIES. THE IMMEDIATE SITE CONTEXT CONSISTS OF (4) DISTINCT CONDITIONS THAT HAVE IMPACTED THE DESIGN OF THE BUILDING'S MASSING, PROGRAMMING AND FENESTRATION LAYOUT. BECAUSE OF ITS CIVIC USE AND UTILIZATION OF LARGE SCALE ARCHITECTURAL CONTRAST, HOW THE BUILDING RELATES TO THE BUILT CONTEXT, DIFFERS FROM OTHER MORE COMMON BUILDING USES.

- SOUTH: *URBAN* - THE SOUTH SIDE OF THE SITE, FRONTING HARRISON STREET AND JUST A BLOCK OFF OF MAIN STREET, IS THE MOST PROMINENT EDGE OF THE PROPERTY. IN CONTRAST TO THE EXISTING LIBRARY'S SIGNIFICANT SETBACK FROM HARRISON AND BUFFERING LANDSCAPE, THE IMPROVED LIBRARY BOLDLY OCCUPIES THE SOUTH WEST CORNER OF THE SITE AND FEATURES LARGE WINDOWS REVEALING A CAFE-STYLE, READING ROOM. THE GOAL IS TO CREATE A HIGHLY-VISIBLE, INVITING SYMBOL OF THE LIBRARY WITH THIS ACTIVE URBAN SPACE. *REFER TO SOUTH RENDERINGS.*
- WEST: *MID-RISE RESIDENTIAL, LIVE-WORK, DRIVEWAY, AND PARKING* - OUT OF RESPECT FOR THE PRIVACY FOR THE RESIDENTIAL PROPERTIES AND IN SUPPORT OF THE CONCEPT OF HAVING THE INTERIOR PUBLIC SPACES OPEN UP TO THE NATURAL SITE RESOURCES RATHER THAN THE PARKING LOT, THE WEST FACADE HAS BEEN CRAFTED TO BE MORE OPAQUE, WHICH ALSO HELPS TO LIMIT AFTERNOON HEAT GAIN. TO AVOID CREATING AN INHOSPITABLE PEDESTRIAN ENTRYWAY, BUILDING FENESTRATION HAS BEEN ORCHESTRATED TO PROVIDE SLICES ALL THE WAY THROUGH THE BUILDING, AFFORDING INTRIGUING VIEWS FROM THE WESTERN SIDEWALK THROUGH TO THE TREE CANOPY ON THE EAST. *REFER TO THE BUILDING ELEVATIONS AND "VIEWS THROUGH FLOOR PLAN DIAGRAM".*
- NORTH: *SCOTT PARK AND THE AMPHITHEATER* - ALTHOUGH THE AMPHITHEATER AND PARK AREAS ARE OCCASIONALLY WELL-ATTENDED DURING PROGRAMMED EVENTS SUCH AS CONCERTS, THE PARK SUFFERS FROM BEING LARGELY HIDDEN FROM THE EXISTING LIBRARY AND ISOLATED FROM REST OF DOWNTOWN. BY EXTENDING THE IMPROVED LIBRARY NORTHWARD, MUCH CLOSER TO THE AMPHITHEATER, THE GOAL IS TO HAVE MORE EYES ON THE PARK THROUGH MORE REGULAR, PUBLIC ACTIVITY NEAR AND WITHIN THE PARK. THE CHILDREN'S AREA OF THE LIBRARY WAS LOCATED AT THE NORTH END OF THE BUILDING SO THAT CHILDREN'S PROGRAMS CAN CONVENIENTLY SPILL OUTSIDE FOR ACTIVITIES AND EVENTS.
- EAST: *SPRING CREEK POND AND NATURAL AREA* - BECAUSE OF THE QUALITY AND BEAUTY OF THIS NATURAL RESOURCE, THE BUILDING'S FUNDAMENTAL MASSING, HAS LARGELY BEEN INFORMED BY THE DESIRE TO PROTECT, AND CONNECT THE LIBRARY'S PRIMARY PUBLIC SPACE TO THIS ASSET.

7. *Promote Architectural Compatibility: Buildings should be "good neighbors." They should be compatible with surrounding buildings by avoiding disruptive excess. New buildings should not attempt to be the center of attention.*

RESPONSE: COMPLIES. BECAUSE OF ITS CIVIC USE AND UTILIZATION OF LARGE SCALE ARCHITECTURAL CONTRAST, MORE TYPICAL COMMERCIAL OR RESIDENTIAL ARCHITECTURAL VOCABULARY, HAS BEEN CONSIDERED TO A LESSER DEGREE. SCALE HOWEVER, AND HOW IT RELATES TO THE VARYING, SURROUNDING SITE CONDITIONS, IS A FOCUS OF THE ARCHITECTURAL DESIGN. THE UNDULATING ROOF FORM, IN COMBINATION WITH DISTRIBUTION OF GLAZED AREAS, ARE THE TWO PRIMARY MOVES THAT CREATE THE SCALE RESPONSES. *REFER TO ARCHITECTURAL MASSING DIAGRAMS.*

8. *Preserve Historic Buildings: Historic building renovation, restoration, or additions should respect the original structure.*

RESPONSE: COMPLIES. NOT APPLICABLE. THIS PROJECT DOES NOT INVOLVE THE RENOVATION, RESTORATION, OR ADDITION OF A HISTORIC STRUCTURE.

9. *Use Architectural Contrast Wisely: Contrast is essential to creating an interesting urban environment. Used Wisely, contrast can help to provide focus and drama, announce a socially significant use, help define an area and clarify how the downtown is organized.*

Description
... Contrast employed at a large scale should be reserved exclusively for civic buildings. ...

Recommended
- *Building contrast created by a unique site*
- *Civic building contrast on a large scale*

RESPONSE: COMPLIES. BECAUSE OF ITS CIVIC USE, THE DESIGN OF THE BUILDING, LANDSCAPE, AND PEDESTRIAN ENVIRONMENT UTILIZE "*LARGE SCALE ARCHITECTURAL CONTRAST*" TO DIFFERENTIATE THE LIBRARY FROM OTHER MORE COMMON BUILDING USES. THIS CONTRAST HAS BEEN CAREFULLY CRAFTED IN RESPONSE TO SITE CONDITIONS, EXISTING ARCHITECTURAL VOCABULARY, MILWAUKIE HISTORY AND CULTURE. *REFER TO THE 'PROJECT STATEMENT' FOR A BROADER EXPLANATION OF THE DESIGN'S USE OF CONTRAST.*

10. *Integrate Art: Public art should be used sparingly. It should not overwhelm outdoor spaces or render building mere backdrops. When used, public art should be integrated into the design of the building or public open space.*

RESPONSE: COMPLIES. THE PROJECT BUDGET INCLUDES A BUDGET FOR INTEGRATED ARTWORK. THE ARTIST AND ARTWORK HAVE YET TO BE IDENTIFIED, BUT WILL BE TASTEFULLY SELECTED AND INTEGRATED INTO THIS PROJECT.

PEDESTRIAN EMPHASIS GUIDELINES

In Downtown Milwaukie, the pedestrian is the priority. These guidelines address the ways in which buildings and spaces may be designed to create a convenient, comfortable, human-scaled environment that people will want to be in.

1. *Reinforce and Enhance the Pedestrian System: Barriers to pedestrian movement and visual and other nuisances should be avoided or eliminiated, so that the pedestrian is the priority in all development.*

RESPONSE: COMPLIES. PEDESTRIAN ACCESS TO BOTH THE LIBRARY AND SCOTT PARK BEYOND IS DIRECT, CLEAR AND INVITING.
- THE EXISTING LIBRARY ENTRANCE IS ELEVATED A FEW FEET ABOVE THE SIDEWALK REQUIRING PATRONS TO CLIMB MULTIPLE STAIR RUNS OR TAKE A CIRCUITOUS RAMP. THE FINISHED FLOOR ELEVATION OF PROPOSED DESIGN IS ESSENTIALLY FLUSH WITH ENTRY WALKWAY.
- THE EXISTING PATH TO SCOTT PARK ZIGZAGS AROUND THE PARKING LOT AND EXISTING BUILDING WHICH COMPLICATES WAYFINDING FOR PEDESTRIANS ENTERING THE SITE FROM HARRISON. THE PROPOSED SITE PLAN STRAIGHTENS THE PEDESTRIAN ACCESSWAY, PRIORITIZING IT BEFORE THE PARKING LOT.

2. *Define the pedestrian environment: Provide human scale to the pedestrian environment, with variety and visual richness that enhance the public realm.*

RESPONSE: COMPLIES. MARKED WITH A GRAND, SHELTERING CANOPY WITH ELEGANT SUPPORTING COLONNADE AND A SERIES OF LANDSCAPED AREAS FEATURING NATIVE AND SYMBOLIC PLANT SPECIES, THE PEDESTRIAN PATH IS THE PRIMARY CIRCULATION FOCUS.

REGARDING THE WEST BUILDING ELEVATION AND ITS IMPACT TO THE PEDESTRIAN ENVIRONMENT, [FROM THE '*CONSIDER CONTEXT*' RESPONSE ABOVE] OUT OF RESPECT FOR THE PRIVACY FOR THE RESIDENTIAL PROPERTIES AND IN SUPPORT OF THE CONCEPT OF HAVING THE INTERIOR PUBLIC SPACES OPEN UP TO THE NATURAL SITE RESOURCES RATHER THAN THE PARKING LOT, THE WEST FACADE HAS BEEN CRAFTED TO BE MORE OPAQUE, WHICH ALSO HELPS TO LIMIT AFTERNOON HEAT GAIN. TO AVOID CREATING AN INHOSPITABLE PEDESTRIAN ENTRYWAY, BUILDING FENESTRATION HAS BEEN ORCHESTRATED TO PROVIDE FENESTRATED SLICES ALL THE WAY THROUGH THE BUILDING, AFFORDING INTRIGUING VIEWS FROM THE WESTERN SIDEWALK THROUGH TO THE TREE CANOPY ON THE EAST. *REFER TO THE BUILDING ELEVATIONS AND "VIEWS THROUGH FLOOR PLAN DIAGRAM".*

3. *Protect the Pedestrian from the Elements: Protect pedestrians from wind sun and rain.*

RESPONSE: COMPLIES. A GRAND, SHELTERING CANOPY EXTENDS FROM THE BUILDING TO CONTINUOUSLY PROTECT PEDESTRIANS ALL THE WAY FROM HARRISON TO THE MAIN ENTRY. *REFER TO SITE ENTRY RENDERINGS*

4. *Provide Places for Stopping and Viewing: Provide safe, comfortable places where people can stop to sit and rest, meet and visit with each other and otherwise enjoy the downtown surroundings.*

RESPONSE: COMPLIES. A PAIR OF BENCHES NEAR THE MAIN ENTRANCE GIVE PEDESTRIANS AN OPPORTUNITY TO SIT AND REST, WAIT FOR THE LIBRARY TO OPEN OR WAIT FOR A RIDE.

5. *Create Successful Outdoor Spaces: Spaces should be designed for a variety of activities during all hours and seasons.*

RESPONSE: COMPLIES. OUTDOOR SPACES, AND PATHWAYS HAVE BEEN SCALED TO REFLECT A PROMINENT CIVIC USE AND HAVE BEEN DESIGNED TO SUPPORT A RANGE OF ACTIVITIES AND GROUP SIZES.
- LARGER ACCESSWAYS CAN SUPPORT MORE ACTIVITIES, AND AMENITIES THAN A TYPICAL SIDEWALK SECTION
- OCCUPIABLE LANDSCAPE AREAS, PARTICULARLY THE CHILDREN'S GARDEN WITHIN PHASE II OF THE LANDSCAPE INSTALLATION, ARE DESIGNED TO SUPPORT A VARIETY OF ACTIVITIES AND GROUP SIZES.

6. *Integrate Barrier-free Design: Accommodate handicap access in a manner that is integral to the building and public right-of-way and not designed merely to meet minimum building code standards*

RESPONSE: COMPLIES. ONE OF THE PRIMARY FACTORS IN SELECTING A SINGLE STORY LIBRARY WAS TO PROVIDE UNIVERSAL ACCESS FOR PATRONS. THE DESIGN, UNLIKE THE EXISTING LIBRARY PROVIDES, DIRECT, BARRIER-FREE SITE ACCESS, INCLUDING THE ENTIRETY OF THE LIBRARY INTERIOR.

ARCHITECTURAL GUIDELINES

The Architecture Guidelines promote quality development while reinforcing the individuality and spirit of Milwaukie. The guidelines promote architectural types indigenous to Milwaukie and/or the Northwest. Buildings in Milwaukie should seem to be "at home" there, reflecting its character and heritage, suiting its climate, landscape and downtown street grid. Within each downtown planning area, building proposals must consider and respond to selected requirements from the following architectural criteria:

1. *Corner Doors: Locate Entry doors on corners of commercial and retail buildings wherever possible.*

RESPONSE: LIBRARY PATRONS CAN GENERALLY BE DIVIDED INTO THREE GROUPS BASED ON THEIR PRIMARY REASON FOR VISITING: KIDS LIBRARY, ADULTS LIBRARY, COMMUNITY EVENTS. IDEALLY, EACH OF THESE GROUPS, ENTERING FROM A COMMON POINT FOR SECURITY PURPOSES, CAN DIRECTLY ACCESS EACH OF THEIR RESPECTIVE AREAS WITHOUT NEEDING TO DISRUPTIVELY CIRCULATE THROUGH ANOTHER GROUP'S AREA. ITS FOR THIS REASON, THE ENTRANCE WAS NOT LOCATED AT CORNER OF THE BUILDING, BUT CLOSER TO THE MIDDLE. ADDITIONAL ASPECTS: UNIVERSAL ACCESS, BUILDING MASSING, CONSTRUCTION COST AND OPERATIONAL EXPENSE LIMITATIONS, WHICH ARE DESCRIBED WITHIN THE MAIN WRITTEN STATEMENT, HAVE ALSO CONTRIBUTED TO THE PREFERENCE OF A MID-BLOCK ENTRANCE.

TO COMPENSATE, EMPHASIS HAS BEEN PLACED ON A WELCOMING BUILDING PRESENCE AND PEDESTRIAN ENVIRONMENT AT THE SOUTHWEST CORNER OF THE SITE, WHICH AIMS TO CREATE A HEIGHTENED SENSE OF ARRIVAL. [FROM THE '*CONSIDER CONTEXT*' RESPONSE ABOVE] "IN CONTRAST TO THE EXISTING LIBRARY'S SIGNIFICANT SETBACK FROM HARRISON AND BUFFERING LANDSCAPE, THE IMPROVED LIBRARY BOLDLY OCCUPIES THE SOUTH WEST CORNER OF THE SITE AND FEATURES LARGE WINDOWS REVEALING A CAFE-STYLE, READING ROOM. THE GOAL IS TO CREATE A HIGHLY-VISIBLE, INVITING SYMBOL OF THE LIBRARY WITH THIS ACTIVE URBAN SPACE." THE PEDESTRIAN ACCESSWAY,

[FROM THE '*DEFINE THE PEDESTRIAN ENVIRONMENT*' RESPONSE ABOVE] MARKED WITH A GRAND, SHELTERING CANOPY WITH ELEGANT SUPPORTING COLONNADE…" CREATES A GATEWAY AND MEMORABLE ENTRANCE TO THE LIBRARY AND SCOTT PARK SITE. *REFER TO THE BUILDING ENTRY RENDERINGS.*

2. *Retail and Commercial Doors: Doors should create an open and inviting atmosphere.*

RESPONSE: COMPLIES. GLAZED DOORS, ARE PART OF A LARGE GLAZED STOREFRONT, THROUGH WHICH, VISITORS CAN SEE THE TREE CANOPY OF SCOTT PARK STRAIGHT THROUGH THE FOYER AND CENTRAL AREA OF THE LIBRARY. *REFER TO THE FLOOR PLAN AND "VIEWS THROUGH FLOOR PLAN DIAGRAM"*

3. *Residential Doors: Residential front doors should define and friendly transition between the public and private realm.*

RESPONSE: NOT APPLICABLE. NO RESIDENTIAL DOORS INCLUDED IN THIS PROJECT.

4. *Wall Materials: Use materials that create a sense of permanence.*

RESPONSE: OUR PRIMARY WALL ASSEMBLY, A WELL-INSULATED, CEDAR SIDING CLAD, RAIN SCREEN IS A DURABLE, HIGH PERFORMANCE ASSEMBLY. CEDAR, A RENEWABLE, ROT AND INSECT RESISTANT, MATERIAL WAS SELECTED TO BETTER RELATE TO THE ADJACENT SCOTT PARK NATURAL AREA. OTHER PRIMARY AND SECONDARY MATERIALS INCLUDE INSULATED GLAZING UNITS, AND SHEET METAL SIDING AND TRIM

5. *Wall Structure: Use scale defining devices to break up the longitudinal dimensions of buildings, creating a comfortable sense of enclosure by establishing an uninterrupted street edge.*

RESPONSE: COMPLIES. VERTICAL, GLAZING AND SHEET METAL PANEL BANDS, OCCASIONALLY INCLUDING DOORS, PUNCTUATE BUILDING FACADES, OFFERING VIEWS INTO FURNISHED OCCUPIED INTERIOR SPACES.

6. *Retail Windows: Use windows that create an open and inviting atmosphere.*

RESPONSE: NOT APPLICABLE. PROJECT IS NOT RETAIL. THE BUILDING DESIGN DOES HOWEVER, USE WINDOWS TO CREATE AN OPEN, INVITING ATMOSPHERE.

7. *Residential Bay Windows: Provide Bays to add visual interest to facade and interesting views and outdoor spaces from the interiors*

RESPONSE: NOT APPLICABLE. PROJECT IS NOT RESIDENTIAL

8. *Silhouette and Roofline: Create interest and detail in silhouette and roofline*

RESPONSE: COMPLIES. THIS IS A PRIMARY ASPECT OF THE LARGE SCALE ARCHITECTURAL CONTRAST. THE UNDULATING ROOF DESIGN DISTINCTLY CREATES A UNIQUE SILHOUETTE AND ROOFLINE. *REFER TO RENDERINGS*

9. *Rooftops: Integrate rooftop elements into the building design*

RESPONSE: COMPLIES. TO ACCOMMODATE UNSIGHTLY, OTHERWISE ROOFTOP-MOUNTED MECHANICAL UNITS, AN OUTDOOR MECHANICAL COURTYARD HAS BEEN CREATED TO CONCEAL EXTERIOR UNITS.

10. *Green Architecture: New construction or building renovation should include sustainable materials and design*

RESPONSE: COMPLIES. REFER TO THE MAIN WRITTEN STATEMENT FOR OUR APPROACH TO SUSTAINABILITY.

- COMMITTED TO AND TRACKING THE ENERGY TRUST OF OREGON'S PATH TO NET ZERO PROGRAM AND ENERGY USE TARGET
- PHOTOVOLTAIC SOLAR PANEL ARRAY, SIZED IN ACCORDANCE WITH THE STATE OF OREGON'S GREEN TECHNOLOGY REQUIREMENT
- EXTENSIVE USE OF RENEWABLE MATERIAL: CEDAR SIDING AND CEILINGS
- OPTIMIZED DAYLIGHTING, TAKING ADVANTAGE OF SITE CONDITIONS
- HIGHLY EFFICIENT, CLEAN, (COMFORTABLE, AND QUIET) RADIANT SLAB HEATING AND COOLING
- HIGHLY EFFICIENT WALL AND ROOF ASSEMBLIES
- OPTIMIZED SHADING VIA THE BROAD CANOPY AND VERTICAL WOOD SCREENS TO CONTROL PROBLEMATIC SOUTHERN AND WESTERN SOLAR GLARE AND THERMAL GAIN.

11. *Building Security: Buildings and site planning should consider and employ techniques that create a safe environment.*

RESPONSE: COMPLIES. WELL-ILLUMINATED PEDESTRIAN AND PARKING AREAS HELP TO KEEP THE SITE SAFE AFTER HOURS. A SECURITY SYSTEM, INCLUDING VIDEO SURVEILLANCE AND INTRUSION DETECTION HELP TO DETER MISCHIEF. THE BUILDING'S FOOT PRINT EXTENDS SIGNIFICANTLY FARTHER NORTH THAN THE EXISTING BUILDING PROVIDING MORE REGULAR ACTIVITY AND PUBLIC PRESENCE CLOSE TO THE NORTH END OF SCOTT PARK INCLUDING THE AMPHITHEATER.

12. *Parking Structures: Parking structures should be designed so that they appear like most other buildings in the downtown.*

RESPONSE: NOT APPLICABLE. PROJECT DOES NOT INCLUDE A PARKING STRUCTURE

LIGHTING GUIDELINES

Lighting should not only provide nighttime security, but also encourage nighttime patronage of businesses and restaurants. Lighting should create an atmosphere of festivity and activity - especially where special elements or places are concerned. Utilitarian application of glaring, offensively colored lights is not appropriate for downtown. Each development proposal must consider and respond to selected requirements from the following lighting criteria:

1. *Exterior Building Lighting: Architectural lighting should be an integral component of the facade composition*

RESPONSE: NOT APPLICABLE. SOLELY-AESTHETIC LIGHTING OF THE BUILDING HAS BEEN AVOIDED TO MINIMIZE ENERGY CONSUMPTION AND REDUCE DISRUPTION TO ADJACENT HABITATS AND WILDLIFE MIGRATION.

2. *Parking Lot Lighting: Ornamental street lights should be used to be compatible with downtown streetlight standards identified in the Public Area Requirements.*

RESPONSE: THE SITE DESIGN FEATURES SIMPLE CONTEMPORARY STREET FIXTURES IN LIEU OF ORNAMENTAL STREET LIGHTS TO BETTER CONTROL LIGHT DISTRIBUTION AND LIMIT LIGHT POLLUTION ALONG THE WEST SIDE OF THE SITE WHICH ABUTS RESIDENTIAL BUILDINGS.

3. *Landscape Lighting: Lighting should be used to highlight sidewalks, street and other landscape features. Landscape Lighting is especially appropriate as a way to provide pedestrian safety during holiday periods.*

RESPONSE: COMPLIES. *REFER TO THE LANDSCAPE SITE PLAN FOR SITE LIGHTING AND THE ARCHITECTURAL FLOOR PLAN FOR CANOPY MOUNTED LIGHTS*

4. Sign Lighting: Sign Lighting should be designed as an integral component of the building and sign composition

RESPONSE: COMPLIES. EXTERNAL SIGNS TO BE SENSITIVELY AND MINIMALLY ILLUMINATED TO AVOID LIGHT POLLUTION.

SIGN GUIDELINES

Signs should make it easy to locate and identify businesses as well as providing other information relevant to getting around and doing business in downtown; however, signs should never overwhelm either buildings or landscape. Moreover, signs should provide information in a highly graphic format that is complementary to downtown architecture. Tasteful logos, symbols and graphics are encouraged. A strong pedestrian orientation should be encouraged for all signs. Development proposals must consider and respond to selected requirements from the following sign criteria:

1. Wall Signs: Signs should be sized and placed so that they are compatible with the building's architectural design

RESPONSE: COMPLIES. REFER TO PAGES 44 & 45 FOR SIGNAGE DETAILS

2. Hanging or Projecting Signs: Hanging signs should be oriented to the pedestrian, and highly visible from the sidewalk

RESPONSE: NOT APPLICABLE. HANGING OR PROJECTING SIGNS NOT INCLUDED IN THIS PROJECT

3. Window Signs: Window Signs should not obstruct views through windows.

RESPONSE: NOT APPLICABLE. WINDOW SIGNS NOT INCLUDED IN THIS PROJECT

4. Awning Signs: Awning signs should be used as alternatives to building or wall signs. They should be designed as a means to attract attention to a shop, office or residential entrance

RESPONSE: NOT APPLICABLE. AWNING SIGNS NOT INCLUDED IN THIS PROJECT

5. Information and Guide Signs: Directional signs should be small scale and of consistent dimensions, and located in a visually logical order. These signs also should provide on-site directional information.

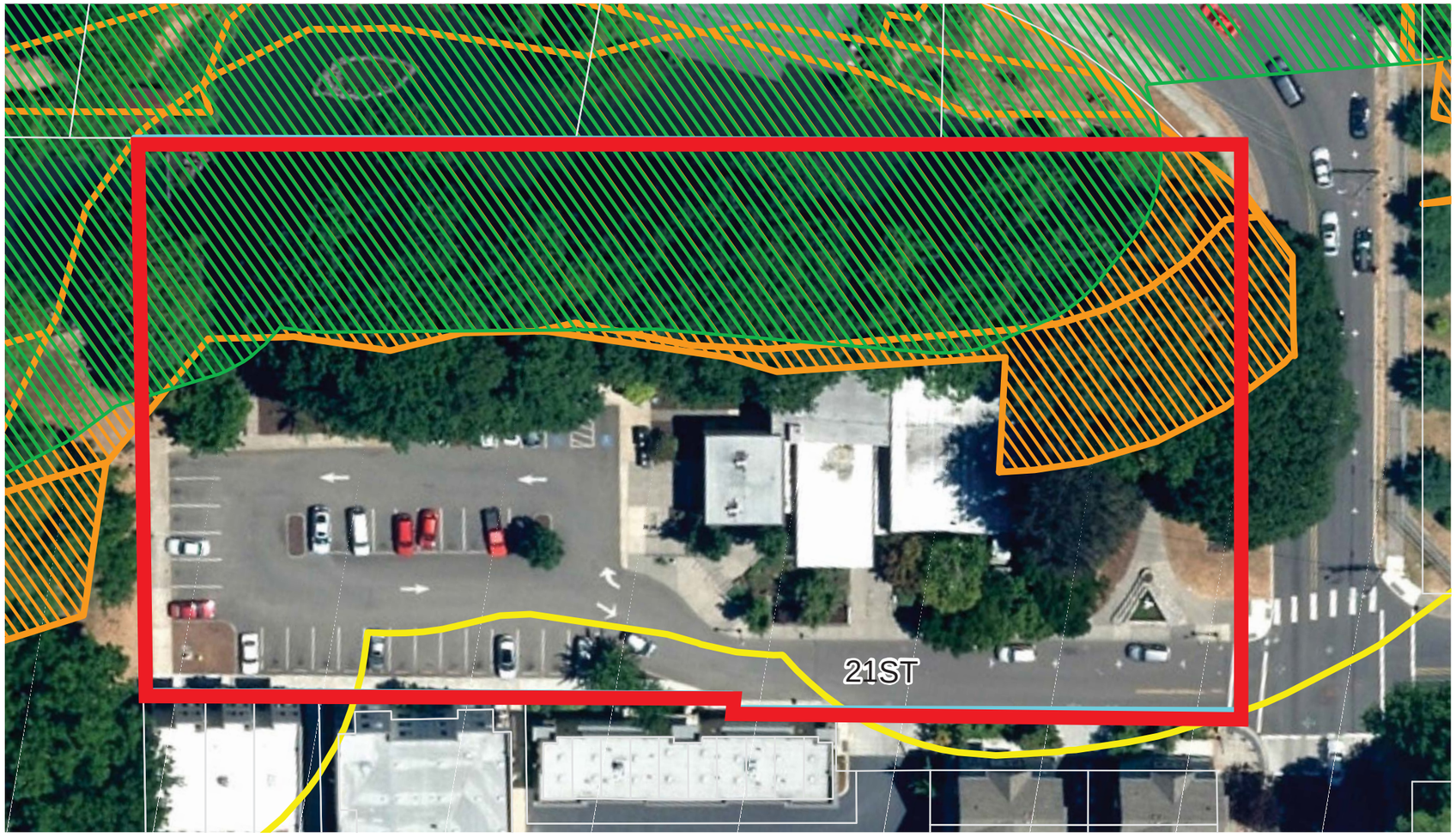
RESPONSE: COMPLIES. PROPOSED GUIDE / DIRECTIONAL SIGN PACKAGE IS GRAPHICALLY CONSISTENT FROM EXTERIOR TO INTERIOR AND LOCATIONS OPTIMIZED FOR WAYFINDING.

6. Kiosks and Monument Signs: Directory monument information signs should illustrate the layout of a development, and list and locate uses or tenants within.

RESPONSE: NOT APPLICABLE. EXTERIOR HANGING OR PROJECTING SIGNS NOT INCLUDED IN THIS PROJECT

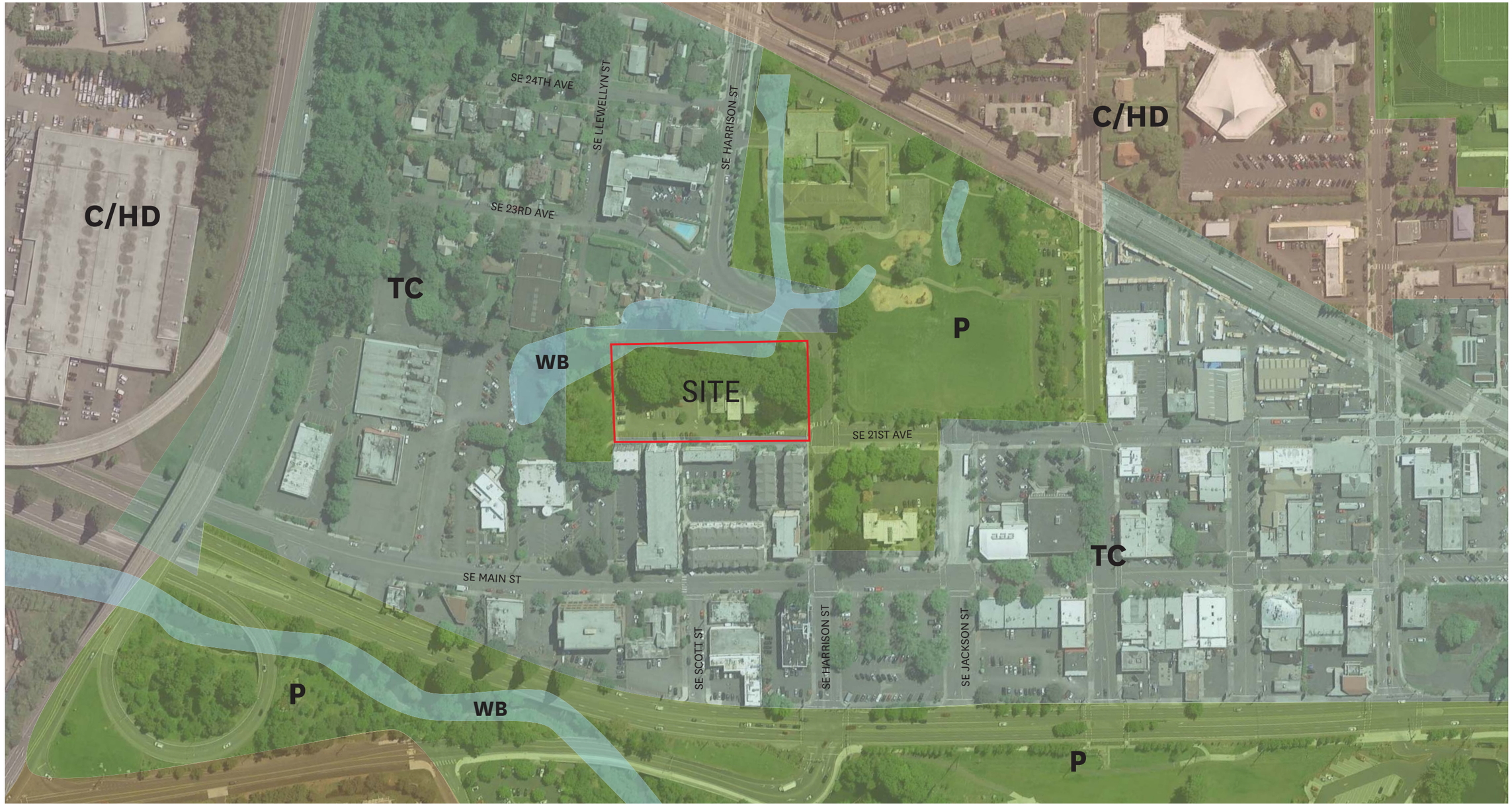
7. Temporary Signs: Signs identifying the short-term uses or activities should be allowed on a temporary basis if consistent with the design character of the surrounding area.

RESPONSE: THE DESIGN AND SCALE OF TEMPORARY ACTIVITY SIGNAGE IS CONSISTENT WITH OTHER PERMANENT SIGNAGE



Legend

- Vegetated Corridors
- Habitat Conservation Areas
- 100-ft Compliance Line



TC TOWN CENTER

C/HD MIXED USE

P PUBLIC

WB WATER BODY

HD HIGH DENSITY

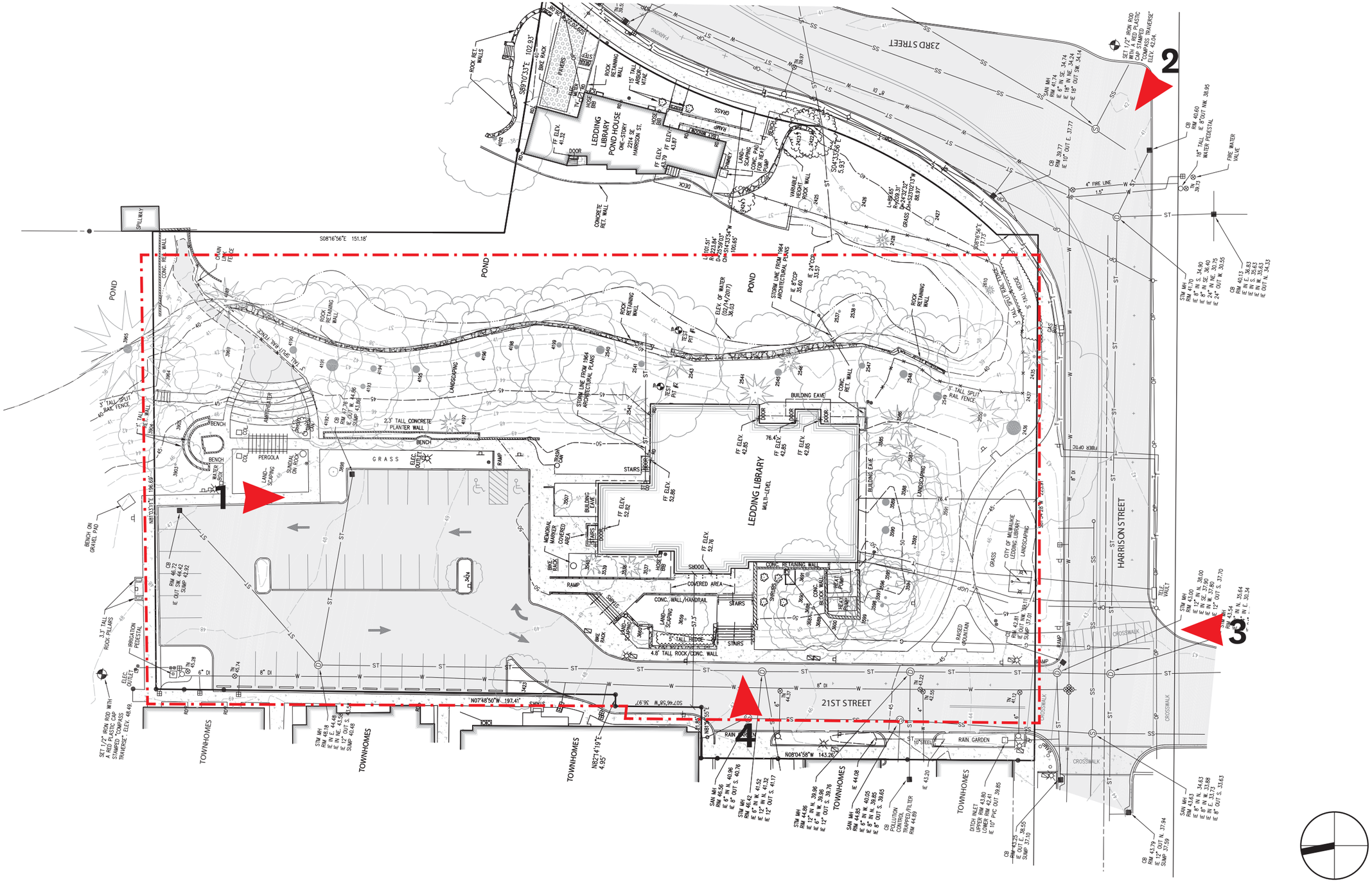
VICINITY & ZONING PLAN

EXISTING STREET VIEW 1 - LOOKING SOUTH TOWARD LEDDING LIBRARY FROM PARKING LOT

EXISTING STREET VIEW 2 - LOOKING SOUTHWEST ON HARRISON ST

EXISTING STREET VIEW 3 - LOOKING WEST ON 21ST ST

EXISTING STREET VIEW 4 - LOOKING NORTH TOWARD THE EXISTING LEDDING LIBRARY ENTRANCE



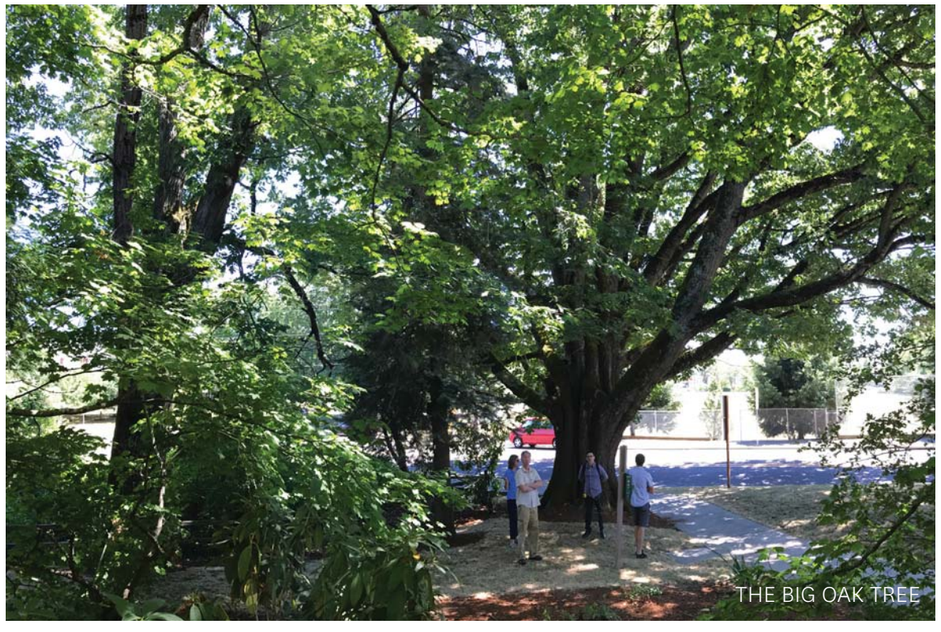
SITE SURVEY AND EXISTING STREET VIEW KEY

CONNECTED TO MILWAUKIE'S LANDSCAPE

In Milwaukie, waterways move through the landscape in a fluid way. The proposed library shape is inspired by a river bend: a long, flowing, and continuous interior space that navigates the natural features of the wetland site.

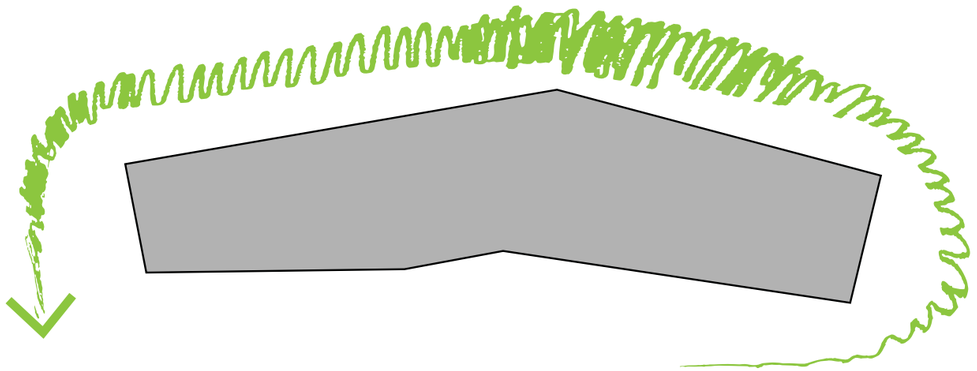
AERIAL OF MILWAUKIE

THE BREAK IN THE TREES AND BEST POND VIEW

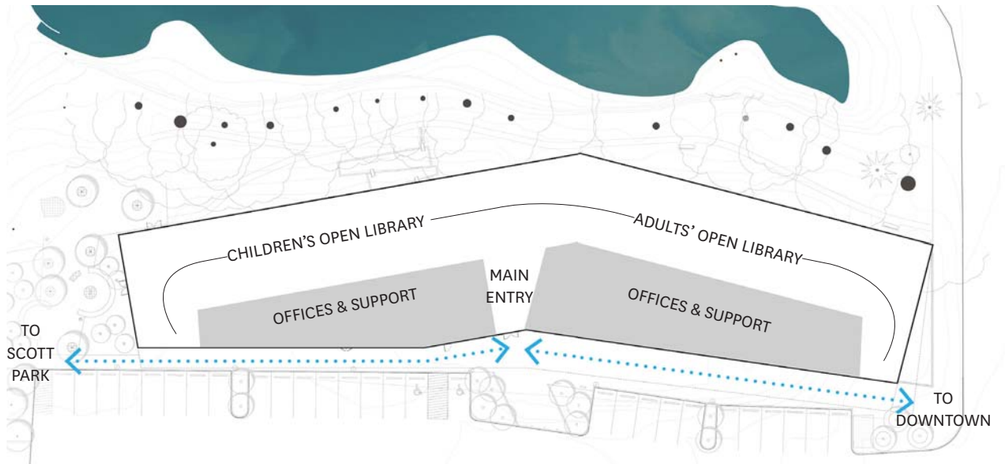


THE BIG OAK TREE

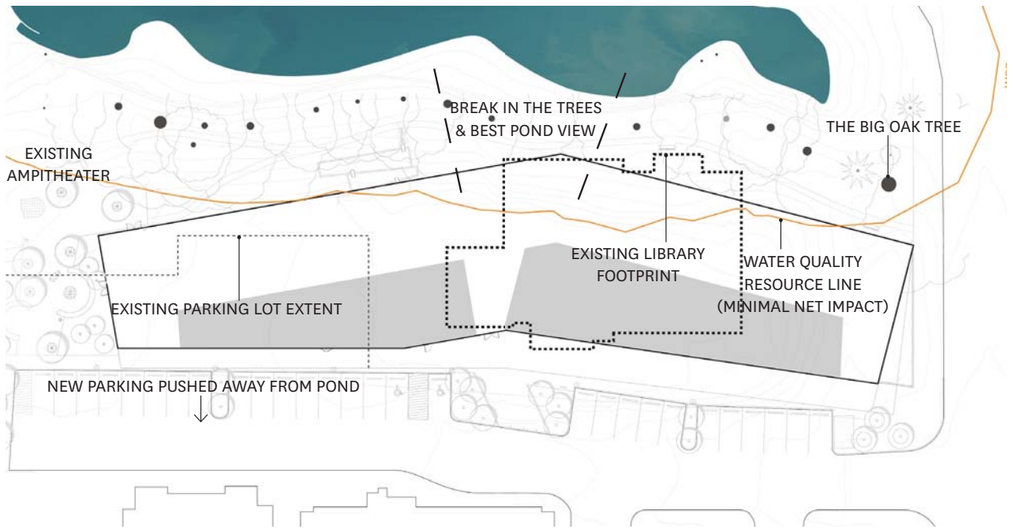
LANDSCAPE SITE PLAN



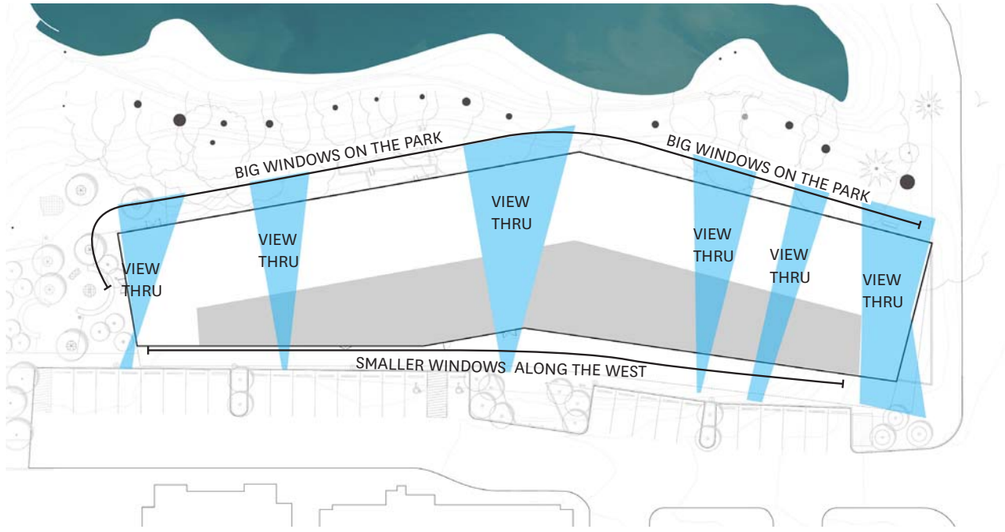
SURROUND THE LIBRARY WITH NATURE



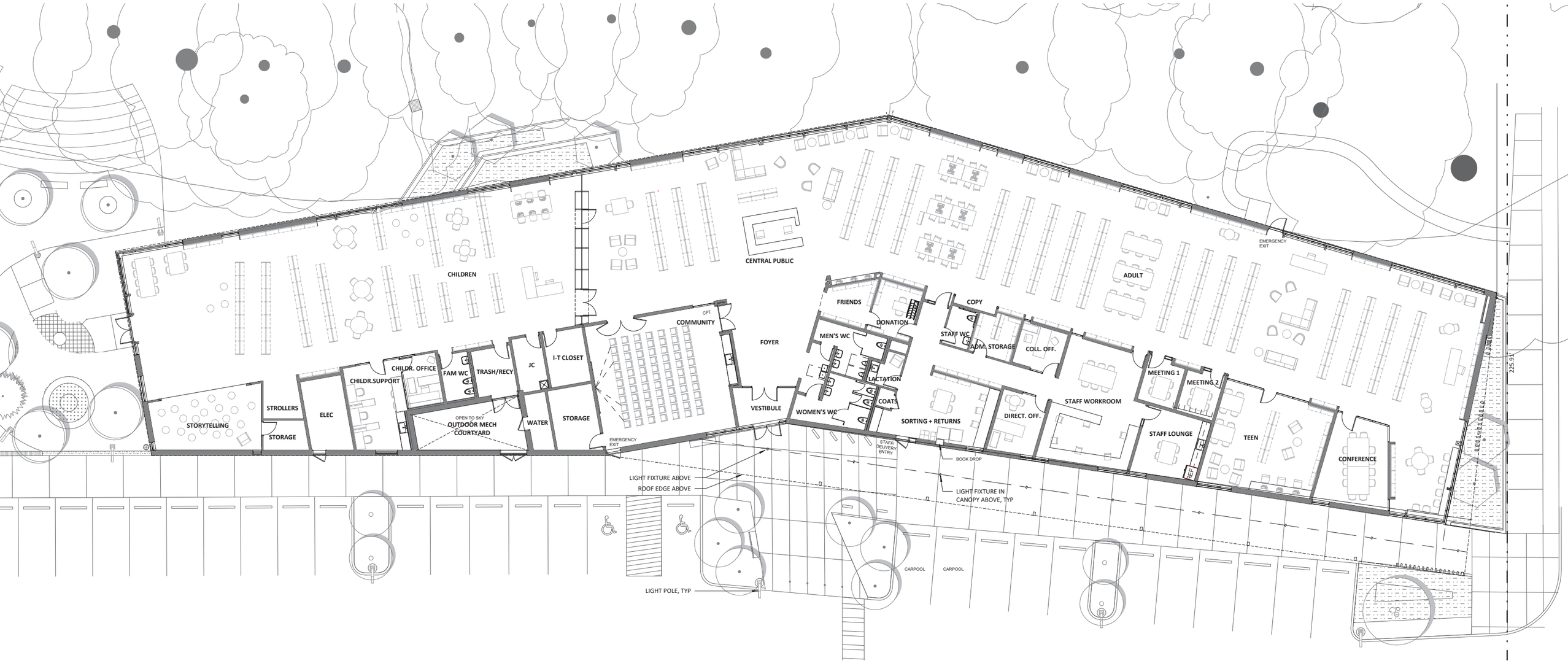
CENTRALIZE MAIN ENTRY & WRAP THE OPEN INTERIOR SPACES AROUND THE BUILDING CORE



SHAPE THE NEW FOOTPRINT TO NAVIGATE NATURAL SITE FEATURES



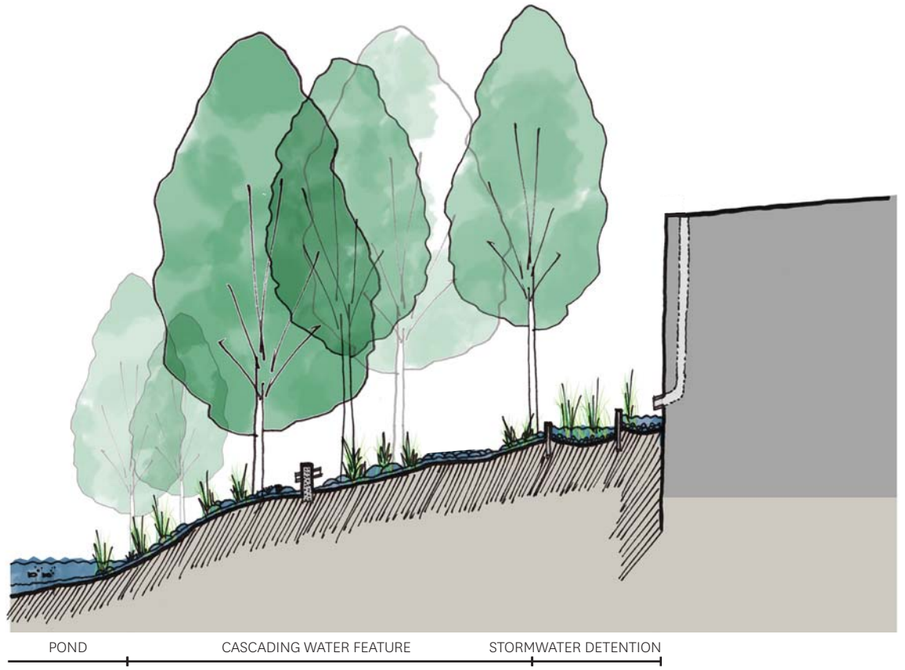
USE WINDOWS FOR VIEWS THROUGH TO PARK & TO OPTIMIZE ENERGY CONSERVATION



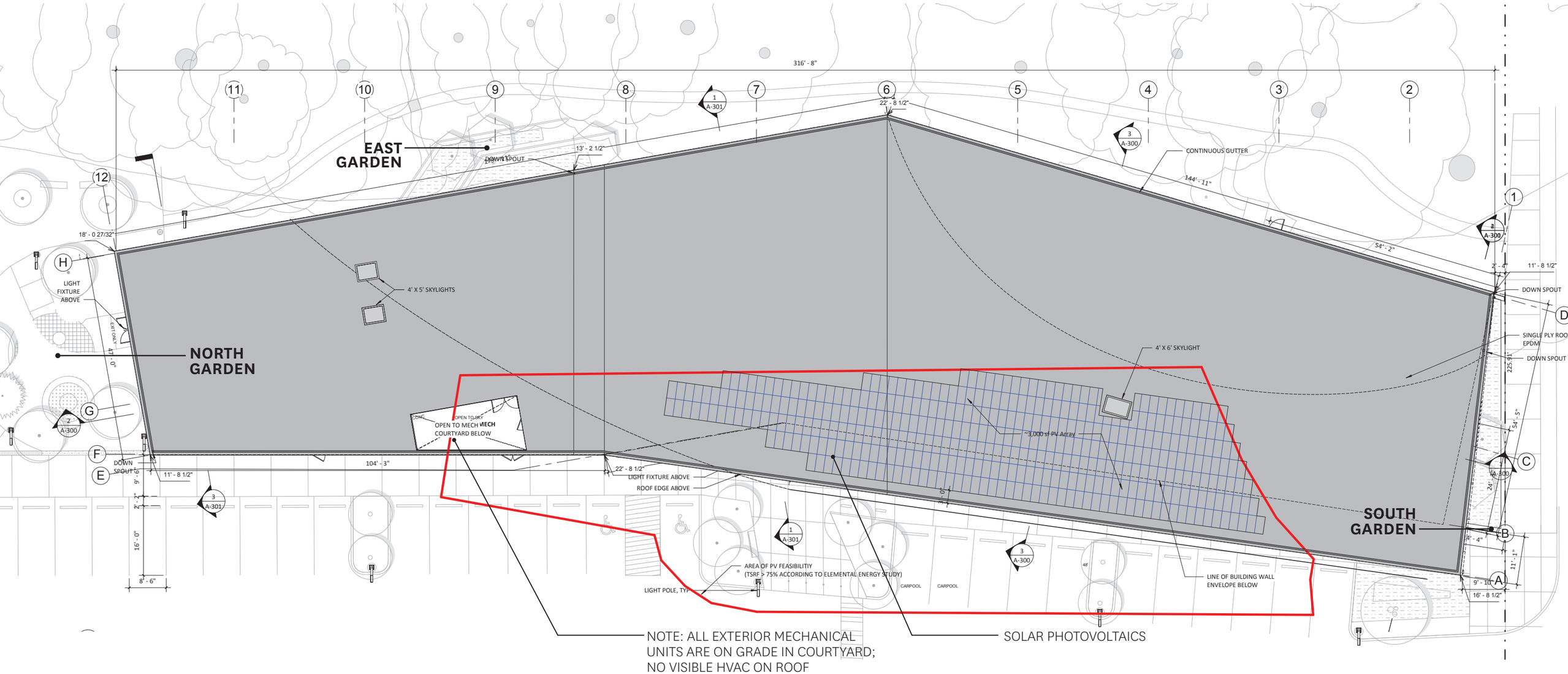
LIBRARY FLOOR PLAN

EAST GARDEN PLAN

PRECEDENT IMAGES



EAST GARDEN SECTION A



NOTE: ALL EXTERIOR MECHANICAL UNITS ARE ON GRADE IN COURTYARD; NO VISIBLE HVAC ON ROOF

SOLAR PHOTOVOLTAICS

ROOF PLAN

VIEW OF NORTH GARDEN

NORTH GARDEN

North Garden manages stormwater from building roof and maintains a connection to the amphitheater

TREES

Cercidiphyllum - Katsura
2” cal, multistem

GARDEN PLANTING

Arctotaphylos uva-ursi - Kinnikinnick
1 gal.

Confederate - Jasmine - Star Jasmine
1 gal.

STORMWATER PLANTING

carex obnupta - slough sedge
1 gal.

juncus patens - rush
1 gal.

ribes sanguineum - red flowering currant
3 gal.

cornus kousa - japanese dogwood
2” cal, multistem

NORTH GARDEN PLAN

WOOD SOFFIT ON CANOPY WITH DOWN LIGHTS

METAL TRIM

EXTERIOR SHEET METAL FASCIA

WOOD SIDING - SEMI-OPAQUE STAINED, TIGHT-KNOT CEDAR BOARD AND BATTEN SIDING

WOOD SCREEN - 1 X 4 AND 1 X 6 CEDAR STAINED TO MATCH SIDING

FIBERGLASS WINDOW SYSTEM - BLACK

STORMWATER PLANTER- CAST IN PLACE CONCRETE

WALKWAY TO MAIN LIBRARY ENTRY

VIEW FROM HARRISON STREET

TREES

acer circinatum - vine maple
1.5” cal, multistem

ulmus propinqua - EMERALD SUNSHINE ELM
4” cal, well branched

GARDEN PLANTING

bouteloua gracilis - blonde ambition grass, 1 gal.

mahonia nervosa - creeping oregon grape
2 gal.

nandina domestica ‘ gulf stream’ - heavenly bamboo, 2 gal.

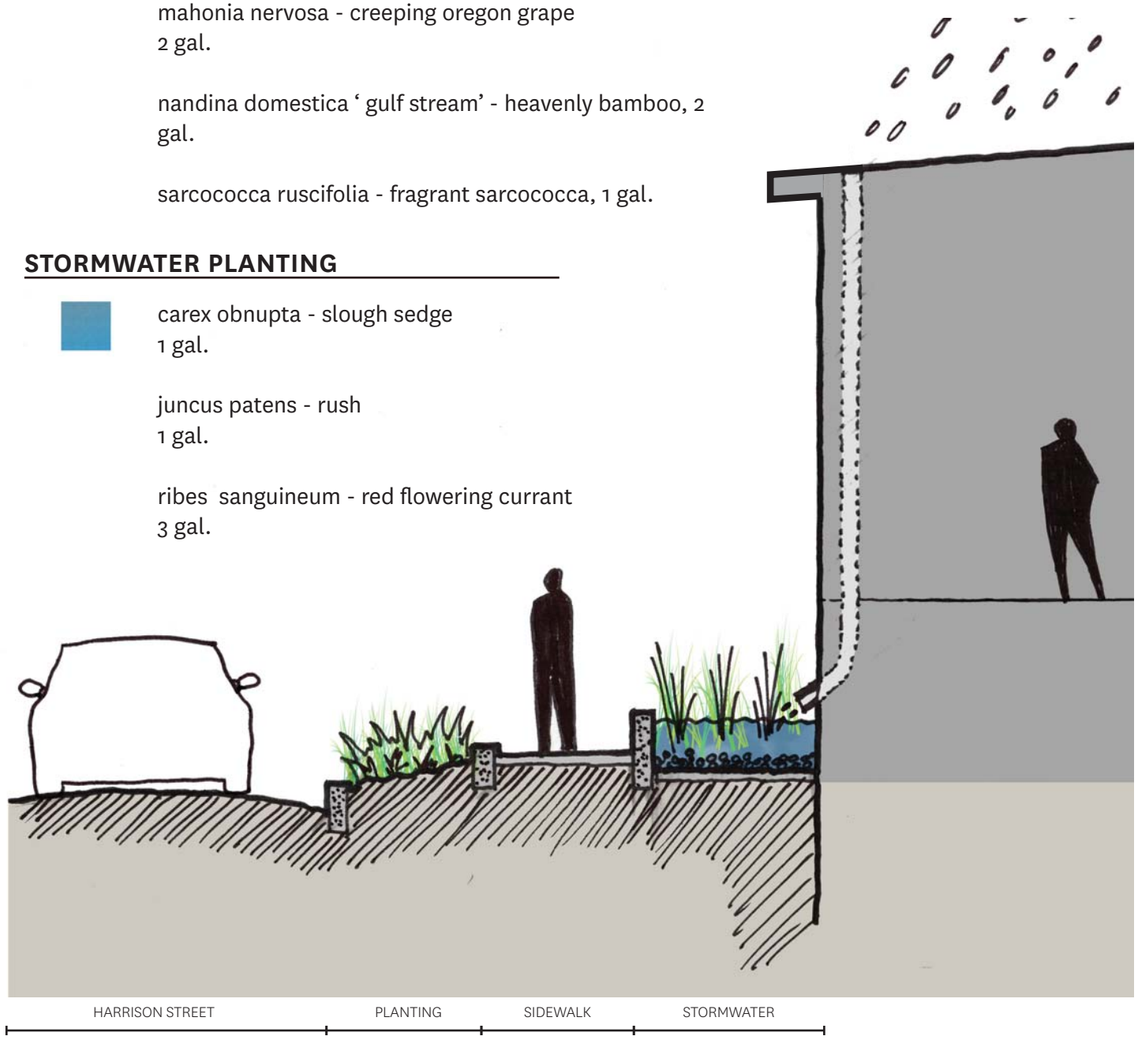
sarcococca ruscifolia - fragrant sarcococca, 1 gal.

STORMWATER PLANTING

carex obnupta - slough sedge
1 gal.

juncus patens - rush
1 gal.

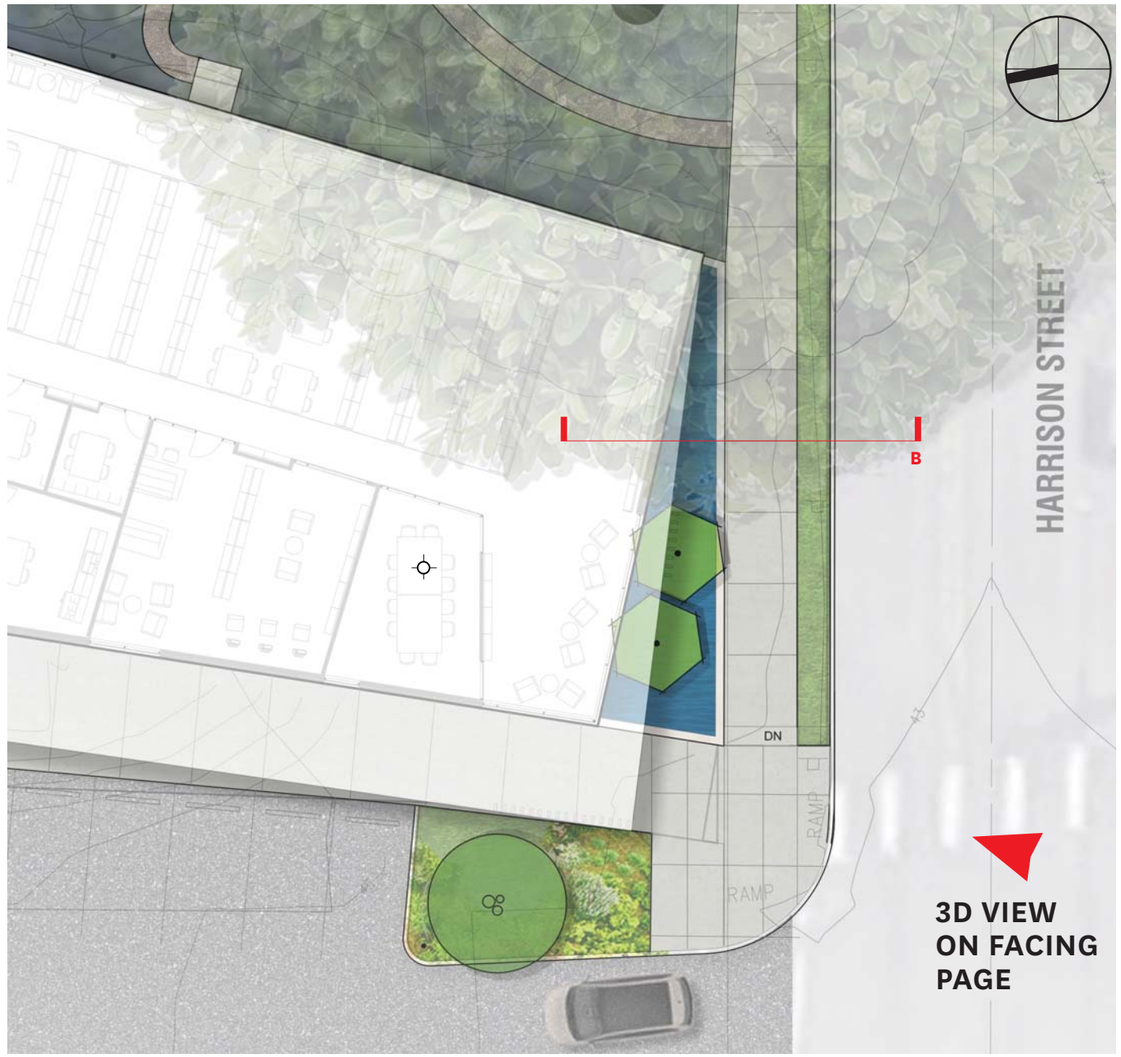
ribes sanguineum - red flowering currant
3 gal.



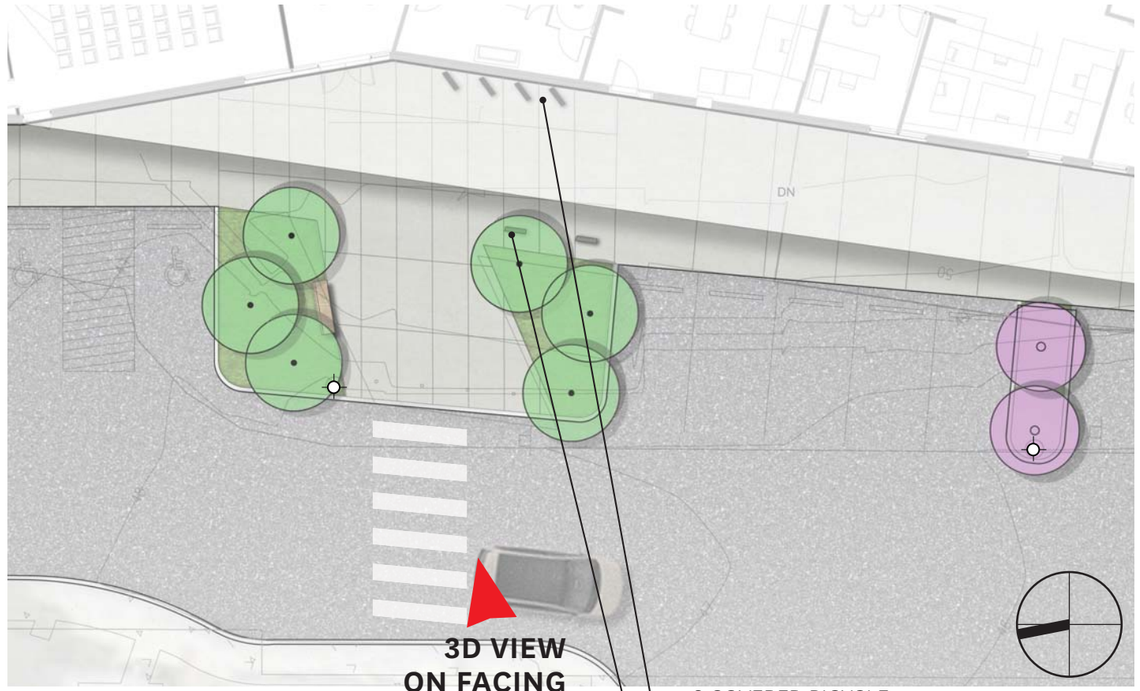
SOUTH GARDEN SECTION B

SOUTH GARDEN

North Garden manages stormwater from building roof and maintains a connection to the amphitheater



VIEW FROM PARKING AT MAIN ENTRY



TREES

cornus kousa - japanese dogwood
2” cal, multistem

lagerstroemia x ‘natchez’ - natchez crape myrtle
2” cal, multistem

GARDEN PLANTING

bouteloua gracilis - blonde ambition grass, 1 gal.

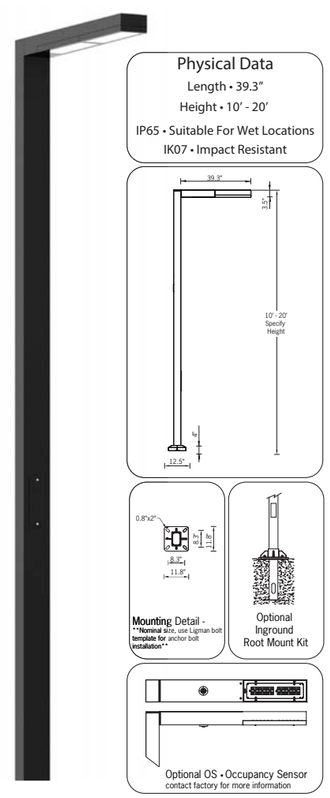
mahonia nervosa - creeping oregon grape, 2 gal.

nandina domestica ‘ gulf stream’ - heavenly bamboo, 2 gal.

sarcococca ruscifolia - fragrant sarcococca, 1 gal.

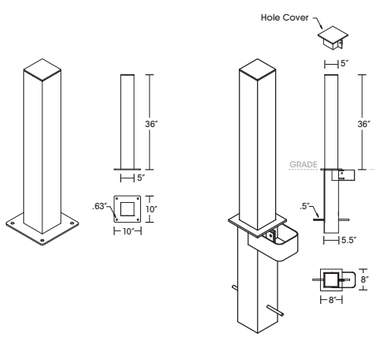
spiraea betulifolia - birchleaf spirea
1 cal.

ULI-21171
Light Linear PT3



PARKING LOT AND SITE LIGHTING

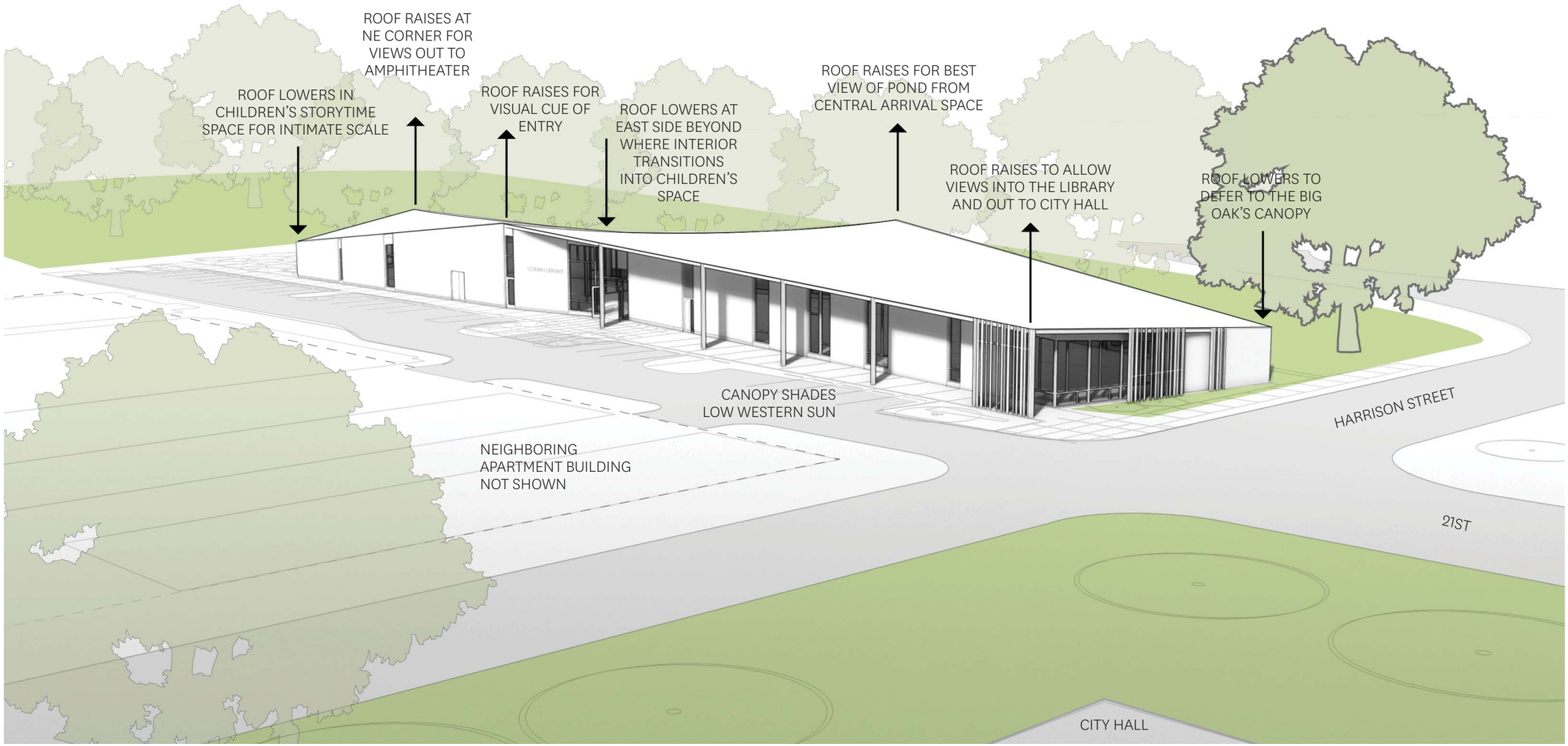
BICYCLE PARKING



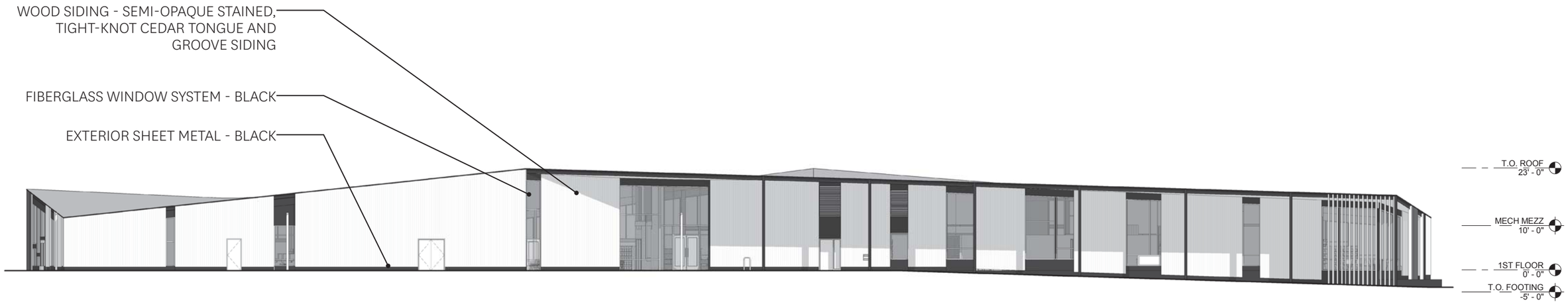
FLAT TOP SQUARE BOLLARDS: HUNTCO 5” FLAT TOP; BLACK

CONNECTED TO MILWAUKIE'S LANDSCAPE

The undulating roof form continues the fluid river shape concept. The continuous roof rises and falls in response to the site's context and natural features

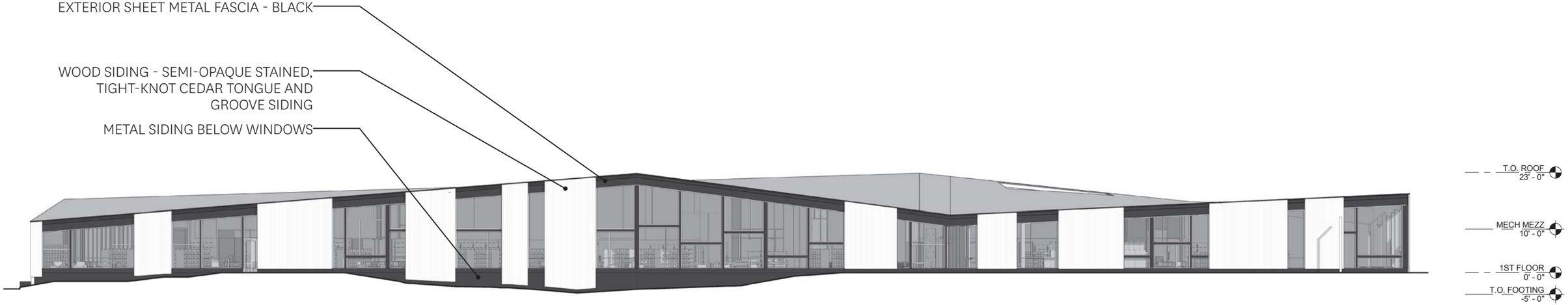


ROOF FORM DIAGRAM



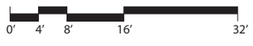
WEST ELEVATION

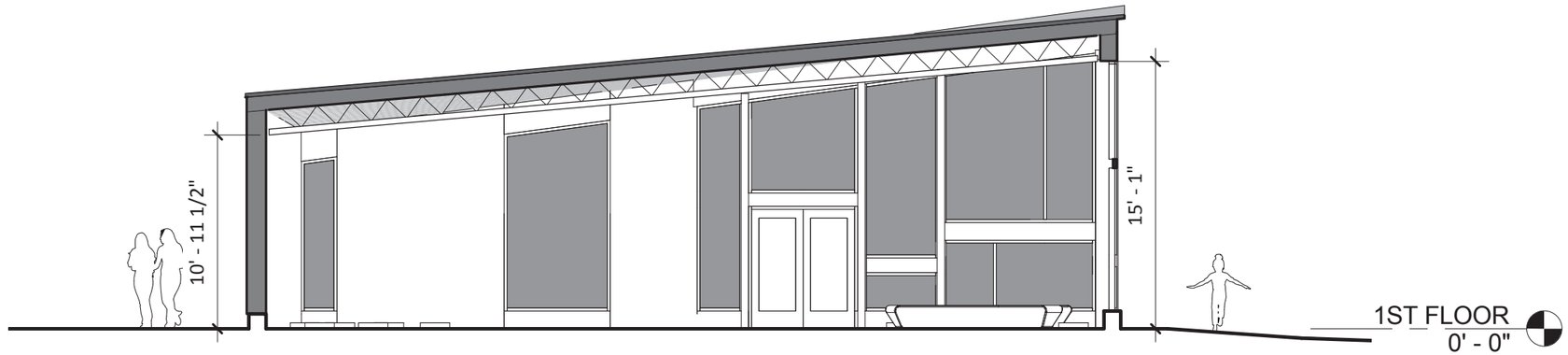
23% GLAZING



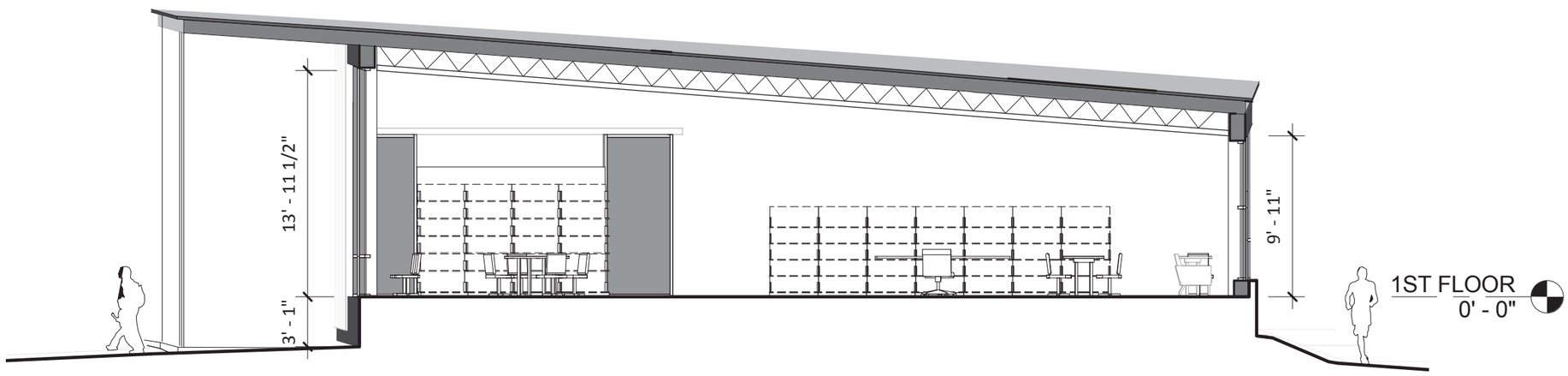
EAST ELEVATION

51% glazing



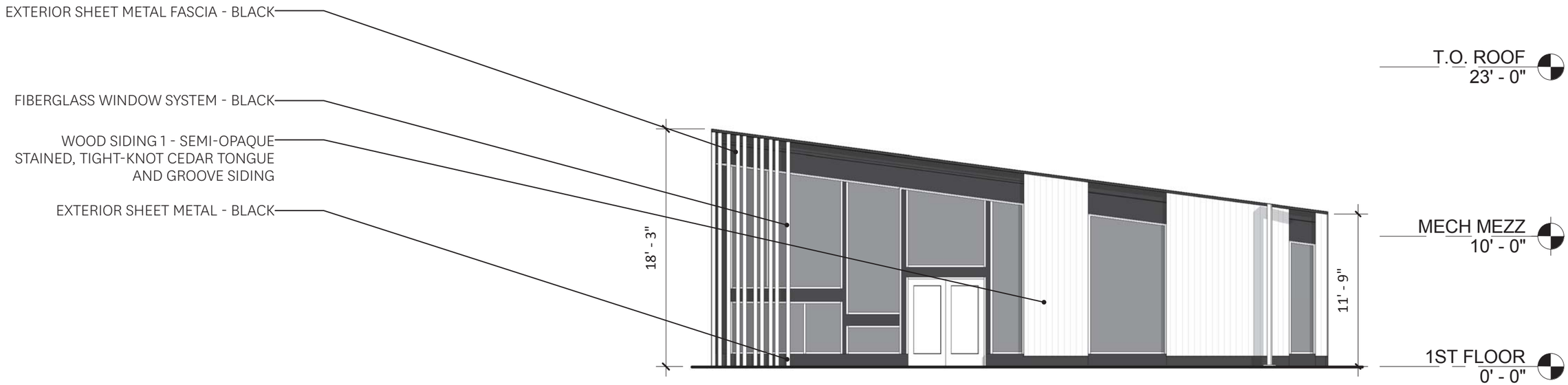


E-W SECTION NEAR READING GARDEN LOOKING NORTH



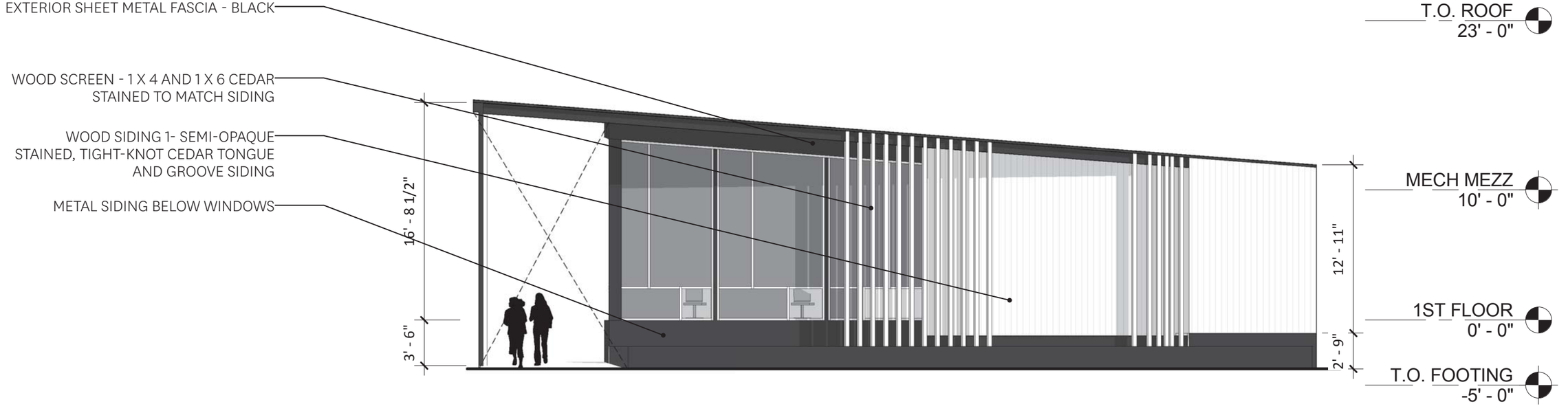
E-W SECTION NEAR HARRISON LOOKING NORTH

0′ 2′ 4′ 8′ 16′



NORTH ELEVATION AT READING GARDEN

53% GLAZING



SOUTH ELEVATION AT HARRISON

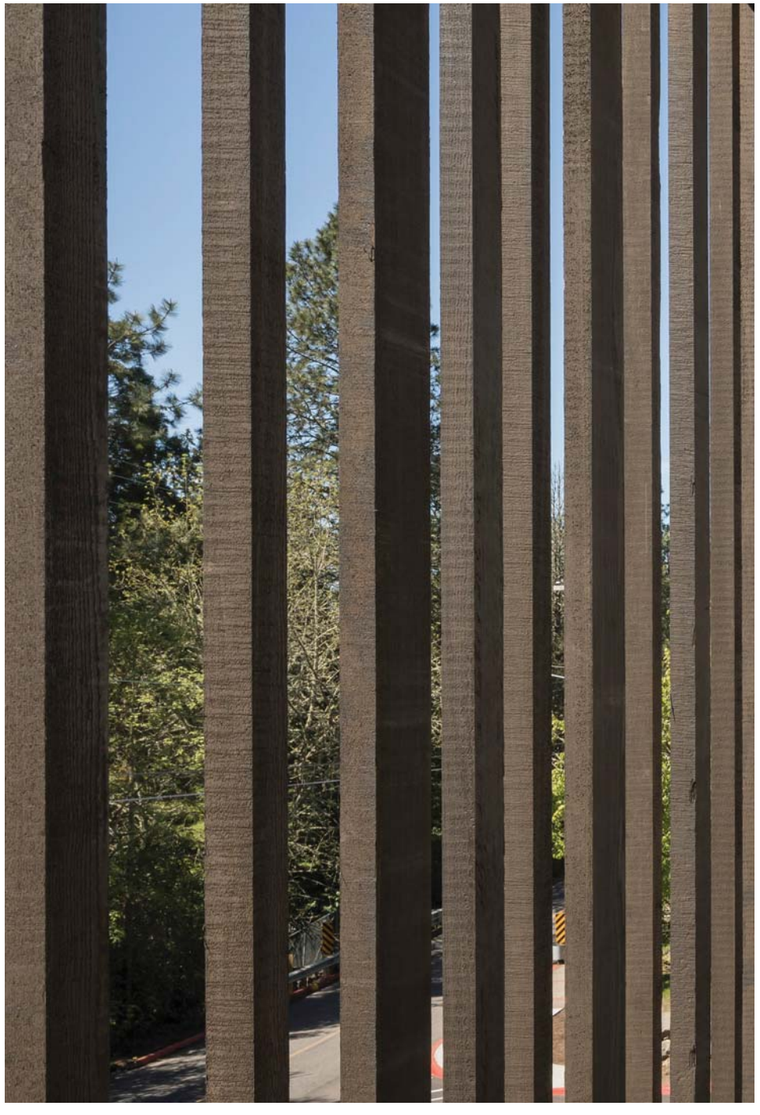
35% glazing

EXTERIOR BUILDING ELEVATIONS

WOOD SOFFIT

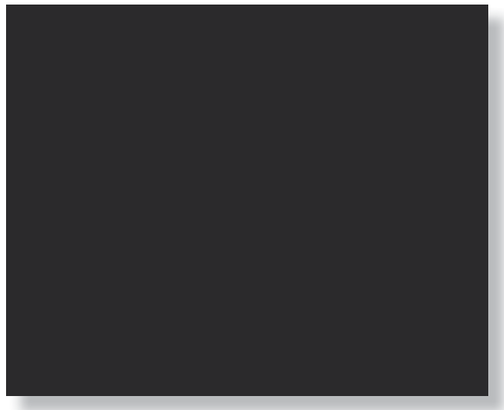
FIBERGLASS WINDOW FRAME & METAL TRIM COLOR

WD SIDING 1 - SEMI-OPAQUE STAINED TOUNGE & GROOVE CEDAR SIDING



WOOD SCREEN

WOOD SCREENS AT HARRISON



SHEET METAL FLASHINGS AND PAINTED STEEL

PREFINISHED, KYNAR COATED STEEL - COLOR TO MATCH WINDOWS AND STOREFRONT

GAUGE PER SCHEDULE, UNLESS NOTED OTHERWISE

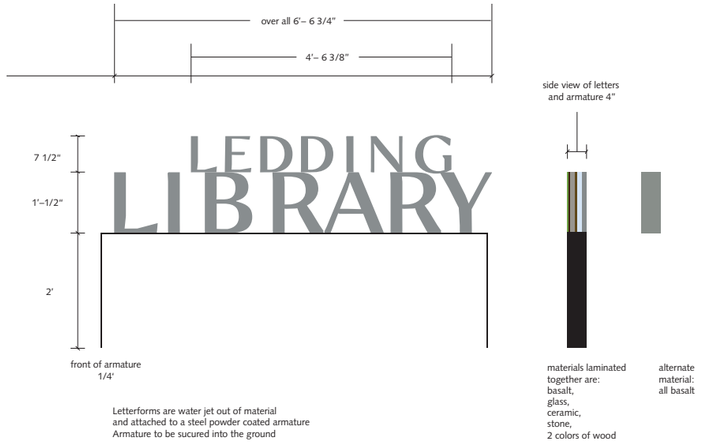
- TYPICAL FLASHINGS - 22 GA
- COPING - 18 GA
- PARAPET FASCIA - 20 GA
- CURB FASCIA - 20 GA

FIBERGLASS WINDOWS AND DOORS - CASCADIA

SHEET METAL PANEL- SMOOTH FINISH - PAINTED BLACK TO MATCH VINYL WINDOWS - FACE-FASTENED IN SMALL PANELS WITHOUT INTERMEDIATE JOINTS. SEALED WITH BLACK SEALANT TO MATCHING SHEET METAL FLASHINGS.

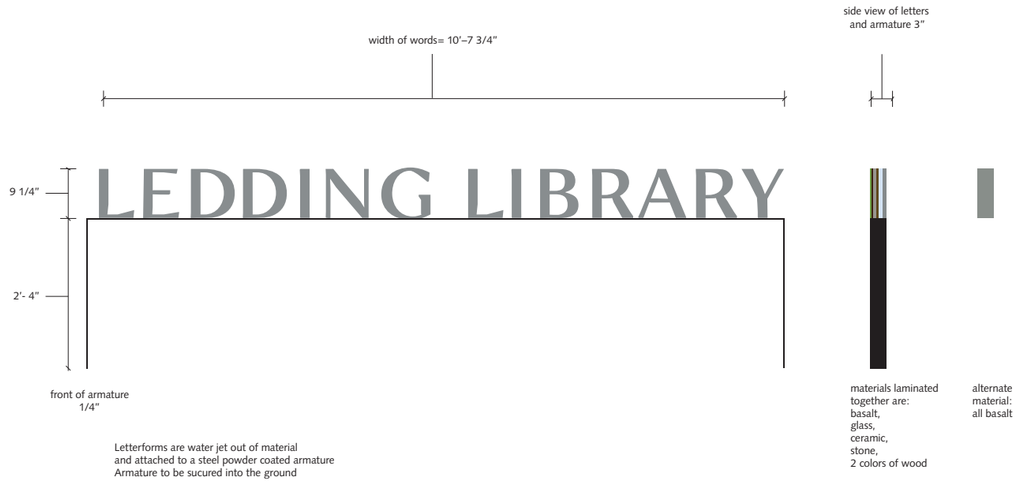
VIEW FROM SCOTT PARK

VIEW OF EAST FACADE FROM HARRISON



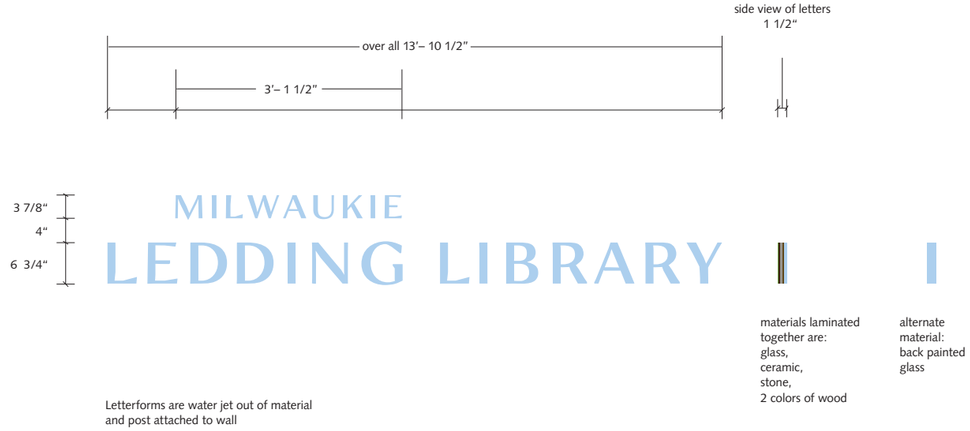
11 **EXTERIOR SINGAGE- STREET VIEW (VERSION 1)**

QTY: 1



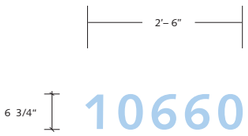
11 **EXTERIOR SINGAGE- STREET VIEW (VERSION 2)**

QTY: 1



12 EXTERIOR SINGAGE- ENTRY

QTY: 1



13 EXTERIOR SINGAGE- ADDRESS

QTY: 1 1" =1'-0"

ARCHITECTS
HACKER
733 SW Oak, Portland, OR 97205

CONSULTANT
HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS • LANDSCAPE ARCHITECTS • SURVEYORS

STAMP

NOT FOR CONSTRUCTION

REVISION NO. DATE

KEY PLAN - (NTS)

TRUE NORTH PLAN NORTH

Milwaukie Ledding Library

City of Milwaukie
10660 SE 21st Ave, Milwaukie, OR 97206

ISSUANCE
Design Review Set

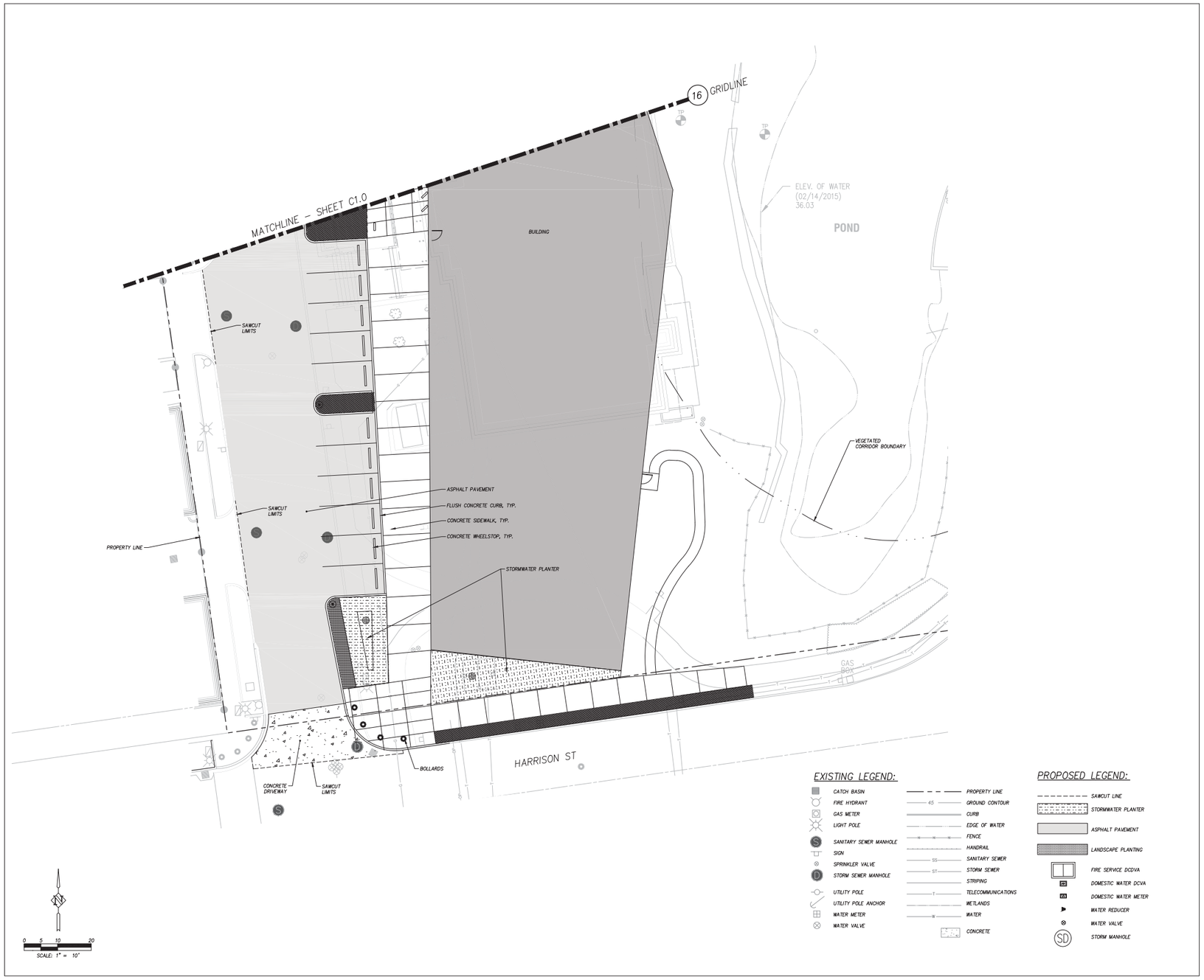
PROJECT NUMBER
1635

DATE
January 12, 2018

SCALE

DRAWING TITLE
SITE PLAN - NORTH

SHEET NUMBER
C1.0



ARCHITECTS
HACKER
733 SW Oak, Portland, OR 97205
CONSULTANT
HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS

STAMP

NOT FOR CONSTRUCTION

REVISION NO. DATE

KEY PLAN - (NTS)

TRUE NORTH PLAN NORTH

Milwaukie Ledding Library

City of Milwaukie
10660 SE 21st Ave, Milwaukie, OR 97206

ISSUANCE
Design Review Set

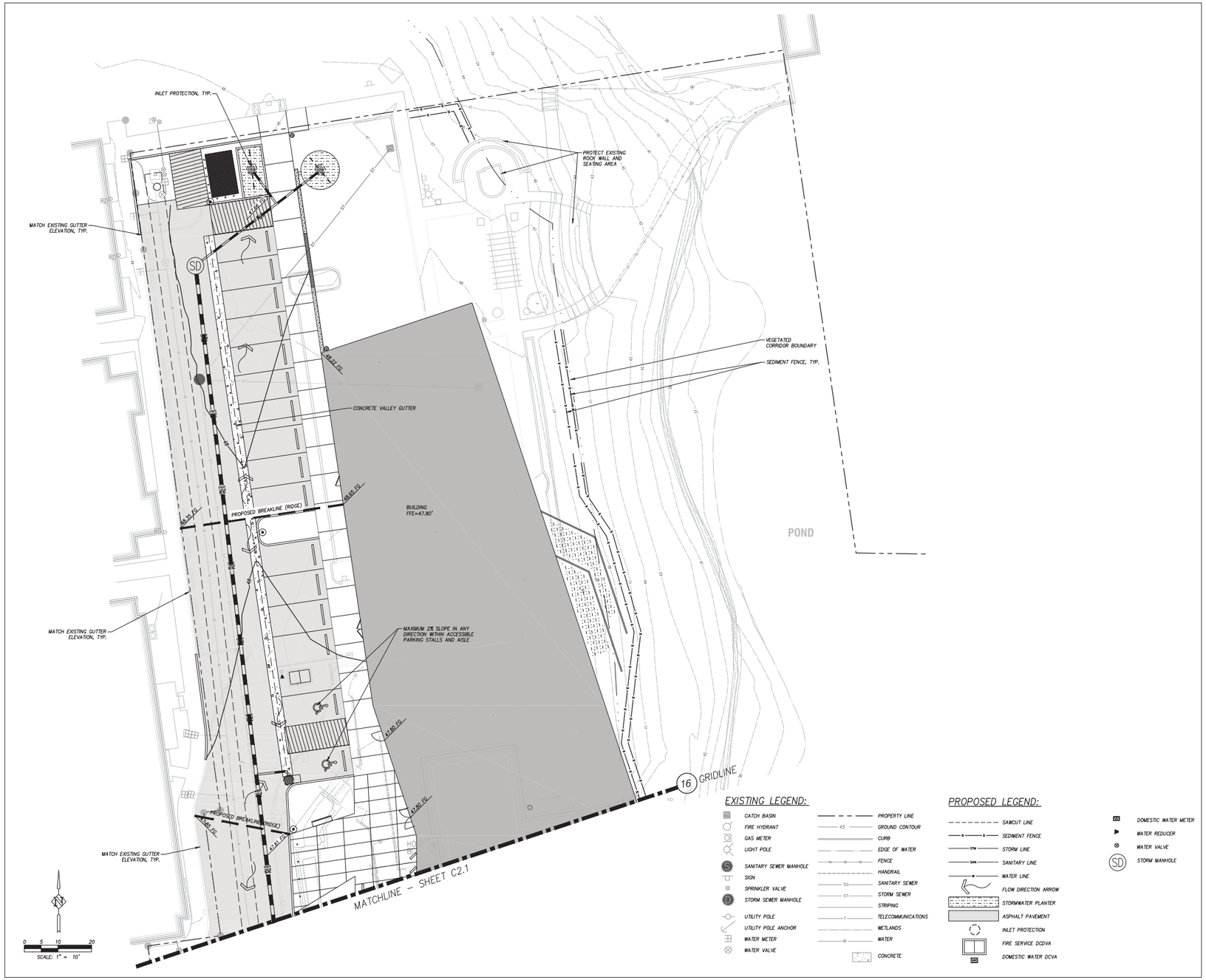
PROJECT NUMBER
1635

DATE
January 12, 2018

SCALE

DRAWING TITLE
SITE PLAN - SOUTH

SHEET NUMBER
C1.1



ARCHITECTS
HACKER
733 SW Oak, Portland, OR 97205
CONSULTANT
HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS • LANDSCAPE ARCHITECTS • SURVEYORS

STAMP

NOT FOR CONSTRUCTION

REVISION NO. DATE

KEY PLAN - (NTS)

TRUE NORTH PLAN NORTH

Milwaukie Ledding Library

City of Milwaukie
10660 SE 21st Ave, Milwaukie, OR 97206

ISSUANCE
Design Review Set

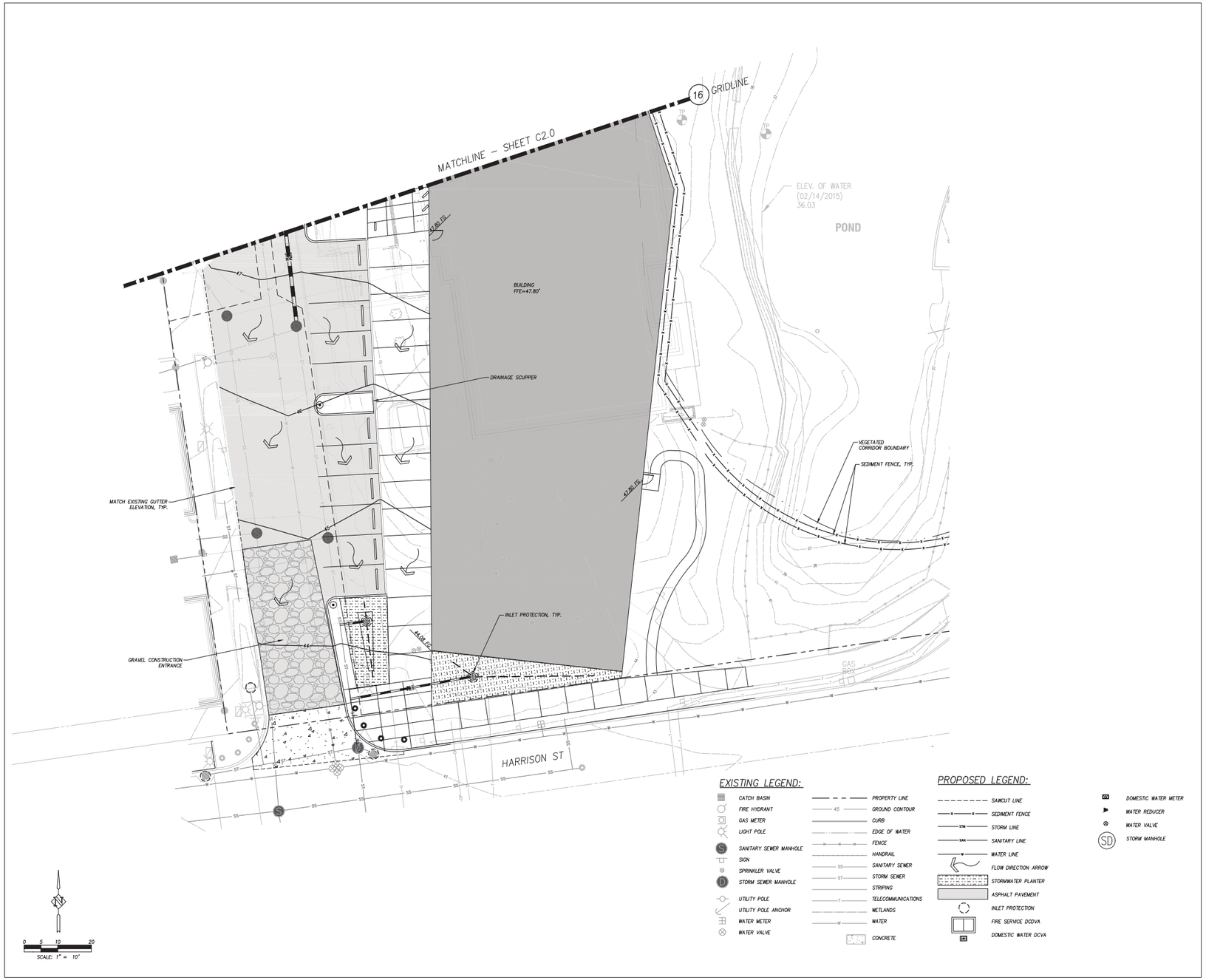
PROJECT NUMBER
1635

DATE
January 12, 2018

SCALE

DRAWING TITLE
GRADING & EC PLAN - NORTH

SHEET NUMBER
C2.0



EXISTING LEGEND:

- CATCH BASIN
- FIRE HYDRANT
- GAS METER
- LIGHT POLE
- SANITARY SEWER MANHOLE
- SIGN
- SPRINKLER VALVE
- STORM SEWER MANHOLE
- UTILITY POLE
- UTILITY POLE ANCHOR
- WATER METER
- WATER VALVE
- PROPERTY LINE
- GROUND CONTOUR
- CURB
- EDGE OF WATER
- FENCE
- HANDRAIL
- SANITARY SEWER
- STORM SEWER
- STRIPING
- TELECOMMUNICATIONS
- WETLANDS
- WATER
- CONCRETE

PROPOSED LEGEND:

- SAWCUT LINE
- SEDIMENT FENCE
- STORM LINE
- SANITARY LINE
- WATER LINE
- FLOW DIRECTION ARROW
- STORMWATER PLANTER
- ASPHALT PAVEMENT
- INLET PROTECTION
- FIRE SERVICE DCDVA
- DOMESTIC WATER DCVA
- DOMESTIC WATER METER
- WATER REDUCER
- WATER VALVE
- STORM MANHOLE

ARCHITECTS
HACKER
733 SW Oak, Portland, OR 97205

CONSULTANT
HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS • LANDSCAPE ARCHITECTS • SURVEYORS

STAMP
NOT FOR CONSTRUCTION

REVISION NO. DATE

KEY PLAN - (NTS)

TRUE NORTH PLAN NORTH

Milwaukie Ledding Library

City of Milwaukie
10660 SE 21st Ave, Milwaukie, OR 97206

ISSUANCE
Design Review Set

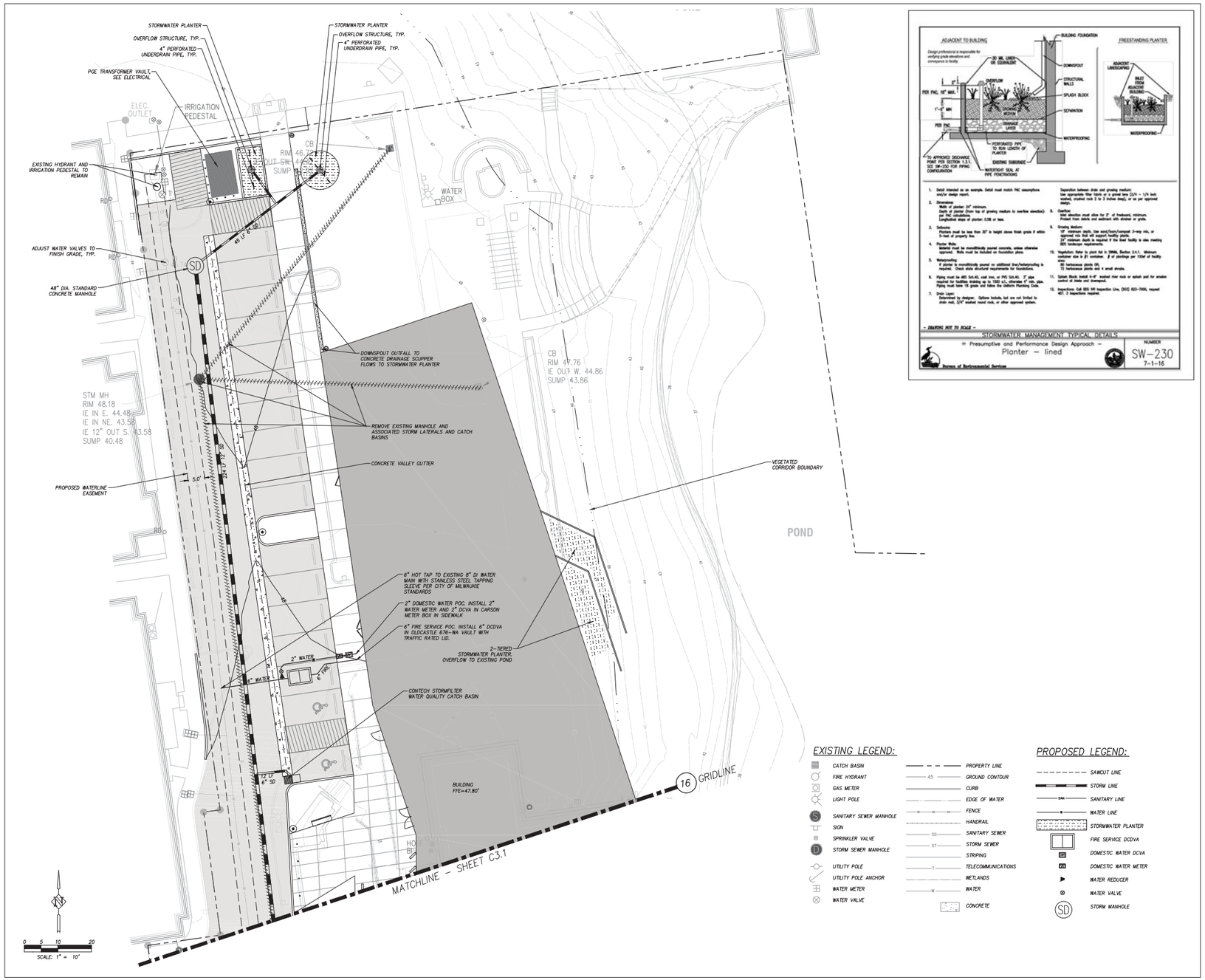
PROJECT NUMBER
1635

DATE
January 12, 2018

SCALE

DRAWING TITLE
GRADING & EC PLAN - SOUTH

SHEET NUMBER
C2.1



ARCHITECTS
HACKER
733 SW Oak, Portland, OR 97205
CONSULTANT
HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS • LANDSCAPE ARCHITECTS • SURVEYORS

STAMP

NOT FOR CONSTRUCTION

REVISION NO. DATE

KEY PLAN - (NTS)

TRUE NORTH PLAN NORTH

Milwaukie Ledding Library

City of Milwaukie
10660 SE 21st Ave, Milwaukie, OR 97206

ISSUANCE
Design Review Set

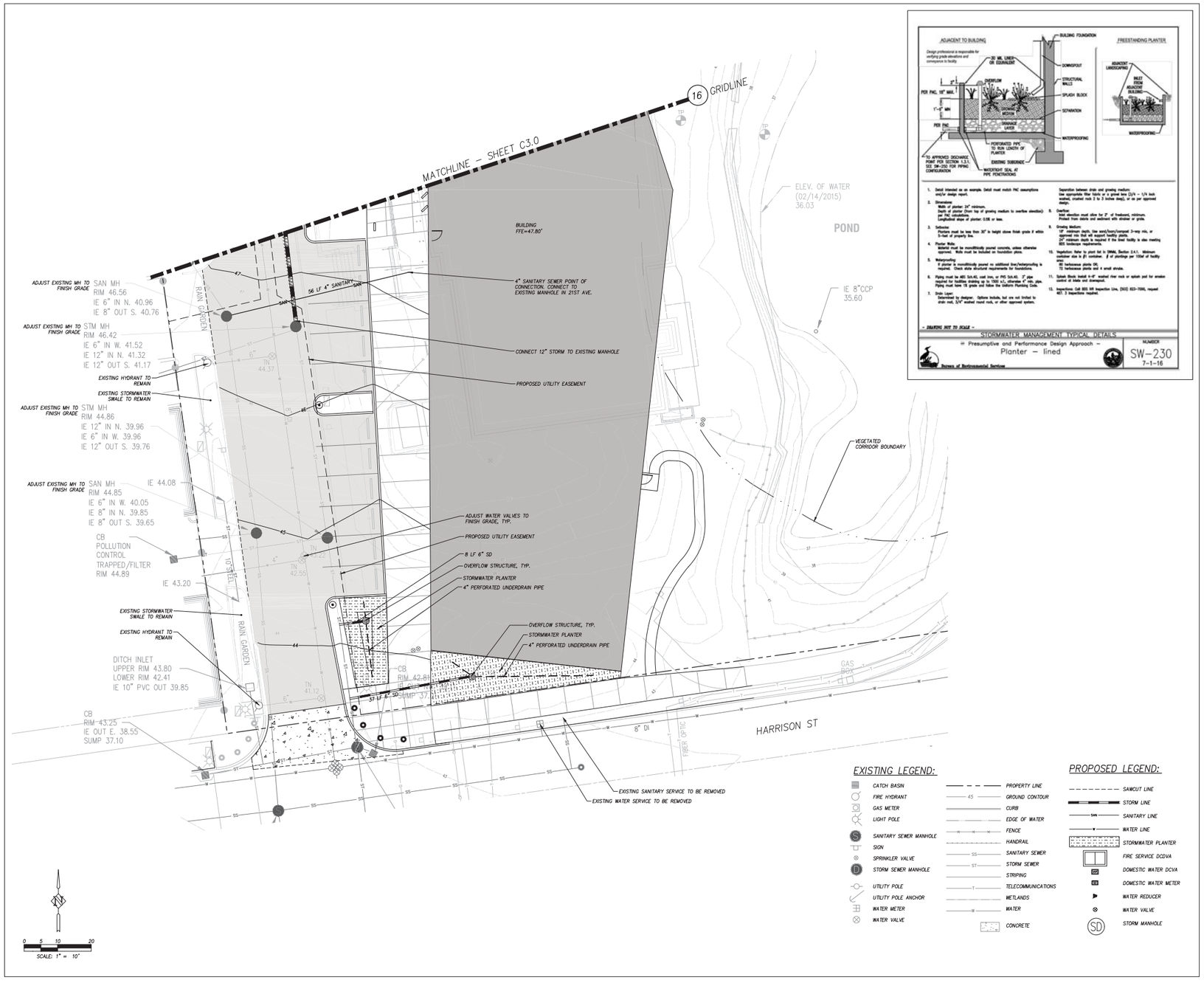
PROJECT NUMBER
1635

DATE
January 12, 2018

SCALE

DRAWING TITLE
UTILITY PLAN - NORTH

SHEET NUMBER
C3.0



ARCHITECTS
HACKER
733 SW Oak, Portland, OR 97205
CONSULTANT
Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS • LANDSCAPE ARCHITECTS • SURVEYORS

STAMP

NOT FOR CONSTRUCTION

REVISION NO. DATE

KEY PLAN - (NTS)

TRUE NORTH PLAN NORTH

Milwaukie Ledding Library

City of Milwaukie
10660 SE 21st Ave, Milwaukie, OR 97206

ISSUANCE
Design Review Set

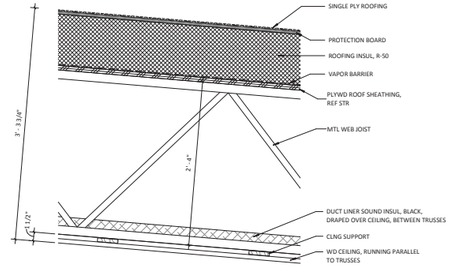
PROJECT NUMBER
1635

DATE
January 12, 2018

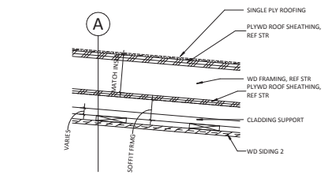
SCALE

DRAWING TITLE
UTILITY PLAN - SOUTH

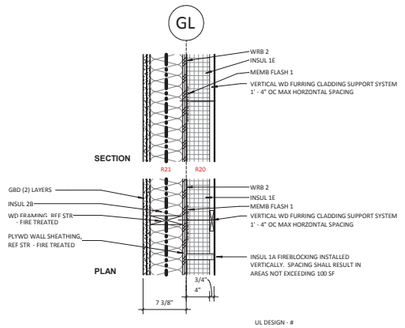
SHEET NUMBER
C3.1



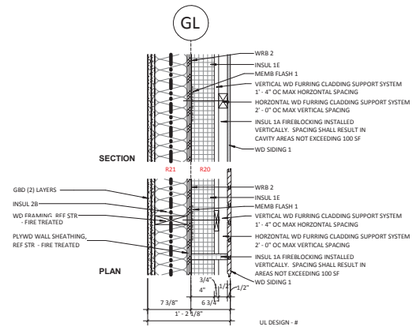
5 A-500 TYP RFG SYS ASSEMBLY
1 1/2" = 1'-0"



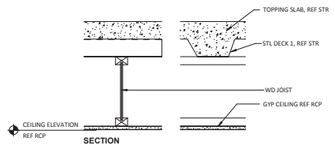
4 A-500 SOFFIT AT EXTERIOR UNISULATED COLONNADE
1 1/2" = 1'-0"



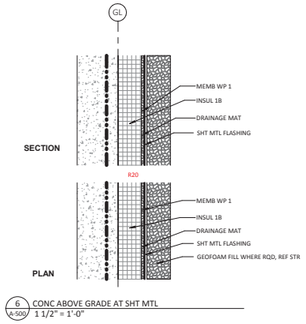
11 A-500 TYP EXTERIOR WALL - 2X8 - AT MTL PNL
1 1/2" = 1'-0"



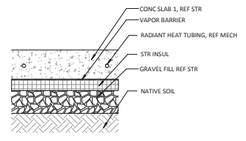
1 A-500 TYP EXTERIOR WALL - 2" x 6" WD STUD
1 1/2" = 1'-0"



3 A-500 FLOOR AT MECH MEZZANINE
1 1/2" = 1'-0"



6 A-500 CONC ABOVE GRADE AT SHT MTL
1 1/2" = 1'-0"



2 A-500 SLAB ON GRADE WITH RADIANT HEAT
1 1/2" = 1'-0"

ARCHITECTS

HACKER

733 SW Oak, Portland, OR 97205

CONSULTANT

STAMP

NOT FOR CONSTRUCTION

REVISION NO. DATE

KEY PLAN - (NTS)

TRUE NORTH PLAN NORTH

Milwaukie Ledding Library

City of Milwaukie
10660 SE 21st Ave, Milwaukie, OR 97222

ISSUANCE
100% Design Development

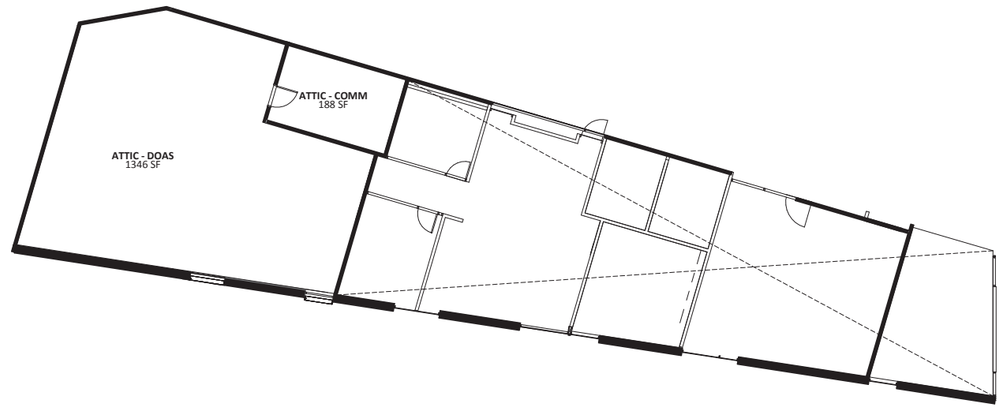
PROJECT NUMBER
1635

DATE
February 6, 2018

SCALE
As indicated

DRAWING TITLE
EXTERIOR ASSEMBLIES

SHEET NUMBER
A-500



MECHANICAL MEZZANINE PLAN

Exhibit 1

Natural Resource Review for the City of Milwaukie Ledding Library Milwaukie, Oregon

(Township 1 South, Range 2 East, Section 25CC, TL 900
Township 1 South, Range 2 East, Section 36BB, TL 1600 and 1800)

Prepared for

City of Milwaukie
10722 SE Main St.
Milwaukie, Oregon 97222

Prepared by

Craig Tumer
Amber Clark
John van Staveren
Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, Oregon 97070
(503) 570-0800
(503) 570-0855 FAX

PHS Project Number: 6314

January 17, 2018

TABLE OF CONTENTS

1.0 INTRODUCTION

The City of Milwaukie proposes to replace the existing Ledding Library located at 10660 SE 21st Avenue with another library building in the same location. The area of work contains both Water Quality Resource (WQR) and Habitat Conservation Area (HCA) and is entirely within 100 feet of the WQR. The proposed work exceeds 150 square feet within the HCA and is within 100 feet of a WQR, and therefore is subject to Type III Natural Resources Review and approval by the Planning Commission. Pacific Habitat Services, Inc. (PHS) has prepared a Natural Resource Review in accordance with Milwaukie Municipal Code (MMC) Section 19.402 to support this application.

The project site is approximately 1.83 acres located on SE 21st Avenue just north of SE Harrison Street. The approximate location of the site is shown on the USGS Gladstone, Oregon topographic quadrangle, which is included as Figure 1, and the tax lot map, which is included as Figure 2. All figures are in Appendix A. The site includes a portion of Spring Creek and an associated wetland. Apex Companies, LLC delineated the jurisdictional limits of Spring Creek and associated wetland in February 2017 and described the results in a Wetland Delineation Report dated March 2, 2017. The surveyed locations of Spring Creek and associated wetlands are depicted on Figure 3. The applicant has submitted the wetland delineation report to the Oregon Department of State Lands (DSL) for concurrence; review of the wetland delineation is currently pending.

Spring Creek is a tributary of Johnson Creek, which is located approximately 800 feet downstream of the project site. Spring Creek and its associated wetland are primary protected water features, as defined in the City of Milwaukie's Natural Resources Code (MMC 19.402). This project is subject to discretionary review under MMC Subsections 19.402.8 and 19.402.12, and an impact evaluation and alternatives analysis are required per MMC Subsection 19.402.12.A. This Natural Resource Review describes the existing WQR and HCA on the site and demonstrates project compliance with the applicable sections of the municipal code. This Natural Resource Review includes an evaluation of the condition of the WQR on the site, an analysis of potential impacts on the WQR and the HCA from the proposed development, and a mitigation plan to compensate for those impacts.

2.0 EXISTING WQR AND HCA ON THE PROJECT SITE

A WQR is defined in MMC Subsection 19.201 as a protected water resource and its vegetated corridor. Spring Creek and its associated wetland are primary protected water features, and as described in Table 19.402.15, Determination of WQR Location, in MMC Subsection 19.402.15, primary protected water features have an associated vegetated corridor of 50 to 200 feet wide, depending on the slopes adjacent to the resource. Because the slopes adjacent to Spring Creek and its associated wetland are less than 25 percent, as depicted on Figure 3), the associated vegetated corridor is 50 feet wide. The extent of the vegetated corridor on the project site, based on the surveyed boundaries of wetlands and waterways is depicted on Figure 3. The total area of vegetated corridor on the site is approximately 21, 389 sq.ft. (0.49 ac.).

Spring Creek also has an associated HCA. The City of Milwaukie Natural Resource Administrative Map (adopted in August 2011) shows HCA along the eastern portion of the site. Previous correspondence with the City of Milwaukie planning staff has indicated that the mapped HCA may be used to comply with MMC 19.402. Therefore, the City's GIS-mapped HCA, as provided by the City of Milwaukie, is depicted on Figure 3. The total area of HCA on the project site is approximately 34,026 sq.ft. (0.78 ac.); however, the mapped HCA boundaries closely correspond to the WQR boundaries such that only a portion of the mapped HCA (approximately 1,630 sq.ft. (0.04 ac.)) extends beyond the limits of the WQR. This HCA is used in the impact evaluation and alternatives analysis below.

3.0 COMPLIANCE WITH MILWAUKIE MUNICIPAL CODE

MMC 19.402.12 - General Discretionary Review

A. Impact Evaluation and Alternatives Analysis

An impact evaluation and alternatives analysis is required to determine compliance with the approval criteria for general discretionary review and to evaluate development alternatives for a particular property. A report presenting this evaluation and analysis shall be prepared and signed by a knowledgeable and qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist. At the Planning Director's discretion, the requirement to provide such a report may be waived for small projects that trigger discretionary review but can be evaluated without professional assistance.

The alternatives shall be evaluated on the basis of their impact on WQRs and HCAs, the ecological functions provided by the resource on the property, and off-site impacts within the subwatershed (6th Field Hydrologic Unit Code) where the property is located. The evaluation and analysis shall include the following:

1. ***Identification of the ecological functions of riparian habitat found on the property, as described in Subsection 19.402.1.C.2.***

MMC Subsection 19.402.1.C.2 identifies seven functions and values that contribute to water quality and to fish and wildlife habitat in urban streamside areas. Descriptions of the functions and values provided by the riparian habitat on the project site are provided below.

Vegetated corridors to separate protected water features from development - The vegetated corridor west of Spring Creek provides a buffer that separates existing development from the primary protected water feature. The existing tree cover, shrub, and herbaceous ground cover vegetation provide wildlife habitat and water quality benefits to the stream and effectively buffer the stream from the existing development.

Microclimate and shade - The trees within the WQR are large and established. Closest to the existing library on the north side of the building, the tree canopy cover is approximately 50 percent; however, the canopy cover is approximately 80 to 85 percent throughout much of the vegetated corridor. The tree canopy provides shade to the stream and helps to regulate the microclimate within the riparian corridor.

Streamflow moderation and water storage – Much of Spring Creek was culverted with increased urbanization of the area in the mid-1900s so that only that portion of Spring Creek on the project site, on parcels immediately north of the site, and parcels to the east of the site remain above ground. With the development, the remaining reaches of Spring Creek have been impounded so that in the project area, Spring Creek has little flow and functions as a pond rather than a stream. Because of the constricted outlet, Spring Creek provides some streamflow moderation and water storage functions. Because the vegetated corridor adjacent to the stream occurs on moderately steep slopes that rise approximately ten feet above the elevation of the stream and wetland, the vegetated corridor provides little streamflow moderation and water storage functions.

Water filtration, infiltration, and natural purification – Vegetation within the vegetated corridor slows runoff from adjacent areas and filters sediments and other pollutants from the runoff before it reaches the creek. By slowing the runoff, the vegetation also increases the potential for water to infiltrate into the soil before reaching the stream. Much of the vegetated corridor is densely vegetated under existing conditions and provides good water filtration, infiltration, and natural purification functions. Portions of the vegetated corridor where native ground cover and shrub vegetation has been replaced by mulched landscaped plantings and mowed lawns provide these functions at a lower level.

Bank stabilization and sediment and pollution control – Within the project area, streambanks and slopes above the stream and wetland are generally well-vegetated with trees and shrubs. This vegetation helps to stabilize the banks. Due to the dense vegetation on the banks and slow flows within the stream, there is little evidence of active bank erosion within the project site.

Large wood recruitment and retention and natural channel dynamics - Within the project area, mature trees occur within much of the vegetated corridor west of Spring Creek. These trees have the potential to become large woody material. However, because there's no active channel and the stream is currently ponded with little flow, any large woody material that falls into the stream is likely to remain on the project site rather than be carried downstream.

Organic material resources -Vegetation within the vegetated corridor provides organic material that serves as the basis for the aquatic food web. Under the existing conditions, the vegetated corridor within the project site is vegetated with a mixture of native and non-native trees, shrubs, and herbaceous species that contribute organic materials to the Spring Creek.

2. An inventory of vegetation, sufficient to categorize the existing condition of the WQR per Table 19.402.11.C, including the percentage of ground and canopy coverage materials within the WQR.

The existing library building, parking lot, walkways, stone planters, and concrete seating area encroach into the western portion of the vegetated corridor; total existing encroachment into the WQR is approximately 5,260 sq.ft. (0.12 ac.). The remainder of the vegetated corridor, between the existing encroachment and wetlands associated with Spring Creek, is largely forested. The vegetated corridor contains a dense canopy formed by large trees, predominantly northern red oak (*Quercus rubra*) and Douglas-fir (*Pseudotsuga menziesii*). The area has a relatively dense understory of tree saplings and shrubs. Common species in the understory include vine maple (*Acer circinatum*), snowberry (*Symphoricarpos albus*), red osier dogwood (*Cornus sericea*),

oceanspray (*Holodiscus discolor*) and Indian plum (*Oemleria cerasiformis*). Because of the lo light conditions from the dense tree canopy and landscape maintenance and mulching in portio of the vegetated corridor area, herbaceous ground cover is absent or relatively sparse througho much of the vegetated corridor. Small amounts of Himalayan blackberry are present on the site Himalayan blackberry is listed as invasive, noxious weed by the Oregon Department of Agriculture. Other non-native species, including northern red oak, which is the predominant tr species on the site, are present within the plant community, but they are not listed as invasive o noxious weeds at this time.

PHS identified two plant communities within the on-site vegetated corridor based on the predominance of native woody species and the extent of the tree canopy within the communiti PHS took three sample points to characterize the plant communities within the vegetated corridor. Brief descriptions of the characteristics that define the vegetated corridor plant communities and an evaluation of the condition of each of the communities are provided belov

Class A Plant Community

The vegetated corridor plant community south of the existing asphalt path and concrete seating area and north of the south edge of the existing library building has tree canopy coverage of approximately 80 to 85 percent. The combined tree, shrub and ground cover layers provide coverage that exceeds 80 percent, and most of the plants species within the plant community a native species. As such, the existing condition of the WQR west of Spring Creek meets the definition of a Class A ("Good") WQR, as defined in Table 19.402.11.C of the municipal code Sample Points 1 and 3 (Tables 1 and 2, respectively) characterize this plant community.

Table 1. Class A (Good) Plant Community, Sample Point 1

Botanical Name	Common Name	Cover (%)
Trees		
Quercus rubra	Northern red oak	75
Pseudotsuga menziesii	Douglas-fir	10
	TOTAL:	**85**
Shrubs and Saplings		
Cornus sericea	Red osier dogwood	25
Acer circinatum	Vine maple	15
Symphoricarpos albus	Snowberry	10
Rubus spectabilis	Salmonberry	10
Rosa nutkana	Nootka rose	10
Oemleria cerasiformis	Indian plum	10
Mahonia nervosa	Cascade Oregon grape	5
Holodiscus discolor	Oceanspray	5
	TOTAL:	**90**

Table 2. Class A (Good) Plant Community, Sample Point 3

Botanical Name	Common Name	Cover (%)
Trees		
Quercus rubra	Northern red oak	70
Thuja plicata	Western red cedar	10
	TOTAL:	**80**
Shrubs and Saplings		
Oemleria cerasiformis	Indian plum	20
Holodiscus discolor	Oceanspray	20
Acer circinatum	Vine maple	20
Rhododendron macrophyllum	Pacific rhododendron	10
	TOTAL:	**70**

Class B Plant Community

Portions of the vegetated corridor to the north of the asphalt path and concrete seating area, near the northeast corner of the existing library building, and south of the existing library consist predominantly of manicured landscape plantings. Many of the plant species in these areas are non-native species commonly used in landscape plantings. Ground cover in these areas is either sparse due to mulching and landscape maintenance or consists of mowed grasses. Himalayan blackberry, which is listed as an invasive, noxious weed by the Oregon Department of Agriculture, is present in small amounts in some of these areas. None of the other non-native species present within the plant community are listed as invasive or noxious weeds at this time. Sample Point 2 (Table 3) characterizes the species composition within the plant community.

As shown by Sample Point 2, this plant community has a canopy coverage of approximately 50 percent. The combined coverage of tree, shrub and ground cover layers provide coverage that exceeds 80 percent. Therefore, the existing condition of the plant communities in these areas meets the definition of a Class B ("Marginal") WQR, as defined in Table 19.402.11.C of the municipal code.

Table 3. Class B (Marginal) Plant Community, Sample Point 2

Botanical Name	Common Name	Cover (%)
Trees		
Quercus rubra	Red oak	50
	TOTAL:	**50**
Shrubs and Saplings		
Symphoricarpos albus	Snowberry	50
Lonicera nitida	Box honeysuckle	20
Pieris japonica	Japanese andromeda	20
Rubus armeniacus	Himalayan blackberry	10
Potentilla fruticosa	Bush cinquefoil	5
Alnus rubra	Red alder	5
	TOTAL:	**110**

Botanical Name	Common Name	Cover (%)
Ground Cover		
Equisetum arvense	Field horsetail	20
Poa sp.	Bluegrass	20
	TOTAL:	**40**

3. ***An assessment of the water quality impacts related to the development, including sediments, temperature and nutrients, sediment control, and temperature control, or any other condition with the potential to cause the protected water feature to be listed on DEQ's 303(d) list.***

Construction of the proposed library and associated infrastructure will result in impacts to WQR and HCA (Figure 4); however, much of the proposed construction within mapped WQR and HCA will occur within the footprint of the existing building and parking lot. Construction of the new building, path, and stormwater planter will result in permanent disturbance to approximately 1,705 sq.ft. (0.04 ac.) of WQR and 1,926 sq.ft. (0.04 ac.) of HCA outside the footprint of the existing building and parking lot. Temporary disturbance to approximately 3,494 sq. ft. (0.08 ac.) of WQR and approximately 3,185 sq.ft. (0.07 ac.) of HCA will result from the construction of the proposed library building, stormwater planter, and stormwater outfall and the removal of portions of the existing building and walkways that are outside the footprint of the proposed structure. Measures will be taken to limit temporary disturbance to the minimum area necessary for the construction of the new facilities and the removal of existing structures. All temporarily disturbed areas will be planted with native plant species, as described below, to minimize impact to the resources. The areas of permanent and temporary disturbance within the WQR and HCA are summarized in Table 4, below, and depicted on Figure 4.

Table 4. Summary of Permanent and Temporary Disturbance in the Water Quality Resource and HCA

Resource	Permanent Disturbance (sq.ft./ac.)	Temporary Disturbance (sq.ft./ac.)
Water Quality Resource	1,705 / 0.04	3,494 / 0.08
HCA	1,926 / 0.04	3,185 / 0.07

The proposed project is not anticipated to have any adverse impacts to water quality. The use of erosion and sediment controls during construction will prevent the transport of sediments to water resources and sediment-related impacts to water quality. The proposed project is not anticipated to result in additional nutrient inputs to the stream. A proposed stormwater planter east of the new building will treat runoff from the library roof and discharge the treated stormwater to the WQR. Boulders and plantings placed downslope of the outfall will dissipate flows preventing erosion and sedimentation and potential impacts to water quality. Additional stormwater planters located outside the WQR will collect and treat stormwater from other areas of the site and discharge the treated stormwater to the City's municipal storm sewer system. The proposed project also includes the installation of path within the WQR.

Construction of the proposed project will result in the removal of three trees six inches or greater in diameter from the western portion of the vegetated corridor. Because the tallest trees closest to the stream and adjacent wetlands will not be affected by the proposed project, the proposed tree removal will not result in decreased stream shading, and the proposed project is not anticipated to have an adverse effect on water temperature.

4. An alternatives analysis, providing an explanation of the rationale behind choosing the alternative selected, listing measures that will be taken to avoid and/or minimize adverse impacts to designated natural resources, and demonstrating that:

a. No practicable alternatives to the requested development exist that will not disturb the WQR or HCA.

In 2016, the City of Milwaukie passed a bond measure to fund improvements and expand the Ledding Library, and as a result, the City proposes to replace the existing library with a new, larger library building. The proposed improvements and expansion are required to meet community needs. Both the existing and proposed buildings are partially located within WQR and mapped HCA. As part of the design process, a two level design alternative was considered in order to reduce the overall footprint of the new building and minimize disturbance to the WQR and HCA. However, a two-story building was determined to be not practicable for the following reasons:

- The addition of a second floor to a library building would increase the distance that materials must be moved through the building to provide the expected service. The use of elevators and dumbwaiters to transport materials between floors would increase the time needed to move materials and result in a loss of efficiency.
- The addition of a second floor to the library would require increased staff to provide direct supervision in all public areas. This additional staffing would result in increased costs to operate the library.
- The addition of a second floor would result in an increase in ongoing expenses associated with maintenance of an elevator and additional restrooms and work spaces.

For these reasons, a one-story building was selected as the preferred alternative for the library improvement and expansion. The existing library is approximately 12,000 sq.ft.; the City proposes a new building of approximately 20,000 sq.ft. to meet community needs.

As depicted on Figure 3, the WQR and mapped HCA occupy almost all of the eastern half of the project site. Because of the location and extent of the resources on the site, it is not possible to construct a library building large enough to meet the community's needs and to provide the required parking, walkways, and other required infrastructure and totally avoid impacts to the WQR and HCA.

b. Development in the WQR and/or HCA has been limited to the area necessary to allow for the proposed use.

Development within the WQR and HCA has been limited to the area necessary to allow for the proposed use. The proposed building has been sited as far west on the site as possible in order to allow for the required parking spaces, provide the minimum amount of space necessary for the

construction of a library building of a size that meets community needs, and minimize disturbance to the WQR and mapped HCA. Much of the proposed library building will be constructed within the existing footprint of the existing building and parking lot, in order to minimize impacts to the vegetated portion of the WQR. The eastern side of the building foundation will be constructed in a manner that minimizes the extent of temporary encroachment into the WQR. Figure 4 depicts a temporary disturbance area that extends up to five feet from the proposed structures to conservatively estimate the limits of disturbance; however, measures will be taken to minimize the proposed stormwater planter east of the building is the minimum size necessary to provide the required treatment of the rooftop runoff in order to minimize permanent disturbance in the WQR. Proposed parking areas will be located entirely outside the WQR and HCA.

c. If disturbed, the WQR can be restored to an equal or better condition in accordance with Table 19.402.11. C; and the HCA can be restored consistent with the mitigation requirements of Subsection 19.402.11. D.2.

All areas of WQR and mapped HCA temporarily disturbed as a result of the proposed project will be restored to equal or better condition in accordance with Table 19.402.11.D.2. All temporarily disturbed areas will be planted with native tree, shrub and herbaceous ground cover species to restore temporarily disturbed areas. Additionally, areas within the footprint of the existing library building and parking area but outside the footprint of the proposed building, will be restored and planted with native tree, shrub, and ground cover species. Mitigation is described in more detail below.

d. Road crossings will be minimized as much as possible.

Not applicable. This project does not include any proposed road crossings.

5. Evidence that the applicant has done the following, for applications proposing routine repair and maintenance, alteration, and/or total replacement of existing structures located within the WQR:

a. Demonstrated that no practicable alternative design or method of development exists that would have a lesser impact on the WQR than the one proposed. If no such practicable alternative design or method of development exists, the project shall be conditioned to limit its disturbance and impact on the WQR to the minimum extent necessary to achieve the proposed repair/maintenance, alteration, and/or replacement.

The proposed project is the total replacement of an existing structure that is partially located within the WQR. As described above, there is no practicable alternative design or method of development that would result in less impact to the WQR. As described above, the proposed project has been designed to minimize disturbance to the WQR to the minimum necessary to achieve the replacement of the existing library building with a new building sufficient to meet the community's needs.

b. Provided mitigation to ensure that impacts to the functions and values of the WQR will be mitigated or restored to the extent practicable.

Mitigation for proposed disturbance is described below.

6. A mitigation plan for the designated natural resource that contains the following information:

a. A description of adverse impacts that will be caused as a result of development.

Construction of the proposed library and associated infrastructure will result in impacts to WQR and HCA (Figure 4); however, much of the proposed construction within mapped WQR and HCA will occur within the footprint of the existing building and parking lot. Construction of the new building, path, and stormwater planter east of the proposed building will result in permanent disturbance to approximately 1,705 sq.ft. (0.04 ac.) of WQR and 1,926 sq.ft. (0.04 ac.) of HCA outside the footprint of the existing building and parking lot. Temporary disturbance to approximately 3,494 sq. ft. (0.08 ac.) of WQR and approximately 3,185,372 sq.ft. (0.07 ac.) of HCA will result from the construction of the proposed library building, stormwater planter, and stormwater outfall and the removal of portions of the existing building and walkways that are outside the footprint of the proposed structure. Measures will be taken to limit temporary disturbance to the minimum area necessary for the construction of the new facilities and the removal of existing structures.

b. An explanation of measures that will be taken to avoid, minimize, and/or mitigate adverse impacts to the designated natural resource; in accordance with, but not limited to, Table 19.402.11.C for WQRs and Subsection 19.402.11.D.2 for HCAs.

As discussed above, it is not possible to construct the proposed project and avoid impacts to the WQR or mapped HCA.

The following measures are included in the project design to minimize adverse impacts to natural resources:

- Siting the proposed library building to overlap the footprint of the existing building and parking lot to the extent practicable to minimize disturbance to the WQR and mapped HCA, as described above.
- A stormwater management plan to insure that the post-development runoff does not exceed the pre-development runoff.
- Stormwater planters will treat stormwater runoff to meet Section 2, Stormwater Design Standards of the City of Milwaukie Public Works Standards.
- Tree protection measures to prevent impacts to existing trees to remain within the vegetated corridor. Protective measures will include a 6-foot-high fence installed at a distance of one foot per one inch of trunk diameter at breast height (dbh) to protect the tree's root zone. Pedestrian and vehicular access will also be limited within the tree protection zones to protect the roots of the trees.

Mitigation for the unavoidable impacts will be provided through the inventory of man-made debris and noxious materials that might be present within the WQR and the removal of any such material present; the implementation of a stormwater plan that meets City requirements for runoff rates and water quality; the removal of non-native, invasive plants from the vegetated corridor; and installation of tree and shrub plantings within the vegetated corridor to enhance and restore a diverse, native plant community. Compliance with the mitigation requirements outlined in Table 19.402.11.C and Subsection 19.402.11.D.2 to compensate for proposed impacts to the WQR and HCA are described below.

As depicted on Figure 3, the existing condition of WQR on the west side of Spring Creek is a combination of Class A ("Good") and Class B ("Marginal"). Mitigation requirements for disturbance in a Class A and Class B WQR, as listed in Table 19.402.11.C, are described below, as are the components of the project design that have been incorporated to insure compliance with the mitigation requirements.

- ***Submit a plan for mitigating water quality impacts related to the development, including: sediments, temperature, nutrients, or any other condition that may have caused the protected water feature to be listed on DEQ's 303(d) list.***

  Hacker Architects submitted a Preliminary Stormwater concept in the Building Program document (dated June 13, 2017) as well as the schematic design site development drawings dated October 24, 2017. The proposed stormwater management facilities treat runoff to meet the City of Milwaukie's water quality requirements and detain post-development runoff at or below pre-development release rates.

- ***Inventory and remove debris and noxious materials.***

  At the time of site construction, the Applicant will identify man-made debris and noxious materials that may be present within the WQR. Any such debris or materials will be removed from the WQR.

Mitigation requirements for disturbance in Class A and B WQR, as listed in Table 19.402.11.C, are described below, as are the components of the project design that have been incorporated to insure compliance with the mitigation requirements.

- ***Restore and mitigate disturbed areas with native species from the Milwaukie Native Plant List, using a City-approved plan developed to represent the vegetative composition that would naturally occur on the site.***

  All disturbed areas within the WQR will be restored with native trees and shrubs and seeded with a native seed mix. Trees and shrubs will be planted within areas designated as "Native Planting Area" and "Restoration Planting Area" (Figure 5) to enhance and restore a native plant community within the WQR.

  The number of trees and shrubs to be planted in Mitigation Area was determined in accordance with MMC Subsection 19.402.11.D.2. Three trees six inches or larger in diameter at breast height (dbh) will be removed from the HCA and WQR, as shown on Figure 4. As prescribed by Table 19.402.11.D.2.a, 14 trees and 36 shrubs would be required under Mitigation Option 1 to mitigate for the trees to be removed. Under Mitigation Option 2, 19 trees (1,926 sq.ft. impact area x 5 trees per 500 sq.ft. of impact area = 19 trees) and 96 shrubs (1,926 sq.ft. impact area x 25 shrubs per 500 sq.ft. of impact area = 96 shrubs) would be planted to mitigate for impacts to 1,926 sq.ft. of HCA impact. Because Mitigation Option 2 results in more tree plantings, Mitigation Option 2 was used to determine the number of trees and shrubs to be planted in accordance with MMC Subsection 19.402.11.D.2. A list of trees and shrubs proposed for planting are provided in Table 5, below.

Table 5. Proposed Riparian Restoration Planting List

Species	Common Name	Quantity	Stock Type	Plant Size
TREES				
Acer macrophyllum	Bigleaf maple	6	Container or field-grown	1/2 in. caliper
Alnus rubra	Red alder	6	Container or field-grown	1/2 in. caliper
Thuja plicata	Western red cedar	7	Container or field-grown	1/2 in. caliper
SHRUBS				
Cornus sericea	Red-osier dogwood	32	1 gallon	12 in
Oemlaria cerasiformis	Indian plum	32	1 gallon	12 in
Symphoricarpos albus	Snowberry	32	1 gallon	12 in

Trees and shrubs listed in Table 5 will be planted in areas designated as "native planting area" and "restoration planting area" on Figure 5. Because these areas are vegetated with trees and shrubs under existing conditions, the designated trees and shrubs will be planted in areas of temporary disturbance, in areas where invasive species are removed, and in areas where understory vegetation is sparse under existing conditions.

In addition, there are areas within the pond itself that have yellow flag iris that will be removed. Yellow flag iris is listed as a noxious weed by the Oregon Department of Agriculture.

These mitigation plantings meet the requirements of MMC Subsection 19.402.11.D, as follows:

- All areas temporarily disturbed will be restored and permanent impacts will be mitigated by the tree and shrub plantings, as described above.
- All species proposed for planting are native species, as identified on the Milwaukie Native Plant List.
- Trees to be planted will average at least a 1/2-in caliper (measured at 6 inches above the ground level for field-grown trees or above the soil line for container-grown trees). Shrubs shall be at least 1-gallon size and 12 inches high.
- Trees will be planted between 8 and 12 feet on center. Shrubs will be planted between 4 and 5 feet on center or clustered in single-species groups of no more than 4 plants, with each cluster planted between 8 and 10 feet on center. When planting near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.
- More than two species of shrubs are proposed, and not more than 50 percent of the trees to be planted are of the same genus.

- All mitigation will occur on site
- Invasive non-native or noxious vegetation will be removed within the mitigation area prior to planting, including, but not limited to, species identified as nuisance plants on the Milwaukie Native Plant List.
- Bare or open soil areas remaining after the required tree and shrub plantings will be seeded to 100% surface coverage with grasses or other ground cover species identified as native on the Milwaukie Native Plant List. Revegetation will occur during the next planting season following the site disturbance.

- ***Plant and/or seed all bare areas to provide 100% surface coverage.***

  All disturbed soil surfaces and low understory areas will be seeded with a native seed mix. Areas temporarily disturbed for the construction of the proposed project and due to the removal of invasive plant species will be seeded with this seed mix.

- ***Inventory and remove debris and noxious materials.***

  At the time of site construction, the Applicant will identify man-made debris and noxious materials that may be present within the WQR. Any such debris or materials will be removed from the WQR. This will occur within Mitigation Area, as shown on Figure 6.

c. Sufficient description to demonstrate how the following standards will be achieved:

(1) Where existing vegetation has been removed, the site shall be revegetated as soon as practicable.

Following the completion of the construction, temporarily disturbed soils will be reseeded with a native seed mix. Within the proposed planting areas, soils disturbed as a result of the removal of non-native invasive plants will be seeded with the native seed mix described in Table 5 as soon as practicable following the removal of the invasive plants. Planting of woody material is anticipated to occur in late winter 2019 to maximize the survival of the plantings.

(2) Where practicable, lights shall be placed so that they do not shine directly into any WQR and/or HCA location. The type, size, and intensity of lighting shall be selected so that impacts to habitat functions are minimized.

Lights will be placed so that they do not shine directly into the WQR. The type, size, and intensity of lighting will be selected so that impacts to habitat functions are minimized.

(3) Areas of standing trees, shrubs, and natural vegetation will remain connected or contiguous; particularly along natural drainage courses, except where mitigation is approved; so as to provide a transition between the proposed development and the designated natural resource and to provide opportunity for food, water, and cover for animals located within the WQR.

With the exception of the removal of invasive plants from the designated planting areas, existing trees, shrubs, and natural vegetation within the WQR will remain undisturbed during the proposed construction. No trees or shrubs will be removed for the construction of the proposed bark mulch trail.

d. A map showing where the specific mitigation activities will occur. Off-site mitigation related to WQRs shall not be used to meet the mitigation requirements of Section 19.402.

Figure 5 depicts the location of proposed mitigation plantings. No mitigation is proposed to occur off site.

e. An implementation schedule; including a timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting; as well as a contingency plan. All in-stream work in fish-bearing streams shall be done in accordance with the allowable windows for in-water work as designated by ODFW.

Construction of the proposed project is anticipated to begin in the summer of 2018. Activities associated with the WQR/HCA mitigation are anticipated to begin in summer 2018. Removal of any existing man-made debris and noxious materials from the WQR will occur in summer 2018, as will the removal of invasive plants from the planting areas (Figure 5). Restoration plantings will be installed in late winter 2019.

Monitoring of the restoration area will be conducted in the late summer of 2019 and again in summer 2020. An annual monitoring report documenting the survival of the restoration plantings will be submitted to the City of Milwaukie by December 31 of each monitoring year. Plants that die shall be replaced in kind as needed to ensure the minimum 80percent survival rate.

No in-stream work is proposed to occur as part of this project.

B. Approval Criteria

1. Unless specified elsewhere in Section 19.402, applications subject to the discretionary review process shall demonstrate how the proposed activity complies with the following criteria:

a. Avoid

The proposed activity avoids the intrusion of development into the WQR and/or HCA to the extent practicable. The proposed activity shall have less detrimental impact to the designated natural resource than other practicable alternatives, including significantly different practicable alternatives that propose less development within the resource area.

The proposed project avoids development within the WQR and HCA to the maximum extent practicable. Much of the proposed construction will occur within the footprints of the existing library building and parking lots. The proposed building has been sited as far to the west as possible in order to minimize disturbance to vegetated portions of the WQR. As discussed above, a two-story building design was considered to minimize disturbance to the WQR and HCA, but such a design was determined to be not practicable due to efficiency and budgetary constraints.

b. Minimize

If the applicant demonstrates that there is no practicable alternative that will avoid disturbance of the designated natural resource, then the proposed activity within the resource area shall minimize detrimental impacts to the extent practicable.

(1) The proposed activity shall minimize detrimental impacts to ecological functions and loss of habitat, consistent with uses allowed by right under the base zone, to the extent practicable.

Implementation of the proposed mitigation will ensure the proposed project minimizes adverse effects to the ecological functions of the WQR and loss of habitat, as follows:

- The minimization of impacts as well as the proposed plantings to restore a native plant community within the vegetated corridor will ensure that the WQR continues to provide a vegetated corridor that separates protected water features from development.
- The diverse native plant community within the WQR will continue to provide water filtration, infiltration, and natural purification functions. The proposed project will not adversely affect these functions.
- The proposed restoration plantings and the resulting diverse native plant community within the WQR will continue to provide bank stabilization and sediment and pollution control functions. The proposed project will not adversely affect these functions.
- Trees will remain within the vegetated corridor following construction, and therefore, the WQR will continue to provide the potential for large wood recruitment.
- Because the WQR will continue to be vegetated with a diverse plant community, the proposed project will not adversely affect the resource's ability to provide organic inputs to the stream and riparian area.

(2) To the extent practicable within the designated natural resource, the proposed activity shall be designed, located, and constructed to:

(a) Minimize grading, removal of native vegetation, and disturbance and removal of native soils; by using the approaches described in Subsection 19.402.11.A, reducing building footprints, and using minimal excavation foundation systems (e.g., pier, post, or piling foundation).

In accordance with MMC Subsection 19.402.11.A, the following measures will be implemented to minimize impacts to the WQR on the site:

- Work areas will be marked to reduce potential damage to the WQR.
- Trees in the WQR will not be used as anchors for stabilizing construction equipment.
- Native soils disturbed during development shall be conserved on the property.
- Prior to the start of any construction activities, the applicant will apply for a grading and erosion control permit, consistent with the standards required by the City's Public Works Department.

- The Applicant will implement best management practices on site to prevent the drainage of hazardous materials, erosion, pollution or sedimentation within the resources and the vegetative corridors.
- The Applicant has prepared a stormwater detention and water quality plan for the project which has been designed to prevent flows within and to natural drainage courses which might exceed pre-developed conditions.
- Prior to construction, the WQR that is to remain undeveloped will be flagged, fenced, or otherwise marked and shall remain undisturbed. Such markings will be maintained until construction is complete.
- The construction phase of the development shall be done in such a manner as to safeguard the resource portions of the site that have not been approved for development.
- Lights will be placed so that they do not shine directly into the WQR.
- The Applicant has prepared a Preliminary Grading and Erosion Control Plan which will conform to the requirements of 19.402.9. The Final Construction Grading and Erosion Control Plan will be provided to the City's Engineering Department prior to the commencement of construction activities.

(b) Minimize adverse hydrological impacts on water resources.

The implementation of the proposed stormwater management plan, which detains post-development runoff at or below pre-development release rates, will ensure that hydrologic impacts to the water resource are minimized.

(c) Minimize impacts on wildlife corridors and fish passage.

The proposed project does not involve any work in water resources that might adversely affect fish passage. Restoration of a diverse native plant community within the vegetated corridor will ensure that impacts to wildlife habitat are minimized.

(d) Allow for use of other techniques to further minimize the impacts of development in the resource area; such as using native plants throughout the site (not just in the resource area), locating other required landscaping adjacent to the resource area, reducing light spill-off into the resource area from development, preserving and maintaining existing trees and tree canopy coverage, and/or planting trees where appropriate to maximize future tree canopy coverage.

Impacts to the on-site resources have been minimized to the extent practicable, as described above.

c. Mitigate

If the applicant demonstrates that there is no practicable alternative that will avoid disturbance of the designated natural resource, then the proposed activity shall mitigate for adverse impacts to the resource area. All proposed mitigation plans shall meet the following standards:

(1) The mitigation plan shall demonstrate that it compensates for detrimental impacts to the ecological functions of resource areas, after taking into consideration the applicant's efforts to minimize such detrimental impacts.

As described above, implementation of the proposed mitigation will ensure the proposed project minimizes adverse effects to the ecological functions of the WQR and loss of habitat, as follows:

- The minimization of areal impacts as well as the proposed plantings to restore a native plant community to the west side of Spring Creek will ensure that the WQR continues to provide a vegetated corridors that separates protected water features from development.
- The diverse plant community within the WQR will continue to provide water filtration, infiltration, and natural purification functions. The proposed project will not adversely affect these functions.
- The proposed restoration plantings and the resulting diverse native plant community within the WQR will continue to provide bank stabilization and sediment and pollution control functions. The proposed project will not adversely affect these functions.
- Trees will remain within the vegetated corridor following construction, and therefore, the WQR will continue to provide the potential for large wood recruitment and retention functions.
- Because the WQR will continue to be vegetated with a diverse plant community, the proposed project will not adversely affect the resource's ability to provide organic inputs to the stream and riparian area.

(2) Mitigation shall occur on the site of the disturbance, to the extent practicable. Off-site mitigation for disturbance of WQRs shall not be approved. Off-site mitigation for disturbance of HCAs shall be approved if the applicant has demonstrated that it is not practicable to complete the mitigation on-site and if the applicant has documented that they can carry out and ensure the success of the off-site mitigation as outlined in Subsection 19.402.11.B.5.

In addition, if the off-site mitigation area is not within the same subwatershed (6th Field Hydrologic Unit Code) as the related disturbed HCA, the applicant shall demonstrate that it is not practicable to complete the mitigation within the same subwatershed and that, considering the purpose of the mitigation, the mitigation will provide more ecological functional value if implemented outside of the subwatershed.

All mitigation will occur on site.

(3) All revegetation plantings shall use native plants listed on the Milwaukie Native Plant List.

Only native species will be installed in the revegetation plantings. A list of species to be planted is provided in Table 5, above.

(4) All in-stream work in fish-bearing streams shall be done in accordance with the allowable windows for in-water work as designated by ODFW.

No in-stream work is proposed to occur with this project.

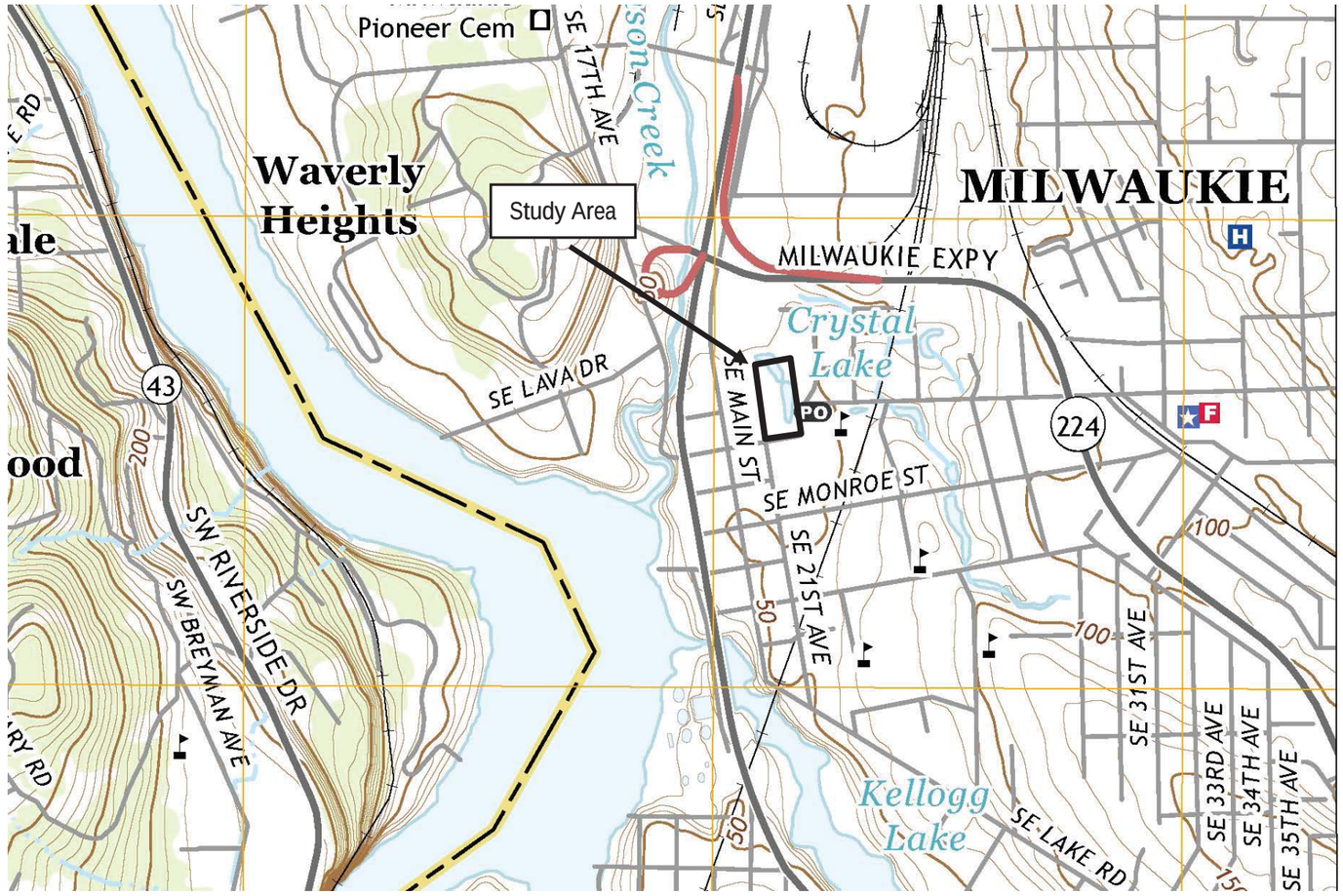
(5) A mitigation maintenance plan shall be included and shall be sufficient to ensure the success of the planting. Compliance with the plan shall be a condition of development approval.

The Applicant will undertake the following mitigation maintenance measures to insure a minimum of 80 percent of the trees and shrubs planted remain alive two years after the mitigation planting is completed.

- New plantings will be mulched to a minimum of 3-inch depth and 18-inch diameter to retain moisture and discourage weed growth.
- Non-native or noxious vegetation will be removed or controlled throughout the maintenance period.
- Plant sleeves or fencing will be used to protect trees and shrubs against wildlife browsing and the resulting damage to plants.
- New plantings will be watered at a rate of 1 inch per week between June 15 and October 15 for the first two years following planting.

Appendix A

Figures



Project #6314
1/18/18

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

General Location and Topography
Milwaukie Ledding Library - Milwaukie, Oregon
United States Geological Survey (USGS) Lake Oswego, Oregon 7.5 quadrangle, 2017
(viewer.nationalmap.gov/basic)

FIGURE
1

Project # 6314
1/18/18

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Tax Lot Map
Milwaukie Ledding Library - Milwaukie, Oregon
The Oregon Map (ormap.net)

FIGURE
2

LEGEND

- Wetland
- Study Area Boundary
- Limit of WQR
- Vegetated Corridor Existing Encroachment (5,260 sf / 0.12 ac)
- HCA (34,026 sf / 0.78 ac)
- HCA Existing Encroachment (3,104 sf / 0.07 ac)
- 50' / 0% Slope Measurement
- Vegetated Corridor (21,389 sf / 0.49 ac)
- Class A (Good) WQR (8,360 sf / 0.19 ac)
- Class B (Marginal) WQR (8,051 sf / 0.18 ac)

0 20 40 80

SCALE IN FEET

Base provided by Compass Surveyors

Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Existing Conditions
Milwaukie Ledding Library - Milwaukie, Oregon

FIGURE 3

1-16-2018

TREES PROPOSED TO BE REMOVED FROM THE WQR AND HCA

TREE ID	SPECIES	DIAMETER (inches)
2542	Pine	8
3589	Deciduous	36
3591	Rhododendron	9

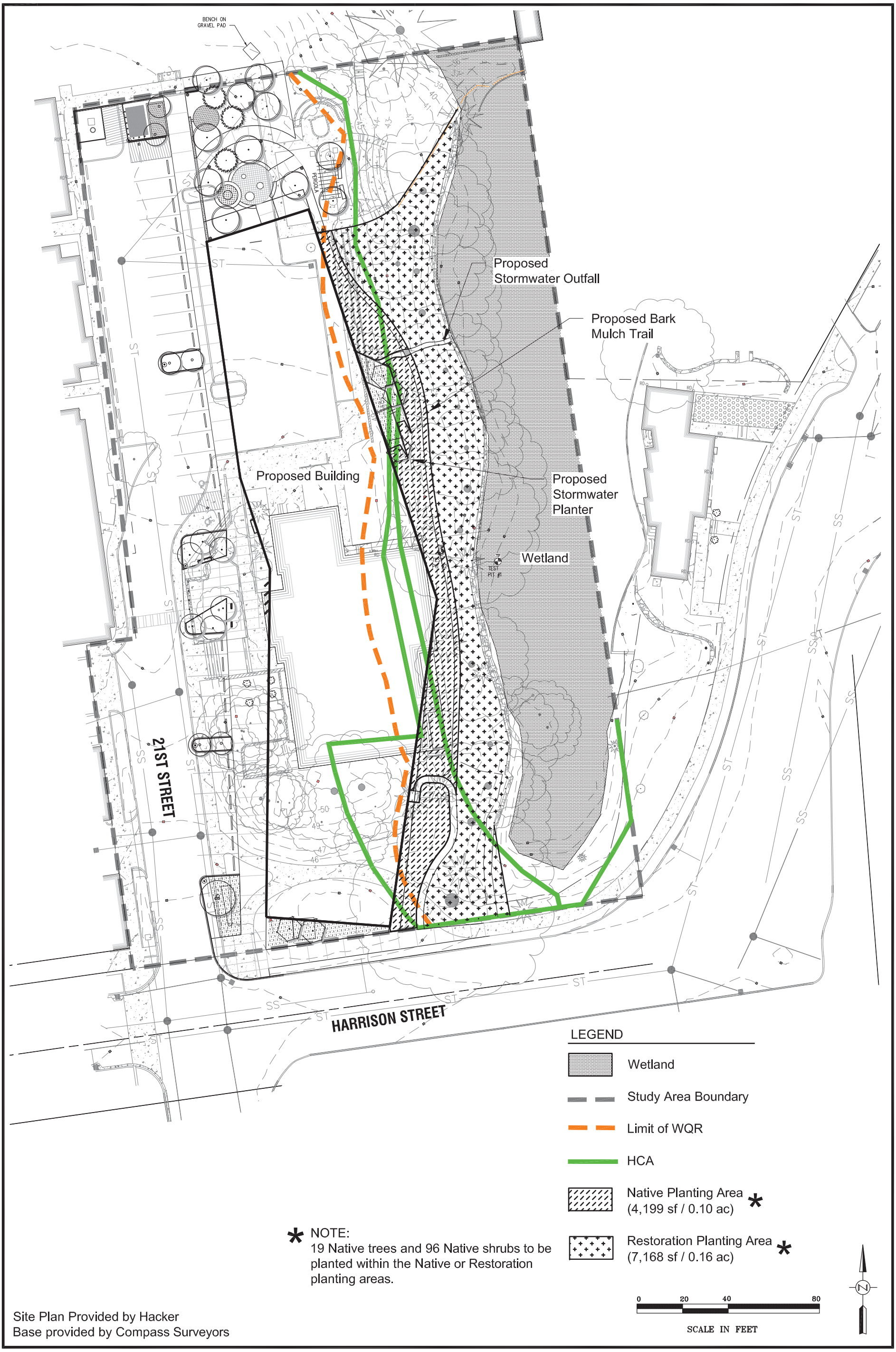
Site Plan Provided by Hacker
Base provided by Compass Surveyors

Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Site Planwith WQR and HCA Disturbance
Milwaukie Ledding Library - Milwaukie, Oregon

FIGURE 4

2-7-2018



Site Plan Provided by Hacker
Base provided by Compass Surveyors

Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Mitigation Plan
Milwaukie Ledding Library - Milwaukie, Oregon

FIGURE 5

2-7-2018

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at https://apps.oregon.gov/DSL/EPS/program?key=4.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.** A single PDF of the completed cover from and report may be e-mailed to **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

Contact and Authorization Information

☒ Applicant ☐ Owner Name, Firm and Address:
City of Milwaukie
10722 SE Main Street
Milwaukie, Oregon 97222

Business phone # (503) 786-7555
Mobile phone # (optional)
E-mail:

☐ Authorized Legal Agent, Name and Address (if different):

Business phone #
Mobile phone # (optional)
E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: _____ **Signature:** _____
Date: _____ Special instructions regarding site access: _____

Project and Site Information

Project Name: City of Milwaukie Ledding Library

Latitude: 45.4902119 Longitude: -122.6663887
decimal degree - centroid of site or start & end points of linear project

Proposed Use: City Library and Parking

Tax Map #
Tax Lot(s)

Tax Map #
Tax Lot(s) 1600, 1800, 900

Project Street Address (or other descriptive location):
10660 SE 21st Avenue
Milwaukie, Oregon 97222

Township 1S, 1S Range 1E, 1E Section 36, 25 QQ BB, CC
Use separate sheet for additional tax and location information

City: Milwaukie County: Clackamas

Waterway: Spring Creek River Mile: N/A

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
Carmen Owens, Apex Companies, LLC
3015 SW 1st Avenue
Portland, Oregon 97201

Phone # (503) 924-4704
Mobile phone # (if applicable)
E-mail: cowens@apexcos.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.
Consultant Signature: _____ Date: 12-1-17

Primary Contact for report review and site access is ☐ Consultant ☒ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No | Study Area size: 2.06 acres | Total Wetland Acreage 0.29

Check Applicable Boxes Below

☐ R-F permit application submitted
☐ Mitigation bank site
☐ Industrial Land Certification Program Site
☐ Wetland restoration/enhancement project (not mitigation)
☐ Previous delineation/application on parcel
If known, previous DSL # _____

☒ Fee payment submitted $ $ 419
☐ Fee ($100) for resubmittal of rejected report
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # _____ Expiration date _____
☐ LWI shows wetlands or waters on parcel
Wetland ID code _____

For Office Use Only

DSL Reviewer: _____ Fee Paid Date: ____/____/____ DSL WD # _____

Date Delineation Received: ___/___/___ Scanned: ☐ Electronic: ☐ DSL App.# _____

Wetland Delineation Report
10600 SE 21st Avenue
Milwaukie, Oregon

Prepared for:
City of Milwaukie

March 2, 2017
2331-00

Wetland Delineation Report
10660 SE 21st Avenue
Milwaukie, Oregon

Prepared for:
City of Milwaukie

March 2, 2017
2331-00

Carmen Owens
Project Biologist

John Foxwell, LHg
Senior Associate Hydrogeologist

Table of Contents

Figures

Appendices

I. Introduction

The purpose of this assessment is to review the property at 10600 SE 21st Avenue and two adjacent parcels located within the City of Milwaukie, Oregon (the Site) for wetlands and regulated waters of the United States (U.S.) and the State of Oregon. The results of the assessment are described in the Sections below, as well as documented on Figures 1 through 6. Data sheets and site photos are presented in Appendices A and B, respectively.

II. Findings

A. Landscape Setting and Use

The Site is a 2.03-acre property located at 10600 SE 21st Avenue in Milwaukie, Oregon, compromising the entirety of Clackamas County tax lots 11E36BB01800 (Ledding Library Parcel), 11E36BB01600 (Silver Parcel), 11E25CC00900 (Pond House Parcel; Figures 1 and 2). The Ledding Library parcel contains an 11,800 square feet three-level municipal library on an estimated 1.77-acres. The rest of the parcel includes a parking lot, vegetated land and Spring Creek. Sliver Parcel is a 2,750 square feet vegetated parcel with no structures. The Pond House parcel contains three-level residence, converted garage, landscaped yard, and Spring Creek on an estimated 0.20-acres. Properties to the west of the subject property are residential use and light commercial use. A small park and Spring Creek are present just north of the subject property, with commercial use buildings across the creek. West and south of the subject property is a school and associated sports field, residential apartments, and Milwaukie City Hall.

Elevation of the Site is approximately 50 feet above mean sea level (MSL). In general, the topography of the Site is flat with a slight decrease in elevation from the east side of the currently Ledding Library building to the Spring Creek. Elevations of the adjacent properties are similar to those at the Site. The Site is located within the Lower Willamette major watershed (HUC 8 17090012) and the Lower Johnson Creek subwatershed (HUC 12 17090012020) (EPA, 2016). The nearest surface water body is Johnson Creek which is approximately 500 feet west of the Site at its nearest location. The Willamette River is located approximately 800 feet west of the Site. The nearest mapped wetland is a freshwater forested/shrub wetland located 75 feet northeast of the Site (USFWS, 2014). This wetland can be seen on Figure 3. The Site is not located within the FEMA 100-year floodplain.

The Site is located within the Portland/Vancouver Basin (3a) Level IV Ecoregion within the Willamette Valley (3) Level III Ecoregion as mapped by the Environmental Protection Agency Level III and IV Ecoregions of Oregon poster (Thorson et al., 2003). The Portland/Vancouver Basin is a depression at the base of the Portland Hills fault block. It contains the confluence of the Columbia and Willamette Rivers and is composed of deltaic sands and gravels deposited by Pleistocene floods. Today, many wetlands, oxbow lakes, and ponds still occur, but, overall, the Portland/Vancouver Basin (3a) is dominated by urban and suburban development, pastures, and nurseries. The climate is usually marine-influenced but, periodically, easterly

winds entering via the Columbia River Gorge bring continental temperature extremes to the Portland/Vancouver Basin. (Thorson et al., 2003).

The Site is located within a dense urban landscape. Historically the vegetation type was Prairie Terraces and Valley Foothills. The Prairie Terraces and Valley Foothills vegetation type covers the Willamette River valley and foothills from Beaverton to Eugene, Oregon (WPN, 1999). Plants associated with these vegetation types historically included Douglas-fir, Oregon ash, madrone, western red cedar, Oregon white oak savanna and prairies, and grand fir wetland vegetation. Current vegetation may be urban and suburban native and exotic vegetation, pasture grasses, grass seed, grain, some forested riparian areas, pastureland, conifer and deciduous forests, vineyards, and orchards.

B. Site Alterations

The Site appears undeveloped on aerial photography in 1914. The Ledding Library parcel was developed as a residential property between 1914 and 1928. The Pond House parcel was developed as a residential property between 1948 and 1952. The Ledding Library was converted from a residential farm house to a municipal library in 1964. Since that date, it has undergone two renovations in 1987 and 1997. No other known improvements have taken place since 1997.

According to United States Geological Survey (USGS) topographic maps, one blue-line tributary is located within the Site. No additional potential tributaries or linear features not delineated as USGS blue-lines were identified on aerial imagery. The one blue-line tributary is labeled as Spring Creek on topographic maps. Historical topographic maps show Spring Creek as a north-northwest flowing blue-line tributary of Johnson Creek. Starting in the 1950s, development of the area increased and became more urban. Corresponding to this time, Spring Creek becomes ponded and segmented on topographic maps, likely signifying the tributary has been culverted between the ponded areas. The most recent topographic map (2014) shows the creek is almost entirely culverted with a few non-culverted ponding locations such as that on Site. As Spring Creek has become a highly engineered system, with little contact with the natural hydrology of the area, there is little flow except at times of significant precipitation. This creates conditions that allow the ponded section of Spring Creek on the Site to have little to no channelization.

C. Precipitation Data and Analysis

Weather conditions on February 8, 2017 were partly sunny with intermittent precipitation. Total precipitation for the day was 2.10 inches. The total rainfall for February 1 through February 8 was 6.40 inches. The table below summarizes the total precipitation and percentage of average for the three months prior to the field reconnaissance. All data is from Natural Resources Conservation Service (NRCS) Agricultural Applied Climate Information System (AgACIS) for the Tillamook Station (NRCSb, 2017).

Month	Average Precipitation	30% Chance Will Have		Observed Precipitation	Percent of Average
		Less Than Average	More Than Average		
November 2016	19.26	15.18	22.18	13.30	69%
December 2016	16.64	12.16	19.58	19.80	119%
January 2017	19.89	12.55	21.24	8.50	43%

D. Methods

Prior to the field investigation, a detailed desktop Geographic Information System (GIS) analysis was conducted to determine the locations of potential areas on the Site that required field inspection. USGS topographic maps were used to identify the locations of potential tributaries and wetlands that may be impacted by the Site, as well as to identify the flow regime of the Site to determine downstream connectivity to a traditional navigable water. The National Wetland Inventory (NWI; USFWS, 2014) was reviewed to identify previously delineated or predicted wetlands on Site and adjacent properties. These wetlands are presented on Figure 3. The soil survey for Clackamas County was reviewed to identify hydric soils located on the Site or adjacent properties (USDA, current). The soil types mapped on this survey for the Site are presented on Figure 4. Aerial imagery of the Site was reviewed for evidence of wetland and channel characteristics, including inundation, saturation, sparsely vegetated surfaces, changes in vegetation type, clearly defined channels, and manmade disturbances. An aerial photograph of the Site is presented on Figure 5.

Following the GIS study, an Apex biologist performed pedestrian field reconnaissance on February 8, 2017 to compare background data to existing conditions and to determine the current extent of waters of the U.S. within the Site. Field investigations were performed in accordance with the USACE Wetland Delineation Manual (USACE, 1987) and with the Western Mountains, Valleys, and Coast Region (USACE, 2010) regional supplement. The limits of ordinary high water (OHW) were delineated based on an evaluation of observed physical characteristics, as described in the USACE Regulatory Guidance Letter No. 05-05 (USACE, 2005).

Wetland and stream field notes were recorded on the appropriate regional supplement wetland data sheet. The Western Mountains, Valleys, and Coast Region (USACE, 2010) regional supplement datasheets for test pit (TP)-1 and TP-2 are shown in Appendix A. The sample locations and wetland boundary were flagged and locations recorded with a hand-held global positioning device (GPS) device.

E. Description of All Wetland and Other Non-Wetland Water

Spring Creek

Spring Creek enters the Site through a culvert on the southeast corner of the property. Flow is northward along the east side of the Ledding Library parcel. This creek is defined on the NWI as a freshwater pond

(PUBK). The feature is a palustrine pond with an unconsolidated bottom that is artificially flooded (USFWS, 2014). The are of Spring Creek is approximately 12,340 square feet (sq ft) or 0.28 acres on the Site.

Within the Site, Spring Creek averages 20 to 30 feet wide at ordinary high water (OHW), though the feature is approximately 60 feet across at it's widest, which includes portions both on and off the Site. Substrate within the pond was silt underlain by sand and gravel. Water depth varied with water approximately 2.5 feet deep in the middle of the pond during the site visit.

Wetland LL001

One emergent wetland was identified on the Site during field reconnaissance, encompassing approximately 4,850 sq ft (0.1 acre) of the Site, bordering Spring Creek. Indicators of this wetland, which includes hydrophytic vegetation, hydric soils, and wetland hydrology, were observed during field investigations. Hydric soils identified within the wetland meet the criteria for Hydrogen Sulfide Indicator (A4) as a sulfur smell was evident at multiple locations. The vegetation at LL001 included red oak, western red cedar, lady fern, English ivy, Himalayan blackberry, Oregon grape, scouring rush, and sweet flag. The wetland boundary and sample points are presented on Figure 6.

F. Deviation from LWI or NWI

Spring Creek is listed as a freshwater pond on the NWI. The identified wetland bordering Spring Creek is not listed on the NWI. The small area of the wetland is likely the reason it is not listed on the NWI. There is no LWI for Milwaukie, Oregon.

G. Mapping Method

Sample locations and the wetland boundary were flagged. The locations of the samples and boundary were recorded with a sub-meter accuracy Trimble Geo7X.

H. Additional Information

None.

I. Results and Conclusion

Following desktop analysis and field reconnaissance, one Water of the US and one wetland was identified on the Site. The freshwater pond, Spring Creek, occupies 0.28 acres of the Site. The freshwater emergent and palustrine open water wetland encompasses 0.1 acres acres of the Site. Hydrophytic vegetation, hydric soils, and wetland hydrology were observed within LL001.

Based on this finding, a PCN would need to be submitted to the USACE if the proposed project results in the permanent loss of greater than 0.50 acre of feature LL 001. If impacts exceed one-half acre, an Individual Permit (IP) from the USACE would be required. In addition, removal of more than 50 cubic yards of material in any waters of the state of Oregon requires an ORDSL Removal-Fill Permit.

Findings within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from public agencies and other referenced sources. The services provided by Apex should not be construed as implied confirmation regarding the suitability of the Site for its eventual use.

J. Required Disclaimer

This report documents the investigation, best professional judgment, and the conclusions of the investigator. It is correct and complete to the best of my knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-005.

III. References

(EPA) United States Environmental Protection Agency, 2017. *Surf Your Watershed*. Available at: http://cfpub.epa.gov/surf/locate/index.cfm. (Accessed in March 2017)

(NRCS) Natural Resources Conservation Service. 2015. Lists of hydric soils, national list, all states. December 2015 version. Available online at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. (Accessed in March 2017)

NRCSa, 2017. *Web Soil Survey*. Available online at: http://websoilsurvey.nrcs.usda.gov/. (Accessed in March 2017)

NRCSb, 2017. *Agricultural Applied Climate Information System*. Available online at https://www.wcc.nrcs.usda.gov/climate/navigate_wets.html. (Accessed in March 2017).

USACE, 1987. "*Corps of Engineers Wetlands Delineation Manual*," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

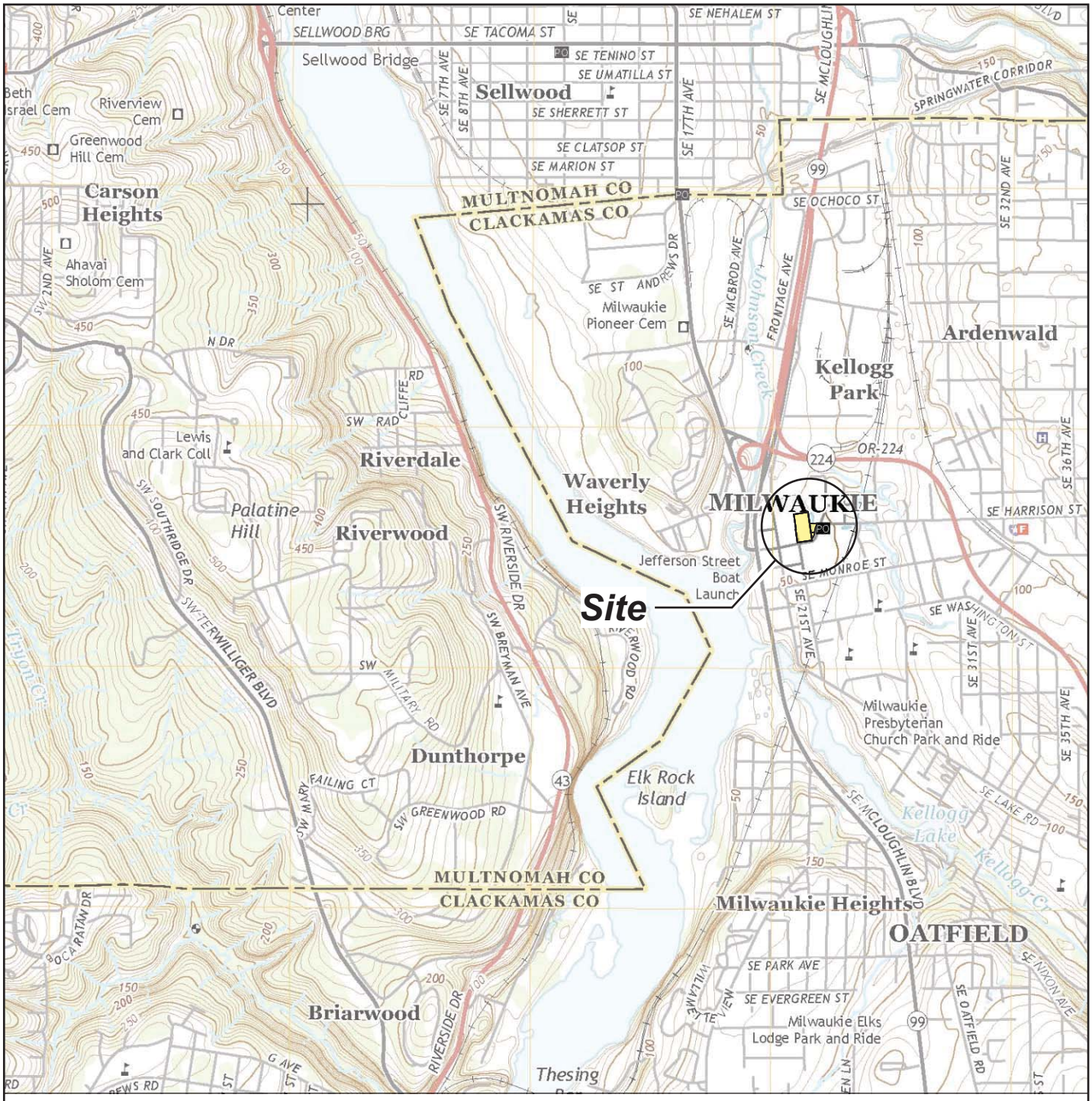
USACE, 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).*

(USFWS) U.S. Fish and Wildlife Service Fisheries and Habitat Conservation. 2014. *National Wetlands Inventory*. Available online at: www.fws.gov/wetlands/Data/Mapper.html. (Accessed in March 2017)

(USGS) U.S. Geological Survey. 2011. *Gap Analysis Program (GAP). National Land Cover, Version 2.* Available online at: http://gis1.usgs.gov/csas/gap/viewer/land_cover/Map.aspx. (Accessed in March 2017)

Thorson, T.D., Bryce, S.A., Lammers, D.A., Woods, A.J., Omernik, J.M., Kagan, J., Pater, D.E., and Comstock, J.A., *2003. Ecoregions of Oregon* (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,500,000).

(WPN) Watershed Professionals Network. 1999. *Oregon Watershed Assessment Manual.* June 1999. Prepared for the Governor's Watershed Enhancement Board, Salem, Oregon.



Note: Base map prepared from USGS 7.5-minute quadrangle of Lake Oswego, OR, dated 2014 as provided by USGS.gov.

0 2,000 4,000

Approximate Scale in Feet

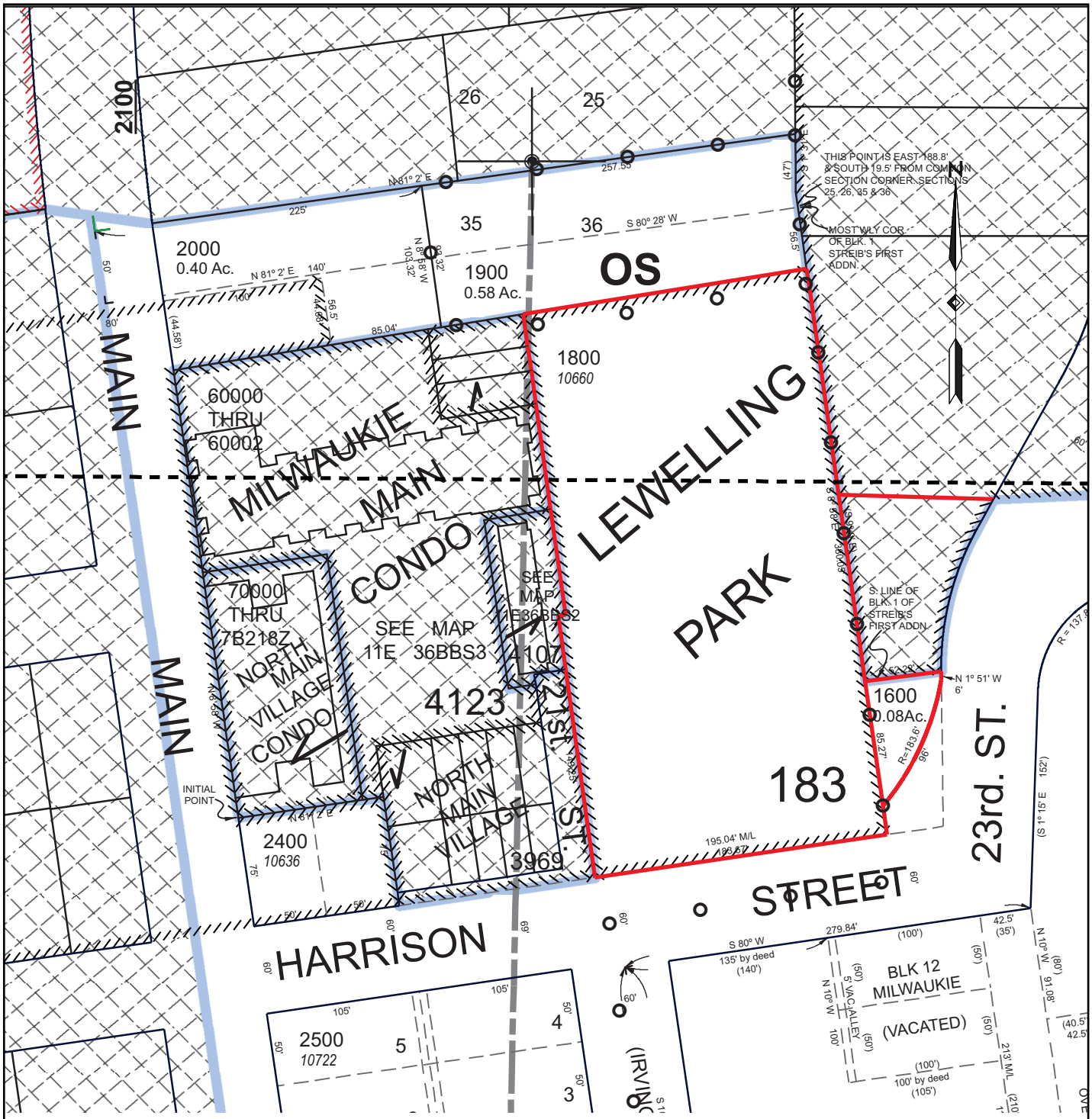
N

Location Map

Wetland Delineation Report
10660 SE 21st Avenue
Milwaukie, Oregon

Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	2331-00	Figure
March 2017		1



Legend:

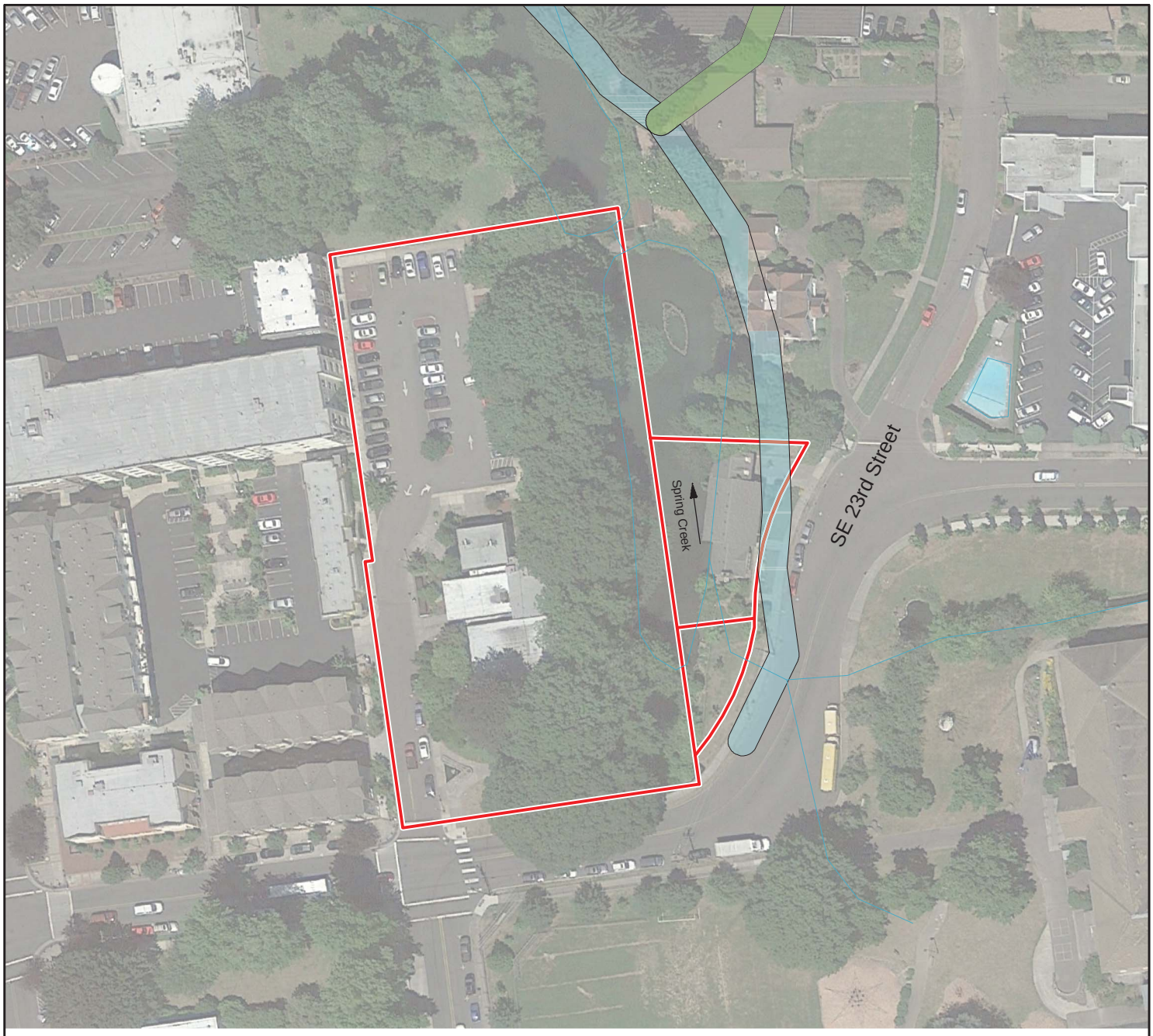
Site Boundary

Note: Base map prepared from a Clackamas County Tax Lot Map: 1 1 E 36BB, N.W.1/4 N.W.1/4 SEC.36 T.1S. R.1E. W.M.

Tax Lot Map

Wetland Delineation Report
10660 SE 21st Avenue
Milwaukie, Oregon

APEX Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	2331-00	Figure 2
	March 2017		



NOTE: Base map prepared from Google Earth Pro Imagery. Aerial dated July 23, 2016. Tax Lot, road, and stream information from © Oregon Metro www.oregonmetro.gov/rlis (8-2016).

N

0 100 200

Scale in Feet

Legend:

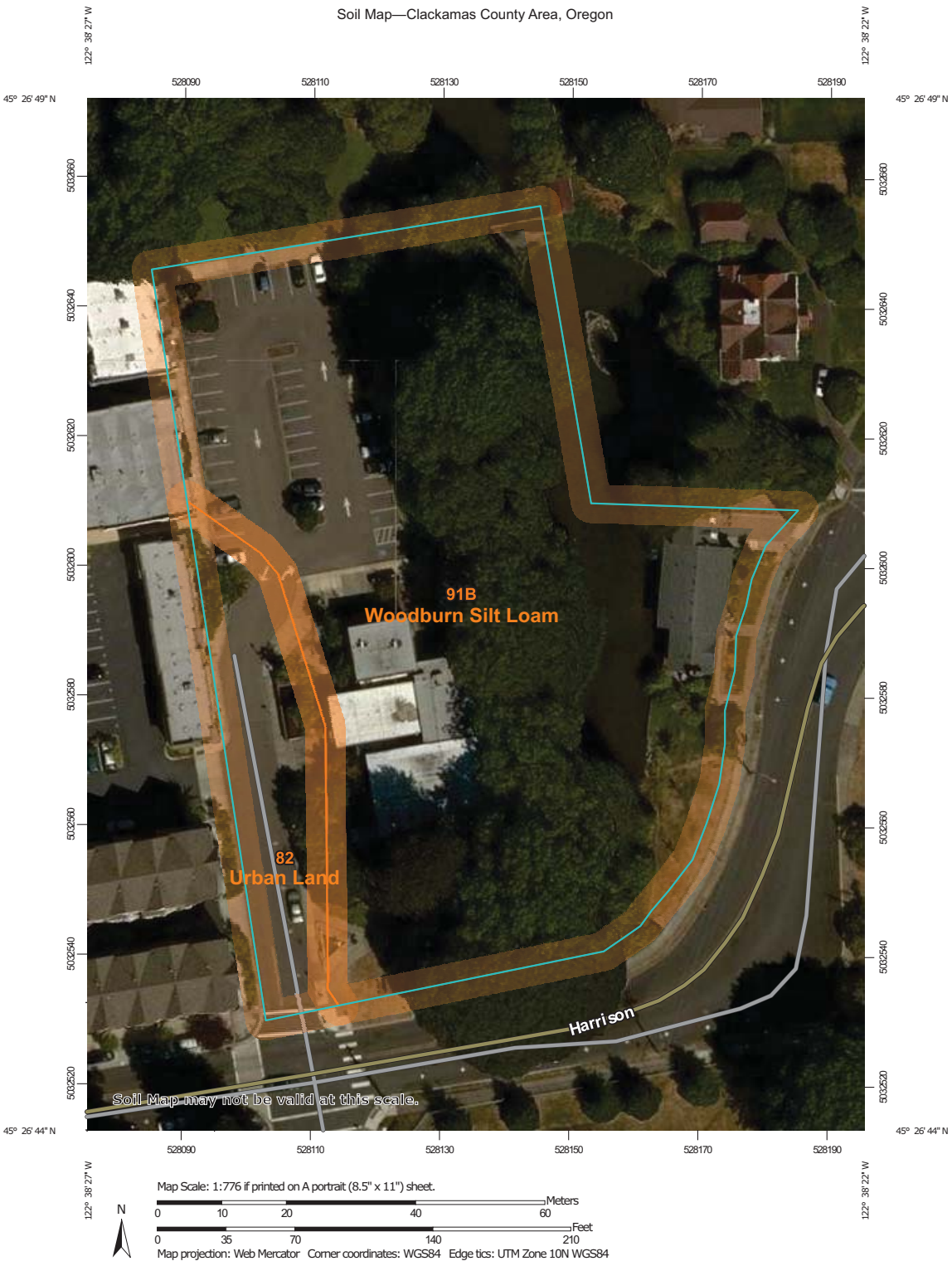
- Site Boundary
- Flow Direction
- Freshwater Pond (USFW)
- Freshwater Forested/Shrub Wetland

U.S. Fish and Wildlife Service. Publication date October 2017. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/

NWI/LWI Map

Wetland Delineation Report
10660 SE 21st Avenue
Milwaukie, Oregon

APEX Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	2331-00	Figure 3
	March 2017		



USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

12/3/2017
Page 1 of 3

County Soil Survey Map

Wetland Delineation Report
10660 SE 21st Avenue
Milwaukie, Oregon

Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	2331-00	Figure 2
	March 2017		

NOTE: Base map prepared from Google Earth Pro Imagery. Aerial dated July 23, 2016. Tax Lot, road, and stream information from © Oregon Metro www.oregonmetro.gov/rlis (8-2016).

0 60 120

Scale in Feet

Legend:

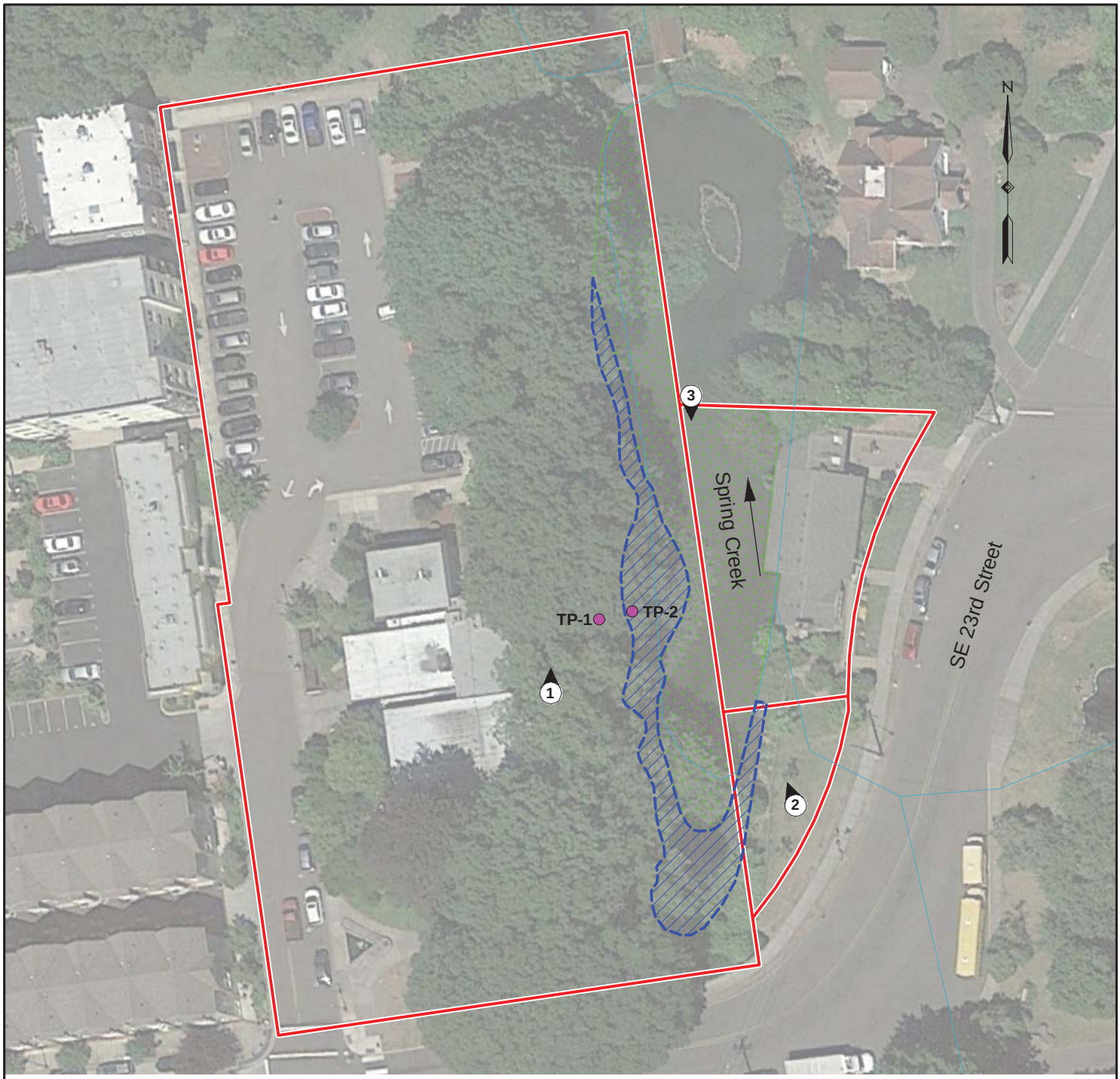
Site Boundary

Flow Direction

Aerial Photography

Wetland Delineation Report
10660 SE 21st Avenue
Milwaukie, Oregon

Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	2331-00	Figure 5
	March 2017		



NOTE: Base map prepared from Google Earth Pro Imagery. Aerial dated July 23, 2016. Tax Lot, road, railroad, and stream information from © Oregon Metro www.oregonmetro.gov/rlis (8-2016).

Legend:

- Site Boundary
- Flow Direction
- Emergent Wetland (BH001) *Note: Boundaries recorded using a sub-meter hand held GPS unit.*
- Waters of the State/US
- TP-1 Sample Point
- 1 Photograph Location, Number, and Direction Taken (See Appendix B for Details)

0 60 120

Scale in Feet

Wetland Delineation Map

Wetland Delineation Report
10660 SE 21st Avenue
Milwaukie, Oregon

Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	2331-00	Figure 6
March 2017		

Appendix A

Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ledding Library City/County: Milwaukie/Clackamas Sampling Date: 2/8/17

Applicant/Owner: City of Milwaukie State: Oregon Sampling Point: TP-1

Investigator(s): Carmen Owens Section, Township, Range: NW1/4NW1/4, Sec. 36, T1S R1E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Urban Land/Woodburn Silt Loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	30	Y	FACU
2. *Thuja plicata*	15	Y	FAC
3.			
4.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5 ft radius)			
1. *Mahonia aquifilium*	5	Y	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Acorus calmus*	50	Y	OBL
2. *Equisetum hyemale*	20	Y	FACW
3. *Hedera helix*	10	N	FACU
4. *Athyrium filix-femina*	5	N	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Rubus armeniacus*	30	Y	FAC
2.			
	30	= Total Cover	

% Bare Ground in Herb Stratum 15

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: TP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5 YR 2.5/1	100						
6-10	5 YR 3/2	100						sulfide smell in this layer
10-								hard gravel layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ✓ No ___ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ledding Library City/County: Milwaukie/Clackamas Sampling Date: 2/8/17

Applicant/Owner: City of Milwaukie State: Oregon Sampling Point: TP-2

Investigator(s): Carmen Owens Section, Township, Range: NW1/4NW1/4, Sec. 36, T1S R1E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Urban Land/Woodburn Silt Loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	60	Y	FACU
2. *Thuja plicata*	10	N	FAC
3.			
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5 ft radius)			
1. *Mahonia aquifilium*	2	Y	FACU
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Hedera helix*	30	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Rubus armeniacus*	40	Y	FAC
2.			
	40	= Total Cover	

% Bare Ground in Herb Stratum 15

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	50	x 3 =	150
FACU species	92	x 4 =	368
UPL species	0	x 5 =	0
Column Totals:	142 (A)		518 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: TP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5 YR 3/4	100						
3-18	7.5 YR 4/4	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix B

Photograph Log

APPENDIX B
PHOTOGRAPH LOG

Project Name: Wetland Delineation Report
Project Number: 2331-00

Client: City of Milwaukie
Location: 10600 SE 21st Ave, Milwaukie, OR

Photo No: 1	
Photo Date: 2/19/2017	
Orientation: North	
Description: Wetland LL001 Facing north on west side of wetland.	

Photo No: 2	
Photo Date: 2/19/2017	
Orientation: South	
Description: Spring Creek and Wetland LL001. Facing north along Spring Creek from the southeast corner of the Site. Wetland LL001 can be seen on the banks of the creek on both sides.	

APPENDIX B
PHOTOGRAPH LOG

Project Name: Wetland Delineation Report
Project Number: 2331-00

Client: City of Milwaukie
Location: 10600 SE 21st Ave, Milwaukie, OR

Photo No: 3	
Photo Date: 2/19/2017	
Orientation: North	
Description: Spring Creek. Facing south along Spring Creek from center of the Site's eastern boundary.	

Harper
Houf Peterson
Righellis Inc.

Milwaukie Ledding Library

Preliminary
Stormwater Management Report

January 11, 2018

Prepared For:

Hacker Architects
733 SW Oak St
Portland, OR 97205

THA-29

Prepared By:

Harper Houf Peterson Righellis Inc.
205 SE Spokane Street, Suite 200
Portland, OR 97202
P: 503-221-1131 F: 503-221-1171

Alex Simpson, PE

HHPR

ENGINEERS ◆ PLANNERS
LANDSCAPE ARCHITECTS ◆ SURVEYORS

Design Review – Preliminary Stormwater Management Report
Milwaukie Ledding Library

Prepared by: Harper Houf Peterson Righellis, Inc.
Date: January 11, 2018

Project Overview and Description:

The new Milwaukie Ledding Library project is located at 10660 SE 21st Avenue in Milwaukie, OR. The total site area is 1.77 acres. It is bordered to the west by private apartments, to the south by SE Harrison St and to the east by an existing pond and Spring Creek. The proposed project will construct a new library building with associated parking lot and stormwater management facilities.

Methodology

The site's impervious surfaces will be managed per the City of Milwaukie's Stormwater Design Standards, updated in January 2014. The City of Milwaukie refers to the 2016 City of Portland Stormwater Management Manual (SWMM) for design of water quality and flow control facilities. Per the SWMM, the Stormwater Infiltration and Discharge Hierarchy is to be used to determine the feasibility of the stormwater option to be used for the site. The following addresses each category in the Hierarchy:

Category 1: Requires total onsite infiltration with vegetated infiltration facilities.

> *On-site infiltration with vegetated infiltration facilities is not feasible for this project due to the low infiltration rates on site (less than 1 in/hr.) and existing site constraints.*

Category 2: Requires total onsite infiltration with a vegetated facility that overflows to a subsurface infiltration facility.

> *On-site infiltration with vegetated infiltration facilities is not feasible for this project due to the low infiltration rates on site (less than 1 in/hr) and existing site constraints.*

Category 3: Requires onsite detention with vegetated facilities that overflow to a drainage way, river, or storm-only pipe.

> ***This category applies to the site. The entire site, with the exception of a portion of the building roof, discharge to a storm-only pipe. Therefore, the SWMM requires that post-developed peak flows be maintained at their respective pre-developed peak flows for the 2, 5, 10-year events. The portion of building roof that discharges directly to the existing pond must limit the 2-year post-developed rate to ½ of the 2-year pre-developed rate, as well as match the post-developed peak rate to the respective pre-developed 5, 10, and 25 year rates.***

Category 4: Requires onsite detention with vegetated facilities that overflow to the combined sewer system.

> *This category does not apply, as there is not a combined sewer system nearby and category 3 will be met.*

Drainage Design & Analysis:

Pre-developed conditions, as stated in the City of Milwaukie standards, are the existing conditions prior to redevelopment. The existing project area consists of the library and asphalt pavement parking lot.

The existing library building had a roof area of approximately 7,300 SF and discharged directly to the pond without flow control or water quality treatment. The proposed development only contributes a portion of the new building roof (Basin E = 6,270 SF) to the pond and provides both water quality and flow control. Therefore, the peak flow conveyed to the pond is reduced per City requirements. The total project's impervious area is increased by approximately 9,144 SF (0.21 ac). Flow control is provided through the stormwater planters and the overall peak flows leaving the site are decreased to meet City requirements. See EX-1, EX-2 and the 'Stormwater Flow Control' section of this report for additional information.

Stormwater facilities were sized using the City of Portland SWMM and Presumptive Approach Calculator (PAC) to provide both water quality and flow control for the project. They are all designed with 2" of freeboard, a varying amount of ponding depth (see PAC printouts), 18" of treatment growing medium, and 12" of drain rock with a perforated underdrain pipe that will connect to the site's storm system. The planters are also lined with an impervious liner due to poor site infiltration and proximity to the building.

There are two existing stormwater swales located in the SW corner of the site that provide stormwater management for a portion of SE 21st Avenue. These existing swales were constructed as part of the N. Main Streetscape Improvement Project in 2005. According to the approved stormwater design, these swales provide existing stormwater management for 5,600 SF (0.13 ac) of impervious drive aisle. These swales will be retained and will provide management for a reduced area of approximately 4,200 SF (0.10 ac) from the proposed drive aisle. See exhibit EX-2 for further clarification.

Stormwater Quality Treatment

In order to provide water quality treatment for the new parking lot and building roof, stormwater planters and a Contech Stormfilter catch basin are used. See Table 1 below and refer to the basin map and PAC output attached for clarification.

Table 1: Stormwater Basin Summary

Basin	Impervious Area (sf)	Treatment Method	Stormwater Facility Size
A (North prkg lot)	4,900	Stormwater Planter	120 sf
B (Center prkg lot)	4,400	Stormfilter WQ Catch Basin	1-cartridge
C (South prkg lot)	3,150	Stormwater Planter	150 sf
D (North bldg. roof)	5,266	Stormwater Planter	100 sf
E (East bldg. roof)	6,270	Stormwater Planter	300 sf
F (South bldg. roof)	11,858	Stormwater Planter	490 sf
G (South prkg lot)	4,200	Existing Swales (SW)	425 sf

Stormwater Flow Control

Flow control is provided through the stormwater planters in order to meet City of Portland requirements. See Table 2 below for a flow control summary. Per the City of Portland 2016 Stormwater Management Manual, on-site infiltration is not feasible when the site has infiltration rates less than 2.0 inches per hour. This site has infiltration rates of 1" per hour or less (without a factor of safety). Refer to the infiltration section 3.4 of the geotechnical report completed by GeoDesign, Inc. on August 25, 2017.
The SWMM requires that post-developed peak flows be maintained at their respective pre-developed peak flows for the 2, 5, 10-year events when discharging to the storm only system. Basins A, B, C, D, and F all meet this criteria.

Flows that discharge directly to the existing pond must limit the 2-year post-developed rate to ½ of the 2-year pre-developed rate, as well as match the post-developed peak rate to the respective pre-developed 5, 10, and 25-year rates. Basin E (east building roof) meets this criteria.

Table 2: Flow Control Summary

Basin	Pre-dev. 2-year peak (cfs)	Pre-dev. 5-year peak (cfs)	Pre-dev. 10-year peak (cfs)	Post-dev. 2-year peak (cfs)	Post-dev. 5-year peak (cfs)	Post-dev. 10-year peak (cfs)
A (North prkg lot)	0.069	0.084	0.100	0.069	0.084	0.100
B Center prkg lot)	0.062	0.076	0.090	0.062	0.076	0.090
C (South prkg lot)	0.044	0.054	0.064	0.009	0.009	0.020
D (North bldg. roof)	0.074	0.091	0.107	0.074	0.091	0.107
F (South bldg. roof)	0.072	0.105	0.140	0.023	0.042	0.124
TOTAL	**0.321**	**0.410**	**0.501**	**0.237**	**0.302**	**0.441**

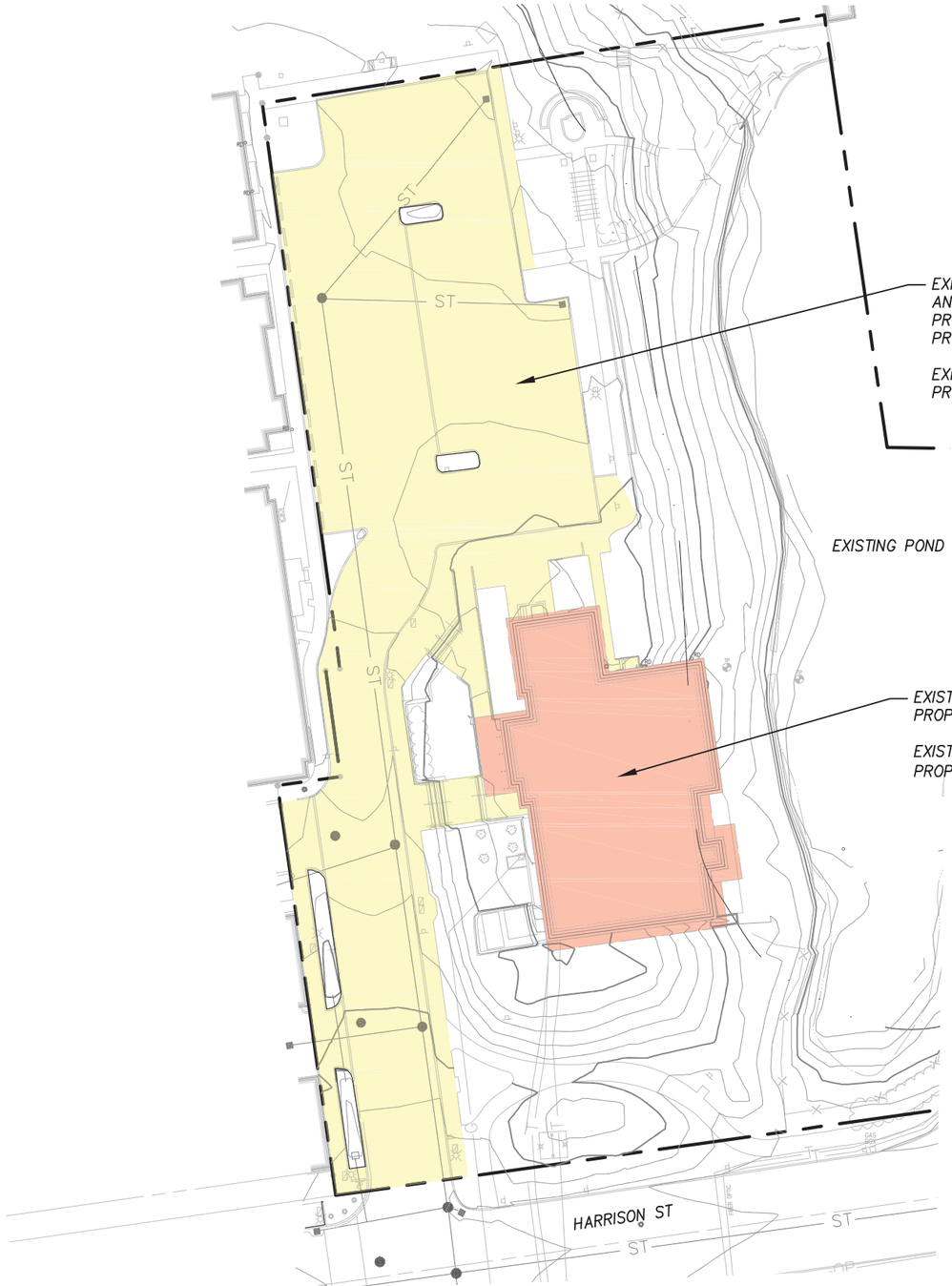
Basin	Pre-dev. ½ of 2-year peak (cfs)	Pre-dev. 5-year peak (cfs)	Pre-dev. 10-year peak (cfs)	Pre-dev. 25-year peak (cfs)	Post-dev. 2-year peak (cfs)	Post-dev. 5-year peak (cfs)	Post-dev. 10-year peak (cfs)	Post-dev. 25-year peak (cfs)
E (East bldg. roof)	0.038	0.097	0.118	0.138	0.014	0.014	0.026	0.076

As seen in the tables above, the total post-developed release rates for the project are less than their respective pre-developed release rates as required by the City of Portland's SWMM.

Engineering Conclusions:

The proposed development has appropriate stormwater facilities and a system that fulfills the required conveyance, water quality and water quantity based on City of Milwaukie and City of Portland requirements and standards. No downstream deficiencies are expected.

BASIN MAP



EXISTING PARKING LOT IMPERVIOUS AREA DISCHARGES TO STORM SEWER AND EVENTUALLY TO HARRISON STREET STORM SEWER.
PROPOSED IMPERVIOUS AREA INCREASED, BUT FLOW CONTROL NOW PROVIDED PER CITY STANDARDS.

EXISTING CONTRIBUTING AREA=24,630 SF
PROPOSED CONTRIBUTING AREA=33,774 SF

EXISTING POND

EXISTING BUILDING OUTFALLS TO POND.
PROPOSED IMPERVIOUS AREA REDUCED & DETAINED.

EXISTING CONTRIBUTING AREA=7,300 SF
PROPOSED CONTRIBUTING AREA=6,270 SF (BASIN E: EAST BLDG ROOF)

N

0 25 50 100

SCALE: 1" = 50'

DATE	NO.	DESCRIPTION

REVISIONS

DESIGNED: AJS
DRAWN: HHPR
CHECKED: HHPR
DATE: JAN. 2018

Harper Houf Peterson Righellis Inc.
ENGINEERS♦PLANNERS
LANDSCAPE ARCHITECTS♦SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

EXISTING STORMWATER EXHIBIT

MILWAUKIE LEDDING LIBRARY

MILWAUKIE, OR

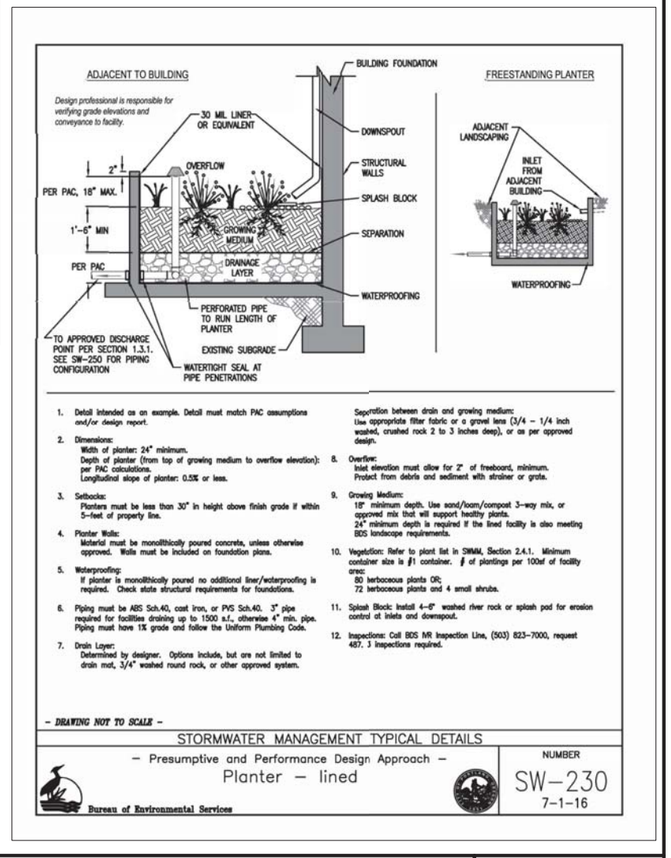
SHEET NO. EX-1

JOB NO. THA-29

P:\THA (THA Architecture)\THA-29 (Ledding Library)\THA29-DWGS\Exhibit\ THA29-Storm Exhibit EXISTING.dwg

Basin	Impervious Area	WQ Facility	Ultimate Discharge Location
A (North prkg lot)	4,900 SF	1	Storm Sewer (Harrison St)
B (Center prkg lot)	4,400 SF	2	Storm Sewer (Harrison St)
C (South prkg lot)	3,150 SF	3	Storm Sewer (Harrison St)
D (North bldg roof)	5,266 SF	4	Storm Sewer (Harrison St)
E (East bldg roof)	6,270 SF	5	Existing Pond (East)
F (South bldg roof)	11,858 SF	6	Storm Sewer (Harrison St)

WQ Facility	Stormwater Facility Type	Basin Area	Proposed Facility Size
1	WQ Planter (Flat)	4,900 SF	120 SF
2	WQ CB (1-CART)	4,400 SF	1-cartridge
3	WQ Planter (Flat)	3,150 SF	150 SF
4	WQ Planter (Flat)	5,266 SF	100 SF
5	WQ Planter (Flat)	6,270 SF	300 SF
6	WQ Planter (Flat)	11,858 SF	490 SF



1. Detail intended as an example. Detail must match PAC assumptions and/or design report.
2. Dimensions:
   Width of planter: 24" minimum.
   Depth of planter (from top of growing medium to overflow elevation): per PAC calculations.
   Longitudinal slope of planter: 0.5% or less.
3. Setbacks:
   Planters must be less than 30" in height above finish grade if within 5-feet of property line.
4. Planter Walls:
   Material must be monolithically poured concrete, unless otherwise approved. Walls must be included on foundation plans.
5. Waterproofing:
   If planter is monolithically poured no additional liner/waterproofing is required. Check state structural requirements for foundations.
6. Piping must be ABS Sch.40, cast iron, or PVS Sch.40. 3" pipe required for facilities draining up to 1500 s.f., otherwise 4" min. pipe. Piping must have 1% grade and follow the Uniform Plumbing Code.
7. Drain Layer:
   Determined by designer. Options include, but are not limited to drain mat, 3/4" washed round rock, or other approved system.
8. Separation between drain and growing medium:
   Use appropriate filter fabric or a gravel lens (3/4 - 1/4 inch washed, crushed rock 2 to 3 inches deep), or as per approved design.
8. Overflow:
   Inlet elevation must allow for 2" of freeboard, minimum. Protect from debris and sediment with strainer or grate.
9. Growing Medium:
   18" minimum depth. Use sand/loam/compost 3-way mix, or approved mix that will support healthy plants.
   24" minimum depth is required if the lined facility is also meeting BDS landscape requirements.
10. Vegetation: Refer to plant list in SWMM, Section 2.4.1. Minimum container size is #1 container. # of plantings per 100sf of facility area:
    80 herbaceous plants OR;
    72 herbaceous plants and 4 small shrubs.
11. Splash Block: Install 4-6" washed river rock or splash pad for erosion control at inlets and downspout.
12. Inspections: Call BDS MR Inspection Line, (503) 823-7000, request 487. 3 inspections required.

- DRAWING NOT TO SCALE -

STORMWATER MANAGEMENT TYPICAL DETAILS
- Presumptive and Performance Design Approach -
Planter - lined
Bureau of Environmental Services
NUMBER SW-230 7-1-16

0 25 50 100
SCALE: 1" = 50'

DATE	NO.	DESCRIPTION

REVISIONS

DESIGNED: AJS
DRAWN: HHPR
CHECKED: HHPR
DATE: JAN. 2018

Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

STORMWATER EXHIBIT
MILWAUKIE LEDDING LIBRARY
MILWAUKIE, OR

SHEET NO. EX-2
JOB NO. THA-29

P:\THA (THA Architecture)\THA-29 (Ledding Library)\THA29-DWGS\Exhibit\ THA29-Storm Exhibit.dwg

PAC CALCULATIONS

PAC Report

Project Name Milwaukie Ledding Library	Permit No.	Created 12/4/17 1:03 PM
Project Address 10660 SE 21st Avenue Milwaukie, OR 97222	Designer HHPR	Last Modified 1/11/18 1:26 PM
	Company HHPR	Report Generated 1/11/18 1:26 PM

Project Summary

New public library and site.

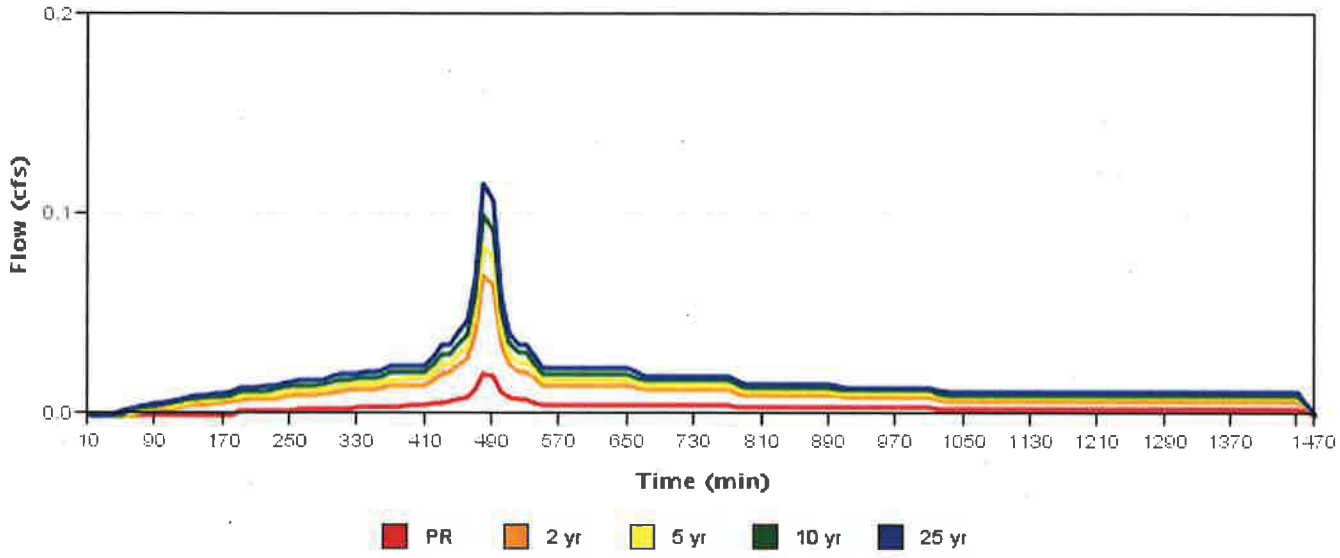
Catchment Name	Impervious Area (sq ft)	Native Soil Design Infiltration Rate	Hierarchy Category	Facility Type	Facility Config	Facility Size (sq ft)	Facility Sizing Ratio	PR Results	Flow Control Results
North Parking Lot	4900	0.00	3	Planter (Flat)	D	100	2%	Pass	Pass
East Roof	6270	0.00	3	Planter (Flat)	D	300	4.8%	Pass	Pass
South Roof	11858	0.00	3	Planter (Flat)	D	490	4.1%	Pass	Pass
North Roof	5266	0.00	3	Planter (Flat)	D	100	1.9%	Pass	Pass
Center Parking Lot	4400	0.00	3	WQ Catch Basin					
South Parking Lot (New Planter)	3150	0.00	3	Basin	D	51	8.1%	Pass	Pass

Catchment North Parking Lot

Site Soils & Infiltration Testing Data	Infiltration Testing Procedure	**Open Pit Falling Head**
	Native Soil Infiltration Rate (I_{test})	**0.00** ⚠
Correction Factor	CF_{test}	**2**
Design Infiltration Rates	Native Soil (I_{dsgn})	**0.00 in/hr** ⚠
	Imported Growing Medium	**2.00 in/hr**
Catchment Information	Hierarchy Category	**3**
	Disposal Point	**C**
	Hierarchy Description	**Off-site flow to drainageway, river, or storm-only pipe system**
	Pollution Reduction Requirement	**Pass**
	10-year Storm Requirement	**N/A**
	Flow Control Requirement	**The post-development peak rates for the 2, 5 and 10-year design storms must be equal or less than the pre-development rates.**
	Impervious Area	**4900 sq ft** **0.112 acre**
	Time of Concentration (Tc)	**5**
	Pre-Development Curve Number (CN_{pre})	**98**
	Post-Development Curve Number (CN_{post})	**98**

⚠ Indicates value is outside of recommended range

SBUH Results



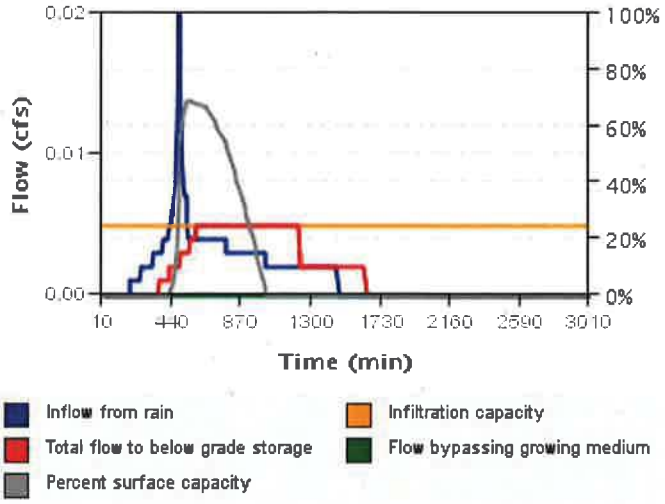
	Pre-Development Rate and Volume		Post-Development Rate and Volume	
	Peak Rate (cfs)	Volume (cf)	Peak Rate (cfs)	Volume (cf)
PR	0.02	256.039	0.02	256.039
2 yr	0.069	886.635	0.069	886.635
5 yr	0.084	1089.719	0.084	1089.719
10 yr	0.1	1293.106	0.1	1293.106
25 yr	0.115	1496.686	0.115	1496.686

Facility North Parking Lot

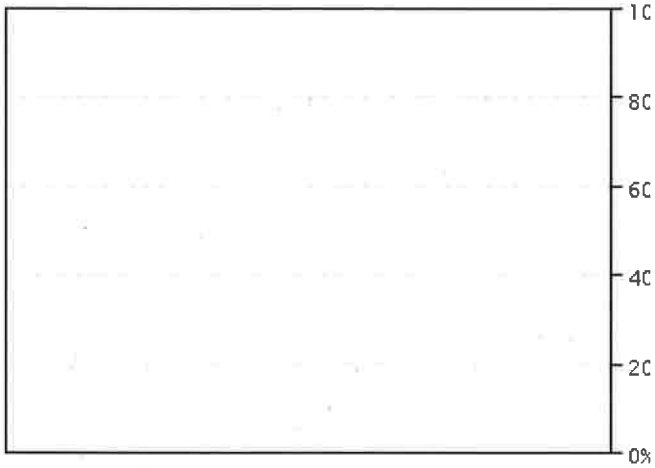
Facility Details	Facility Type	**Planter (Flat)**
	Facility Configuration	**D: Lined Facility with RS and Ud**
	Facility Shape	**Planter**
	Above Grade Storage Data	
	Bottom Area	**100 sq ft**
	Bottom Width	**4.00 ft**
	Storage Depth 1	**6.0 in**
	Growing Medium Depth	**18 in**
	Surface Capacity at Depth 1	**50.0 cu ft**
	Design Infiltration Rate for Native Soil	**0.000 in/hr**
	Infiltration Capacity	**0.005 cfs**
Facility Facts	Total Facility Area Including Freeboard	**100.00 sq ft**
	Sizing Ratio	**2%**
Pollution Reduction Results	Pollution Reduction Score	**Pass**
	Overflow Volume	**260.433 cf**
	Surface Capacity Used	**69%**
Flow Control Results	Flow Control Score	**Pass**
	Overflow Volume	**1292.309 cf**
	Surface Capacity Used	**100%**

	Post-development outflow (cfs)		Pre-development inflow (cfs)	
2 year	0.069	≤	0.069	**Pass**
5 year	0.084	≤	0.084	**Pass**
10 year	0.1	≤	0.1	**Pass**

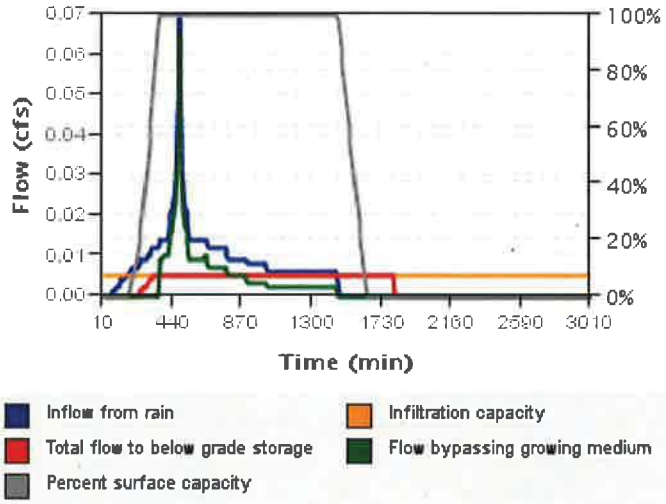
Pollution Reduction Event Surface Facility Modeling



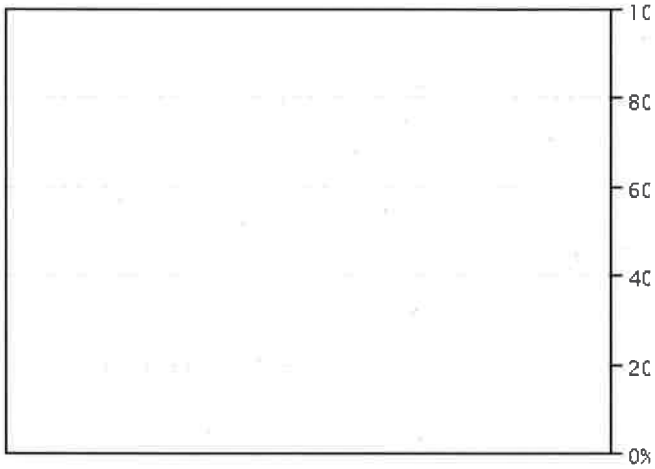
Pollution Reduction Event Below Grade Modeling



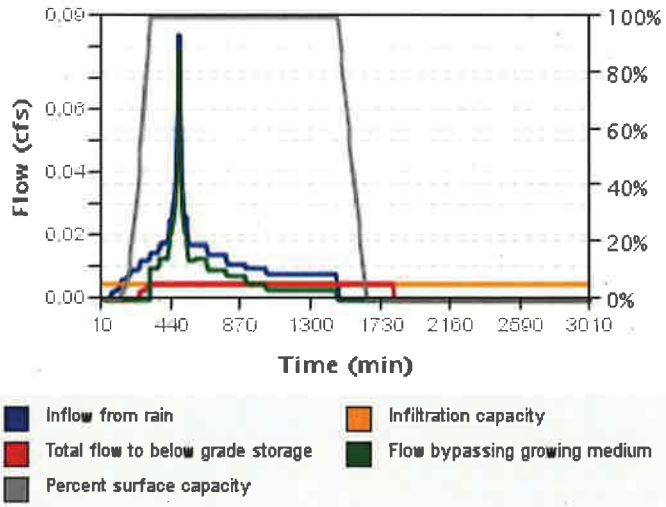
2 Year Event Surface Facility Modeling



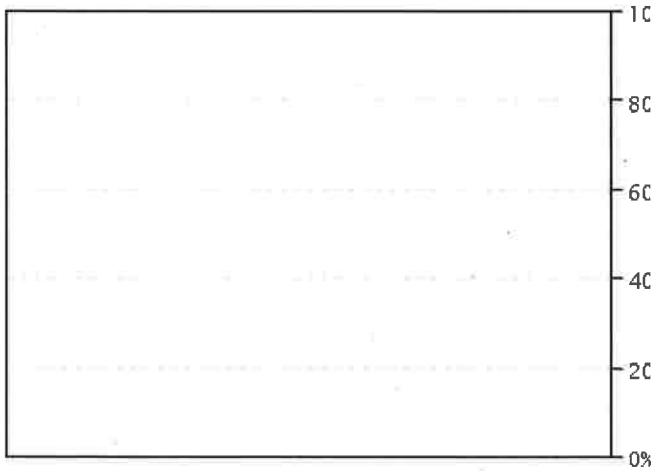
2 Year Event Below Grade Modeling



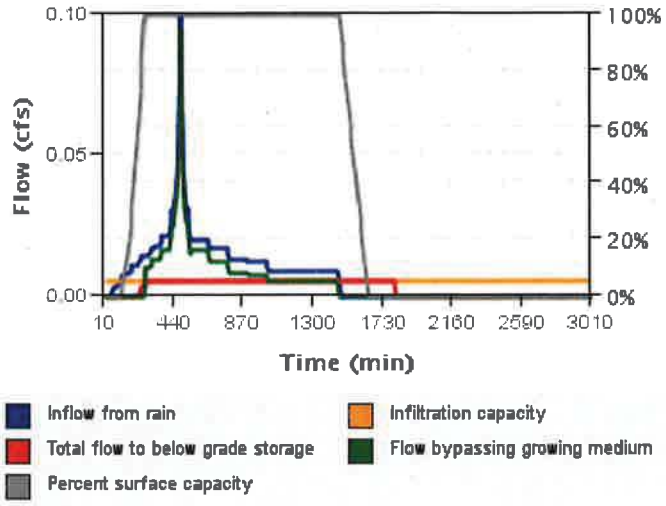
5 Year Event Surface Facility Modeling



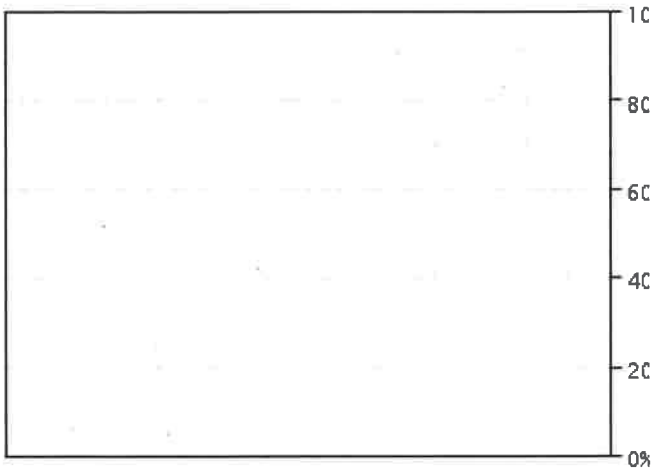
5 Year Event Below Grade Modeling



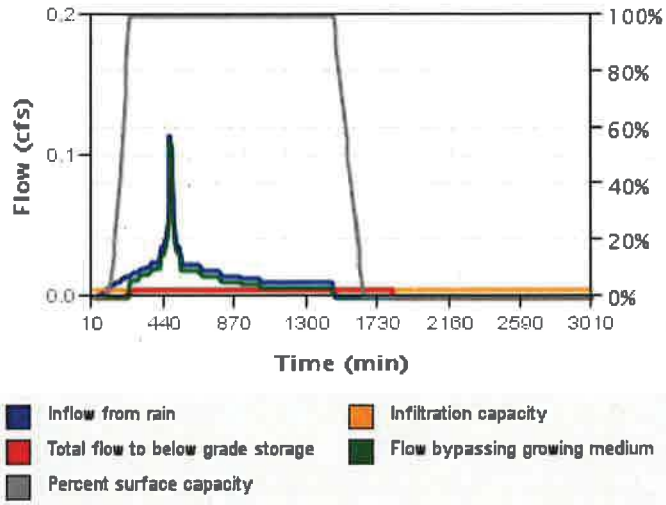
10 Year Event Surface Facility Modeling



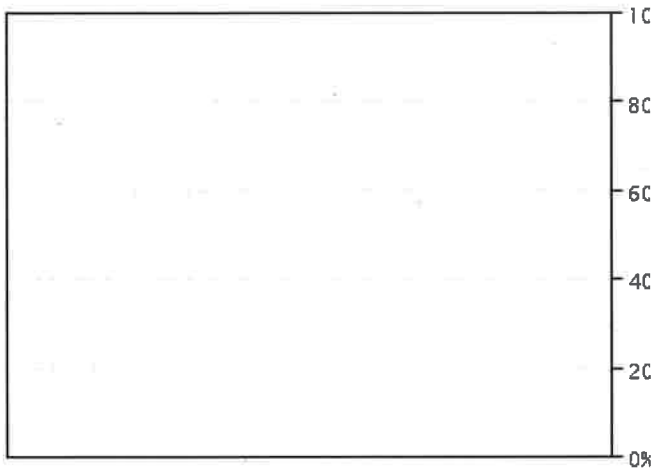
10 Year Event Below Grade Modeling



25 Year Event Surface Facility Modeling



25 Year Event Below Grade Modeling

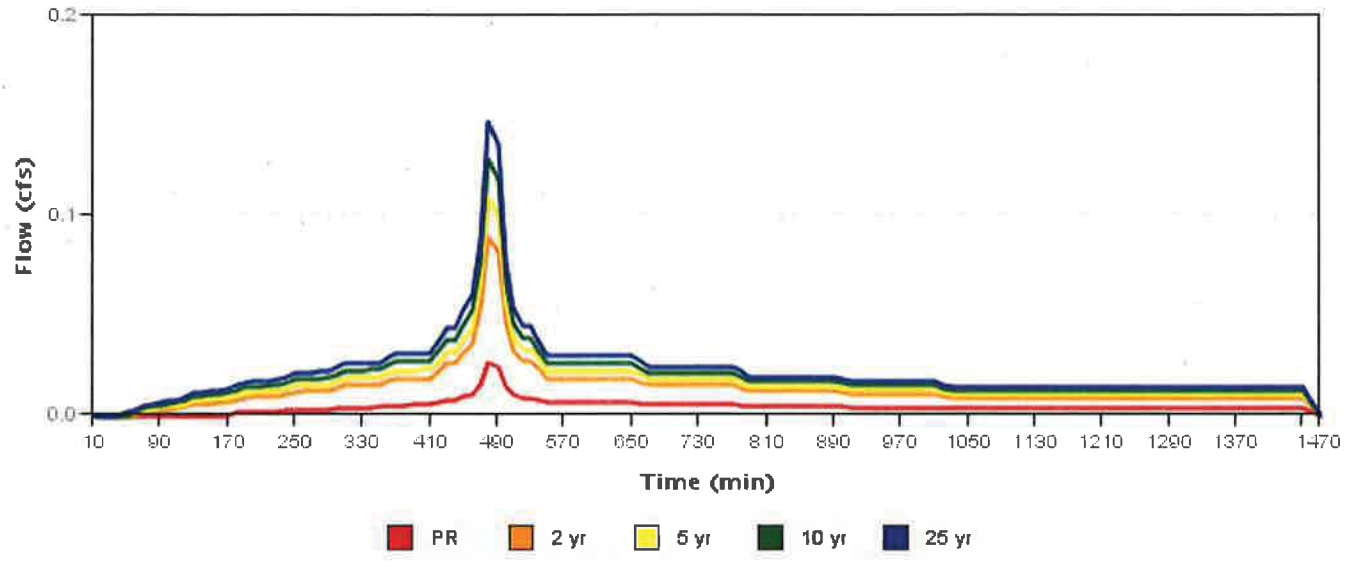


Catchment East Roof

Site Soils & Infiltration Testing Data	Infiltration Testing Procedure	**Open Pit Falling Head**
	Native Soil Infiltration Rate (I_{test})	**0.00** ⚠
Correction Factor	CF_{test}	**2**
Design Infiltration Rates	Native Soil (I_{dsgn})	**0.00 in/hr** ⚠
	Imported Growing Medium	**2.00 in/hr**
Catchment Information	Hierarchy Category	**3**
	Disposal Point	**B**
	Hierarchy Description	**Off-site flow to drainageway, river, or storm-only pipe system**
	Pollution Reduction Requirement	**Pass**
	10-year Storm Requirement	**N/A**
	Flow Control Requirement	**If discharging to an overland drainage system or to a storm sewer that discharges to an overland drainage system, including streams, drainageways, and ditches, the 2-year post-development peak flow must be equal or less than half of the 2-year pre-development rate and the 5, 10, and 25-year post-development peak rate must be equal or less than the pre-development rates for the corresponding design storms.**
	Impervious Area	**6270 sq ft** **0.144 acre**
	Time of Concentration (Tc)	**5**
	Pre-Development Curve Number (CN_{pre})	**95**
	Post-Development Curve Number (CN_{post})	**98**

⚠ Indicates value is outside of recommended range

SBUH Results



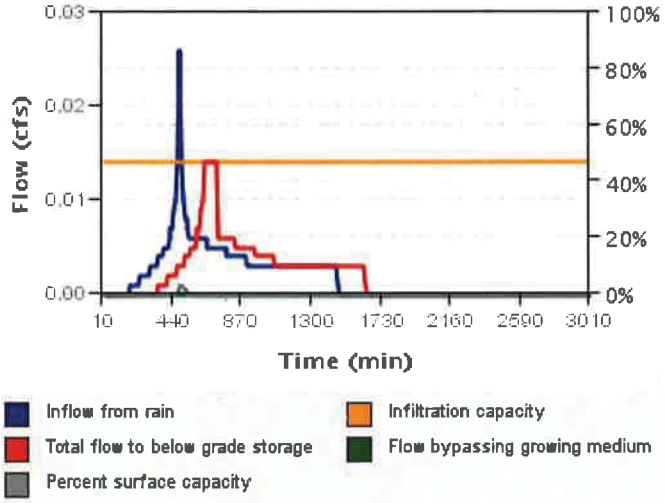
	Pre-Development Rate and Volume		Post-Development Rate and Volume	
	Peak Rate (cfs)	Volume (cf)	Peak Rate (cfs)	Volume (cf)
PR	0.015	219.367	0.026	327.625
2 yr	0.077	975.306	0.089	1134.531
5 yr	0.097	1228.832	0.108	1394.395
10 yr	0.118	1484.379	0.128	1654.648
25 yr	0.138	1741.246	0.147	1915.147

Facility East Roof

Facility Details	Facility Type	**Planter (Flat)**
	Facility Configuration	**D: Lined Facility with RS and Ud**
	Facility Shape	**Planter**
	Above Grade Storage Data	
	Bottom Area	**300 sq ft**
	Bottom Width	**5.00 ft**
	Storage Depth 1	**18.0 in**
	Growing Medium Depth	**18 in**
	Surface Capacity at Depth 1	**450.0 cu ft**
	Design Infiltration Rate for Native Soil	**0.000 in/hr**
	Infiltration Capacity	**0.014 cfs**
Facility Facts	Total Facility Area Including Freeboard	**300.00 sq ft**
	Sizing Ratio	**4.8%**
Pollution Reduction Results	Pollution Reduction Score	**Pass**
	Overflow Volume	**331.758 cf**
	Surface Capacity Used	**3%**
Flow Control Results	Flow Control Score	**Pass**
	Overflow Volume	**1651.338 cf**
	Surface Capacity Used	**100%**

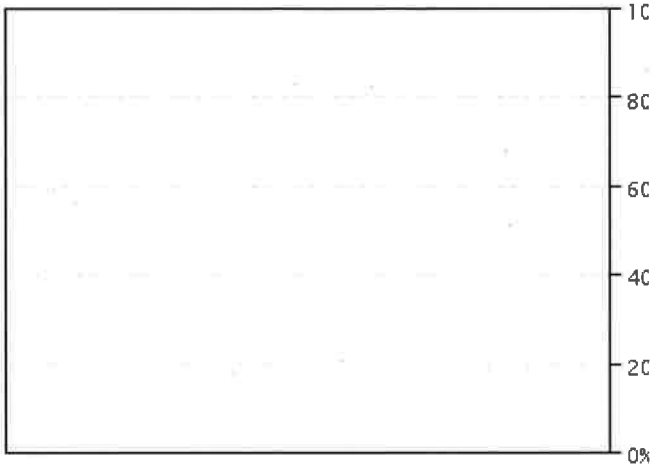
	Post-development outflow (cfs)		Pre-development inflow (cfs)	
2 year	0.014	≤ ½ of	0.077	**Pass**
5 year	0.014	≤	0.097	**Pass**
10 year	0.026	≤	0.118	**Pass**
25 year	0.076	≤	0.138	**Pass**

Pollution Reduction Event Surface Facility Modeling

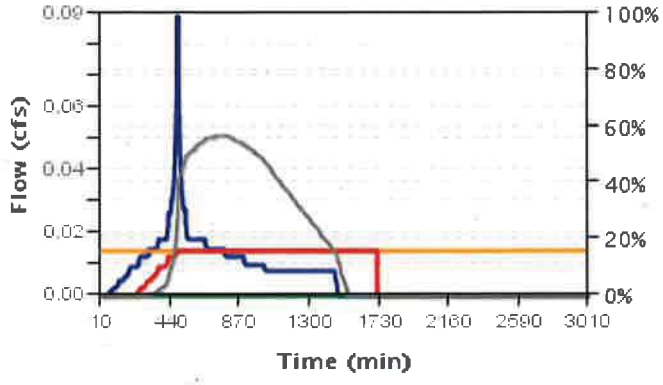


Inflow from rain
Total flow to below grade storage
Percent surface capacity
Infiltration capacity
Flow bypassing growing medium

Pollution Reduction Event Below Grade Modeling

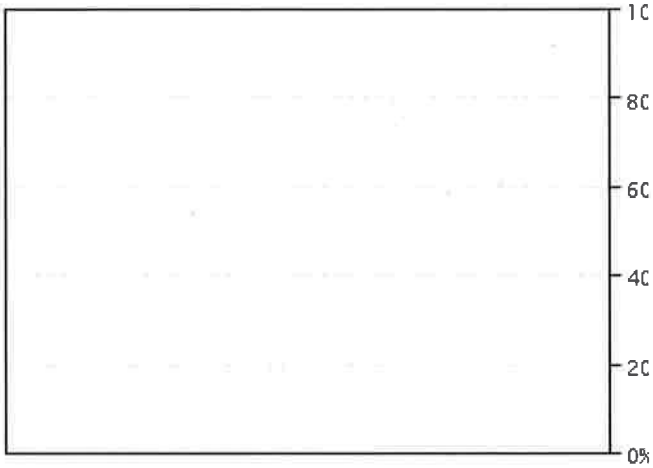


2 Year Event Surface Facility Modeling

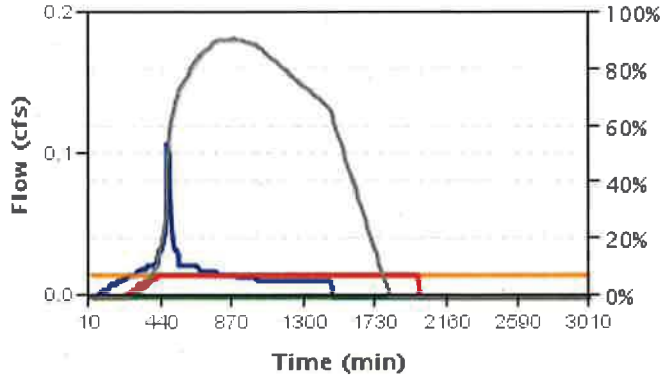


Inflow from rain
Total flow to below grade storage
Percent surface capacity
Infiltration capacity
Flow bypassing growing medium

2 Year Event Below Grade Modeling

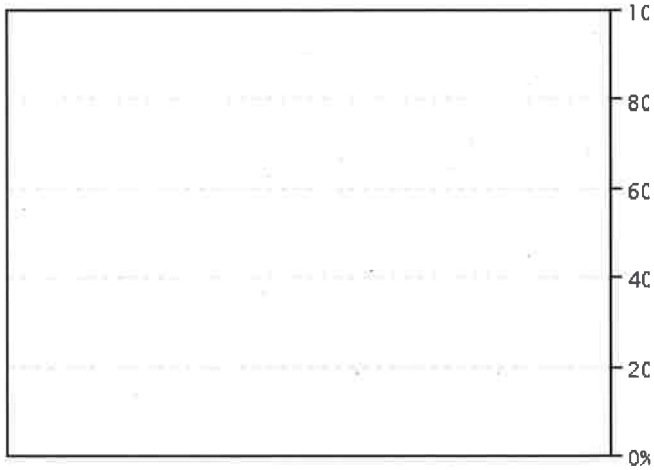


5 Year Event Surface Facility Modeling

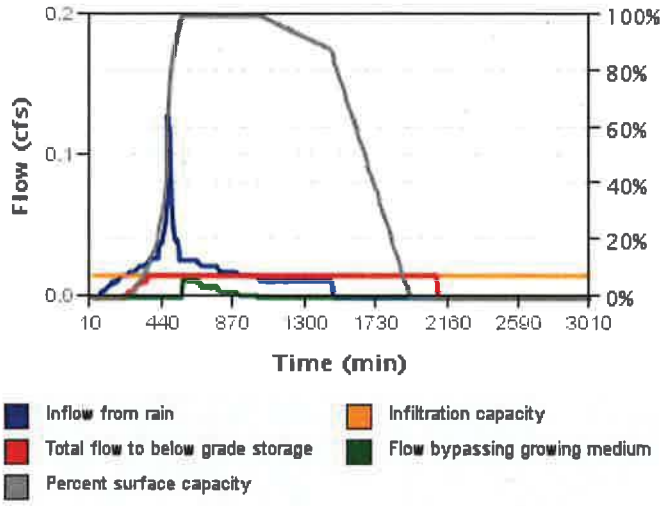


Inflow from rain
Total flow to below grade storage
Percent surface capacity
Infiltration capacity
Flow bypassing growing medium

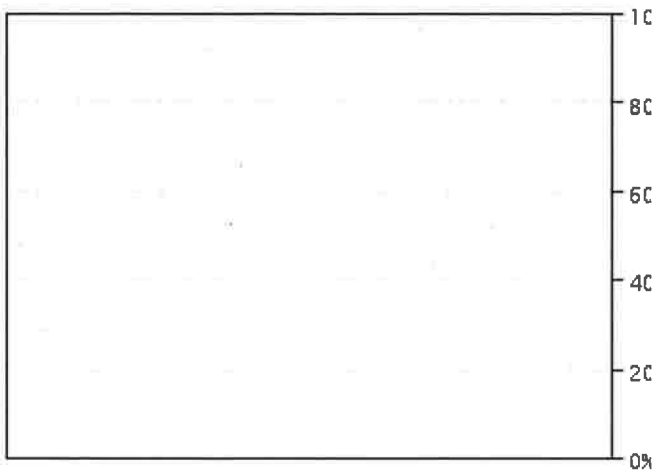
5 Year Event Below Grade Modeling



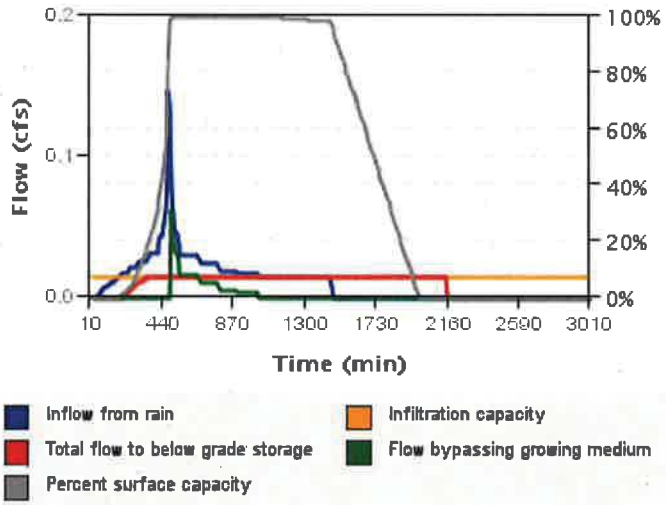
10 Year Event Surface Facility Modeling



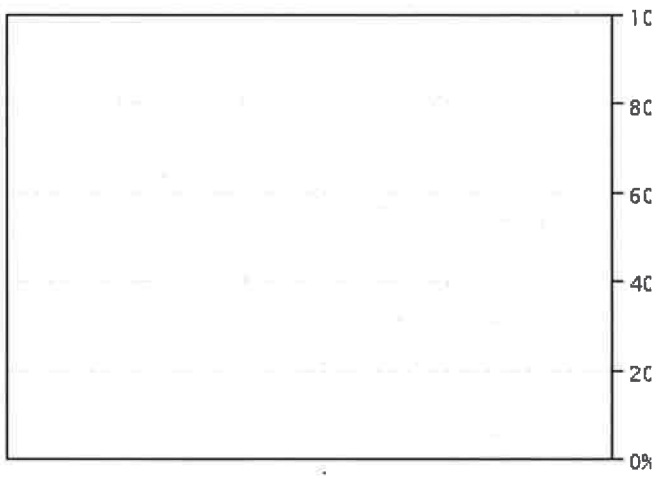
10 Year Event Below Grade Modeling



25 Year Event Surface Facility Modeling



25 Year Event Below Grade Modeling

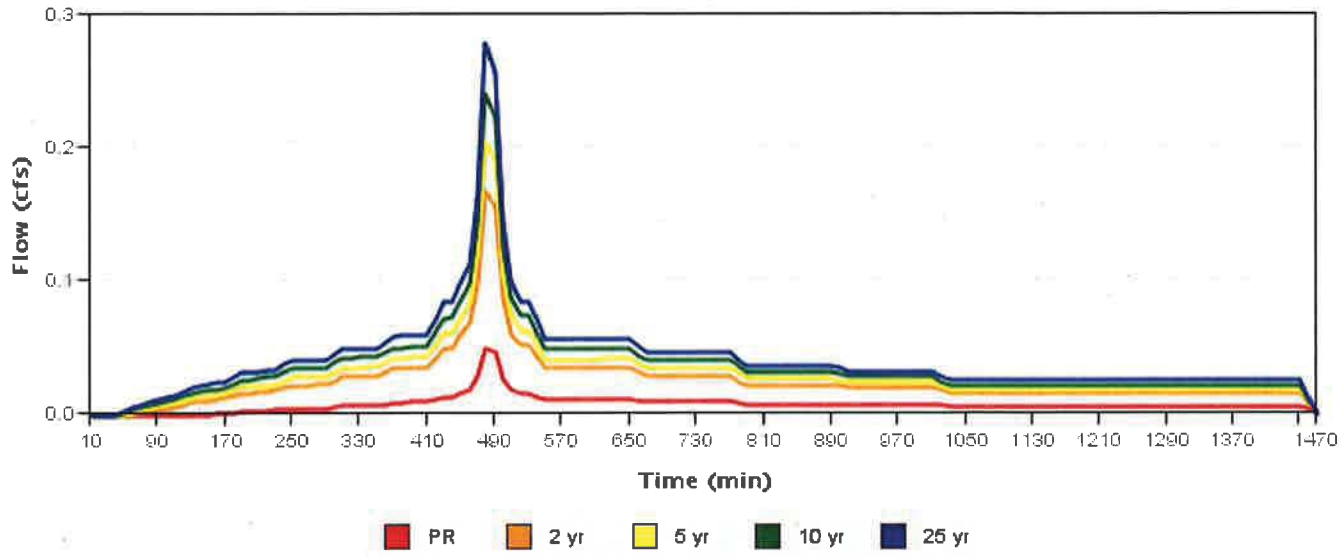


Catchment South Roof

Site Soils & Infiltration Testing Data	Infiltration Testing Procedure	**Open Pit Falling Head**
	Native Soil Infiltration Rate (I_{test})	**0.00** ⚠
Correction Factor	CF_{test}	**2**
Design Infiltration Rates	Native Soil (I_{dsgn})	**0.00 in/hr** ⚠
	Imported Growing Medium	**2.00 in/hr**
Catchment Information	Hierarchy Category	**3**
	Disposal Point	**C**
	Hierarchy Description	**Off-site flow to drainageway, river, or storm-only pipe system**
	Pollution Reduction Requirement	**Pass**
	10-year Storm Requirement	**N/A**
	Flow Control Requirement	**The post-development peak rates for the 2, 5 and 10-year design storms must be equal or less than the pre-development rates.**
	Impervious Area	**11858 sq ft** **0.272 acre**
	Time of Concentration (Tc)	**5**
	Pre-Development Curve Number (CN_{pre})	**85**
	Post-Development Curve Number (CN_{post})	**98**

⚠ Indicates value is outside of recommended range

SBUH Results



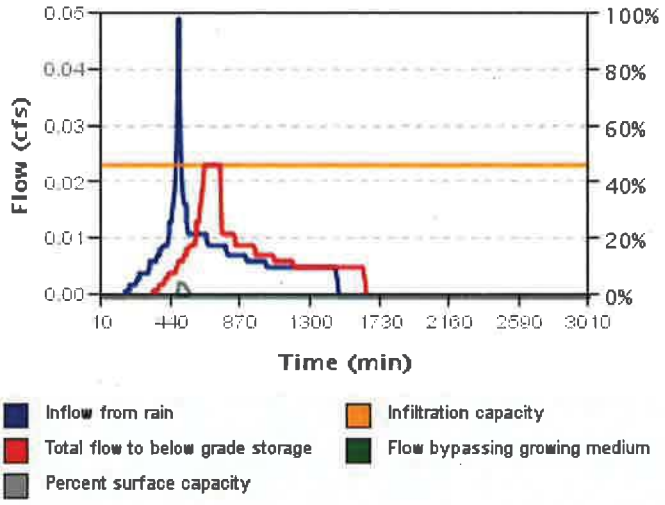
	Pre-Development Rate and Volume		Post-Development Rate and Volume	
	Peak Rate (cfs)	Volume (cf)	Peak Rate (cfs)	Volume (cf)
PR	0.002	100.319	0.049	619.614
2 yr	0.072	1086.337	0.167	2145.656
5 yr	0.105	1486.802	0.204	2637.119
10 yr	0.14	1906.723	0.241	3129.317
25 yr	0.176	2340.605	0.278	3621.979

Facility South Roof

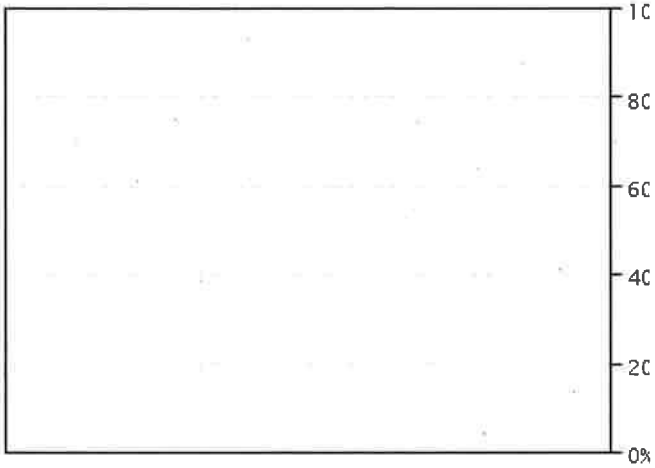
Facility Details	Facility Type	**Planter (Flat)**
	Facility Configuration	**D: Lined Facility with RS and Ud**
	Facility Shape	**Planter**
	Above Grade Storage Data	
	Bottom Area	**490 sq ft**
	Bottom Width	**5.00 ft**
	Storage Depth 1	**18.0 in**
	Growing Medium Depth	**18 in**
	Surface Capacity at Depth 1	**735.0 cu ft**
	Design Infiltration Rate for Native Soil	**0.000 in/hr**
	Infiltration Capacity	**0.023 cfs**
Facility Facts	Total Facility Area Including Freeboard	**490.00 sq ft**
	Sizing Ratio	**4.1%**
Pollution Reduction Results	Pollution Reduction Score	**Pass**
	Overflow Volume	**622.548 cf**
	Surface Capacity Used	**5%**
Flow Control Results	Flow Control Score	**Pass**
	Overflow Volume	**3144.533 cf**
	Surface Capacity Used	**100%**

	Post-development outflow (cfs)		Pre-development inflow (cfs)	
2 year	0.023	≤	0.072	**Pass**
5 year	0.042	≤	0.105	**Pass**
10 year	0.124	≤	0.14	**Pass**

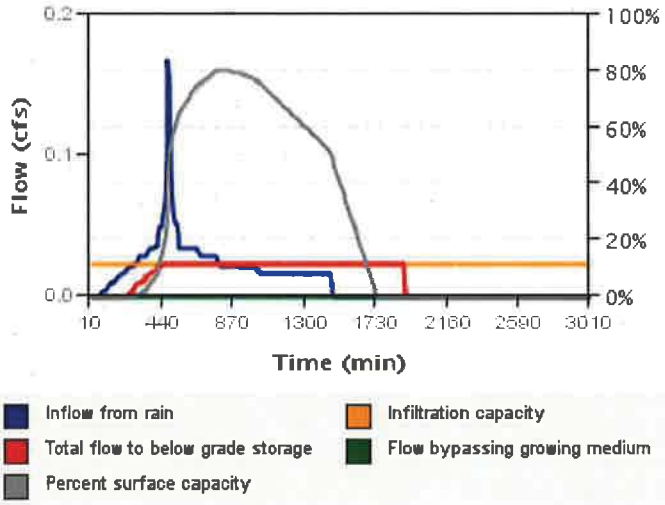
Pollution Reduction Event Surface Facility Modeling



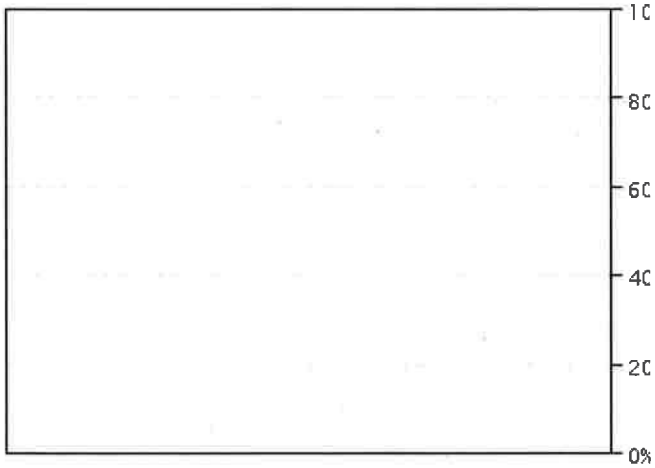
Pollution Reduction Event Below Grade Modeling



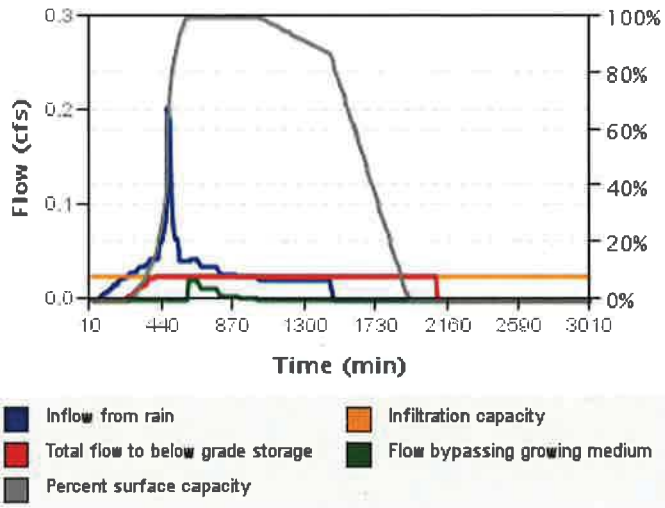
2 Year Event Surface Facility Modeling



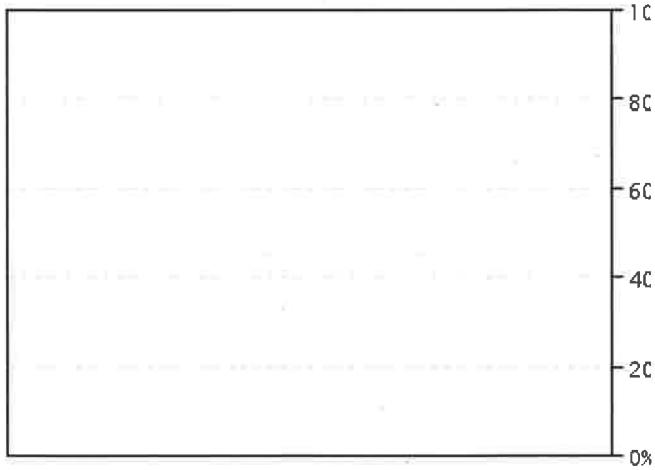
2 Year Event Below Grade Modeling



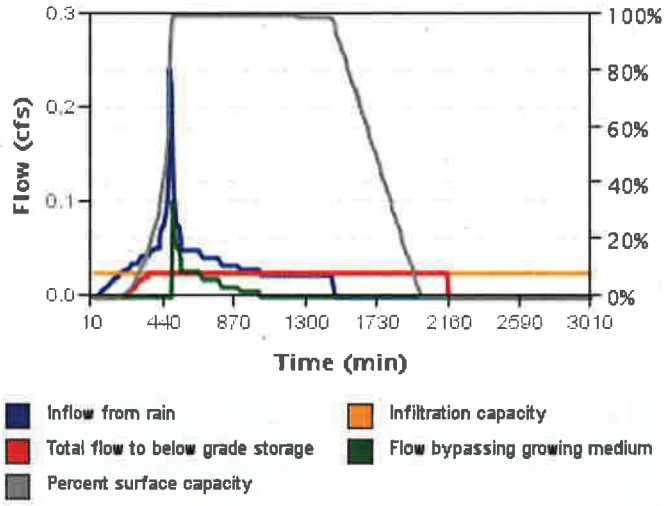
5 Year Event Surface Facility Modeling



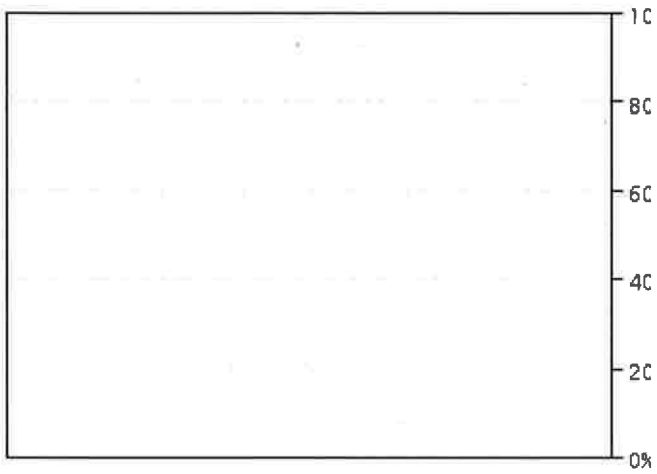
5 Year Event Below Grade Modeling



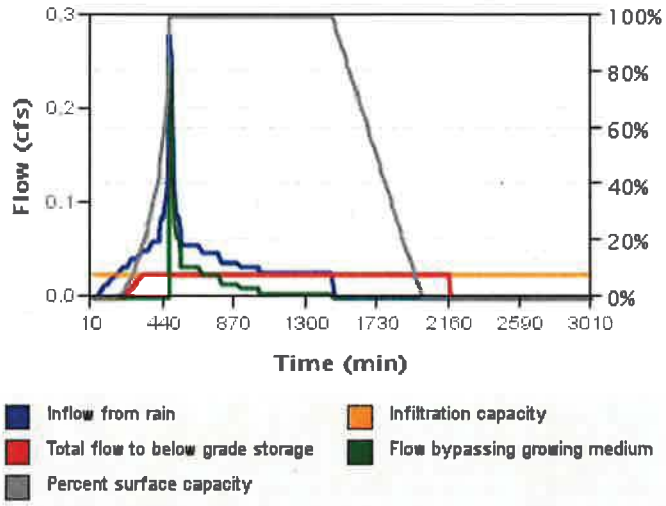
10 Year Event Surface Facility Modeling



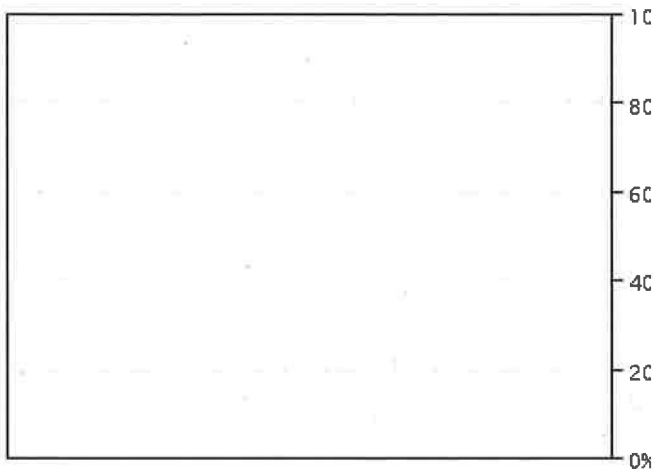
10 Year Event Below Grade Modeling



25 Year Event Surface Facility Modeling



25 Year Event Below Grade Modeling

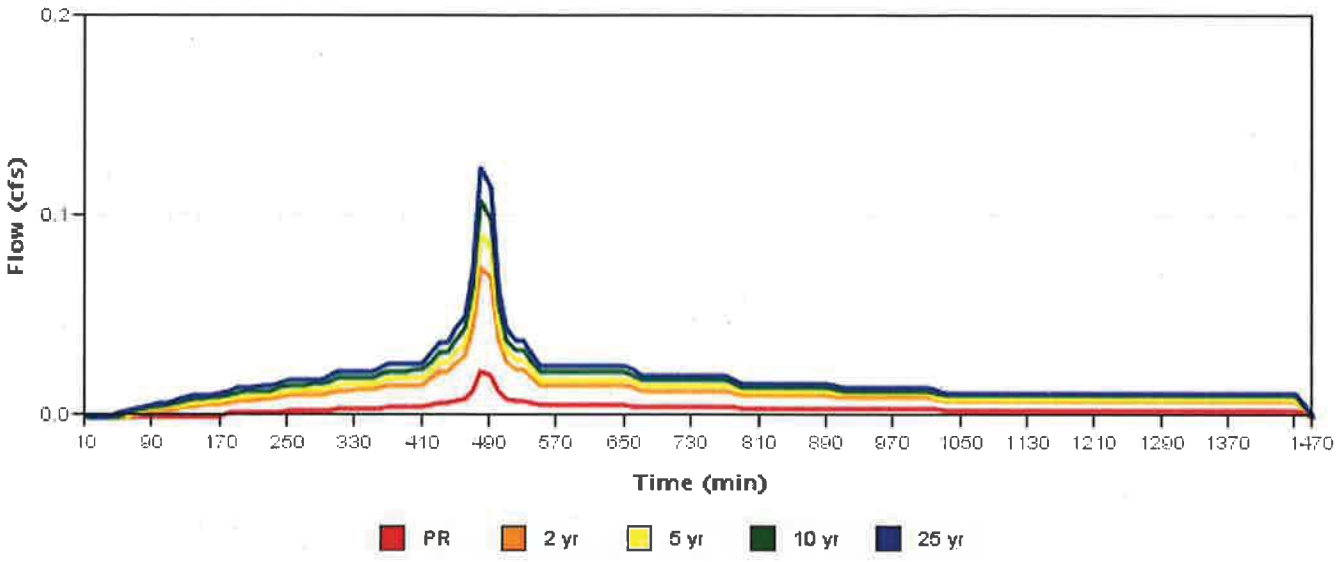


Catchment North Roof

Site Soils & Infiltration Testing Data	Infiltration Testing Procedure	**Open Pit Falling Head**
	Native Soil Infiltration Rate (I_{test})	**0.00** ⚠
Correction Factor	CF_{test}	**2**
Design Infiltration Rates	Native Soil (I_{dsgn})	**0.00 in/hr** ⚠
	Imported Growing Medium	**2.00 in/hr**
Catchment Information	Hierarchy Category	**3**
	Disposal Point	**C**
	Hierarchy Description	**Off-site flow to drainageway, river, or storm-only pipe system**
	Pollution Reduction Requirement	**Pass**
	10-year Storm Requirement	**N/A**
	Flow Control Requirement	**The post-development peak rates for the 2, 5 and 10-year design storms must be equal or less than the pre-development rates.**
	Impervious Area	**5266 sq ft** **0.121 acre**
	Time of Concentration (Tc)	**5**
	Pre-Development Curve Number (CN_{pre})	**98**
	Post-Development Curve Number (CN_{post})	**98**

⚠ Indicates value is outside of recommended range

SBUH Results



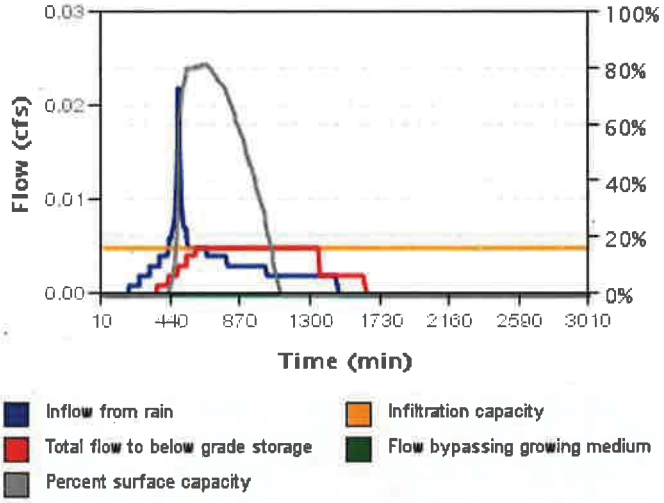
	Pre-Development Rate and Volume		Post-Development Rate and Volume	
	Peak Rate (cfs)	Volume (cf)	Peak Rate (cfs)	Volume (cf)
PR	0.022	275.163	0.022	275.163
2 yr	0.074	952.861	0.074	952.861
5 yr	0.091	1171.114	0.091	1171.114
10 yr	0.107	1389.693	0.107	1389.693
25 yr	0.124	1608.479	0.124	1608.479

Facility North Roof

Facility Details	Facility Type	**Planter (Flat)**
	Facility Configuration	**D: Lined Facility with RS and Ud**
	Facility Shape	**Planter**
	Above Grade Storage Data	
	Bottom Area	**100 sq ft**
	Bottom Width	**10.00 ft**
	Storage Depth 1	**6.0 in**
	Growing Medium Depth	**18 in**
	Surface Capacity at Depth 1	**50.0 cu ft**
	Design Infiltration Rate for Native Soil	**0.000 in/hr**
	Infiltration Capacity	**0.005 cfs**
Facility Facts	Total Facility Area Including Freeboard	**100.00 sq ft**
	Sizing Ratio	**1.9%**
Pollution Reduction Results	Pollution Reduction Score	**Pass**
	Overflow Volume	**283.446 cf**
	Surface Capacity Used	**82%**
Flow Control Results	Flow Control Score	**Pass**
	Overflow Volume	**1391.158 cf**
	Surface Capacity Used	**100%**

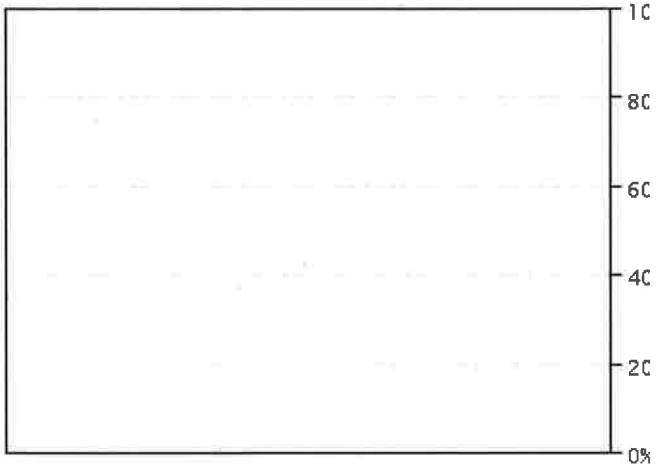
	Post-development outflow (cfs)		Pre-development inflow (cfs)	
2 year	0.074	≤	0.074	**Pass**
5 year	0.091	≤	0.091	**Pass**
10 year	0.107	≤	0.107	**Pass**

Pollution Reduction Event Surface Facility Modeling

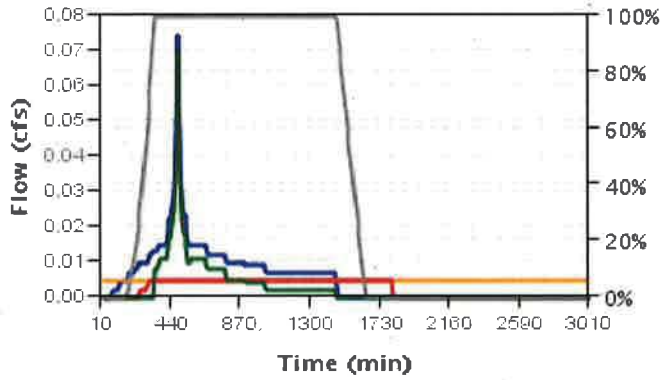


Inflow from rain
Total flow to below grade storage
Percent surface capacity
Infiltration capacity
Flow bypassing growing medium

Pollution Reduction Event Below Grade Modeling

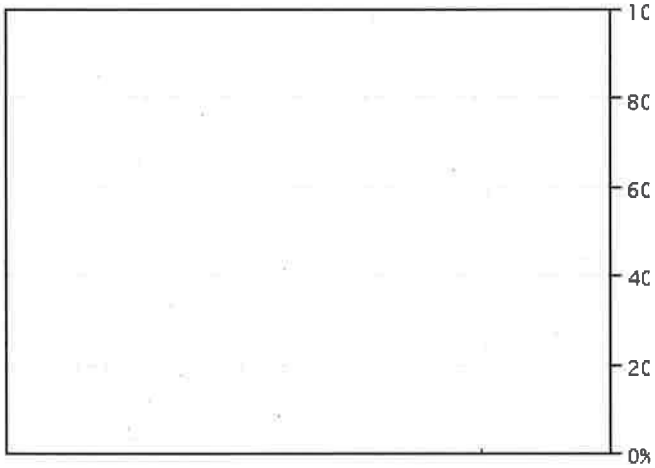


2 Year Event Surface Facility Modeling

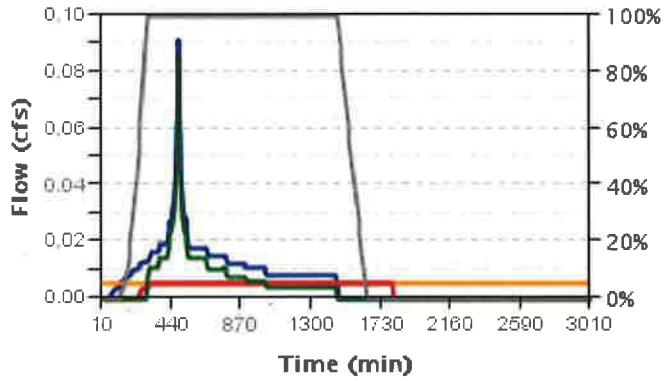


Inflow from rain
Total flow to below grade storage
Percent surface capacity
Infiltration capacity
Flow bypassing growing medium

2 Year Event Below Grade Modeling

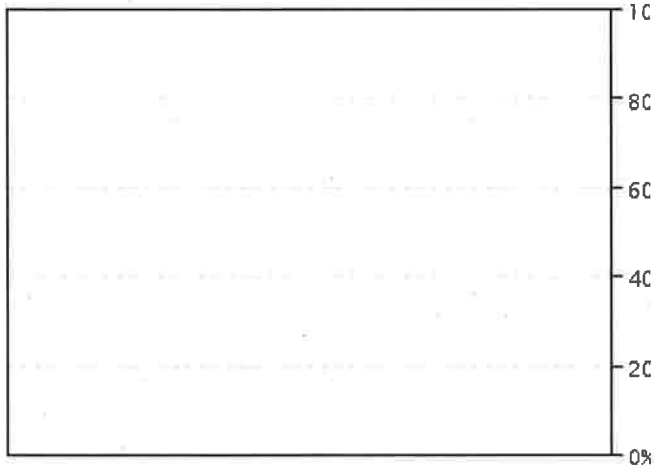


5 Year Event Surface Facility Modeling

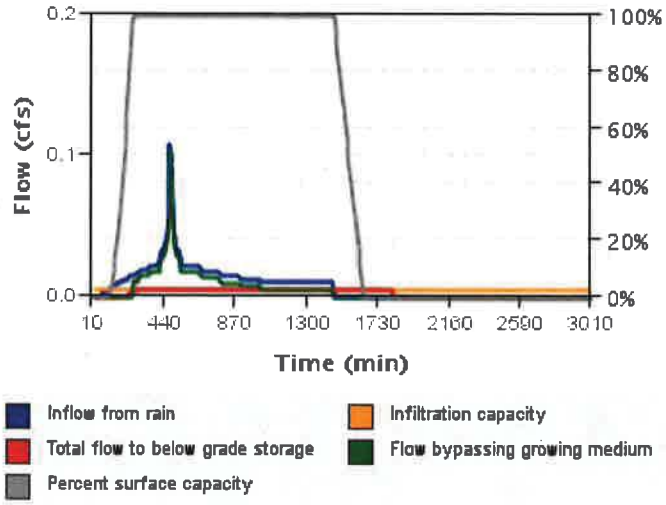


Inflow from rain
Total flow to below grade storage
Percent surface capacity
Infiltration capacity
Flow bypassing growing medium

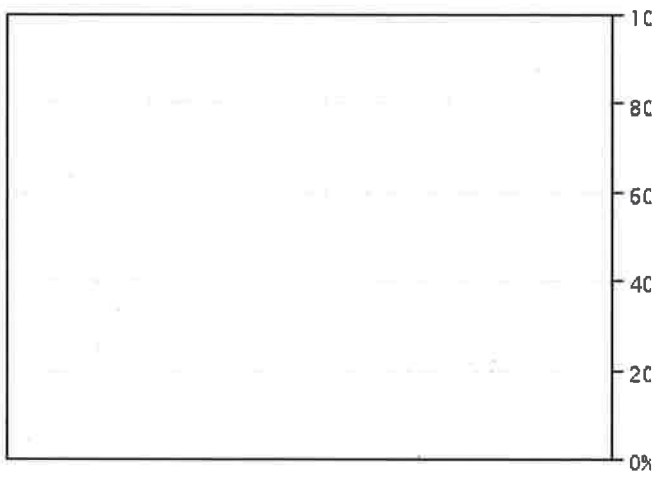
5 Year Event Below Grade Modeling



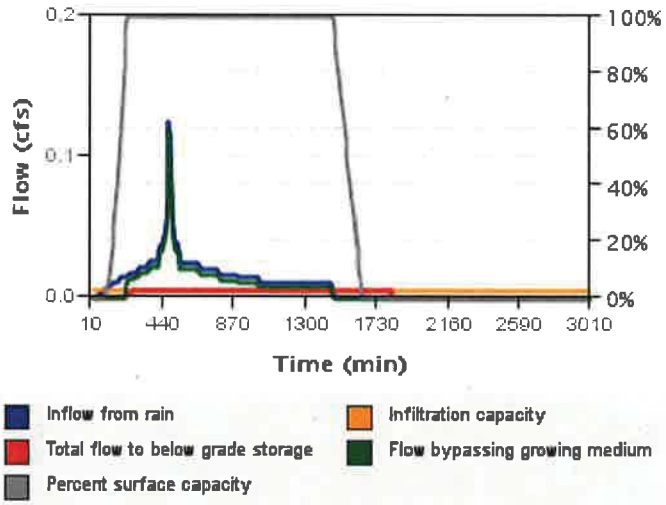
10 Year Event Surface Facility Modeling



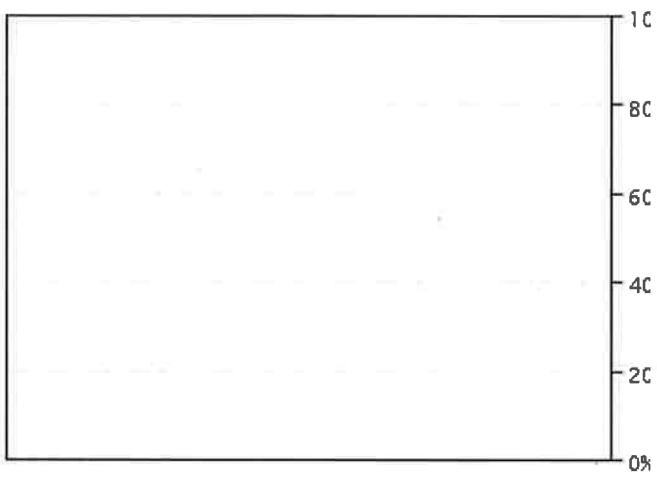
10 Year Event Below Grade Modeling



25 Year Event Surface Facility Modeling



25 Year Event Below Grade Modeling

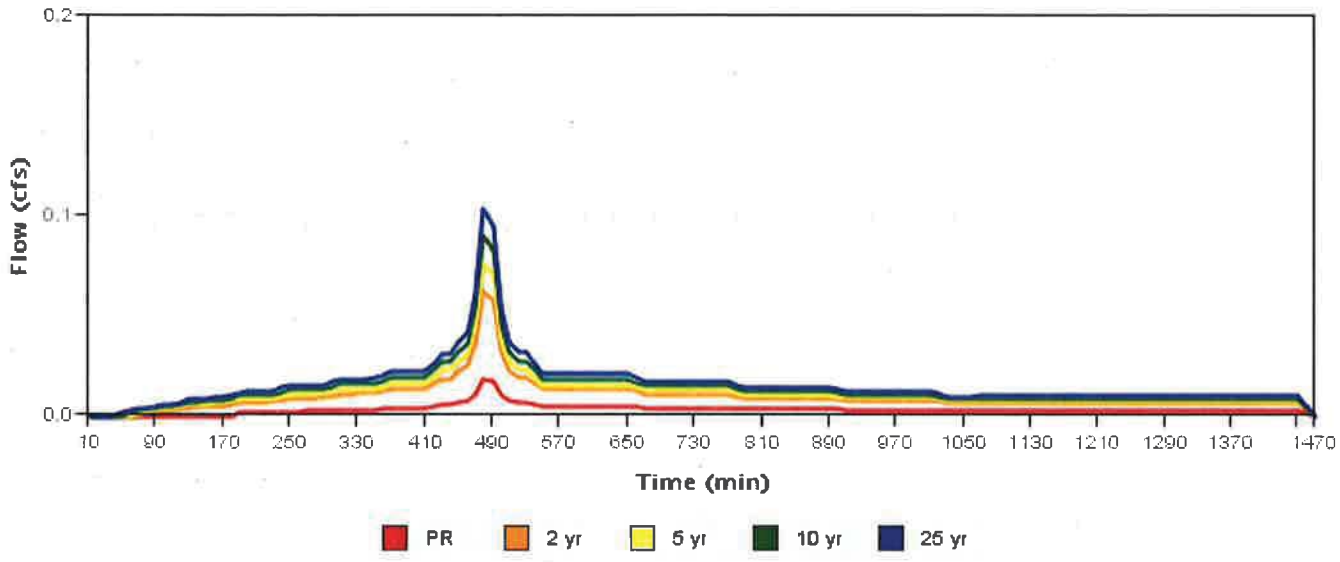


Catchment Center Parking Lot

Site Soils & Infiltration Testing Data	Infiltration Testing Procedure	**Open Pit Falling Head**
	Native Soil Infiltration Rate (I_{test})	**0.00** ⚠
Correction Factor	CF_{test}	**2**
Design Infiltration Rates	Native Soil (I_{dsgn})	**0.00 in/hr** ⚠
	Imported Growing Medium	**2.00 in/hr**
Catchment Information	Hierarchy Category	**3**
	Disposal Point	**C**
	Hierarchy Description	**Off-site flow to drainageway, river, or storm-only pipe system**
	Pollution Reduction Requirement	**Pass**
	10-year Storm Requirement	**N/A**
	Flow Control Requirement	**The post-development peak rates for the 2, 5 and 10-year design storms must be equal or less than the pre-development rates.**
	Impervious Area	**4400 sq ft** **0.101 acre**
	Time of Concentration (Tc)	**5**
	Pre-Development Curve Number (CN_{pre})	**98**
	Post-Development Curve Number (CN_{post})	**98**

⚠ Indicates value is outside of recommended range

SBUH Results



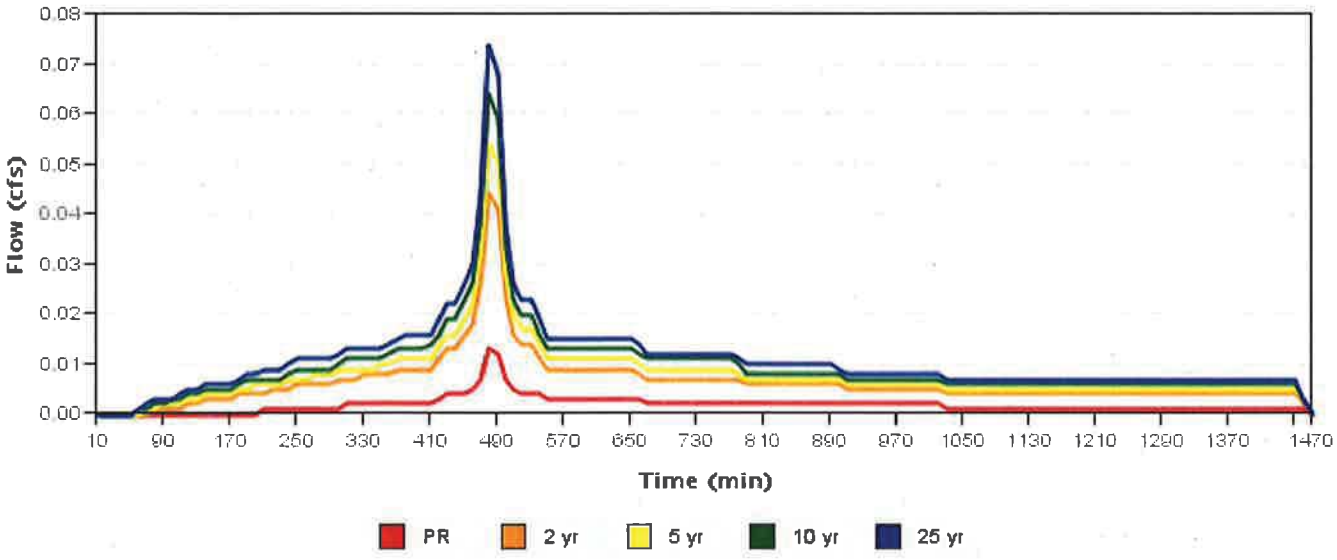
	Pre-Development Rate and Volume		Post-Development Rate and Volume	
	Peak Rate (cfs)	Volume (cf)	Peak Rate (cfs)	Volume (cf)
PR	0.018	229.912	0.018	229.912
2 yr	0.062	796.162	0.062	796.162
5 yr	0.076	978.523	0.076	978.523
10 yr	0.09	1161.157	0.09	1161.157
25 yr	0.103	1343.962	0.103	1343.962

Catchment South Parking Lot (New Planter)

Site Soils & Infiltration Testing Data	Infiltration Testing Procedure	**Open Pit Falling Head**
	Native Soil Infiltration Rate (I_{test})	**0.00** ⚠
Correction Factor	CF_{test}	**2**
Design Infiltration Rates	Native Soil (I_{dsgn})	**0.00 in/hr** ⚠
	Imported Growing Medium	**2.00 in/hr**
Catchment Information	Hierarchy Category	**3**
	Disposal Point	**C**
	Hierarchy Description	**Off-site flow to drainageway, river, or storm-only pipe system**
	Pollution Reduction Requirement	**Pass**
	10-year Storm Requirement	**N/A**
	Flow Control Requirement	**The post-development peak rates for the 2, 5 and 10-year design storms must be equal or less than the pre-development rates.**
	Impervious Area	**3150 sq ft** **0.072 acre**
	Time of Concentration (Tc)	**5**
	Pre-Development Curve Number (CN_{pre})	**98**
	Post-Development Curve Number (CN_{post})	**98**

⚠ Indicates value is outside of recommended range

SBUH Results



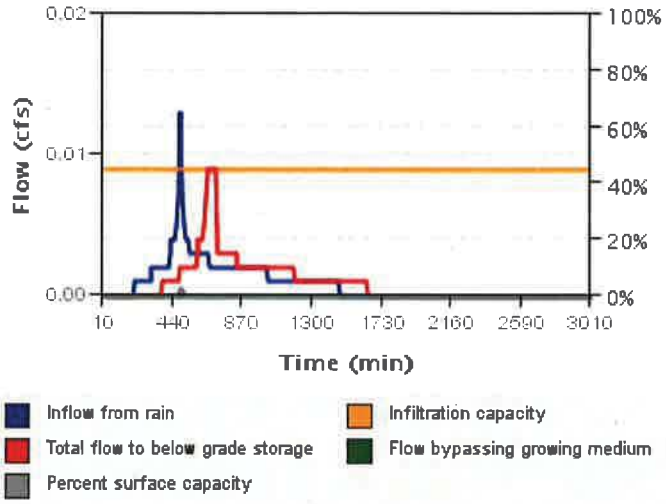
	Pre-Development Rate and Volume		Post-Development Rate and Volume	
	Peak Rate (cfs)	Volume (cf)	Peak Rate (cfs)	Volume (cf)
PR	0.013	164.596	0.013	164.596
2 yr	0.044	569.98	0.044	569.98
5 yr	0.054	700.533	0.054	700.533
10 yr	0.064	831.283	0.064	831.283
25 yr	0.074	962.155	0.074	962.155

Facility South Parking Lot (New Planter)

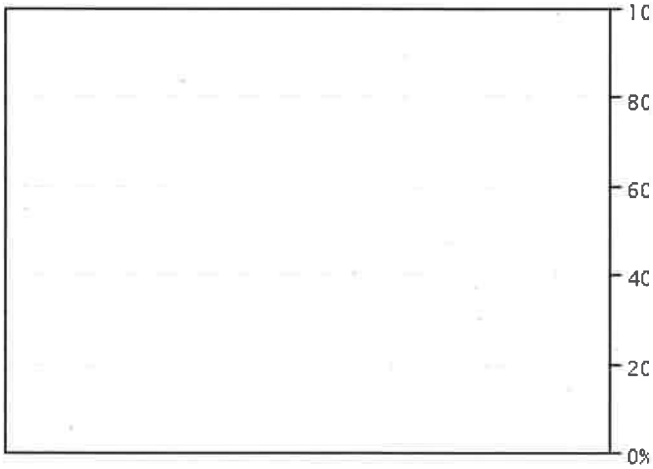
Facility Details	Facility Type	**Basin**
	Facility Configuration	**D: Lined Facility with RS and Ud**
	Facility Shape	**Amoeba**
	Above Grade Storage Data	
	Bottom Area	**51 sq ft**
	Bottom Perimeter Length	**41.00 ft**
	Side Slope	**3.0:1**
	Storage Depth 1	**18.0 in**
	Growing Medium Depth	**18 in**
	Freeboard Depth	**2.00 in**
	Surface Capacity at Depth 1	**168.8 cu ft**
	Design Infiltration Rate for Native Soil	**0.000 in/hr**
	Infiltration Capacity	**0.009 cfs**
Facility Facts	Total Facility Area Including Freeboard	**256.00 sq ft**
	Sizing Ratio	**8.1%**
Pollution Reduction Results	Pollution Reduction Score	**Pass**
	Overflow Volume	**168.826 cf**
	Surface Capacity Used	**3%**
Flow Control Results	Flow Control Score	**Pass**
	Overflow Volume	**834.416 cf**
	Surface Capacity Used	**100%**

	Post-development outflow (cfs)		Pre-development inflow (cfs)	
2 year	0.009	≤	0.044	**Pass**
5 year	0.009	≤	0.054	**Pass**
10 year	0.02	≤	0.064	**Pass**

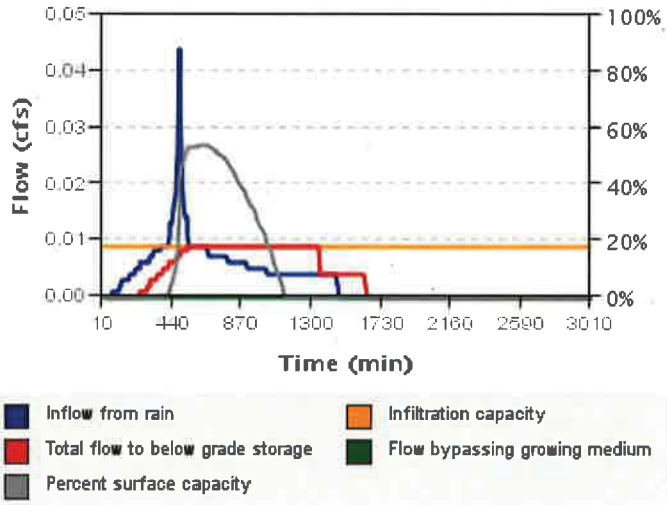
Pollution Reduction Event Surface Facility Modeling



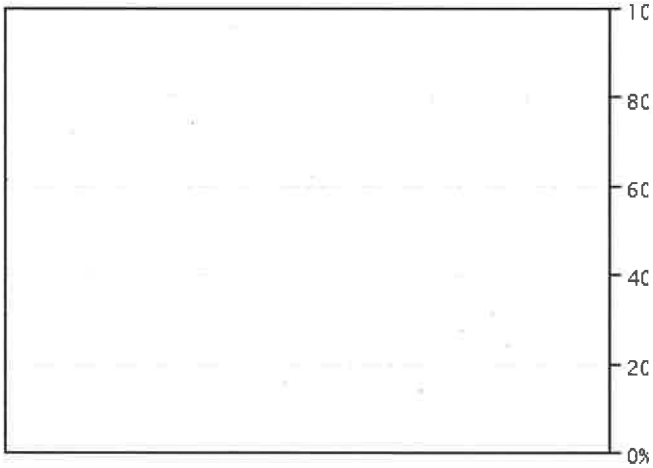
Pollution Reduction Event Below Grade Modeling



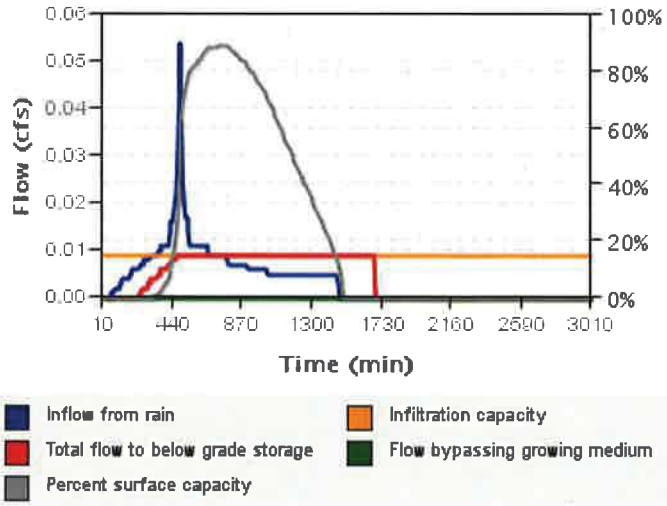
2 Year Event Surface Facility Modeling



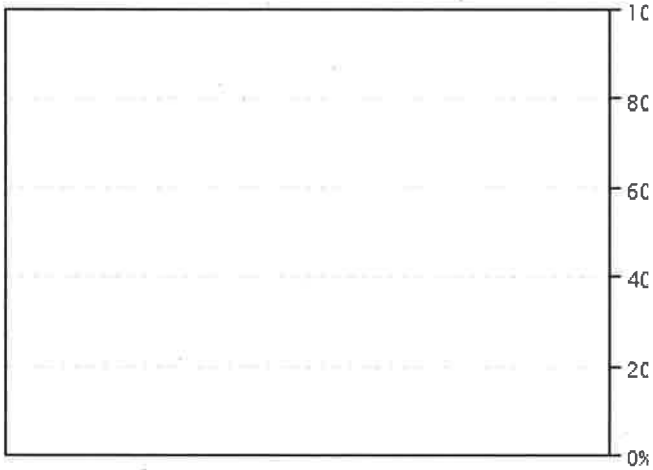
2 Year Event Below Grade Modeling



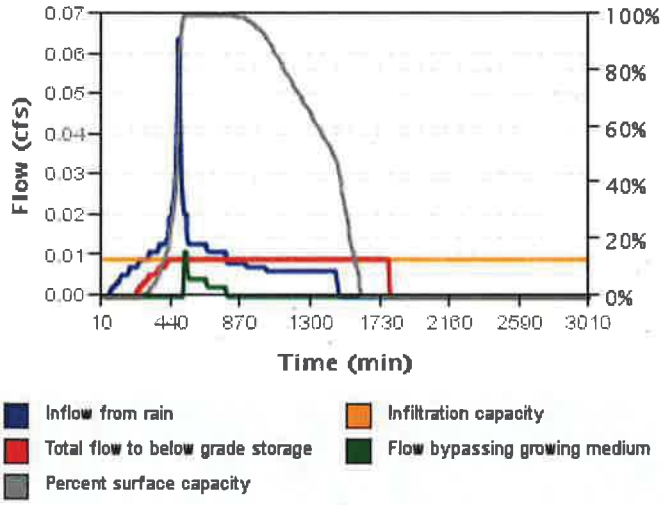
5 Year Event Surface Facility Modeling



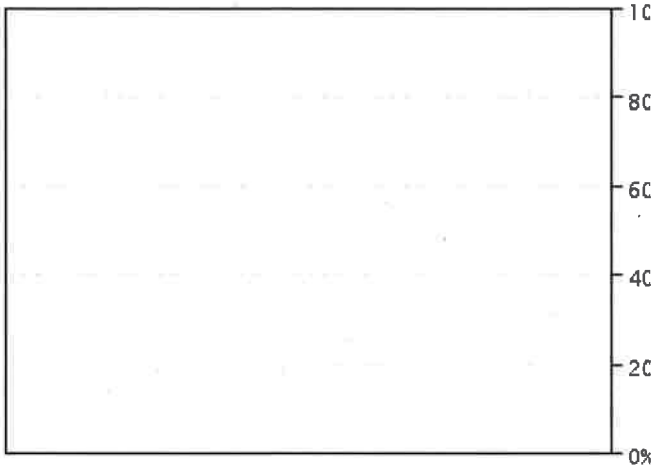
5 Year Event Below Grade Modeling



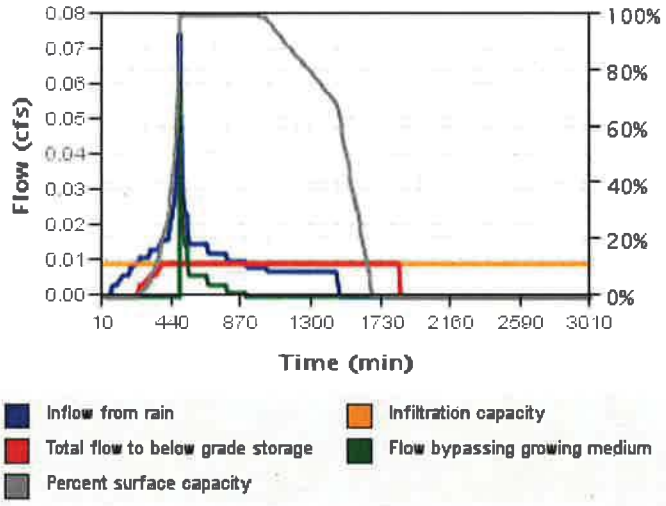
10 Year Event Surface Facility Modeling



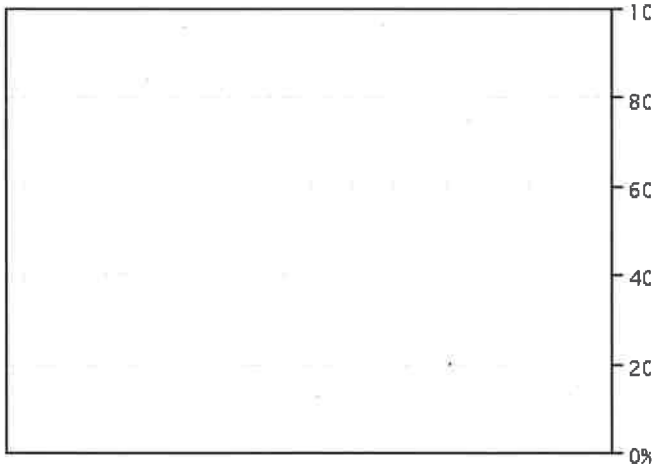
10 Year Event Below Grade Modeling



25 Year Event Surface Facility Modeling



25 Year Event Below Grade Modeling



GEOTECHNICAL REPORT

GeoDesign Inc

REPORT OF GEOTECHNICAL ENGINEERING SERVICES

Ledding Library of Milwaukie Renovation and Expansion
10660 SE 21st Avenue
Milwaukie, Oregon

For
City of Milwaukie
August 25, 2017

GeoDesign Project: CMilwaukie-2-01

GeoDesign Inc

August 25, 2017

PlanB Consultancy
696 McVey Avenue
Lake Oswego, OR 97034

Attention: Amy Winterowd

Report of Geotechnical Engineering Services
Ledding Library of Milwaukie Renovation and Expansion
10660 SE 21st Avenue
Milwaukie, Oregon
GeoDesign Project: CMilwaukie-2-01

GeoDesign, Inc. is pleased to submit THIS report of geotechnical engineering services for the proposed renovation and expansion of the Ledding Library of Milwaukie located at 10660 SE 21st Avenue in Milwaukie, Oregon. Our services for this project were conducted in accordance with our proposal dated March 24, 2017.

We appreciate the opportunity to be of service to you. Please call if you have questions regarding this report.

Sincerely,

GeoDesign, Inc.

Brett A. Shipton, P.E., G.E.
Principal Engineer

cc: Jordan Henderson, PlanB Consultancy (via email only)

JTW:BAS:kt
Attachments
One copy submitted (via email only)
Document ID: CMilwaukie-2-01-082517-geor.docx
© 2017 GeoDesign, Inc. All rights reserved.

EXECUTIVE SUMMARY

The following is a summary of our findings and recommendations for design and construction of the proposed library renovation and expansion. This executive summary is limited to an overview of the project. We recommend that the report be referenced for a more thorough description of the subsurface conditions and geotechnical recommendations for the project.

- Based on the assumed foundation loads, the proposed structures can be supported on shallow foundations bearing on granular pads constructed on firm native soil or soil compacted as structural fill as presented in the "Shallow Foundations" section.

- The on-site soils can be sensitive to small changes in moisture content and difficult, if not impossible, to adequately compact during wet weather or when the moisture content of the soil is more than a couple of percent above the optimum required for compaction. As discussed in the report, the moisture content of the soils currently is above optimum and drying will be required if used as structural fill.

- The on-site soils will provide inadequate support for construction equipment during periods wet weather or when above optimum moisture. Granular haul roads and working pads should be employed if earthwork will occur during the wet winter months.

- Based on our explorations, the near-surface soils at the site generally consist of fine-grained silt and clay. Based on our infiltration testing, the site has little to no infiltration capacity.

- The soils encountered during our subsurface explorations are not susceptible to liquefaction under design levels of ground shaking

TABLE OF CONTENTS **PAGE NO.**

TABLE OF CONTENTS **PAGE NO.**

1.0 INTRODUCTION

GeoDesign, Inc. is pleased to submit this geotechnical engineering report for the proposed renovation and expansion of the Ledding Library of Milwaukie located at 10660 SE 21st Avenue in Milwaukie, Oregon. Figure 1 shows the site relative to existing topographic and physical features. Figure 2 shows the approximate site boundaries and our approximate exploration locations.

The exploration logs and laboratory testing results are presented in Appendix A. Our site-specific seismic evaluation is presented in Appendix B. Acronyms and abbreviations used herein are defined at the end of this document.

1.1 PROJECT UNDERSTANDING

The site encompasses Tax Lot 11E36BB011800, Parcel Number 00026803. The parcel is currently developed with the existing Ledding Library building and includes an AC-paved parking area and landscaped areas with walkways. We understand that plans are preliminary and currently being developed; however, they may consist of expansion of the library into the existing parking areas and/or landscaped areas. In addition, development plans will also include renovations to the existing library building.

Based on preliminary information provided by ABHT Structural Engineers, isolated column loads are anticipated to be between 150 and 200 kips and continuous wall loads are anticipated to be between 3 and 6 kips per linear foot. We anticipate maximum floor loads will be 100 psf. The building addition will be classified as a special occupancy structure and will require a site-specific seismic evaluation per the current SOSSC.

2.0 SCOPE OF SERVICES

The purpose of our geotechnical engineering services was to characterize site subsurface conditions and provide geotechnical engineering recommendations for use in design and construction of the proposed development. Our scope of work is presented as follows:

- Reviewed readily available published geologic data and our in-house files for existing information on subsurface conditions in the site vicinity.
- Explored subsurface conditions by drilling five borings to depths ranging between 8.0 and 16.5 feet BGS.
- Classified the materials encountered in the explorations, and maintained a detailed log of each exploration.
- Completed laboratory testing on disturbed soil samples collected from the explorations as follows:
  - Twenty-one moisture content determinations in general accordance with ASTM D 2216
  - Four particle-size determinations in general accordance with ASTM C 117 and ASTM D 1140
  - One Atterberg limits tests in general accordance with ASTM D 4318

- Provided recommendations for site preparation and grading, including clearing and grubbing, demolition, temporary and permanent slopes, fill placement criteria, suitability of on-site soil for fill, subgrade preparation, and recommendations for wet weather construction.
- Provided foundation support recommendations for the proposed building addition. Our recommendations include preferred foundation type, allowable bearing capacity, and lateral resistance parameters.
- Provided recommendations for use in design of conventional retaining walls, including backfill and drainage requirements and lateral earth pressures.
- Evaluated groundwater conditions at the site, and provided general recommendations for dewatering during construction and subsurface drainage.
- Provided pavement design recommendations for AC paving, including subbase, base course, and AC paving thickness.
- Provided recommendations for seismic design factors in accordance with the procedures outlined in the 2012 IBC and 2014 SOSSC.
- Conducted a site-specific seismic hazard evaluation as required for the public "occupied structure" in accordance with procedures in the 2014 SOSSC.
- Prepared this geotechnical engineering report that presents our findings, conclusions, and recommendations.

3.0 SITE CONDITIONS

3.1 SURFACE CONDITIONS

The approximately 1.8-acre property is currently developed with the existing Ledding Library building and includes an AC-paved parked area and landscaped areas with walkways. The building expansion will likely extend to the south of the existing structure into the landscape area or north into the existing parking lot. The site is relatively level with grade changes between approximately 42 and 47 feet MSL.

3.2 SUBSURFACE CONDITIONS

3.2.1 General

Our subsurface exploration program consisted of drilling five borings (B-1 through B-5) to depths ranging between 8.0 and 16.5 feet BGS. Borings B-1 through B-3 were drilled in the AC parking lot and B-4 and B-5 were drilled in existing landscape areas. Drilling refusal was encountered in all borings on the underlying gravel and silty gravel. We conducted infiltration testing in B-5 at a depth of 6.0 feet BGS. The approximate locations of the explorations are shown on Figure 2. A more detailed description of the exploration and laboratory testing programs, the exploration logs, and results of our laboratory testing are presented in Appendix A.

Subsurface conditions generally consist of silt and clay, over silty sand and sand with interbeds of silt, overlying medium dense to dense gravel. The following sections provide a more detailed description of the units encountered.

3.2.2 Pavement Section

Borings B-1 through B-3 were completed in the existing AC-paved parking lot. The AC varied from 3.0 to 6.0 inches thick and the aggregate base was observed to be 7.0 to 11.0 inches thick. Table 1 presents the thickness of the AC and aggregate base encountered at the boring locations.

Table 1. Existing Pavement Thicknesses

Boring	AC Thickness (inches)	Base Thickness (inches)
B-1	3.0	11.0
B-2	6.0	7.0
B-3	3.0	9.0

3.2.3 Silt and Clay

Below the AC and aggregate base and from the surface in B-4 we encountered brown to gray medium stiff to stiff silt and clay with trace to minor amounts of sand to depths ranging between 8.0 and 9.5 feet BGS in B-1 through B-4. A layer of very stiff silt was also observed between depths of 11.0 and 14.0 feet BGS in B-4. Laboratory analysis of the silt and clay indicates the moisture content ranged between 19 and 39 percent at the time of testing.

3.2.4 Sand

Loose to medium dense, brown silty sand and sand with silt was observed at depths ranging between 8.0 and 13.0 feet BGS below the silt and from the ground surface to a depth of 6.5 feet BGS in B-5. Interbedded layers of silt were observed throughout the silty sand and sand with silt. Laboratory analysis of the silty sand and sand with silt indicates the moisture content ranged from 14 to 39 percent at the time of testing.

3.2.5 Gravel

We encountered medium dense, brown to gray, silty gravel to gravel with sand starting at depths ranging between 6.5 and 14.0 feet BGS and extending to the maximum depth explored of 16.5 feet BGS. Laboratory testing indicates the moisture content ranged from 12 to 19 percent at the time of testing.

3.3 GROUNDWATER

Groundwater was observed in the three deeper borings during drilling. The depths to the observed groundwater are summarized in Table 2.

Table 2. Groundwater Measurements

Boring	Depth (feet BGS)
B-1	13.0
B-3	14.3
B-4	13.3

The depth to groundwater may fluctuate in response to seasonal changes, prolonged rainfall, changes in surface topography, and other factors not observed in this study. In addition, we expect the depth to groundwater may be associated with the water level of the pond and Spring Creek located along the east side of the property.

3.4 INFILTRATION TESTING

Infiltration testing was completed to assist in the evaluation of potential stormwater infiltration facilities for the project. We conducted one infiltration test in B-5 at a depth of 6.0 feet BGS. The infiltration test was performed using the encased falling head method using a 6-inch-inside diameter casing and approximately 12 inches of water head. Laboratory testing was performed to determine the percent fines content at the infiltration test depth. Table 3 summarizes the unfactored infiltration test results and the amount of fines present at the depth of the infiltration test.

Table 3. Infiltration Test Results

Boring	Depth (feet BGS)	Material	Observed Infiltration Rate[1] (inches per hour)	Percent Fines[2]
B-5	6.0	Sand with Silt	0.3	27

1. Infiltration rates are measured rates with no factor of safety.
2. Fines content: material passing the U.S. Standard No. 200 sieve

Given the infiltration test results, fine-grained soils present across the site, relatively shallow groundwater, and without additional testing, it is our opinion that the site has little to no infiltration capacity.

4.0 CONCLUSIONS

Based on the results of our subsurface explorations and engineering analyses, it is our opinion that the site can be developed as proposed. The primary geotechnical considerations for the project are summarized in the "Executive Summary." Our specific recommendations are provided in the following sections.

5.0 DESIGN

5.1 GENERAL

The following sections provide our design recommendations for the project. All site preparation and structural fill should be prepared as recommended in the "Construction" section.

5.2 SHALLOW FOUNDATIONS

5.2.1 General

Based on the results of our explorations and analysis, the proposed library addition can be supported by conventional spread footings resting on granular pads underlain by undisturbed

native soil or structural fill overlying firm native soil. Foundations should not be established on undocumented fill, soft soil, or soil containing deleterious material. If present, this material should be removed and replaced with granular pads.

The granular pads should be a minimum of 4 inches thick, increasing to a minimum of 6 inches thick during the wet winter months, and extend 6 inches beyond the margins of the footings for every foot excavated below the base grade of the footing. The granular pads should consist of imported granular material, as defined in the "Structural Fill" section. The imported granular material should be compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D 1557, or, as determined by one of our geotechnical staff, until well-keyed. We recommend that a member of our geotechnical staff observe the prepared footing subgrade and the prepared granular pad.

5.2.2 Dimensions and Capacities

Continuous wall and isolated spread footings should be at least 18 and 24 inches wide, respectively. The bottom of exterior footings should be at least 18 inches below the lowest adjacent exterior grade. The bottom of interior footings should be established at least 12 inches below the base of the slab.

Footings bearing on subgrade prepared as recommended above should be sized based on an allowable bearing pressure of 2,500 psf. This is a net bearing pressure; the weight of the footing and overlying backfill can be ignored in calculating footing sizes. The recommended allowable bearing pressure applies to the total of dead plus long-term live loads and may be doubled for short-term loads such as those resulting from wind or seismic forces.

5.2.3 Resistance to Sliding

Lateral loads on footings can be resisted by passive earth pressure on the sides of the structures and by friction on the base of the footings. Our analysis indicates that the available passive earth pressure for footings confined by native soil and structural fill is 250 pcf, modeled as an equivalent fluid pressure. Adjacent floor slabs, pavements, or the upper 12-inch depth of adjacent, unpaved areas should not be considered when calculating passive resistance. The passive resistance should be reduced to 120 pcf below groundwater.

For footings in contact with native soil, a coefficient of friction equal to 0.30 may be used when calculating resistance to sliding. For footings in contact with granular fill, a coefficient of friction equal to 0.40 may be used when calculating resistance to sliding.

5.2.4 Settlement

Based on the anticipated foundation loads, post-construction settlement of footings and floor slabs founded as recommended is anticipated to be less than 1 inch. Differential settlements between similarly loaded, newly constructed foundation elements should be approximately one-half of the total settlement. Differential settlement between new and existing foundation elements that are structurally tied together will likely be negligible and approaching the total settlement if structurally isolated.

5.2.5 Subgrade Observation

All footing and floor subgrades should be evaluated by a representative of GeoDesign to evaluate the bearing conditions. Observations should also confirm that all loose or soft material, organics, unsuitable fill, prior topsoil zones, and softened subgrades (if present) have been removed. Localized deepening of footing excavations may be required to penetrate deleterious material.

5.3 FLOOR SLABS

Satisfactory subgrade support for building floor slabs supporting up to 100 psf areal loading can be obtained on the existing undisturbed native silt and clay or on structural fill. To help reduce moisture transmission and slab shifting, we recommend a minimum 6-inch-thick layer of floor slab base rock be placed and compacted over a subgrade that has been prepared in conformance with the "Site Preparation" section. The floor slab base rock should meet the requirements in the "Materials" section and be compacted to at least 95 percent of ASTM D 1557.

While groundwater is unlikely to be encountered within the slab subgrade material, the native soil is fine grained and will tend to maintain a high moisture content. In areas where moisture-sensitive floor slab and flooring will be installed, the installation of a vapor barrier is warranted in order to reduce the potential for moisture transmission through and efflorescence growth on the slab and flooring. In addition, flooring manufacturers often require vapor barriers to protect flooring and flooring adhesives and they will warrant their product only if a vapor barrier is installed according to their recommendations.

Slabs should be reinforced according to their proposed use and per the structural engineer's recommendations. Load-bearing concrete slabs may be designed assuming a modulus of subgrade reaction, k, of 150 psi per inch.

5.4 RETAINING STRUCTURES

5.4.1 Assumptions

Retaining walls may be needed to address grade changes. Our retaining wall design recommendations are based on the following assumptions: (1) the walls consist of conventional, cantilevered retaining walls, (2) the walls are less than 8 feet in height, (3) the backfill is drained, and (4) the backfill has a slope flatter than 4H:1V. Re-evaluation of our recommendations will be required if the retaining wall design criteria for the project varies from these assumptions.

5.4.2 Wall Design Parameters

For unrestrained retaining walls, an active pressure of 35 pcf equivalent fluid pressure should be used for design. For embedded building walls, a superimposed seismic lateral force should be calculated based on a dynamic force of $7.0H^2$ pounds per lineal foot of wall, where H is the height of the wall in feet, and applied a distance of 0.6H from the base of the wall. Where retaining walls are restrained from rotation prior to being backfilled, a pressure of 55 pcf equivalent fluid pressure should be used for design.

If surcharges (e.g., retained slopes, building foundations, vehicles, steep slopes, terraced walls, etc.) are located within a horizontal distance from the back of a wall equal to twice the height of

the wall, additional pressures will need to be accounted for in the wall design. Our office should be contacted for appropriate wall surcharges based on the actual magnitude and configuration of the applied loads.

The base of the wall footing excavations should extend a minimum of 18 inches below lowest adjacent grade. The footing excavations should then be lined with a minimum 4-inch-thick layer of compacted imported granular material, as described in the "Materials" section.

The wall footings should be designed in accordance with the guidelines provided in the appropriate portion of the "Shallow Foundations" section.

5.4.3 Wall Drainage and Backfill

The above design parameters have been provided assuming that back-of-wall drains will be installed to prevent buildup of hydrostatic pressures behind all walls. If a drainage system is not installed, our office should be contacted for revised design forces.

The backfill material placed behind the walls and extending a horizontal distance of ½H, where H is the height of the retaining wall, should consist of retaining wall select backfill placed and compacted in conformance with the "Structural Fill" section.

A minimum 6-inch-diameter, perforated collector pipe should be placed at the base of the walls. The pipe should be embedded in a minimum 2-foot-wide zone of angular drain rock that is wrapped in a drainage geotextile fabric and extends up the back of the wall to within 1 foot of the finished grade. The drain rock and drainage geotextile fabric should meet specifications provided in the "Materials" section. The perforated collector pipes should discharge at an appropriate location away from the base of the wall. The discharge pipe(s) should not be tied directly into stormwater drain systems, unless measures are taken to prevent backflow into the drainage system of the wall.

Settlement of up to 1 percent of the wall height commonly occurs immediately adjacent to the wall as the wall rotates and develops active lateral earth pressures. Consequently, we recommend that construction of flatwork adjacent to retaining walls be postponed at least four weeks after backfilling of the wall, unless survey data indicates that settlement is complete prior to that time.

5.5 SEISMIC DESIGN CONSIDERATIONS

5.5.1 IBC Parameters

Based on our explorations, the following design parameters can be applied if the building is designed using the applicable provisions of the 2012 IBC and 2014 SOSSC. The parameters in Table 4 are appropriate for code-level seismic design obtained from USGS seismic design maps (USGS, 2014). We performed a site-specific seismic evaluation study, the results of this study are presented in Appendix B.

Table 4. IBC Seismic Design Parameters

Seismic Design Parameter	Short Period (T_s = 0.2 second)	1 Second Period (T_1 = 1.0 second)
MCE Spectral Acceleration, S	S_s = 0.984 g	S_1 = 0.421 g
Site Class	D	
Site Coefficient, F	F_a = 1.11	F_v = 1.58
Adjusted Spectral Acceleration, S_M	S_{MS} = 1.088 g	S_{M1} = 0.665 g
Design Spectral Response Acceleration Parameters, S_D	0.726 g	0.443 g

5.6 PAVEMENTS

5.6.1 Design Assumptions and Parameters

We anticipate some re-grading and re-paving may be needed to accommodate the building addition and site improvements. Pavements should be installed on undisturbed native subgrade, scarified and re-compacted soil, or new engineered fills described in the "Site Preparation" and "Structural Fill" sections.

Our pavement recommendations are based on the following assumptions:

- The top 12 inches of soil subgrade is compacted to at least 92 percent of its maximum dry density, as determined by ASTM D 1557, or until proof rolling with heavy equipment indicates that is it firm and unyielding.
- Resilient moduli of 3,700 psi and 20,000 psi were assumed for the subgrade and base rock, respectively.
- No traffic growth.
- A pavement design life of 20 years.
- Initial and terminal serviceability indices of 4.2 and 2.5, respectively.
- Reliability of 75 percent and standard deviation of 0.49.

We do not have specific information on the frequency of vehicles expected at the site. Consequently, we have provided pavement sections for automobile parking and heavy-duty areas with high automobile traffic and occasional heavy vehicles (i.e., garbage trucks, delivery trucks, semi-trucks, etc.). The breakdown of the type and frequency of the trucks used in our analysis are presented in Table 5. If any of these assumptions vary from project design values, our office should be contacted with the appropriate information so that the pavement designs can be revised.

Table 5. Truck Traffic Breakdown

FHWA Class Group	Description	Percent
5	2-axle, single unit	60
6	3-axle, single unit	30
7	4-axle, single unit	0
8	tractor/trailer 3- to 4-axle	10
9	tractor/trailer 3- to 4-axle	0
10	tractor/trailer 3- to 4-axle	0
11	5-axle, multi-trailer	0
12	6-axle, multi-trailer	0

Our pavement design recommendations assuming a maximum of five trucks per day are presented in Table 6.

Table 6. Recommended Standard Pavement Sections

Pavement Use	Trucks per Day[1]	ESALs	AC (inches)	Base Rock (inches)
Automobile Parking	0	10,000	2.5	8.0
Heavy Duty[1]	5	30,000	3.0	9.0

1. See Table 5 for the assumed breakdown of the trucks.

All thicknesses are intended to be the minimum acceptable. The design of the recommended pavement section is based on the assumption that construction will be completed during an extended period of dry weather. Wet weather construction could require an increased thickness of aggregate base. The AC and aggregate base should meet the requirements outlined in the "Materials" section.

Construction traffic should be limited to non-building, unpaved portions of the site or haul roads. Construction traffic should not be allowed on new pavements. If construction traffic is to be allowed on newly constructed road sections, an allowance for this additional traffic will need to be made in the design pavement section. The aggregate base does not account for construction traffic, and haul roads and staging areas should be used as described in the "Construction" section.

If any of these assumptions are incorrect, our office should be contacted with the appropriate information so that the pavement designs can be revised.

5.7 DRAINAGE

5.7.1 Surface Water Control

The ground surface around the structure should be sloped away from its foundations at a minimum 2 percent gradient for a distance of at least 5 feet. Downspouts should discharge into solid, smooth-walled drainage pipes that carry the collected water away from the building

foundations. Trapped planter areas should not be created adjacent to buildings without providing means for positive drainage (e.g., swales or catch basins).

5.7.2 Foundation Drainage

We recommend installing footing drains around the perimeter of the proposed building addition. The footing drains should consist of a filter fabric-wrapped, drain rock-filled trench that extends at least 2 feet below the lowest adjacent grade (i.e., slab subgrade elevation). A minimum 4-inch-diameter, perforated pipe should be placed at the base to collect water that gathers in the drain rock. The drain rock and drainage geotextile fabric should meet the specifications outlined in the "Materials" section.

5.8 PERMANENT SLOPES

Permanent cut and fill slopes should not exceed 2H:1V. Slopes within stormwater facilities should not exceed 3H:1V. Access roads and pavements should be located at least 5 feet from the top of cut and fill slopes. The setback should be increased to 10 feet for buildings. The slopes should be planted with appropriate vegetation to provide protection against erosion as soon as possible after grading. Surface water runoff should be collected and directed away from slopes to prevent water from running down the face of the slope.

6.0 CONSTRUCTION

6.1 SITE PREPARATION

6.1.1 Demolition

Demolition should include removal of existing structures, pavements, and utilities that are present underneath areas to be improved. Demolished material should be transported off site for disposal or recycled and used on site if the material is acceptable for use as structural fill. Excavations remaining from site preparation activities should be backfilled with structural fill where below planned site grades. The base of excavations should be excavated to expose firm subgrade before filling. Utility lines abandoned under new structural elements should be completely removed and backfilled with structural fill in accordance with the recommendations provided in the "Structural Fill" section.

6.1.2 Stripping and Grubbing

The existing topsoil and vegetation should be stripped and removed from all proposed building and pavement areas and for a 5-foot margin around such areas. The actual stripping depth should be based on field observations at the time of construction. Stripped material should be transported off site for disposal or used in landscaped areas. Greater depths may be necessary to remove localized zones of organic material or deeper root zones.

Trees should also be removed from improved areas. Root balls should be grubbed out to the depth of the roots. Based on our experience, the grubbing depth required to remove tree root balls will be approximately 2.5 to 3 feet BGS and the grubbing depth to remove brush roots will be approximately 1 foot to 2 feet BGS. Depending on the methods used to remove the root balls, considerable disturbance and loosening of the subgrade could occur during site grubbing. We recommend that soil disturbed during grubbing operations be removed to expose firm subgrade. The resulting excavations should be backfilled with structural fill.

6.1.3 Subgrade Evaluation

Upon completion of stripping and subgrade stabilization, and prior to the placement of fill or pavement improvements, the exposed subgrade should be evaluated by proof rolling. The subgrade should be proof rolled with a fully loaded dump truck or similarly heavy, rubber-tired construction equipment to identify soft, loose, or unsuitable areas. A member of our geotechnical staff should observe the proof rolling to evaluate yielding of the ground surface. During wet weather, subgrade evaluation should be performed by probing with a foundation probe rather than proof rolling. Areas that appear soft or loose should be improved in accordance with subsequent sections of this report.

6.2 CONSTRUCTION CONSIDERATIONS

The fine-grained soils present on this site are easily disturbed. If not carefully executed, site preparation, utility trench work, and excavations can create extensive soft areas and significant repair costs can result. Earthwork planning, regardless of the time of year, should include considerations for minimizing subgrade disturbance.

If construction occurs during or extends into the wet season, or if the moisture content of the surficial soil is more than a couple percentage points above optimum, site stripping and cutting may need to be accomplished using track-mounted equipment. Likewise, the use of granular haul roads and staging areas will be necessary for support of construction traffic during the rainy season or when the moisture content of the surficial soil is more than a few percentage points above optimum. The base rock thickness for pavement areas is intended to support post-construction design traffic loads. This design base rock thickness will likely not support construction traffic or pavement construction when the subgrade soil is wet. If construction is planned for periods when the subgrade soil is wet, staging and haul roads with increased thicknesses of base rock will be required.

The amount of staging and haul road areas, as well as the required thickness of granular material, will vary with the contractor's sequencing of a project and type/frequency of construction equipment. Based on our experience, between 12 and 18 inches of imported granular material is generally required in staging areas and between 18 and 24 inches in haul roads areas. A geotextile fabric is commonly placed below the imported granular material. The actual thickness will depend on the contractor's means and methods and should be the contractor's responsibility. The imported granular material, stabilization material, and geotextile are described in the "Materials" section.

6.3 EXCAVATION

6.3.1 Excavation and Shoring

Temporary excavation sidewalls should stand vertical to a depth of approximately 4 feet, provided groundwater seepage is not observed in the sidewalls. Open excavation techniques may be used to excavate trenches with depths between 4 and 8 feet, provided the walls of the excavation are cut at a slope of 1.5H:1V and groundwater seepage is not present. At this inclination, the slopes with loose sand may ravel and require some ongoing repair. Excavations should be flattened if excessive sloughing or raveling occurs. In lieu of large and open cuts, approved temporary shoring may be used for excavation support. A wide variety of shoring and

dewatering systems are available. Consequently, we recommend that the contractor be responsible for selecting the appropriate shoring and dewatering systems.

If box shoring is used, it should be understood that box shoring is a safety feature used to protect workers and does not prevent caving. If the excavations are left open for extended periods of time, caving of the sidewalls may occur. The presence of caved material will limit the ability to properly backfill and compact the trenches. The contractor should be prepared to fill voids between the box shoring and the sidewalls of the trenches with sand or gravel before caving occurs.

If shoring is used, we recommend that the type and design of the shoring system be the responsibility of the contractor, who is in the best position to choose a system that fits the overall plan of operation. All excavations should be made in accordance with applicable OSHA and state regulations.

6.3.2 Trench Dewatering

Shallow excavations (less than 5 feet) will not likely encounter groundwater. However, perched groundwater may be encountered after prolonged wet periods. Dewatering systems are best designed by the contractor. It may be possible to remove groundwater encountered by pumping from a sump in the trenches. More intense use of pumps may be required at certain times of the year and where more intense seepage occurs. Removed water should be routed to a suitable discharge point.

If groundwater is present at the base of utility trench excavations, we recommend placing up to 12 inches of stabilization material at the base of the excavations. Trench stabilization material should meet the requirements provided in the "Structural Fill" section.

We note that these recommendations are for guidance only. The dewatering of excavations is the sole responsibility of the contractor, as the contractor is in the best position to select these systems based on their means and methods.

6.3.3 Safety

All excavations should be made in accordance with applicable OSHA requirements and regulations of the state, county, and local jurisdiction. While this report describes certain approaches to excavation and dewatering, the contract documents should specify that the contractor is responsible for selecting excavation and dewatering methods, monitoring the excavations for safety, and providing shoring (as required) to protect personnel and adjacent structural elements.

6.4 MATERIALS

6.4.1 Structural Fill

6.4.1.1 General

Fill should be placed on subgrade that has been prepared in conformance with the "Site Preparation" section. A variety of material may be used as structural fill at the site. However, all material used as structural fill should be free of organic matter or other unsuitable material and should meet the specifications provided in OSSC 00330 (Earthwork), OSSC 00400 (Drainage and

Sewers), and OSSC 02600 (Aggregates), depending on the application. A brief characterization of some of the acceptable materials and our recommendations for their use as structural fill is provided below.

6.4.1.2 On-Site Soil

The material at the site should be suitable for use as general structural fill provided it is properly moisture conditioned; free of debris, organic material, and particles over 4 inches in diameter; and meets the specifications provided in OSSC 00330.12 (Borrow Material).

Based on laboratory test results, the moisture content of the on-site soil will be significantly above the optimum required for compaction. Therefore, moisture conditioning (drying) will be required to use the on-site fine-grained soil for structural fill. Extended dry weather and sufficient area to dry the soil will be required to adequately condition the soil for use as structural fill. The on-site fine-grained soil should not be used as structural fill during the wet season. We note that during summer the near-surface (within 2 to 3 BGS) soils can become dry and require the addition of water to moisture condition for compaction.

When used as structural fill, the on-site fine-grained soils should be placed in lifts with a maximum uncompacted thickness of 8 inches and compacted to not less than 92 percent of the maximum dry density, as determined by ASTM D 1557.

6.4.1.3 Imported Granular Material

Imported granular material used as structural fill should be pit- or quarry-run rock, crushed rock, or crushed gravel and sand and should meet the specifications provided in OSSC 00330.14 (Selected Granular Backfill) or OSSC 00330.15 (Selected Stone Backfill). The imported granular material should also be angular, fairly well graded between coarse and fine material, have less than 5 percent by dry weight passing the U.S. Standard No. 200 sieve, and have at least two fractured faces.

Imported granular material should be placed in lifts with a maximum uncompacted thickness of 12 inches and compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D 1557. During the wet season or when wet subgrade conditions exists, the initial lift should be approximately 18 inches in uncompacted thickness and should be compacted by rolling with a smooth-drum roller without using vibratory action.

6.4.1.4 Stabilization Material

Stabilization material should consist of pit- or quarry-run rock, crushed rock, or crushed gravel and should meet the specifications provided in OSSC 00330.16 (Stone Embankment Material). In addition, the material should have a maximum particle size of 6 inches, less than 5 percent by dry weight passing the U.S. Standard No. 4 sieve, and at least two mechanically fractured faces. The material should be free of organic matter and other deleterious material. Stabilization material should be placed in lifts between 12 and 18 inches thick and compacted to a firm condition.

Where the stabilization material is used for staging or construction haul roads, a geotextile should be placed as a barrier between the soil subgrade and the imported granular material. The

placement of the imported granular fill should be done in conformance with the specifications provided in OSSC 00331 (Subgrade Stabilization). The geotextile fabric should meet the specifications provided below for subgrade geotextiles. Geotextile is not required where stabilization material is used at the base of utility trenches.

6.4.1.5 Trench Backfill

Trench backfill placed beneath, adjacent to, and for at least 12 inches above utility lines (i.e., the pipe zone) should consist of well-graded granular material with a maximum particle size of 1½ inches and less than 7 percent by dry weight passing the U.S. Standard No. 200 sieve and should meet the specifications provided in OSSC 00405.13 (Pipe Zone Material). The pipe zone backfill should be compacted to at least 90 percent of the maximum dry density, as determined by ASTM D 1557, or as required by the pipe manufacturer or local building department.

Within roadway alignments, the remainder of the trench backfill up to the subgrade elevation should consist of well-graded granular material with a maximum particle size of 2½ inches and less than 7 percent by dry weight passing the U.S. Standard No. 200 sieve and should meet the specifications provided in OSSC 00405.14 (Trench Backfill; Class B, C, or D). This material should be compacted to at least 92 percent of the maximum dry density, as determined by ASTM D 1557, or as required by the pipe manufacturer or local building department. The upper 3 feet of the trench backfill should be compacted to at least 95 percent of the maximum dry density, as determined by ASTM D 1557.

Outside of structural improvement areas (e.g., roadway alignments or building pads) trench backfill placed above the pipe zone may consist of general fill material that is free of organics and material over 6 inches in diameter and meets the specifications provided in OSSC 00405.14 (Trench Backfill; Class A, B, C, or D). This general trench backfill should be compacted to at least 90 percent of the maximum dry density, as determined by ASTM D 1557, or as required by the pipe manufacturer or local building department.

6.4.1.6 Floor Slab Aggregate Base

Imported granular material used as base rock for building floor slabs should consist of ¾- or 1½-inch-minus material (depending on the application) and meet the requirements in OSSC 00641 (Aggregate Subbase, Base, and Shoulders). In addition, the aggregate should have less than 5 percent by dry weight passing the U.S. Standard No. 200 sieve. The aggregate base should be compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D 1557.

6.4.1.7 Pavement Aggregate Base

Imported granular material used as base rock for building floor slabs should consist of ¾- or 1½-inch-minus material (depending on the application) and meet the requirements in OSSC 00641 (Aggregate Subbase, Base, and Shoulders). In addition, the aggregate should have less than 5 percent by dry weight passing the U.S. Standard No. 200 sieve. The aggregate base should be compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D 1557.

6.4.1.8 Retaining Wall Select Backfill

Backfill material placed behind retaining walls and extending a horizontal distance of ½H, where H is the height of the retaining wall, should consist of select granular material that meets the requirements provided in OSSC 00510.12 (Granular Wall Backfill). We recommend the select granular wall backfill be separated from general fill, native soil, and/or topsoil using a geotextile fabric that meets the specifications provided below for drainage geotextiles.

The wall backfill should be compacted to a minimum of 95 percent of the maximum dry density, as determined by ASTM D 1557. However, backfill located within a horizontal distance of 3 feet from a retaining wall should only be compacted to approximately 90 percent of the maximum dry density, as determined by ASTM D 1557. Backfill placed within 3 feet of the wall should be compacted in lifts less than 6 inches thick using hand-operated tamping equipment (such as a jumping jack or vibratory plate compactor). If flatwork (sidewalks or pavements) will be placed atop the wall backfill, we recommend that the upper 2 feet of material be compacted to 95 percent of the maximum dry density, as determined by ASTM D 1557.

6.4.1.9 Drain Rock Material

Drain rock should consist of angular, granular material that meets the specifications provided in OSSC 00430.11 (Granular Drain Backfill Material) and the aggregate should have at least two fractured faces. The drain rock should be wrapped in a drainage geotextile that meets the specifications provided below for drainage geotextiles.

6.4.1.10 Retaining Wall Leveling Pad

Imported granular material placed at the base of retaining wall footings should consist of select granular material that meets the specifications provided in OSSC 00510.13 (Granular Structure Backfill). The granular material should meet either the 1"-0 or ¾"-0 aggregate size listed in OSSC Table 02630-1 – Grading Requirements for Dense-Graded Aggregate and have at least two mechanically fractured faces. The leveling pad material should be placed in a 6- to 12-inch lift and compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D 1557.

6.4.2 AC

6.4.2.1 ACP

The AC should be Level 2, ½-inch, dense ACP according to OSSC 00744 (Asphalt Concrete Pavement) and compacted to 91 percent of the theoretical maximum density of the mix, as determined by AASHTO T 209. The minimum and maximum lift thickness is 2.0 and 3.0 inches, respectively, for ½-inch ACP. Lift thicknesses desired outside these limits should be discussed with the design team prior to design or construction. Asphalt binder should be performance graded and conform to PG 64-22 or better.

6.4.2.2 Cold Weather Paving Considerations

In general, AC paving is not recommended during cold weather (temperatures less than 40 degrees Fahrenheit). Compacting under these conditions can result in low compaction and premature pavement distress.

Each AC mix design has a recommended compaction temperature range that is specific for the particular AC binder used. In colder temperatures, it is more difficult to maintain the temperature of the AC mix as it can lose heat while stored in the delivery truck, as it is placed, and in the time between placement and compaction. In Oregon, the AC surface temperature during paving should be at least 40 degrees Fahrenheit for lift thickness greater than 2.5 inches and at least 50 degrees Fahrenheit for lift thickness between 2.0 and 2.5 inches.

If paving activities must take place during cold-weather construction as defined above, the project team should be consulted and a site meeting should be held to discuss ways to lessen low compaction risks.

6.4.3 Geotextile Fabric

6.4.3.1 Subgrade Geotextile

The subgrade geotextile should meet the specifications provided in OSSC Table 02320-4 - Geotextile Property Values for Subgrade Geotextile (Separation). The geotextile should be installed in conformance with OSSC 00350 (Geosynthetic Installation). A minimum initial aggregate base lift of 6 inches is required over geotextiles. All drainage aggregate and stabilization material should be underlain by a subgrade geotextile. Geotextile is not required where stabilization material is used at the base of utility trenches.

6.4.3.2 Drainage Geotextile

Drainage geotextile should meet the specifications provided in OSSC Table 02320-1 - Geotextile Property Values for Drainage Geotextile. The geotextile should be installed in conformance with OSSC 00350 (Geosynthetic Installation). A minimum initial aggregate base lift of 6 inches is required over geotextiles.

6.5 EROSION CONTROL

The site soil is susceptible to erosion; therefore, erosion control measures should be carefully planned and in place before construction begins. Surface water runoff should be collected and directed away from slopes to prevent water from running down the slope face. Erosion control measures (such as straw bales, sediment fences, and temporary detention and settling basins) should be used in accordance with local and state ordinances.

7.0 OBSERVATION OF CONSTRUCTION

Satisfactory foundation and earthwork performance depends to a large degree on quality of construction. Sufficient observation of the contractor's activities is a key part of determining that the work is completed in accordance with the construction drawings and specifications. Subsurface conditions observed during construction should be compared with those encountered during the subsurface exploration. Recognition of changed conditions often requires experience; therefore, qualified personnel should visit the site with sufficient frequency to detect if subsurface conditions change significantly from those anticipated.

We recommend that GeoDesign be retained to observe earthwork activities, including stripping, proof rolling of the subgrade and repair of soft areas, footing subgrade preparation, performing

laboratory compaction and field moisture-density tests, observing final proof rolling of the pavement subgrade and base rock, and asphalt placement and compaction.

8.0 LIMITATIONS

We have prepared this report for use by the City of Milwaukie, PlanB Consultancy, and members of the design and construction teams for the proposed project. The data and report can be used for bidding or estimating purposes, but our report, conclusions, and interpretations should not be construed as warranty of the subsurface conditions and are not applicable to other nearby building sites.

Exploration observations indicate soil conditions only at specific locations and only to the depths penetrated. They do not necessarily reflect soil strata or water level variations that may exist between exploration locations. If subsurface conditions differing from those described are noted during the course of excavation and construction, re-evaluation will be necessary.

The site development plans and design details were preliminary at the time this report was prepared. When the design has been finalized and if there are changes in the site grades or location, configuration, design loads, or type of construction for the buildings, and walls, the conclusions and recommendations presented may not be applicable. If design changes are made, we request that we be retained to review our conclusions and recommendations and to provide a written modification or verification.

The scope does not include services related to construction safety precautions, and our recommendations are not intended to direct the contractor's methods, techniques, sequences, or procedures, except as specifically described in our report for consideration in design. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices in this area at the time the report was prepared. No warranty, express or implied, should be understood.

♦ ♦ ♦

We appreciate the opportunity to be of service to you. Please call if you have questions concerning this report or if we can provide additional services.

Sincerely,

GeoDesign, Inc.

Joe T. Westergreen, P.E. (Washington)
Project Engineer

Brett A Shipton, P.E., G.E.
Principal Engineer

REFERENCES

International Building Code, 2012.

ODOT, 2015. *Oregon Standard Specifications for Construction,* Oregon Department of Transportation, 2015 Edition.

State of Oregon, 2014. *Oregon Structural Specialty Code.*

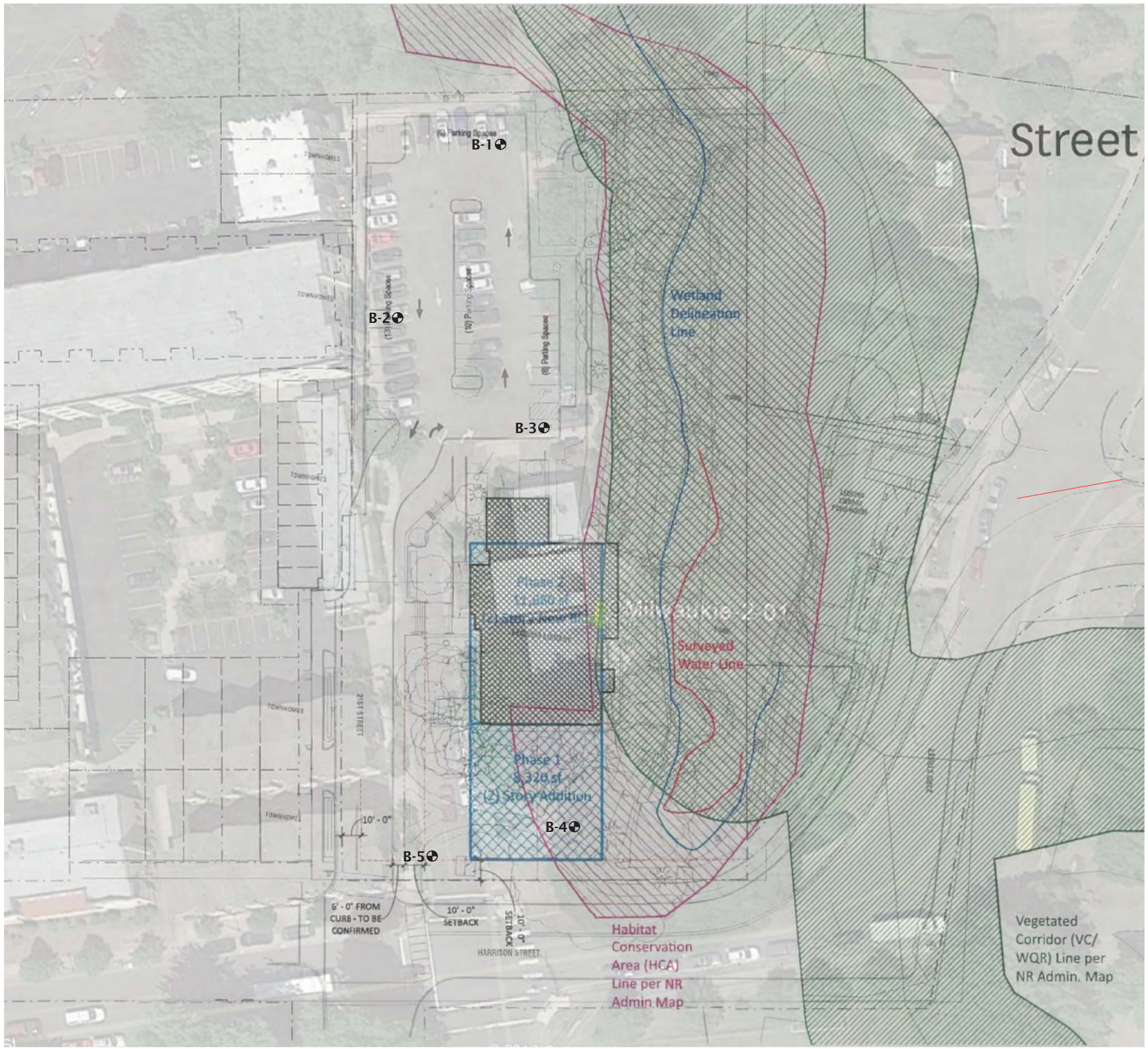
USGS, 2014. *U.S. Seismic Design Maps.* Obtained from website: http://earthquake.usgs.gov/hazards/designmaps/. Last accessed August 22, 2017. Website last updated on June 12, 2014.

FIGURES

GeoDesign Inc
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

CMILWAUKIE-2-01	**VICINITY MAP**	
AUGUST 2017	LEDDING LIBRARY OF MILWAUKIE MILWAUKIE, OR	**FIGURE 1**

Printed By: aday | Print Date: 7/26/2017 9:19:39 AM
File Name: J:\A-D\CMilwaukie\CMilwaukie-2\CMilwaukie-2-01\Figures\CAD\CMilwaukie-2-01-VM01.dwg | Layout: FIGURE 1



LEGEND:

B-1 BORING

N

0 50 100

(SCALE IN FEET)

SITE PLAN BASED ON IMAGE OBTAINED FROM PLAN B CONSULTANCY

SITE PLAN

LEDDING LIBRARY OF MILWAUKIE
MILWAUKIE, OR

FIGURE 2

CMILWAUKIE-2-01

AUGUST 2017

GEODESIGN INC
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

Printed By: aday | Print Date: 7/26/2017 9:19:41 AM
File Name: J:\A-D\CMilwaukie\CMilwaukie-2\CMilwaukie-2-01\Figures\CAD\CMilwaukie-2-01-SP01.dwg | Layout: FIGURE 2

APPENDIX A

APPENDIX A

FIELD EXPLORATIONS

GENERAL

We explored the site by drilling five borings (B-1 through B-5) to depths ranging between 8.0 and 16.5 feet BGS. Drilling services were provided by Dan J. Fischer Excavating Inc. of Forest Grove, Oregon, using a trailer-mounted drill rig with solid-stem auger drilling methods. The exploration logs are presented in this appendix.

Approximate locations of our explorations are shown on Figure 2. The exploration locations were determined by pacing from existing site features and should be accurate implied by the methods used.

SOIL SAMPLING

A member of our geology staff observed the explorations. We collected representative samples of the various soils encountered in the explorations for geotechnical laboratory testing. Soil samples were collected by conducting SPTs in general conformance with ASTM D 1586. The sampler was driven with a 140-pound hammer free-falling 30 inches. The number of blows required to drive the sampler 1 foot, or as otherwise indicated, into the soil is shown adjacent to the sample symbols on the exploration logs. Disturbed soil samples were collected from the split barrel for subsequent classification and index testing. Sampling methods and intervals are shown on the exploration logs.

We understand that calibration of the SPT hammer used by Dan J. Fischer Excavating, Inc. has not been completed. The SPT blows completed by Dan J. Fischer Excavating, Inc. were conducted using two wraps around a cathead.

SOIL CLASSIFICATION

The soil samples were classified in the field in accordance with the "Exploration Key" (Table A-1) and "Soil Classification System" (Table A-2), which are presented in this appendix. The exploration logs indicate the depths at which the soil characteristics change, although the change actually could be gradual. If the change occurred between sample locations, the depth was interpreted. Classifications are shown on the exploration logs.

LABORATORY TESTING

CLASSIFICATION

The soil samples were classified in the laboratory to confirm field classifications. The laboratory classifications are shown on the exploration logs if those classifications differed from the field classifications.

ATTERBERG LIMITS

The plastic limit and liquid limit (Atterberg limits) of a selected soil sample were determined in accordance with ASTM D 4318. The Atterberg limits and the plasticity index were completed to aid in the classification of the soil. The test results are presented in this appendix.

MOISTURE CONTENT

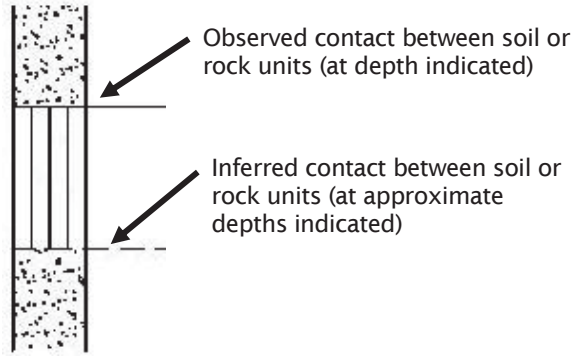
We tested the natural moisture content of selected soil samples in general accordance with ASTM D 2216. The natural moisture content is a ratio of the weight of the water to soil in a test sample and is expressed as a percentage. The test results are presented in this appendix.

PARTICLE-SIZE ANALYSES

Particle-size analyses were completed on selected soil samples in general accordance with ASTM C 117 and ASTM D 1140. The test results are presented in this appendix.

SYMBOL	SAMPLING DESCRIPTION
	Location of sample obtained in general accordance with ASTM D 1586 Standard Penetration Test with recovery
	Location of sample obtained using thin-wall Shelby tube or Geoprobe® sampler in general accordance with ASTM D 1587 with recovery
	Location of sample obtained using Dames & Moore sampler and 300-pound hammer or pushed with recovery
	Location of sample obtained using Dames & Moore and 140-pound hammer or pushed with recovery
	Location of sample obtained using 3-inch-O.D. California split-spoon sampler and 140-pound hammer
	Location of grab sample
	Rock coring interval
	Water level during drilling
	Water level taken on date shown

Graphic Log of Soil and Rock Types



GEOTECHNICAL TESTING EXPLANATIONS

ATT	Atterberg Limits	PP	Pocket Penetrometer
CBR	California Bearing Ratio	P200	Percent Passing U.S. Standard No. 200 Sieve
CON	Consolidation		
DD	Dry Density	RES	Resilient Modulus
DS	Direct Shear	SIEV	Sieve Gradation
HYD	Hydrometer Gradation	TOR	Torvane
MC	Moisture Content	UC	Unconfined Compressive Strength
MD	Moisture-Density Relationship	VS	Vane Shear
OC	Organic Content	kPa	Kilopascal
P	Pushed Sample		

ENVIRONMENTAL TESTING EXPLANATIONS

CA	Sample Submitted for Chemical Analysis	ND	Not Detected
P	Pushed Sample	NS	No Visible Sheen
PID	Photoionization Detector Headspace Analysis	SS	Slight Sheen
		MS	Moderate Sheen
ppm	Parts per Million	HS	Heavy Sheen

GeoDesign Inc
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

EXPLORATION KEY

TABLE A-1

RELATIVE DENSITY - COARSE-GRAINED SOILS

Relative Density	Standard Penetration Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)
Very Loose	0 – 4	0 - 11	0 - 4
Loose	4 – 10	11 - 26	4 - 10
Medium Dense	10 – 30	26 - 74	10 - 30
Dense	30 – 50	74 - 120	30 - 47
Very Dense	More than 50	More than 120	More than 47

CONSISTENCY - FINE-GRAINED SOILS

Consistency	Standard Penetration Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)	Unconfined Compressive Strength (tsf)
Very Soft	Less than 2	Less than 3	Less than 2	Less than 0.25
Soft	2 - 4	3 – 6	2 - 5	0.25 - 0.50
Medium Stiff	4 - 8	6 – 12	5 - 9	0.50 - 1.0
Stiff	8 - 15	12 – 25	9 - 19	1.0 - 2.0
Very Stiff	15 - 30	25 – 65	19 – 31	2.0 - 4.0
Hard	More than 30	More than 65	More than 31	More than 4.0

PRIMARY SOIL DIVISIONS			GROUP SYMBOL	GROUP NAME
COARSE-GRAINED SOILS (more than 50% retained on No. 200 sieve)	GRAVEL (more than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVELS (< 5% fines)	GW or GP	GRAVEL
		GRAVEL WITH FINES (≥ 5% and ≤ 12% fines)	GW-GM or GP-GM	GRAVEL with silt
			GW-GC or GP-GC	GRAVEL with clay
		GRAVELS WITH FINES (> 12% fines)	GM	silty GRAVEL
			GC	clayey GRAVEL
			GC-GM	silty, clayey GRAVEL
	SAND (50% or more of coarse fraction passing No. 4 sieve)	CLEAN SANDS (<5% fines)	SW or SP	SAND
		SANDS WITH FINES (≥ 5% and ≤ 12% fines)	SW-SM or SP-SM	SAND with silt
			SW-SC or SP-SC	SAND with clay
		SANDS WITH FINES (> 12% fines)	SM	silty SAND
			SC	clayey SAND
			SC-SM	silty, clayey SAND
FINE-GRAINED SOILS (50% or more passing No. 200 sieve)	SILT AND CLAY	Liquid limit less than 50	ML	SILT
			CL	CLAY
			CL-ML	silty CLAY
			OL	ORGANIC SILT or ORGANIC CLAY
		Liquid limit 50 or greater	MH	SILT
			CH	CLAY
			OH	ORGANIC SILT or ORGANIC CLAY
HIGHLY ORGANIC SOILS			PT	PEAT

MOISTURE CLASSIFICATION

Term	Field Test
dry	very low moisture, dry to touch
moist	damp, without visible moisture
wet	visible free water, usually saturated

ADDITIONAL CONSTITUENTS

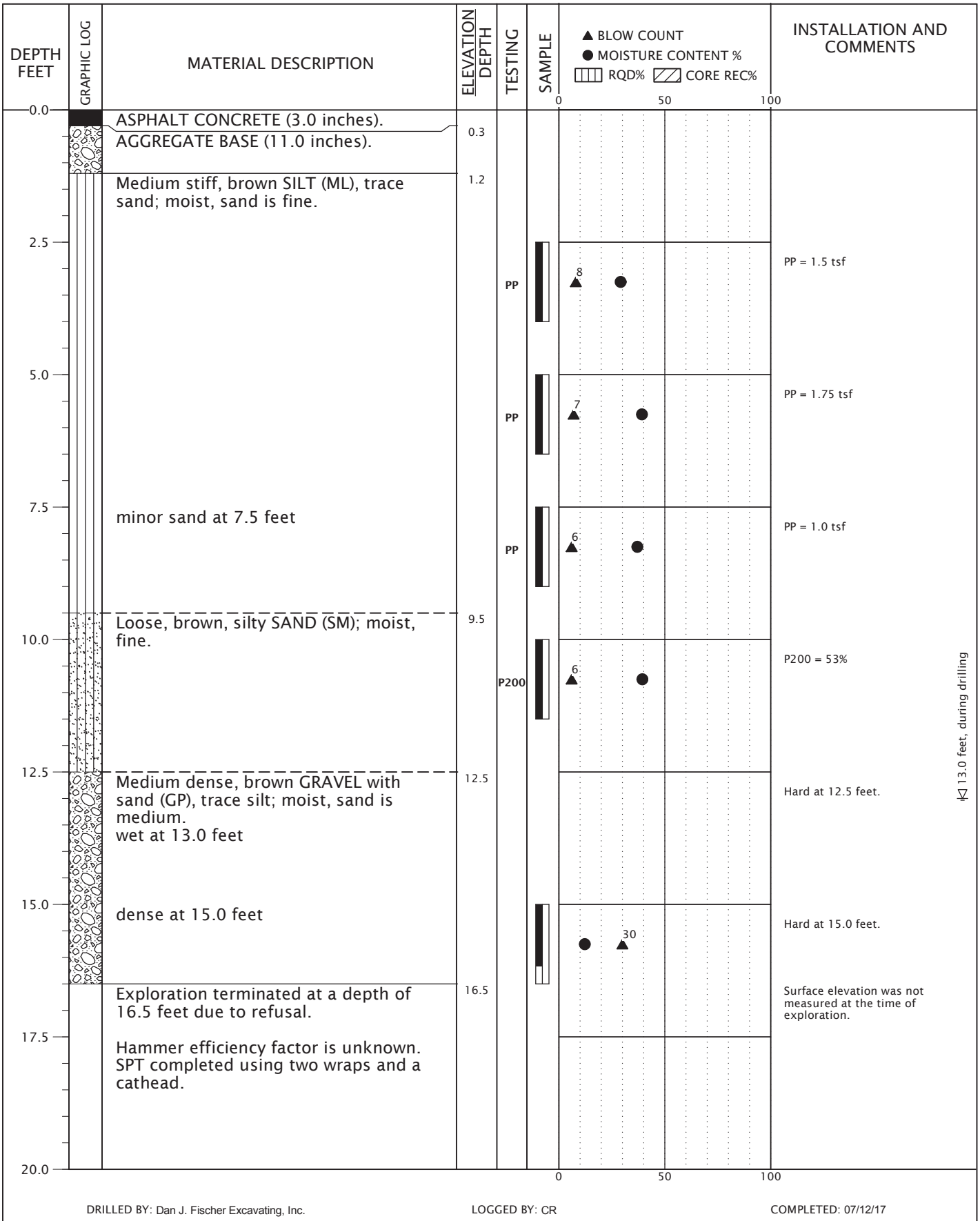
Secondary granular components or other materials such as organics, man-made debris, etc.

Percent	Silt and Clay In: Fine-Grained Soils	Silt and Clay In: Coarse-Grained Soils	Percent	Sand and Gravel In: Fine-Grained Soils	Sand and Gravel In: Coarse-Grained Soils
< 5	trace	trace	< 5	trace	trace
5 – 12	minor	with	5 – 15	minor	minor
> 12	some	silty/clayey	15 – 30	with	with
			> 30	sandy/gravelly	Indicate %

GEODESIGN INC
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

SOIL CLASSIFICATION SYSTEM

TABLE A-2



DRILLED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: CR COMPLETED: 07/12/17

BORING METHOD: solid-stem auger (see document text) BORING BIT DIAMETER: 4 inches

BORING LOG CMILWAUKIE-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 8/25/17:RC:KT

GEODESIGN INC
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

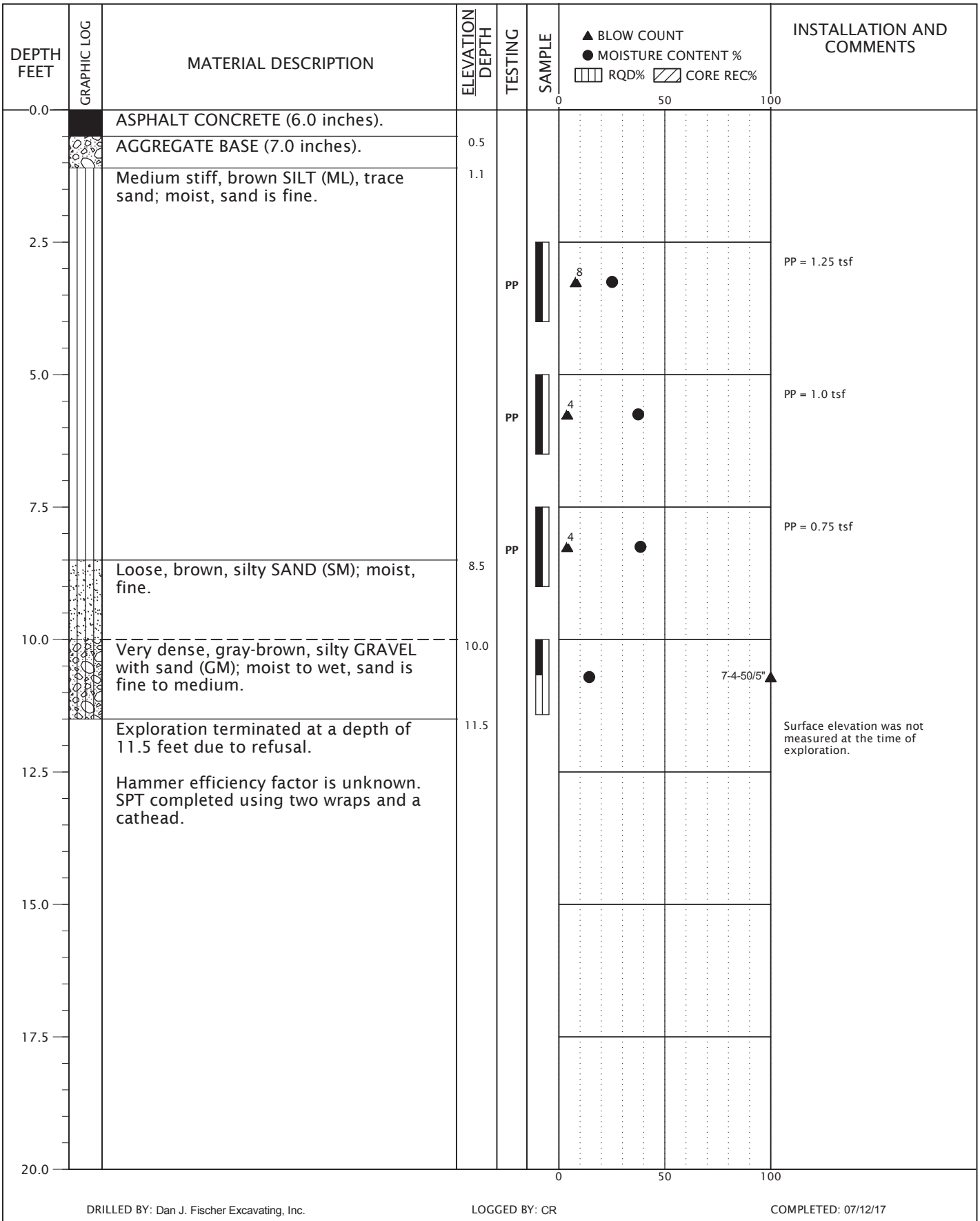
CMILWAUKIE-2-01

BORING B-1

AUGUST 2017

LEDDING LIBRARY OF MILWAUKIE
MILWAUKIE, OR

FIGURE A-1



DRILLED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: CR COMPLETED: 07/12/17

BORING METHOD: solid-stem auger (see document text) BORING BIT DIAMETER: 4 inches

BORING LOG CMILWAUKIE-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 8/25/17:RC:KT

GEODESIGN INC
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

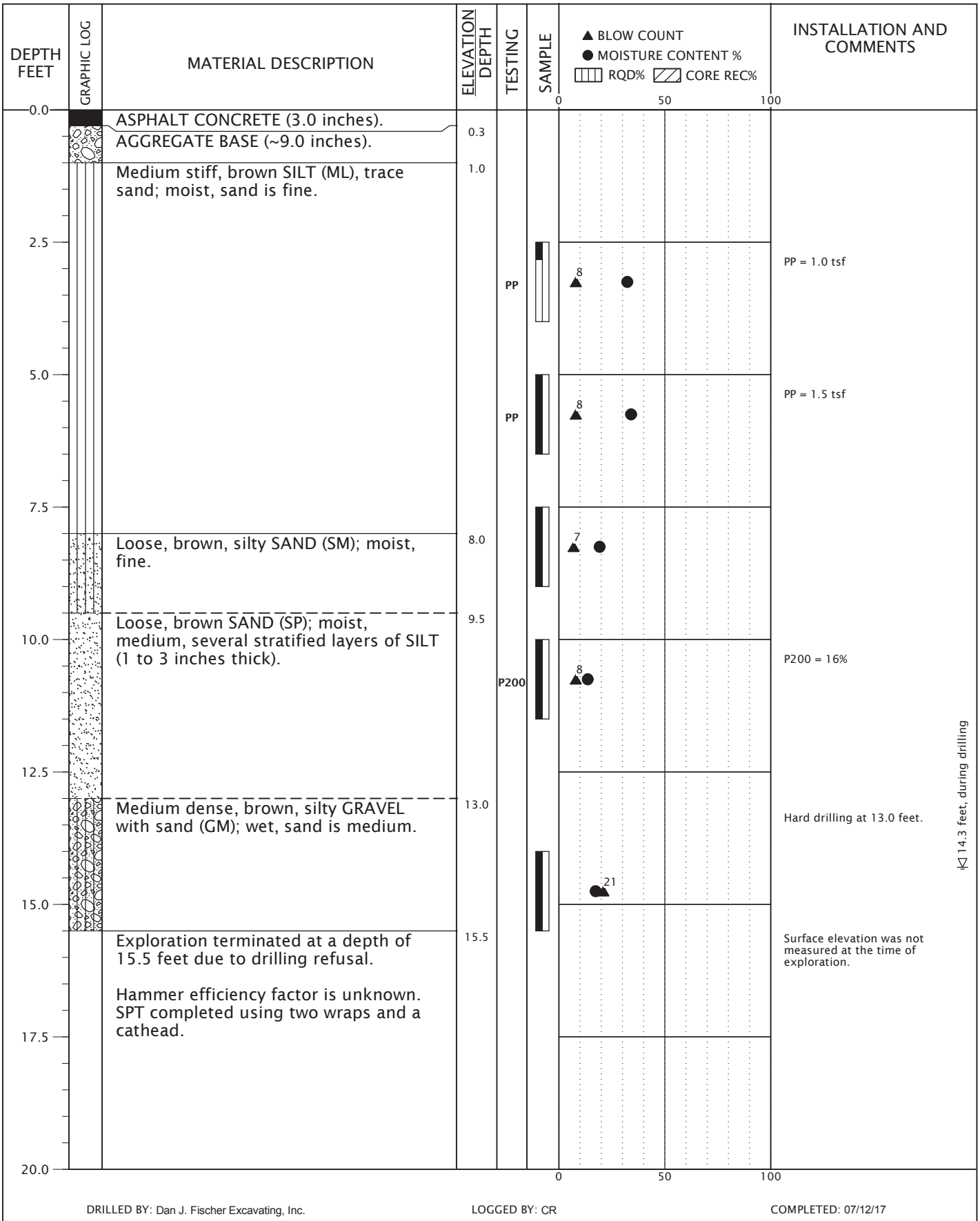
CMILWAUKIE-2-01

BORING B-2

AUGUST 2017

LEDDING LIBRARY OF MILWAUKIE
MILWAUKIE, OR

FIGURE A-2



DRILLED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: CR COMPLETED: 07/12/17

BORING METHOD: solid-stem auger (see document text) BORING BIT DIAMETER: 4 inches

BORING LOG CMILWAUKIE-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 8/25/17:RC:KT

GEODESIGN INC
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

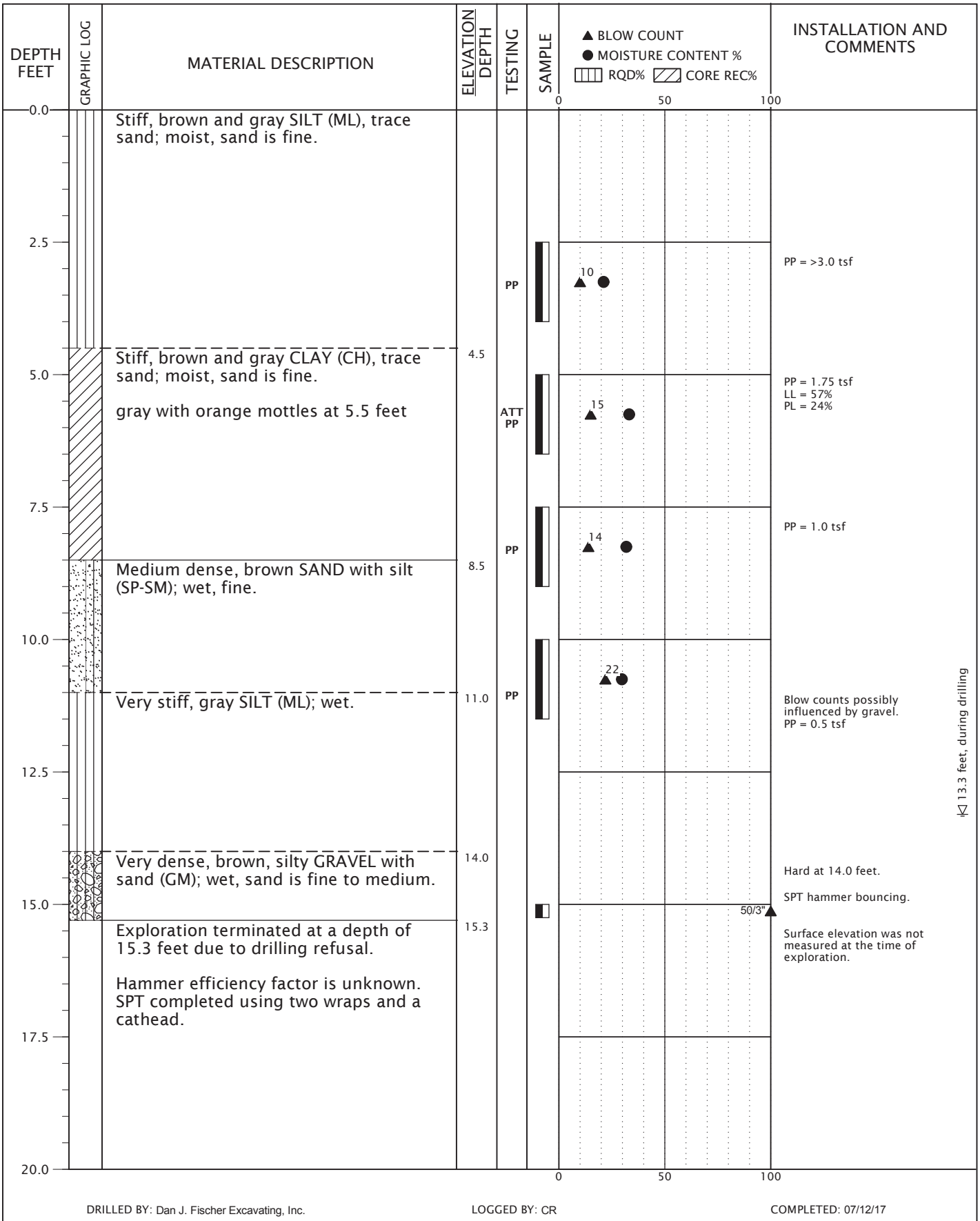
CMILWAUKIE-2-01

BORING B-3

AUGUST 2017

LEDDING LIBRARY OF MILWAUKIE
MILWAUKIE, OR

FIGURE A-3



DRILLED BY: Dan J. Fischer Excavating, Inc. LOGGED BY: CR COMPLETED: 07/12/17

BORING METHOD: solid-stem auger (see document text) BORING BIT DIAMETER: 4 inches

BORING LOG CMILWAUKIE-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 8/25/17:RC:KT

GEODESIGN INC
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

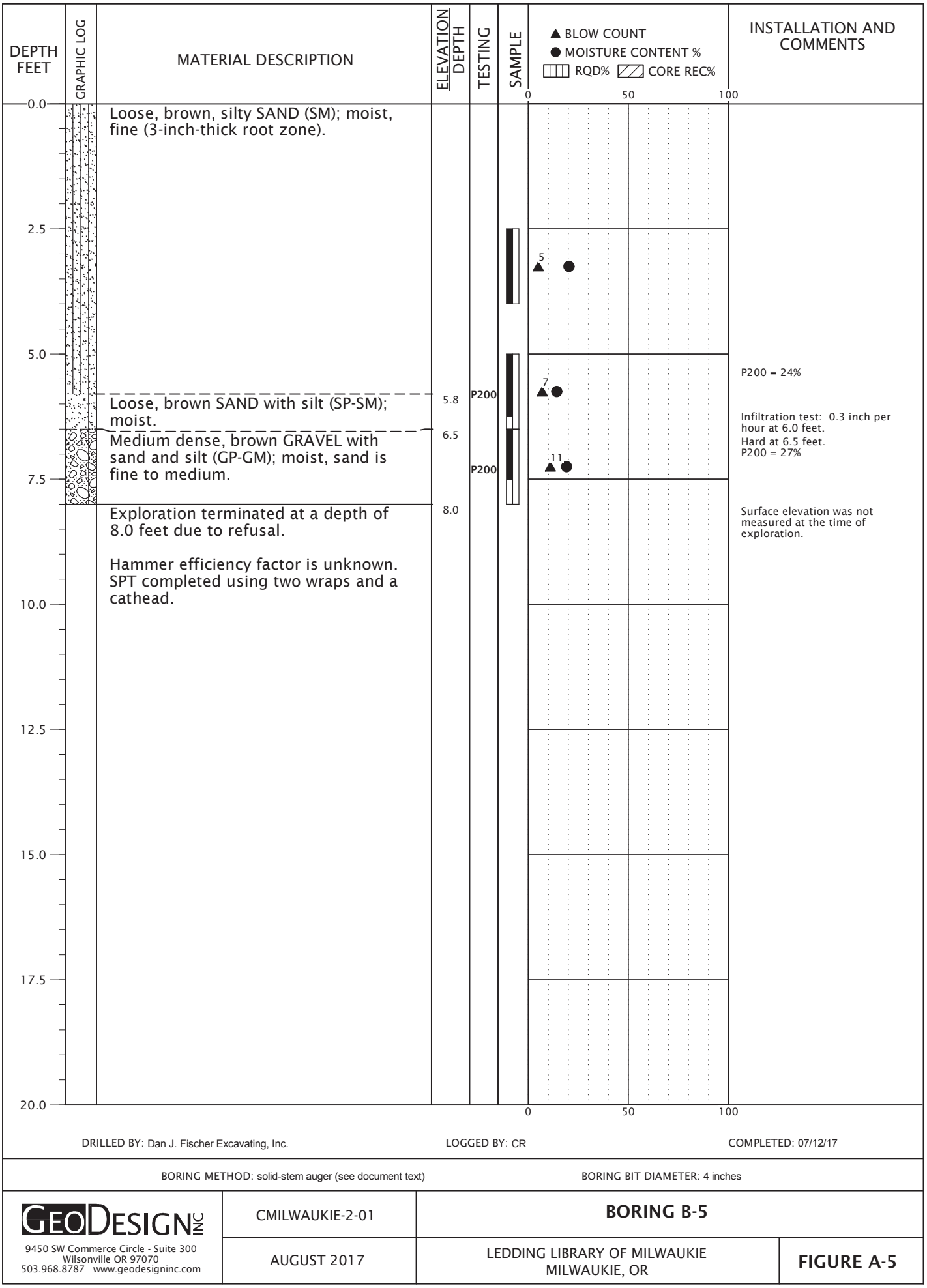
CMILWAUKIE-2-01

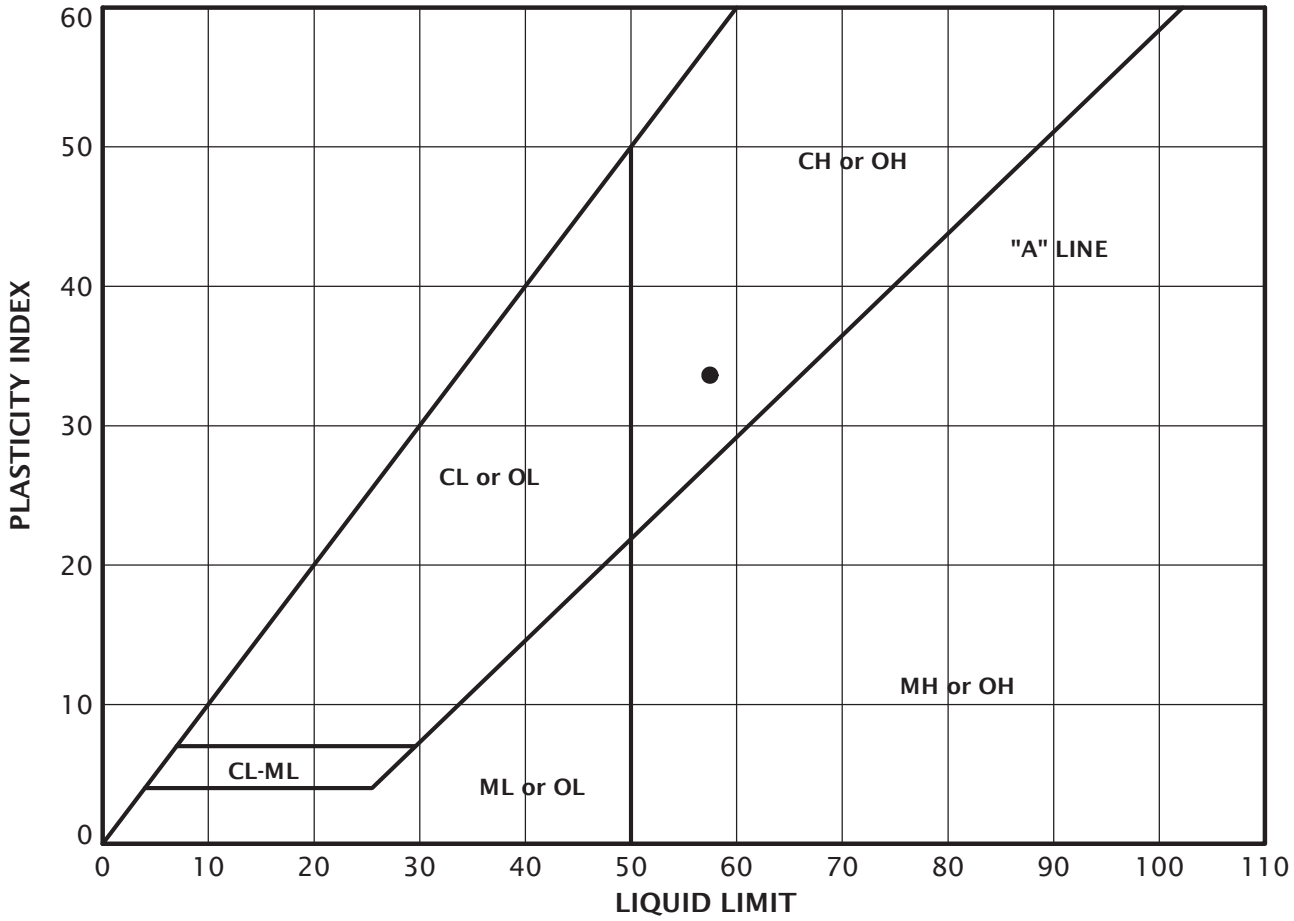
BORING B-4

AUGUST 2017

LEDDING LIBRARY OF MILWAUKIE
MILWAUKIE, OR

FIGURE A-4


DEPTH FEET
GRAPHIC LOG
MATERIAL DESCRIPTION
ELEVATION DEPTH
TESTING
SAMPLE
▲ BLOW COUNT
● MOISTURE CONTENT %
RQD% CORE REC%
0
50
100
INSTALLATION AND COMMENTS
0.0
Loose, brown, silty SAND (SM); moist, fine (3-inch-thick root zone).
2.5
5
5.0
P200 = 24%
7
Loose, brown SAND with silt (SP-SM); moist.
5.8
P200
Infiltration test: 0.3 inch per hour at 6.0 feet.
Hard at 6.5 feet.
P200 = 27%
Medium dense, brown GRAVEL with sand and silt (GP-GM); moist, sand is fine to medium.
6.5
11
7.5
P200
Exploration terminated at a depth of 8.0 feet due to refusal.
8.0
Surface elevation was not measured at the time of exploration.
Hammer efficiency factor is unknown. SPT completed using two wraps and a cathead.
10.0
12.5
15.0
17.5
20.0
0
50
100
DRILLED BY: Dan J. Fischer Excavating, Inc.
LOGGED BY: CR
COMPLETED: 07/12/17
BORING METHOD: solid-stem auger (see document text)
BORING BIT DIAMETER: 4 inches
GEODESIGN INC
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com
CMILWAUKIE-2-01
BORING B-5
AUGUST 2017
LEDDING LIBRARY OF MILWAUKIE
MILWAUKIE, OR
FIGURE A-5
BORING LOG CMILWAUKIE-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 8/25/17:RC:KT



KEY	EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	MOISTURE CONTENT (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
●	B-4	5.0	43	57	24	33

ATTERBERG_LIMITS 7 CMILWAUKIE-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 8/4/17:KT

GEODESIGN INC
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

CMILWAUKIE-2-01

ATTERBERG LIMITS TEST RESULTS

AUGUST 2017

LEDDING LIBRARY OF MILWAUKIE
MILWAUKIE, OR

FIGURE A-6

SAMPLE INFORMATION			MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	SIEVE			ATTERBERG LIMITS		
EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	ELEVATION (FEET)			GRAVEL (PERCENT)	SAND (PERCENT)	P200 (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
B-1	2.5		29							
B-1	5.0		39							
B-1	7.5		37							
B-1	10.0		39				53			
B-1	15.0		12							
B-2	2.5		25							
B-2	5.0		37							
B-2	7.5		39							
B-2	10.0		14							
B-3	2.5		32							
B-3	5.0		34							
B-3	7.5		19							
B-3	10.0		14				16			
B-3	14.0		17							
B-4	2.5		21							
B-4	5.0		33					57	24	33
B-4	7.5		32							
B-4	10.0		30							
B-5	2.5		20							
B-5	5.0		14				24			
B-5	6.5		19				27			

LAB SUMMARY CMILWAUKIE-2-01-B1_5.GPJ GEODESIGN.GDT PRINT DATE: 8/4/17:KT

GEODESIGN INC
9450 SW Commerce Circle - Suite 300
Wilsonville OR 97070
503.968.8787 www.geodesigninc.com

CMILWAUKIE-2-01

AUGUST 2017

SUMMARY OF LABORATORY DATA

LEDDING LIBRARY OF MILWAUKIE
MILWAUKIE, OR

FIGURE A-7

APPENDIX B

APPENDIX B

SITE-SPECIFIC SEISMIC HAZARD EVALUATION

INTRODUCTION

The information in this appendix summarizes the results of a site-specific seismic hazard evaluation for the proposed improvements at Ledding Library in Milwaukie, Oregon. This seismic hazard evaluation was performed to meet the requirement of the 2014 SOSSC.

SITE CONDITIONS

REGIONAL GEOLOGY

The site is located within the Portland Basin, which is separated from by the Tualatin Basin by the Tualatin Mountains (Portland Hills) to the west. Geologic mapping by Ma et al. (2012) and Beeson et al. (1989) shows the near-surface geology mapped as catastrophic Missoula flood deposits (channel facies). The Missoula flood deposits generally consists of a varying mix of unconsolidated deposits of sand, silt, and gravel sediment, which were deposited in major flood events. Since being deposited, the deposits have been modified by recent alluvium (Beeson et al., 1989). The Missoula flood deposits are underlain by undifferentiated sediments, which are commonly fine-grained sediments that overlay basalt bedrock in the site vicinity. The thickness is highly variably and ranges from less than 15 feet to greater than 200 feet (Beeson et al., 1989). The undifferentiated sediments are underlain by Eocene (54 million to 33 million years old) Basalt of Waverly Heights, a sequence of subaerial basaltic lava flows and associated undifferentiated sedimentary rocks (Beeson et al., 1989).

SUBSURFACE CONDITIONS

A detailed description of site subsurface conditions is presented in the main report.

SEISMIC SETTING

Earthquake Source Zones

Three scenario earthquakes were considered for this study consistent with the local seismic setting. Two of the possible earthquake sources are associated with the CSZ, and the third event is a shallow local crustal earthquake that could occur in the North American plate. The three earthquake scenarios are discussed below.

Regional Events

The CSZ is the region where the Juan de Fuca Plate is being subducted beneath the North American Plate. This subduction is occurring in the coastal region between Vancouver Island and northern California. Evidence has accumulated suggesting that this subduction zone has generated eight great earthquakes in the last 4,000 years, with the most recent event occurring approximately 300 years ago (Weaver and Shedlock, 1991). The fault trace is mapped approximately 50 to 120 km off the Oregon Coast.

Two types of subduction zone earthquakes are possible and considered in this study:

1. An interface event earthquake on the seismogenic part of the interface between the Juan de Fuca Plate and the North American Plate on the CSZ. This source is reportedly capable of generating earthquakes with a moment magnitude of between 8.5 and 9.0.
2. A deep intraplate earthquake on the seismogenic part of the subducting Juan de Fuca Plate. These events typically occur at depths of between 30 and 60 km. This source is capable of generating an event with a moment magnitude of up to 7.5.

Local Events

A significant earthquake could occur on a local fault near the site within the design life of the facility. Such an event would cause ground shaking at the site that could be more intense than the CSZ events, though the duration would be shorter. Figure B-1 shows the locations of faults with potential Quaternary movement within a 20-mile radius of the site (USGS, 2014a; PNSN, 2014). Figure B-2 shows the interpreted locations of seismic events that occurred between 1833 and 2014 (USGS, 2014b). The most significant faults in the site vicinity are the Oatfield fault and Portland Hills fault. Table B-1 presents the closest mapped distance and mapped length of these faults.

Table B-1. Closest Crustal Faults

Source	Closest Mapped Distance[1] (km)	Mapped Length[1] (km)
Oatfield fault	1.0	24
Portland Hills fault	2.3	49

1. Reported by USGS (USGS, 2014a)

Oatfield Fault

The northwest-striking Oatfield fault forms northeast-facing escarpments in volcanic rocks of the Miocene CRBG in the Tualatin Mountains and northern Willamette Valley. The fault may be part of the Portland Hills-Clackamas River structural zone. The Oatfield fault is primarily mapped as a very high-angle, reverse fault with apparent down-to-the-southwest displacement, but a few kilometer-long reach of the fault with down-to-the-northeast displacement is mapped in the vicinity of the Willamette River. This apparent change in displacement direction along strike may reflect a discontinuity in the fault trace or could reflect the right-lateral, strike-slip displacement that characterizes other parts of the Portland Hills-Clackamas River structural zone. The fault has also been modeled as a 70-degree, east-dipping reverse fault. Reverse displacement with a right-lateral, strike-slip component is consistent with the tectonic setting, mapped geologic relations, and microseismicity in the area. Fault scarps on surficial deposits have not been described, but exposures in a light rail tunnel showing offset of approximately 1 M_a Boring Lava across the fault indicate Quaternary displacement (Personius, 2002a).

Portland Hills Fault

The northwest-striking Portland Hills fault forms the prominent linear northeastern margin of the Tualatin Mountains (Portland Hills) and the southwestern margin of the Portland Basin; this basin

may be a right-lateral, pull-apart basin in the forearc of the CSZ or a piggyback synclinal basin formed between antiformal uplifts of the Portland fold belt. The fault is part of the Portland Hills-Clackamas River structural zone, which controlled the deposition of Miocene CRBG lavas in the region. The crest of the Portland Hills is defined by the northwest-striking Portland Hills anticline. Sense of displacement on the Portland Hills fault is poorly known and controversial. The fault was originally mapped as a down-to-the-northeast normal fault. The fault has also been mapped as part of a regional-scale zone of right-lateral oblique slip faults and as a steep escarpment caused by asymmetrical folding above a southwest-dipping blind thrust. Reverse displacement with a right-lateral, strike-slip component may be most consistent with the tectonic setting, mapped geologic relations, aeromagnetic data, and microseismicity in the area. Fault scarps on surficial Quaternary deposits have not been described along the fault trace, but some geomorphic (steep, linear escarpment, triangular facets, over-steepened, and knick-pointed tributaries) and geophysical (aeromagnetic, seismic reflection, and ground penetrating radar) evidence suggest Quaternary displacement (Personius, 2012b).

DESIGN EARTHQUAKE

We determined acceleration response spectra for the three postulated scenarios discussed above by using the USGS Interactive Mapping Project that provides a probabilistic site response spectrum for the site assuming bedrock conditions. We assumed an MCE that has a 2 percent probability of exceedance in a 50-year period, as required by the 2014 SOSSC. Some of the major contributing sources to the PGA reported by USGS are presented in Table 2.

Table 2. Partial List of Faults Considered

Source	Magnitude[1] (M_w)	Distance[1] (km)
Cascadia Megathrust (Deep Interface)	9.10	82.70
Portland Hills	6.75	2.93
Cascadia Megathrust (Middle Interface)	8.92	132.72
Grant Butte 50	6.19	8.23

1. Reported by USGS (USGS, 2014)

Figure B-3 shows the site-specific bedrock spectrum as reported by USGS. The soil profile at the site is classified as a Site Class D as prescribed by Section 1613 of SOSSC. Accordingly, the bedrock response spectrum has been amplified using the factors prescribed by SOSSC for Site Class D. Table 3 presents the factors.

Table 3. SOSSC Seismic Design Parameters

Parameter	Short Period (T_s = 0.2 second)	1 Second Period (T_1 = 1.0 second)
MCE Spectral Acceleration, S	S_s = 0.984 g	S_1 = 0.421 g
Site Coefficient, F	F_a = 1.107	F_v = 1.579
Adjusted Spectral Acceleration, S_M	S_{MS} = 1.088 g	S_{M1} = 0.665 g

Figure B-3 shows adjusted spectrum appropriate for use in design of structures at the site.

GEOLOGIC HAZARDS

In addition to ground shaking, site-specific geologic conditions can influence the potential for earthquake damage. Deep deposits of loose or soft alluvium can amplify ground motions, resulting in increased seismic loads on structures. Other geologic hazards are related to soil failure and permanent ground deformation. Permanent ground deformation could result from liquefaction, lateral spreading, landsliding, and fault rupture. The following sections provide additional discussion regarding potential seismic hazards that could affect the planned development.

FAULT SURFACE RUPTURE

The Oatfield fault is mapped 0.6 mile northeast of the site and the Portland Hills fault is mapped 1.4 miles southwest of the site. Consequently, it is our opinion that the probability of surface fault rupture beneath the site is low.

LIQUEFACTION

Liquefaction is caused by a rapid increase in pore water pressure that reduces the effective stress between soil particles to near zero. Granular soil, which relies on interparticle friction for strength, is susceptible to liquefaction until the excess pore pressures can dissipate. In general, loose, saturated sand soil with low silt and clay content is the most susceptible to liquefaction. Silty soil with low plasticity is moderately susceptible to liquefaction under relatively higher levels of ground shaking

Based on a review of the available information, soil types encountered, and groundwater depth, it is our opinion that liquefaction is not considered a hazard under design levels of ground shaking.

LATERAL SPREAD

Lateral spread is a liquefaction-related seismic hazard. Development areas subject to lateral spreading are typically gently sloping or flat sites underlain by liquefiable sediments adjacent to an open face, such as riverbanks. Liquefied soil adjacent to open faces may “flow” in that

direction, resulting in surface cracking and lateral displacement towards the open face (i.e., riverbank). Since the site has low susceptibility to liquefaction, lateral spreading is expected to be negligible at this site.

GROUND MOTION AMPLIFICATION

The soil profile at the site is classified as a Site Class D as prescribed by Section 1613.5.5 of SOSSC. Accordingly, the bedrock response spectrum has been appropriately amplified using the factors prescribed by the code for Site Class D.

LANDSLIDE

Earthquake-induced landsliding generally occurs in steeper slopes comprised of relatively weak soil deposits. The site and surrounding area are relatively flat, and seismically induced landslides are not considered a site hazard.

SETTLEMENT

Settlement due to earthquakes is most prevalent in relatively deep deposits of dry, clean sand. We do not anticipate that seismic-induced settlement in addition to liquefaction-induced settlement will occur during design levels of ground shaking.

SUBSIDENCE/UPLIFT

Subduction zone earthquakes can cause vertical tectonic movements. The movements reflect coseismic strain release accumulation associated with interplate coupling in the subduction zone.

Based on our review of the literature, the locked zone of the CSZ is located in excess of 90 miles from the site. Consequently, we do not anticipate that subsidence or uplift is a significant design concern.

LURCHING

Lurching is a phenomenon generally associated with very high levels of ground shaking, which cause localized failures and distortion of the soil. The anticipated ground accelerations shown on Figure C-3 are below the threshold required to induce lurching of the site soil.

SEICHE AND TSUNAMI

The site is inland and elevated away from tsunami inundation zones and away from large bodies of water that may develop seiches. Seiches and tsunamis are not considered a hazard in the site vicinity.

REFERENCES

Beeson, M.H., Tolan, T.L., and Madin, I.P., 1989, Geologic map of the Lake Oswego quadrangle, Clackamas, Multnomah, and Washington counties, Oregon: Oregon Department of Geology and Mineral Industries, Geological Map Series 59, scale 1:24,000

Ma, Lina, Madin, Ian P., Duplantis, Serin, Williams, Kendra J., 2012, Lidar-based Surficial Geologic Map and Database of the Greater Portland, Oregon, Area, Clackamas, Columbia, Marion, Multnomah, Washington, and Yamhill Counties, Oregon, and Clark County, Washington, Oregon Department of Geology and Mineral Industries, Open-File Report 0-12-02, scale 1:63,360.

Personius, S.F., compiler, 2002a, Fault number 875, Oatfield fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquake.usgs.gov/hazards/qfaults, accessed 08/23/2017 06:47 PM.

Personius, S.F., compiler, 2012b, Fault number 877, Portland Hills fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquake.usgs.gov/hazards/qfaults, accessed 08/02/2017 06:50 PM.

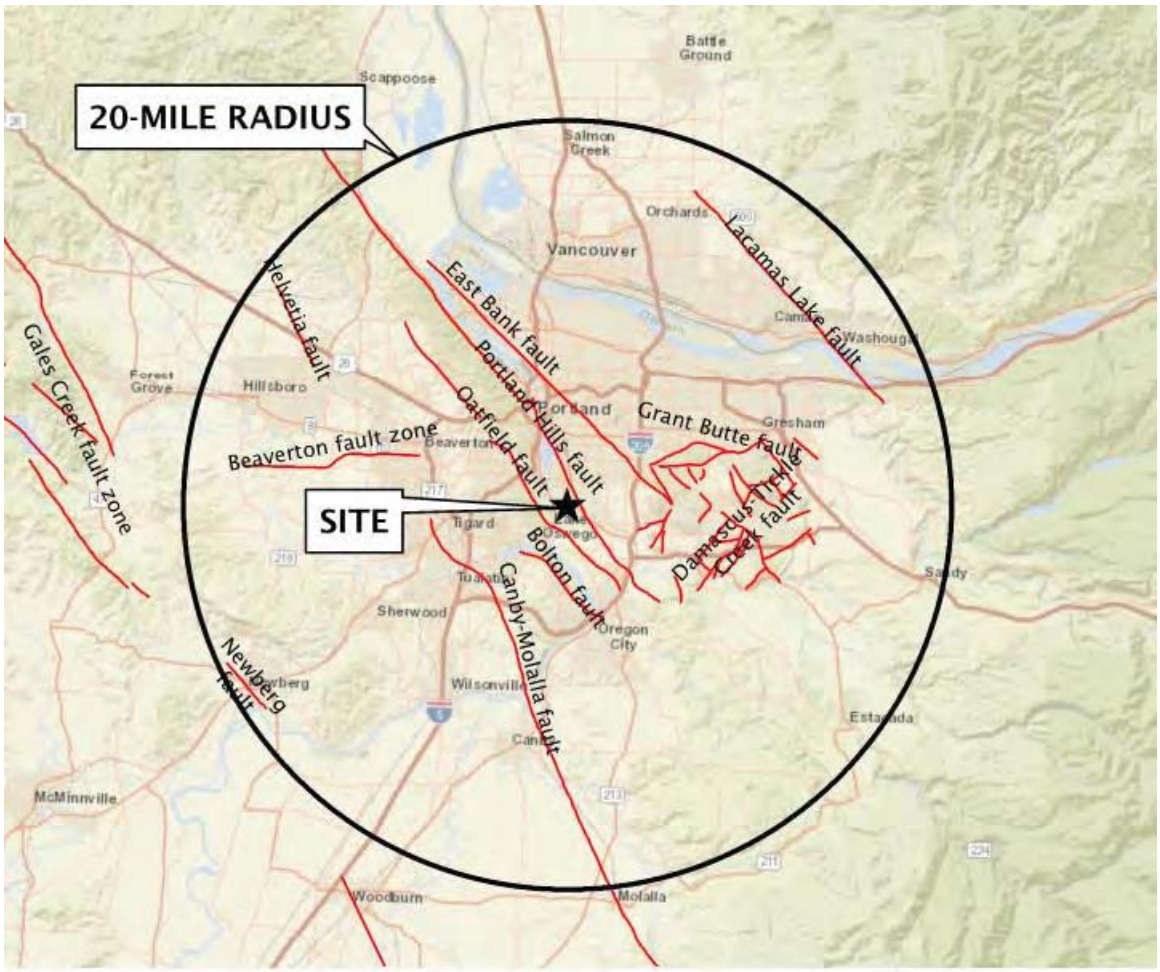
PNSN, 2014, Historic Earthquake Database, Pacific Northwest Seismic Network, University of Washington, http://www.pnsn.org, December, 2014.

State of Oregon, 2014. *Oregon Structural Specialty Code.*

USGS, 2014a, Earthquake Hazards Program, *2014 National Seismic Hazards Maps*, U.S. Geological Survey, Available: http://earthquake.usgs.gov/hazards/hazmaps/, 2014.

USGS, 2014b, Earthquake Hazards Program, *US Earthquake Information by State*, U.S. Geological Survey, Available: http://earthquake.usgs.gov/earthquakes/search, December, 2014.

Weaver, C.S. and Shedlock, K.M., 1991, Program for earthquake hazards assessment in the Pacific Northwest: U.S. Geological Survey Circular 1067, 29 pgs.



LEGEND

QUATERNARY FAULT

FAULTS PROVIDED BY THE USGS FAULT AND FOLD DATABASE (2006)

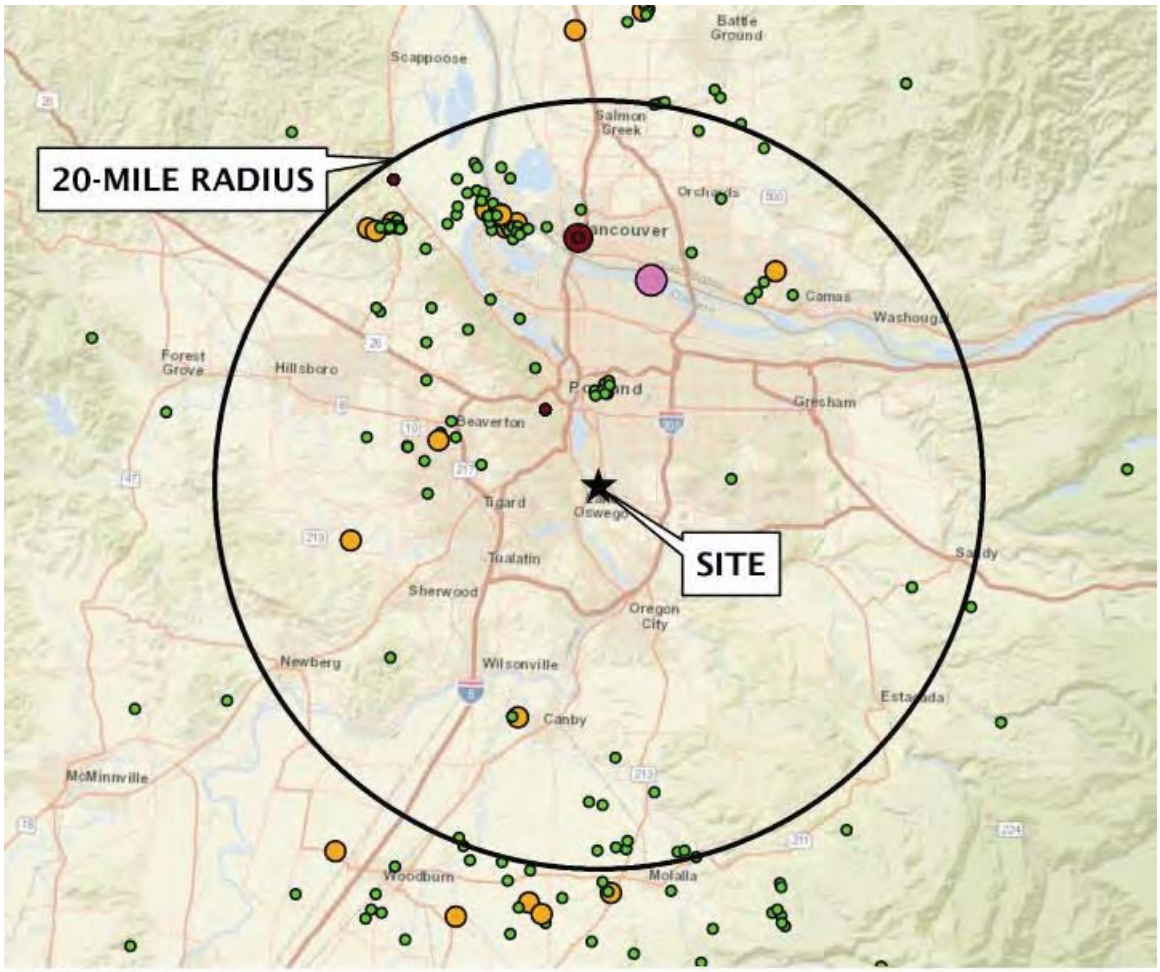
N

0 5 10

(SCALE IN MILES)

CMilwaukie-2-01-FB1_B2.docx Print Date: 8/2/17

GEODESIGN INC 9450 SW Commerce Circle - Suite 300 Wilsonville OR 97070 503.968.8787 www.geodesigninc.com	CMILWAUKIE-2-01	**QUATERNARY FAULT MAP**	
	AUGUST 2017	LEDDING LIBRARY OF MILWAUKIE MILWAUKIE, OR	**FIGURE B-1**



LEGEND

EARTHQUAKE MAG

- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- > 6.0

MAXIMUM MODIFIED MERCALLI INTENSITY (MMI)

- VI
- VII
- VIII

N

0 5 10

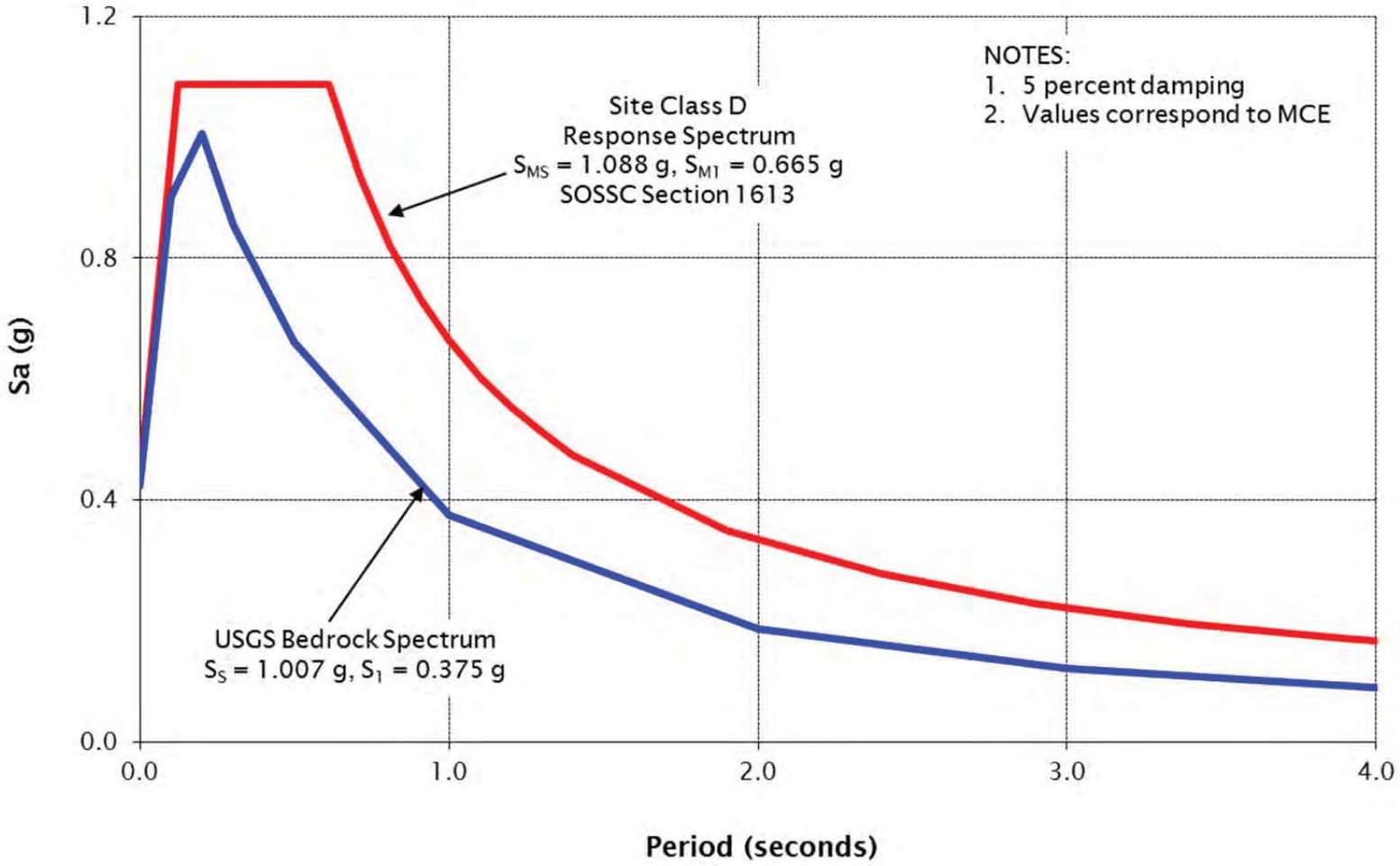
(SCALE IN MILES)

HISTORICAL MMI DATA FROM NGDG (2010)

INSTRUMENTAL MAGNITUDE FROM USGS (2009), PNSN (2017)

CMilwaukie-2-01-FB1_B2.docx Print Date: 8/2/17

GeoDesign Inc 9450 SW Commerce Circle - Suite 300 Wilsonville OR 97070 503.968.8787 www.geodesigninc.com	CMILWAUKIE-2-01	**HISTORICAL SEISMICITY MAP**	
	AUGUST 2017	LEDDING LIBRARY OF MILWAUKIE MILWAUKIE, OR	**FIGURE B-2**



GeoDesign Inc 9450 SW Commerce Circle - Suite 300 Wilsonville OR 97070 503.968.8787 www.geodesigninc.com	CMILWAUKIE-2-01	**SITE RESPONSE SPECTRA**	
	AUGUST 2017	LEDDING LIBRARY OF MILWAUKIE MILWAUKIE, OR	**FIGURE B-3**

ACRONYMS AND ABBREVIATIONS

ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
AC	asphalt concrete
ACP	asphalt concrete pavement
ASTM	American Society for Testing and Materials
BGS	below ground surface
CRBG	Columbia River Basalt Group
CSZ	Cascadia Subduction Zone
ESAL	equivalent single-axle load
FHWA	Federal Highway Administration
g	gravitational acceleration (32.2 feet/second^2)
H:V	horizontal to vertical
IBC	International Building Code
km	kilometers
MCE	maximum considered earthquake
MSL	mean sea level
OSHA	Occupational Safety and Health Administration
OSSC	Oregon Standard Specifications for Construction (2015)
pcf	pounds per cubic foot
PG	performance grade
PGA	peak ground acceleration
psf	pounds per square foot
psi	pounds per square inch
SOSSC	State of Oregon Structural Specialty Code
SPT	standard penetration test
USGS	U.S. Geological Survey

ESA
819 SE Morrison Street
Suite 310
Portland, OR 97214
503.274.2010 phone
503.274.2024 fax
www.esassoc.com

memorandum

date	March 6, 2018
to	Vera Kolias, AICP (City of Milwaukie)
from	John Vlastelicia
subject	Natural Resource Review for Ledding Library Construction Project 10660 SE 21st Avenue (Assessor Map 11E36BB, Tax Lot 1800) City of Milwaukie Land Use File #CSU-2018-002

Thank you for asking Environmental Science Associates (ESA) to assist the City of Milwaukie with natural resource evaluation services for the Ledding Library Construction Project located at 10660 SE 21st Avenue. This memorandum summarizes our technical review of land use application materials related to site natural resources regulated by Milwaukie Municipal Code (MMC), including Water Quality Resource (WQR) areas and Habitat Conservation Area (HCA). The materials we reviewed included a Natural Resource Review report prepared by Pacific Habitat Services (PHS, January 2018), which addresses requirements of MMC Section 19.402 (Natural Resources), and a Wetland Delineation Report prepared by Apex Companies, LLC (Apex, March 2017).

This memorandum is formatted to address specific technical review tasks identified by the City in your request for ESA services (letter from Vera Kolias to John Vlastelicia, February 9, 2018). The City-requested tasks are identified in **bold**, followed by our responses.

Task 1: Conduct a site visit to assess existing conditions and generally corroborate the figures and narrative provided in the application submittal.

Response: ESA staff (John Vlastelicia and Luke Johnson) visited the Ledding Library site on February 23, 2018. The site visit involved walking the property to assess existing conditions with the Natural Resources Review and Wetland Delineation reports in hand. In general, ESA observed site conditions to be consistent with those illustrated on the report figures and described in the narrative. Our observations of site conditions related to specific habitat characteristics, ecological functions, and MMC approval criteria are described in the responses to Tasks 2 and 3 of this memorandum. A more general discussion of observations related to the report figures and descriptions of regulated resource boundaries follows.

WQR Boundaries

- Stream/Wetland Distinction: The PHS Natural Resource Review Report explains on Page 1 that Spring Creek and its adjacent wetland are Primary Protected Water Features under MMC and that the WQR includes the stream/wetland and the Vegetated Corridor that extends outward 50 feet from the wetland boundary. The

PHS report references the Apex Wetland Delineation Report and states that "the surveyed locations of Spring Creek and associated wetlands are shown on Figure 3" and also that "the extent of the vegetated corridor on the project site, based on the surveyed boundaries of wetlands and waterways, is depicted on Figure 3."

The PHS report Figure 3 (and other PHS report figures) does not distinguish Spring Creek from its adjacent wetland; the entire feature is simply labeled "Wetland" and there is no label on any PHS report figure that identifies Spring Creek. While some reference to Spring Creek on the figures would be helpful, the lumping of Spring Creek (below ordinary high water) with its adjacent wetland (above ordinary high water) into a single "Wetland" feature representing the Primary Protected Water feature is acceptable for establishing the adjacent vegetated corridor and thus the WQR regulated by MMC.

- PHS and Apex Wetland Boundary Difference: The "Wetland" boundary shown in PHS report Figure 3 does not appear to exactly match the wetland boundary shown in the Apex Wetland Delineation Report Figure 6, even though the PHS report text suggests that they are the same. Both figures are attached to this memorandum for reference.

  It appears that the western "Wetland" boundary line shown in the PHS report figures generally follows the toe of a rock retaining wall that meanders in a north-south direction through the eastern portion of the site, while the Apex report Figure 6 shows a more complex boundary that likely differentiates wetland and non-wetland areas below the rock retaining wall. Also, the Apex report does not show a stream/wetland boundary extending beyond (north of) the asphalt-path crossing of the water feature on the northern portion of the site, while the PHS report figures show the wetland/stream extending through that area and encompassing the asphalt path.

  During the site visit, ESA staff observed the rock retaining wall, which is shown and labeled on the existing conditions survey included in the land use application and attached to this memorandum for reference. The retaining wall represents a sharp topographic break that functionally separates the lower Spring Creek/wetland/floodplain area from the upland slopes of the adjacent riparian forest, and there is logic in using the retaining wall as the approximate boundary line separating the Primary Protected Water Feature from its adjacent Vegetated Corridor.

  By drawing a "Wetland" boundary along the retaining wall and extending that boundary through the asphalt path that crosses the stream in the north portion of the site, the PHS report takes a conservative approach to defining the Primary Protected Water Feature and thus establishes a vegetated corridor offset and a WQR that maximize resource protections. For that reason, the wetland boundary discrepancies between the PHS report figures and Apex report figures do not impact the overall review of the proposal.

- Vegetated Corridor Width: The topographic survey included in the land use application and attached to this memo shows 1-foot contours for the site, including the area of the Vegetated Corridor. The survey and field observations made by ESA staff indicate that the slopes adjacent to the Wetland are less than 25%, and so the 50-foot vegetated corridor width shown on the PHS report figures is appropriate.

HCA Boundaries

The PHS report notes that the HCA boundaries shown on the report figures were provided by the City of Milwaukie in the form of GIS data reflecting the City's Natural Resources Administrative Map (NR Map, August

2011). The report also notes that coordination with City staff has indicated that the mapped HCA may be used to comply with MMC 19.402, and the land use application does not propose a detailed boundary verification or map revision.

ESA's field reviews of the site indicated that the mapped HCA boundaries are reasonable for planning purposes and are reflective of the resources warranting protection. On the subject property, the mapped HCA includes Spring Creek and the adjacent riparian area on the west side of the creek, which features a canopy dominated by mature oak trees. The mapped HCA approximately traces the riparian canopy extents, and it does not appear that a detailed HCA boundary verification is needed, nor would it substantially change the HCA boundary, HCA impacts, or mitigation requirements for the proposal.

Task 2: Review the Natural Resource Review report prepared by Pacific Habitat Services. Assess and comment on the applicant's response to the following requirements:

a. Inventory of existing vegetation, identification of the ecological functions of riparian habitat, and categorization of the existing condition of the WQR on the subject property

Response:

- Vegetation Inventory: Tables 1, 2, and 3 of the PHS report list plant species and percent cover from three sample points in the vegetated corridor. The sample point locations are not identified on the report's Figure 3 (they should be), but the species noted in the report tables and described elsewhere in the report text are generally consistent with vegetation conditions as ESA staff observed during our February 23 site visit. ESA noted that many of the young native trees in the understory of the corridor, including a number of western redcedar, appear to have been planted.

  One non-native invasive species ESA observed that is not noted in the PHS report is English ivy (*Hedera helix*), which is identified as a nuisance species on Milwaukie's Plant List (Portland Plant List) and is present as groundcover in the southern portion of the vegetated corridor in particular. ESA also observed some English ivy on tree trunks, but not to an extent that tree health appears to be threatened. The riparian restoration planting should include removal of English ivy, along with other non-native invasive vegetation.

- Ecological Functions: The PHS report includes a good discussion of the ecological functions and values provided by the site's riparian habitat on the project site. Each of the seven function categories identified in MMC 19.402.1.C.2 is adequately addressed.

- Existing Condition Category: The PHS report describes the site's vegetated corridor as consisting of two plant communities (Conditions A and B), based on the predominance of woody species and the extent of the tree canopy. The corridor in the site's interior (north of southern portion of library and south of asphalt path) is classified as Good condition based on the dense tree canopy and dominance of native vegetation, while the corridor at the north and south ends of the site is characterized as being in Marginal condition due the presence of landscaping, a higher percentage of non-native vegetation, and less canopy coverage. ESA agrees with the condition categories assigned in the PHS report.

b. Analysis of alternatives to the proposed development, including a critique of the rationale behind choosing the alternative selected

Response: The alternatives analysis discussion in the PHS report presents a strong justification for the library expansion by noting that it's driven by a 2016 City bond measure that was passed to address public needs. One alternative approach to the site layout that could lessen building footprint - and therefore lessen HCA/WQR impact -is identified: construction of a two-story building rather than the proposed one-story building. The report notes that approach was rejected by the design team due to operational inefficiencies associated with a 2-story library (moving materials between floors) and added operational costs to have staff presence on two floors, elevator maintenance, additional restroom, etc.

The existing library is 12,000 square feet in size, and the PHS report notes the proposed library would be approximately 20,000 square feet "to meet community needs." The report also notes that because the WQR and HCA occupy most of the eastern half of the project site, it is not possible to construct a library building large enough to meet community needs and provide required parking, walkways, and other infrastructure while avoiding WQR/HCA impacts entirely.

It is clear that complete avoidance of WQR/HCA impacts is not practicable, based on the extent of HCA/WQR on the site and the fact that the existing undersized library encroaches into WQR/HCA. However, the alternatives analysis could be strengthened by a few additional details to more specifically justify the community's needs for a 20,000-square foot library (and not something smaller), the number of parking spaces required for such a facility, etc. An additional brief note explaining why it is not practicable to construct the new library on another property that would avoid HCA/WQR impacts could also help (e.g., no nearby suitable City property available, much higher costs, not authorized by the bond funding, etc.).

c. Mitigation plan that is appropriate for the proposed disturbance and that ensures the disturbed portions of the WQR and HCA will be restored to an equal or better condition, including appropriateness of the proposed mitigation planting list

Response: The PHS report includes an accounting of: (1) permanent HCA/WQR impacts, which are defined as permanent disturbance (new building, path, stormwater facility) within the HCA/WQR outside of the existing building and parking lot; and (2) temporary HCA/WQR impacts, which are defined as the area with HCA/WQR that will be disturbed by construction activities but are outside of the proposed development footprint. Defining permanent HCA/WQR impacts to exclude existing development (buildings and pavement) is typical and appropriate for determining mitigation requirements.

MMC 19.402.11 outlines two options for determining mitigation requirements for impacts less than one acre: (1) based on number and size of trees to be removed; and (2) based on disturbance area. The option that would result in more tree plantings based on the calculations prescribed in the MMC is the option that must be followed. The PHS report includes the calculation for both and proposes mitigation based on Option 2, which would consist of 19 trees (5 trees per 500 SF of HCA disturbance) and 96 shrubs (25 shrubs per 500 SF disturbance) for the 1,926 square feet of permanent HCA impact. The proposed planting area covers the entire temporary disturbance area within the HCA/WQR, as well as additional area within the HCA/WQR where no disturbance is proposed.

The species proposed in the PHS mitigation plan include bigleaf maple, red alder, and western red cedar trees, along with red-osier dogwood, Indian plum, and snowberry shrubs. The proposed mix of native trees and shrubs is well-suited for the riparian conditions at the site, and most of the proposed species can be found on the site currently, indicating a good potential for planting success. As noted previously, the riparian restoration planting should include removal of English ivy, along with other non-native invasive vegetation. The removal of invasive species and proposed two-year monitoring/maintenance period will help ensure plant establishment.

The trees to be removed as part of the proposal include one 36-inch diameter tree identified as "deciduous" in the PHS report, along with two smaller landscape trees (a pine and a rhododendron). The loss of functions provided by the 36-inch tree in particular cannot be immediately replaced through plantings, but the enhancement of the existing multi-layered native plant community within the proposed mitigation area should provide ecological lift over time and support water quality functions.

Task 3: Evaluate the proposed activity with respect to the three approval criteria established in MMC Subsection 19.402.12.B:

a. Avoid = The proposed activity will have less detrimental impact to the WQR and HCA than other practicable alternatives.

Response: The PHS report does not identify practicable alternatives that would have more impact to the WQR and HCA than the proposal, but provides rationale for why an alternative with less impact on WQR/HCA (a two-story building) is not practicable. The report notes that the proposed building has been sited as far to the west as possible to avoid impacts to the vegetated portion of the WQR/HCA as much as possible, and it is clear from the site constraints (size, WQR/HCA in the east, 21st St. to the west) that a one-story library expansion that avoids HCA/WQR entirely is likely not practicable. The fact that the existing, undersized library extends into the WQR/HCA highlights this point.

Please refer to the response to Task 2b in this memo for additional thoughts on demonstrating a thorough alternatives analysis.

b. Minimize = Where impacts cannot be avoided, the proposed activity shall minimize detrimental impacts to the extent practicable.

Response: The PHS report identifies measures that the project will incorporate to minimize impacts to habitat and ecological functions, soil and vegetation, hydrologic conditions, and wildlife corridors.

The impact minimization measures listed in the PHS report for soil and vegetation disturbance generally follow the development standards of MMC 19.401.11.A , although the report text and figures do not identify details of types/locations of proposed erosion and sediment control measures (e.g., sediment fence downslope of ground disturbance). The report notes that the applicant has prepared a Preliminary Grading and Erosion Control Plan that will conform to the requirements of 19.402.9 (Construction Management Plan), but details from that plan are not incorporated into the PHS report.

The most significant natural resources on the site are the mature riparian trees that provide the basis for the HCA designation. A Construction Management Plan must establish root protection zones (RPZz) around

trees in WQR/HCA adjacent to any approved work area. Per 19.402.9, the RPZ shall extend from the trunk to the outer edge of the tree's canopy, or as close to the outer edge of the canopy as is practicable for the approved project.

The proposed project involves ground-disturbing activities within the outer edge of the tree canopy, but the PHS report does not mention RPZs or document any analysis of the potential for tree impacts resulting from ground disturbance within default RPZs. Since protecting the existing mature trees on-site is critical to avoiding and minimizing resource impacts, some additional analysis of the potential for tree impacts resulting from RPZ disturbance is recommended.

c. Mitigate = The proposed mitigation plan demonstrates appropriate and adequate mitigation for adverse impacts to the WQR and HCA.

Response: As discussed in the response for Task 2c of this memorandum, the proposed mitigation approach for addressing adverse impacts to the HCA appears to be adequate and commensurate with the impacts.

Again, thank you for asking ESA to provide natural resources review assistance for the Ledding Library Construction Project at 10660 SE 21st Avenue. Please let me know if you have any questions or would like to discuss any of the information presented in this memorandum.

ATTACHMENTS

PHS Report Figure 3 (Existing Conditions)

Apex Report Figure 6 (Wetland Delineation Map)

Site Survey from Hacker Land Use Review Application

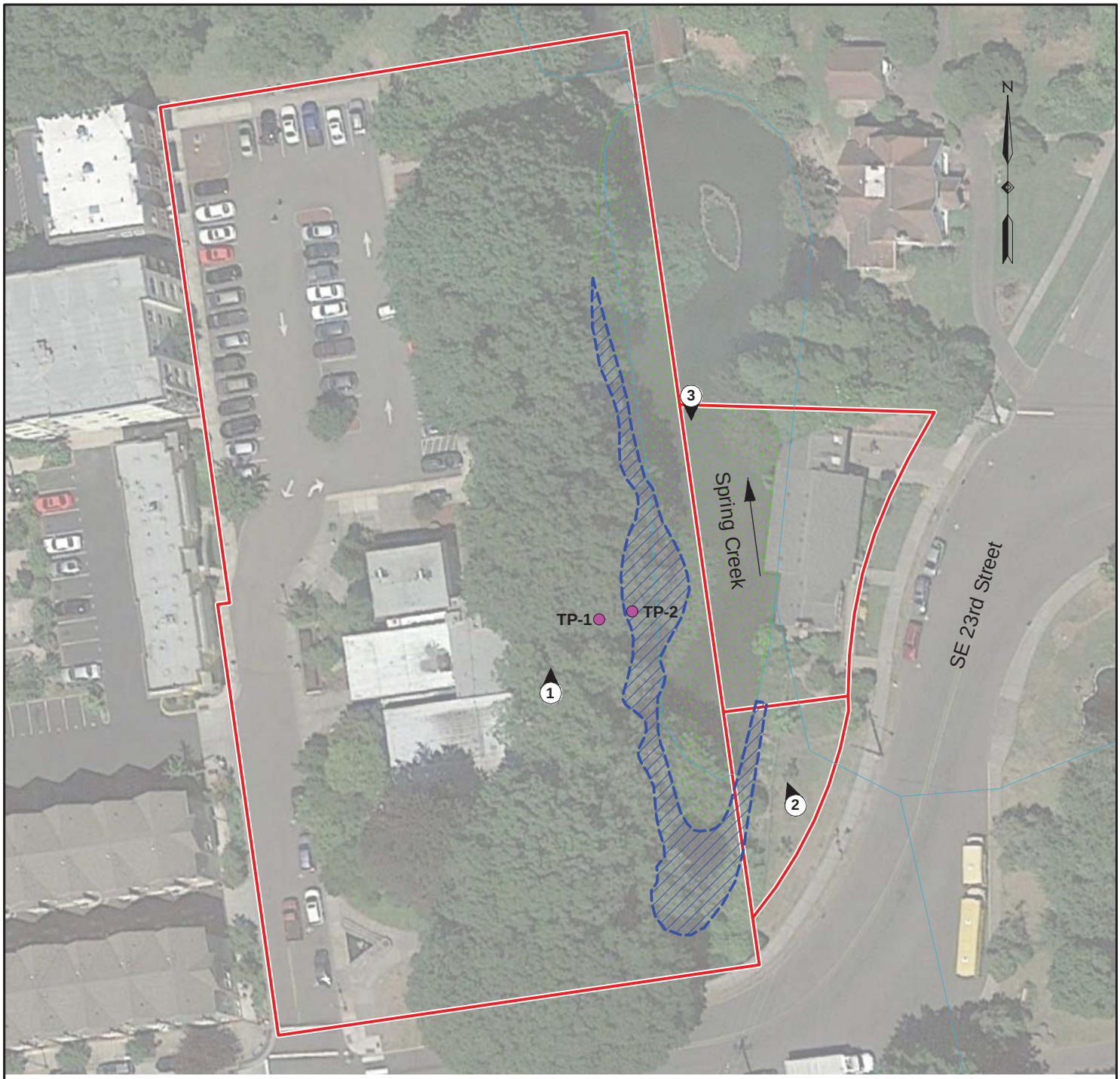
Base provided by Compass Surveyors

PHS
Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Existing Conditions
Milwaukie Ledding Library - Milwaukie, Oregon

FIGURE 3

1-16-2018



NOTE: Base map prepared from Google Earth Pro Imagery. Aerial dated July 23, 2016. Tax Lot, road, railroad, and stream information from © Oregon Metro www.oregonmetro.gov/rlis (8-2016).

Legend:

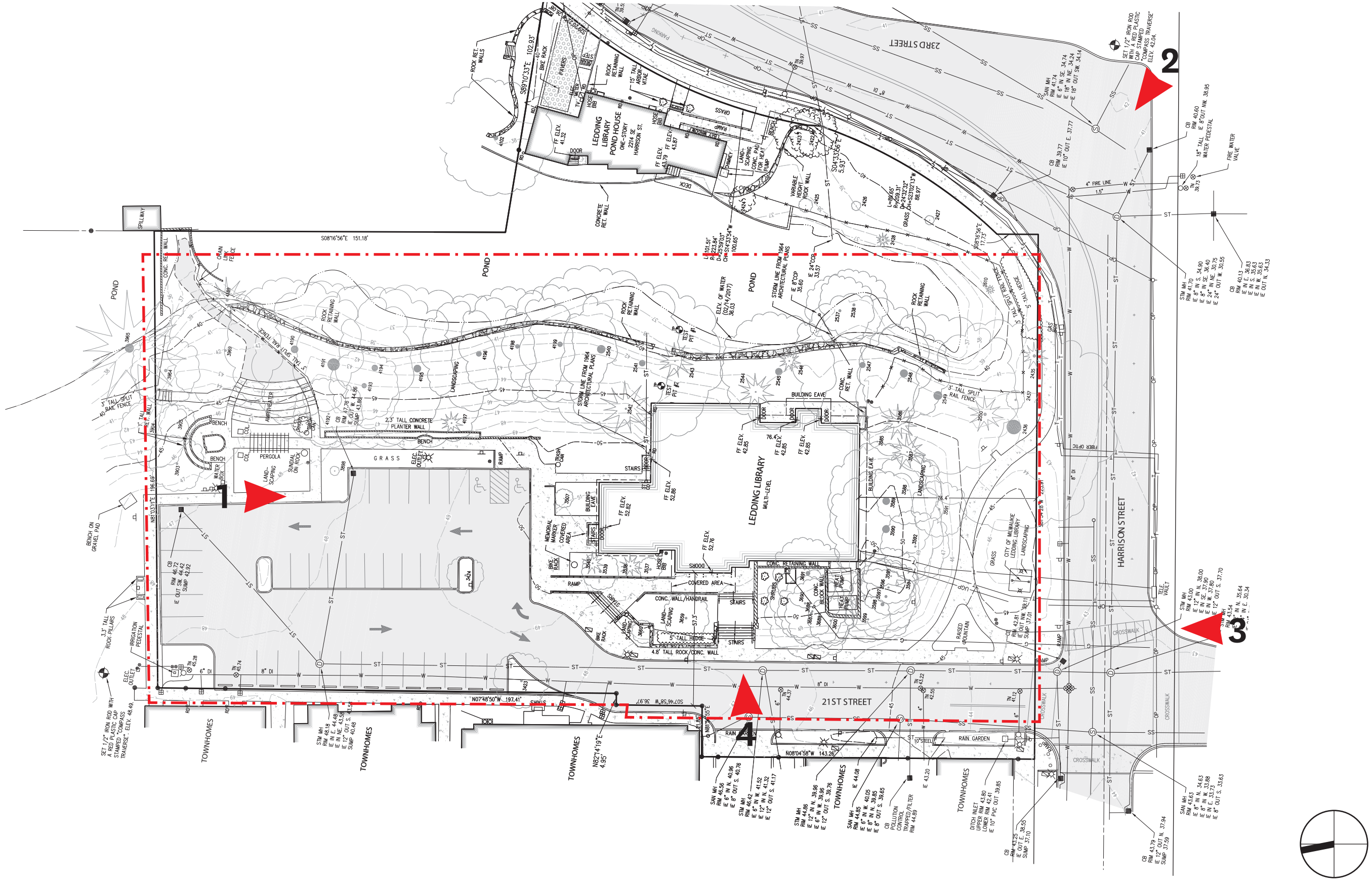
- Site Boundary
- Flow Direction
- Emergent Wetland (BH001) *Note: Boundaries recorded using a sub-meter hand held GPS unit.*
- Waters of the State/US
- TP-1 Sample Point
- 1 Photograph Location, Number, and Direction Taken (See Appendix B for Details)

0 60 120
Scale in Feet

Wetland Delineation Map

Wetland Delineation Report
10660 SE 21st Avenue
Milwaukie, Oregon

Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	2331-00	Figure 6
	March 2017		



SITE SURVEY AND EXISTING STREET VIEW KEY

RECEIVED
MAR 19 2018
CITY OF MILWAUKIE
PLANNING DEPARTMENT

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, Oregon 97070
Oregon General Contractor: CCB# 94379

Telephone number: (503) 570-0800 **Fax number: (503) 570-0855**

MEMORANDUM

Date: **March 19, 2018**

To: **Vera Kolias, AICP**
City of Milwaukie

From: **Amber Clark**

RE: **City of Milwaukie Ledding Library, #CSU-2018-002**

This memorandum is a response to the review conducted by ESA for the Milwaukie Ledding Library Land Use Application (ESA, March 6, 2018). Pacific Habitat Services has evaluated the review and is in agreement with ESA's assessment. There are a few items that need to be addressed to further meet the City of Milwaukie's code requirements.

The majority of the comments were related to the alternative analysis, described on page 7 of the Natural Resources Review (PHS, January 17, 2018). PHS has copied the alternative analysis and added necessary information (italicized) below.

Alternative Analysis:

In 2016, the City of Milwaukie passed a bond measure to fund improvements and expand the Ledding Library, and as a result, the City proposes to replace the existing library with a new, larger library building. The proposed improvements and expansion are required to meet community needs. Both the existing and proposed buildings are partially located within WQR and mapped HCA.

The existing building is too small accommodate the current needs, and a new 20,000 sq.ft. building is proposed to replace the existing building. The proposed design incorporates three primary areas for library patrons: a children's library, an adult's library, and a space for community events. The applicant proposes to exceed the maximum of 24 spaces by four for a total of 28 (including two ADA spaces and two carpool spaces). The applicant proposes that the four additional spaces are required due to special circumstances of this site to accommodate visitors to Scott Park without impacting the 24 spaces allowed to meet typical library parking demand. The existing lot that currently serves Scott Park and the Ledding Library contains 38 spaces. The events at the amphitheater create a seasonal parking demand that further support exceeding the maximum number of spaces by a modest amount. Because of the location and extent of WQR and HCA on the site, it is not possible to build a larger library with the necessary parking and totally avoid

disturbance to the WQR and HCA.

The Applicant considered building a new library on a different site that is not constrained by WQR and HCA; however, that alternative was determined to be infeasible. The property associated with the existing library was donated to the City by the Ledding family. Mrs. Ledding stated in her will that the property of the existing (and proposed) library was donated by the Ledding family with the condition that the land must be utilized as a public library use and if not, the land would return to the ownership of the Ledding family heirs. Forfeiting the land value and the existing library infrastructure to transfer the library to an alternate site are not financially viable options for the City.

As part of the design process, a two-story design alternative was considered in order to reduce the overall footprint of the new building and minimize disturbance to the WQR and HCA. However, a two-story building was determined to be not practicable for the following reasons:

- The addition of a second floor to a library building would increase the distance that materials must be moved through the building to provide the expected service. The use of elevators and dumbwaiters to transport materials between floors would increase the time needed to move materials and result in a loss of efficiency.
- The addition of a second floor to the library would require increased staff to provide direct supervision in all public areas. This additional staffing would result in increased costs to operate the library.
- The addition of a second floor would result in an increase in ongoing expenses associated with maintenance of an elevator and additional restrooms and work spaces.

For these reasons, a one-story building *with 28 parking spaces on the existing Ledding Library site* was selected as the preferred alternative for the library improvement and expansion. The existing library is approximately 12,000 sq.ft.; the City proposes a new building of approximately 20,000 sq.ft. to meet community needs.

Figures and Tree Protection:

Additional revisions to the figures have also been provided (attached). Figure 3 has been updated to show the three vegetation sample point locations. The sample point locations correspond to the vegetation inventory documented in the Natural Resource Review.

Figure 5 has been updated to include an additional note that all invasive species, including English ivy, are proposed to be removed from the Native and Restoration Planting Areas.

From the proposed construction notes provided in the design specifications, the contractor will protect all trees that are proposed to not be removed. This includes the heritage oak tree on the southeast corner of the site by the road. The contractor will also provide a temporary 6-foot-high chain link fence that encompasses the rootzone at 1 foot per 1 inch of tree diameter. This will insure that there is limited pedestrian and vehicular access in the protected rootzone.

We look forward to the further review and acceptance of this project into the land use application process. Please do not hesitate to contact me if you have any questions.

Sincerely,

Amber Clark
Biologist

Base provided by Compass Surveyors

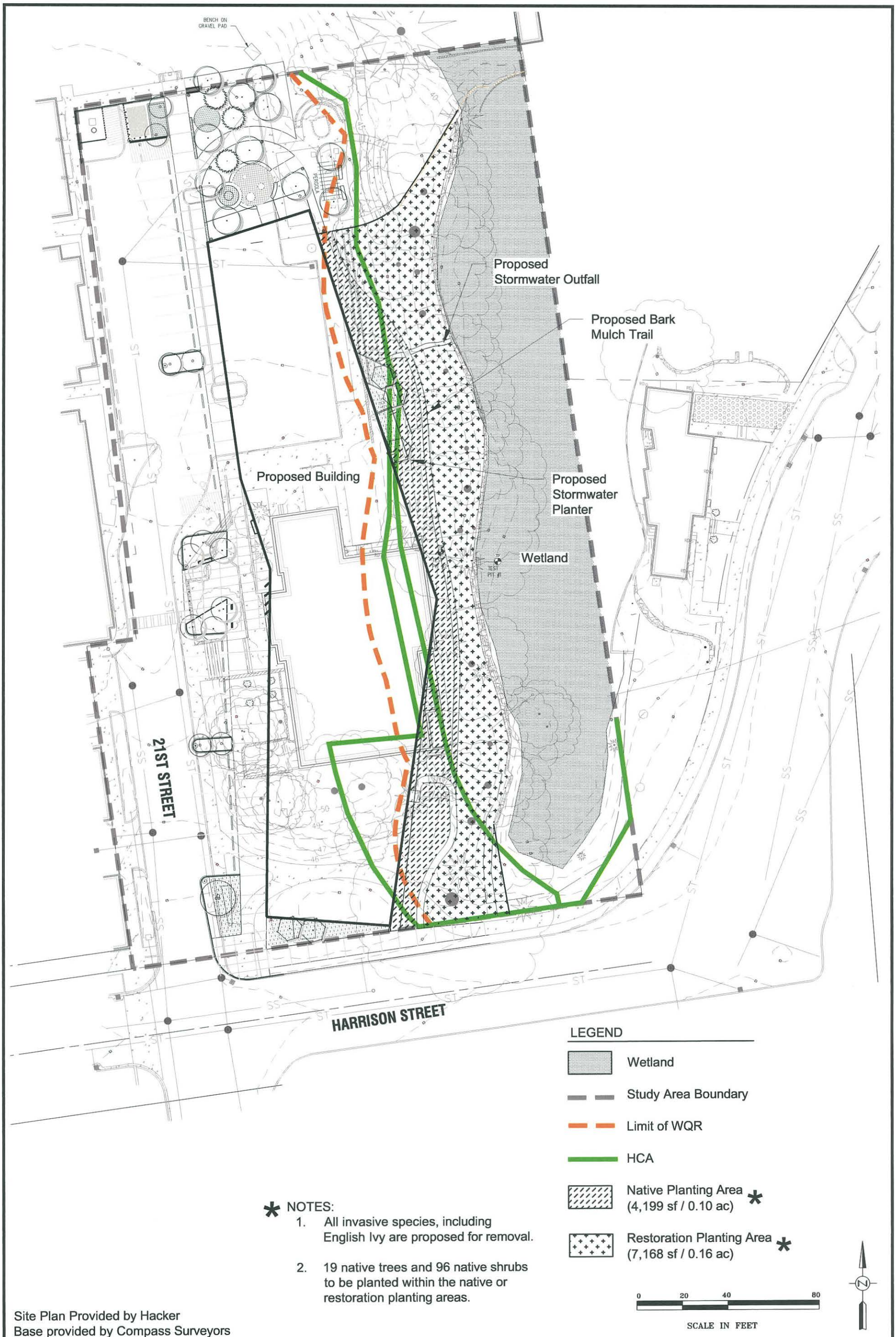
PHS
Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Existing Conditions
Milwaukie Ledding Library - Milwaukie, Oregon

FIGURE 3

3-13-2018

X:\Project Directories\6300\6314 Milwaukie Ledding Library\AutoCAD\Plot Dwgs\Fig3 ExistCond.dwg, 3/13/2018 2:00:33 PM, Xerox EXi 570 Print Server



* NOTES:
1. All invasive species, including English Ivy are proposed for removal.
2. 19 native trees and 96 native shrubs to be planted within the native or restoration planting areas.

Site Plan Provided by Hacker
Base provided by Compass Surveyors

Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Mitigation Plan
Milwaukie Ledding Library - Milwaukie, Oregon

FIGURE 5

3-13-2018

X:\Project Directories\6300\6314 Milwaukie Ledding Library\AutoCAD\Plot Dwgs\Fig5 MitigationPlan.dwg, 3/19/2018 3:44:43 PM, Xerox EXi 570 Print Server

CITY OF MILWAUKIE
DESIGN AND LANDMARKS COMMITTEE
NOTES
Milwaukie City Hall
10722 SE Main St
Monday, March 5, 2018
6:30 PM

COMMITTEE MEMBERS PRESENT
Lauren Loosveldt, Chair
Cynthia Schuster
Mary Neustadter
Kyle Simukka

MEMBERS ABSENT
None

STAFF PRESENT
Brett Kelver, Associate Planner (staff liaison)
Vera Kolias, Associate Planner
Leila Aman, Development Manager

OTHERS PRESENT
Scott Mannhard, Hacker Architects
Tyler Nishitani, Hacker Architects
Amy Winterowd, Plan B Consultancy
Evan Osterlund
Dennis Osterlund
Kathryn Krygier, North Clackamas Parks & Rec

1.0 Call to Order – Procedural Matters

Chair Lauren Loosveldt called the meeting to order at 6:31 p.m.

2.0 Design and Landmarks Committee Notes
2.1 February 5, 2018

Chair Loosveldt called for any revisions to the notes from the February meeting. There were none and the notes were approved unanimously.

3.0 Information Items – None

4.0 Audience Participation – None

5.0 Public Meetings
5.1 Recommendation Hearing: Downtown Design Review for Ledding Library renovation (land use master file #CSU-2018-002, with DR-2018-001)

Chair Loosveldt opened the public hearing for review of the proposed renovation of Ledding Library. The Committee is charged with making a recommendation to the Planning Commission about whether the proposal satisfies the approval criteria for projects that trigger downtown design review as outlined in Milwaukie Municipal Code (MMC) Section 19.907. **Associate Planner Brett Kelver** listed the code sections applicable to the proposal.

Associate Planner Vera Kolias gave the staff presentation, using slides to describe the proposal and outline the applicable criteria. The project represents a major modification to the library as a Community Service Use (CSU), which is a type of conditional use in the underlying zone. The CSU application is the master file for the project and the proposal includes a modification of the off-street parking requirement, though the Committee is not responsible for a recommendation on either the CSU or parking aspects. The focus of the Committee's review and recommendation is the design review application, which will be provided to the Planning

Commission as part of their consideration of the overall proposal at a public hearing scheduled for April 10.

Ms. Kolias identified two key questions for the Committee's consideration: (1) does the proposed design meet the downtown site and building design standards? and (2) does the proposed design sufficiently address the Downtown Design Guidelines? She noted several aspects of the proposed new building that did not meet the prescribed design standards (Subsection 19.508.4 of the zoning code), which was what led the application into the discretionary design review process and involved the Committee. In particular, the proposed design did not meet some of the design standards related to horizontal building façade, weather protection, ground-floor wall openings, ground-floor windows, and roofs.

Ms. Kolias elaborated on the details of each noncompliant design aspect. She related them to each of the five guideline elements—Milwaukie Character, Pedestrian Emphasis, Architecture, Lighting, and Signs—and described the design features that staff believed made the proposal consistent with the applicable design guidelines. Within the context of the overarching question of whether the Committee thought the design review portion of the land use application should be approved was a question about the proposal to use a more contemporary design for site lighting and parking lot lighting instead of the ornamental style recommended in the guidelines.

Chair Loosveldt called for questions from the group for Ms. Kolias. She asked someone to point out the locations of the lighting poles on the site plan. **Member Mary Neustadter** noted that the library building is considered a "contributing" resource by the State Historic Preservation Office (SHPO) and so there should be SHPO involvement in the (pre-)demolition process.

Scott Mannhard and **Tyler Nishitani** of Hacker Architects gave the applicant presentation, walking through the overall design and explaining the decisions behind various features. They noted the unique setting of this downtown site next to a natural area and described the various challenges involved—a 1-story replacement building, Spring Creek, mature trees, the amount of off-street parking desired, etc. A canopy over a wide walkway would lead to a single entry point that would lead past a community room into a central area providing views into both the adult and children's sections. The design would preserve and give space to the very large oak tree in the southeast corner of the site and would relocate the existing sculpture-fountain in the southwest corner of the site to the north side of the new building. In response to a question from Chair Loosveldt, **Mr. Mannhard** noted that the roof material was a light grey membrane that was very flexible and would work well with the proposed undulating roof design.

Mr. Mannhard touched on the five points where the proposal fell short of the design standards and explained the rationale behind the team's decisions. Along the west elevation, where the eastern half of the façade goes more than 150 ft horizontally without a significant break, the design acknowledges the storage and utility functions inside that portion of the building. The proposed canopy provides a more generous overhang than the 6-ft maximum width normally allowed over the primary walkway. Window openings on the western elevation are only approximately 20% of the total façade instead of the minimum required 40%, but the result is more privacy for the adjacent residences in the North Main Village development and is balanced by much higher window percentages on other building elevations. The existing grade drop at the southern part of the site, together with the need to maintain an ADA-accessible slope on the walkway to the main entrance, results in window sills being more than the maximum allowed 30 in above grade. And by eliminating the required cornice or parapet feature, the proposed design more readily allows for the placement of photovoltaic solar panels on the roof.

Chair Loosveldt asked whether the solar panels would be visible from Harrison St—the applicant team was not sure. She asked whether the existing trees would continue to thrive with

the new building located so close and how many of the trees would be protected. **Mr. Nishitani** explained that many of the oaks along the east side of the new building would remain, while a few existing beech trees near the current building and some other existing intermediate vegetation would be removed. He noted that they would identify significant roots of the largest oak and modify the building footings to avoid impacting them. Significant roots would continue to receive air and water even where under the building, though it was likely the tree would develop additional roots to accommodate. **Member Kyle Simukka** asked whether the proposed stormwater management system would retain more water than would be healthy for the remaining trees; **Mr. Mannhard** replied that the site soils were not suitable for significant infiltration, so concentrated stormwater would simply be detained and then overflow into the City's storm system as needed, without overcharging tree root zones.

Chair Loosveldt asked about the decision to demolish the existing building and how much of it would be recovered. **Mr. Nishitani** explained that seismic considerations were a big issue and that the building's mechanical, electrical, and plumbing systems were also at the end of their useful lives. Very little would be saved from the original building. **Member Neustadter** asked whether it would be possible to add on to the new building in the future. **Mr. Nishitani** explained that the library working group had determined that, especially given the site constraints, it would be more practical to establish a branch library in another location in the future than to spend additional money now to construct a building that could be added on to (where experience shows that to be an unlikely outcome).

Member Cynthia Schuster asked about the plan for improvements along Harrison St (e.g., sidewalks, lighting, street trees). She thought it was a good location for street lighting and that it would make sense to have any lights there be consistent with the ornamental style. **Mr. Kelver** clarified that any improvements in the public right-of-way would meet the City's Public Works Standards. **Ms. Kolias** noted a capital improvement project planned to construct frontage improvements on Harrison St, independent of the library project.

Member Schuster asked about the width of the sidewalk at the northwest portion of the site, where people would be pulled in from the parking lot. **Mr. Nishitani** confirmed the sidewalk would be 8 ft wide, with wheelstops to prevent vehicles from overhanging the walkway. **Chair Loosveldt** asked whether there would be a walkway along the east side of the building and around the large oak tree. **Mr. Nishitani** said they were not currently proposing a walkway in that location. **Member Schuster** asked how stormwater was being collected from the roof. **Mr. Mannhard** explained that drains and downspouts would convey water that would daylight into the stormwater planters, and **Mr. Nishitani** confirmed that gutters would be integrated into the roof design, with no water sheeting off the roof.

Chair Loosveldt thanked the applicants for their presentation and turned the group's discussion to the key issues raised by staff, working through them one by one. With respect to the design standard for horizontal building façade, she noted that the main entry is at the 150-ft mark from the front of the building and provided some effective shadowlines, which she felt met the intent of the design standard. **Members Schuster** and **Simukka** agreed; **Member Neustadter** did not like the relatively featureless left-hand side of the west elevation but was ok with the design in general.

Regarding the weather protection standard and the wider-than-6-ft canopy over the walkway, **Member Schuster** thought it was appropriate and provided a good connection to Harrison St. **Member Simukka** agreed and noted that the wider canopy provided welcome coverage for the book drop and bicycle parking. **Chair Loosveldt** also liked the wider overhang but was concerned that it did not extend farther to the north to provide coverage for people coming from that part of the parking lot. She noted that hers was not a significant concern. **Member**

Neustadter agreed with Chair Loosveldt and confirmed that hers, too, was only a minor concern.

In relation to the design standard for ground-floor wall openings, **Chair Loosveldt** focused first on the west elevation (only 20% openings instead of the minimum 40%) and suggested there may be ways to achieve greater transparency on the northern-most side of that façade, using different materials to break up the wall, or somehow opening the northwest corner of the building (children's reading area) to be more café-style like the southwest corner. She was concerned about the pedestrian experience along that northern portion of the western façade. **Member Simukka** agreed, and echoed the thought that it would be good to copy the southwest corner at the northwest corner, making a pitch for more transparency along that façade. **Member Neustadter** agreed, as did **Member Schuster**, who suggested there may be ways to use screening to minimize solar gain. **Chair Loosveldt** suggested the applicant consider additional glazing, or find ways to focus the transparency, or use material changes within their design pallet to break up the west elevation wall. She suggested opening the northwest corner along the west wall up to the point where the back-of-house functions begin, trying to get to at least 25-30% openings there.

Considering the south elevation (approximately 35% openings), **Chair Loosveldt** thought the design was reasonable; the other members agreed.

On the question of the bottom edge of some windows being more than 30 in above grade, **Member Schuster** suggested that this particular design standard is more meaningful on Main St and noted that there were grade issues to contend with. She thought the design was fine in this regard; the other members agreed.

Regarding the lack of a cornice or parapet on the roof, **Chair Loosveldt** suggested that the intent of the standard seemed to come most into play at the points where the undulating roof dips down, such as at the northwest corner for the children's storytime space. **Member Schuster** suggested that the applicant team consider presenting the Planning Commission with a view that shows the perspective from a height of 5 to 6 ft above grade instead of the second-story type of view they showed the Committee. That would make it easier to assess the effect of having no parapet from the pedestrian level. **Chair Loosveldt** noted how much of the roof will be viewable when one is east of the new building and traveling west down the hill on Harrison St. She asked how the roof would be cleaned or maintained. **Mr. Nishitani** was not sure of a specific method or schedule for cleaning but noted that the roof would be accessible for cleaning and maintenance. **Chair Loosveldt** clarified that she is not significantly concerned about this issue and thought that the proposed roof design is a good direction. **Member Neustadter** said she liked the roof, and the other members agreed.

Before tackling the key question on lighting, **Chair Loosveldt** asked whether the members had any questions or comments on the design guidelines in general. She returned to the issue of the northern third of the west elevation of the new building, noting the lack of relief for a pedestrian on the sidewalk adjacent to the blank wall. She described this as her largest area of concern for the whole project. Without landscaping, cover, or transparency, it was not a welcoming environment for pedestrians where there would be a significant level of pedestrian activity. She asked whether the design team had considered adding landscape buffering along the sidewalk. **Mr. Mannhard** explained that there was not much room to work with between the parking area and the building, and the design had prioritized a wider walkway over landscaping. The design did not open up the northwest corner with additional glazing in order to minimize distractions in the children's reading room adjacent to the parking area (headlights, pedestrian traffic, etc.). **Chair Loosveldt** maintained that even a sliver of landscaping would provide some visual relief for a pedestrian in the environment between the parking area and the blank building façade.

She suggested a recommendation to the Planning Commission that the blank portion of the west elevation façade be looked at more closely, to consider requiring something to provide relief for the pedestrian, whether with a landscape strip or by pulling the building back a bit from the walkway or increasing the transparency. **Member Schuster** wondered whether there was an opportunity to do something along the edge there, to tie in somehow to the relocated fountain or extend a water feature alongside the walkway, like at the Armory in downtown Portland.

With regard to building signage, **Chair Loosveldt** appreciated the perspective of the proposed signage from Harrison St but wondered if a better indication of signage could be given from 21st Ave. **Mr. Mannhard** clarified that the proposed sign is not actually on the building face, it was a freestanding monument sign and would be in front of the café-style window in the southwest corner of the new building. **Mr. Nishitani** added that there had been extensive discussion about the sign and the team had landed on the proposed design and location in part because the sign would be clearly visible from most perspectives. **Member Simukka** asked whether the new sign would be lighted—**Mr. Nishitani** responded that they intended to provide lighting but had not gotten that far into figuring out that particular detail of the sign. **Chair Loosveldt** suggested that the team develop an additional rendering or vantage point to more clearly show the Planning Commission the sign, and she recommended using lighting in the canopy or in the stormwater planter to provide some illumination for the sign.

Chair Loosveldt asked whether the rooftop solar panels would definitely be included as part of the project. **Mr. Nishitani** confirmed that the panels were definitely in (a State requirement) and would be in the location shown—only the size of the array was still in question. **Chair Loosveldt** asked whether there would be any public display of the power being generated by the panels, as an educational tool or publicity piece. **Mr. Mannhard** confirmed that there would certainly be an interpretive component to the panel array and that the details would be worked out farther along in the process. **Chair Loosveldt** noted that the new building would be one of the highest performing sustainable buildings in the downtown core and that it would be great to highlight that somehow.

Member Neustadter asked about any public art aspects of the project, inside or outside the new building. **Mr. Nishitani** responded that they were still very early in the process of integrating art into the project, though they had someone working on a request for qualifications from artists and they had been asked to identify potential locations both inside and outside for public art. **Member Neustadter** asked whether there would be an opportunity for public involvement in the art-selection process, and **Chair Loosveldt** noted that the library working group included members of the public. **Mr. Nishitani** indicated that there would be a series of community meetings where the art aspect could be addressed, although the specific art-selection process was not yet known. **Mr. Mannhard** emphasized that there was money set aside for public art in this project, so it would not be a casualty of a project budget shortfall.

Finally, with respect to the lighting question about whether a contemporary style would be allowable, **Member Schuster** observed that a lot of cities were looking for dark-sky options for lighting and that there were some dark-sky modifications that could be made to the traditional ornamental, globe-style fixtures prescribed by the guidelines. She noted that the dark-sky options tended to have lower outputs and might work well on narrow streets but might not work as well for area lighting or for parking lots. She wondered whether the team had looked at dark-sky options for the traditional lights and whether they had any photometrics for the lights they were proposing. **Mr. Mannhard** confirmed that the civil engineer and lighting designer on their team had provided recommendations about placement and type of fixtures to ensure that the site was adequate lighted for safety. **Member Schuster** liked the way the contemporary fixtures matched the colonnade on the new building and thought it was fine to vary from the prescribed

ornamental style because the proposed lights matched the building design, but she was concerned that they may not provide adequate lighting, especially for the sidewalk at the northwest corner of the building. **Chair Loosveldt** suggested that the team provide the Planning Commission with the photometrics and perhaps a better view or rendering of the fixtures with respect to the building.

Member Simukka expressed a reservation about setting a precedent for future projects to propose their own lighting styles instead of using the prescribed ornamental fixtures, in terms of consistency. That said, he appreciated the need to innovate and improve lighting systems in the city. **Chair Loosveldt** suggested that a solution might be to utilize both types of fixtures, with an ornamental fixture closer to Harrison St (perhaps with another ornamental fixture close to the oak tree) and contemporary fixtures farther into the site (in the parking area). She agreed with Member Schuster's statement that 21st Ave did not feel much like a street and that the contemporary fixtures were more allowable beyond the "threshold" of the site at Harrison St. **Member Schuster** clarified that it might make sense to maintain the ornamental fixture already in place near Harrison St.

Member Simukka asked whether the new light color (output) would match that of the existing ornamental lights; **Mr. Nishitani** confirmed they could ensure that the colors matched for consistency. **Ms. Kolias** noted that the City's Public Works Department is coordinating with PGE to convert the existing ornamental lights to LED bulbs and with the dark-sky nightcaps. **Member Schuster** specified her suggestion to maintain the existing ornamental light near Harrison St but to relocate it into the public right-of-way if necessary, to make it part of the lighting system that would be maintained by the City instead of a responsibility of the library site. **Development Manager Leila Aman** informed the group that, since the library since is a City property, Public Works staff would be maintaining the lights on the library site and would be working with PGE to ensure that all lights were up to the "Schedule A" standard. **Chair Loosveldt** reiterated the group's recommendation that the existing ornamental light near Harrison St be retained and that the lights more internal to the site be allowed to be the contemporary style. The other members concurred.

Chair Loosveldt thanked the applicant team for its effort on the design. She asked whether anyone else at the meeting wanted to present testimony—two gentlemen said they were neighboring property owners to the east and were very interested in the project but had no comments. **Chair Loosveldt** asked staff to summarize the group's recommendations. **Ms. Kolias** began her summary for the Planning Commission with the note that the group was comfortable with the staff report and recommendations with respect to the project's compliance with the design standards and applicable design guidelines, except where the northern third of the west elevation façade was concerned. Recommendations from the group included revising the design to increase the percentage of opening on that façade by treating the northwest corner like the southwest corner, opening it up or creating more breaks by using glass, spandrel glass, art, screens, or other materials to increase the percentage of openness to a minimum of 25%. With respect to the question on light fixtures, the group was comfortable recommending the contemporary fixtures where more internal to the site but that the existing ornamental fixture should be retained near Harrison St, where it would tie in with the prescribed design for public improvements.

Chair Loosveldt confirmed that, if the group's recommendations were followed for the northern third of the west façade, the concerns expressed about the design guidelines in general (with respect to the pedestrian environment along that section of the building) would be sufficiently addressed. She reiterated that the group's other suggestions about the applicant team's presentation included providing a rendering of the pole fixtures and their photometrics, plus an

additional rendering to more clearly show the sign when looking east. With that, she thanked everyone and closed the design review portion of the meeting.

6.0 Worksession Items

6.1 Downtown Design Guidelines Update, cont. (Session 24)
Staff Person: Brett Kelver, Associate Planner

Mr. Kelver informed the group that a contract was being developed with SERA Architects to work with the Committee on the update of the Downtown Design Guidelines. **Chair Loosveldt** expressed concern about the selection, given the group's recent experience with SERA in the design review for the Guardian project and the perceived difficulty the SERA team had in responding to the City's design guidelines. **Mr. Kelver** noted that they had needed to move quickly to identify potential consultants and that the nature of the update project was very different than a submittal for design review. The SERA team that would be working with the group was also different from the team that worked on the Guardian project. **Chair Loosveldt** suggested talking to a couple of other firms, like Hacker or LRS Architects (the firm that Member Schuster works for), to see how they might respond to the proposed scope of work. **Mr. Kelver** agreed to talk further with the Planning Director about options at this point.

Mr. Kelver noted that, regardless of which firm they ended up working with, the short timeline for the project meant that the group might need to be flexible in its scheduling of meetings between now and June 30. It seemed likely that two-hour meetings would be necessary to make the most use of the time, and the group members indicated willingness to meet longer if needed. **Member Simukka** suggested that if the meetings started any earlier it would be good to have some food or nourishment due to the conflict with a normal dinner time.

7.0 Other Business/Updates

7.1 Election of Vice Chair

Mr. Kelver reminded the group of the need to elect a new Vice Chair. **Chair Loosveldt** called for nominations or volunteers. **Member Schuster** agreed to serve if others agreed, and the group affirmed her as the new Vice Chair.

8.0 Design and Landmarks Committee Discussion Items – None

9.0 Forecast for Future Meetings:

April 2, 2018	Kickoff of DDG Assessment project with SERA Architects
TBD	Meeting schedule for May-June to be determined

Chair Loosveldt adjourned the meeting at 9:15 p.m.

Respectfully submitted,

Brett Kelver, Associate Planner

Lauren Loosveldt, Chair

RECEIVED
MAR 19 2018
CITY OF MILWAUKIE
PLANNING DEPARTMENT

REVISEDFINAL DRAFT

March 13, 2018

Review from the Historic Downtown Milwaukie NDA Land Use Committee

on the Ledding Library Construction.

The Historic Milwaukie NDA thanks the City of Milwaukie Planning Department for the opportunity to comment on the proposed construction of the New Ledding Library in downtown Milwaukie. Our Land Use Committee reviewed the various reports and documents provided by the City Planning Department and some City Ordinances pertaining to construction within the City.

First, it would appear, based on the artists renderings, that the proposed new building could be an appealing structure, however, the design doesn't comport with the design of the surrounding structures (Masonic Temple, City Hall, Waldorf School, Townhomes on Harrison, and Condos on Main) within one block of the proposed building site. Therefore, whatever potential beauty this design might have is lost in its surroundings and only makes it an outlier to the otherwise perceived quaintness that Milwaukie citizens see in surrounding downtown structures.

Beyond the design, the proposed structure will consume too much of the property on which it will sit and visually diminishes both the park and wetlands area. This property is bordered by a sensitive wetland and natural area which will require, if the area is to be preserved, extensive site preparation and stabilization of the surface and sub-surface according to the GeoDesign, Inc. report.

The NDA's committee also considered the immediate neighborhood and its inhabitants (neighbors) in reviewing the impacts of the new structure. Our review includes the proposed size of the building, traffic impacts, noise, parking, length and breadth of construction, normal operations of the Library, safety, and potential structural impacts on other structures which may create a liability concern for the City (Library.) Therefore, our first recommendation is that the City/Library leaders call a meeting specifically for these neighbors at a time and meeting space convenient to both groups to fully discuss this proposed project. Inclusive in this recommendation is that the City/Library will enter into a Good Neighbor Agreement which addresses the issues brought up in the meeting with neighbors.

Serious consideration should be given not only to the short-term issues of construction, but the long-term impacts on the neighborhood such as inadequate parking when considering the use of the adjacent park by the larger community. The building plan might eventually comply with the technical requirements for construction, which isn't currently the case, yet it very well

might not fit into the overall nature of the surrounding downtown community. The proposal isn't for a modernization and expansion of the current structure to better serve the community, as was advertised during the Bond campaign, but a complete teardown and rebuild of the library.

In terms of the construction period, no matter how the plan moves forward, the committee requests that the following issues be given serious consideration: (Not in Priority Order)

1. Noise: The abatement of noise from equipment used in demolition and construction creates a potential dilemma considering the proximity of the building site to a school as well as to living quarters for citizens. A city ordinance on the one hand calls for the use of such equipment during night hours if the property on which the building is to be built is on an adjacent street to a school, which at least part of this project will be because it only has a partial natural area between it and the Waldorf School. On the other hand, such use of equipment at night will seriously disturb the peaceful living conditions of immediate neighbors either across the street (parking lot) or pond from the site. We believe this potential conflict must be resolved prior to the approval of the plan.
2. Wetlands and Natural Environment: The condition of the Wetlands, as found in the ESA environmental consultants report and the GeoDesign, Inc. report require serious consideration in terms of construction in a sensitive environmental area. Eventual potential approval must take the impact of construction on current building foundations and the integrity of those structures (Townhomes, Condos, and Apartments) adjacent to the site, do to demolition and construction on sensitive and unstable soils to significant depths.
3. Scott Park: The Master Plan for Scott Park needs to be seriously considered in coordinating with construction on the site.
4. Size of Building: The footprint for the proposed building, appears to the committee, to overwhelm the site, and encroaches on the wetland beyond the area recommended by the ESA report. There is little doubt that mitigation of this impact will require years of growth of new plantings to rebuild the damage done to the environment. There is concern that the construction process will do damage beyond what has been considered to date. Common sense makes this a potential reality because of the nature of construction.
5. Safety: There is a fire hydrant at the end of the proposed street/parking area which may very well be much more difficult to access due to the narrowing of the street, especially during hours of operation of the library.
6. Traffic During Construction: The driveways for the Townhouses and Condos parking lot and garages must remain open and usable by the residents throughout construction.
7. Construction Staging: The size of the planned building will potentially cause the placement of building materials that will negatively affect the peaceful living conditions of immediate/adjacent residents.

8. Dust, Debris, and Litter Control: There needs to be a specific plan for control of dust, debris, and litter during the construction so as not to negatively impact the peaceful living conditions of immediate/adjacent residents.
9. Inspections: Constant and thorough inspection of this potential construction is more critical than most considering the sensitivity of the soils and the potential damage to the necessary integrity of the new and adjacent building(s).
10. Liability: Seriously consider the potential liability to the City/Library for damage done to nearby buildings due to unanticipated effects of construction. Environmentally sensitive areas with soft soils such as the one in question, once disturbed by construction, have the potential for future erosion. Such erosion could have unanticipated adverse affects on surrounding buildings adjacent to the site. Owners of current adjacent homes and buildings should be given fair warning of this potential so they can document the current condition of their property in case there is future damage. The City/Library could be held liable for any such damage.

Respectfully submitted, Historic Downtown Milwaukie NDA Land Use Committee

i

Vera Kolias

From: Salena Sanford <salena.sanford@gmail.com>
Sent: Friday, March 30, 2018 6:26 PM
To: Vera Kolias
Subject: Ledding LIbrary proposal

Hello;

I am a Historic Milwaukie resident and I've reviewed the full proposal for the Ledding Library re-build. I live in the townhome on the corner of 21st & Harrison directly across from the library.

I had one concern I wanted to pass on to whomever is compiling the public comments - the proposed bike "racks" are only square pillars, according to the architectural drawings. This is completely unsafe, bikes can be lifted off the pillars and stolen very easily if this is the actual proposed design.

There are a great many transients who travel to downtown Milwaukie via public transit, and unprotected/insecure bike racks will provide an attractive nuisance and opportunity for theft. This could present a real safety problem for someone whose only form of transport to the library is by bike (many young people/teens come to the library). If their bike is stolen and they don't have another way to get home easily they could be waiting a long time, sometimes at night. Please consider safety when considering bike storage at the library, thank you.

Salena Sanford
10677 SE 21st Ave, Milwaukie, OR 97222

Denny, Kim and members of the Planning Commission,

I am writing to ask you to reconsider the North Garden design in the Library Master Plan. The current design has both paths leading from the north end of the library to the memorial and amphitheater without any connection to Scott Park.

Although the Master Plan for Scott Park was recently removed from the Comprehensive Plan, there will be a Master Plan in the future to replace it. I think it's important to think of the Library and Park plans as being related/connected to each other. I'm asking that plantings for the North Garden not be an obstruction for future connectivity to Scott Park and that a path to the park be designed for future construction once park improvements are made.

I am concurrently making a proposal for Scott Park that designates it as a Children's garden with some sensory features, an outdoor classroom and art geared towards children.

Thank you for your consideration,

Lisa Lashbrook

RECEIVED
APR 02 2018
CITY OF MILWAUKIE
PLANNING DEPARTMENT

Proposal: That the new Scott Park Master Plan designates a portion of the park as an interactive children's garden with sensory features, an outdoor "classroom" and art geared toward children.

The design of the future Ledding Library features a beautiful building with lots of thought given to the connection between the green spaces, water features and the building. The plan for the Ledding Library places the children's section of the library at the end of the building closest to Scott Park. Although the amphitheater and the pond are inviting to visitors, Scott Park has had little use from patrons.

We are about to construct a state-of-the art library that will undoubtedly be an attractive addition to downtown Milwaukie. I believe that this proposed design for Scott Park will attract people and be a unique asset for library and park users.

I have PARB's support for this proposal.

Thank you for your consideration,

Lisa Lashbrook, Parks and Recreation Board member

RECEIVED
APR 02 2018
CITY OF MILWAUKIE
PLANNING DEPARTMENT

CITY OF **MILWAUKIE**

To: Planning Commission

Through: Dennis Egner, Planning Director

From: Vera Kolias, Associate Planner

Date: April 3, 2018, for April 10, 2018, Worksession

Subject: 2018 Housekeeping Code Amendments: Round 1 Briefing

ACTION REQUESTED

None. Review the package of housekeeping code amendments developed by staff. This is a briefing for discussion only.

BACKGROUND INFORMATION

Over the course of several years, Planning Department staff has been tracking issues with current zoning code language and has made suggested corrections. These items have been identified through a variety of means, including multiple instances of the same questions from the public that are not easily answered, code interpretation applications, and onerous land use review procedures for specific types of small development proposals, to name a few. To date, there are over 100 individual items on the "code fix" list.

In order to address this list, the Planning Department will strive to regularly bring forward a small package of "housekeeping" code amendments. The last package of amendments was in 2016. Housekeeping amendments are clarifications or minor tweaks, and are not intended to affect the meaning or intent of existing regulations, rather than amendments that are a change in policy.

The current package of proposed code amendments is the first of 2 packages of amendments for this year. It includes the following: (Please refer to Attachment 1 for draft language):

- Revising the definition of "senior and retirement housing";
- Revising the calculation for density relative to slope;
- Modifying or eliminating the odor control standards for marijuana businesses;
- Amending the maximum height and height variance language for downtown;
- Eliminating the prohibition to compound lot lines for land divisions;
- Allowing signs for historic property identification and allowing neon signs downtown;

- Adding indoor recreation to the allowed uses in G-C General Commercial zone;
- Clarifying language in the natural resource, accessory structure, single-family design standards, garage and carport, multifamily housing, off-street parking, community service use, preapplication conference, and development review sections of the code; and
- Miscellaneous numbering and labeling corrections.

The revisions are intended to correct and clarify the code to improve its administration without changing basic policy or intent.

ATTACHMENTS

Attachments are provided as indicated by the checked boxes. All material is available for viewing upon request.

	PC Packet	Public Copies	E-Packet
1. Draft code amendment language (underline/strikeout)	☒	☒	☒

Key:

PC Packet = paper materials provided to Planning Commission 7 days prior to the meeting.

Public Copies = paper copies of the packet available for review at City facilities and at the Planning Commission meeting.

E-Packet = packet materials available online at https://www.milwaukieoregon.gov/bc-pc/planning-commission-3.

Underline/Strikeout Amendments

Title 14 Sign Ordinance

CHAPTER 14.16 SIGN DISTRICTS

14.04.030 DEFINITIONS

Sign, Neon. "Neon sign" means an electric sign lighted by long luminous gas-discharge tubes that contain rarefied neon or other gases. A neon sign is a lighting display made of glass tubes that have been filled with a gas and bent into the shape of letters or decorative designs.

Sign, Outdoor Advertising. "Outdoor advertising sign" means a sign that meets the definition of ~~Oregon Revised Statute~~ ORS 377.710(21).

14.12.010 Exempted Signs

N. Signs or tablets (including names of buildings, and the date of erection) when cut into any masonry surface, or constructed of bronze or other similar durable noncombustible surface meeting the following requirements: not to exceed 2 sq ft for wall signs or 2 sq ft and no taller than 3 ft for a monument sign. This exemption is limited to historic properties, as listed in Appendix A of the Milwaukie Comprehensive Plan or any building that is shown to be at least 50 years old. Only 1 sign per historic property is permitted and may not be installed in the public right-of-way unless permitted as an encroachment with the public right-of-way per MMC 12.14.

14.16.060 DOWNTOWN ZONES

No sign shall be installed or maintained in the DMU or OS Zones, except as allowed under Section 14.12.010 Exempted Signs, or as otherwise noted in this section.

H. Illumination

Illuminated signs may be permitted subject to the following:

6. Neon signs with exposed tubing are allowed provided that light levels comply with Subsection 14.24.020.A and Subsection 14.24.020.D.

~~6~~7. Electronic display signs are permitted for properties that have frontage on McLoughlin Blvd, subject to the following standards:

a. An electronic display sign may be included only as part of a larger sign, and the electronic display portion of the sign is subject to the more restrictive of the following size limitations:

(1) 25% of the size of the sign face that contains the electronic display sign, abuts the electronic display sign, or is on the same sign structure as the electronic display sign.

(2) 20 sq~~uare~~ fe~~et~~.

b. An electronic display sign shall be primarily visible from, and oriented toward, McLoughlin Blvd and not toward any other street on which the property has frontage.

c. Illumination for an electronic display sign is subject to the standards of Subsection 14.24.020.G.1.

d. The manner of display on electronic display signs shall comply with the standards of Subsection 14.24.020.G.3.

e. Incorporating an electronic display sign within an existing nonconforming sign is allowed subject to the regulations of Subsection 14.28.020.A.3.b.

14.28.020 NONCONFORMING SIGN

A. Time Limit

1. Except as provided in Subsection 14.28.020.A.~~4~~3, signs that were in compliance with applicable regulations when installed; but that become nonconforming as a result of adoption, modification, or applicability of the City's sign regulations; may remain in place for 10 years after the date they became nonconforming but shall be removed or brought into compliance on or before 10 years plus 1 day of the date they became nonconforming.

Title 17 Land Division

17.28.040 GENERAL LOT DESIGN

This section does not apply to units of land that are created for purposes other than land development including parks, natural areas, right-of-way dedications, or reservations of a similar nature. Lots and tracts created for cottage cluster housing development, per Subsection 19.505.4, are also exempt from the requirements of this section.

C. Limits on Compound Lot Line Segments

Changes in direction ~~along side~~ alongside and rear lot lines shall be avoided. Cumulative lateral changes in direction of a side or rear lot line exceeding 10% of the distance between opposing lot corners along a given lot line ~~is prohibited~~ may only be permitted through the variance provisions of MMC Subsection 19.911. Changes in direction shall be measured from a straight line drawn between opposing lot corners.

Title 19 Zoning Ordinance

CHAPTER 19.200 DEFINITIONS AND MEASUREMENTS

19.201 DEFINITIONS

"Senior and retirement housing" means a multiunit dwelling where persons who are of retirement age reside. Activity levels, including traffic generation and parking of cars, are generally lower than for other types of housing. Common facilities for eating and activities may be provided; nursing care, medical supplies, and personal services may be provided on a limited basis. One person may own the entire complex, or each dwelling unit may be owned separately as in a condominium. ~~The dwelling units shall not have more than 1 bedroom per unit and shall not have more than 800 sq ft per dwelling unit.~~

19.202 MEASUREMENTS

19.202.4 Density Calculations

Minimum required and maximum allowed dwelling unit density will be calculated as described below, except that residential cluster development on lands containing natural resource areas are subject to the density calculations in Subsection 19.402.14.C. The purpose of these calculations is to ensure that properties develop at densities consistent with the densities in the Comprehensive Plan. The area deductions for minimum required density allow properties to utilize land that can be built upon. The area deductions for maximum allowed density include sensitive lands where development should be avoided.

E. Maximum Density

1. Deductions to Calculate Net Area

   The following areas, measured in sq ft, are subtracted from the gross area to determine the net area. The net area calculation is rounded to the nearest whole number.

   a. 1% Annual Chance Flood areas (also called the 100-Year Floodplain), as determined by Federal Emergency Management Agency flood maps.

   b. Right-of-way dedications for new right-of-way or expansion of existing rights-of-way, as required in Chapter 19.700.

   c. Open space or parkland that will be ~~publically~~ publicly-owned or open space owned in common by owners within the residential development.

   d. Naturally occurring slopes in excess of 25%.

   e. Man-made slopes (grades that are the result of human activity rather than natural causes) in excess of 25% with both a horizontal measure over 40 ft and an elevation change more than 10 ft over that horizontal distance.

2. Density Calculation

   The maximum number of dwelling units allowed is calculated by dividing the net area by 43,560 sq ft to convert the area to acres, then by multiplying the acreage by the maximum allowed dwelling unit density in the applicable base zone in Chapter 19.300.

19.304 DOWNTOWN ZONES

19.304.4 Development Standards

Table 19.304.4 Downtown Zones—Summary of Development Standards			
Standard	**DMU**	**OS**	**Standards/ Additional Provisions**
B. Development Standards			
2. Building height (ft)			**Subsection 19.304.5.B** Building Height **Figure 19.304-4** Base Maximum Building Heights **Subsection 9.304.5.I** Transition Measures **Subsection 9.304.5.B.3** Height Bonuses
a. Minimum	25	None	
b. Maximum	~~35~~45 ~~65~~79 (height bonus available)	15	

19.307 GENERAL COMMERCIAL ZONE C-G

In a C-G Zone the following regulations shall apply:

19.307.1 Uses Permitted Outright

In a C-G Zone the following uses and their accessory uses are permitted outright:

AB. Indoor recreation;

AC~~AB~~. Any other use similar to the above and not listed elsewhere.

19.402 NATURAL RESOURCES NR

19.402.14 Adjustments and Variances

To encourage applicants to avoid or minimize impacts to WQRs and/or HCAs, several types of adjustments and variances are available for use on any property that includes a WQR or HCA. These include adjustments to specific base zone and lot design standards, discretionary variances, and allowances for residential cluster development.

C. Residential Cluster Development

3. Site Plan Requirements

The preliminary and final site plans for a residential cluster development shall include the following information, in addition to the items listed on the City's Site Plan Requirements:

c. The calculations for the permitted number of dwelling units, derived pursuant to Subsection 19.402.14.C.~~2~~1.

19.402.15 Boundary Verification and Map Administration

The NR Administrative Map shows the locations of WQRs and HCAs. For WQRs, the NR Administrative Map is a general indicator of protected water features and their associated vegetated corridors; the location of actual WQRs is determined according to the parameters established in Table 19.402.15. With respect to HCA locations, the NR Administrative Map is assumed to be correct unless demonstrated otherwise.

A. Boundary Verification

2. Type II Boundary Verification

Corrections to mapped WQRs and/or detailed verification of mapped HCAs may be proposed according to the following procedures, and are subject to Type II review per Section 19.1005.

a. Corrections to WQRs

(1) Submittal Requirements

To propose a correction to a WQR shown on the NR Administrative Map, the applicant shall submit the following information, depending on the type of water feature in question:

(a) Drainages

In the case of drainages; including rivers, streams, springs, and natural lakes; the applicant shall submit a ~~hydrology~~ report, prepared by a professional wetland specialist or professional engineer, demonstrating whether or not the drainage meets the definition of a protected water feature. If the drainage is demonstrated to be a protected water feature, the applicant shall provide a topographic map of the site, with contour intervals of 5 ft or less, that shows the specific location of the drainage on the subject property.

B. Map Administration

1. Updates to the NR Administrative Map

When a boundary verification, conducted in accordance with the standards of Subsection 19.402.15.A, demonstrates an error in the location of a WQR or HCA shown on the NR Administrative Map, the City shall update the NR Administrative Map to incorporate the corrected information as soon as practicable. Changes to the NR Administrative Map are not considered amendments to the City's Comprehensive Plan, to Comprehensive Plan Map 5 (Natural Resources), or to the Zoning Map.

CHAPTER 19.500 SUPPLEMENTARY DEVELOPMENT REGULATIONS

19.502 ACCESSORY STRUCTURES

19.502.2 Specific Provisions for Accessory Structures

A. The following standards apply for residential accessory structures on single-family detached, duplex, rowhouse, and cottage cluster properties. The standards in Subsection 19.502.2.A do not apply to pools, uncovered decks, and patios.

The purpose of these standards is to allow accessory structures that accommodate the typical needs of a single-family residence, while protecting the character of single-family neighborhoods.

1. Development Standards

b. Other Development Standards

(1) Maximum accessory structure footprint allowance is subject to lot coverage and minimum vegetation standards of the base zone. Multiple accessory structures are allowed on a lot, subject to lot coverage and minimum vegetation standards of the base zone.

(2) The yard exceptions in Subsection 19.501.2 are applicable for accessory structures.

(3) A minimum of 5 ft is required between the exterior wall of an accessory structure and the exterior wall of any other structure on a site, excluding a fence or similar structure.

19.505 BUILDING DESIGN STANDARDS

19.505.1 Single-Family Dwellings and Duplexes

C. Standards

All buildings that meet the applicability provisions in Subsection 19.505.1.B shall meet the following design standards. The graphics provided are intended to illustrate how development could comply with these standards and should not be interpreted as requiring a specific architectural style. An architectural feature may be used to comply with more than one standard.

An applicant may request a variance to the Detailed Design standards in Subsection 19.505.1.C.4 through a Type II review, pursuant to Subsection 19.911.3.B. Variances to any other design standards requires a variance through a Type III review, per Subsection 19.911.3.C.

4. Detailed Design

All buildings shall include at least 5 of the following features on any street-facing façade. See Figure 19.505.1.C.4 for illustration of detailed design elements.

o. Bay window at least 2 ft deep and 5 ft wide~~long~~.

5. Standards for Duplexes

In addition to the other standards in Subsection 19.505.1, duplexes shall also comply with the following standards.

e. For duplexes on~~e~~ corner lots, each entrance is required to face a separate street frontage. Where an existing house is being converted, 1 main entrance with internal access to both units is allowed.

19.505.2 Garages and Carports

C. Standards

2. The width of a street-facing garage door(s), as measured between the inside of the garage door frame, may not exceed 40% of the total width of the street-facing façades on the same street frontage as the garage door. See Figure 19.505.2.C.2. Notwithstanding this limit, a dwelling is allowed 1 12-ft-wide garage door, regardless of the total width of street-facing façades.

   The maximum allowed garage door width may be increased to 50% of the total width of the street-facing façade if a total of 7 detailed design elements in Subsection 19.505.1.C.4 are included on the street-facing façade.

19.505.3 Multifamily Housing

Table 19.505.3.D
Multifamily Design Guidelines and Standards

Design Element	Design Guideline (Discretionary Process)	Design Standard (Objective Process)
6. Building Façade Design	Changes in wall planes, layering, horizontal datums, vertical datums, building materials, color, and/or fenestration shall be incorporated to create simple and visually interesting buildings. Windows and doors should be designed to create depth and shadows and to emphasize wall thickness and give expression to residential buildings. Windows should be used to provide articulation to the façade and visibility into the street. Building façades shall be compatible with adjacent building façades. Garage doors shall be integrated into the design of the larger façade in terms of color, scale, materials, and building style.	a. Street-facing building façades shall be divided into wall planes. The wall plane on the exterior of each dwelling unit shall be articulated by doing one or more of the following: (1) Incorporating elements such as porches or decks into the wall plane. (2) Recessing the building a minimum of 2 ft deep x 6 ft long. (3) Extending an architectural bay at least 2 ft from the primary street-facing façade. b. Windows and the glass portion(s) of doors with glazing shall occupy a minimum of 25% of the total street-facing façade. c. Buildings shall have a distinct base and top. The base of the building (ground-floor level) shall be considered from grade to 12 ft above grade. The base shall be visually distinguished from the top of the building by any of the following physical transitions: a change in brick pattern, a change in surface or siding materials, a change in color, or a change in the size or orientation of window types. d. To avoid long, monotonous, uninterrupted walls, buildings shall incorporate exterior wall off-sets, projections and/or recesses. At least 1 ft of horizontal variation shall be used at intervals of 40 ft or less along the building's primary façade on the ground-floor level. e. Blank, windowless walls in excess of 750 sq ft are prohibited when facing a public street, unless required by the Building Code. In instances where a blank wall exceeds 750 sq ft, it shall be articulated or intensive landscaping shall be provided. f. Garage doors shall be painted to match the color or color palette used on the rest of the buildings.

Table 19.505.3.D Multifamily Design Guidelines and Standards		
Design Element	**Design Guideline (Discretionary Process)**	**Design Standard (Objective Process)**
8. Landscaping	Landscaping of multifamily developments should be used to provide a canopy for open spaces and courtyards, and to buffer the development from adjacent properties. Existing, healthy trees should be preserved whenever possible. Landscape strategies that conserve water shall be included. Hardscapes shall be shaded where possible, as a means of reducing energy costs (heat island effect) and improving stormwater management.	a. For every 2,000 sq ft of site area, 1 tree shall be planted or 1 existing tree shall be preserved. Preserved tree(s) must be at least 6 inches in diameter at breast height (DBH) and cannot be listed as a nuisance species in the Milwaukie Native Plant List. ~~(1) New trees must be listed as native trees in the Milwaukie Native Plant List.~~ ~~(2) Preserved tree(s) must be at least 6 in diameter at breast height (DBH) and cannot be listed as a nuisance species in the Milwaukie Native Plant List.~~ b. Trees shall be planted to provide, within 5 years, canopy coverage for at least ⅓ of any common open space or courtyard. Compliance with this standard is based on the expected growth of the selected trees. c. On sites with a side or rear lot line that abuts an R-10, R-7, or R-5 Zone, landscaping, or a combination of fencing and landscaping, shall be used to provide a sight-obscuring screen 6 ft high along the abutting property line. Landscaping used for screening must attain the 6 ft height within 24 months of planting. d. For projects with more than 20 units: (1) Any irrigation system shall minimize water use by incorporating a rain sensor, rotor irrigation heads, or a drip irrigation system. (2) To reduce the "heat island" effect, highly reflective paving materials with a solar reflective index of at least 29 shall be used on at least 25% of hardscape surfaces.
13. Safety	Multifamily development should be designed to maximize visual surveillance, create defensible spaces, and define access to and from the site. Lighting should be provided that is adequate for safety and surveillance, while not imposing lighting impacts to nearby properties. The site should be generally consistent with the principles of Crime Prevention Through Environmental Design: • Natural Surveillance: Areas where people and their activities can be readily observed. • Natural Access Control: Guide how people come to and from a space through careful placement of entrances, landscaping, fences, and lighting. • Territorial Reinforcement: Increased definition of space	a. At least 70% of the street or common open space frontage shall be visible from the following areas on 1 or more dwelling units: a front door; a ground-floor window (except a garage window); or a second-story window placed no higher than 3.5 ft from the floor to the bottom of the windowsill. b. All outdoor common open spaces and streets shall be visible from 50% of the units that face it. A unit meets this criterion when at least 1 window of a frequently used room—such as a kitchen, living room and dining room, but not bedroom or bathroom—faces a common open space or street. c. Uses on the site shall be illuminated as follows: (1) Parking and loading areas: 0.5 footcandle minimum. (2) Walkways: 0.5 footcandle minimum and average of 1.5 footcandles. (3) Building entrances: 1 footcandle minimum with an average of 3.5 footcandles, except that secondary entrances may have an average of 2.0 footcandles. d. Maximum illumination at the property line shall not exceed 0.5 footcandles. However, where a site abuts a nonresidential district, maximum illumination at the property line shall not exceed 1 footcandle.

Table 19.505.3.D Multifamily Design Guidelines and Standards		
Design Element	**Design Guideline (Discretionary Process)**	**Design Standard (Objective Process)**
	improves proprietary concern and reinforces social control.	This standard does not apply where the property line is adjacent to a public right-of-way. e. Developments shall use full cut-off lighting fixtures to avoid off-site lighting, night sky pollution, and shining lights into residential units.

CHAPTER 19.600 OFF-STREET PARKING AND LOADING

19.602 APPLICABILITY

19.602.5 Improvements to Existing Off-Street Parking and Loading Areas

C. Areas of Required Improvement

5. New perimeter landscape buffers, islands, and medians, as applicable, per Subsection 19.606.2.~~E~~.

19.605 VEHICLE PARKING QUANTITY REQUIREMENTS

19.605.3 Exemptions and By-Right Reductions to Quantity Requirements

The following exemptions and by-right reductions cannot be used to further modify any parking modification or determination granted under Subsection 19.605.2.

B. Reductions to Minimum Parking Requirements

Applicants are allowed to utilize multiple reductions from Subsections 19.605.3.B.2-7, provided that the total reduction in required parking does not exceed 25% of the minimum quantity requirement listed in Table 19.605.1. The total reduction in required parking is increased to 30% in the Downtown Mixed Use Zone DMU. Applicants may not utilize the reduction in Subsection 19.605.3.B.1 in conjunction with any other reduction in Subsection 19.605.3.B.

1. Reductions for Neighborhood Commercial Areas

The minimum parking requirements of Table 19.605.1 shall be reduced by 50% for the properties described below:

a. Properties zoned Commercial Limited (C-L).

b. Properties zoned Commercial Neighborhood (C-N).

c. Properties in the Neighborhood Mixed-Use (NMU) Zone in the area bounded by 40th ~~42nd~~ Avenue, King Road, 44th ~~40th~~ Avenue, and Jackson Street.

~~d. Properties in the Neighborhood Mixed-Use (NMU) Zone in the area bounded by 42nd Avenue, Harrison Street, 44th Avenue, and Jackson Street.~~

19.606 PARKING AREA DESIGN AND LANDSCAPING

19.606.2 Landscaping

E. Other Parking Area Landscaping Provisions

5. Pedestrian walkways are allowed within perimeter and interior landscape buffers if the landscape buffer is at least 2 ft wider than required in Subsections 19.606.2.C.1 and 19.606.2.D.3.b.

19.607 OFF-STREET PARKING STANDARDS FOR RESIDENTIAL AREAS

19.607.1 Residential Driveways and Vehicle Parking Areas

Subsection 19.607.1 is intended to preserve residential neighborhood character by establishing off-street parking standards. The provisions of Subsection 19.607.1 apply to passenger vehicles and off-street parking areas for rowhouses, cottage clusters, duplexes, single-family detached dwellings, and residential homes in all zones, unless specifically stated otherwise.

D. Parking Area Limitations

Uncovered parking spaces and maneuvering areas for vehicles, and for recreational vehicles and pleasure craft as described in Subsection 19.607.2.B, have the following area limitations. See Figure 19.607.1.D. The pole portion of a flag lot is not included in these area limitations.

These standards do not apply to off-street parking for cottage clusters, which are subject to the standards in Subsection 19.505.4; nor to rowhouses, which are subject to the standards in Subsection 19.505.5.

1~~a~~. Uncovered parking spaces and maneuvering areas cannot exceed 50% of the front yard area.

2~~b~~. Uncovered parking spaces and maneuvering areas cannot exceed 30% of the required street side yard area.

3~~c~~. No more than 3 residential parking spaces are allowed within the required front yard. A residential parking space in the required front yard is any 9- x 18-ft rectangle that is entirely within the required front yard that does not overlap with another 9- x 18-ft rectangle within the required front yard.

CHAPTER 19.900 LAND USE APPLICATIONS

19.901 INTRODUCTION

Table 19.901
Land Use Applications

Application Type	Municipal Code Location	Review Types
Community Service Use	Section 19.904	I, II, III

[1] Level of review determined by City Attorney per Section 19.902.4.A.

[2] Level of review determined by City Attorney per Section 19.902.6.A.1.

19.904 COMMUNITY SERVICE USES

19.904.7 Specific Standards for Schools

Public, private or parochial, elementary, secondary, preschool, nursery schools, kindergartens, and day-care centers are included.

D. Where Subsection 19.904.7.B is applicable, a s~~S~~ight-obscuring fence of 4 to 6 ft in height shall be provided to separate the play area from adjacent residential uses.

19.905 CONDITIONAL USES

19.905.6 Conditional Use Permit

D. A conditional use permit is not affected by a change in ownership of the use or the property containing the use. A conditional use permit is valid unless one of the following occurs:

1. There is a change in use.
2. The permit is suspended per the procedures in Subsection 19.905.7~~6~~.
3. The use is discontinued as described in Subsection 19.905.8.

E. Compliance with the terms and conditions of the conditional use permit is required on an ongoing basis.

F. The notice of decision, Planning Commission minutes, and other city records shall constitute the conditional use permit for conditional uses that were approved prior to the effective date of this ordinance.

19.905.7 Review of Existing Conditional Use Permits

C. If the owner and/or operator of the conditional use cannot or does not resolve the issue in Subsection 19.905.7.B, the matter shall be heard by the Planning Commission to review the conditional use permit and to consider modification, suspension, or revocation of the conditional use permit. The review shall follow the procedures of Section 19.1006 Type III Review. The owner and/or operator shall not be charged a fee for this review.

The Planning Commission may take the following actions in consideration of the conditional use permit:

3. Modify the conditional use permit to address the circumstance(s) that gave rise to the issue. Modifications to the conditional use permit shall be based on factors relevant to the approval criteria for conditional uses in Subsection 19.905.4. The Planning Commission may opt to suspend the permit per Subsection 19.905.7.C.2~~1~~ until compliance with the modified conditional use permit is achieved.

19.906 DEVELOPMENT REVIEW

19.906.2 Applicability

B. Type II Review

The following development proposals must submit a development review application and are subject to the requirements of this section. Type II development review does not apply to development proposals in the downtown zones as these zones have a separate design review process.

1. New development, or expansions or modifications to existing development, for which the applicant elects, where a choice is available, to have the proposal reviewed against discretionary criteria or standards.
2. New construction of over 1,000 sq ft, either: 1) in the Manufacturing Zone within 120 ft of areas zoned for residential uses, or 2) within any part of the Business Industrial Zone, or 3) within any part of the North Milwaukie Industrial Area.
3. New development or expansions, or modifications to existing development, where the Planning Director determines that the scale of development and/or the level of discretion required to evaluate applicable standards and criteria is not appropriate for a Type I development review.

C. Exemptions

The following development proposals are not required to submit a development review application and are exempt from the requirements of this section. Proposals that are exempt from this section must still comply with all applicable development and design standards. For proposals that require a development permit, compliance with standards will be reviewed during the permit review process.

3. Interior modifications to existing buildings that do not involve a change of primary use.

19.907 DOWNTOWN DESIGN REVIEW

19.907.3 Review Process

B. Review Types

To achieve the purpose of the downtown design standards, there are three downtown design review processes through which to apply for approval:

3. Type III

The discretionary review track provides for a Type III review process pursuant to Section 19.1006, through which the Design and Landmarks Committee and Planning Commission determine substantial consistency with the purpose statement of the relevant standard or standards and the Milwaukie Downtown Design Guidelines. It generally applies to new development and renovation/remodeling projects, as listed in Subsection 19.907.2.D.

19.911 VARIANCES

19.911.6 Building Height Variance in the Downtown Mixed Use Zone

A. Intent

To provide a discretionary option for variances to maximum building heights in the Downtown Mixed Use Zone to reward buildings of truly exceptional design that respond to the specific context of their location and provide desired public benefits and/or amenities.

B. Applicability

The Type III building height variance is an option for proposed buildings that exceed the base maximum building heights or stories and allowed height through bonuses specified in Figure 19.304-4 ~~and~~ or do not elect to use the height bonuses in Subsection 19.304.5.B.3.

CHAPTER 19.1000 REVIEW PROCEDURES

19.1002 PREAPPLICATION CONFERENCE

19.1002.2 Applicability

A. For Type I applications, a preapplication conference is optional if MMC Chapter 19.700 is not applicable to the proposal as determined by MMC Section 19.702.

CHAPTER 19.1200 SOLAR ACCESS PROTECTION

19.1203.6 Protection from Future Shade

The applicant shall file a note on the plat or other documents in the office of the County Recorder binding the applicant and subsequent purchasers to comply with the future shade protection standards in Subsection 19.1203.3~~6~~. The City shall be made a party of any covenant or restriction created to enforce any provision of this subsection. The covenant or restriction shall not be amended without written City approval.