

**Application for
Type III
Design Review**

**Gillis Properties
Elk Rock Estates
Cluster Development
12205/ 12225 SE 19th St.
Milwaukie, Oregon 97206**

Revised February 25, 2019

Revisions to initial narrative are denoted by underlined, italic text

City of Milwaukie
6101 SE Johnson Creek Blvd
Milwaukie, OR 97206

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Project Information:

Property Owner: Gillis Properties LLC
11650 SW 67th Ave, Ste. 210
Tigard OR 97223 PO Box 61426
Matt Gillis
matthew.gillis@mac.com

Architect: Iselin Architects, P.C.
1307 Seventh Street
Oregon City, OR 97045
Todd Iselin, Project Architect
503-656-1942 phone
todd@iselinarch.com

Civil Engineer: Harper Houf Peterson Righellis, Inc
205 SE Spokane St
Portland, OR 97202
Ken Valentine, P.E.
503.221.1131 phone
ken@HHPR.com

Site Address: 12205/ 12225 SE 19th St
Milwaukie, OR 97206
Tax Lots 3200 and 3300
Map 1 1E 35DD

Site Area: Aprox. 3.66 acres

Zone: R-5, Moderate Density Residential Zone 5000 s.f.
Development proposed as Cluster Development as allowed per
Milwaukie Municipal Code Section 19.402.12.C.

Project Summary:

This Application seeks approval for a total of 12 single family detached homes (10 new and 2 existing homes to be remodeled) on a site located between 19th St and the Willamette slough adjacent to Elk Rock park.

The site is constrained by flood plain development standards, HCA zone requirements and the Willamette Greenway overlay. A consolidation of the two parcels, with no additional partition of sub-division is proposed. *Development in strict compliance with the standards* of the R-5 base zone are not feasible given the overlay zone restrictions and minimum lot sizes.

The two existing homes fronting SE 19th St are proposed to be remodeled and one additional home constructed fronting 19th St. This home is proposed to be craftsman style homes to blend with the existing neighborhood and will be two storey with a tall crawl space at the rear due to the topography of the site. A proposed private drive will serve an additional 9 new homes with 6 of these backing up to the slough and 3 located across the street backing up to the homes on SE 19th St. These homes are proposed to be built in a NW contemporary style incorporating modern elements with natural timber and wood accents and stone accents. The use of the natural wood products is proposed to pay homage to the logging history of the site which was once a log storage area. The stone proposed for the accents will match the natural stone outcropping on adjacent Elk Rock Island, which is a local landmark. *The new homes proposed at the lower level of the site will be 3 stories with a garage located within the flood plain and living areas above.* All buildings are proposed to be designed in accordance with FEMA standards for construction within the flood plain.

The new homes are proposed will have 3-5 bedrooms and 2 1/2- 3 1/2 baths and designed to be sold at market rate with the land held in common ownership by the Home Owners association which will maintain the grounds and infrastructure on the Project Site.

Variances or adjustments are being sought with this application for the following items:

1. A reduced side yard setback from 25' to 20' on the south side of the property. This is proposed to allow for a logical driveway placement and to allow for a reasonable building footprint below the existing home on this side of the site. The 20' proposed setback will also allow the proposed new home to align with the existing home which is set back 20' from south property line. We believe this requested variance also meets the intent of the Code to provide an increased perimeter buffer since this property line abuts a 40' wide unimproved right of way which will likely never be improved due to the identified wetland within the right of way. The property on the opposite side of this right of way will also remain open space since it is a public park.

2. A *Type III* variance for garage door width exceeding 50% of the front elevation is also being sought. This is proposed to allow for traditional 2 car garages, rather than tandem garages for the narrow houses proposed to meet market demand. These garage doors will have glazing and a stained wood appearance. Approval of this variance will also provide more convenient off street parking to avoid potential congestion within the existing neighborhood.

3. A *Type III* variance is being sought to allow for 3 story buildings facing the slough rather than the 2 1/2 stories permitted by Table 19.301.4. All proposed buildings comply with the maximum measured height requirements and have low pitched roofs to minimize the impact on views from the Willamette River and public right of ways.

Milwaukie Municipal Code Compliance Summary:

CHAPTER 18.04 FLOOD HAZARD AREAS

18.04.010 PURPOSE

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- A. To protect human life and health;
- B. To minimize expenditure of public money and costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
- F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard;
- H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions; and
- I. To maintain the functions and values of floodplains such as allowing for storage and conveyance of stream flows through existing and natural flood conveyance systems.

The proposed development will be developed with sound engineering practices to protect human life and property, minimize damage to public infrastructure and allow no interruption to natural flood conveyance systems.

18.04.020 METHODS OF REDUCING FLOOD LOSSES

In order to accomplish its purposes, this chapter includes methods and provisions for:

A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

D. Controlling filling, grading, dredging, and other development which may increase flood damage; and

E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

The proposed development will allow safe residential development within the flood plain by elevating living spaces of new homes above the 100 year flood elevation and allowing flood waters to flow under occupied areas in a way that will not unnaturally divert flood waters that may adversely impact other areas within the flood plain. Filling and grading proposed is balanced and only the minimal necessary to allow for safe vehicular access.

18.04.030 DEFINITIONS

Unless specifically defined in this section, the words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

“Appeal” means to request review of the City’s interpretation of any provision of this chapter or a request for a variance.

“Area of February 1996 inundation” means the areas along the Willamette River and its backwaters of Johnson and Kellogg Creeks that were flooded to elevation 34.5 (NGVD) in February of 1996.

“Area of shallow flooding” means a designated AO or AH Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one (1) to three (3) feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

“Area of special flood hazard” means the land in the floodplain within a community subject to a one percent (1%) or greater chance of flooding in any given year. Designation on maps always includes the letter A.

“Base flood” means the flood having a one percent (1%) chance of being equaled or exceeded in any given year. Also referred to as the one hundred (100)-year flood. Designation on maps always includes the letter A.

“Basement” means any area of the building having its floor subgrade (below ground level) on all sides.

“City” means the City of Milwaukie, Oregon.

“Critical facility” means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools; nursing homes; hospitals; police, fire, and emergency response installations; and installations that produce, use, or store hazardous materials or hazardous waste.

“Critical feature” means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

“Development” means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or the storage of equipment or materials located within the area of special flood hazard.

“Design flood height” means the higher elevation of the following:

1. The elevation of the one hundred (100)-year storm as defined in FEMA Flood Insurance Studies and shown as Zone A on Flood Insurance Rate Maps; or
2. Water surface elevation of 34.5, the elevation of the February 1996 flood event measured for the Willamette River.

“Elevated building” means, for insurance purposes, a nonbasement building that has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

“Existing manufactured home park or subdivision” means a manufactured home park subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations.

“Expansion to an existing manufactured home park or subdivision” means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

“FEMA” means the Federal Emergency Management Agency.

“Flood” or “flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters; or
2. The unusual and rapid accumulation of runoff of surface waters from any source.

“Flood Insurance Rate Map (FIRM)” means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

“Flood Insurance Study” means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary Floodway Map, and the water surface elevation of the base flood.

“Flood management areas” means all lands contained within the one hundred (100)-year floodplain, and floodway as shown on the Federal Emergency Management Agency Flood

Insurance Rate Maps and Floodway Maps, and the areas of inundation for the February 1996 flood as shown on the Metro Water Quality and Flood Management Area Maps.

“Flood storage area” means that area below the design flood height but above bankful stage, which is capable of storing flood waters during a flood event.

“Floodway” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.

“Habitable floor” means any floor usable for living purposes, which includes working, sleeping, eating, cooking, or recreation, or a combination thereof. A floor used only for storage purposes is not a “habitable floor.”

“Levee” means a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

“Levee system” means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

“Lowest floor” means the lowest floor of the lowest enclosed area (including basements and any crawlspace that is below grade). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage, in an area other than a basement area, is not considered a building’s lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this chapter.

“Manufactured home” means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and is designated for use with or without a permanent foundation when connected to the required utilities. The term “manufactured home” does not include recreational vehicles, park trailers, travel trailers, and other similar vehicles.

“Manufactured home park or subdivision” means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

“Mean sea level” means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community’s flood insurance rate map are referenced.

“New construction” means structures for which the “start of construction” commenced on or after the effective date of the ordinance codified in this chapter.

“New manufactured home park or subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of adopted floodplain management regulations.

“Recreational vehicle” means a vehicle that is:

1. Built on a single chassis;
2. Four hundred (400) square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck; and

4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

“Remedy a violation” means to bring a structure or other development into compliance with State or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of this chapter, or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

“Start of construction” means and includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within one hundred eighty (180) days of the permit date. The “actual start” means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation, or the placement of a manufactured home on a foundation. “Permanent construction” does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footing, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

“Structure” means that which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner principally above ground.

“Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

Substantial Improvement

1. “Substantial improvement” means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either:

a. Before the improvement or repair is started; or

b. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

2. “Substantial improvement” does not include either:

a. Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or

b. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

“Variance” means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter.

“Violation” means the failure of a structure or other development to be fully compliant with the City’s floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in the FEMA standards is presumed to be in violation until such time as that documentation is provided.

“Water dependent” means a structure for commerce or industry that cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.

“Water surface elevation” means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

18.04.040 APPLICABILITY

A. This chapter shall apply to all special flood hazard areas and all flood management areas within the jurisdiction of the City.

B. In the event that a claim for just compensation is made against the City pursuant to Article I, Section 18 of the Oregon Constitution based on the application or enforcement of this title, the City Council may waive, suspend, or modify application or enforcement of this title if the City Council determines that application or enforcement would result in an unconstitutional taking. In the event that the waiver, suspension or modification results in a state statute or regulation becoming directly applicable, the City will enforce the state law as required.

The Project site is identified as a special flood hazard area with a majority of the site at an elevation below the 100 year flood elevation of 36.4’ above sea level. The proposed development will comply with all sections of this Title.

18.04.050 BASIS FOR ESTABLISHING SPECIAL FLOOD HAZARD AND FLOOD MANAGEMENT AREAS

A. The areas of special flood hazard identified by the Federal Insurance Administration in the scientific and engineering report entitled “The Flood Insurance Study for Clackamas County and Incorporated Areas,” dated June 17, 2008, with accompanying flood insurance rate maps and floodway maps, and other FEMA maps and studies for those areas annexed or restudied, are adopted by reference and declared to be a part of this chapter. The Flood Insurance Study is on file at 6101 SE Johnson Creek Boulevard, Milwaukie, Oregon.

B. Those areas designated as flood management areas on the water quality and flood management areas maps prepared by Metro are adopted by reference and declared to be a part of this chapter. Copies of the Metro Water Quality and Flood Management Areas Maps for the City of Milwaukie are on file at 6101 Johnson Creek Boulevard, Milwaukie, Oregon.

The Project site is identified as a special flood hazard area with a majority of the site at an elevation below the 100 year flood elevation of 36.4' above sea level. The proposed development will comply with all sections of this Title.

18.04.060 COMPLIANCE REQUIRED—VIOLATION—PENALTY

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the provisions of this chapter shall be punishable by a fine of not more than one thousand dollars (\$1,000.00). Nothing contained in this subsection shall prevent the City from taking such other lawful action as is necessary to remedy any violation.

The proposed development will comply with all sections of this Title.

18.04.070 ABROGATION AND GREATER RESTRICTIONS

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

The Proposed development will comply with sections of this Chapter and others within the MMC. The most restrictive requirements will be met where conflicts may arise.

18.04.080 INTERPRETATION

In the interpretation and application of this chapter, all provisions shall be:

- A. Considered as minimum requirements;*
- B. Liberally construed in favor of the City; and*
- C. Deemed neither to limit nor repeal any other powers granted under State statutes.*

18.04.090 WARNING—LIABILITY DISCLAIMER

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man made or natural cases. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the City, any officer or employee thereof, or the Federal Insurance

Administration, for flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

The Owner acknowledges the inherent risk of building within the flood plain and will construct the Project in accordance with current federal and local requirements for construction of homes within a flood plain.

18.04.100 DEVELOPMENT PERMIT REQUIRED

A development permit shall be obtained before construction or development begins within any special flood hazard or flood management area established in Section 18.04.050. The permit shall be for all structures, including manufactured homes, as set forth in Section 18.04.030 and for all other development including fill and other activities, also as set forth in Section 18.04.030. Application for a development permit shall be made on forms furnished by the Engineering Director and may include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

- A. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;
- B. Elevation in relation to mean sea level to which any structure has been floodproofed;
- C. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 18.04.160; and
- D. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

A development permit will be obtained prior to beginning work upon approval of this application. Floodproofing of all structures will be appropriately certified and surveyed prior to completion of construction. No watercourses will be altered or relocated as part of the proposed development.

18.04.110 ENGINEERING DIRECTOR—DESIGNATED ADMINISTRATOR

The Engineering Director is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.

The Applicant will work with the City designated administrator to ensure compliance with the requirements of this Chapter.

18.04.120 ENGINEERING DIRECTOR—DUTIES AND RESPONSIBILITIES

The Engineering Director or designee shall act as the local floodplain administrator. Duties of the Engineering Director shall include, but not be limited to:

A. Permit Review

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied;
2. Review all development permits to determine that all necessary permits have been obtained from those federal, State, or local governmental agencies from which prior approval is required;
3. Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood prone area, all new construction and substantial improvements shall:
 - a. Be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
 - b. Be constructed with materials resistant to flood damage;
 - c. Be constructed by methods and practices that minimize flood damages; and
 - d. Be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

The Applicant will work with the City designated administrator to ensure compliance with the requirements of this Chapter and obtain all required permits prior to commencement of construction activities.

B. Use of Available Base Flood Data

When base flood and floodway elevation data has not been provided for flood zones in accordance with Section 18.04.050, the Engineering Director shall obtain, review and reasonably utilize any base flood and floodway elevation data available from a federal, state or other source, in order to administer Subsections 18.04.160.A and B.

C. Information to be Obtained and Maintained

1. Obtain and record the actual elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.
2. For all new or substantially improved floodproofed structures:
 - a. Verify and record the actual elevation (in relation to mean sea level); and
 - b. Maintain the floodproofing certifications required in Subsection 18.04.100.C of this chapter.
3. Maintain for public inspection all records pertaining to the provisions of this chapter.

The Project Site has been surveyed and the base flood elevation shown on submitted drawings.

D. Alteration of Watercourses

1. Notify adjacent communities, the Oregon Department of Land Conservation and Development (DLCDD), and the Federal Emergency Management Agency (FEMA) Insurance and Mitigation Division prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration;
2. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

E. Interpretation of FIRM and Flood Management Area Boundaries

Make interpretations, where needed, as to exact location of the boundaries of the special flood hazard and/or flood management areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 18.04.130.

No alteration of relocation of watercourse is being proposed with this application.

18.04.130 VARIANCE—APPEAL BOARD

A. The Planning Commission as established by the City shall hear and decide appeals and requests for variances from the requirements of this chapter.

B. The Planning Commission shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Engineering Director in the enforcement or administration of this chapter.

C. Those aggrieved by the decision of the Planning Commission or any taxpayer, may have the determination reviewed by the City Council and then under ORS 34.010 to 34.100.

D. In passing upon such applications, the Planning Commission shall consider all technical evaluations, all relevant factors and standards specified in other section of this chapter, and:

1. The danger that materials may be swept onto lands to the injury of others;
2. The danger of life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The necessity to the facility of a waterfront location, where applicable;
6. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
7. The compatibility of the proposed use with existing anticipated development;
8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

9. The safety of access to the property in times of flood for ordinary and emergency vehicles;

10. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site;

11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges; and

12. The balancing of potentially adverse environmental impacts that may result from meeting the requirements of this chapter against the need to minimize impacts of new development on flood heights.

E. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of 0.5 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing subsections D.1 through 12 of this section have been fully considered. As the lot size increases beyond the 0.5 acre, the technical justification required for issuing the variance increases.

F. Upon consideration of the factors of subsection D of this section and the purposes of this chapter, the Planning Commission may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

G. The Engineering Director shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request. (Ord. 1983 § 2, 2008; Ord. 1899 § 2, 2002)

18.04.140 VARIANCE—CONDITIONS

A. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.

B. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

C. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

D. Variances shall only be issued upon findings of the following:

1. A showing of good and sufficient cause;

2. A determination that failure to grant the variance would result in exceptional hardship to the applicant;

3. A determination that the granting of a variance will not result in increased flood heights; additional threats to public safety; extraordinary public expense; or create nuisances, cause fraud on, or victimization of the public as identified in Section 18.04.010; or conflict with existing local laws or ordinances; and

4. That there are no practicable alternatives to the variance.

E. The Planning Commission may impose such conditions as are necessary to limit any adverse flooding or environmental impacts that may result from granting relief.

F. Variances, as interpreted in the National Flood Insurance Program (NFIP), are based on the general zoning law principal that they pertain to a physical piece of property; are not personal in nature; and do not pertain to the structure, its inhabitants, or economic or financial circumstances. They primarily address small lots in densely populated neighborhoods. As such, variances from the flood elevations should be quite rare.

G. Variances may be issued for nonresidential buildings in very limited circumstances, to allow for a lesser degree of floodproofing than watertight or dry floodproofing, where it can be determined that such action will have a low damage potential, complies with all other variance criteria except subsection A, and otherwise complies with Section 18.04.150, General Standards.

H. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below one (1) foot above base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. (Ord. 1983 § 2, 2008; Ord. 1899 § 2, 2002)

No variances to this Chapter are being sought with this proposed development. In the event of a 100 year flood the residents will be able to shelter in place within their “floodproof” homes or safely evacuate their homes. The slough area is not in the velocity zone of the river and no alterations to the natural watercourse is proposed with this proposed Cluster Development.

18.04.150 GENERAL STANDARDS

In all special flood hazard and all flood management areas the following standards are required:

A. Anchoring

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

2. All manufactured homes shall be anchored to resist flotation, collapse, or lateral movement to the structure, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, over-the-top and frame ties to ground anchors (reference FEMA’s “Manufactured Home Installation in Flood Hazard Areas” guidebook for additional techniques).

All new structures in this development will be securely anchored to properly designed foundations to prevent flotation, lateral movement or collapse in accordance with accepted engineering practices.

B. Construction Materials and Methods

1. All new construction and substantial improvements shall be constructed with materials and utilize equipment resistant to flood damage.

2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

3. Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

All new structures will be constructed with concrete foundations extending above the 100 year flood elevation with flood vents to allow for unrestricted flow of flood water. Electrical, heating, ventilation and plumbing systems will be elevated above flood elevation or designed to be watertight per local and federal design guidelines for “floodproof” construction.

C. Utilities

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;

2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters; and

3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

All new water supply and sanitary sewer systems will be designed to minimize or eliminate infiltration of floodwaters in accordance with accepted engineering practices. No on-site waste disposal systems are proposed.

D. Subdivision Proposals

1. All subdivision proposals shall be consistent with the need to minimize flood damage.

2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.

3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

4. Base flood elevation data shall be provided for subdivision proposals and other proposed development which contain at least fifty (50) lots or five (5) acres (whichever is less).

No subdivision is proposed with this application. Criteria do not apply.

E. Review of Building Permits

Where elevation data are not available, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two (2) feet above grade in these zones may result in higher insurance rates.

Elevation data has been provided by Survey. All buildings will be elevated above the 100 year base flood elevation.

F. Balanced Cut and Fill

The displacement of flood storage area by the placement of fill or structures (including building foundations) shall conform to the following standards for balanced cut and fill:

- 1. The placement of fill or structures that displaces ten (10) cubic yards or less of flood storage area is exempt from the requirements of subsection 2 below.**
- 2. The placement of fill or structures that displaces more than ten (10) cubic yards of flood storage area shall comply with the following standards:**
 - a. No net fill in any floodplain is allowed.**
 - b. All fill placed in a floodplain shall be balanced with at least an equal amount of soil material removal.**
 - c. Any excavation below bankful stage shall not count toward compensating for fill.**
 - d. Excavation to balance a fill shall be located on the same parcel as the fill unless it is not reasonable or practicable to do so. In such cases, the excavation may be located in the same drainage basin and as close as possible to the fill site subject to the following:**
 - (1) The proposed excavation and fill will not increase flood impacts for surrounding properties as determined through hydrologic and hydraulic analysis;**
 - (2) The proposed excavation is authorized under applicable municipal code provisions including Section 19.402 Natural Resources; and**
 - (3) Measures to ensure the continued protection and preservation of the excavated area for providing balanced cut and fill shall be approved by the City.**

Balanced cut and fill is proposed on the project site for this development. Grading proposed is the minimum to provide safe vehicular access and construct proposed development. No displacement of flood storage area is proposed and no alteration of natural watercourses will be caused by the development.

- e. Temporary fills permitted during construction shall be removed at the end of construction.**

Any temporary fills needed for construction will be removed at the end of construction. No temporary fills are anticipated, but may be required for wet weather construction.

- f. New culverts, stream crossings, and transportation projects shall be designed as balanced cut and fill projects or designed not to significantly raise the design flood elevation. Such projects shall be designed to minimize the area**

of fill in flood management areas and to minimize erosive velocities. Stream crossings shall be as close to perpendicular to the stream as practicable. Bridges shall be used instead of culverts wherever practicable.

No new culverts, stream crossings or transportation projects are proposed. Criterion does not apply.

g. Excavation and fill required for the construction of detention facilities or structures, and other facilities, shall be designed to reduce or mitigate flood impacts and improve water quality. Levees shall not be used to create vacant buildable lands.

Detention facilities have yet to be designed for this Project, but will likely consist of relatively small stormwater planters at each building designed to mitigate flood impacts and improve water quality.

G. Crawlspace Construction

Below-grade crawlspaces are allowed subject to the following standards as found in FEMA Technical Bulletin 1101, Crawlspace Construction for Buildings Located in Special Flood Hazard Areas.

1. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Hydrostatic loads and the effects of buoyancy can usually be addressed through the required openings stated in Section B of FEMA Technical Bulletin 1101. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five (5) feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer. Other types of foundations are recommended for these areas.

All new structures will be constructed with crawl spaces or garages below the 100 year base flood elevation. Wood frame structures with finish floor elevation 1' above base flood elevation will be anchored to foundations in accordance with accepted engineering practices to resist floatation, collapse and lateral movement. The site is not in a flood velocity area being on the slough behind Elk Rock Island.

2. The crawlspace is an enclosed area below the base flood elevation (BFE) and, as such, must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than one (1) foot above the lowest adjacent exterior grade.

All crawlspaces and garages located below the base flood elevation will have appropriately sized automatic flood vents properly installed.

3. Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the

crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE. The recommended construction practice is to elevate the bottom of joists and all insulation above BFE.

All wood joists, insulation and other building components will be located above the 100 year base flood elevation. Garages and building entry areas located below the base flood elevations will have concrete floors and walls above the flood elevation to be resistant to flood damage.

4. Any building utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.

All building utility systems within the crawlspaces of the proposed homes will be designed so that floodwaters cannot enter the systems. All ductwork and HVAC units will be located above the BFE.

5. The interior grade of a crawlspace below the BFE must not be more than two (2) feet below the lowest adjacent exterior grade.

All crawl spaces will be less than 2' below lowest adjacent grade to allow for drainage.

6. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall, must not exceed four (4) feet at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas.

No crawlspace foundation walls will have more than 4' of unbalanced fill as proposed.

7. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles or gravel or crushed stone drainage by gravity, or mechanical means.

All crawl space will have a low point foundation drain and perimeter drain with perforated pipe set in a gravel bed. Each crawl space will also have a sump pit and pump as a means of quickly evacuating water from the crawl space after a flood event since the infiltration rate of the soil is poor based on geotechnical information obtained by the Owner.

8. The velocity of floodwaters at the site should not exceed five (5) feet per second for any crawlspace. For velocities in excess of five (5) feet per second, other foundation types should be used.

Floodwater velocity at the site is less than 5 feet per second. No special foundation types are required.

18.04.160 SPECIFIC STANDARDS

In all special flood hazard and flood management areas where base flood elevation data has been provided as set forth in Section 18.04.050 and Subsection 18.04.120.B, the following provisions are required:

A. Residential Construction

New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one (1) foot above base flood elevation.

All new structures will be constructed with concrete foundations extending above the 100 year flood elevation and finish floors at least 1' above the base flood elevation.

B. Nonresidential Construction

New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated one (1) foot above design flood height, or, together with attendant utility and sanitary facilities, shall:

1. Be floodproofed so that below one (1) foot above the design flood height the structure is watertight with walls substantially impermeable to the passage of water;
2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
3. Be certified by a registered professional engineer or architect that the design and methods of construction satisfy the standards of this subsection. Such certificates shall be provided to this official as set forth in Subsection 18.04.120.C.
4. Nonresidential structures that are elevated, but not floodproofed, must meet the same standards for space below the lowest floor as described in subsection E;
5. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level; e.g., a building floodproofed to the base flood level will be rated as one (1) foot below.

No non-residential construction is proposed. Criteria do not apply.

C. Manufactured Homes

1. All manufactured homes to be placed or substantially improved on sites:
 - a. Outside of a manufactured home park or subdivision;
 - b. In a new manufactured home park or subdivision;
 - c. In an expansion to an existing manufactured home park or subdivision; or

d. In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood: shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one (1) foot above the design flood height and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.

2. Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A130, AH, and AE on the community's FIRM that are not subject to the above manufactured home provisions shall be elevated so that either:

a. The lowest floor of the manufactured home is elevated one (1) foot above the base flood elevation; or

b. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and are securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.

No manufactured homes are proposed. Criteria do not apply.

D. Recreational Vehicles

1. Recreational vehicles placed on sites are required to either:

a. Be on the site for fewer than one hundred eighty (180) consecutive days;

b. Be fully licensed and ready for highway use, on their wheels or jacking system, be attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or

c. Meet the requirements of subsection C above and the elevation and anchoring requirements for manufactured homes.

2. Nothing in this section shall be deemed to allow the placement, parking, or storage of recreational vehicles as otherwise prohibited by City zoning ordinances.

No recreational vehicle parking will be allowed on the Project Site per the CC&R's for the development.

E. Miscellaneous Provisions

1. For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding are prohibited or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.

b. The bottom of all openings shall be no higher than one (1) foot above grade.

c. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

2. Provisions of this chapter are to be administered concurrently with those of Title 19, the Zoning Ordinance of the City.

Properly sized and located automatic flood vents will be installed at all areas below the 100 year BFE.

18.04.170 FLOODWAYS.

Located within areas of special flood hazard established in Section 18.04.050 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

A. Prohibit encroachments, including fill, new construction, substantial improvements, and other development, unless certification by a registered professional engineer is provided demonstrating, through hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

Cut and balanced fill will be provided with proposed grading on site. Encroachment will be limited to the new building foundation which will be provided with flood vents to not impact the natural watercourse in a flood event.

B. If subsection A of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Sections 18.04.150 through this section.

All new construction will comply with the flood hazard reduction provisions of this Chapter.

C. The placement of any manufactured home within a floodway is prohibited, except in an existing manufactured home park or existing manufactured home subdivision. Subsections A and B of this section must be satisfied.

No manufactured homes are proposed. Criteria do not apply.

18.04.180 CRITICAL FACILITY

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Special Flood Hazard Area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated 3 feet above the design flood height or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

No critical facilities are proposed with this development. Criterion does not apply.

19.301 LOW DENSITY RESIDENTIAL ZONES

The low density residential zones are Residential Zone R-10, Residential Zone R-7, and Residential Zone R-5. These zones implement the Low Density and Moderate Density residential land use designations in the Milwaukie Comprehensive Plan.

19.301.1 Purpose

The low density residential zones are intended to create, maintain, and promote neighborhoods with larger lot sizes where the land use is primarily single-family dwellings. They allow for some nonhousehold living uses but maintain the overall character of a single-family neighborhood.

The proposed development will create a new neighborhood compatible with the existing surrounding neighborhood that consists of single family homes. No non household living uses are proposed with this development..

19.301.2 Allowed Uses in Low Density Residential Zones

Uses allowed, either outright or conditionally, in the low density residential zones are listed in Table 19.301.2 below. Similar uses not listed in the table may be allowed through a Director’s Determination pursuant to Section 19.903. Notes and/or cross references to other applicable code sections are listed in the “Standards/Additional Provisions” column.

See Section 19.201 Definitions for specific descriptions of the uses listed in the table.

Table 19.301.2				
Low Density Residential Uses Allowed				
Use	R-10	R-7	R-5	Standards/Additional Provisions
Residential Uses				
Single-family detached dwelling	P	P	P	Subsection 19.505.1 Single-Family Dwellings and Duplexes
Duplex	P/II	P/II	P	Subsection 19.505.1 Single-Family Dwellings and Duplexes Subsection 19.910.2 Duplexes
Residential home	P	P	P	Subsection 19.505.1 Single-Family Dwellings and Duplexes
Accessory dwelling unit	P/II	P/II	P/II	Subsection 19.910.1 Accessory Dwelling Units

Manufactured dwelling park	N	III	III	Subsection 19.910.3 Manufactured Dwelling Parks.
Senior and retirement housing	CU	CU	CU	Subsection 19.905.9.G Senior and Retirement Housing
Commercial Uses				
Bed and breakfast or Vacation rental	CU	CU	CU	Section 19.905 Conditional Uses
Accessory and Other Uses				
Accessory use	P	P	P	Section 19.503 Accessory Uses
Agricultural or horticultural use	P	P	P	Subsection 19.301.3 Use Limitations and Restrictions
Community service use	CSU	CSU	CSU	Section 19.904 Community Service Uses
Home occupation	P	P	P	Section 19.507 Home Occupation Standards
Short-term rental	P	P	P	Section 19.507 Home Occupation Standards

P = Permitted.

N = Not permitted.

CSU = Permitted with Community Service Use approval subject to provisions of Section 19.904. Type III review required to establish a new CSU or for major modification of an existing CSU. Type I review required for a minor modification of an existing CSU.

CU = Permitted with conditional use approval subject to the provisions of Section 19.905. Type III review required to establish a new CU or for major modification of an existing CU. Type I review required for a minor modification of an existing CU.

II = Type II review required.

III = Type III review required.

The proposed development is for 12 single family homes. However, as the site is located within the Willamette River Greenway, the proposal triggers conditional use review subject to MMC Subsections 19.401.6 and 19.905.4.A which are addressed further in these findings.

19.301.3 Use Limitations and Restrictions

A. Agricultural or horticultural uses are permitted, provided that the following conditions are met.

1. Retail or wholesale sales associated with an agricultural or horticultural use are limited to the allowances for a home occupation per Section 19.507.

2. Livestock, other than usual household pets, are not housed or kept within 100 ft of any dwelling not on the same lot, nor on a lot less than one acre, nor having less than 10,000 sq ft per head of livestock.
3. Poultry kept for the production of meat or for commercial sale of eggs are not housed or kept within 100 ft of any dwelling not on the same lot, nor on a lot less than 1 acre. Poultry kept for other purposes are not subject to these limitations and are allowed per Subsection 19.503.1.C.

B. Marijuana production is not permitted in low density residential zones except as follows:

1. State-licensed production for medical marijuana patients is permitted provided the operation is entirely indoors and meets the security and odor control standards set forth in Subsection 19.509.2.
2. Growing marijuana indoors or outdoors for personal use is permitted consistent with state laws.

The proposed development is for 12 single family homes. No prohibited uses are proposed.

9.301.4 Development Standards

In the low density residential zones, the development standards in Table 19.301.4 apply. Notes and/or cross references to other applicable code sections are listed in the “Standards/Additional Provisions” column. Additional standards are provided in Subsection 19.301.5.

See Sections 19.201 Definitions and 19.202 Measurements for specific descriptions of standards and measurements listed in the table.

Table 19.301.4				
Low Density Residential Development Standards				
Standard	R-10	R-7	R-5	Standards/ Additional Provisions
A. Lot Standards				
1. Minimum lot size (sq ft)				Subsection 19.501.1 Lot Size Exceptions
a. Single-family detached	10,000	7,000	5,000	
b. Duplex	14,000	14,000	10,000	
2. Minimum lot width (ft)	70	60	50	
3. Minimum lot depth (ft)	100		80	
4. Minimum street frontage requirements (ft)				
a. Standard lot			35	

b.	Flag lot			25	
c.	Double flag lot			35	
B. Development Standards					
1.	Minimum yard requirements for primary structures (ft)				Subsection 19.301.5.A Side Yards Subsection 19.501.2 Yard Exceptions Subsection 19.504.8 Flag Lot Design and Development Standards
a.	Front yard	20	20	20	
b.	Side yard	10	5/10	5	
c.	Street side yard	20	20	15	
d.	Rear yard	20	20	20	
2.	Maximum building height for primary structures	2.5 stories or 35 ft, whichever is less			Subsection 19.501.3 Building Height and Side Yard Height Plane Exceptions
3.	Side yard height plane limit				Subsection 19.501.3 Building Height and Side Yard Height Plane Exceptions
a.	Height above ground at minimum required side yard depth (ft)	20			
b.	Slope of plane (degrees)	45			
4.	Maximum lot coverage (percent of total lot area)	30%		35%	Section 19.201 “Lot coverage” definition Subsection 19.301.5.B Lot Coverage
5.	Minimum vegetation (percent of total lot area)	35%	30%	25%	Subsection 19.301.5.C Front Yard Minimum Vegetation Subsection 19.504.7 Minimum Vegetation
C. Other Standards					
1.	Density requirements (dwelling units per acre)				Subsection 19.301.5.D Residential Densities Subsection 19.501.4 Density Exceptions
a.	Minimum	3.5	5.0	7.0	
b.	Maximum	4.4	6.2	8.7	

The proposed development is proposed to be developed by consolidating two adjacent properties and developing the single lot with multiple detached single family homes under the Cluster Housing provisions of MMC 19.402.14. Setbacks are proposed to be in accordance with those allowed for cluster developments and are addressed in that section.

Vegetation and lot coverage will be in accordance with the R-5 zoning standards.

The density for the site per MMC 19.202 is based on a net site area of 10,578 s.f. since a majority of the site is approximately 3' below the 100 year flood elevation. This .243 acre area allows a minimum density of 1.7 homes and a maximum of 2.1 dwellings.

The maximum height of the proposed new structures on the flat portion of the lot is less than 35' and less than 45' for the home facing SE 19th that is located on the sloped portion of the site. The homes on the level portion of the site are proposed to be 3 stories rather than the 2 ½ allowed per Table 19.301.4. A Type III variance is being sought for an exception to this requirement due to the 100 year flood elevation.

Lot coverage is 8.1% and vegetation area is 83.6% as proposed.

19.301.5 Additional Development Standards

A. Side Yards

In the R-7 Zone, one side yard shall be at least 5 ft and one side yard shall be at least 10 ft, except on a corner lot the street side yard shall be 20 ft.

Side yard setbacks are proposed to be in accordance with those for a cluster development with the exception of proposed variance, and area addressed in the applicable sections.

B. Lot Coverage

The lot coverage standards in Subsection 19.301.4.B.4 are modified for specific uses and lot sizes as described below. The reductions and increases are combined for properties that are described by more than one of the situations below.

1. Decreased Lot Coverage for Large Lots

The maximum lot coverage percentage in Subsection 19.301.4.B.4 is reduced by 10 percentage points for a single-family detached dwelling, duplex, or residential home on a lot that is more than 2.5 times larger than the minimum lot size in Subsection 19.301.4.A.1.

The lot with a gross area of 3.66 acres is considered a large lot. The proposed development will have a total of 16,613 s.f. of buildings with a total lot coverage of 10.4%. This is significantly less than the 25% maximum allowed for an oversized lot in the R-5 zone.

2. Increased Lot Coverage for Single-Family Detached Dwellings

The maximum lot coverage percentage in Subsection 19.301.4.B.4 is increased by 10 percentage points for development of a single-family detached dwelling, or an addition to an existing single-family detached dwelling, provided that the portions of the structure that are in excess of 20 ft high, or in excess of one story, are limited to the lot coverage standard listed in Subsection 19.301.4.B.4. Only portions of the structure that are less than 20 ft and no taller than one story are allowed to exceed the listed lot coverage standard. See Figure 19.301.5.B.2 for an illustration of this allowance.

A Type II variance per Subsection 19.911.4.A, to further increase this lot coverage allowance, is prohibited.

No increased lot coverage for single family detached dwellings is requested as part of this application.

**Figure 19.301.5.B.2
Increased Lot Coverage for Single-Family Detached Dwellings**

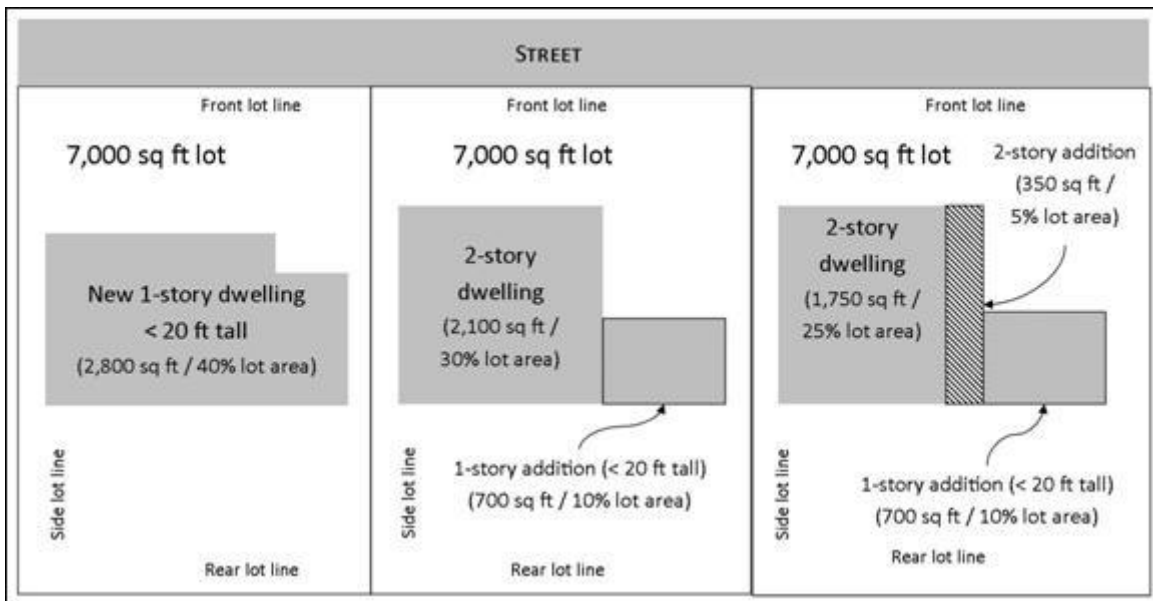


Figure 19.301.5.B.2 illustrates increased lot coverage for lots in Residential Zone R-7 based on 7,000-sq-ft lot area.

3. Increased Lot Coverage for Duplexes

The maximum lot coverage percentage in Subsection 19.301.4.B.4 is increased by 20 percentage points for a duplex.

Criterion does not apply. No duplexes are proposed.

4. Increased Lot Coverage for Detached Accessory Dwelling Units

The maximum lot coverage percentage in Subsection 19.301.4.B.4 is increased by 5 percentage points for the development of a new detached accessory dwelling unit. This allowance applies only to the detached accessory structure and does not allow for the primary structure or other accessory structures to exceed lot coverage standards.

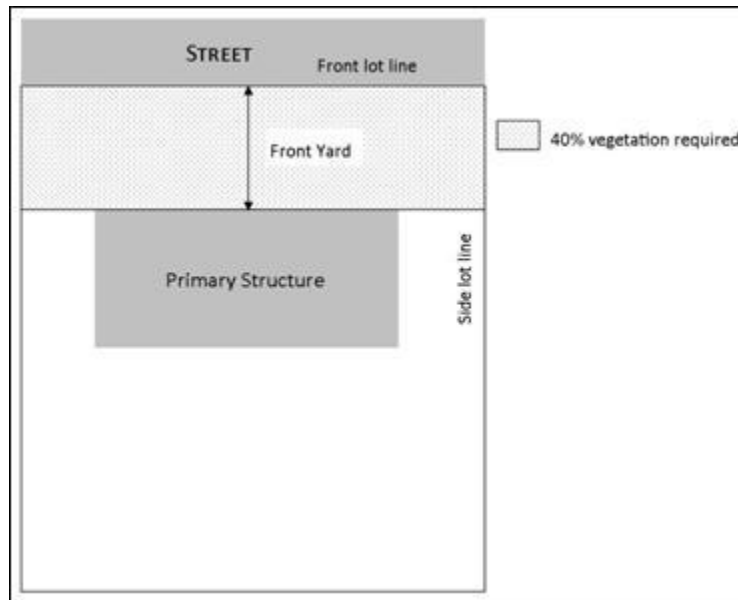
Criterion does not apply. No accessory dwelling units are proposed.

C. Front Yard Minimum Vegetation

At least 40% of the front yard shall be vegetated. The front yard vegetation area required by this subsection counts toward the minimum required vegetation for the lot. A property may provide less than the 40% of the front yard vegetation requirement if it is necessary to provide a turnaround area so that vehicles can enter a collector or arterial street in a forward motion.

Approval of Front yard vegetation less than 40% is requested for the proposed development to allow for the creation of a private road which will allow for safe maneuvering of vehicles onto SE 19th St.. Existing homes to be retained on the site do not comply with current zoning requirements.

Front Yard Minimum Vegetation



D. Residential Densities

The minimum and maximum development densities in Subsection 19.301.4.C.1 are applicable for land divisions and replats that change the number of lots.

If a proposal for a replat or land division is not able to meet the minimum density requirement—due to the dimensional requirements for lot width, lot depth, or lot frontage—the minimum density requirement shall instead be equal to the maximum number of lots that can be obtained from the site given its dimensional constraints. The inability of new lot lines to meet required yard dimensions from existing structures shall not be considered as a basis for automatically lowering the minimum density requirement.

A consolidation of the 2 properties as proposed would yield a minimum and maximum density of 2 homes due to the large area of the site within the flood plain. The development is proposed as a cluster development in accordance with the provisions of Section 19.402. The increased density proposed for this development is consistent with the Goals of the City’s Comprehensive Plan and would be significantly less than the 29-32 dwelling units that would be allowed if the entire property was above the 100 year flood plain.

E. Accessory Structure Standards

Standards specific to accessory structures are contained in Section 19.502.

A shared dock for kayaks, canoes and paddleboards is the only proposed accessory structure on the site. This will be properly approved and permitted by all agencies having jurisdiction prior to construction.

F. Number of Dwelling Structures

In the low density residential zones, 1 primary building designed for dwelling purposes shall be permitted per lot. See Subsection 19.504.4.

The site is proposed to be developed with a total of 12 dwelling units as allowed under the cluster development provisions of MMC 19.402.

G. Off-Street Parking and Loading

Off-street parking and loading is required as specified in Chapter 19.600.

Refer to Chapter 19.600 narrative for compliance.

H. Public Facility Improvements

Transportation requirements and public facility improvements are required as specified in Chapter 19.700.

Refer to Chapter 19.700 discussion for compliance.

I. Additional Standards

Depending upon the type of use and development proposed, the following sections of Chapter 19.500 Supplementary Development Regulations may apply. These sections are referenced for convenience, and do not limit or determine the applicability of other sections within the Milwaukie Municipal Code.

1. Subsection 19.504.4 Buildings on the Same Lot

2. Subsection 19.504.8 Flag Lot Design and Development Standards
3. Subsection 19.505.1 Single-Family Dwellings and Duplexes
4. Subsection 19.505.2 Garages and Carports
5. Subsection 19.506.4 Manufactured Dwelling Siting and Design Standards, Siting Standards

Refer to other sections of this application for compliance with applicable standards of the Milwaukie Municipal Code.

19.401 WILLAMETTE GREENWAY ZONE WG

19.401.1 Purpose

The purpose of the Willamette Greenway Zone is to protect, conserve, enhance, and maintain the natural, scenic, historic, economic, and recreational qualities of lands along the Willamette River and major courses flowing into the Willamette River.

19.401.2 Area Defined

The Willamette Greenway Zone is that area within the Willamette Greenway plan boundary identified on the Zoning Map. The WG Zone is in combination with the underlying zone.

A majority of this site is within the Willamette Greenway plan boundary as identified on the Zoning Map.

19.401.3 Limitations on Use

All land use actions and any change or intensification of use, or development permitted in the underlying zone, are conditional uses, subject to the provisions of Section 19.905.

Prohibited uses:

- A. Commercial, industrial and residential structures and residential accessory structures exceeding 35 ft in height west of McLoughlin Blvd;
- B. Residential floating structures;
- C. New private noncommercial boathouses or storage structures, including temporary structures;
- D. New private noncommercial docks exceeding 400 sq ft;
- E. Grading and tree cutting is prohibited in the buffer, except as allowed in Subsections 19.401.8.B.1 through 6.

Structures within the Greenway are proposed to be less than 35' in height. No prohibited uses are proposed with this application. The proposed private noncommercial dock will be less than 200 square feet. No grading or tree removal is proposed within the 50' buffer from the top of the slough bank as identified in the HCA delineation submitted as part of this application. No additional grading or tree cutting is proposed outside the boundary of the proposed development.

19.401.4 Definitions

“Change of use” means making a different use of the land or water which requires construction; alterations of the land, river bed, bank, water, or other areas outside of existing buildings or

structures; and which substantially alters or affects the land or water. It does not include a change of use of a building or other structure that does not substantially alter or affect the land or water upon which it is situated. Landscaping, construction of driveways, modifications of existing structures, or the construction or placement of such subsidiary structures or facilities as are usual and necessary to the use and enjoyment of existing improvements (such as swing sets and patios) shall not be considered a change of use.

“Develop, developing” means activities which result in removal of substantial amounts of vegetation or in the substantial alteration of natural site characteristics; e.g., to construct or alter a structure, to conduct a mining operation, to make a physical change in the use or appearance of land, to divide land into parcels, to create or terminate rights of access.

“Development” means the act, process, or result of developing.

“Floodway” means the channel of the river and the adjacent land areas that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than 1 ft (FEMA definition).

“Intensification” means any change of use; or action which increases or expands the area or amount of an existing use or the level of activity, including remodeling the exterior of a structure if the remodeling substantially alters the appearance of the structure. Maintenance and repair usual and necessary for the continuance of an existing use is not an intensification of use. Reasonable emergency procedures necessary for the safety or the protection of property are not an intensification of use. Residential use of lands within the WG Zone includes the practices and activities customarily related to the use and enjoyment of one’s home. Landscaping, construction of driveways, modifications of existing structures, or the construction or placement of such subsidiary structures or facilities as are usual and necessary to the use and enjoyment of existing improvements (such as swing sets and patios) shall not be considered an intensification of use.

“Large trees” means trees with at least a 6-in caliper at 5 ft of height.

“Native vegetation” means plant species indigenous to the Portland metropolitan area, consisting of trees, shrubs, and ground cover, as identified in the Portland plant list.

“Nonresidential floating structure” means water-dependent or water-related structures, usually made of wood or concrete and containing a flotation system of polystyrene or similar materials, that ride on the river surface anchored by a cable either to the river bed, to piling, or to the riverbank, for uses including, but not limited to: public walks or river access not associated with marina or moorage; waterski jumps; swimmer’s resting platform; storage of marine-related equipment or boat storage; or boat fueling facility. Sometimes fully enclosed buildings are situated atop the floating structure. Restaurants, snack bars, and the like are included in this definition.

“Ordinary high water line” means the line on the bank or shore to which the water ordinarily rises annually. Ordinary high water shall be established by the Division of State Lands (DSL) with reference to historical data, vegetation, field observations, survey, or other generally accepted methods.

“Public access” means facilities that enable the public to safely make physical contact with the river and its environs.

“Residential floating structure” (houseboat or floating home) means single- or multifamily dwellings supported on the river by a flotation system, which may include a system of piles, berths, walkways, and ramps. This is not a water-dependent or water-related use.

“Riparian” means related to, living, or located on the bank of a waterway.

“Riverbank” means a land feature or constructed structure that serves to contain the waters of the river. It can be distinguished from upland areas by the presence of riparian vegetation in close proximity to flowing water. Usually the riverbank represents the limits of seasonal high water and periodic flood waters.

“Security” means any form of surety approved by the City Attorney, including, but not limited to: performance bond, letter of credit, or cash escrow account.

“View window” means an area of unobstructed view. The width of a view window shall be measured at the point where vegetation is removed.

“Water-dependent” means a use or activity which can be carried out only on, in, or adjacent to water areas because the use requires access to the water body for waterborne transportation, recreation, energy production, or source of water.

“Water-related” means uses which are not directly dependent upon access to a water body, but which provide goods or services that are directly associated with water dependent land or waterway use, and which, if not located adjacent to water, would result in a public loss of quality in the goods or services offered. Except as necessary for water-dependent or water-related uses or facilities, residences, parking lots, spoil and dump sites, roads and highways, restaurants, businesses, factories, and trailer parks are not generally considered dependent on or related to water location needs.

19.401.5 Procedures

The following procedures shall govern the application of WG zones:

A. In the WG Zone, all uses and their accessory uses are permitted subject to the provisions of Section 19.905, except as noted in Subsection 19.401.5.B and Subsection 19.401.5.D.

B. Willamette Greenway review is not required for any of the activities listed below:

1. Changes to the interior of a building or alterations of buildings or accessory structures that do not increase the size or alter the configuration of the building or accessory structure footprint;
2. Normal maintenance and repair as necessary for an existing development;
3. Removal of plants listed as nuisance species on the Milwaukie Native Plant List;
4. Addition or modification of existing utility lines, wires, fixtures, equipment, circuits, appliances, and conductors by public or municipal utilities;
5. Flood emergency procedures, and maintenance and repair of existing flood control facilities;
6. Placement of signs, markers, aids, etc., by a public agency to serve the public;
7. Establishment of residential accessory uses, such as lawns, gardens, and play areas, subject to the vegetation buffer requirements of Subsection 19.401.8;

8. Ordinary maintenance and repair of existing buildings, structures, parking lots, or other site improvements;
9. Minor repairs or alterations to existing structures for which no building permit is required;
10. A change of use of a building or other structure that does not substantially alter or affect the land or water upon which it is situated;
11. Construction of driveways;
12. Reasonable emergency procedures as necessary for the safety or protection of property; and
13. Other activities similar to those listed in “1” through “12” above. Such Director determinations, including a finding of consistency with Goal 15, shall be made in accordance with Section 19.903.

Willamette Greenway review and approval is necessary for the proposed residential development and is being sought with this application.

C. The Oregon Department of Parks and Recreation shall be notified of a hearing on a conditional use in the WG Zone. The notice shall be sent via “certified mail, return receipt requested.”

The City will send notice via certified mail, return receipt requested of the public hearing to the Oregon Department of Parks and Recreation upon the City deeming this application complete and setting a date certain for the public meeting.

D. A greenway conditional use is required for all intensification or change of use, or alteration of the vegetation buffer area, or development, as defined in this section. Landscaping, construction of driveways, modifications of existing structures, or the construction or placement of such subsidiary structures or facilities as are usual and necessary to the use and enjoyment of existing improvements shall not be considered a change in use or intensification. Approval shall be granted only if the criteria in Subsection 19.401.6 are met.

The intensification of use within the current mapped Greenway area requires this conditional use application.

E. Submittal Requirements

A vegetation/buffer plan must be submitted for each application for a greenway conditional use permit. A buffer plan is required only if the proposed development impacts the vegetation buffer defined in Subsection 19.401.8.

A vegetation/ buffer plan (Landscape Plan) is being submitted with this application to stabilize and enhance the current slough bank and buffer area which is currently overgrown with invasive plants.

F. Written notice, including a copy of the application, will be sent upon receipt to the Oregon Parks and Recreation Department by certified mail—return receipt requested. The Oregon Division of State Lands, Oregon Department of Fish and Wildlife, and State Marine Board shall also be notified of each application.

The City will send notice via certified mail, return receipt requested of the Public hearing to the Oregon Parks and Recreation Department, Oregon Division of State Lands, Oregon Department of Fish and Wildlife and State Marine Board upon the City deeming this application complete and setting a date certain for the public meeting.

G. Written notice shall be provided to the Oregon Division of State Lands after the land use action is final for activities affecting wetlands or submerged or submersible lands within the Willamette River greenway. The notice shall include local government conditions of approval.

Written notice of the land use action for activities affecting wetlands or submersible lands within the Willamette River Greenway will be forwarded to the Oregon Division of State Lands with local conditions of approval.

19.401.6 Criteria

The following shall be taken into account in the consideration of a conditional use:

A. Whether the land to be developed has been committed to an urban use, as defined under the State Willamette River Greenway Plan;

The land to be developed has been committed to an urban use within the City of Milwaukie through its moderate density R-5 zoning.

B. Compatibility with the scenic, natural, historic, economic, and recreational character of the river;

The proposal is consistent with the scenic, natural, historic, economic and recreational character of the river along this segment. This section of the river has been developed over the past 100 years for residential and commercial use. The proposed residential development is consistent with the surrounding uses on both sides of the river which are primarily residential. This site; located on the slough, contains fill placed within the past 100 years and is not a pristine river frontage. The site was filled for farming use prior to 1940 and was utilized prior to this time as log storage. The proposed development will include a walking path along the slough with interpretive displays to highlight this history. Heavy timber accents on the proposed homes will pay homage to the logging history of the site and rock accents on the exterior will match the stone outcropping of the adjacent Elk Rock Island which has been a navigational landmark along the river throughout history.

C. Protection of views both toward and away from the river;

The proposed development of this site will have no impact on the views toward the river, since the main channel of the river can't currently be viewed from the public right of way.

The slough is only marginally visible during high water and views to the main channel to the south are obstructed by Elk Rock Island. Views to the north will not be impacted due to topography of the site.

Views from the main channel of the river toward the site will not be impacted by the development, since the island/ penninsula separating the slough provides a 300'+ buffer and has native trees and vegetation that obscure views. The proposed development will only be visible from the slough during high water due to the steep bank and 50' offset from the top of the bank. The development proposed will actually enhance the views from the slough through the proposed vegetated buffer enhancement and removal of invasive plants.

D. Landscaping, aesthetic enhancement, open space, and vegetation between the activity and the river, to the maximum extent practicable;

The proposed native landscaping enhancement of the slough bank and buffer will create a more pleasurable open space along the river slough than what currently exists.

E. Public access to and along the river, to the greatest possible degree, by appropriate legal means;

Public access to the river and slough will be retained adjacent to the property along the unimproved Lark St right of way and the adjoining park land with this development. No additional public access is proposed as part of this application.

F. Emphasis on water-oriented and recreational uses;

A small craft dock is proposed at the slough to encourage recreational use of the river by the occupants of the proposed development.

Interpretive plaques along the pedestrian path proposed at the top of the slough bank will spotlight the important history of the river for logging, farming and transportation over the past 150 years.

G. Maintain or increase views between the Willamette River and downtown;

The development will not impact views from the River and downtown from the south since it is located behind Elk Rock. It is located away from the river and to the south of downtown so does not impact any views from the river to downtown from this vantage point.

H. Protection of the natural environment according to regulations in Section 19.402;

The proposed development will enhance the natural environment which has been degraded through the proliferation of invasive plants on the subject site.

I. Advice and recommendations of the Design and Landmark Committee, as appropriate;

The applicant will incorporate any advice and recommendations of the Design and Landmark Committee to the greatest extent possible with the final design for the project.

J. Conformance to applicable Comprehensive Plan policies;

As demonstrated in this application, the proposed development is consistent with the applicable provisions of the Milwaukie Municipal Code, or can be made consistent through the imposition of conditions.

1. *Citizen Involvement- This development has been presented to the neighborhood association and will require a public hearing process to approve satisfying the requirements of this chapter.*
2. *Plan Review and Amendment Process- No changes to the adopted plan are proposed with this application. It is requested that the Conditional Use and variances be approved consistent with the adopted Comprehensive Plan.*
3. *Environmental and Natural Resources- Proposed new construction will comply with Objective #1- Floodplain by constructing all new structures with floors of living areas more than 1' above the 100 year flood elevation. No new public streets will be constructed that would require extensive grading within the flood plain to be 1' above the flood elevation. Objectives #2 Seismic Conditions and #3 Weak Foundation Soils will be incorporated by constructing the buildings as required by current building code requirements with the oversight of a qualified geo-technical engineer and incorporating flood venting as required for foundations within the flood plain. No historic resources exist on the site so this section does not apply. Compliance with the objectives for Open Spaces, Scenic Areas and Natural Resource Elements as identified in the Comprehensive Plan are addressed in further detail in other sections of this application dealing with the Willamette Greenway and natural resource areas.*
4. *Land Use- The proposed development will provide necessary additional housing to the City with responsible development within an area constrained by drainage issues. This development will achieve a reasonable density based on the overall site area for the underlying zone as proposed.*
5. *Transportation, Public Facilities and Energy Conservation- The existing roadway infrastructure is adequate to serve the proposed development and mass transit facilities are within walking distance of the property. Water, Sanitary, Solid Waste, Fire, Police, Schools, Health Care and Government Services currently serve the site adequately. New storm drainage systems will be provided on site to ensure development does not overburden existing systems. Energy conservation objectives will be met with this compact development and by conforming or exceeding the State Energy Code requirements for new construction.*

As the MMC implements the Comprehensive Plan, the proposal therefore conforms to the applicable Comprehensive Plan policies.

K. The request is consistent with applicable plans and programs of the Division of State Lands;

The proposed development will enhance a degraded wetland area and serve to more clearly delineate this Goal 5 resource that is part of the Willamette River.

L. A vegetation buffer plan meeting the conditions of Subsections 19.401.8.A through C.

As demonstrated in the responses to 19.401.8.A-C below, the proposed vegetation buffer will enhance the existing non native vegetation and create a buffer with a trail and

stopping spots for people to appreciate the slough and learn about the history of the river and the surrounding community.

19.401.7 Setbacks

On a case-by-case basis, uses that are not water-dependent or water-related shall be evaluated according to criteria of Subsection 19.401.6 above so that they are directed away from the river. Existing and proposed uses that are water-dependent and water-oriented may be permitted near or at the water's edge subject to review of criteria in Subsection 19.401.6 above.

The proposed residential development is providing a 50' buffer from the top of the slough bank in accordance with the recommendation of the environmental consultant retained by the Owner for this project. A map amendment to the City defined HCA is proposed as part of this application.

19.401.8 Vegetation Buffer Requirements

A. A buffer strip of native vegetation shall be identified along the river, which shall include the land area between the river and a location 25 ft upland from the ordinary high water line. This area shall be preserved, enhanced, or reestablished, except for development otherwise allowed in this title, and subject to the requirements of Subsection 19.401.8.B below.

A 50' buffer strip of native vegetation is proposed upland from the top of the slough bank which is approximately 8' vertically above ordinary high water. This buffer is in excess of that required by this Code provision.

B. Prior to development (e.g., removal of substantial amounts of vegetation or alteration of natural site characteristics) within the buffer, a vegetation buffer plan for the buffer area shall be submitted for review and approval. The plan shall address the following areas and is subject to the following requirements:

1. Riverbank Stabilization

The plan shall identify areas of riverbank erosion, and provide for stabilization. Bioengineering methods for erosion control shall be used when possible. When other forms of bank stabilization are used, pocket plantings or other means shall be used to provide vegetative cover.

No areas of riverbank (or slough bank) erosion have been identified as requiring stabilization. The proposed plantings along the bank and the 50' wide buffer should provide a sufficient bio-engineering method to prevent future erosion.

2. Scenic View Protection (Screening)

The plan shall identify the impact of the removal or disturbance of vegetation on scenic views from the river, public parks, public trails, and designed public overlooks.

The vegetation on the site currently consist of himialyan blackberries on the steeply sloped portion of the slough and field grass within the flat portion of the site. The removal of these invasive plants and replacement with appropriate native species will improve the views to the site from the slough. No views of the site exist from the

river. The residential development will be visible from trails on Elk Rock Island and will be consistent with the existing residential character of the surrounding area.

3. Retain Existing Native Vegetation and Large Trees

The plan shall provide for the retention of existing large trees and existing native vegetation, including small trees, ground covers, and shrubs, within the vegetation buffer area. Removal of native vegetation and large trees is allowed pursuant to the following standards:

- a. Large trees that are diseased, dead, or in danger of falling down may be removed if there is a clear public safety hazard or potential for property damage.
- b. Grading or tree removal is allowed in conjunction with establishing a permitted use. Only the area necessary to accommodate the permitted use shall be altered.
- c. Tree and vegetation removal may be allowed to create 1 view window from the primary residential structure to the river when suitable views cannot be achieved through pruning or other methods. The width of a view window may not exceed 100 ft or 50% of lineal waterfront footage, whichever is lesser. The applicant must clearly demonstrate the need for removal of trees and vegetation for this purpose.

No existing large trees or pristine sections of native vegetation exist on the portion of the site proposed to be developed. The site area to the west of the slough is proposed to be retained in its natural conditions with no tree removal or grading proposed.

An eagles nest in a tree adjacent to the southern property line has been identified and monitored with no activity for a year. The Owner will monitor this tree in the spring and take appropriate precautions if this nest becomes active. It is not anticipated that this tree and nesting environment will be impacted by the proposed development.

4. Restore Native Vegetation

The plan shall provide for restoring lands within the buffer area which have been cleared of vegetation during construction with native vegetation.

The proposed Vegetation Buffer/ Landscape Plan provides for restoring native vegetation which does not currently exist on the Site.

5. Enhance Vegetation Buffer Area

The plan may provide for enhancing lands within the buffer area. Regular pruning and maintenance of native vegetation shall be allowed. Vegetation that is not native, except large trees, may be removed. New plant materials in the buffer strip shall be native vegetation.

The vegetated buffer using all native species will be an enhancement to the existing conditions and will be maintained by the Home Owners Association for the property.

6. Security that the Plan will be Carried Out

The approved vegetation buffer shall be established, or secured, prior to the issuance of any permit for development.

Applicant acknowledges the final approved Vegetation Buffer Plan must be established or secured prior to issuance of any development permit for the Site.

C. The vegetation buffer requirements shall not preclude ordinary pruning and maintenance of vegetation in the buffer strip.

Applicant acknowledges vegetation buffer requirements do not preclude ordinary pruning and maintenance of vegetation in the buffer strip. It is anticipated that the Home Owners Association for this development will maintain and prune the vegetation planted as part of this approved application.

19.401.9 Private Noncommercial Docks

Private noncommercial docks are subject to the following requirements:

A. Only 1 dock is allowed per riverfront lot of record.

A single 8' wide x 24' long dock is proposed for this development. It is proposed to be located at the slough and not along the river.

B. In areas designated as open water areas or special management areas by the Division of State Lands, docks may be restricted or additional requirements may be applied to docks. Restrictions or additional requirements will be identified by DSL in their review of the development application.

No special requirements for docks have been identified by DSL for this proposal.

C. Private, noncommercial docks shall not exceed 400 sq ft (square footage is measured as the width times the length of the outer edge of the structure), with the following exceptions:

1. Legal nonconforming docks or boathouses;
2. Nonconforming structures may be altered or replaced pursuant to Chapter 19.800.

The proposed dock is less than 200 sq ft.

D. Docks, pilings, and walkways shall either be dark natural wood colors, or painted dark earthtones (dark brown or green).

The proposed dock will be a dark natural wood color and pilings will be painted dark brown steel.

E. Private noncommercial docks shall not:

1. Restrict boat access to adjacent properties;
2. Interfere with the commercial navigational use of the river, including transiting, turning, passing, and berthing movements;
3. Interfere with critical fish and wildlife habitat or fishing use of the river as determined by Oregon Department of Fish and Wildlife; nor
4. Significantly add to recreational boating congestion.

The proposed dock location on the slough will not restrict access to adjacent properties, interfere with commercial navigation or interfere with critical fish and wildlife habitat. It is anticipated that this will be a launching area for small non-motorized watercraft only due to the shallowness of the slough during summer months. This is an area that is very infrequently used by recreational boaters at this time.

19.401.10 Greenway Design Plan

The WG Zone is intended to be temporary and will be replaced by the Willamette Greenway Design Plan when it is completed. The Willamette Greenway Design Plan is identified in the Comprehensive Plan of the City.

Applicant acknowledges a future Willamette Greenway Design Plan may be implemented. The current proposal is subject to the WG Zone applicable at this time.

19.402 NATURAL RESOURCES NR

19.402.1 Intent

Section 19.402 is to be interpreted consistently with the following:

A. Section 19.402 provides protection for water quality resources under Statewide Land Use Planning Goal 6 and Sections 1-4 of Title 3 of the Metro Urban Growth Management Functional Plan (UGMFP). Section 19.402 also provides protection for designated natural resources that have been identified for the purposes of implementing Statewide Planning Goal 5 relating to significant natural riparian, wildlife, and wetland resources and Title 13 of the UGMFP.

B. Many of Milwaukie's riparian, wildlife, and wetland resources have been adversely affected by development over time. These regulations seek to minimize additional adverse impacts and to restore and improve resources, where possible, while balancing property rights and development needs of the city.

C. It is also the intent of Section 19.402 to:

1. Designate water quality resources (WQRs) to protect the functions and values of riparian and wetland resources at the time of development.
2. Protect and improve the functions and values that contribute to water quality and to fish and wildlife habitat in urban streamside areas. These functions and values include, but are not limited to:
 - a. Vegetated corridors to separate protected water features from development.
 - b. Microclimate and shade.
 - c. Streamflow moderation and water storage.
 - d. Water filtration, infiltration, and natural purification.
 - e. Bank stabilization and sediment and pollution control.
 - f. Large wood recruitment and retention and natural channel dynamics.
 - g. Organic material resources.
3. Designate habitat conservation areas (HCAs) to implement the performance standards of Title 13 of the UGMFP for riparian areas and fish and wildlife habitat, and to protect significant local Goal 5 resources such as wetlands.

4. Provide nondiscretionary (clear and objective) standards, as well as a discretionary review process, applicable to development in HCAs, in accordance with Goal 5.
5. Allow and encourage habitat-friendly development while minimizing the impact on water quality and fish and wildlife habitat functions.
6. Permit residential cluster development to encourage creative and flexible site design that is sensitive to the land's natural features and adapts to the natural topography.
7. Provide mitigation standards for the replacement of ecological functions and values lost through development in WQRs and HCAs. This includes restoration of designated natural resources that are temporarily disturbed during development, as well as mitigation for permanent disturbance of those areas as a result of development.
8. Preserve existing native vegetation against removal and replacement with lawns, gardens, or other nonnative plantings.

D. Section 19.402 allows development in situations where adverse impacts from the development can be avoided or mitigated and where the strict application of these rules would deny reasonable economic use of property.

E. It is not the intent of Section 19.402 to:

1. Impose any obligation on property owners to restore existing developed sites to predevelopment or natural conditions when no new activity is proposed.
2. Impose any unreasonable hardship against the continued maintenance of existing legal site conditions.
3. Apply to activities that do not affect WQRs or HCAs.
4. Prohibit normal lawn and yard landscape planting and maintenance that does not involve removal and replacement of existing native vegetation. Normal lawn and yard planting and maintenance does not include the planting of invasive nonnative or noxious vegetation, including, but not limited to, plants listed as nuisance species on the Milwaukie Native Plant List established in Subsection 19.402.2.G.

Refer to attached HCA Determination Report and Wetland Delineation documents prepared by Environmental Technical Consultants (ETC) for detailed responses on existing conditions and proposed mitigation and enhancement of degraded water quality resources and habitat conservation areas proposed with this development.

19.402.2 Coordination with Other Regulations

A. Implementation of Section 19.402 is in addition to, and shall be coordinated with, Title 19 Zoning, Title 18 Flood Hazard Regulations, and Chapter 16.28 Erosion Control.

All applicable zoning, flood hazard regulations and erosion control regulations will be complied with in addition to requirements of this section for the proposed development.

B. For properties along the Willamette River, Section 19.402 shall not prohibit the maintenance of view windows, as allowed by Section 19.401 Willamette Greenway Zone WG.

The project site is located within the Willamette Greenway Zone and will comply with requirements of this section in addition to those of this section.

C. Except as provided for in Subsection 19.402.2.B, when applicable provisions of Sections 19.402 and 19.401 are in conflict, the more restrictive provision shall be controlling.

The proposed development is intended to require with the most restrictive sections of the MMC where conflicts may be determined.

D. Nonconforming development that was legally existing for WQRs as of January 16, 2003, the effective date of Ordinance #1912, or that was legally existing for HCAs as of September 15, 2011, the effective date of Ordinance #2036, and that is nonconforming solely because of Section 19.402, shall not be subject to the provisions of Chapter 19.800 Nonconforming Uses and Development. However, development that is nonconforming for other reasons shall be subject to the provisions of Chapter 19.800.

Except for two existing houses constructed around 1938, the proposal is for new development, not nonconforming development.

E. The requirements of Section 19.402 apply in addition to all applicable local, regional, State, and federal regulations, including those for wetlands and flood management areas. Where Section 19.402 imposes restrictions that are more stringent than regional, State, and federal regulations, the requirements of Section 19.402 shall govern.

The wetland determination prepared for this site is being submitted to appropriate State and Federal agencies for approval.

F. Development in or near wetlands and streams may require permits from the Oregon Department of State Lands (DSL) and the U.S. Army Corps of Engineers (Corps). If a federal permit is required, a water quality certification from the Oregon Department of Environmental Quality (DEQ) may also be required. The Planning Director shall notify DSL and the Corps when an application for development within streams and wetlands is submitted. Because these agencies may have more restrictive regulations than the City, applicants are encouraged to contact them before preparing development plans.

State and Federal agencies are being notified and approval sought for this development due to its location within the Willamette River Greenway.

G. A document or other list used to identify native, nuisance, and prohibited plants shall be maintained by the Planning Director and shall be referred to as the "Milwaukie Native Plant List."

H. A document or other list used to identify chemicals that have been demonstrated to be detrimental to water quality and habitat health shall be maintained by the Planning Director and shall be referred to as the "Milwaukie Prohibited Chemicals List."

No detrimental chemicals have been identified as existing on this site and none are proposed.

19.402.3 Applicability

A. The regulations in Section 19.402 apply to all properties that contain, or are within 100 ft of a WQR and/or HCA (including any locally significant Goal 5 wetlands or habitat areas identified by the City of Milwaukie) as shown on the Milwaukie Natural Resource Administrative Map (hereafter "NR Administrative Map").

The Project Site is identified on City Maps as containing both WQR and HCA overlays. The requirements of this Section will be complied with for the proposed development.

B. For properties that do not contain, but are within 100 ft of, a WQR and/or HCA, as shown on the NR Administrative Map, and where an activity not listed as exempt in Subsection 19.402.4.A will disturb more than 150 sq ft, a construction management plan is required in accordance with Subsection 19.402.9 (see also Table 19.402.3).

Section does not apply since the Site contains WQR and HCA overlays.

C. The NR Administrative Map, which shows WQRs and HCAs, is adopted by reference. The NR Administrative Map shall be used to determine the applicability of Section 19.402 and shall be administered in accordance with Subsection 19.402.15.

A map amendment is proposed as part of this application. With this amendment the site still contains protected WQR and HCA areas, but to a lesser extent than current maps indicate.

D. Designated natural resources are shown on the NR Administrative Map as follows:

1. Water quality resources (WQRs) include protected water features and their associated vegetated corridors, as specified in Table 19.402.15. The vegetated corridor is a buffer around each protected water feature, established to prevent damage to the water feature. The width of the vegetated corridor varies depending on the type of protected water feature, upstream drainage area served, and slope adjacent to the protected water feature. The NR Administrative Map is a general indicator of the location of vegetated corridors; the specific location of vegetated corridors shall be determined in the field in accordance with Table 19.402.15.

2. Habitat conservation areas (HCAs) include significant Goal 5 wetlands, riparian areas, and fish and wildlife habitat. HCAs are designated based on a combination of inventory of vegetative cover and analysis of habitat value and urban development value. HCA locations on the NR Administrative Map are assumed to be correct unless demonstrated otherwise; verifications and corrections shall be processed in accordance with the procedures established in Subsection 19.402.15.

A map amendment is proposed as part of this application to more accurately define the boundaries and buffers in accordance with accepted environmental standards. A 50' buffer from the WQR is proposed and will have enhanced natural vegetation as

part of a mitigation plan to be prepared and approved by the City prior to construction. Refer to attached report prepared by ETC.

E. To determine whether a proposed activity on a given property will trigger any requirements of Section 19.402, the City shall use the latest available aerial photographs; a copy of the applicable section of the NR Administrative Map; and, in the case of WQRs, the parameters established in Table 19.402.15. If a property owner or applicant believes that the NR Administrative Map is inaccurate, they may propose corrections according to the standards established in Subsection 19.402.15.

A map amendment is proposed as part of this application to more concisely define the boundaries and buffers in accordance with accepted environmental standards. Refer to attached documents prepared by ETC.

F. In the context of designated natural resources, “disturbance” is a condition or result of an act that “disturbs” as defined in Section 19.201. Disturbance can be either temporary or permanent as noted below.

1. Temporary disturbances are those that occur during an allowed or approved development or activity but will not persist beyond completion of the project. Temporary disturbances include, but are not limited to, accessways for construction equipment; material staging and stockpile areas; and excavation areas for building foundations, utilities, stormwater facilities, etc.
2. Permanent disturbances are those that remain in place after an allowed or approved development or activity is completed. Permanent disturbances include, but are not limited to, buildings, driveways, walkways, and other permanent structures.

Refer to report prepared by ETC for extent of temporary and permanent disturbances proposed with this development.

G. If more than 150 sq ft of area will be disturbed in conjunction with a proposed activity listed as exempt in Subsection 19.402.4.B, a construction management plan shall be submitted according to the provisions of Subsection 19.402.9. This requirement applies even when the proposed activity will not occur within a designated natural resource but is within at least 100 ft of the resource, in accordance with Table 19.402.3.

A construction management plan will be prepared and approved by the City prior to commencement of work for the proposed development.

H. Proposed activities that are listed as exempt or occur more than 100 ft from a WQR or HCA, as shown on the NR Administrative Map or determined in accordance with Table 19.402.15, do not require review under the provisions of Section 19.402.

A construction management plan for the entire development will be submitted, even though a portion of the Project may be exempt or located more than 100' from a WQR or HCA with the proposed map amendment.

I. Those portions of streams, creeks, and other protected water features that appear on the NR Administrative Map but are enclosed in pipes, culverts, or similar structures are not subject to the provisions of Section 19.402, except where a proposed activity will expose or directly disturb the protected water feature, such as with excavation. For WQRs, the underground portion of the protected water feature is not considered a protected water feature for purposes of determining the WQR location as outlined in MMC Table 19.402.15. For HCAs, the boundary verification options provided in MMC 19.402.15 may be used as necessary to determine whether the aboveground characteristics of the underground portion of the protected water feature affects the representation of HCA on the NR Administrative Map.

A Boundary verification has been prepared by ETC as outlined in MMC Table 19.402.15. No underground portions of the protected waterway exist on the Project Site.

J. The requirements of Section 19.402 apply, as shown in Table 19.402.3, both to properties that include a WQR and/or HCA, and to properties that do not include a WQR or HCA but where an activity is proposed within 100 ft of a WQR or HCA.

Table 19.402.3		
Applicability of Requirements of Section 19.402		
Situations/Activities that may Trigger Section 19.402	Prepare Construction Management Plan per Subsection 19.402.9	Comply with Remainder of Section 19.402
Activities listed as exempt per: <ul style="list-style-type: none"> • Subsection 19.402.4.A (outright exemptions for both WQRs and HCAs) • Subsection 19.402.4.B (limited exemptions for HCAs only) 	<p>No</p> <p>No (unless > 150 sq ft of disturbance is proposed)</p>	<p>No</p> <p>No</p>
Nonexempt activities: <ul style="list-style-type: none"> • Outside of WQR and HCA • Within WQR or HCA 	<p>No (unless activity is within 100' of WQR or HCA and > 150 sq ft of disturbance is proposed)</p> <p>Yes</p>	<p>No</p> <p>Yes</p>

The requirements of this section will be complied with as part of this proposed development where located within the WQR/ HCA or within the buffer areas.

K. Activities that are not exempt per Subsection 19.402.4, or prohibited per Subsection 19.402.5, are subject to the Type I, II, or III review process as outlined in Table 19.402.3.K.

Table 19.402.3.K

Types of Process Review for Various Activities

Activity (and applicable code sections)	Type of Review Process		
	Type I (19.1004)	Type II (19.1005)	Type III (19.1006)
Agency-approved natural resource management plans (Subsections 19.402.10.A and C)	✓		
Independent natural resource management plans (Subsections 19.402.10.B and C)		✓	
Limited tree removal (Subsection 19.402.6.B)	✓		
Tree removal that is not exempt or allowable with Type I review (Subsection 19.402.8.A.8)			✓
Activities within HCA that meet nondiscretionary standards (Subsection 19.402.11.D)	✓		
Maintenance of existing utility facilities (Subsection 19.402.6.E)	✓		
Utility connections (Subsection 19.402.6.F)	✓		
Nonemergency abatement of nuisances or violations (Subsection 19.402.6.G)	✓		
Special use activities (Subsections 19.402.7.A and 19.402.11.E)		✓	
Limited disturbance to WQRs (Subsection 19.402.7.D)		✓	

Property line adjustments that balance the HCA distribution (Subsection 19.402.13.E.1 or 2)	✓		
Property line adjustments that otherwise limit HCA disparity (Subsection 19.402.13.E.3)		✓	
Low-impact partitions or replats (put designated natural resources in separate tract) (Subsection 19.402.13.G)		✓	
Other partitions, replats, subdivisions. Development activities that are not exempt or allowable with Type I or II review (Subsections 19.402.8, 19.402.12, and 19.402.13.F, H or I)			✓
Boundary verifications with minor corrections (Subsection 19.402.15.A.1)	✓		
Boundary verifications with substantial corrections (Subsection 19.402.15.A.2)		✓	

A consolidation of the two existing properties and Boundary verification with substantial corrections are propose. No exempt activities are proposed with this application.

L. Where WQRs and HCAs overlap, the WQR overlap area is not included in any calculations of the HCA area for purposes of determining whether HCA-only exemptions are allowed or for calculating allowable HCA disturbances.

The WQR (slough area) is not included in calculations of the HCA for purposes of determining whether HCA only exemptions are allowed for calculation of allowed disturbances.

19.402.4 Exempt Activities

A. Outright Exemptions

The following activities in WQRs or HCAs are exempt from the provisions of Section 19.402:

1. Action taken on a building permit for any portion of a phased development project for which the applicant has previously met the applicable requirements of Section 19.402, including the provision of a construction management plan per Subsection 19.402.9. This exemption applies so long as the building site for new construction was identified on the original application, no new portion of the WQR and/or HCA will be disturbed, and no related land use approvals have expired per Subsection 19.1001.7. This exemption also extends to projects initiated prior to September 15, 2011, the effective date of Ordinance #2036, which have already been approved through Water Quality Resource Review.

A construction management plan for the entire development will be submitted. The proposed development may be phased as dictated by the Owners finances so approval for the overall development site is being sought.

2. Stream, wetland, riparian, and upland enhancement or restoration projects and development in compliance with a natural resource management plan or mitigation plan approved by the City or by a State or federal agency.

All wetland enhancement proposed will be part of the overall development plan. No exempt enhancement plan or mitigation plan is proposed as part of this application.

3. Emergency procedures or activities undertaken that are necessary to remove or abate hazards to person or property, provided that the time frame for such remedial or preventative action is too short to allow for compliance with the requirements of Section 19.402. After the emergency, the person or agency undertaking the action shall repair any impacts to the designated natural resource resulting from the emergency action; e.g., remove any temporary flood protection such as sandbags, restore hydrologic connections, or replant disturbed areas with native vegetation.

No exemption for emergency procedures or activities allowed under this subsection are proposed as part of this application.

4. The planting or propagation of plants categorized as native species on the Milwaukie Native Plant List.

Plantings within the buffer area will be from the native species identified on the Milwaukie Native Plant list.

5. Removal of plants categorized as nuisance species on the Milwaukie Native Plant List. After removal, all open soil areas shall be replanted and/or protected from erosion.

Nuisance plants within the HCA and buffer area are proposed to be removed and replanted with appropriate native species to prevent erosion as part of this application.

6. Removal of trees under any of the following circumstances:

- a. The tree is a “downed tree” as defined in Section 19.201, the tree has been downed by natural causes, and no more than 150 sq ft of earth disturbance will occur in the process of removing the tree.
- b. The tree is categorized as a nuisance species on the Milwaukie Native Plant List, no more than 3 such trees will be removed from 1 property during any 12-month period, and no more than 150 sq ft of earth disturbance will occur in the process of removing the tree(s).
- c. The tree presents an emergency situation with immediate danger to persons or property, as described in Subsection 19.402.4.A.3. Emergency situations may include, but are not limited to, situations in which a tree or portion of a tree has been compromised and has damaged, or is damaging, structures or utilities on private or public property, or where a tree or portion of a tree is prohibiting safe passage in the public right-of-way. Examples are trees that have fallen into or against a house or other occupied building, or trees downed across power lines or roadways. This exemption is limited to removal of the tree or portion of the tree as necessary to eliminate the hazard. Any damage or impacts to the designated natural resource shall be repaired after the emergency has been resolved.
- d. Removal of the tree is in accordance with an approved natural resource management plan per Subsection 19.402.10.
- e. Major pruning of trees within 10 ft of existing structures.

The portion of the site proposed to be developed has no trees that conflict with the proposed development. No tree cutting or pruning is proposed at this time.

7. Landscaping and maintenance of existing landscaping and gardens. This exemption extends to the installation of new irrigation and drainage facilities and/or erosion control features, as well as to landscaping activities that do not involve the removal of native plants or plants required as mitigation, the planting of any vegetation identified as a nuisance species on the Milwaukie Native Plant List, or anything that produces an increase in impervious area or other changes that could result in increased direct stormwater discharges to the WQR.

No exempt landscaping and maintenance of existing is proposed as an exempt activity with this application.

8. Additional disturbance for outdoor uses, such as gardens and play areas, where the new disturbance area does not exceed 150 sq ft; does not involve the removal of any trees of larger than 6-in diameter; and is located at least 30 ft from the top of bank of a stream or drainage and at least 50 ft from the edge of a wetland.

No exempt disturbance for outdoor uses are proposed as exempt activities with this application.

9. Routine repair and maintenance, alteration, demolition, and/or change of use of existing legal structures, provided that the following criteria are met:

a. There is no change in the location, or increase in the footprint, of any building, impervious surface, or outdoor storage area within a WQR or HCA.

b. No other site changes are proposed that could result in increased direct stormwater discharges to a WQR. If the project will result in increased direct stormwater discharges, the proposal is subject to the Type II review process and the standards for discretionary review established in Subsection 19.402.12.

No exempt repair or maintenance, alteration or demolition of existing structures within the HCA/ WQR are proposed. Existing homes along 19th St proposed to be remodeled are outside HCA/ WQR areas.

10. Routine repair and maintenance, alteration, and/or total replacement of existing utility facilities, accesses, streets, driveways, trails, walkways, and parking improvements (including asphalt overlays); provided that there is no new disturbance of the WQR or HCA, no increase in impervious area, no reduction in landscaped areas or tree cover, and no other change that could result in increased direct stormwater discharges to the WQR.

Any work required to relocate or replace existing utilities will not increase impervious area or disturb the HCA or WQR areas delineated with this development. New walking trails will be less than 30" wide and not result in increased stormwater discharge to the WQR.

11. Routine repair and maintenance of public and private stormwater facilities in accordance with a stormwater management plan approved by the City.

No exempt repair and maintenance of existing stormwater facilities are proposed as an exempt activity with this application.

12. Existing agricultural practices or uses, excluding buildings and structures, provided that such activities or uses do not result in increased direct stormwater discharges to WQRs.

Criterion does not apply. No existing agricultural practices or uses exist on the site.

13. Removal of debris, as defined in Section 19.201.

Debris will be removed from the Site prior to start of construction as an exempt activity.

14. Change of ownership.

No change in ownership is proposed at this time, but may be done as an exempt activity at Owner's discretion.

15. Lot consolidations, as defined in Section 17.08.150.

A lot consolidation is proposed as an exempt activity to allow the overall proposed development.

16. Activities and improvements in existing public rights-of-way.

Improvements in the existing public right of way identified by Staff as required for this project are outside the HCA/ WQR. Criterion does not apply.

17. Establishment and maintenance of trails in accordance with the following standards:

- a. Trails shall be confined to a single ownership or within a public trail easement.
- b. Trails shall be no wider than 30 in. Where trails include stairs, stair width shall not exceed 50 in and trail grade shall not exceed 20%, except for the portion of the trail containing stairs.
- c. Trails shall be unpaved and constructed with nonhazardous, pervious materials.
- d. Trails shall be located at least 15 ft from the top of bank of all water bodies.
- e. Plants adjacent to trails may be trimmed, but trimming clearances shall not exceed a height of 8 ft and a width of 6 ft.
- f. Native trees of larger than 6-in diameter, and native shrubs or conifers larger than 5 ft tall, shall not be removed.

The trail proposed at the top of the slough bank will be owned and maintained by the single property owner, will be 30" wide, have slopes less than 20%, constructed with pervious pavers and located 15' from the top of the bank. No trees cutting or native shrub removal will be required for the construction.

18. Installation and maintenance of erosion control measures that have been reviewed and approved by the City.

All erosion control measures for the development will be reviewed and approved by the City prior to start of construction activities.

B. Limited Exemptions Within HCAs

The following activities within HCAs are exempt from the provisions of Section 19.402, except that a construction management plan is required, according to the provisions of Subsection 19.402.9, where the activity disturbs a total of more than 150 sq ft:

1. The alteration and/or total replacement of existing structures, provided that both of the following standards are met:
 - a. The alteration and/or replacement shall not intrude more than 500 sq ft into the HCA, beyond the area defined as the building footprint as of September 15, 2011, the effective date of Ordinance #2036.
 - b. The alteration and/or replacement shall not result in increased direct stormwater discharges to a WQR.

Criterion does not apply. Existing homes to be retained and remodeled as part of this project are outside the HCA/ WQR portion of the site.

2. Minor encroachments, not to exceed 500 sq ft for residential zones or 150 sq ft in nonresidential zones, for new features such as accessory buildings, patios, walkways, or retaining walls.

Criterion does not apply. A construction management plan for the entire site will be prepared and approved prior to start of construction.

3. Temporary and minor clearing, excavation, or other disturbances, not to exceed 150 sq ft, for the purpose of: site investigations or preparation of soil profiles; installation of underground utility facilities or other infrastructure; routine repair and maintenance and/or alteration of existing utility facilities, access, streets, driveways, and parking improvements; or similar activities, provided that such disturbed areas are restored to their original condition when the activity is complete.

Temporary and minor clearing and limited excavation less than 150 sq. ft. may be required prior to final design of utility infrastructure necessary to serve the proposed development. Any portion of the site that is disturbed under this subsection will be restored to original condition at completion of activity.

4. Low-impact outdoor recreation facilities for public use—including, but not limited to, multiuse paths, accessways, trails, picnic areas, or interpretive and educational displays and overlooks that include benches and outdoor furniture—provided that such facilities contain no more than 500 sq ft of new impervious surface. Any trails shall have a maximum width of 5 ft and shall be constructed using nonhazardous, pervious materials.

The proposed trail, overlooks and interpretive signage will comply with the provisions of this subsection.

5. Facilities that infiltrate stormwater on the site, including the associated piping, so long as the forest canopy and the areas within the driplines of the trees are not disturbed. Such facilities may include, but are not limited to, vegetated swales, rain gardens, vegetated filter strips, and vegetated infiltration basins. Native or nonnative vegetation may be planted in these facilities, provided that none of the plantings are identified as a nuisance species on the Milwaukie Native Plant List.

No stormwater infiltration is proposed on the site due to the high water table and the flood plain area on the site. Criterion does not apply.

19.402.5 Prohibited Activities

Title 19 Zoning is comprised of regulations that deal with the use of land; it does not extend into the broader realm of laws that regulate personal activities unrelated to land use and development. Given such limitations, the following activities are prohibited within WQRs and HCAs:

- A. New structures, development, or landscaping activity other than those allowed by Section 19.402.
- B. Uncontained areas of hazardous materials, as defined by DEQ.
- C. Planting any vegetation listed as a nuisance species on the Milwaukie Native Plant List.
- D. Outside storage of materials; unless such storage began before September 15, 2011, the effective date of Ordinance #2036; or unless such storage is approved according to the applicable provisions of Section 19.402.
- E. Application of pesticides or herbicides with any of the active ingredients listed on the Milwaukie Prohibited Chemicals List.

No prohibited activities are proposed with this development.

19.402.6 Activities Requiring Type I Review

Within either WQRs or HCAs, the following activities and items are subject to Type I review per Section 19.1004:

A. Limited Tree Removal

1. The Planning Director may approve an application for limited tree removal or major pruning within WQRs and HCAs, except where exempted by Subsection 19.402.6.A.2, under any of the following circumstances:
 - a. The tree removal is necessary to eliminate a hazardous, nonemergency situation, as determined by the Planning Director. A situation may be deemed hazardous if a tree, or portion of a tree, has undergone a recent change in health or condition in a manner that may pose a danger to people, to structures on private property, to public or private utilities, or to travel on private property or in the public right-of-way. Examples of imminent hazards may include, but are not limited to, trees that are broken, split, cracked, uprooted, or otherwise in danger of collapse. Approval shall be limited to removal of the tree, or portion of the tree, as necessary to eliminate the hazard.
 - b. The tree is dead, diseased, or dying and cannot be saved, as determined and documented in a report by a certified arborist.
 - c. The proposal would remove more than 3 trees during any 12-month period that are categorized as nuisance species on the Milwaukie Native Plant List.
 - d. The tree is a downed tree, but more than 150 sq ft of earth disturbance is necessary to remove it.
 - e. The tree is a nuisance species, but more than 150 sq ft of earth disturbance is necessary to remove it.
 - f. The tree is not categorized as either a nuisance or native species on the Milwaukie Native Plant List and is not located in a WQR categorized as Class A ("Good"), according to Table 19.402.11.C, provided that no more than 3 such trees will be removed during any 12-month period.

E. Utility Connections

Unless they are exempt per Subsection 19.402.4, connections to existing or new utility lines that involve disturbance to a WQR and/or HCA are subject to Type I review against the following criteria:

1. The activities required to establish the connection shall not disturb a protected water feature. Utility connections that will disturb a protected water feature are subject to the review procedures for special uses established in Subsection 19.402.11.E.
2. The activities required to establish the connection shall not disturb an area greater than 10 ft wide.
3. The connection can meet the general standards for special uses established in Subsection 19.402.11.E.1.

F. Nuisance Abatement

Measures to remove or abate nuisances; or any other violation of State statute, administrative agency rule, or City or County ordinance; shall be subject to Type I review of a construction management plan, to be approved by the Planning Director prior to the abatement activity. The person or agency undertaking the action shall repair any impacts to the designated natural resource resulting from the nuisance or violation (e.g., restore disturbed soils, restore hydrologic connections, replant disturbed areas with native vegetation, etc.) unless subsequent development has been approved.

G. Boundary Verification

Boundary verifications that propose minor corrections will be processed in accordance with Subsection 19.402.15.A.1 and are subject to Type I review.

No Type I review is being sought for this project due to its size.

19.402.7 Activities Requiring Type II Review

Within either WQRs or HCAs, the following activities and items are subject to Type II review and approval by the Planning Director per Section 19.1005, unless they are otherwise exempt or permitted as a Type I activity.

A. Special Uses

If not listed as exempt in Subsection 19.402.4, and not able to meet the nondiscretionary standards for HCAs as established in Subsection 19.402.11.D, any special use activity listed below shall be subject to Type II review if the proposal complies with the applicable standards provided in Subsection 19.402.11.E:

1. Improvement or construction of public or private utility facilities.
2. New stormwater facilities.
3. Walkways and bike paths.
4. Stormwater management plans.

If the proposed special use activity is not in compliance with the applicable standards in Subsection 19.402.11.E, it shall be subject to Type III review and the general discretionary review criteria provided in Subsection 19.402.12.

B. Natural Resource Management Plans

Natural resource management plans that do not meet the Type I review standards provided in Subsection 19.402.10.A, but that meet the standards provided in Subsection 19.402.10.B, are subject to Type II review. These are typically plans that have been prepared independently of a qualified agency but that are in accordance with standards and guidelines related to enhancing natural resources.

C. Partitions

Partitions that meet the standards provided in Subsection 19.402.13.G are subject to Type II review.

D. Other Uses and Activities with Minimal Impacts to WQRs

The activities listed below are subject to Type II review and the general discretionary review criteria provided in Subsection 19.402.12:

1. New agricultural practices or uses, excluding buildings and structures, that result in increased direct stormwater discharges to WQRs.
2. Landscaping and maintenance of existing landscaping that would increase impervious area within a WQR by no more than 150 sq ft and/or would result in increased direct stormwater discharges to the WQR.
3. Routine repair and maintenance, alteration, and/or total replacement of existing legal buildings or structures that increases the existing disturbance area by no more than 150 sq ft within the WQR.
4. Routine repair and maintenance, alteration, and/or total replacement of existing utility facilities, accesses, streets, driveways, and parking improvements that increases the existing disturbance area by no more than 150 sq ft within the WQR. Activities approved under this subsection shall be subject to the following requirements:
 - a. Restore the disturbed portion of the WQR.
 - b. Within the disturbed portion of the WQR, remove any vegetation categorized as a nuisance species on the Milwaukie Native Plant List and replace it with native vegetation from the list.

E. Boundary Verification

Boundary verifications that propose substantial corrections will be processed in accordance with Subsection 19.402.15.A.2 and are subject to Type II review.

A Type II review is being requested as part of this proposal for a boundary verification with substantial corrections.

19.402.8 Activities Requiring Type III Review

Within either WQRs or HCAs, the following activities are subject to Type III review and approval by the Planning Commission under Section 19.1006, unless they are otherwise exempt or permitted as a Type I or II activity.

A. The activities listed below shall be subject to the general discretionary review criteria provided in Subsection 19.402.12:

1. Any activity allowed in the base zone that is not otherwise exempt or permitted as a Type I or II activity.
2. Within HCAs, development that is not in compliance with the nondiscretionary standards provided in Subsection 19.402.11.D.
3. New roads to provide access to protected water features, necessary ingress and egress across WQRs, or the widening of an existing road.
4. Improvement of existing public utility facilities that cannot meet the applicable standards of Subsection 19.402.11.E.
5. New stormwater facilities that cannot meet the applicable standards of Subsection 19.402.11.E.
6. New public or private utility facility construction that cannot meet the applicable standards of Subsection 19.402.11.E.
7. Walkways and bike paths that are not exempt per Subsection 19.402.4 or cannot meet the applicable standards of Subsection 19.402.11.E.
8. Tree removal in excess of that permitted under Subsections 19.402.4 or 19.402.6.
9. Landscaping and maintenance of existing landscaping that would increase impervious area by more than 150 sq ft.
10. Routine repair and maintenance, alteration, and/or total replacement of existing legal buildings or structures that increases the existing disturbance area by more than 150 sq ft within the WQR.
11. Routine repair and maintenance, alteration, and/or total replacement of existing utility facilities, accesses, streets, driveways, and parking improvements that would disturb more than 150 sq ft within the WQR.

B. The activities listed below shall be subject to the review criteria for partitions and subdivisions provided in Subsections 19.402.13.H and I, respectively:

1. The partitioning of land containing a WQR or HCA that cannot meet the standards provided in Subsection 19.402.13.G.
2. The subdividing of land containing a WQR or HCA.

A Type III review is being sought for the overall development proposed.

19.402.9 Construction Management Plans

A. Construction management plans are not subject to Type I review per Section 19.1004 but shall be reviewed in similar fashion to an erosion control permit (MMC Chapter 16.28).

B. Construction management plans shall provide the following information:

1. Description of work to be done.
2. Scaled site plan showing a demarcation of WQRs and HCAs and the location of excavation areas for building foundations, utilities, stormwater facilities, etc.
3. Location of site access and egress that construction equipment will use.
4. Equipment and material staging and stockpile areas.
5. Erosion and sediment control measures.
6. Measures to protect trees and other vegetation located within the potentially affected WQR and/or HCA. A root protection zone shall be established around each tree in the WQR or HCA that is adjacent to any approved work area. The root protection zone 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 perimeter of the root protection zone shall be flagged, fenced, or otherwise marked and shall remain undisturbed. Material storage and construction access is prohibited within the perimeter. The root protection zone shall be maintained until construction is complete.

When required for a property that does not include a designated natural resource, the construction management plan shall show the protective measures that will be established on the applicant's property.

A Construction Management Plan will be submitted and approved by the City prior to any construction activity.

19.402.10 Natural Resource Management Plans

Natural resource management plans or restoration plans that authorize limited disturbance within the WQR or HCA may be approved with Type I or II review, subject to the following standards:

A. Plans Eligible for Type I Review

The plan has already been approved by the U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife (ODFW), DSL, Oregon Watershed Enhancement Board (OWEB), Metro, Clackamas County Soil and Water Conservation District, or other agency approved by the Planning Director.

B. Plans Eligible for Type II Review

The plan has been prepared in accordance with particular standards and guidelines promulgated by a natural resource agency, such as OWEB's Oregon Aquatic Habitat Restoration and Enhancement Guide, ODFW's Western Oregon Stream Restoration Program, DSL's Hydrogeomorphic (HGM) approach of assessment for wetland and riparian functions, or other standards approved by the Planning Director.

C. Approval Criteria

Every plan prepared for approval under Section 19.402 shall demonstrate that it encourages restoration activities that have any of the following effects:

1. Changes the trend of habitat function from one of a diminishing ability to support salmonids and other organisms to one that supports a complex, self-sustaining system.
2. Corrects or improves conditions caused by past management and/or disturbance events.
3. Maximizes beneficial habitat in the short term where watershed degradation has been extensive and natural processes will need substantial time to restore habitat.
4. Creates beneficial habitat and restores stream function and hydrology to the fullest extent practicable within developed areas where there is no reasonable expectation of returning to natural conditions.

D. Construction Management Plans

A construction management plan prepared in accordance with Subsection 19.402.9 is required with each natural resource management plan.

E. Ongoing Maintenance

Natural resource management plans shall demonstrate how ongoing maintenance is part of the associated restoration or enhancement activities.

F. Expiration of Plans

The approval of a natural resource management plan shall be valid for 5 years. Approved plans may be renewed through the Type I review process by demonstrating that the original approved plan still meets the criteria provided in Subsection 19.402.10.C. Plans that demonstrate an adaptive management component and/or that involve partnership with one of the agencies noted in Subsection 19.402.10.A may be approved as valid for up to 20 years upon request.

A natural resource management plan will be submitted and approved by the City prior to start of construction as a Type II review process.

19.402.11 Development Standards

A. Protection of Natural Resources During Site Development

During development of any site containing a designated natural resource, the following standards shall apply:

1. Work areas shall be marked to reduce potential damage to the WQR and/or HCA.
2. Trees in WQRs or HCAs shall not be used as anchors for stabilizing construction equipment.
3. Native soils disturbed during development shall be conserved on the property.
4. An erosion and sediment control plan is required and shall be prepared in compliance with requirements set forth in the City's Public Works Standards.

5. Site preparation and construction practices shall be followed that prevent drainage of hazardous materials or erosion, pollution, or sedimentation to any WQR adjacent to the project area.
6. Stormwater flows that result from proposed development within and to natural drainage courses shall not exceed predevelopment flows.
7. Prior to construction, the WQR and/or HCA that is to remain undeveloped shall be flagged, fenced, or otherwise marked and shall remain undisturbed. Such markings shall be maintained until construction is complete.
8. 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.
9. 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.
10. All work on the property shall conform to a construction management plan prepared according to Subsection 19.402.9.

The proposed development will comply with all standards above.

B. General Standards for Required Mitigation

Where mitigation is required by Section 19.402 for disturbance to WQRs and/or HCAs, the following general standards shall apply:

1. Disturbance
 - a. Designated natural resources that are affected by temporary disturbances shall be restored, and those affected by permanent disturbances shall be mitigated, in accordance with the standards provided in Subsection 19.402.11.C for WQRs and Subsection 19.402.11.D.2 for HCAs, as applicable.

Temporary disturbances of natural resources will be restored and permanent disturbances mitigated per the requirements of MMC.

- b. Landscape plantings are not considered to be disturbances, except for those plantings that are part of a non-exempt stormwater facility; e.g., raingarden or bioswale.

No stormwater facilities are proposed within natural resource areas or buffers. Criterion does not apply.

2. Required Plants

Unless specified elsewhere in Section 19.402, all trees, shrubs, and ground cover planted as mitigation shall be native plants, as identified on the Milwaukie Native Plant List. Applicants are encouraged to choose particular native species that are appropriately suited for the specific conditions of the planting site; e.g., shade, soil type, moisture, topography, etc.

3. Plant Size

Required mitigation trees shall average at least a ½-in caliper—measured at 6 in above the ground level for field-grown trees or above the soil line for container-grown trees—unless they are oak or madrone, which may be 1-gallon size. Required mitigation shrubs shall be at least 1-gallon size and 12 in high.

4. Plant Spacing

Trees shall be planted between 8 and 12 ft on center. Shrubs shall be planted between 4 and 5 ft on center or clustered in single-species groups of no more than 4 plants, with each cluster planted between 8 and 10 ft on center. When planting near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.

5. Plant Diversity

Shrubs shall consist of at least 2 different species. If 10 trees or more are planted, then no more than 50% of the trees shall be of the same genus.

A Landscape Plan is being submitted with this revised application submittal.

6. Location of Mitigation Area

a. On-Site Mitigation

All mitigation vegetation shall be planted on the applicant's site within the designated natural resource that is disturbed, or in an area contiguous to the resource area; however, if the vegetation is planted outside of the resource area, the applicant shall preserve the contiguous planting area by executing a deed restriction such as a restrictive covenant.

All mitigation required for this project will be on the applicants site within the designated natural resource area.

b. Off-Site Mitigation

(1) For disturbances allowed within WQRs, off-site mitigation shall not be used to meet the mitigation requirements of Section 19.402.

(2) For disturbances allowed within HCAs, off-site mitigation vegetation may be planted within an area contiguous to the subject-property HCA, provided there is documentation that the applicant possesses legal authority to conduct and maintain the mitigation, such as having a sufficient ownership interest in the mitigation site. If the off-site mitigation is not within an HCA, the applicant shall document that the mitigation site will be protected after the monitoring period expires, such as through the use of a restrictive covenant.

Criteria do not apply. No off site mitigation is proposed.

7. Invasive Vegetation

Invasive nonnative or noxious vegetation shall 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.

Invasive vegetation, except for that on the steep bank of the slough is proposed to be removed per attached report from ETC.

8. Ground Cover

Bare or open soil areas remaining after the required tree and shrub plantings shall be planted or seeded to 100% surface coverage with grasses or other ground cover species identified as native on the Milwaukie Native Plant List. Revegetation shall occur during the next planting season following the site disturbance.

All bare or open soil areas will be planted to prevent erosion with native ground cover acceptable to the City.

9. Tree and Shrub Survival

A minimum of 80% of the trees and shrubs planted shall remain alive on the second anniversary of the date that the mitigation planting is completed.

a. Required Practices

To enhance survival of the mitigation plantings, the following practices are required:

- (1) Mulch new plantings to a minimum of 3-in depth and 18-in diameter to retain moisture and discourage weed growth.
- (2) Remove or control nonnative or noxious vegetation throughout the maintenance period.

New trees and shrubs will be mulched and kept free of non-native vegetation throughout the required 2 year period.

b. Recommended Practices

To enhance survival of tree replacement and vegetation plantings, the following practices are recommended:

- (1) Plant bare root trees between December 1 and April 15; plant potted plants between October 15 and April 30.
- (2) Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and the resulting damage to plants.
- (3) Water new plantings at a rate of 1 in per week between June 15 and October 15 for the first 2 years following planting.

Recommended practices for plantings above will be followed for all new landscaping.

c. Monitoring and Reporting

Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die shall be replaced in kind as needed to ensure the minimum 80% survival rate. The Planning Director may require a maintenance bond to cover the continued health and survival of all plantings. A maintenance bond shall not be required for land use applications related to owner-occupied single-family residential projects. An annual report on the survival rate of all plantings shall be submitted for 2 years.

Monitoring process above will be adhered to by the Owner for a two year period.

10. Light Impacts

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.

Lighting will be designed to not shine directly into the HCA/ WCR areas. A lighting plan and photometrics have been included with revised application submittal.

C. Mitigation Requirements for Disturbance within WQRs

1. The requirements for mitigation vary depending on the existing condition of the WQR on the project site at the time of application. The existing condition of the WQR shall be assessed in accordance with the categories established in Table 19.402.11.C.

Refer to report prepared by ETC for determination of WOR as Class C (“Poor”).

2. When disturbance within a WQR is approved according to the standards of Section 19.402, the disturbance shall be mitigated according to the requirements outlined in Table 19.402.11.C and the standards established in Subsection 19.402.11.B.

Noxious and invasive species have been inventoried in report prepared by ETC and are proposed to be removed from the portion of the site east of the slough, except for the steep bank area at the slough. This portion of the site will be planted to provide 100% surface coverage with plants from the Milwaukie Native Plant List. Refer to landscape plan submitted with revised application.

Table 19.402.11.C

Mitigation Requirements for WQRs

Existing Condition of WQR	Requirements
<p>Class A (“Good”) Extent and character of existing vegetation provides good conditions for water quality and wildlife habitat</p>	
<p>Combination of trees, shrubs, and ground cover are 80% present, with more than 50% tree canopy coverage in vegetated corridor.</p>	<ul style="list-style-type: none"> • 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. • Inventory and remove debris and noxious materials.
<p>Class B (“Marginal”) Extent and character of existing vegetation provides marginal conditions for water quality and wildlife habitat</p>	
<p>Combination of trees, shrubs, and ground cover are 80% present, with 25-50% canopy coverage in vegetated corridor.</p>	<ul style="list-style-type: none"> • 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. • Inventory and remove debris and noxious materials.
<p>Class C (“Poor”) Extent and character of existing vegetation provides poor conditions for water quality and wildlife habitat</p>	
<p>Combination of trees, shrubs, and ground cover are less than 80% present and/or less than 25% canopy coverage in vegetated corridor.</p>	<ul style="list-style-type: none"> • 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. • Plant and/or seed all bare areas to provide 100% surface coverage. • Inventory and remove debris and noxious materials.

D. Nondiscretionary Standards for HCAs

The following nondiscretionary standards may be applied to proposals that are subject to Type I review and located within HCAs only. These standards do not apply to activities proposed within WQRs.

1. Disturbance Area Limitations in HCAs

To avoid or minimize impacts to HCAs, activities that are not otherwise exempt from the requirements of Section 19.402, and that would disturb an HCA, are subject to the following disturbance area limitations, as applicable:

a. Detached and Attached Single-Family Residential Uses

The amount of disturbance allowed within an HCA for detached and attached single-family residential uses, including any related public facilities as required by Section 19.700 Public Facility Improvements, shall be determined by subtracting the area of the lot or parcel outside of the HCA from the maximum disturbance area calculated per Figure 19.402.11.D.1.a. Such disturbance shall be subject to the mitigation requirements described in Subsection 19.402.11.D.2.

Figure 19.402.11.D.1.a

Method for Calculating Allowable Disturbance within an HCA

for Detached and Attached Single-Family Residential Uses

X = The maximum potential disturbance area within the HCA, which is 50% of the total HCA, up to a maximum of 5,000 sq ft.

Y = The area of the lot or parcel outside the total resource area (WQR and HCA).

Z = The net amount of disturbance area allowed within the HCA ($Z = X - Y$)

If (Y) is greater than (X), development shall not be permitted within the HCA; otherwise, the applicant may disturb up to the net amount of disturbance area allowed (Z) within the HCA.

Example 1: 8,000-sq-ft lot with 3,000 sq ft of HCA and 5,000 sq ft outside of HCA/WQR

X = 1,500 sq ft (50% of HCA)

Y = 5,000 sq ft outside of HCA/WQR

Z = - 3,500 sq ft (1,500 sq ft – 5,000 sq ft)

Conclusion: Y is greater than X; therefore, development is not permitted within the HCA.

Example 2: 8,000-sq-ft lot with 6,000 sq ft of HCA and 2,000 sq ft outside of

HCA/WQR

X = 3,000 sq ft (50% of HCA)

Y = 2,000 sq ft outside of HCA/WQR

Z = 1,000 sq ft (3,000 sq ft – 2,000 sq ft)

Conclusion: Y is not greater than X; therefore, the applicant may disturb up to the value of Z (1,000 sq ft) within the HCA.

b. All Other Uses

A maximum net disturbance area of 10% of the HCA on the site is allowed by right, subject to the mitigation requirements described in Subsection 19.402.11.D.2.

c. Temporary and Permanent Disturbances

All disturbances within an HCA that occur during construction or other development activities, whether temporary or permanent disturbances, count equally for the purposes of calculating and tracking the maximum disturbance area allowed for a particular site. Disturbance resulting from any activity deemed exempt per Subsection 19.402.4 shall not be counted against the amount of disturbance allowed by Subsection 19.402.

d. Disturbance in Excess of that Allowed by Section 19.402

In accordance with Subsection 19.402.8, proposed development that would disturb more HCA than allowed by Subsections 19.402.11.D.1.a and b shall be subject to the Type III review process and general discretionary review criteria, as outlined in Subsection 19.402.12.C.1.

e. Disturbance Changes HCA Status

When disturbances within HCAs are allowed, in accordance with the applicable provisions of Section 19.402, the City shall remove the HCA designation from such disturbance areas on the NR Administrative Map, as provided in Subsection 19.402.15.B.

In the case of a request to develop within an HCA on a property where a prior development request was subject to the disturbance area limitations of Subsection 19.402.11.D.1, the calculation of the new amount of disturbance area allowed within the HCA on the property shall be based on the mapped location of the HCA at the time of the request, notwithstanding any previous calculation of allowed disturbance area.

2. Mitigation Requirements for Disturbance in HCAs

To achieve the goal of reestablishing forested canopy that meets the ecological values and functions described in Subsection 19.402.1, when development intrudes into an HCA, tree replacement and vegetation planting are required according to the following standards, unless the planting is also subject to wetlands mitigation requirements imposed by state and federal law.

These mitigation options apply to tree removal and/or site disturbance in conjunction with development activities that are otherwise permitted by Section 19.402. They do not apply to situations in which tree removal is exempt per Subsection 19.402.4 or approvable through Type I review.

An applicant shall meet the requirement of Mitigation Option 1 or 2, whichever results in more tree plantings; except that where the disturbance area is 1 acre or more, the applicant shall comply with Mitigation Option 2.

a. Mitigation Option 1

This mitigation requirement is calculated based on the number and size of trees that are removed from the site. Trees that are removed from the site shall be replaced as shown in Table 19.402.11.D.2.a. Conifers shall be replaced with conifers. Bare ground shall be planted or seeded with native grasses or herbs. Nonnative sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

Table 19.402.11.D.2.a	
Tree Replacement	
Size of Tree to be Removed (inches in diameter)	Number of Trees and Shrubs to be Planted
6 to 12	2 trees and 3 shrubs
13 to 18	3 trees and 6 shrubs
19 to 24	5 trees and 12 shrubs
25 to 30	7 trees and 18 shrubs
over 30	10 trees and 30 shrubs

b. Mitigation Option 2

This mitigation requirement is calculated based on the size of the disturbance area within an HCA. Native trees and shrubs are required to be planted at a rate of 5 trees and 25 shrubs per 500 sq ft of disturbance area. This is calculated by dividing the number of square feet of disturbance area by 500, multiplying that result times 5 trees and 25 shrubs, and rounding all fractions to the nearest whole number of trees and shrubs. For example, if there will be 330 sq ft of disturbance area, then 330 divided by 500 equals 0.66, and 0.66 times 5 equals 3.3, so 3 trees must be planted, and 0.66 times 25 equals 16.5, so 17 shrubs must be planted. Bare ground shall be planted or seeded with native grasses or herbs. Nonnative sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

c. Adjustments to HCA Mitigation Requirements

Proposals to vary the number or size of trees and shrubs required as mitigation in Subsection 19.402.11.D.2 shall be subject to the Type II review process and the requirements of Subsection 19.402.12.C.2.

E. Standards for Special Uses

Unless they are exempt per Subsection 19.402.4, or do not meet the nondiscretionary standards for HCAs provided in 19.402.11.D, the special uses listed in Subsection 19.402.7.A are subject to Type II review if they comply with the applicable standards in Subsection 19.402.11.E. Otherwise, the special uses listed in Subsection 19.402.7.A are subject to Type III review and the general discretionary review criteria provided in Subsection 19.402.12.

1. General Standards for Special Uses

Except for stormwater management plans, all nonexempt special uses listed in Subsections 19.402.11.E.2 through 5 that do not meet the nondiscretionary standards for HCAs provided in Subsection 19.402.11.D shall comply with the specific applicable standards in Subsection 19.402.11.E, as well as with the following general standards:

- a. In addition to a construction management plan prepared according to the standards of Subsection 19.402.9; a mitigation plan shall be submitted per Subsection 19.402.11.D.2 or 19.402.12.C.2 for HCAs, as applicable, or per Subsection 19.402.11.C for WQRs. WQRs and HCAs shall be restored and maintained in accordance with the approved mitigation plan.
- b. Existing vegetation outside of approved work areas shall be protected and left in place. Work areas shall be carefully located and marked to reduce potential damage to WQRs and HCAs. Trees in WQRs or HCAs shall not be used as anchors for stabilizing construction equipment.
- c. Where existing vegetation has been removed, or the original land contours disturbed, the site shall be revegetated and the vegetation shall be established as soon as practicable. Interim erosion control measures, such as mulching, shall be used to avoid erosion on bare areas.

2. Public or Private Utility Facilities

In addition to the requirements of Subsection 19.402.11.E.1, the following disturbance area limitations apply to all new public and private utility facilities, as well as to facility upgrades that are not exempted by Subsection 19.402.4 or that do not meet the nondiscretionary standards for HCAs provided in Subsection 19.402.11.D.

- a. The disturbance area for the upgrade of existing utility facilities shall be no greater than 15 ft wide.
- b. The disturbance area for new underground utility facilities shall be no greater than 25 ft wide and disturb no more than 200 linear feet of WQR within any 1,000-linear-foot stretch of WQR. Such a disturbance area shall be restored with the exception of necessary access points to the utility facility.
- c. Disturbance areas shall be revegetated.
- d. No fill or excavation is allowed within the ordinary high water mark of a stream, unless a permit is obtained from the Corps through the Standard Local Operating Procedures for Endangered Species (SLOPES) process.

3. New Stormwater Facilities

In addition to the requirements of Subsection 19.402.11.E.1, new stormwater facilities that are not exempted by Subsection 19.402.4, or that do not meet the nondiscretionary standards for HCAs provided in Subsection 19.402.11.D, shall not encroach more than 25 ft into the outer boundary of the WQR adjacent to a primary protected water feature.

4. Walkways and Bike Paths

In addition to the requirements of Subsection 19.402.11.E.1; walkways and bike paths that are not exempted by Subsection 19.402.4, or that do not meet the nondiscretionary standards for HCAs provided in Subsection 19.402.11.D, and that are proposed to be constructed or improved with gravel, pavement, pavers, wood, or other materials, shall comply with the following standards:

- a. Walkways and bike paths within WQRs or HCAs shall not exceed a 10-ft width.
- b. If the proposed walkway or bike path will be located within a WQR and will be paved, then, for the purposes of evaluating the proposed project, the vegetated corridor shall be widened by the width of the walkway or bike path.
- c. The walkway or bike path shall be designed to avoid WQRs and HCAs, to the greatest extent practicable, and shall be constructed so as to minimize disturbance to existing vegetation and slope stability.
- d. The walkway or bike path shall be a minimum of 10 ft from the boundary of the protected water feature.
- e. Where practicable, any lights associated with the walkway or bike path 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.

5. Stormwater Management Plans

Stormwater management plans that authorize disturbance within the WQR or HCA may be approved if in compliance with all of the following standards:

- a. Stormwater facilities will be designed to provide an environmentally beneficial hydrological impact on protected water features.
- b. Protected water features will be protected from erosion by implementing a stream protection strategy and quantity control strategies.
- c. Watershed health will be improved through the use of vegetated facilities to meet pollution reduction, flow control, and infiltration goals. These facilities will be maintained in a manner that ensures a continued benefit to watershed health.
- d. Proposed stormwater management facilities will correct or improve conditions caused by past management and/or disturbance events, if any are present.
- e. Where there is no reasonable expectation of returning to natural conditions, beneficial habitat, vegetation, and stream function and hydrology will be restored to the fullest extent practicable within developed areas.

Refer to report prepared by ETC for proposed adjustment to mapped HCA and buffer area.

19.402.12 General Discretionary Review

This subsection establishes a discretionary process by which the City shall analyze the impacts of development on WQRs and HCAs, including measures to prevent negative impacts and requirements for mitigation and enhancement. The Planning Director may consult with a professional with appropriate expertise to evaluate an application, or they may rely on appropriate staff expertise to properly evaluate the report's conclusions.

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.

The attached report from ETC identifies the ecological functions of the degraded riparian habitat on the property and requests a map amendment to adjust the HCA and delineate the WOR areas existing on and adjacent to the subject property.

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 attached report from ETC includes an inventory of vegetation sufficient to categorize the WQR as Class 3 per Table 19.402.11.C.

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.
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.
 - b. Development in the WQR and/or HCA has been limited to the area necessary to allow for the proposed use.
 - 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.
 - d. Road crossings will be minimized as much as possible.
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.
 - b. Provided mitigation to ensure that impacts to the functions and values of the WQR will be mitigated or restored to the extent practicable.
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.
 - 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.

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.

(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.

(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.

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.

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.

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.

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.

(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).

- (b) Minimize adverse hydrological impacts on water resources.
- (c) Minimize impacts on wildlife corridors and fish passage.
- (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.

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.

(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.

(3) All revegetation plantings shall use native plants listed on the Milwaukie Native Plant List.

(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.

(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.

2. Municipal Water Utility Facilities Standards

In addition to all other applicable criteria of Subsection 19.402.12.B, and if not already exempted by Subsection 19.402.4; municipal potable water, stormwater, and wastewater utility facilities (which may include, but are not limited to, water treatment plants, wastewater treatment plants, raw water intakes, pump stations, transmission mains, conduits or service lines, terminal storage reservoirs, and outfall devices) may be built, expanded, repaired, maintained, reconfigured, rehabilitated, replaced, or upsized in accordance with the following criteria:

- a. Such projects shall not be required to avoid the resource area per Subsection 19.402.12.B.1.a, provided that, where practicable, the project does not encroach closer to a protected water feature than existing operations and development; or, for new projects where there are no existing operations or development, provided that the project does not encroach closer to a protected water feature than practicable.
- b. Best management practices will be employed that accomplish all of the following:
 - (1) Account for watershed assessment information in project design.
 - (2) Minimize the trench area and tree removal within the resource area.
 - (3) Utilize and maintain erosion controls until other site stabilization measures are established, post-construction.
 - (4) Replant immediately after backfilling, or as soon as effective.
 - (5) Preserve wetland soils and retain soil profiles.
 - (6) Minimize compactions and the duration of the work within the resource area.
 - (7) Complete in-water construction during appropriate seasons, or as approved within requisite federal or State permits.
 - (8) Monitor water quality during the construction phases, if applicable.
 - (9) Implement a full inspection and monitoring program during and after project completion, if applicable.

C. Limitations and Mitigation for Disturbance of HCAs

1. Discretionary Review to Approve Additional Disturbance within an HCA

An applicant seeking discretionary approval to disturb more of an HCA than is allowed by Subsection 19.402.11.D.1 shall submit an Impact Evaluation and Alternatives Analysis, as outlined in Subsection 19.402.12.A, and shall be subject to the approval criteria provided in Subsection 19.402.12.B.

An applicant may use the nondiscretionary mitigation options presented in Subsection 19.402.11.D.2 as a guide for proposing mitigation measures that will then be evaluated against the approval criteria provided in Subsection 19.402.12.B.

2. Discretionary Review to Approve Mitigation that Varies the Number and Size of Trees and Shrubs within an HCA

An applicant seeking discretionary approval to proportionally vary the number and size of trees and shrubs required to be planted under Subsection 19.402.11.D.2 (e.g., to plant fewer larger trees and shrubs or to plant more smaller trees and shrubs), but who will comply with all other applicable provisions of Subsection 19.402.11, shall be subject to the following process:

- a. The applicant shall submit the following information:
 - (1) A calculation of the number and size of trees and shrubs the applicant would be required to plant under Subsection 19.402.11.D.2.
 - (2) The number and size of trees and shrubs that the applicant proposes to plant.
 - (3) An explanation of how the proposed number and size of trees and shrubs will achieve, at the end of the third year after initial planting, comparable or better mitigation results than would be achieved if the applicant complied with all of the requirements of Subsection 19.402.11.D.2. Such explanation shall be prepared and signed by a knowledgeable and qualified natural resource professional or a certified landscape architect. It shall include discussion of site preparation including soil additives, removal of invasive and noxious vegetation, plant diversity, plant spacing, and planting season; and immediate post-planting care, including mulching, irrigation, wildlife protection, and weed control.
 - (4) A mitigation, site-monitoring, and site-reporting plan.
- b. Approval of the request shall be based on consideration of the following:
 - (1) Whether the proposed planting will achieve, at the end of the third year after initial planting, comparable or better mitigation results than would be achieved if the applicant complied with all of the requirements of Subsection 19.402.11.D.2.
 - (2) Whether the proposed mitigation adequately addresses the plant diversity, plant survival, and monitoring practices established in Subsection 19.402.11.B.

Refer to report prepared by ETC for information of this section and discretionary review approval criteria.

19.402.13 Land Division and Property Line Adjustments

The following standards apply to property line adjustments and all forms of land division defined in Chapter 17.08. These standards apply in addition to the applicable requirements provided in Title 17 Land Division and elsewhere in Title 19 Zoning. Lot consolidations, as defined in Chapter 17.08, are not subject to the provisions of Section 19.402.

A. Boundary Verification

Whether or not an applicant believes the NR Administrative Map is accurate, the applicant shall verify the boundaries of the WQR and HCA on the property according to Subsection 19.402.15.

A boundary verification and modification is being submitted as part of this application. Refer to attached report prepared by ETC.

B. Construction Management Plans

1. In accordance with Subsection 19.402.9, a construction management plan is required for applications for land division that will require physical site improvements (e.g., grading and/or construction of structures, streets, or utilities) within, or within 100 ft of, a WQR or HCA.
2. A construction management plan is not required for applications for land division that do not require grading; constructing structures, streets, or utilities; or making other physical improvements to the site.

A construction management plan will be submitted for review and approval by the City prior to beginning any construction activities.

C. Impacts from Site Improvements

Applications for land division that will require physical site improvements (e.g., grading and/or the construction of streets, sidewalks, culverts, bridges, or utilities) within a WQR or HCA shall comply with the relevant standards for disturbance limitation and mitigation provided in Subsections 19.402.11 and/or 19.402.12, as applicable.

Final construction plans will be submitted and approved by the City prior to construction of any site improvements and will comply with the applicable subsections of MMC.

D. Mitigation for Future Structures or Improvements

Applications proposing a division of land on which future construction may impact a WQR or HCA shall comply with one of the following two standards:

1. Complete the mitigation requirements for any impacts to the WQR or HCA, in accordance with the requirements of Section 19.402, thereby exempting all subsequent development on lots containing a WQR and/or HCA from further review if in compliance with the related approval. When mitigation is required for new streets created as part of a subdivision, as outlined in Subsection 19.402.13.I, such mitigation shall be completed prior to approval of the final plat for the subdivision, unless the Planning Commission's approval establishes a different schedule.
2. Not complete the mitigation requirements, thus requiring that any subsequent development be subject to review under Section 19.402.

Mitigation for the proposed Project will comply with option 1 above. Complete mitigation for the Site will be fully designed prior to construction of individual single family homes and associated site improvements.

E. Property Line Adjustments

Applications for property line adjustment, when any of the properties include HCAs, shall address the resulting change in the percentage of HCA coverage on each property and demonstrate compliance with one of the following standards:

1. The proposed property line adjustment will result in no more than a 30-point difference in the percentage of HCA coverage on each property. Such an adjustment shall be subject to the Type I review process.

The proposed consolidation of the two properties will result in less than a 30 point difference in the percentage of HCA coverage on each property. The HCA/ WQR percentage of each individual lot is nearly identical and will remain consistent.

2. The proposed property line adjustment will not contravene a condition of approval related to HCA distribution from a previously approved land division. Such an adjustment shall be subject to the Type I review process.

The proposed property consolidation will not contravene any previously approved land division.

3. The proposed property line adjustment cannot meet the standard of Subsection 19.402.13.E.1, above, but will result in the smallest practicable difference in the percentage of HCA coverage on each property. Furthermore, the new boundary configuration will mitigate, to the extent practicable, the potential future impacts to the HCA from access and development. Such an adjustment shall be subject to the Type II review process.

The proposed lot consolidation will comply with Items 1 and 2 above. A type II review process is not required for this property line adjustment.

F. Replats

For the purpose of compliance with Section 19.402, replats that result in 3 or fewer lots shall be processed as partitions; replats that result in 4 or more lots shall be processed as subdivisions.

A replat will be required for the lot line consolidation. This will be processed as a partition involving 3 or fewer lots.

G. Low-Impact Partitions

Applications for partitions are subject to Type II review if they demonstrate compliance with the following standards:

1. For properties that contain HCAs, but no WQRs, and where the HCA covers 85% or less of the total lot area, the partition shall achieve either of the following results:
 - a. There shall be no more than a 30-point difference in the percentage of HCA coverage on each of the new parcels. For example, a 2-lot partition that

would produce one parcel that is 55% HCA and the other that is 30% HCA is permissible with Type II review; whereas, a 2-lot partition that would produce one parcel that is 75% HCA and the other that is 40% HCA is not permissible with Type II review and shall be subject to the standards of Subsection 19.402.13.H.

Both existing parcels contain similar percentages (within 2%). Consolidation will maintain similar percentage within HCA. Refer to proposed map amendment.

b. At least 90% of the original property's HCA is on a separate unbuildable parcel, protected by a conservation restriction.

The HCA on the consolidated property will be protected by a conservation restriction. Refer to proposed map amendment.

3. For properties that contain WQRs, the applicant shall place 100% of the WQR in a separate unbuildable tract, protected by a conservation restriction.

A separate unbuildable tract, protected by a conservation easement will be created in conjunction with the lot consolidation.

3. For properties that contain both WQRs and HCAs, the applicant shall comply with both of the standards listed above in Subsections 19.402.13.G.1 and 2.

Property contains both WQR and HCA. Refer to responses above to 19.402.13.G.1 and G.2.

4. For properties where the HCA covers more than 85% of the total lot area, the proposed partition shall be subject to the standards and review process established in Subsection 19.402.13.H.

The HCA/WQR as delineated by ETC covers approximately 38% of the consolidated property.

H. All Other Partitions

Applications for partitions that cannot comply with Subsection 19.402.13.G are subject to Type III review and shall comply with one of the following two standards:

1. For properties that do not contain any WQRs, but for which it is not practicable to comply with the partition standards in Subsection 19.402.13.G.1, and where the HCA covers 85% or less of the total lot area, the application shall meet the following standards and is not subject to the requirements of Subsection 19.402.12:

a. The partition plan shall result in the smallest practicable percentage point difference in HCA coverage on the parcels created by the partition.

b. To the extent practicable, the parcel configuration shall mitigate the potential future impacts to the HCA from access and development.

2. For properties that contain WQRs but cannot comply with Subsection 19.402.13.G.2, that contain both WQRs and HCAs but cannot comply with Subsection 19.402.13.G.3, or where the HCA covers more than 85% of the total lot area, the application shall comply with the following standards:

- a. To the extent practicable, the parcel configuration shall mitigate the potential future impacts to WQRs from access and development.
- b. An Impact Evaluation and Alternatives Analysis shall be prepared in accordance with the relevant portions of Subsection 19.402.12.A.
- c. For properties where the HCA covers more than 85% of the total lot area, the Impact Evaluation and Alternatives Analysis shall address how the applicant's proposal retains the greatest practicable degree of contiguity of the HCA across the new parcels.

The application can comply with the provisions of Subsection 19.402.13.G. Criteria of this section do not apply.

I. Subdivisions

Applications for subdivisions are subject to Type III review and shall comply with one of the following two standards:

1. At least 90% of the property's HCA and 100% of the property's WQR shall be located in a separate tract. Applications that meet this standard are not subject to the discretionary review requirements of Subsection 19.402.12.
2. If a subdivision cannot comply with the standards in Subsection 19.402.13.I.1, the application shall comply with the following standards:
 - a. All proposed lots shall have adequate buildable area outside of the WQR and HCA.
 - b. To the extent practicable, the lot and access configurations shall mitigate the potential future impacts to the WQR and HCA from access and development.
 - c. An Impact Evaluation and Alternatives Analysis shall be prepared in accordance with the relevant portions of Subsection 19.402.12.A.
 - d. For properties where the HCA covers more than 85% of the total lot area, the Impact Evaluation and Alternatives Analysis shall address how the applicant's proposal retains the greatest practicable degree of contiguity of the HCA across the new lots.

No subdivision is proposed with this application. Criteria do not apply.

J. Resource Area as a Separate Tract

Where required by Section 19.402, the new subdivision or partition plat shall delineate and show all WQRs and HCAs as being located in a separate unbuildable tract(s) according to the following process:

1. Prior to preliminary plat approval, the designated natural resource (whether WQR, HCA, or both) shall be shown as a separate tract(s), which shall not be part of any lot or parcel used for construction of any structures.

A separate conservation tract or easement will be shown on the preliminary plat for the consolidation of the tax lots necessary for this development based on the revised map amendment proposed by ETC. Upon approval of the map amendment and delineation by the City the exact instrument for protection of the resource area shall be determined and implemented as part of the Project.

2. Prior to final plat approval, ownership of the separate natural resource tract(s) shall be identified to distinguish it from lots or parcels intended for sale. Ownership in common or by a homeowners association is strongly discouraged. The tract(s) may be identified as any one of the following:

- a. Private natural area held by the owner with a restrictive covenant and/or conservation easement.

- b. For residential subdivisions, private natural area subject to an easement conveying storm and surface water management rights to the City of Milwaukie, Clackamas County Water Environment Services, and/or any other relevant jurisdiction, and preventing the owner of the tract from activities and uses inconsistent with the purposes of Section 19.402.

- c. Public natural area where the tract has been dedicated to the City of Milwaukie or a private nonprofit with the mission of land conservation.

The property owner is open to discussion with the City on which instrument will ultimately be utilized to provide protection for the resource area for this unique property that will not consist of individual lots with the resource area running through the center of the property.

3. The boundaries of all such separate tracts shall be demarcated with stakes, flags, or some similar means so that the boundaries between tracts and adjacent properties are defined in perpetuity. Fences that prevent the unfettered passage of wildlife shall not be installed along the boundary of any tract.

The boundaries of the resource area will be surveyed and staked to perpetually define the boundaries.

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.

A. Adjustments

The adjustments provided in Subsection 19.402.14.A shall not be used to avoid the requirement to submit a construction management plan, if deemed applicable per Subsection 19.402.3. The following adjustments are allowed by right as part of any Type I, II, or III application:

1. Adjustments to Base Zone Standards

a. Yard Setback (General)

Yard setback standards may be adjusted by up to 10%. This allowance applies only to the yard requirements established in base zones and does not apply to additional yard requirements for conditional uses or community service uses, yard exceptions established in Subsection 19.501.2, or transition area measures established in Subsection 19.504.6.

b. Rear Yard Setback (Limited)

For residential development, if the subject property is adjacent to a separate tract that was established according to the standards of Subsection 19.402.13.J, and the tract is adjacent to the rear yard of the subject property, the minimum rear yard requirement may be reduced to 10 ft.

Criteria do not apply. No adjustments to the base zone standards are proposed.

2. Adjustments to Lot Design Standards

When property boundaries are changed and/or land divided per Title 17 Land Division, an applicant may utilize the following adjustments to avoid or minimize impacts to a WQR or HCA:

a. The minimum base zone standards for lot width and lot depth may be reduced by up to 10%.

b. The minimum lot frontage required on a public street may be reduced by up to 10%.

Criteria do not apply. No adjustments to the lot design standards are proposed.

B. Variances

1. Requests to vary any standards beyond the adjustments allowed in Subsections 19.402.14.A or B shall be subject to the review process and approval criteria for variances established in Section 19.911.

2. In granting any variance request related to Section 19.402, the Planning Commission may impose such conditions as are deemed necessary to minimize

adverse impacts that may result from granting the variance. Examples of such conditions include, but are not limited to, maintaining a minimum width of the vegetated corridor alongside a primary protected water feature and limiting the amount of WQR for which the adjacent vegetated corridor width can be reduced.

No variances to standards of Subsections 19.402.14.A or B.

C. Residential Cluster Development

For residential proposals, development may be clustered so that land can be developed at allowed densities while avoiding or minimizing impacts to WQRs or HCAs. The intent of this section is to encourage creative and flexible site design that enables the allowable density to be transferred elsewhere on a site to protect environmentally sensitive areas and preserve open space and natural features. A residential cluster development may be permitted in any residential or mixed-use zoning district, subject to Type III review and approval by the Planning Commission. A cluster development proposal may be considered in conjunction with a proposal for land division or property line adjustment as provided in Subsection 19.402.13.

A residential cluster development is being proposed to minimize impacts to the WQR and HCA.

1. Calculation of Permitted Number of Dwelling Units

a. The maximum number of dwelling units proposed for a residential cluster development shall not exceed the number of dwelling units otherwise permitted for the residential zoning district in which the parcel is located. The number of units allowed on a parent lot may be transferred to one or more newly created lots or parcels on the site. The cumulative density for all lots or parcels shall not exceed the density allowed for the parent lot.

The density allowed for the gross property area would be 25-32 dwelling units based on the ratio of 7-8.7 dwelling units per the base R-5 zone. The proposed density of 12 dwellings is 3.28 dwellings per gross acre.

b. The number of permitted dwelling units on a site shall be calculated in the following manner:

(1) Measure the gross area of the proposed cluster development site in acres and tenths of an acre.

Gross site area is 3.66 acres per assessors records.

(2) From the gross area, subtract the area of public streets, other publicly dedicated improvements, and common open space (whether or not it is conveyed pursuant to Subsection 19.402.14.C.2.c), measured in acres and tenths of an acre. The remainder shall be the net buildable area.

Common area consisting of HCA/ WQR and area to the west of the slough is 1.58 acres, leaving 2.08 acres of net buildable area.

(3) Convert the net buildable area from acres to square feet, using the equivalency of 43,560 sq ft = 1 acre.

Net buildable area is 90,605 sq. ft.

(4) Divide the net buildable area by the smallest minimum lot size (in square feet) per unit for a dwelling unit permitted in the zoning district. This figure shall be rounded to the nearest lower number to establish the maximum number of dwelling units permitted in the cluster development.

90,605 / 5000 = 18.12 dwelling units maximum. 12 units are proposed.

2. Development Standards

a. All principal and accessory uses authorized in the underlying zoning district(s) shall be allowed in the cluster development. In addition, single-family attached dwellings, multifamily dwellings, and townhouses may be permitted for a cluster development located in a residential zoning district that does not otherwise allow attached dwelling units.

Single family detached homes are proposed as allowed in the underlying R-5 zone.

b. Maximum lot coverage, building height, and off-street parking requirements for the applicable zoning district shall apply to the cluster development. Maximum lot coverage, floor area ratios, and off-street parking requirements shall be applied to the entire site rather than to any individual lot.

The maximum lot coverage and off street parking for the R-5 zone will be met with the proposed development. The height limit for the home on SE 19th will comply with the underlying zone. All other new homes proposed meet the more restrictive 35' requirement of the Willamette Greenway overlay.

c. The following provisions shall apply to any residential cluster development, regardless of the general requirements of the applicable residential zoning district:

(1) The adjustments allowed by Subsection 19.402.14.A shall be available for cluster development proposals.

No adjustments are being requested per Subsection 19.402.14.A.

(2) Minimum lot width and lot depth standards shall not apply.

No subdivision is proposed. The overall site exceeds the lot width and depth of the underlying zone.

(3) A minimum separation of 10 ft shall be provided between all principal buildings and structures.

A minimum of 10' separation is proposed between all buildings on the site.

(4) A minimum yard or common open space shall be provided, with a minimum depth of 25 ft, as measured from all public streets and from the side and rear lot lines of the entire cluster development.

A minimum 25' yard is proposed from the front, rear and north side yards. A variance is being sought to allow a minimum side setback to the south. This is being sought to match the existing home and since the unimproved right of way along this frontage will likely remain undeveloped due to the wetland area within it. This unimproved 60' right of way provides a buffer that meets the intent of this criteria.

(5) Each lot shall provide at least 12 ft of frontage on a public street.

The consolidated lot will have 240' of frontage on SE 19th St. Criteria is met.

(6) More than 1 principal building or structure may be placed on a lot.

Twelve detached single family homes are proposed on a common building site with this application.

(7) No less than 25% of the site shall be conveyed as common open space.

1.58 acres (43% of gross site area) is proposed to be conveyed as common open space. The instrument of this conveyance will be as acceptable to the City.

(8) No less than 50% of the designated natural resources on the site shall be included in calculating the common open space.

94% of the designated natural resource area on the site is being calculated as common open space. The 4,094 sq. ft. created by the delineated wetland to the south side of the property is not proposed as common open space.

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:

- a. The maximum number and type of dwelling units proposed.
- b. The areas of the site on which the dwelling units are to be constructed or are currently located and their size. This may take the form of the footprint of the dwelling unit or a building envelope showing the general area in which the dwelling unit is to be located.
- c. The calculations for the permitted number of dwelling units, derived pursuant to Subsection 19.402.14.C.1.
- d. The areas of the site on which other principal and accessory uses are proposed to be located and their size.
- e. The areas of the site designated for common open space and their size.

Information from this subsection has been included on the Site Plan.

4. Approval Criteria

a. Proposals for residential cluster development shall demonstrate compliance with the following criteria:

- (1) The site plan satisfies the requirements of Subsections 19.402.14.C.1 and 2.

The proposed Site Plan satisfies the requirement of Subsections 19.402.14.C.1 and .2.

- (2) Buildings and structures are adequately grouped so that at least 25% of the total area of the site is set aside as common open space. To the greatest degree practicable, common open space shall be designated as a single tract and not divided into unconnected small parcels located in various parts of the development. Common open space shall be conveyed as allowed by Subsection 19.402.13.J.

A single common space tract is proposed with instrument of conveyance acceptable to the City, ie. Deed restriction, public ownership, common tract or easement.

- (3) Individual lots, buildings, structures, streets, and parking areas are situated to minimize the alteration of natural features, natural vegetation, and topography.

Buildings are proposed to be clustered to minimize impact and alteration of natural features and topography.

- (4) Impacts to WQRs and HCAs are avoided or minimized to the greatest degree practicable.

Impacts to WQR and HCA per the proposed map amendment have been minimized with the proposed development.

- (5) The cluster development advances the purposes established in Subsection 19.402.1.

The proposed cluster development is consistent with the purpose of Subsection 19.402.1.

b. The Planning Commission may apply such conditions or stipulations to its approval as may be required to maintain harmony with neighboring uses and promote the objectives and purposes of the Comprehensive Plan and the Zoning and Land Division Ordinances.

c. If the Planning Commission finds that the criteria in Subsection 19.402.14.C.4.a are met, it shall approve the residential cluster development, subject to any conditions established pursuant to Subsection 19.402.14.C.4.b.

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.

Refer to attached reports from ETC for Boundary verification and requested map modification in compliance with this Subsection.

Table 19.402.15			
Determination of WQR Location			
Protected Water Feature Type	Slope Adjacent to Protected Water Feature	Starting Point for Measurements from Protected Water Feature	Width of Vegetated Corridor ¹
Primary Protected Water Features ²	< 25%	<ul style="list-style-type: none"> Bankful stage (top of bank) or 2-year recurrence interval flood elevation Delineated edge of Title 3 wetland 	50'
Primary Protected Water Features ²	≥ 25% for 150' or more ³	<ul style="list-style-type: none"> Bankful stage or 2-year flood elevation Delineated edge of Title 3 wetland 	200'
Primary Protected Water Features ²	≥ 25% for less than 150' ³	<ul style="list-style-type: none"> Bankful stage or 2-year flood elevation Delineated edge of Title 3 wetland 	Distance from starting point of measurement to top of ravine (break in ≥ 25% slope) ⁴ plus 50' ⁵
Secondary Protected Water Features ⁶	< 25%	<ul style="list-style-type: none"> Bankful stage or 2-year flood elevation 	15'
Secondary Protected Water Features ⁶	≥ 25% ³	<ul style="list-style-type: none"> Bankful stage or 2-year flood elevation 	50'

¹ Vegetated corridor width shall be applied to the outer boundaries of water features, such as the edge of a wetland and both banks of a watercourse.

² Primary protected water features include: all perennial streams, streams draining 100 or more acres, Title 3 wetlands, and natural lakes and springs. See Section 19.201 for the full definition.

³ Vegetated corridors in excess of 50 ft for primary protected features, or in excess of 15 ft for secondary protected features, apply on steep slopes only in the uphill direction from the protected water feature.

⁴ Where the protected water feature is confined by a ravine or gully, the top of ravine is the break in the $\geq 25\%$ slope.

⁵ A maximum reduction of 25 ft may be permitted in the width of the vegetated corridor beyond the slope break if a geotechnical report demonstrates that the slope is stable. To establish the width of the vegetated corridor, slope should be measured in 25-ft increments away from the water feature until the slope is less than 25% (top of ravine).

⁶ Secondary protected water features include intermittent streams draining 50 to 100 acres. See Section 19.201 for the full definition.

A. Boundary Verification

To determine whether the standards of Section 19.402 apply to a proposed activity at any given location, the boundaries of any designated natural resource(s) on or near the site shall be verified.

Agreement with the accuracy of the NR Administrative Map does not constitute or require a land use decision. However, for activities proposed within 100 ft of a wetland or its associated vegetated corridor, the boundary verification process outlined in Subsection 19.402.15.A.2.a(1)(b) shall be followed to identify the specific location of wetlands on the subject property. The Planning Director may waive the requirement for official wetland delineation, depending on the specific circumstances of the site and the proposed activity. Such circumstances may include, but are not limited to, the scale and potential impacts of the proposed activity, the proximity of the proposed activity to the mapped resource, and the Director's confidence in the accuracy of the NR Administrative Map relative to the resource in question.

An applicant may challenge the accuracy of the NR Administrative Map through either of the boundary verification processes outlined in Subsections 19.402.15.A.1 and 2.

1. Type I Boundary Verification

The following minor corrections to mapped HCAs may be proposed according to one of the following procedures, and are subject to Type I review per Section 19.1004:

a. Simple Incongruities

In some cases, the vegetative cover data shown on the NR Administrative Map might not align with the location of existing legally established development or tree cover. An applicant who believes that the NR Administrative Map is inaccurate, based on such an obvious misalignment, shall submit the following information regarding the property:

- (1) A detailed property description and site plan of the property that includes all existing conditions plans listed on the City's Site Plan Requirements.

- (2) A copy of the applicable NR Administrative Map section.
- (3) The latest available aerial photograph of the property, with lot lines shown, at a scale of at least 1 map inch equal to 50 ft for lots of 20,000 or fewer square feet, and a scale of 1 map inch equal to 100 ft for larger lots.
- (4) A documented demonstration of the misalignment between the NR Administrative Map and the property's tax lot boundary lines and/or the location of existing legally established development.
- (5) Any other factual information that the applicant wishes to provide to support boundary verification.

b. Legal Development Prior to Adoption Date

If a property was legally developed between the summer of 2002 (when the aerial photograph used to determine the regional habitat inventory was taken) and September 15, 2011, the effective date of Ordinance #2036, the applicant shall submit the following information regarding the property:

- (1) The information described in Subsection 19.402.15.A.1.a.
- (2) A summer 2002 aerial photograph of the property, with lot lines shown, at a scale of at least 1 map inch equal to 50 ft for lots of 20,000 or fewer square feet, and a scale of 1 map inch equal to 100 ft for larger lots.
- (3) Any approved building permits or other development plans and drawings related to the development of the property that took place between summer 2002 and September 15, 2011, the effective date of Ordinance #2036.
- (4) A clear explanation and documentation, such as supporting maps or drawings or a more recent aerial photograph, indicating the new development that has occurred and where previously identified habitat no longer exists because it is now part of a developed area.

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 report, prepared by a qualified scientist or professional engineer who specializes in hydrology, 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) Wetlands

In the case of wetlands, the applicant shall submit a wetland delineation report, prepared by a professional wetland specialist in accordance with the 1996 Oregon Freshwater Wetland Assessment Methodology and following the wetlands delineation process established by DSL, demonstrating the location of any wetlands on the site. The delineation report will be accepted only after approval by DSL. If the wetland is demonstrated to be a primary 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 wetland on the subject property.

The Planning Director shall confer with DSL and Metro to confirm delineation and hydrology reports, as may be needed, prior to issuing a notice of decision on a requested map correction.

(2) Approval Criteria

The City shall update the NR Administrative Map if the wetland or hydrology report submitted demonstrates any of the following:

- (a) That there was an error in the original mapping.
- (b) That the boundaries of the WQR have changed since the most recent update to the NR Administrative Map.
- (c) That a primary protected water feature no longer exists because the area has been legally filled, culverted, or developed prior to January 16, 2003, the effective date of Ordinance #1912.

b. Detailed Verification of HCAs

An applicant who believes that an HCA shown on the NR Administrative Map should be corrected for a reason other than those described in Subsections 19.402.15.A.1.a or b may propose a detailed verification.

(1) Submittal Requirements

The applicant shall submit a report prepared and signed by either a knowledgeable and qualified natural resource professional; such as a wildlife biologist, botanist, or hydrologist; or a civil or environmental engineer registered in Oregon to design public sanitary or storm systems, stormwater facilities, or other similar facilities. The report shall include:

- (a) A description of the qualifications and experience of all persons that contributed to the report and, for each person that contributed, a description of the elements of the analysis to which the person contributed.
- (b) The information described in Subsection 19.402.15.A.1.a.

- (c) The information described in Subsection 19.402.15.A.1.b, if the applicant believes such information is relevant to the verification of habitat location on the subject lot or parcel.
- (d) Additional aerial photographs, if the applicant believes they provide better information regarding the property, including documentation of the date and process used to take the photos and an expert's interpretation of the additional information they provide.
- (e) A map showing the topography of the property shown by 2-ft vertical contours in areas of slopes less than 15%, and at 5-ft vertical contours of slopes 15% or greater.
- (f) Any additional information necessary to address each of the detailed verification criteria provided in Subsection 19.402.15.A.2.b(2); a description of where any HCAs are located on the property, based on the application of the detailed verification criteria; and factual documentation to support the analysis.

(2) Approval Criteria

A boundary verification request submitted under Subsection 19.402.15.A.2.b shall be evaluated according to the following three-step process:

(a) Verify Boundaries of Inventoried Riparian Habitat

Locating habitat and determining the riparian habitat class of the designated natural resource is a four-step process:

(i) Locate the water feature that is the basis for identifying riparian habitat.

- Locate the top of bank of all streams, rivers, and open water within 200 ft of the property.
- Locate all flood areas within 100 ft of the property.
- Locate all wetlands within 150 ft of the property, based on the NR Administrative Map. Identified wetlands shall be further delineated consistent with methods currently accepted by DSL and the Corps.

(ii) Identify the vegetative cover status of all areas on the property that are within 200 ft of the top of bank of streams, rivers, and open water; are wetlands or are within 150 ft of wetlands; and are flood areas and within 100 ft of flood areas.

- Vegetative cover status shall be as identified on the latest Metro Vegetative Cover Map (available from the City and/or the Metro Data Resource Center).
- The vegetative cover status of a property may be adjusted only if: (1) the property was legally developed prior to September 15, 2011, the effective date of Ordinance #2036 (see Subsection 19.402.15.A.1.b); or (2) an error was made at the time the vegetative cover status was determined. To assert the latter type

of error, applicants shall submit an analysis of the vegetative cover on their property, using the aerial photographs on which the latest Metro Vegetative Cover Map is based and the definitions of the different vegetative cover types identified in Table 19.402.15.A.2.b(2)(a)(iv).

(iii) Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 ft of the property is greater than or less than 25%, using the methodology outlined in Table 19.402.15.

(iv) Identify the riparian habitat classes applicable to all areas on the property using Table 19.402.15.A.2.b(2)(a)(iv) and the data identified in Subsections 19.402.15.A.2.b(2)(a)(i) through (iii).

Table 19.402.15.A.2.b(2)(a)(iv)			
Method for Determining Classification of Riparian Areas			
Distance from Protected Water Feature	Development/Vegetation Status ¹		
	Low Structure Vegetation or Open Soils ²	Woody Vegetation (shrub and scattered forest canopy) ³	Forest Canopy (closed to open forest canopy) ⁴
Surface Streams			
0'-50'	Class I ⁵	Class I	Class I
51'-100'	Class II ⁶	Class I	Class I
101'-150'	Class II ⁶ if slope>25%	Class II ⁶ if slope>25%	Class II ⁶
151'-200'	Class II ⁶ if slope>25%	Class II ⁶ if slope>25%	Class II ⁶ if slope>25%
Wetlands (wetland feature itself is a Class I riparian area)			
0'-100'	Class II ⁶	Class I	Class I
101'-150'			Class II ⁵
Flood Areas			
Within 300' of river or surface stream	Class I	Class I	Class I
More than 300' from river or surface stream	Class II ⁶	Class II ⁶	Class I
0'-100' from edge of flood area		Class II ^{6,7}	Class II ⁶

¹ The vegetative cover type assigned to any particular area was based on two factors: the type of vegetation observed in aerial photographs and the size of the overall contiguous area of vegetative cover to which a particular piece of vegetation belonged.

² “Low structure vegetation or open soils” means areas that are part of a contiguous area 1 acre or larger of grass, meadow, croplands, or areas of open soils located within 300 ft of a surface stream. Low structure vegetation areas may include areas of shrub vegetation less than 1 acre in size; if they are contiguous with areas of grass, meadow, croplands, orchards, Christmas tree farms, holly farms, or areas of open soils located within 300 ft of a surface stream; and if those contiguous areas together together form an area of 1 acre in size or larger.

³ “Woody vegetation” means areas that are part of a contiguous area 1 acre or larger of shrub or open or scattered forest canopy (less than 60% crown closure) located within 300 ft of a surface stream.

⁴ “Forest canopy” means areas that are part of a contiguous grove of trees of 1 acre or larger in area with approximately 60% or greater crown closure, irrespective of whether the entire grove is within 200 ft of the relevant water feature.

⁵ Except that areas within 50 ft of surface streams shall be Class II riparian areas if their vegetation status is “low structure vegetation or open soils,” and they are high gradient streams. High gradient streams are identified on the Metro Vegetative Cover Map. If a property owner believes the gradient of a stream was incorrectly identified, then the property owner may demonstrate the correct classification by identifying the channel type using the methodology described in the *Oregon Watershed Assessment Manual*, published by OWEB, and appended to Metro’s *Riparian Corridor and Wildlife Habitat Inventories Report*, Attachment 1 to Exhibit F to Metro Ordinance No. 05-1077C.

⁶ Areas that have been identified as habitats of concern, as designated on the Metro Habitats of Concern Map (on file in the Metro Council office), shall be treated as Class I riparian habitat areas in all cases; subject to the provision of additional information that establishes that they do not meet the criteria used to identify habitats of concern as described in Metro’s *Technical Report for Fish and Wildlife*. Examples of habitats of concern include: Oregon white oak woodlands, bottomland hardwood forests, wetlands, native grasslands, riverine islands or deltas, and important wildlife migration corridors.

⁷ Only if within 300 ft of a river or surface stream.

(b) Determine the Property’s Urban Development Value

The urban development value of property designated as regionally significant habitat is depicted on the Metro Habitat Urban Development Value Map (available from the Metro Data Resource Center).

(i) A property’s urban development value designation shall be adjusted upward if the Metro 2040 Design Type designation for the property lot or parcel has changed from one with a lower urban development value to one with a higher urban development value. 2040 Design Type designations are identified on the Metro 2040 Applied Concept Map (available from the Metro Data Resource Center).

(ii) Properties in areas designated on the 2040 Applied Concept Map as Central City, Regional Centers, Town Centers, and Regionally Significant Industrial Areas are considered to be of high urban development value; properties in areas designated as Main Streets, Station Communities, Other Industrial Areas, and Employment Centers are of medium urban development value; and properties in areas designated as Inner and Outer Neighborhoods and Corridors are of low urban development value.

(iii) As designated in Title 13 of the UGMFP, properties owned by a regionally significant educational or medical facility are designated as high urban development value.

(c) Cross-Reference Habitat Class with Urban Development Value

City verification of the locations of HCAs shall be consistent with Table 19.402.15.A.2.b(2)(c).

Table 19.402.15.A.2.b(2)(c)				
Method for Identifying Habitat Conservation Areas (HCAs)				
Fish & Wildlife Habitat Classification	High Urban Development Value ¹	Medium Urban Development Value ²	Low Urban Development Value ³	Other Areas: Parks and Open Spaces (no design types outside UGB)
Class I Riparian	HCA	HCA	HCA	HCA
Class II Riparian	HCA	HCA	HCA	HCA
Class A Upland Wildlife	No HCA	No HCA	No HCA	No HCA/HCA ⁴
Class B Upland Wildlife	No HCA	No HCA	No HCA	No HCA/HCA ⁴

NOTE: The default urban development value of property is as depicted on the Metro Habitat Urban Development Value Map. The Metro 2040 Design Type designations provided in the following footnotes are only for use when a city or county is determining whether to make an HCA adjustment.

¹ Primary 2040 design type: Central City, Regional Centers, Town Centers, and Regionally Significant Industrial Areas.

² Secondary 2040 design type: Main Streets, Station Communities, Other Industrial areas, and Employment Centers.

³ Tertiary 2040 design type: Inner and Outer Neighborhoods, Corridors.

⁴ All Class A and B upland wildlife habitat in publicly-owned parks and open spaces shall be considered HCA, except for parks and open spaces where the acquiring agency clearly identified that it was acquiring the property to develop it for active recreational uses.

(3) Notification to Metro and DLCD

When an application for boundary verification proposes corrections to mapped HCAs that would result in a change in HCA designation of 1 acre or more, the City shall notify Metro and the Oregon Department of Land Conservation and Development within 7 days after the application has been deemed complete, in accordance with the Type II referral procedure outlined in Subsection 19.1005.3.A.

3. Type III or V Boundary Verification

Corrections to mapped WQRs or HCAs that are not subject to processing according to the provisions outlined in either of Subsection 19.402.15.A.1 or A.2, such as in cases where the City initiates the change without property owner authorization and/or where the changes involve more properties than for which it is practicable to obtain all property owners' authorization, shall be processed in accordance with the procedures for zoning map amendments as provided in Subsection 19.902.6. Such corrections shall be processed with either Type III or Type V review, accordingly, but do not constitute amendments to the zoning map itself, only to the NR Administrative Map.

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.

2. Mapping Implications of Allowed Disturbances

a. WQRs

Permanent disturbances within a WQR, whether they occurred prior to the adoption of the Zoning Ordinance or are allowed according to the standards of Section 19.402, do not affect the way related WQRs are shown on the NR Administrative Map.

b. HCAs

When disturbances are allowed within HCAs, in accordance with the applicable standards of Section 19.402, the City may update the NR Administrative Map to show that the permanently disturbed area is no longer considered an HCA.

3. Designation of Annexed Areas

When land annexed to the City includes WQRs and/or HCAs, as designated by Clackamas County, those same designations shall be shown on the City's NR Administrative Map at the time of annexation. Verification of the boundaries of such WQRs and/or HCAs shall be processed in accordance with the applicable provisions

established in Subsection 19.402.15.A; not necessarily at the time of annexation, but at such time as a new activity is proposed on the annexed property.

19.504 SITE DESIGN STANDARDS

19.504.1 Clear Vision Areas

A clear vision area shall be maintained on the corners of all property at the intersection of 2 streets or a street and a railroad according to the provisions of the clear vision ordinance in Chapter 12.24.

The location selected for the proposed private road accessing the property conforms with both horizontal and vertical vision clearance requirements.

19.504.2 Maintenance of Minimum Ordinance Requirements

No lot area, yard, other open space, or off-street parking or loading area shall be reduced by conveyance or otherwise below the minimum requirements of this title, except by dedication or conveyance for a public use.

No reduction of lot area, yards or open space below the minimum is proposed for this development.

19.504.3 Dual Use of Required Open Space

No lot area, yard, or other open space or off-street parking or loading area which is required by this title for one use shall be used to meet the required lot area, yard, or other open space or off-street parking area for another use, except as provided in Subsection 19.605.4.

Criterion does not apply. Proposed project consists only of single family residential use.

19.504.4 Buildings on the Same Lot

A. In R-10, R-7, and R-5 Zones, 1 primary dwelling shall be permitted per lot. A detached accessory dwelling unit may be permitted per Subsection 19.910.1.

B. In the R-3 Zone, 1 single-family detached dwelling shall be permitted per lot. A detached accessory dwelling unit may be permitted per Subsection 19.910.1. Multifamily housing, with multiple structures designed for dwelling purposes, may be permitted as a conditional use per Section 19.905.

Multiple buildings are proposed on a single lot with the proposed development as allowed for Cluster Development under MMC 19.402.14.

19.504.5 Distance from Property Line

Where a side or rear yard is not required and a structure is not to be erected at the property line, it shall be set back at least 3 ft from the property line.

Side and rear yard setbacks are proposed to comply with the requirements of Cluster Developments per MMC 19.402.14.

19.504.6 Transition Area Measures

Where commercial, mixed-use, or industrial development is proposed abutting or adjacent to properties zoned for lower-density residential uses, the following transition measures shall be

required. These additional requirements are intended to minimize impacts on lower-density residential uses.

A. All yards that abut, or are adjacent across a right-of-way from, a lower-density zone shall be at least as wide as the required front yard width of the adjacent lower-density zone. This additional yard requirement shall supersede the base zone yard requirements for the development property where applicable, except in the NMU Zone. In the NMU Zone, the base zone front yard requirements supersede these requirements.

B. All yards that abut, or are adjacent across a right-of-way from, a lower-density zone shall be maintained as open space. Natural vegetation, landscaping, or fencing shall be provided to at least the 6-ft level to screen lower-density residential uses from direct view across the open space, subject to the provisions of Subsection 19.502.2.B.

No commercial, mixed use or industrial developments are proposed or abut the subject property. Criterion does not apply.

19.504.7 Minimum Vegetation

No more than 20% of the required vegetation area shall be covered in mulch or bark dust. Mulch or bark dust under the canopy of trees or shrubs is excluded from this limit. Plans for development shall include landscaping plans which shall be reviewed for conformance to this standard.

A final landscape plan for the proposed development area of the site will be provided prior to building permits being applied for. Compliance with this requirement will be met with this plan.

19.504.8 Flag Lot Design and Development Standards

A. Applicability

Flag lots in all zones are subject to the development standards of this subsection.

B. Development Standards

1. Lot Area Calculation

The areas contained within the accessway or pole portion of the lot shall not be counted toward meeting the minimum lot area requirement.

2. Yard Setbacks for Flag Lots

a. Front and rear yard: The minimum front and rear yard requirement for flag lots is 30 ft.

b. Side yard: The minimum side yard for principal and accessory structures in flag lots is 10 ft.

Criteria do not apply. No flag lots are proposed as part of this development.

C. Variances Prohibited

Variances of lot area, lot width, and lot depth standards are prohibited for flag lots.

Criterion does not apply. No flag lots are proposed as part of this development.

D. Frontage, Accessway, and Driveway Design

1. Flag lots shall have frontage and access on a public street. The minimum width of the accessway and street frontage is 25 ft. The accessway is the pole portion of the lot that provides access to the flag portion of the lot.
2. Abutting flag lots shall have a combined frontage and accessway of 35 ft. For abutting accessways of 2 or more flag lots, the accessway of any individual lot shall not be less than 15 ft.

Criteria do not apply. No flag lots are proposed as part of this development.

3. Driveway Design and Emergency Vehicle Access

- a. Driveways shall be designed and constructed in accordance with Chapters 12.16 and 12.24 and the Public Works Standards.
- b. Driveways serving single flag lots shall have a minimum paved width of 12 ft.
- c. Driveways shall be centered within the accessway to minimize impacts on adjoining lots except when otherwise warranted to preserve existing vegetation or meet the intent of this subsection.
- d. A paved turnaround area, or other provisions intended to provide emergency vehicle access and adequate maneuvering area, may be required.
- e. Driveways serving 2 flag lots shall be consolidated and have a minimum shared driveway width of 16 ft.
- f. The flag lot driveway shall be consolidated with the driveway on the parent lot to the greatest extent practicable.
- g. Design standards for shared driveways serving more than 3 lots shall be specified by the Engineering Director after consultation with the Fire Marshal.
- h. Parking along any portion of the driveway within the accessway is prohibited unless the driveway is suitably sized to meet the combined needs of parking and emergency access requirements.

Criteria do not apply. No flag lots are proposed as part of this development.

E. Protection of Adjoining Properties

Flag lots must be screened in accordance with this subsection to minimize potential adverse impacts to abutting properties. Fencing and screening must conform to the clear vision standards of Chapter 12.24. Fencing shall conform to the standards of Subsection 19.502.2.B.

1. Planting and screening must be provided at the time of development. Installation of required screening and planting is required prior to final inspections and occupancy of the site unless a bond or other surety acceptable to the City Attorney is provided. Screening and landscaping shall be installed within 6 months thereafter or the bond

will be foreclosed. The property owner shall maintain required screening and planting in good and healthy condition. The requirement to maintain required screening and planting is continuous.

2. Impacts to neighboring lots due to use of the flag lot driveway shall be mitigated to the greatest extent practicable through screening and planting. Continuous screening along lot lines of the flag lot abutting any neighboring lot that is not part of the parent lot from which the flag lot was created is required as described below. See Figure 19.504.8.E.

a. Any combination of dense plantings of trees and shrubs and fencing that will provide continuous sight obstruction for the benefit of adjoining properties within 3 years of planting is allowed.

b. Fencing along an accessway may not be located nearer to the street than the front building line of the house located on lots that abut the flag lot accessway. Dense planting shall be used to provide screening along the accessway in areas where fencing is not permitted.

c. All required screening and planting shall be maintained and preserved to ensure continuous protection against potential adverse impacts to adjoining property owners.

Criteria do not apply. No flag lots are proposed as part of this development.

F. Tree Mitigation

All trees 6 in or greater in diameter, as measured at the lowest limb or 4 ft above the ground, whichever is less, shall be preserved. Where trees are required to be removed for site development, at least 1 evergreen or deciduous tree, of a species known to grow in the region, shall be replanted for each tree removed. At planting, deciduous trees shall be a minimum of 2 in caliper and evergreen trees shall be a minimum of 5 ft tall.

No trees 6 inches in diameter are proposed to be removed as part of this project.

G. Landscaping Plan Required

A landscaping plan shall be submitted to the Planning Director prior to issuance of a building permit for new construction. The plan shall be drawn to scale and shall accompany development permit applications. The plan shall show the following information:

1. A list of existing vegetation by type, including number, size, and species of trees.
2. Details for protections of existing trees.
3. List of existing natural features.
4. Location and space of existing and proposed plant materials.
5. List of plant material types by botanical and common names.
6. Notation of trees to be removed.

7. Size and quantity of plant materials.
8. Location of structures on adjoining lots, and location of windows, doors, and outdoor use areas on lots that adjoin the flag lot driveway.

A landscape plan for the entire development area will be submitted for review/ approval prior to issuance of building permits being applied for.

19.504.9 On-Site Walkways and Circulation

A. Requirement

All development subject to Chapter 19.700 (excluding single-family and multifamily residential development) shall provide a system of walkways that encourages safe and convenient pedestrian movement within and through the development site. Redevelopment projects that involve remodeling or changes in use shall be brought closer into conformance with this requirement to the greatest extent practicable. On-site walkways shall link the site with the public street sidewalk system. Walkways are required between parts of a site where the public is invited to walk. Walkways are not required between buildings or portions of a site that are not intended or likely to be used by pedestrians, such as truck loading docks and warehouses.

B. Location

A walkway into the site shall be provided for every 300 ft of street frontage.

C. Connections

Walkways shall connect building entrances to one another and building entrances to adjacent public streets and existing or planned transit stops. On-site walkways shall connect with walkways, sidewalks, bicycle facilities, alleys, and other bicycle or pedestrian connections on adjacent properties used or planned for commercial, multifamily, institutional, or park use. The City may require connections to be constructed and extended to the property line at the time of development.

D. Routing

Walkways shall be reasonably direct. Driveway crossings shall be minimized. Internal parking lot circulation and design shall provide reasonably direct access for pedestrians from streets and transit stops to primary buildings on the site.

E. Design Standards

Walkways shall be constructed with a hard surface material, shall be permeable for stormwater, and shall be no less than 5 ft in width. If adjacent to a parking area where vehicles will overhang the walkway, a 7-ft-wide walkway shall be provided. The walkways shall be separated from parking areas and internal driveways using curbing, landscaping, or distinctive paving materials. On-site walkways shall be lighted to an average 5/10-footcandle level. Stairs or ramps shall be provided where necessary to provide a direct route.

Criteria do not apply. The project is not a commercial, industrial or mixed use project.

19.504.10 Setbacks Adjacent to Transit

The following requirement applies to all new commercial, office, and institutional development within 500 ft of an existing or planned transit route measured along the public sidewalk that provides direct access to the transit route:

When adjacent to a street served by transit, new commercial, office, or institutional development, including uses authorized under Section 19.904 Community Service Uses, shall be set back no more than 30 ft from the right-of-way that is providing transit service.

A. An individual building may be set back more than 30 ft, provided the building is part of an approved phased development that will result in a future building(s) that complies with the 30-ft setback standard.

B. For sites with multiple buildings, the maximum distance from a street with transit to a public entrance of the primary building shall be no more than 100 ft.

C. If the proposed building is part of an institutional campus, the Planning Director may allow flexibility in the setback and orientation of the building. As a trade-off for this flexibility, enhanced sidewalk connections shall be provided between the institutional building(s) and nearby transit stops.

D. If the site abuts more than 1 street served by transit, then the maximum setback requirement need only apply to 1 street.

Criteria do not apply. The project is not a commercial, industrial or mixed use project.

19.504.11 Preliminary Circulation Plan

A preliminary circulation plan is intended to guide site development by establishing a plan for multimodal access, connectivity, and circulation. A preliminary circulation plan is a conceptual plan, in that it does not establish a precise alignment for street, pedestrian, or bicycle facilities.

A. Applicability

A preliminary circulation plan is required for nonresidential development on sites 3 acres and larger that are subject to development review per Section 19.906 and where any of the following is true:

1. The site is vacant.
2. The proposed new development or redevelopment will result in reconfiguration of the transportation and development pattern for > 50% of the site.
3. The development is in the Flex Space Overlay Zone.

B. Plan Contents

1. The preliminary circulation plan shall include a site plan, showing land uses; building envelopes and other structures; the pedestrian, bicycle, and vehicle

circulation system; vehicle and bicycle parking areas; open areas; existing trees to be preserved; and utility connections. The site plan must also include the following:

- a. All existing improvements that will remain after development of the proposed use.
- b. All improvements planned in conjunction with the proposed use.
- c. Conceptual plans for possible future uses.
- d. Pedestrian and bicycle facilities, including safe pedestrian and safe bicycle circulation between the following:

- (1) Major buildings, activity areas, and transit stops within the site plan boundaries and adjacent streets, pathways, and transit stops.

- (2) Adjacent developments and the proposed development.

2. The preliminary circulation plan shall include a public right-of-way/easement plan depicting the following, if applicable:

Reservation, dedication, or use of the proposed site for public purposes, including, but not limited to the following: rights-of-way, showing the name and location of all existing and proposed public and private access drives within or on the boundary of the proposed site; the right-of-way and paving dimensions; the ownership and maintenance status, if applicable; the location, width, and construction material of all existing and proposed sidewalks; pedestrian accessways and trails; and bicycle accessways and trails.

C. Approval Criteria

In reviewing a proposed preliminary circulation plan, the Planning Director shall find compliance with the relevant portions of the Comprehensive Plan, Transportation System Plan, and Section 19.708 Transportation Facility Requirements.

D. Permit Process

A new preliminary circulation plan, or a revision to an approved preliminary circulation plan, is subject to Type II review per Section 19.1005.

Criteria do not apply. The project is not a commercial, industrial or mixed use project.

19.505 BUILDING DESIGN STANDARDS

19.505.1 Single-Family Dwellings and Duplexes

A. Purpose

The design standards for single-family dwellings and duplexes require a minimum level of design on every dwelling. These standards are intended to promote attention to detail, human-scale design, street visibility, and privacy of adjacent properties, while affording flexibility to use a variety of architectural styles.

B. Applicability

The design standards in this subsection apply to the types of development listed below when the closest wall of the street-facing façade is within 50 ft of a front or street side lot line.

1. New single-family detached dwellings, residential homes, duplexes, and rowhouses on individual lots. Placement of a new manufactured home on a lot outside of a manufactured home park is subject to the requirements of Section 19.506 and the standards of Subsection 19.505.1.
2. Expansions of structures in Subsection 19.505.1.B.1 that add area to any street-facing façade. The design standards for such expansions are applicable as follows:
 - a. Expansions that add 75 sq ft or less of street-facing façade area are exempt from all design standards in Subsection 19.505.1.
 - b. Expansions that add more than 75 sq ft and less than 200 sq ft of street-facing façade area are subject to Subsection 19.505.1.C.2 Eyes on the Street. The expanded façade area must meet the standards of Subsection 19.505.1.C.2 without consideration of the original street-facing façade area.
 - c. Expansions that add 200 sq ft or more of street-facing façade area are subject to the following design standards:
 - (1) The entire street-facing façade shall comply with Subsection 19.505.1.C.2 Eyes on the Street.
 - (2) Subsection 19.505.1.C.3 Main Entrance is applicable if an expansion would create a new main entrance. No expansion shall bring the street-facing façade out of conformance, or further out of conformance if already nonconforming, with the design standard.
 - (3) Subsection 19.505.1.C.1 Articulation is applicable for expansions that add 20 lineal ft or more to the length of the street-facing façade.
 - d. Subsection 19.505.1.C.4 Detailed Design is not applicable for expansions. However, no expansion shall bring the street-facing façade out of conformance, or further out of conformance if already nonconforming, with the Detailed Design standards.
 - e. Expansions to street-facing façades of less than 200 sq ft are limited to no more than 1 expansion every 5 years, calculated from the date of issuance for the development permit. Multiple expansions are allowed within a 5-year period if

the street-facing façade will comply with the design standards that would have been applicable if the expansions occurred at the same time.

3. Remodels that convert an attached garage to a habitable residential space. When applicable, the design standards apply only to the street-facing façade of the garage being converted. The following design standards are applicable:

a. Subsection 19.505.1.C.3 Main Entrance is applicable if the garage conversion would create a new main entrance. No conversion shall bring the street-facing façade out of conformance, or further out of conformance if already nonconforming, with the design standard.

b. Subsection 19.505.1.C.4 Detailed Design is not applicable. However, no conversion shall bring the street-facing façade out of conformance, or further out of conformance if already nonconforming, with the design standard.

The project consists of new detached, single family homes on a common lot. As such; compliance with these standards are not applicable per the Code Section above. Compliance with these standards is voluntary and being applied to the proposed development to the greatest extent possible.

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.

1. Articulation

All buildings shall incorporate design elements that break up all street-facing façades into smaller planes as follows. See Figure 19.505.1.C.1 for illustration of articulation.

a. For buildings with 30-60 ft of street frontage, a minimum of 1 of the following elements shall be provided along the street-facing façades.

(1) A porch at least 5 ft deep.

(2) A balcony that is at least 2 ft deep and is accessible from an interior room.

(3) A bay window that extends at least 2 ft wide.

(4) A section of the façade that is recessed by at least 2 ft deep and 6 ft long.

(5) A gabled dormer.

All buildings with 30-60 feet of street frontage are proposed to have at least one of the articulation elements above.

- b. For buildings with over 60 ft of street frontage, at least 1 element in Subsection 19.505.1.C.1.a(1)-(4) above shall be provided for every 30 ft of street frontage. Elements shall be distributed along the length of the façade so that there are no more than 30 ft between 2 elements.

Criterion does not apply. No buildings are proposed with more than 60' of street frontage.

- c. For buildings with less than 30 ft of street frontage, the building articulation standard is not applicable.

Articulation through offsets in wall planes and entry porches are proposed on buildings less than 30' wide, even though not required by this Code Section.

2. Eyes on the Street

At least 12% of the area of each street-facing façade must be windows or entrance doors. See Figure 19.505.1.C.2 for illustration of eyes on the street.

- a. Windows used to meet this standard must be transparent and allow views from the building to the street. Glass blocks and privacy windows in bathrooms do not meet this standard.
- b. Half of the total window area in the door(s) of an attached garage counts toward the eyes on the street standard. All of the window area in the street-facing wall(s) of an attached garage count toward meeting this standard.
- c. Window area is considered the entire area within the outer window frame, including any interior window grid.
- d. Doors used to meet this standard must face the street or be at an angle of no greater than 45 degrees from the street.
- e. Door area is considered the portion of the door that moves. Door frames do not count toward this standard.

All proposed buildings have at least 12% street facing glazing. Refer to front elevations for actual percentages.

3. Main Entrance

At least 1 main entrance must meet both of the following standards. See Figure 19.505.1.C.3 for illustration of main entrances.

- a. Be no further than 8 ft behind the longest street-facing wall of the building.

All buildings are proposed to have main entrances less than 8' behind the longest street facing facade.

- b. Face the street, be at an angle of up to 45 degrees from the street, or open onto a porch. If the entrance opens up onto a porch, the porch must meet all of these additional standards.

- (1) Be at least 25 sq ft in area with a minimum 4-ft depth.

- (2) Have at least 1 porch entry facing the street.
- (3) Have a roof that is no more than 12 ft above the floor of the porch.
- (4) Have a roof that covers at least 30% of the porch area.

The main entries for each individual home is proposed to have porches at least 4' deep and 25 square feet that are covered by pedestrian scale (less than 12' high) roof covered porches.

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.

- a. Covered porch at least 5 ft deep, as measured horizontally from the face of the main building façade to the edge of the deck, and at least 5 ft wide.
- b. Recessed entry area at least 2 ft deep, as measured horizontally from the face of the main building façade, and at least 5 ft wide.
- c. Offset on the building face of at least 16 in from 1 exterior wall surface to the other.
- d. Dormer that is at least 4 ft wide and integrated into the roof form.
- e. Roof eaves with a minimum projection of 12 in from the intersection of the roof and the exterior walls.
- f. Roof line offsets of at least 2 ft from the top surface of 1 roof to the top surface of the other.
- g. Tile or wood shingle roofs.
- h. Horizontal lap siding between 3 to 7 in wide (the visible portion once installed). The siding material may be wood, fiber-cement, or vinyl.
- i. Brick, cedar shingles, stucco, or other similar decorative materials covering at least 40% of the street-facing façade.
- j. Gable roof, hip roof, or gambrel roof design.
- k. Window trim around all windows at least 3 in wide and 5/8 in deep.
- l. Window recesses, in all windows, of at least 3 in as measured horizontally from the face of the building façade.
- m. Balcony that is at least 3 ft deep, 5 ft wide, and accessible from an interior room.
- n. One roof pitch of at least 500 sq ft in area that is sloped to face the southern sky and has its eave line oriented within 30 degrees of the true north/south axis.
- o. Bay window at least 2 ft deep and 5 ft long.
- p. Attached garage width, as measured between the inside of the garage door frame, of 35% or less of the length of the street-facing façade.

Each of the proposed detached homes in this development have been designed with a minimum of 5 of the elements listed above. Refer to building elevations for compliance.

5. Standards for Duplexes

In addition to the other standards in Subsection 19.505.1, duplexes shall also comply with the following standards.

- a. The exterior finish of the structure must be the same for both units.
- b. The eaves must be uniform for the entire structure.
- c. The window and door trim must be the same in type, size, and location for the entire structure.
- d. Windows must match in proportion and orientation for the entire structure.
- e. For duplexes or 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.
- f. For duplexes facing 1 frontage, the following standards apply.
 - (1) Only 1 entrance is required to face the frontage.
 - (2) Where more than 1 entrance to the structure faces the street, each separate entrance is required to meet the standards of Subsection 19.505.1.C.3.
 - (3) A second entrance from a side or rear yard is not allowed within 10 ft of the side or rear property line.

Criteria do not apply. No duplexes are proposed as part of this development.

19.505.2 Garages and Carports

A. Purpose

These standards are intended to prevent garages from obscuring or dominating the street-facing façade of a dwelling and provide for a pleasant pedestrian environment in residential areas.

B. Applicability

The standards in this subsection apply to all new attached garages and carports on properties with a single-family detached dwelling, residential home, or duplex when the street-facing façade of the garage, or columns of the carport, are located within 50 ft of the front property line. Standards for garages in rowhouse development are in Subsection 19.505.5.

All proposed detached single family homes will comply with this standard.

C. Standards

1. The front of a garage or carport can be no closer to the front lot line than the longest street-facing wall of the house that encloses living area. The following exceptions apply:

- a. A garage or carport may extend up to 5 ft in front if there is a covered front porch and the garage or carport does not extend beyond the front of the porch.

All proposed building designs have covered front porches or building walls that are in front of attached garages, except for 2 proposed building designs that comply with exception B below.

- b. A garage may extend up to 5 ft in front if the garage is part of a 2-story façade that has a window at least 12 sq ft in area on the second story that faces the street.

Two of the proposed building designs backing to the slough utilize this exception.

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 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.

Some of the buildings proposed are too narrow to comply with the 40 or 50% maximum width. A Type III variance is being sought for these buildings. Refer to Section 19.911.4.B.

3. Garages may be side-oriented to the front lot line if the eyes on the street standard in Subsection 19.505.1.C.2 is met.

No side oriented garages are proposed.

19.505.3 Multifamily Housing

A. Purpose

The purpose of these design standards is to facilitate the development of attractive multifamily housing that encourages multimodal transportation. They encourage good site and building design, which contributes to livability, safety, and sustainability; helps create a stronger community; and fosters a quality environment for residents and neighbors.

The guidelines and standards are intended to achieve the following principles that the City encourages for multifamily development:

1. Livability

Development should contribute to a livable neighborhood by incorporating visually pleasing design, minimizing the impact of vehicles, emphasizing pedestrian and bicycle connections, and providing public and private open spaces for outdoor use.

2. Compatibility

Development should have a scale that is appropriate for the surrounding neighborhood and maintains the overall residential character of Milwaukie.

3. Safety and Functionality

Development should be safe and functional, by providing visibility into and within a multifamily development and by creating a circulation system that prioritizes bicycle and pedestrian safety.

4. Sustainability

Development should incorporate sustainable design and building practices, such as energy conservation, preservation of trees and open space, quality building materials, and alternative transportation modes.

B. Applicability

The design elements in Table 19.505.3.D in this subsection apply, as described below, to all multifamily and congregate housing developments with 3 or more dwelling units on a single lot. Cottage cluster housing and rowhouses on their own lots are subject to separate standards and are therefore exempt from Subsection 19.505.3. Housing development that is on a single lot and emulates the style of cottage cluster housing or rowhouses is subject to the standards of this subsection.

1. All new multifamily or congregate housing development is subject to the design elements in this subsection.

Since more than 3 dwelling units are proposed on a single lot with this development compliance with this subsection as well as the single family detached subsection above is being provided with this development.

2. The following design elements are applicable for work that would construct a new building or increase the floor area on the site by more than 1,000 sq ft. Elements that are applicable only to additions do not apply to the site's existing development.

- a. Subsection 19.505.3.D.1 Private Open Space, for the entire site.
- b. Subsection 19.505.3.D.2 Public Open Space, for the entire site.
- c. Subsection 19.505.3.D.5 Building Orientation and Entrances, only for additions or new buildings.
- d. Subsection 19.505.3.D.6 Building Façade Design, only for additions or new buildings.
- e. Subsection 19.505.3.D.7 Building Materials, only for additions or new buildings.
- f. Subsection 19.505.3.D.8 Landscaping, for the entire site.
- g. Subsection 19.505.3.D.9 Screening, only for additions or new buildings.
- h. Subsection 19.505.3.D.11 Sustainability, only for new buildings.
- i. Subsection 19.505.3.D.12 Privacy Considerations, only for additions or new buildings.
- j. Subsection 19.505.3.D.13 Safety, only for additions or new buildings.

3. Table 19.505.3.D.7 Building Materials is applicable for work that would replace more than 50% of the façade materials on a building within a 12-month period. The element applies only to the building on which the new façade materials are installed.
4. Any activity not described in Subsections 19.505.3.D.2.a-c is exempt from the design elements in this subsection.

C. Review Process

Two possible review processes are available for review of multifamily or congregate housing development: objective and discretionary. An applicant may choose which process to use. The objective process uses clear objective standards that do not require the use of discretionary decision-making. The discretionary process uses design guidelines that are more discretionary in nature and are intended to provide the applicant with more design flexibility. Regardless of the review process, the applicant must demonstrate how the applicable standards or guidelines are being met.

1. Projects reviewed through the objective process will be evaluated through a Type I development review, pursuant to Chapter 19.906.
2. Projects reviewed through the discretionary process will be evaluated through a Type II development review, pursuant to Chapter 19.906.

A Type II discretionary review process for this project is requested with this application.

3. A project can be reviewed using only one of the two review processes. For example, a project may not use some of the objective standards and some of the discretionary guidelines in one application.

The discretionary review process for this project has been selected, since this is not a typical multi-family development and located on a unique, constrained site.

D. Design Guidelines and Standards

Applicable guidelines and standards for multifamily and congregate housing are located in Table 19.505.3.D. These standards should not be interpreted as requiring a specific architectural style.

Table 19.505.3.D

Multifamily Design Guidelines and Standards

Design Element	Design Guideline (Discretionary Process)	Compliance
<p>1. Private Open Space</p>	<p>The development should provide private open space for each dwelling unit. Private open space should have direct access from the dwelling unit and should be visually and/or physically separate from common areas.</p> <p>The development may provide common open space in lieu of private opens space if the common open space is well designed, adequately sized, and functionally similar to private open space.</p>	<p><i>Each unit is provided with private open space having direct access from the dwelling unit to the outside. Separation is provided by elevated terraces since the flood plain dictates that living area be elevated.</i></p> <p><i>All units are provided with balcony/ deck areas greater than 48 square feet having minimum dimensions of 5'</i></p>
<p>2. Public Open Space</p>	<p>The development should provide sufficient open space for the purpose of outdoor recreation, scenic amenity, or shared outdoor space for people to gather.</p>	<p><i>More than 50% of the proposed site will be public open space with this proposal. This will consist of natural areas with enhanced native plantings and a small craft dock located at the slough to provide recreation opportunities. A meandering path in the required 50' buffer to the east of the slough with benches and tables will allow for the occupants to gather and appreciate the scenic amenities on this property.</i></p>

<p>3. Pedestrian Circulation</p>	<p>Site design should promote safe, direct, and usable pedestrian facilities and connections throughout the development. Ground-floor units should provide a clear transition from the public realm to the private dwellings.</p>	<p><i>Pedestrian circulation through the site from SE 19th St is provided to the primary entry for each of the proposed home. This is provided by a 5' wide sidewalk and stripped crosswalk connecting all units.</i></p> <p><i>Landscaping at front yards of each proposed home will provide a transition from the public space to each private home.</i></p> <p><i>All streets and on site walkways will be provided with 5-10 footcandles of illumination by pole mounted LED illuminaires.</i></p>
<p>4. Vehicle and Bicycle Parking</p>	<p>Vehicle parking should be integrated into the site in a manner that does not detract from the design of the building, the street frontage, or the site. Bicycle parking should be secure, sheltered, and conveniently located.</p>	<p><i>Each unit is provided with an attached garage and driveway long enough to allow for additional parking.</i></p> <p><i>No on street parking or additional surface parking lot is proposed as part of this development.</i></p> <p><i>Bicycle parking is proposed to be within the private garages, typical of detached single family residences.</i></p>
<p>5. Building Orientation & Entrances</p>	<p>Buildings should be located with the principal façade oriented to the street or a street-facing open space such as a courtyard. Building entrances should be well-defined and protect people from the elements.</p>	<p><i>Each of the proposed detached homes in this development are designed to have the principal facade facing the street with defined entry porches.</i></p>

<p>6. Building Façade Design</p>	<p>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.</p> <p>Windows and doors should be designed to create depth and shadows and to emphasize wall thickness and give expression to residential buildings.</p> <p>Windows should be used to provide articulation to the façade and visibility into the street.</p> <p>Building façades shall be compatible with adjacent building façades.</p> <p>Garage doors shall be integrated into the design of the larger façade in terms of color, scale, materials, and building style.</p>	<p><i>Each of the proposed detached homes has articulation and detailed design elements in accordance to the Design Guidelines for single family detached residences, which are more restrictive than those in multi-family residential projects.</i></p> <p><i>The homes fronting SE 19th St have craftsman elements to blend with the surrounding neighborhood and become more contemporary as the homes get closer to the slough.</i></p>
<p>7. Building Materials</p>	<p>Buildings should be constructed with architectural materials that provide a sense of permanence and high quality.</p> <p>Street-facing façades shall consist predominantly of a simple palette of long-lasting materials such as brick, stone, stucco, wood siding, and wood shingles.</p> <p>A hierarchy of building materials shall be incorporated. The materials shall be durable and reflect a sense of permanence and quality of development.</p> <p>Split-faced block and gypsum reinforced fiber concrete (for trim elements) shall only be used in limited quantities.</p> <p>Fencing shall be durable, maintainable, and attractive.</p>	<p><i>Buildings are proposed to be clad with fiber cement siding with varying profiles for durability and to minimize maintainence. Stained timber and natural wood accents are incorporated to bring a warm, pacific northwest sensibility to the project. No prohibited building materials are proposed. Fencing will be natural cedar, good neighbor type.</i></p>

Design Element	Design Guideline (Discretionary Process)	Design Standard (Objective Process)
12. Privacy Considerations	Multifamily development should consider the privacy of, and sight lines to, adjacent residential properties, and be oriented and/or screened to maximize the privacy of surrounding residences.	<i>The proposed residential development will protect the privacy and sight lines of the adjacent residential properties. The living areas of the surrounding properties on the uphill side of SE 19th are elevated approx 8-12' above the street and approximately 30' above the ground level of a majority of the development so will not obstruct any views from these properties. The property to the south is a park, which does not require screening and the one house to the north of the Project Site has views toward the river away from this site. A 6' high cedar fence is proposed where this home abuts the Site to ensure privacy for these occupants.</i>
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: <ul style="list-style-type: none"> • 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 improves proprietary concern and reinforces social control. 	<i>Individual buildings are designed to provide visual surveillance of roads and common spaces in accordance with single family Design Guidelines. Pole mounted street lighting and lighting at individual homes provide additional security in low light conditions.</i> <i>Lighting will be designed to provide illumination levels per City of Milwaukie Code requirements, minimize glare for adjoining properties and minimize light pollution.</i> <i>Access to the site is controlled by a single access point and fencing along sections of the perimeter is designed to provide additional secure areas and reinforce the territorial boundaries of the development.</i>

19.505.4 Cottage Cluster Housing

A. Purpose

These standards are intended to: support the growth management goal of more efficient use of urban residential land; support development of diverse housing types in accordance with the Comprehensive Plan; increase the variety of housing types available for smaller households; provide opportunities for small, detached dwelling units within existing neighborhoods; increase opportunities for home ownership; and provide opportunities for creative and high-quality infill development that is compatible with existing neighborhoods.

B. Applicability

These standards apply to cottage cluster housing, as defined in Section 19.201, wherever this housing type is allowed by the base zones in Chapter 19.300. The standards apply to development of new cottage clusters and modifications to existing cottage clusters.

The proposed development does not qualify as a cottage cluster housing development due to the size limitations of the proposed homes. Criteria of this section do not apply.

19.505.5 Rowhouses

A. Purpose

Rowhouses provide a type of housing that includes the benefits of a single-family detached dwelling, such as fee simple ownership and private yard area, while also being an affordable housing type for new homeowners and households that do not require as much living space. The purpose of these standards is to allow rowhouses in medium to high density residential zones. Rowhouses are allowed at the same density as single-family detached and multifamily dwellings, and the general design requirements are very similar to the design requirements for single-family detached dwellings. Two important aspects of these standards are to include a private-to-public transition space between the dwelling and the street and to prevent garage and off-street parking areas from being prominent features on the front of rowhouses.

B. Applicability

1. The standards of Subsection 19.505.5 apply to single-family dwellings on their own lot, where the dwelling shares a common wall across a side lot line with at least 1 other dwelling, and where the lots meet the standards for a rowhouse lot in both Section 19.302 and Subsection 19.505.5.E. Rowhouse development may take place on existing lots that meet the lot standards for rowhouse lots or on land that has been divided to create new rowhouse lots.

The proposed development does not qualify as a rowhouse development since detached single family homes are proposed.

19.505.6 Live/Work Units

A. Purpose

This section establishes regulations and standards for creating and operating live/work units as a primary use. The purposes of these provisions are as follows:

1. Allow for the creation of cost-efficient alternative work space that will provide an incentive for entrepreneurs, business owners, artists, artisans, and other individuals to work in Milwaukie and contribute to the city's economy.
2. Foster and encourage the development of small businesses.
3. Enliven the vitality of commercial corridors by encouraging on-site residential uses.
4. Ensure that the use and design of live/work units is compatible with the use and design of surrounding structures and development.

B. Applicability

These standards apply to live/work units, as defined in Section 19.201, wherever this use is allowed by the base zones in Chapter 19.300 or the overlay zones in Chapter 19.400.

No live - work units are proposed. This Code subsection does not apply.

19.505.7 Nonresidential Development

A. Purpose

The design standards contained in this section are intended to encourage building design and construction with durable, high-quality materials. The design standards support development of an attractive, cohesive, and pedestrian-friendly commercial area. The design standards do not prescribe a particular building or architectural style.

B. Applicability

1. The design standards in this section generally apply to the street-facing façades of new commercial, institutional, manufacturing, and mixed-use buildings within the commercial mixed-use zones.
2. The standards in this section do not apply to rowhouses or live/work units. Rowhouses and live/work units are subject to the design standards in Subsections 19.505.5 Rowhouses and 19.505.6 Live/Work Units.
3. The standards in this section do not apply to stand-alone multifamily housing. Stand-alone multifamily buildings are subject to the design standards in Subsection 19.505.3 Multifamily Housing.
4. The standards in this section do not apply to cottage cluster housing. Cottage cluster housing is subject to the design standards in Subsection 19.505.4 Cottage Cluster Housing.

No non-residential buildings are proposed as part of this development. Criteria of this section do not apply.

19.505.8 Building Orientation to Transit

The following requirement applies to all new commercial, office, mixed-use, and institutional development within 500 ft of an existing or planned transit route measured along the public sidewalk that provides direct access to the transit route:

New buildings shall have their primary orientation toward a transit street or, if not adjacent to a transit street, a public right-of-way which leads to a transit street. The primary building entrance shall be visible from the street and shall be directly accessible from a sidewalk connected to the public right-of-way. A building may have more than 1 entrance. If the development has frontage on more than 1 transit street, the primary building entrance may be oriented to either street or to the corner.

The site does not front a transit street. Criteria of this section are not applicable.

CHAPTER 19.600 OFF-STREET PARKING AND LOADING

19.601 PURPOSE

Chapter 19.600 regulates off-street parking and loading areas on private property outside the public right-of-way. The purpose of Chapter 19.600 is to: provide adequate, but not excessive, space for off-street parking; avoid parking-related congestion on the streets; avoid unnecessary conflicts between vehicles, bicycles, and pedestrians; encourage bicycling, transit, and carpooling; minimize parking impacts to adjacent properties; improve the appearance of parking areas; and minimize environmental impacts of parking areas.

Regulations governing the provision of on-street parking within the right-of-way are contained in Chapter 19.700. The management of on-street parking is governed by Chapter 10.20. Chapter 19.600 does not enforce compliance with the Americans with Disabilities Act (ADA). ADA compliance on private property is reviewed and enforced by the Building Official.

19.602 APPLICABILITY

19.602.1 General Applicability

The regulations of Chapter 19.600 apply to all off-street parking areas and off-street loading areas, whether required by the City as part of development or a change in use, per Subsection 19.602.3, or voluntarily installed for the convenience of users, per Subsection 19.602.4. Activity that is not described by Subsections 19.602.3 or 4 is exempt from compliance with the provisions of Chapter 19.600. Changes to nonconforming off-street parking and loading are addressed through Chapter 19.600 and not through the provisions of Chapter 19.800.

The proposed development will be in conformance with this Code Section.

19.602.2 Maintenance Applicability

Property owners shall comply with the regulations of Chapter 19.600 by ensuring conformance with the standards of Chapter 19.600 related to ongoing maintenance, operations, and use of off-street parking and loading areas. Changes to existing off-street parking or loading areas that bring the area out of conformance with Chapter 19.600, or further out of conformance if already nonconforming, are prohibited.

The Home Owners Association for this development will be responsible for on going maintenance and use of off-street parking.

19.602.3 Applicability for Development and Change in Use Activity

The provisions of Chapter 19.600 apply to development and changes of use as described in Subsection 19.602.3.

A. Development of a vacant site shall have off-street parking and off-street loading areas that conform to the requirements of Chapter 19.600. Development of a site that results in an increase of 100% or more of the existing floor area and/or structure footprint on a site shall also conform to the requirements of Chapter 19.600. The floor area and/or footprint of

structures demolished prior to development or redevelopment on the site shall not be considered when calculating the increase in floor area and/or structural footprints.

The proposed development provides for the 1.25- 2 spaces required for multi-family development.

B. Existing off-street parking and loading areas shall be brought closer into conformance with the standards of Chapter 19.600, per Subsection 19.602.5, when the following types of development or change in use occur:

1. Development that results in an increase of less than 100% of the existing floor area and/or structure footprint.
2. Changes of use, as defined in Section 19.201.

No existing off-street parking or loading areas exist on the site. Criteria do not apply.

19.602.4 Applicability not Associated With Development or Change in Use

A. Any parking or loading area developed to serve an existing use(s) that is not associated with development activity or a change in use described in Subsection 19.602.3 shall conform to the requirements of Sections 19.604 and 19.606-19.611. The total number of spaces in the existing parking area and new parking area shall not exceed the maximum allowed quantity of parking as established in Section 19.605.

B. Any parking or loading area that is not developed to serve an existing use and is not associated with development activity or a change in use as described in Subsection 19.602.3 shall conform to the requirements of Sections 19.604 and 19.606-19.611. The requirements of Section 19.605 do not apply to parking areas described under Subsection 19.602.4.B.

Criteria of this subsection do not apply to this proposed new development.

19.602.5 Improvements to Existing Off-Street Parking and Loading Areas

A. Purpose

The purpose of Subsection 19.602.5 is to improve nonconforming off-street parking and loading areas as redevelopment occurs. These improvements should occur in conjunction with a development or change in use.

B. Limitations on Required Improvements

The cost of materials for any required improvements shall not exceed 10% of the development permit value of the associated development, redevelopment, and/or tenant improvements associated with a change in use. The cost of capital equipment such as manufacturing or operational equipment is exempt from the building permit value for purposes of this regulation. This exemption does not include building infrastructure such as electrical, plumbing, heating, venting, or air conditioning equipment.

C. Areas of Required Improvement

The Planning Director will evaluate the applicant's parking plan and use the prioritized list below when determining what improvements will be required.

1. Paving and striping of parking areas, per Subsection 19.606.3.A.
2. Minimum required vehicle parking spaces, per Section 19.605.
3. Minimum required bicycle parking spaces, per Section 19.609.
4. Landscaping of existing buffers, islands, and medians, per Subsection 19.606.2.D.
5. New perimeter landscape buffers, islands, and medians, as applicable, per Subsection 19.606.2.E.
6. Other applicable standards within Chapter 19.600, as determined by the Planning Director.

Criteria of this subsection do not apply to this proposed new development.

19.603 REVIEW PROCESS AND SUBMITTAL REQUIREMENTS

19.603.1 Review Process

The Planning Director shall apply the provisions of Chapter 19.600 in reviewing all land use and development permit applications, except when an application is subject to a quasi-judicial land use review or appeal, in which case the body reviewing the application or appeal has the authority to implement and interpret the provisions of Chapter 19.600.

19.603.2 Submittal Requirements

Except for single-family dwellings, a development or change in use subject to Chapter 19.600 as per Section 19.602 shall submit a parking plan, drawn to scale. The parking plan shall show that all applicable standards are met, and shall include but not be limited to the items listed below, unless waived by the Planning Director.

- A. Delineation of individual spaces and wheel stops.
- B. Drive aisles necessary to serve spaces.
- C. Accessways, including driveways and driveway approaches, to streets, alleys, and properties to be served.
- D. Pedestrian pathways and circulation.
- E. Bicycle parking areas and rack specifications.
- F. Fencing.
- G. Abutting land uses.
- H. Grading, drainage, surfacing, and subgrading details.
- I. Location and design of lighting fixtures and levels of illumination.
- J. Delineation of existing and proposed structures.
- K. Parking and loading area signage.
- L. Landscaping, including the following information.
 1. The location and area of existing and proposed trees, vegetation, and plant materials, including details about the number, size, and species of such items.

2. Notation of the trees, plants, and vegetation to be removed, and protection measures for existing trees and plants to be preserved.

Proposed parking for this development will be located in private garages and in driveways serving these garages.

19.604 GENERAL PARKING STANDARDS

19.604.1 Parking Provided with Development Activity

All required off-street parking areas shall be provided at the time the structure is built; at the time a structure or site is enlarged; or when there is change in use or an increase in density or intensity. All required off-street parking areas shall be provided in conformance with the standards of Chapter 19.600 prior to issuance of a certificate of occupancy, or final development permit approval, or as otherwise specified in any applicable land use decision.

Required off street parking is proposed to be constructed with each new single family detached residence.

19.604.2 Parking Area Location

Accessory parking shall be located in one or more of the following areas:

- A. On the same site as the primary use for which the parking is accessory.
- B. On a site owned by the same entity as the site containing the primary use that meets the standards of Subsection 19.605.4.B.2. Accessory parking that is located in this manner shall not be considered a parking facility for purposes of the base zones in Chapter 19.300.
- C. Where shared parking is approved in conformance with Subsection 19.605.4.

All proposed off-street parking will be located on the development site with no shared parking proposed.

19.604.3 Use of Parking Areas

All required off-street parking areas shall continually be available for the parking of operable vehicles of intended users of the site. Required parking shall not be rented, leased, sold, or otherwise used for parking that is unrelated to the primary or accessory use of the site, except where a shared parking agreement per Subsection 19.605.4 has been recorded. Subsection 19.604.3 does not prohibit charging fees for parking when the parking serves the primary or accessory uses on site.

All proposed off-street parking is intended to be used by occupants of the site and guests visiting the site.

19.604.4 Storage Prohibited

No required off-street parking area shall be used for storage of equipment or materials, except as specifically authorized by Subsection 19.607.2 Commercial Vehicle, Pleasure Craft, and Recreational Vehicle Parking. (Ord. 2025 § 2, 2011)

The use of off street parking for storage of commercial vehicles, pleasure craft or RVs will be prohibited by the CC&R's for the development.

19.605 VEHICLE PARKING QUANTITY REQUIREMENTS

The purpose of Section 19.605 is to ensure that development provides adequate, but not excessive, vehicle parking based on their estimated parking demand. Subsection 19.605.1 establishes parking ratios for common land uses, and Subsection 19.605.3 allows certain exemptions and reductions to these ratios based on location or on-site amenities. Modifications to the established parking ratios and determinations of parking requirements for unique land uses are allowed with discretionary review per Subsection 19.605.2.

Nonresidential development in the Downtown Mixed Use (DMU) and Open Space (OS) Zones is exempt from the requirements of Section 19.605.

19.605.1 Minimum and Maximum Requirements

A. Development shall provide at least the minimum and not more than the maximum number of parking spaces as listed in Table 19.605.1. Modifications to the standards in Table 19.605.1 may be made as per Section 19.605. Where multiple ratios are listed, the Planning Director shall determine which ratio to apply to the proposed development or use.

Table 19.605.1 requires a minimum of 1 space per single family home with no maximum and 1.25-2.0 spaces for multi-family residential developments. A minimum of 16 spaces are required utilizing the single family home requirement and a range of 20- 32 are required if the multi-family provision is required. The proposed development provides 36 off street parking spaces with 20 spaces in private garages and an additional 16 located in driveways serving these garages. More parking than the maximum allowed for multi-family use is desirable for this development which will consist of detached single family homes.

B. When a specific use has not been proposed or identified at the time of permit review, the Planning Director may elect to assign a use category from Table 19.605.1 to determine the minimum required and maximum allowed parking. Future tenants or property owners are responsible for compliance with Chapter 19.600 per the applicability provisions of Section 19.602.

Proposed use is residential. It is requested that the Planning Director allow the use of the single family values in the table in order to allow the additional parking desired.

C. If a proposed use is not listed in Table 19.605.1, the Planning Director has the discretion to apply the quantity requirements of a similar use listed in the table upon finding that the listed use and unlisted use have similar parking demands. If a similar use is not listed, the quantity requirements will be determined per Subsection 19.605.2.

Refer to Item B above.

D. Where the calculation of minimum parking spaces does not result in a whole number, the result shall be rounded down to the next whole number. Where the calculation of maximum parking spaces does not result in a whole number, the result shall be rounded to the nearest whole number.

Ratios do not require rounding based on the number of units proposed.

E. Parking spaces for disabled persons, and other improvements related to parking, loading, and maneuvering for disabled persons, shall conform to the Americans with Disabilities Act and shall be subject to review and approval by the Building Official. Spaces reserved for disabled persons are included in the minimum required and maximum allowed number of off-street parking spaces.

No ADA parking is required for single family residential uses under the Building Code. None are proposed.

F. Uses that have legally established parking areas that exceed the maximum number of spaces allowed by Section 19.605 prior to June 17, 2010, the effective date of Ordinance #2015, shall be considered nonconforming with respect to the quantity requirements. Such uses shall not be considered parking facilities as defined in Section 19.201.

Criterion is not applicable. No legally established parking areas exist on the property.

Table 19.605.1		
Minimum To Maximum Off-Street Parking Requirements		
Use	Minimum Required	Maximum Allowed
A. Residential Uses		
1. Single-family dwellings, including rowhouses and manufactured homes.	1 space per dwelling unit.	No maximum.
2. Multifamily dwellings containing 3 or more dwelling units (includes senior and retirement housing). a. Dwelling units with 800 sq ft of floor area or less and all units located in the DMU Zone. b. Dwelling units with more than 800 sq ft of floor area.	1 space per dwelling unit. 1.25 spaces per dwelling unit.	2 spaces per dwelling unit. 2 spaces per dwelling unit.
3. Residential homes and similar facilities allowed outright in residential zones.	1 space per dwelling unit plus 1 space per employee on the largest shift.	Minimum required parking plus 1 space per bedroom.

4. Accessory dwelling units (ADU)—Types I and II.	Property containing an ADU and primary dwelling must have 2 spaces.	No maximum.
B. Community Service and Other Public Uses		
1. Religious institutions.	1 space per 4 seats.	1 space per 2 seats.
2. Day-care center (“family day-care” as defined in Section 19.201 has no parking requirements).	2 spaces per 1,000 sq ft of floor area.	3.5 spaces per 1,000 sq ft of floor area.
3. School—elementary or junior high.	1 space per classroom.	2 spaces per classroom.
4. School—senior high.	0.25 spaces per student, plus 1 space per staff.	0.33 spaces per student, plus 1 space per staff.
5. Meeting room, club, lodge, or association.	5 spaces per 1,000 sq ft of floor area, or 1 space per 4 seats if seats are permanently installed.	16.66 spaces per 1,000 sq ft of floor area, or 1 space per 3 seats if seats are permanently installed.
6. Library, museum, art gallery.	1 space per 1,000 sq ft of floor area.	1.2 spaces per 1,000 sq ft of floor area.
7. Nursing, convalescent, and extended-care facilities.	1 space per 4 beds.	1 space per 3 beds.
C. Lodging Places		
1. Motel, hotel, boarding house.	1 space per lodging unit.	1.5 spaces per lodging unit.
2. Bed and breakfast establishments.	1 space per lodging unit, plus 1 space for the permanent residence.	1.5 spaces per lodging unit, plus 2 spaces for the permanent residence.
D. Commercial Uses—Recreational		
1. Indoor recreation, such as a health club, gym, bowling alley, arcade, etc.	3 spaces for each 1,000 sq ft of floor area.	5.5 spaces per 1,000 sq ft of floor area.
2. Theater, auditorium, or stadium.	1 space per 4 seats.	1 space per 3 seats.
E. Commercial Uses—Retail Goods		
1. Eating and drinking establishments.	4 spaces per 1,000 sq ft floor area.	15 spaces per 1,000 sq ft of floor area.

2. General retail—grocery stores, convenience stores, specialty retail and shops.	2 spaces per 1,000 sq ft of floor area.	5 spaces per 1,000 sq ft of floor area.
3. Bulk retail—furniture and home furnishings, appliances, vehicles, building materials, and similar large items.	1 space per 1,000 sq ft of floor area.	3 spaces per 1,000 sq ft of floor area.
4. Gas stations.	No minimum.	1.25 spaces per 4 pumps.
F. Commercial Uses—Services		
1. General office, including banks.	2 spaces per 1,000 sq ft of floor area.	3.4 spaces per 1,000 sq ft of floor area.
2. Medical/dental office (non-hospital), veterinary clinic.	3.9 spaces per 1,000 sq ft of floor area.	4.9 spaces per 1,000 sq ft of floor area.
3. Personal services, such as a barbershop, beauty parlor, etc.	4 spaces per 1,000 square floor area.	5.4 spaces per 1,000 sq ft of floor area.
4. Commercial services, such as dry cleaners and repair shops (does not include vehicle repair).	2.8 spaces per 1,000 sq ft of floor area.	5.1 spaces per 1,000 sq ft of floor area.
5. Vehicle repair.	2 spaces per 1,000 sq ft of floor area.	2.5 spaces per 1,000 sq ft of floor area.
6. Quick vehicle repair and servicing, such as oil change and tire shops.	2 spaces per service bay.	3 spaces per service bay.
7. Mortuary/funeral home.	1 space per 5 chapel or parlor seats.	1 space per 3 chapel or parlor seats.
8. Car wash.	No minimum.	2 spaces per wash bay for self-service washes, or 2 spaces per 1,000 sq ft of floor area for full-service washes.
G. Industrial Uses		
1. Manufacturing.	1 space per 1,000 sq ft of floor area.	2 spaces per 1,000 sq ft of floor area.
2. Storage, warehouse, wholesale establishment less than 150,000 sq ft.	0.5 spaces per 1,000 sq ft of floor area.	1 space per 1,000 sq ft of floor area.

3. Storage, warehouse, wholesale establishment 150,000 sq ft or greater.	0.3 spaces per 1,000 sq ft of floor area.	0.4 spaces per 1,000 sq ft of floor area.
4. Mini-warehouse; self-service storage.	1 space per 45 storage units, plus 1 space per employee of the largest shift.	1 space per 20 storage units, plus 1 space per employee of the largest shift.

19.605.2 Quantity Modifications and Required Parking Determinations

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. Parking determinations shall be made when the proposed use is not listed in Table 19.605.1 and for developments with large parking demands.

A. Applicability

The procedures of Subsection 19.605.2 shall apply in the following situations:

1. If the proposed use is not listed in Table 19.605.1 and the quantity requirements for a similar listed use cannot be applied.
2. If the applicant seeks a modification from the minimum required or maximum allowed quantities as calculated per Table 19.605.1.

No modification to quantity of parking spaces is proposed with the request for acceptance of the Planning Director to utilize ratios for single family detached residences.

B. Application

Determination of parking ratios in situations listed above shall be reviewed as a Type II land use decision, per Section 19.1005 Type II Review. The application for a determination must include the following:

1. Describe the proposed uses of the site, including information about the size and types of the uses on site, and information about site users (employees, customers, etc.).
2. Identify factors specific to the proposed use and/or site, such as the proximity of transit, parking demand management programs, availability of shared parking, and/or special characteristics of the customer, client, employee or resident population that affect parking demand.
3. Provide data and analysis specified in Subsection 19.605.2.B.3 to support the determination request. The Planning Director may waive requirements of Subsection 19.605.2.B.3 if the information is not readily available or relevant, so long as sufficient documentation is provided to support the determination request.
 - a. Analyze parking demand information from professional literature that is pertinent to the proposed development. Such information may include data or literature from the Institute of Transportation Engineers, American Planning Association, Urban Land Institute, or other similar organizations.
 - b. Review parking standards for the proposed use or similar uses found in parking regulations from other jurisdictions.

- c. Present parking quantity and parking use data from existing developments that are similar to the proposed development. The information about the existing development and its parking demand shall include enough detail to evaluate similarities and differences between the existing development and the proposed development.
4. Propose a minimum and maximum parking ratio. For phased projects, and for projects where the tenant mix is unknown or subject to change, the applicant may propose a range (low and high number of parking spaces) for each development phase and both a minimum and maximum number of parking spaces to be provided at buildout of the project.
5. Address the approval criteria in Subsection 19.605.2.C.

C. Approval Criteria

The Planning Director shall consider the following criteria in deciding whether to approve the determination or modification. The Planning Director, based on the applicant's materials and other data the Planning Director deems relevant, shall set the minimum parking requirement and maximum parking allowed. Conditions of approval may be placed on the decision to ensure compliance with the parking determination.

1. All modifications and determinations must demonstrate that the proposed parking quantities are reasonable based on existing parking demand for similar use in other locations; parking quantity requirements for the use in other jurisdictions; and professional literature about the parking demands of the proposed use.
2. In addition to the criteria in Subsection 19.605.2.C.1, requests for modifications to decrease the amount of minimum required parking shall meet the following criteria:
 - a. The use of transit, parking demand management programs, and/or special characteristics of the site users will reduce expected vehicle use and parking space demand for the proposed use or development, as compared with the standards in Table 19.605.1.
 - b. The reduction of off-street parking will not adversely affect available on-street parking.
 - c. The requested reduction is the smallest reduction needed based on the specific circumstances of the use and/or site.
3. In addition to the criteria in Subsection 19.605.2.C.1, requests for modifications to increase the amount of maximum allowed parking shall meet the following criteria:
 - a. The proposed development has unique or unusual characteristics that create a higher-than-typical parking demand.
 - b. The parking demand cannot be accommodated by shared or joint parking arrangements or by increasing the supply of spaces that are exempt from the maximum amount of parking allowed under Subsection 19.605.3.A.
 - c. The requested increase is the smallest increase needed based on the specific circumstances of the use and/or site.

Criteria above do not apply. No modification to quantity of parking spaces is being sought.

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.

A. Exemptions to Maximum Quantity Allowance

The following types of parking do not count toward the maximum amount of parking allowed on a site. This exemption applies only to the quantity requirements of Section 19.605 and not to the other requirements of Chapter 19.600. The City may impose conditions to ensure that parking spaces associated with these parking types are appropriately identified and used for the intended purpose.

1. Spaces for a parking facility.
2. Spaces for a transit facility or park and ride facility.
3. Storage or display areas for vehicle sales.
4. Employee carpool parking, when spaces are dedicated or reserved for that use.
5. Fleet parking.
6. Truck loading areas.

Criteria above do not apply. No modification to quantity of parking spaces is being sought.

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 42nd Avenue, King Road, 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.

Criteria above do not apply. Site is not in a Neighborhood Commercial Area.

2. Proximity to Public Transit

- a. Parking for commercial and industrial uses may be reduced by up to 10% if the development is within 500-ft walking distance, as defined in Subsection 19.605.3.B.2.d, of a transit stop with a peak hour service frequency of 30 minutes or less.
- b. Parking for multifamily uses may be reduced by up to 20% if the development is within 500-ft walking distance, as defined in Subsection 19.605.3.B.2.d, of a transit stop with a peak hour service frequency of 30 minutes or less.
- c. Parking for all uses except single-family attached and detached dwellings may be reduced by 25% if the development is within 1,000-ft walking distance, as defined in Subsection 19.605.3.B.2.d, of a light rail transit stop, or if it is located in the Downtown Mixed Use Zone DMU.
- d. In determining walking distance, the applicant shall measure the shortest route along sidewalks, improved pedestrian ways, or streets if sidewalks or improved pedestrian ways are not present. Walking distance shall be measured along the shortest course from the point on the development site that is nearest to the transit stop.

No reduction for transit is being sought with this application.

3. Multitenant Commercial Sites

Where multiple commercial uses occur on the same site, minimum parking requirements shall be calculated as described below. The Planning Director shall have the authority to determine when multiple uses exist on a site.

- a. Use with highest parking requirement. The use that has the largest total number of minimum parking spaces required shall be required to provide 100% of the minimum number of parking spaces.
- b. All other uses. All other uses on the site shall be required to provide 80% of the minimum number of parking spaces.

Criteria above do not apply. Project is not a multitenant commercial site.

4. Carpool/Vanpool

Commercial and industrial developments that provide at least 2 carpool/vanpool parking spaces may reduce the required number of parking spaces by up to 10%. This reduction may be taken whether the carpool/vanpool space is required pursuant to Section 19.610 or voluntarily provided.

Criteria above do not apply. Project is not a commercial or industrial use.

5. Bicycle Parking

The minimum amount of required parking for all non-single-family residential uses may be reduced by up to 10% for the provision of covered and secured bicycle parking in addition to what is required by Section 19.609. A reduction of 1 vehicle

parking space is allowed for every 6 additional bicycle parking spaces installed. The bicycle spaces shall meet all other standards of Section 19.609. If a reduction of 5 or more stalls is granted, then on-site changing facilities for bicyclists, including showers and lockers, are required. The area of an existing parking space in an off-street parking area may be converted to bicycle parking to utilize this reduction.

It is requested that the proposed development be allow bicycle parking in the garages, similar to traditional single family detached homes.

6. Car Sharing

Required parking may be reduced by up to 5% if at least 1 off-street parking space is reserved for a vehicle that is part of a car sharing program. The car sharing program shall be sufficiently large enough, as determined by the Planning Director, to be accessible to persons throughout Milwaukie and its vicinity. The applicant must provide documentation from the car sharing program that the program will utilize the space provided.

Criteria above do not apply. Car sharing is not proposed as part of this residential project.

7. Provision of Transit Facility Improvements

The number of existing required parking spaces may be reduced by up to 10% for developments that provide facilities such as bus stops and pull-outs, bus shelters, or other transit-related facilities. A reduction of 1 parking space is allowed for each 100 sq ft of transit facility provided on the site.

No provision for transit facility improvements are desired for this location. No reduction in parking is being sought.

19.605.4 Shared Parking

Some or all of a use's required parking spaces may be accommodated off-premises on the parking area of a different site through shared parking, pursuant to the standards of Subsection 19.605.4. The standards of Subsection 19.605.4 do not apply to voluntary shared parking agreements that are not created in order to conform to the quantity requirements of Section 19.605.

A. Review

The Planning Director shall determine, in accordance with Section 19.1004 Type I Review, whether the shared parking standards are met. The Planning Director may require a nonconforming parking area be brought into conformance, or closer to conformance as per Subsection 19.602.5, before it may be used for shared parking.

B. Standards

1. The applicant must demonstrate that the shared parking area has a sufficient quantity of spaces for the uses that will share the parking area. The Planning Director may require the applicant to provide data substantiating the claim that the proposed parking is sufficient for multiple uses during peak hours of demand for each use.

2. The nearest parking spaces shall be no further than 1,000 ft from the principal structure(s) or use(s). The measurement shall be along a route that is adequately illuminated; has vertical or horizontal separation from travel lanes within the right-of-way; uses legal crosswalks for right-of-way crossing; and has an asphalt, concrete, or similar surface material. The applicant may propose to construct new facilities or modify existing facilities to comply with Subsection 19.605.4.B.2.

3. Legal documentation between the property owners that guarantees access to the shared parking shall be recorded with the County. The documentation shall be reviewed and approved by the Planning Director prior to being recorded. The agreement shall run with the land and not be tied to property ownership. The agreement shall not be terminated without City approval. The request for terminating the agreement must demonstrate that the properties in the agreement and their uses will comply with the quantity requirements of Section 19.605 after dissolution of the agreement. A copy of the recorded documentation shall be provided to the City prior to obtaining a building permit.

Criteria above do not apply. No shared parking is proposed.

19.606 PARKING AREA DESIGN AND LANDSCAPING

The purpose of Section 19.606 is to ensure that off-street parking areas are safe, environmentally sound, aesthetically pleasing, and that they have efficient circulation. These standards apply to all types of development except for cottage clusters, rowhouses, duplexes, single-family detached dwellings, and residential homes.

The proposed Project consists of single- family detached dwellings. Sub section does not apply.

19.606.1 Parking Space and Aisle Dimensions

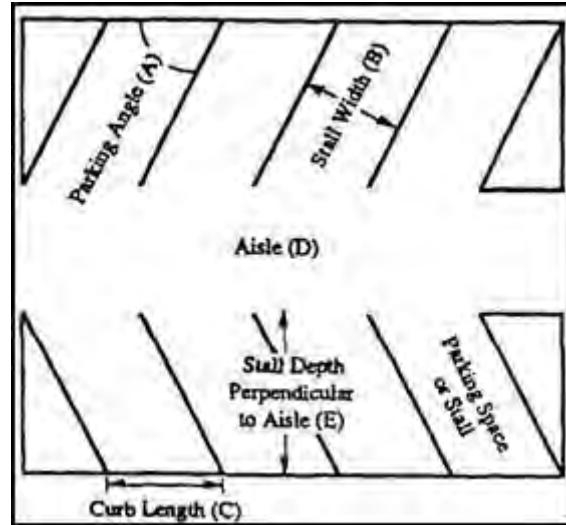
A. The dimensions for required off-street parking spaces and abutting drive aisles, where required, shall be no less than in Table 19.606.1. The minimum dimensions listed in Table 19.606.1 are illustrated in Figure 19.606.1.

Table 19.606.1					
Minimum Parking Space And Aisle Dimensions					
Angle (A)	Width (B)	Curb Length (C)	1-Way Aisle Width (D)	2-Way Aisle Width (D)	Depth (E)
0° (Parallel)	8.5'	22'	12'	19'	8.5'
30°	9'	17'	12'	19'	16.5'
45°	9'	12'	13'	19'	18.5'
60°	9'	10'	17'	19'	19'

90°	9'	9'	22'	22'	18'
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Figure 19.606.1

Parking Dimension Factors



B. The dimension of vehicle parking spaces provided for disabled persons shall be according to federal and State requirements.

C. Parking spaces shall be provided with adequate aisles or turnaround areas so that all vehicles may enter the street in a forward manner.

D. Drive aisles shall be required in parking areas greater than 5 spaces. Drive aisles shall meet the minimum width standards of Subsection 19.606.1. Where a drive aisle or portion thereof does not abut a parking space(s), the minimum allowed width for a one-way drive aisle shall be 8 ft and the minimum allowed width for a two-way drive aisle shall be 16 ft.

19.606.2 Landscaping

A. Purpose

The purpose of the off-street parking lot landscaping standards is to provide vertical and horizontal buffering between parking areas and adjacent properties, break up large expanses of paved area, help delineate 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.

B. General Provisions

1. Parking area landscaping shall be required for the surface parking areas of all uses, except for cottage clusters, rowhouses, duplexes, and single-family detached dwellings. Landscaping shall be based on the standards in Subsections 19.606.2.C-E.
2. Landscaped areas required by Subsection 19.606.2 shall count toward the minimum amount of landscaped area required in other portions of Title 19.

3. Parking areas with 10 or fewer spaces in the Downtown Mixed Use Zone are exempt from the requirements of Subsection 19.606.2.

The proposed Project consists of single-family detached dwellings. Sub section does not apply.

C. Perimeter Landscaping

The perimeter landscaping of parking areas shall meet the following standards which are illustrated in Figure 19.606.2.C.

1. Dimensions

The minimum width of perimeter landscape areas are shown in Table 19.606.2.C.1. Where a curb provides the border for a perimeter landscape area, the dimension shall be measured from the inside of the curb(s). The Planning Director may reduce the required minimum width of a perimeter landscaping area where existing development or site constraints make it infeasible to provide drive aisles, parking spaces, and the perimeter landscaping buffer width listed in Table 19.606.2.C.1.

Table 19.606.2.C.1		
Minimum Perimeter Landscape Strip Dimensions		
Location	Downtown Zones	All Other Zones
Lot line abutting a right-of-way	4'	8'
Lot line abutting another property, except for abutting properties that share a parking area	0'	6'

2. Planting Requirements

Landscaping requirements for perimeter buffer areas shall include 1 tree planted per 40 lineal ft of landscaped buffer area. Where the calculation of the number of trees does not result in a whole number, the result shall be rounded up to the next whole number. Trees shall be planted at evenly spaced intervals along the perimeter buffer to the greatest extent practicable. The remainder of the buffer area shall be grass, ground cover, mulch, shrubs, trees, or other landscape treatment other than concrete and pavement.

3. Additional Planting Requirements Adjacent to Residential Uses

In addition to the planting requirements of Subsection 19.606.2.D.2, all parking areas adjacent to a residential use shall have a continuous visual screen in the landscape perimeter area that abuts the residential use. The area of required screening is illustrated in Figure 19.606.2.C.3. The screen must be opaque throughout the year from 1 to 4 ft above ground to adequately screen vehicle lights. These standards must be met at the time of planting. Examples of acceptable visual screens are a fence or wall, an earth berm with plantings, and other plantings of trees and shrubs.

D. Interior Landscaping

The interior landscaping of parking areas shall meet the following standards which are illustrated in Figure 19.606.2.D.

1. General Requirements

Interior landscaping of parking areas shall be provided for sites where there are more than 10 parking spaces on the entire site. Landscaping that is contiguous to a perimeter landscaping area and exceeds the minimum width required by Subsection 19.606.2.C.1 will be counted as interior landscaping if it meets all other requirements of Subsection 19.606.2.D.

2. Required Amount of Interior Landscaped Area

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 and dispersed throughout the parking area.

3. Location and Dimensions of Interior Landscaped Areas

a. Interior landscaped area shall be either a divider median between opposing rows of parking, or a landscape island in the middle or at the end of a parking row.

b. Interior landscaped areas must be a minimum of 6 ft in width. Where a curb provides the border for an interior landscape area, the dimension shall be measured from the inside of the curb(s).

4. Planting Requirements for Interior Landscaped Areas

a. For divider medians, at least 1 shade or canopy tree must be planted for every 40 linear ft. Where the calculation of the number of trees does not result in a whole number, the result shall be rounded up to the next whole number. Trees shall be planted at evenly spaced intervals to the greatest extent practicable.

b. For landscape islands, at least 1 tree shall be planted per island. If 2 interior islands are located contiguously, they may be combined and counted as 2 islands with 2 trees planted.

c. The remainder of any divider median or landscape island shall be grass, ground cover, mulch, shrubs, trees, or other landscape treatment other than concrete and pavement.

5. Additional Landscaping for Large Parking Areas

Parking areas with more than 100 spaces on a site shall not have more than 15 spaces in a row without providing an interior landscaped island. See Figure

E. Other Parking Area Landscaping Provisions

1. Preservation of existing trees is encouraged in the off-street parking area and may be credited toward the total number of trees required, based on staff's review.

2. Installation of parking area landscaping shall be required before a certificate of occupancy is issued, unless a performance bond is posted with the City. Then landscaping shall be installed within 6 months thereafter or else the bond will be foreclosed and plant materials installed by the City.

3. Parking area landscaping shall be maintained in good and healthy condition.
4. Required parking landscaping areas may serve as stormwater management facilities for the site. The Engineering Director has the authority to review and approve the design of such areas for conformance with the Public Works Standards. This allowance does not exempt the off-street parking landscape area from meeting the design or planting standards of Subsection 19.606.2.
5. Pedestrian walkways are allowed within perimeter and interior landscape buffer 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.

19.606.3 Additional Design Standards

A. Paving and Striping

Paving and striping are required for all required maneuvering and standing areas. Off-street parking areas shall have a durable and dust-free hard surface, shall be maintained for all-weather use, and shall be striped to show delineation of parking spaces and directional markings for driveways and accessways. Permeable paving surfaces may be used to reduce surface water runoff and protect water quality.

B. Wheel Stops

Parking bumpers or wheel stops, of a minimum 4-in height, shall be provided at parking spaces to prevent vehicles from encroaching on the street 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.

C. Site Access and Drive Aisles

1. Accessways to parking areas shall be the minimum number necessary to provide access while not inhibiting the safe circulation and carrying capacity of the street. Driveway approaches shall comply with the access spacing standards of Chapter 12.16.
2. Drive aisles shall meet the dimensional requirements in Subsection 19.606.1.
3. Parking drive aisles shall align with the approved driveway access and shall not be wider than the approved driveway access within 10 ft of the right-of-way boundary.
4. Along collector and arterial streets, no parking space shall be located such that its maneuvering area is in an ingress or egress aisle within 20 ft of the back of the sidewalk, or from the right-of-way boundary where no sidewalk exists.
5. Driveways and on-site circulation shall be designed so that vehicles enter the right-of-way in a forward motion.

D. Pedestrian Access and Circulation

Subsection 19.504.9 establishes standards that are applicable to an entire property for on-site walkways and circulation. The purpose of Subsection 19.606.3.D is to provide safe and convenient pedestrian access routes specifically through off-street parking areas.

Walkways required by Subsection 19.606.3.D are considered part of the on-site walkway and circulation system required by Subsection 19.504.9.

1. Pedestrian access shall be provided for off-street parking areas so that no parking space is further than 100 ft away, measured along vehicle drive aisles, from a building entrance, or a walkway that meets the standards of Subsection 19.606.3.D.2.
2. Walkways through off-street parking areas must be continuous, must lead to a building entrance, and meet the design standards of Subsection 19.504.9.E.

E. Internal Circulation

1. General 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 modifying drive aisle dimensions.

2. Connections to Adjacent Parking Areas

Where feasible, parking areas shall be designed to connect with parking areas on adjacent sites to eliminate the use of the street for cross movements.

3. Drive-Through Uses and Queuing Areas

The following standards apply to uses with drive-through services and uses such as gas stations and quick vehicle service facilities where vehicles queue rather than park on the site. The Planning Director has the authority to determine when the standards apply to a proposed use.

- a. The drive-up/drive-through facility shall be along a building face that is oriented to an alley, driveway, or interior parking area, and shall not be on a building face oriented toward a street.
- b. None of the drive-up, drive-in, or drive-through facilities (e.g., driveway queuing areas, windows, teller machines, service windows, kiosks, drop-boxes, or similar facilities) are located within 20 ft of the right-of-way.
- c. Queuing areas shall be designed so that vehicles do not obstruct a driveway, fire access lane, walkway, or public right-of-way. Applicants may be required to submit additional information regarding the expected frequency and length of queues for a proposed use.

F. Lighting

Lighting is required for parking areas with more than 10 spaces. The Planning Director may require lighting for parking areas of less than 10 spaces if the parking area would not be safe due to the lack of lighting. Lighting shall be designed to enhance safe access for vehicles and pedestrians on the site, and shall meet the following standards:

1. Lighting luminaires shall have a cutoff angle of 90 degrees or greater to ensure that lighting is directed toward the parking surface.
2. Parking area lighting shall not cause a light trespass of more than 0.5 footcandles measured vertically at the boundaries of the site.

3. Pedestrian walkways and bicycle parking areas in off-street parking areas shall have a minimum illumination level of 0.5 footcandles, measured horizontally at the ground level.
4. Where practicable, lights shall be placed so 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.

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.

A. Dimensions

Off-street parking space dimensions for required parking spaces are 9 ft wide x 18 ft deep.

9'X 18' dimensions have been utilized to calculate provided off street parking.

B. Location

1. Off-street vehicle parking shall be located on the same lot as the associated dwelling, unless shared parking is approved per Subsection 19.605.4.

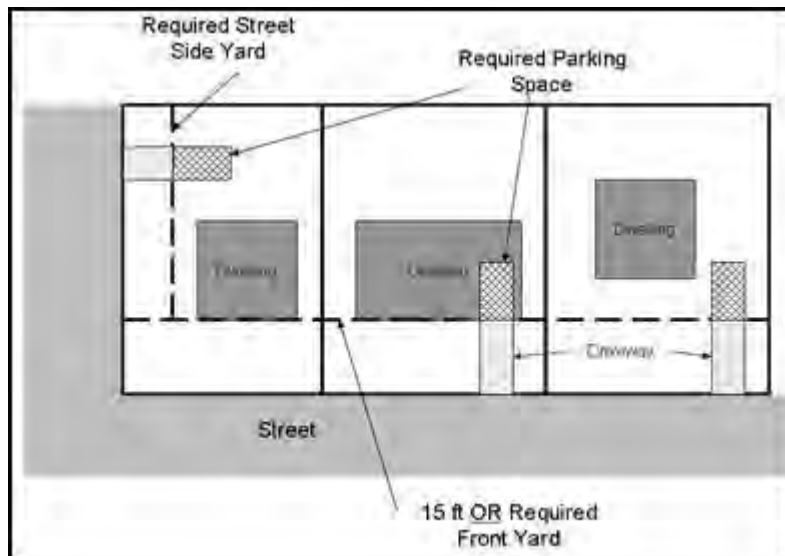
Off- street parking is located adjacent and within each dwelling unit. No shared parking is proposed.

2. No portion of the required parking space is allowed within the following areas. See Figure 19.607.1.B.2. These standards do not apply to off-street parking for cottage clusters, which are subject to the standards in Subsection 19.505.4.

- a. Within the required front yard or within 15 ft of the front lot line, whichever is greater.
- b. Within a required street side yard.

All proposed parking is within garages or in driveways serving garages for individual dwellings.

Figure 19.607.1.B.2
Required Parking Space Location



C. Parking Surface Materials

Parking of vehicles shall only be allowed on surfaces described in Subsection 19.607.1.C.

1. The following areas are required to have a durable and dust-free hard surface, and shall be maintained for all-weather use. The use of pervious concrete, pervious paving, driveway strips, or an in-ground grid or lattice surface is encouraged to reduce stormwater runoff.

- a. Required parking space(s).
- b. All vehicle parking spaces and maneuvering areas located within a required front or side yard. Areas for boat or RV parking are exempt from this requirement and may be graveled.
- c. All off-street parking and maneuvering areas for a residential home.

All driveways are proposed to have pervious pavers.

2. Maneuvering areas and unrequired parking areas that are outside of a required front or side yard are allowed to have a gravel surface.

No maneuvering areas or unrequired parking areas are proposed other than driveways illustrated on Site Plan.

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.

Criterion does not apply. No commercial vehicle, recreational vehicle or watercraft parking will be allowed on the Site per the proposed CC &R's for the Development.

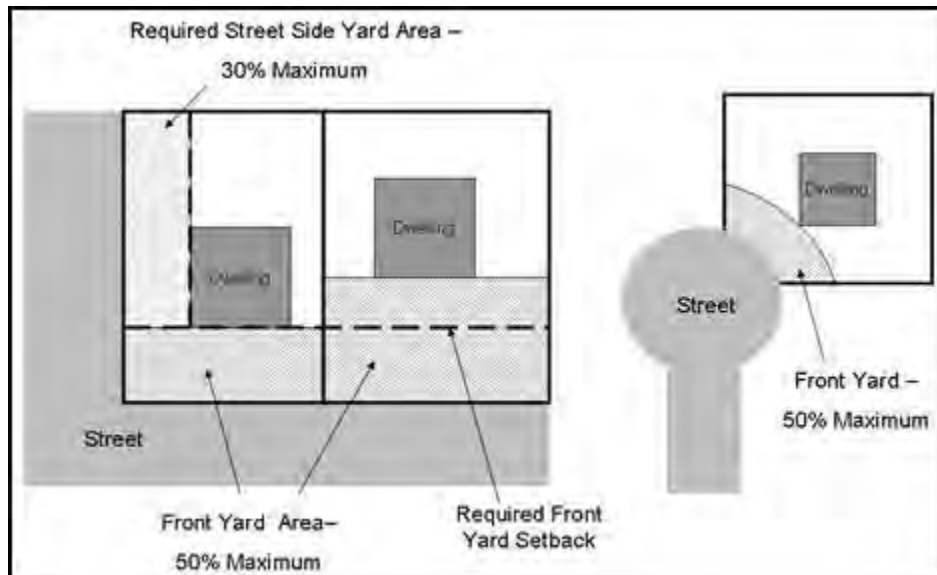
These standards do not apply to off-street parking for cottage clusters, which are subject to the standards in Subsection 19.505.4; nor to rowhouses, which are subject to the standards in Subsection 19.505.5.

- a. Uncovered parking spaces and maneuvering areas cannot exceed 50% of the front yard area.
- b. Uncovered parking spaces and maneuvering areas cannot exceed 30% of the required street side yard area.
- 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.

As a single site with no lot lines proposed between dwellings, this proposed development has assumed property lines midway between homes to demonstrate uncovered parking areas inhabit less than 50% of the front yard area. No more than two parking spaces are allowed at any front yard area.

Figure 19.607.1.D

Front and Street Side Yard Parking Area Limits



E. Additional Driveway Standards

1. Parking areas and driveways on the property shall align with the approved driveway approach and shall not be wider than the approved driveway approach within 5 ft of the right-of-way boundary (Option 1—see Figure 19.607.1.E.1).

All driveways, except for the proposed shared driveway on SE 19th will be the same width of proposed curb cuts.

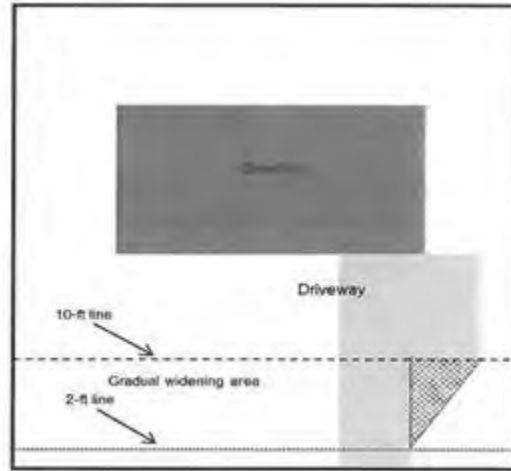
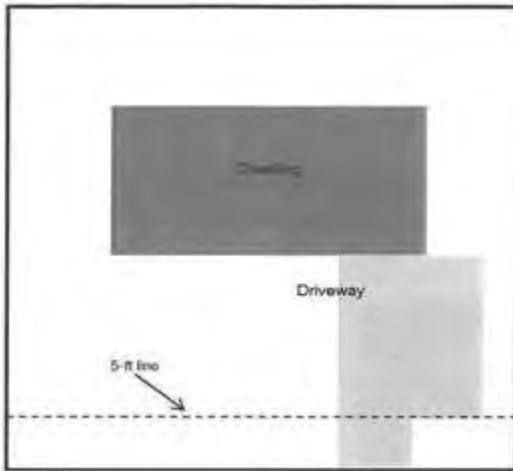
Alternately, a gradual widening of the onsite driveway is allowed to the 10-ft point at a ratio of 1:1 (driveway width:distance onto property), starting 2 ft behind the front property line (Option 2—see Figure 19.607.1.E.2).

Figure 19.607.1.E.1

Figure 19.607.1.E.2

Driveway Widening Limitation—Option 1

Driveway Widening Limitation—Option 2



2. Properties that take access from streets other than local streets and neighborhood routes shall provide a turnaround area on site that allows vehicles to enter the right-of-way in a forward motion.

All proposed driveways are located on local or private streets. No on site turnarounds are proposed.

19.607.2 Commercial Vehicle, Pleasure Craft, and Recreational Vehicle Parking

Subsection 19.607.2 is intended to preserve residential neighborhood character by minimizing the impacts created by the parking and storing of commercial vehicles, pleasure crafts, and recreational vehicles. The standards of Subsection 19.607.2 apply to off-street parking areas for cottage clusters, rowhouses, duplexes, single-family detached dwellings, and residential homes in all zones.

A. Commercial vehicles shall not be permitted to be parked or stored in the front yard or required street side yard on cottage cluster, rowhouse, duplex, single-family detached dwelling, or residential home properties. Commercial vehicles may be present anywhere on these properties for up to 12 hours in 1 day if the vehicle is engaged in loading or unloading materials for a residence(s).

Parking and/ or storage of commercial vehicles, recreational vehicles and pleasure craft will be prohibited by the C,C &R's for the development.

B. Recreational vehicles and pleasure crafts on cottage cluster, rowhouse, duplex, single-family detached, or residential home properties must comply with the following regulations:

1. On residential lots less than 1 acre, only 1 recreational vehicle or private pleasure craft that is not located in an enclosed structure such as a garage shall be allowed. Canoes and other crafts less than 12 ft long shall be exempt from this requirement. On lots larger than 1 acre, 1 additional recreational vehicle or private pleasure craft that is not located in an enclosed structure is allowed for each 1/2 acre of area over 1 acre.
2. No vehicle or pleasure craft shall be lived in, have housekeeping maintained, or have hook-up to utilities while parked or stored on, or otherwise attached or moored to, a lot used for a cottage cluster, rowhouse, duplex, single-family detached dwelling, or residential home.
3. A recreational vehicle or pleasure craft may be parked anywhere on a residential lot for up to 24 hours for the purposes of loading or unloading the vehicle.
4. A recreational vehicle or pleasure craft is encouraged to be parked or stored in the side or rear yard area of a residential lot.
5. Recreational vehicles and pleasure craft must be stored on a surface that meets the requirements of Subsections 19.607.1.C.1 or 2. Parking areas for recreational vehicle and pleasure craft are considered excess parking, and may be graveled as allowed by Subsection 19.607.1.C.2. The prohibitions in Subsection 19.607.1.C.2 on graveled areas in front yard or side yard setbacks are not applicable for areas where recreational vehicles and pleasure crafts are parked.

Parking and/ or storage of commercial vehicles, recreational vehicles and pleasure craft will be prohibited by the C,C &R's for the development.

19.608 LOADING

19.608.1 General Provisions

A. The purpose of off-street loading areas is to contain loading activity of goods on-site and avoid conflicts with travel in the public right-of-way; provide for safe and efficient traffic circulation on the site; and minimize the impacts of loading areas to surrounding properties.

B. Off-street loading areas may be required for commercial, industrial, public, and semipublic uses for the receipt or distribution of merchandise, goods, or materials by vehicles. Off-street loading is not required in the Downtown Mixed Use Zone.

Criteria of this Section do not apply. Proposed development is not a commercial, industrial, public or semipublic use.

19.608.2. Number of Loading Spaces

The Planning Director shall determine whether to require off-street loading for commercial, industrial, public, and semipublic uses. The ratios listed below should be the minimum required unless the Planning Director finds that a different number of loading spaces are needed upon reviewing the loading needs of a proposed use.

A. Residential Buildings

Buildings where all of the floor area is in residential use should meet the following standards:

1. Fewer than 50 dwelling units on a site that abuts a local street: no loading spaces required.
2. All other buildings: 1 loading space.

B. Nonresidential and Mixed-Use Buildings

Buildings where any floor area is in nonresidential uses should meet the following standards:

1. Less than 20,000 sq ft of total floor area: no loading spaces required.
2. 20,000 to 50,000 sq ft of total floor area: 1 loading space.

3. More than 50,000 sq ft of total floor area: 2 loading spaces.

19.608.3 Loading Space Standards

A. Loading spaces shall be at least 35 ft long and 10 ft wide, and shall have a height clearance of at least 13 ft.

B. Loading areas shall be provided on the site and be separate from parking spaces.

C. Off-street loading areas shall have a durable and dust-free hard surface. Permeable paving surfaces may be used to reduce surface water runoff and protect water quality.

D. Lighting of loading areas shall conform to the standards of Subsection 19.606.3.F.

E. Off-street loading areas for materials and merchandise shall be located outside of the minimum front and side yard requirements for structures.

F. Off-street loading areas shall be located where not a hindrance to drive aisles, walkways, public or private streets, or adjacent properties.

19.608.4 Prohibitions

A. Loading activity for a site, regardless of whether loading spaces are required, shall not obstruct travel within the right-of-way.

B. The accumulation of goods in loading areas shall be prohibited when it renders the space useless for loading and unloading of goods and passengers. (Ord. 2110 § 2 (Exh. G), 2015; Ord. 2106 § 2 (Exh. F), 2015; Ord. 2025 § 2, 2011)

19.609 BICYCLE PARKING

19.609.1 Applicability

Bicycle parking shall be provided for all new commercial, industrial, community service use, and multifamily residential development. Temporary and seasonal uses (e.g., fireworks and Christmas tree stands) and storage units are exempt from Section 19.609. Bicycle parking shall be provided in the Downtown Mixed Use Zone and at transit centers.

Criteria of this Section do not apply. Despite being classified as a multi-family use (more than 4 units on a site) the proposed development consists of single family detached dwellings with individual garages allowing for secure long term bicycle storage.

19.609.2 Quantity of Spaces

A. The quantity of required bicycle parking spaces shall be as described in this subsection. In no case shall less than 2 spaces be provided.

1. Unless otherwise specified, the number of bicycle parking spaces shall be at least 10% of the minimum required vehicle parking for the use.
2. The number of bicycle parking spaces at transit centers shall be provided at the ratio of at least 1 space per 100 daily boardings.
3. Multifamily residential development with 4 or more units shall provide 1 space per unit.

B. Covered or enclosed bicycle parking. A minimum of 50% of the bicycle spaces shall be covered and/or enclosed (in lockers or a secure room) in any of the following situations:

1. When 10% or more of vehicle parking is covered.
2. If more than 10 bicycle parking spaces are required.
3. Multifamily residential development with 4 or more units.

19.609.3 Space Standards and Racks

A. The dimension of each bicycle parking space shall be a minimum of 2 x 6 ft. A 5-ft-wide access aisle must be provided. If spaces are covered, 7 ft of overhead clearance must be provided. Bicycle racks must be securely anchored and designed to allow the frame and 1 wheel to be locked to a rack using a high security, U-shaped, shackle lock.

B. Lighting shall conform to the standards of Subsection 19.606.3.F.

19.609.4 Location

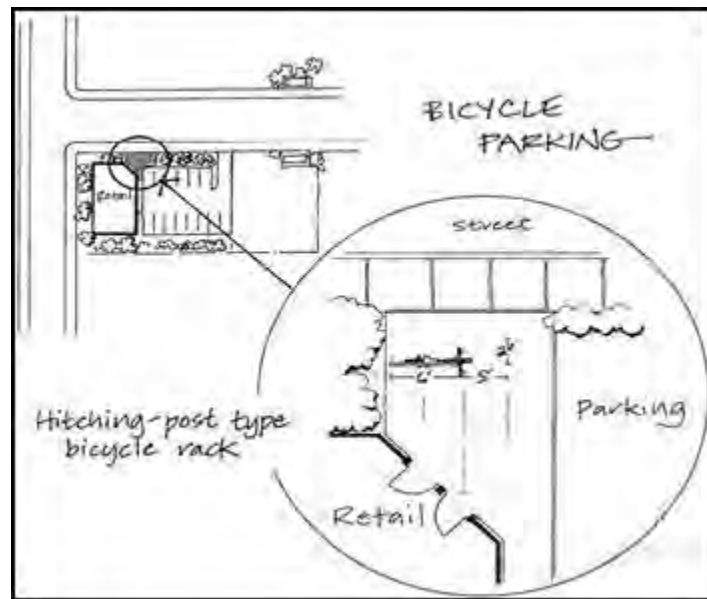
A. Bicycle parking facilities shall meet the following requirements:

1. Located within 50 ft of the main building entrance.
2. Closer to the entrance than the nearest non-ADA designated vehicle parking space.
3. Designed to provide direct access to a public right-of-way.
4. Dispersed for multiple entrances.
5. In a location that is visible to building occupants or from the main parking lot.

6. Designed not to impede pedestrians along sidewalks or public rights-of-way.
7. Separated from vehicle parking areas by curbing or other similar physical barriers.

B. The public right-of-way may be utilized for bicycle parking when parking cannot be reasonably accommodated on the site and the location is convenient to the building's front entrance. The bicycle parking area in the right-of-way must leave a clear, unobstructed width of sidewalk that meets the Engineering Department's Public Works Standards for sidewalk passage. See Figure 19.609 for illustration of space and locational standards. A right-of-way permit is required.

Figure 19.609
Bicycle Parking



19.610 CARPOOL AND VANPOOL PARKING

19.610.1 Applicability

New industrial, institutional, and commercial development with 20 or more required parking spaces shall provide carpool/vanpool parking.

Criteria of this Section do not apply. Proposed development is not a commercial, industrial, or institutional use.

19.610.2 Number of Spaces

The number of carpool/vanpool parking spaces shall be at least 10% of the minimum amount of required parking spaces. The minimum amount of required parking spaces shall take into account the reduction allowed by Subsection 19.605.3.B.4.

19.610.3 Location

Parking for carpools/vanpools shall be located closer to the main entrances of the building than other employee or student parking, except ADA spaces.

19.610.4 Standards

Carpool/vanpool spaces shall be clearly designated with signs or pavement markings for use only by carpools/vanpools. (Ord. 2025 § 2, 2011)

19.611 PARKING STRUCTURES

The purpose of Section 19.611 is to regulate the design and location of structured parking, and to provide appropriate incentives for the provision of structured parking. Structured parking is allowed to accommodate parking that is required for a specific use, or as a parking facility that is a use by itself.

Criteria of this Section do not apply. No structured parking is proposed as part of this development.

19.611.1 Permitted Zones and Review Procedures

A. Parking structures, including underground parking, are allowed in all zoning districts except the R-10, R-7, R-5, and Open Space Zones. A parking structure can be permitted through approval of a Community Service Use application in all zones except the Open Space Zone. A parking structure to be used for commercial parking in the Downtown Mixed Use Zone must be permitted through approval of a conditional use application.

B. Applications for parking structures with fewer than 20 spaces are subject to Type II review, per the procedures of Section 19.1005. Applications for parking structures with 20 spaces or more shall be reviewed by the Planning Commission at a public hearing per Section 19.1006 Type III Review. The Planning Commission may impose conditions on the proposed structure to make it compatible with surrounding properties.

19.611.2 Compliance with Other Sections of Chapter 19.600

A. Spaces in parking structures can be used to satisfy the minimum quantity requirements of Section 19.605. Spaces in parking structures are exempt from counting against maximum parking allowances if the spaces are utilized for types of parking listed in Subsection 19.605.3.A.

B. The space and drive aisle dimensions required in Subsection 19.606.1 shall apply to structured parking unless the applicant requests that the dimensions be reduced. Dimensions may be reduced if the applicant can demonstrate that the reduced dimensions can safely accommodate parking and maneuvering for standard passenger vehicles.

C. In addition to the standards in Subsection 19.611.3, parking structures shall comply with the development standards, design standards, and design guidelines for the base zone(s) in which the structure will be located.

19.611.3 Standards and Design Criteria for Structured Parking

A. A minimum of 75% of the length of any façade of a parking structure that faces a street shall provide ground-floor windows or wall openings. Blank walls are prohibited.

B. The structure shall be compatible with related structures on the lot in terms of appearance, size, scale, and bulk.

C. The required yard setbacks between the property line and the structure shall be landscaped per the requirements of Subsection 19.606.2.D.3.

D. The structure shall provide safe pedestrian connections between parking structure and the public sidewalk or principal building.

E. The structure shall provide adequate lighting to ensure motorist and pedestrian safety within the structured parking facility and connecting pedestrian ways to the principal building.

19.611.4 Incentives for Provision of Structured Parking.

A. An applicant shall be allowed an additional 0.5 sq ft of floor area above the maximum allowed floor area ratio for every 1 sq ft of structured parking provided. The applicant shall meet the other requirements of the development standards for the base zone in which it is located.

B. If structured parking is underground, the applicant shall be relieved from Subsection 19.611.3.C and can locate the underground structure within any part of the setback and yard area.

CHAPTER 19.700 PUBLIC FACILITY IMPROVEMENTS

19.701 PURPOSE

The purpose of Chapter 19.700 is to ensure that development, including redevelopment, provides public facilities that are safe, convenient, and adequate in rough proportion to their public facility impacts. The purposes of this chapter include the following:

19.701.1 For Transportation Facilities

- A. Provide standards and procedures to implement provisions of the State Transportation Planning Rule (OAR 660, Division 12) and local, regional, and state transportation system plans.
- B. Protect the functional classification, capacity, and level of service of transportation facilities.
- C. Ensure that transportation facility improvements are provided in rough proportion to development impacts.
- D. Provide an equitable and consistent method of requiring transportation facility improvements.
- E. Ensure that transportation facility improvements accommodate multiple modes of travel, including pedestrian, bicycle, transit, and auto.

This application will have minimal impact on the current transportation facilities due to its relatively small residential use.

19.701.2 For Public Facilities

- A. Ensure that public facility improvements are safe, convenient, and adequate.
- B. Ensure that public facility improvements are designed and constructed to City standards in a timely manner.
- C. Ensure that the expenditure of public monies for public facility improvements is minimized when improvements are needed for private development.
- D. Ensure that public facility improvements meet the City of Milwaukie Comprehensive Plan goals and policies. (Ord. 2025 § 2, 2011)

19.702 APPLICABILITY

19.702.1 General

Chapter 19.700 applies to the following types of development in all zones:

- A. Partitions.
- B. Subdivisions.
- C. Replats.
- D. New construction.
- E. Modification or expansion of an existing structure or a change or intensification in use that results in any one of the following. See Subsections 19.702.2-3 for specific applicability provisions for single-family residential development and development in downtown zones.
 - 1. A new dwelling unit.

2. Any increase in gross floor area.
3. Any projected increase in vehicle trips, as determined by the Engineering Director.

The project proposed with this application will include public improvements for sanitary and storm water systems and extension of existing water systems to serve the Development.

19.702.2 Single-Family Residential Expansions

Chapter 19.700 applies to single-family residential expansions as described below. The City has determined that the following requirements are roughly proportional to the impacts resulting from single-family residential expansions.

- A. For expansions or conversions that increase the combined gross floor area of all structures (excluding nonhabitable accessory structures and garages) by 1,500 sq ft or more, all of Chapter 19.700 applies.
- B. For expansions or conversions that increase the combined gross floor area of all structures (excluding nonhabitable accessory structures and garages) by at least 200 sq ft, but not more than 1,499 sq ft, right-of-way dedication may be required pursuant to the street design standards and guidelines contained in Subsection 19.708.2.
- C. For expansions or conversions that increase the combined gross floor area of all structures (excluding nonhabitable accessory structures and garages) by less than 200 sq ft, none of Chapter 19.700 applies.
- D. Single-family residential expansions shall provide adequate public utilities as determined by the Engineering Director pursuant to Section 19.709.
- E. Construction or expansion of garage and carport structures shall comply with the requirements of Chapter 12.16 Access Management. Existing nonconforming accesses may not go further out of conformance and shall be brought closer into conformance to the greatest extent possible.

Criteria of this Section do not apply. No expansion of existing residential use is proposed with this application.

19.702.3 Downtown Zones

A. Purpose

The purpose of the specific exemptions for some types of development in downtown Milwaukie is to encourage new uses in, and revitalization of, existing structures in downtown and to recognize that the transportation infrastructure in downtown is more complete than in other areas of the city.

B. Exemptions

1. For expansions or conversions that increase the combined gross floor area of all structures by 1,500 sq ft or less, frontage improvements are exempt, as described in the approval criterion of Subsection 19.703.3.B.

2. For changes of use, Chapter 19.700 applies. Frontage improvements for these increases in floor area are exempt, as described in Subsection 19.703.3.B.

C. Limitation to Exemptions

No more than one exempt increase in gross floor area, as described in Subsection 19.702.3.B.1, is allowed every 5 years. The 5-year period starts from the date the City issues an occupancy permit or final inspection for the expanded or converted development.

Chapter 19.700 applies to subsequent development that would exceed this limitation as follows.

1. Subsequent development is exempt per Subsection 19.702.3.B.1 if the total floor area of the initial development and subsequent development does not exceed 1,500 sq ft.
2. Subsequent development is not exempt per Subsection 19.702.3.B.1 if the total floor area of the initial development and subsequent development is greater than 1,500 sq ft. Review per Chapter 19.700 is based on all floor areas that are involved with the development.

19.702.4 Exemptions

Chapter 19.700 does not apply to the following types of development in all zones:

- A. Modifications to existing single-family residential structures that do not result in an increase in gross floor area.
- B. Construction or expansion of nonhabitable residential detached accessory structures. Garage and carport construction or expansions are only partially exempt. See Subsection 19.702.2.E above.
- C. Property line adjustments.
- D. Redevelopment of a structure following partial or total accidental destruction when all of the following criteria are met:
 1. The redeveloped structure has a gross floor area no larger than the structure that was destroyed.
 2. The use of the structure remains the same as the use that existed before the structure was destroyed.
 3. A building permit is submitted and approved by the City within 2 years of the date of accidental destruction.

If redevelopment of a structure following accidental destruction does not meet all three of these criteria, the redeveloped structure shall be subject to Subsections 19.702.1 and 2 as applicable. Redevelopment of a structure following nonaccidental destruction shall constitute new construction and is not exempt from Chapter 19.700.

E. Operation, maintenance, and repair of existing public facilities.

F. Public capital improvement projects.

Criteria of the Section above do not apply. Project site is not within the Downtown Area.

19.703 REVIEW PROCESS

19.703.1 Preapplication Conference

For all proposed development that requires a land use application and is subject to Chapter 19.700 per Section 19.702, the applicant shall schedule a preapplication conference with the City prior to submittal of the land use application. The Engineering Director may waive this requirement for proposals that are not complex.

A preapplication conference was held on March 28, 2018 for the proposed project.

19.703.2 Application Submittal

For all proposed development that is subject to Chapter 19.700 per Section 19.702, one of the following types of applications is required.

A. Development Permit Application

If the proposed development does not require a land use application, compliance with Chapter 19.700 will be reviewed as part of the development permit application submittal.

B. Transportation Facilities Review (TFR) Land Use Application

If the proposed development triggers a transportation impact study (TIS) per Section 19.704, a TFR land use application shall be required. Compliance with Chapter 19.700 will be reviewed as part of the TFR application submittal and will be subject to a Type II review process as set forth in Section 19.1005. The TFR application shall be consolidated with, and processed concurrently with, any other required land use applications.

If the proposed development does not trigger a TIS per Section 19.704, but does require the submittal of other land use applications, compliance with Chapter 19.700 will be reviewed during the review of the other land use applications.

A development permit application is being submitted for this project. A TIS was not a requirement from the preapplication conference.

19.703.3 Approval Criteria

For all proposed development that is subject to Chapter 19.700 per Section 19.702, the required development permit and/or land use application shall demonstrate compliance with the following approval criteria at the time of submittal.

A. Procedures, Requirements, and Standards

Development and related public facility improvements shall comply with procedures, requirements, and standards of Chapter 19.700 and the Public Works Standards.

B. Transportation Facility Improvements

Development shall provide transportation improvements and mitigation at the time of development in rough proportion to the potential impacts of the development per Section 19.705 Rough Proportionality, except as allowed by Chapter 13.32 Fee in Lieu of Construction.

Development in downtown zones that is exempt per Subsection 19.702.3.B shall only be required to provide transportation improvements that are identified by a Transportation Impact Study as necessary to mitigate the development's transportation impacts. Such development is not required to provide on-site frontage improvements.

After the preapplication conference this proposed Project was discussed with City Staff and determined that an application for Preliminary approval of the Work proposed could be sought with a Preliminary Grading Plan and Stormwater Report. Final design is to be deferred until Conditional Approval is granted.

C. Safety and Functionality Standards

The City will not issue any development permits unless the proposed development complies with the City's basic safety and functionality standards, the purpose of which is to ensure that development does not occur in areas where the surrounding public facilities are inadequate. Upon submittal of a development permit application, an applicant shall demonstrate that the development property has or will have all of the following:

1. Adequate street drainage, as determined by the Engineering Director.
2. Safe access and clear vision at intersections, as determined by the Engineering Director.
3. Adequate public utilities, as determined by the Engineering Director.
4. Access onto a public street with the minimum paved widths as stated in Subsection 19.703.3.C.5 below.
5. Adequate frontage improvements as follows:
 - a. For local streets, a minimum paved width of 16 ft along the site's frontage.
 - b. For nonlocal streets, a minimum paved width of 20 ft along the site's frontage.
 - c. For all streets, a minimum horizontal right-of-way clearance of 20 ft along the site's frontage.
6. Compliance with Level of Service D for all intersections impacted by the development, except those on Oregon Highway 99E that shall be subject to the following:
 - a. Level of Service F for the first hour of the morning or evening 2-hour peak period.
 - b. Level of Service E for the second hour of the morning or evening 2-hour peak period.

Refer to response above to Section 19.702.B.

19.703.4 Determinations

There are four key determinations related to transportation facility improvements that occur during the processing of a development permit or land use application. These determinations

are described below in the order in which they occur in the review process. They are also shown in Figure 19.703.4. In making these determinations, the Engineering Director will take the goals and policies of the TSP into consideration and use the criteria and guidelines in this chapter.

A. Impact Evaluation

For development that is subject to Chapter 19.700 per Subsection 19.702.1, the Engineering Director will determine whether the proposed development has impacts to the transportation system pursuant to Section 19.704. Pursuant to Subsection 19.704.1, the Engineering Director will also determine whether a transportation impact study (TIS) is required. If a TIS is required, a transportation facilities review land use application shall be submitted pursuant to Subsection 19.703.2.B.

For development that is subject to Chapter 19.700 per Subsection 19.702.2, the City has determined that there are impacts to the transportation system if the proposed single-family residential expansion/conversion is greater than 200 sq ft.

The Engineering Director has determined that Impact Evaluation for this proposed Development is not required due to its modest scale.

B. Street Design

Given the City's existing development pattern, it is expected that most transportation facility improvements will involve existing streets and/or will serve infill development. To ensure that required improvements are safe and relate to existing street and development conditions, the Engineering Director will determine the most appropriate street design cross section using the standards and guidelines contained in Section 19.708. On-site frontage improvements are not required for downtown development that is exempt per Subsection 19.702.3.B.

A driveway/ private road is proposed that will be constructed to City Standards and maintained by the Property Owner.

C. Proportional Improvements

When transportation facility improvements are required pursuant to this chapter, the Engineering Director will conduct a proportionality analysis pursuant to Section 19.705 to determine the level of improvements that are roughly proportional to the level of potential impacts from the proposed development. Guidelines for conducting a proportionality analysis are contained in Subsection 19.705.2.

The applicant is willing to construct reasonable, proportional improvements that may be conditioned for this approval.

D. Fee in Lieu of Construction (FILOC)

If transportation facility improvements are required and determined to be proportional, the City will require construction of the improvements at the time of development. However, the applicant may request to pay a fee in lieu of constructing the required transportation facility improvements. The Engineering Director will approve or deny such requests using the criteria for making FILOC determinations found in Chapter 13.32 Fee in Lieu of Construction.

The applicant is willing to pay a reasonable fee in lieu of construction if conditioned by the City to provide adequate transportation systems.

19.703.5 Remedies

A. Variances

Relief from any transportation facility improvement requirement in Section 19.708 may be granted through a variance process, which requires submittal and approval of a Variance land use application. Variance criteria and procedures are located in Section 19.911.

No variances from this Code Section are being sought with this application, but may be pursued at a later date dependent on Conditions of Approval.

B. Appeals

Appeal of a land use decision is subject to the provisions of Chapter 19.1009. Appeal of a rough proportionality determination (Subsection 19.702.2 and Section 19.705) or street design standard determination (Subsection 19.708.2) not associated with a land use decision is subject to the provisions of Section 19.1006 Type III Review.

The Owner will reserve the right to appeal, dependent on Conditions of Approval.

19.704 TRANSPORTATION IMPACT EVALUATION

The Engineering Director will determine whether a proposed development has impacts on the transportation system by using existing transportation data. If the Engineering Director cannot properly evaluate a proposed development's impacts without a more detailed study, a transportation impact study (TIS) will be required to evaluate the adequacy of the transportation system to serve the proposed development and determine proportionate mitigation of impacts. The TIS determination process and requirements are detailed below.

19.704.1 TIS Determination

A. Based on information provided by the applicant about the proposed development, the Engineering Director will determine when a TIS is required and will consider the following when making that determination.

1. Changes in land use designation, zoning designation, or development standard.
2. Changes in use or intensity of use.
3. Projected increase in trip generation.
4. Potential impacts to residential areas and local streets.
5. Potential impacts to priority pedestrian and bicycle routes, including, but not limited to, school routes and multimodal street improvements identified in the TSP.
6. Potential impacts to intersection level of service (LOS).

B. It is the responsibility of the applicant to provide enough detailed information for the Engineering Director to make a TIS determination.

C. A TIS determination is not a land use action and may not be appealed.

A TIS was not a requirement for this Land Use Application at the Preapplication Conference, so none is being provided.

19.704.2 TIS General Provisions

A. All transportation impact studies, including neighborhood through-trip and access studies, shall be prepared and certified by a registered Traffic or Civil Engineer in the State of Oregon.

B. Prior to TIS scope preparation and review, the applicant shall pay to the City the fees and deposits associated with TIS scope preparation and review in accordance with the adopted fee schedule. The City's costs associated with TIS scope preparation and review will be charged against the respective deposits. Additional funds may be required if actual costs exceed deposit amounts. Any unused deposit funds will be refunded to the applicant upon final billing.

C. The TIS shall be submitted with a transportation facilities review (TFR) land use application pursuant to Subsection 19.703.2.B and associated application materials pursuant to Subsection 19.703.3. The City will not accept a TFR application for processing if it does not include the required TIS. The City will not accept other associated land use applications for processing if they are not accompanied by the required TFR application.

D. The Engineering Director may require a TIS review conference with the applicant to discuss the information provided in the TIS. This conference would be in addition to the required preapplication conference pursuant to Subsection 19.703.1. If such a conference is required, the City will not accept the TFR application for processing until the conference has taken place. The applicant shall pay the TIS review conference fee at the time of conference scheduling, in accordance with the adopted fee schedule.

E. The City may attach conditions of approval to land use decisions as needed to satisfy the transportation facility requirements of Section 19.708 and to mitigate transportation impacts identified in the TIS.

19.704.3 TIS Requirements

A. TIS Scope

The Engineering Director shall determine the study area, study intersections, trip rates, traffic distribution, and required content of the TIS based on information provided by the applicant about the proposed development.

1. The study area will generally comprise an area within a ½-mile radius of the development site. If the Engineering Director determines that development impacts may extend more than ½ mile from the development site, a larger study area may be required.

2. If notice to ODOT or Clackamas County is required pursuant to Section 19.707, the City will coordinate with these agencies to provide a comprehensive TIS scope.

B. TIS Content

A project-specific TIS checklist will be provided by the City once the Engineering Director has determined the TIS scope. A TIS shall include all of the following elements, unless waived by the Engineering Director.

1. Introduction and Summary

This section should include existing and projected trip generation including vehicular trips and mitigation of approved development not built to date; existing level and proposed level of service standard for City and County streets and volume to capacity for State roads; project build year and average growth in traffic between traffic count year and build year; summary of transportation operations; proposed mitigation(s); and traffic queuing and delays at study area intersections.

2. Existing Conditions

This section should include a study area description, including existing study intersection level of service.

3. Impacts

This section should include the proposed site plan, evaluation of the proposed site plan, and a project-related trip analysis. A figure showing the assumed future year roadway network (number and type of lanes at each intersection) should also be provided.

4. Mitigation

This section should include proposed site and areawide specific mitigation measures. Mitigation measures shall be roughly proportional to potential impacts pursuant to Section 19.705.

5. Appendix

This section should include traffic counts, capacity calculations, warrant analysis, and any information necessary to convey a complete understanding of the technical adequacy of the TIS.

C. TIS Methodology

The City will include the required TIS methodology with the TIS scope.

D. Neighborhood Through-Trip Study

Any nonresidential development projected to add more than 25 through-vehicles per day to an adjacent residential local street or neighborhood route will require assessment and mitigation of residential street impacts. Through-trips are defined as those to and from a proposed development that have neither an origin nor a destination in the neighborhood.

The through-trip study shall include all of the following:

1. Existing number of through-trips per day on adjacent residential local streets or neighborhood routes.
2. Projected number of through-trips per day on adjacent residential local streets or neighborhood routes that will be added by the proposed development.
3. Traffic management strategies to mitigate for the impacts of projected through-trips consistent with Section 19.705 Rough Proportionality and Subsection 19.704.4 Mitigation.

19.704.4 Mitigation

A. Transportation impacts shall be mitigated at the time of development when the TIS identifies an increase in demand for vehicular, pedestrian, bicycle, or transit transportation facilities within the study area.

B. The following measures may be used to meet mitigation requirements. Other mitigation measures may be suggested by the applicant or recommended by a State authority (e.g., ODOT) in circumstances where a State facility will be impacted by a proposed development. The Engineering Director or other decision-making body, as identified in Chapter 19.1000, shall determine if the proposed mitigation measures are adequate.

1. On- and off-site improvements beyond required frontage improvements.
2. Development of a transportation demand management program.
3. Payment of a fee in lieu of construction.
4. Correction of off-site transportation deficiencies within the study area that are not substantially related to development impacts.
5. Construction of on-site facilities or facilities located within the right-of-way adjoining the development site that exceed minimum required standards and that have a transportation benefit to the public.

19.705 ROUGH PROPORTIONALITY

The purpose of this section is to ensure that required transportation facility improvements are roughly proportional to the potential impacts of the proposed development. The rough proportionality requirements of this section apply to both frontage and off-site, or nonfrontage, improvements. A rough proportionality determination may be appealed pursuant to Subsection 19.703.5.

The Engineering Director will conduct a proportionality analysis for any proposed development that triggers transportation facility improvements per this chapter, with the exception of development subject to Subsection 19.702.2. The Engineering Director may conduct a proportionality analysis for development that triggers transportation facility improvements per Subsection 19.702.2.

When conducting a proportionality analysis for frontage improvements, the Engineering Director will not consider prior use for the portion of the proposed development that involves new construction. The Engineering Director will, however, consider any benefits that are estimated to accrue to the development property as a result of any required transportation facility improvements.

The following general provisions apply whenever a proportionality analysis is conducted.

19.705.1 Impact Mitigation

Mitigation of impacts, due to increased demand for transportation facilities associated with the proposed development, shall be provided in rough proportion to the transportation impacts of the proposed development. When a TIS is required, potential impacts will be determined in accordance with Section 19.704. When no TIS is required, potential impacts will be determined by the Engineering Director.

Potential impacts for this Project will be determined by the Engineering Director.

19.705.2 Rough Proportionality Guidelines

The following shall be considered when determining proportional improvements:

- A. 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 1/2-mile radius of the proposed development. If a TIS is required pursuant to Section 19.704, the impact area is the TIS study area.
- B. Existing vehicle, bicycle, pedestrian, and transit use within the impact area.
- C. 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.
- D. The most recent use when a change in use is proposed that does not involve new construction.
- E. Applicable TSP goals, policies, and plans.
- F. 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.
- G. Accident history within the impact area.
- H. Potential increased safety risks to transportation facility users, including pedestrians and cyclists.
- I. Potential benefit the development property will receive as a result of the construction of any required transportation facility improvements.
- J. Other considerations as may be identified in the review process.

The Owner will be responsible for reasonable, proportional improvements created by the impacts of this proposed Development.

19.706 RESERVED

19.707 AGENCY NOTIFICATION AND COORDINATED REVIEW

19.707.1 Agency Notification

In addition to the general notice provisions set forth in Chapter 19.1000 for land use applications, the City shall provide notice of applications that are subject to Chapter 19.700 to the following agencies:

- A. Oregon Department of Transportation (ODOT): If the proposed development generates more than 100 vehicle trips per day, is within 200 ft of a State highway, or is within 1,320 ft of a State highway interchange ramp.
- B. ODOT Rail Division: If the proposed development is within 300 ft of a public railroad crossing or if a modification is proposed to an existing public railroad crossing. Private

crossing improvements are subject to review and licensing by the private rail service provider.

C. Metro and Clackamas County: If the proposed development is within 200 ft of a designated arterial or collector roadway, as identified in Figure 8-1 of the TSP.

D. Metro: If the proposed development is within 200 ft of a designated regional multiuse trail, as identified in the Regional Transportation Plan.

E. TriMet: If the proposed development (excluding single-family development on an existing lot) is within 200 ft of an existing or proposed transit route as identified on the current TriMet service map and Figure 7-3 of the TSP.

19.707.2 Coordinated Review

The City shall coordinate application review and land use findings and conditions, if any, with the agencies listed above. The City shall include the deadline for review comments in its notice. Agencies shall indicate in their comments if additional public facility permits or approvals are required through their agency separate from City permits and approvals.

19.708 TRANSPORTATION FACILITY REQUIREMENTS

This section contains the City's requirements and standards for improvements to public streets, including pedestrian, bicycle, and transit facilities. For ease of reading, the more common term "street" is used more frequently than the more technical terms "public right-of-way" or "right-of-way." As used in this section, however, all three terms have the same meaning.

The City recognizes the importance of balancing the need for improved transportation facilities with the need to ensure that required improvements are fair and proportional. The City also acknowledges the value in providing street design standards that are both objective and flexible. Objective standards allow for consistency of design and provide some measure of certainty for developers and property owners. Flexibility, on the other hand, gives the City the ability to design streets that are safe and that respond to existing street and development conditions in a way that preserves neighborhood character.

The City's street design standards are based on the street classification system described in the TSP. Figure 8-1 of the TSP identifies the functional street classification for every street in the City and Figure 10-1 identifies the type and size of street elements that may be appropriate for any given street based on its classification.

19.708.1 General Street Requirements and Standards

A. Access Management

All development subject to Chapter 19.700 shall comply with access management standards contained in Chapter 12.16.

The proposed private driveway serving the Project will comply with Access Management Standards in Chapter 12.16..

B. Clear Vision

All development subject to Chapter 19.700 shall comply with clear vision standards contained in Chapter 12.24.

The proposed private driveway alignment and landscaping at intersection will comply with the clear vision standards of Chapter 12.24.

C. Development in Downtown Zones

Street design standards and right-of-way dedication for the downtown zones are subject to the requirements of the Milwaukie Public Works Standards, which implement the streetscape design of the Milwaukie Downtown and Riverfront Plan: Public Area Requirements (PAR). Unless specifically stated otherwise, the standards in Section 19.708 do not apply to development located in the downtown zones or on street sections shown in the PAR per Subsection 19.304.6.

Criterion does not apply. Project is outside of Downtown Zones.

D. Development in Non-Downtown Zones

Development in a non-downtown zone that has frontage on a street section shown in the PAR is subject to the requirements of the Milwaukie Public Works Standards, which implements the street design standards and right-of-way dedication requirements contained in the PAR for that street frontage. The following general provisions apply only to street frontages that are not shown in the PAR and for development that is not in any of the downtown zones listed in Subsection 19.708.1.C above:

1. Streets shall be designed and improved in accordance with the standards of this chapter and the Public Works Standards. ODOT facilities shall be designed consistent with State and federal standards. County facilities shall be designed consistent with County standards.

The proposed private driveway will be designed in accordance with standards for public streets.

2. Streets shall be designed according to their functional classification per Figure 8-3b of the TSP.

The proposed private driveway serving the development will be designed in accordance with TSP requirements.

3. Street right-of-way shall be dedicated to the public for street purposes in accordance with Subsection 19.708.2. Right-of-way shall be dedicated at the corners of street intersections to accommodate the required turning radii and transportation

facilities in accordance with Section 19.708 and the Public Works Standards. Additional dedication may be required at intersections for improvements identified by the TSP or a required transportation impact study.

No public street or right of way dedication is proposed as part of this Project.

4. The City shall not approve any development permits for a proposed development unless it has frontage or approved access to a public street.

The property currently has frontage on SE 19th St that will be utilized to access the proposed development.

5. Off-site street improvements shall only be required to ensure adequate access to the proposed development and to mitigate for off-site impacts of the proposed development.

Limited off site improvements on SE 19th will be required to ensure adequate access to the proposed development. No other off site improvements are anticipated with this application.

6. The following provisions apply to all new public streets and extensions to existing public streets.

a. All new streets shall be dedicated and improved in accordance with this chapter.

b. Dedication and construction of a half-street is generally not acceptable. However, a half-street may be approved where it is essential to allow reasonable development of a property and when the review authority finds that it will be possible for the property adjoining the half-street to dedicate and improve the remainder of the street when it develops. The minimum paved roadway width for a half-street shall be the minimum width necessary to accommodate 2 travel lanes pursuant to Subsection 19.708.2.

No new public streets or extensions are proposed as part of this Project. Criteria do not apply.

7. Traffic calming may be required for existing or new streets. Traffic calming devices shall be designed in accordance with the Public Works Standards or with the approval of the Engineering Director.

Reasonable traffic calming devices will be constructed by the Owner if conditioned by the Engineering Director.

8. Railroad Crossings

Where anticipated development impacts trigger a need to install or improve a railroad crossing, the cost for such improvements may be a condition of development approval.

No rail crossings are proposed. Site does not abut a rail line.

9. Street Signs

The City shall install all street signs, relative to traffic control and street names, as specified by the Engineering Director. The applicant shall reimburse the City for the cost of all such signs installed by the City.

The Owner will reimburse the City for costs of street signs associated with this Project.

10. Streetlights

The location of streetlights shall be noted on approved development plans. Streetlights shall be installed in accordance with the Public Works Standards or with the approval of the Engineering Director.

Final development plans will include streetlights installed per City Standards and approved by the City.

E. Street Layout and Connectivity

1. The length, width, and shape of blocks shall take lot size standards, access and circulation needs, traffic safety, and topographic limitations into consideration.
2. The street network shall be generally rectilinear but may vary due to topography or other natural conditions.
3. Streets shall be extended to the boundary lines of the developing property where necessary to give access to or allow for future development of adjoining properties.
 - a. Temporary turnarounds shall be constructed for street stubs in excess of 150 ft in length. Drainage facilities shall be constructed to properly manage stormwater runoff from temporary turnarounds.
 - b. Street stubs to adjoining properties shall not be considered turnarounds, unless required and designed as turnarounds, since they are intended to continue as through streets when adjoining properties develop.
 - c. Reserve strips may be required in order to ensure the eventual continuation or completion of a street.

Criteria do not apply. No new public streets are proposed.

4. Permanent turnarounds shall only be provided when no opportunity exists for creating a through street connection. The lack of present ownership or control over abutting property shall not be grounds for construction of a turnaround. For proposed land division sites that are 3 acres or larger, a street ending in a turnaround shall have a maximum length of 200 ft, as measured from the cross street right-of-way to the

farthest point of right-of-way containing the turnaround. For proposed land division sites that are less than 3 acres, a street ending in a turnaround shall have a maximum length of 400 ft, measured from the cross street right-of-way to the farthest point of right-of-way containing the turnaround. Turnarounds shall be designed in accordance with the requirements of the Public Works Standards. The requirements of this subsection may be adjusted by the Engineering Director to avoid alignments that encourage nonlocal through traffic.

A permanent emergency vehicle turnaround is proposed to serve the Development. A perpetual access easement is proposed.

5. Closed-end street systems may serve no more than 20 dwellings.

The proposed development consists of a private closed end driveway serving 12 units. The additional 4 units are to be served from the existing SE 19th St..

F. Intersection Design and Spacing

1. Connecting street intersections shall be located to provide for traffic flow, safety, and turning movements, as conditions warrant.

The proposed intersection for the new access drive with SE 19th proposed will provide a safe intersection for the Development.

2. Street and intersection alignments for local streets shall facilitate local circulation but avoid alignments that encourage nonlocal through traffic.

The proposed driveway alignment with SE 19th St will facilitate new and existing traffic and not encourage any additional non local through traffic with the proposed dead end street.

3. Streets should generally be aligned to intersect at right angles (90 degrees). Angles of less than 75 degrees will not be permitted unless the Engineering Director has approved a special intersection design.

The proposed intersection for the private driveway will be at a 90 degree angle with SE 19th St.

4. New streets shall intersect at existing street intersections so that centerlines are not offset. Where existing streets adjacent to a proposed development do not align properly, conditions shall be imposed on the development to provide for proper alignment.

There is no adjacent intersecting street to align with due to topography. Criterion does not apply.

5. Minimum and maximum block perimeter standards are provided in Table 19.708.1.

No new public streets or blocks are proposed. Criterion does not apply.

6. Minimum and maximum intersection spacing standards are provided in Table 19.708.1.

The existing unimproved right of ways of Sparrow and Wren Streets are highly unlikely to ever be developed due to topographic and wetland areas. The proposed private driveway intersection will therefore meet the spacing standards in the table below.

Table 19.708.1 Street/Intersection Spacing			
Street Classification	Minimum Distance Between Street Intersections	Maximum Distance Between Street Intersections	Maximum Block Perimeter
Arterial	530'	1,000'	2600'
Collector	300'	600'	1800'
Neighborhood Route	150'	530'	1650'
Local	100'	530'	1650'

19.708.2 Street Design Standards

Table 19.708.2 contains the street design elements and dimensional standards for street cross sections by functional classification. Dimensions are shown as ranges to allow for flexibility in developing the most appropriate cross section for a given street or portion of street based on existing conditions and the surrounding development pattern. The additional street design standards in Subsection 19.708.2.A augment the dimensional standards contained in Table 19.708.2. The Engineering Director will rely on Table 19.708.2 and Subsection 19.708.2.A to determine the full-width cross section for a specific street segment based on functional classification. The full-width cross section is the sum total of the widest dimension of all individual street elements. If the Engineering Director determines that a full-width cross section is appropriate and feasible, a full-width cross section will be required. If the Engineering Director determines that a full-width cross section is not appropriate or feasible, the Engineering Director

will modify the full-width cross section requirement using the guidelines provided in Subsection 19.708.2.B. Standards for design speed, horizontal/vertical curves, grades, and curb return radii are specified in the Public Works Standards.

Table 19.708.2							
Street Design Standards (Dimensions are Shown in Feet)							
Street Classification	Full-Width Right of Way Dimension	Individual Street Elements					
		Travel Lane (Center Lane)	Bike Lane	On-Street Parking	Landscape Strips	Sidewalk Curb Tight	Sidewalk Setback
Arterial	54'–89'	11'–12' (12'–13')	5'–6'	6'–8'	3'–5'	8'–10'	6'
Collector	40'–74'	10'–11'	5'–6'	6'–8'	3'–5'	8'	6'
Neighborhood	20'–68'	10'	5'	6'–8'	3'–5'	6'	5'
Local	20'–68'	8' or 10'	5'	6'–8'	3'–5'	6'	5'
Truck Route	34'–89'	11'–12' (12'–13')	5'–6'	6'–8'	3'–5'	8'–10'	Per street classification
Transit Route	30'–89'	10'–12' (12'–13')	5'–6'	6'–8'	3'–5'	Per street classification	Per street classification

A. Additional Street Design Standards

These standards augment the dimensional standards contained in Table 19.708.2 and may increase the width of an individual street element and/or the full-width right-of-way dimension.

1. Minimum 10-ft travel lane width shall be provided on local streets with no on-street parking.
2. Where travel lanes are next to a curb line, an additional 1 ft of travel lane width shall be provided. Where a travel lane is located between curbs, an additional 2 ft of travel lane width shall be provided.
3. Where shared lanes or bicycle boulevards are planned, up to an additional 6 ft of travel lane width shall be provided.
4. Bike lane widths may be reduced to a minimum of 4 ft where unusual circumstances exist, as determined by the Engineering Director, and where such a reduction would not result in a safety hazard.
5. Where a curb is required by the Engineering Director, it shall be designed in accordance with the Public Works Standards.

6. Center turn lanes are not required for truck and bus routes on street classifications other than arterial roads.
7. On-street parking in industrial zones shall have a minimum width of 8 ft.
8. On-street parking in commercial zones shall have a minimum width of 7 ft.
9. On-street parking in residential zones shall have a minimum width of 6 ft.
10. Sidewalk widths may be reduced to a minimum of 4 ft for short distances for the purpose of avoiding obstacles within the public right-of-way including, but not limited to, trees and power poles.
11. Landscape strip widths shall be measured from back of curb to front of sidewalk.
12. Where landscape strips are required, street trees shall be provided a minimum of every 40 ft in accordance with the Public Works Standards and the Milwaukie Street Tree List and Street Tree Planting Guidelines.
13. Where water quality treatment is provided within the public right-of-way, the landscape strip width may be increased to accommodate the required treatment area.
14. A minimum of 6 in shall be required between a property line and the street element that abuts it; e.g., sidewalk or landscape strip.

Criteria do not apply. No new public street is proposed.

B. Street Design Determination Guidelines

The Engineering Director shall make the final determination regarding right-of-way and street element widths using the ranges provided in Table 19.708.2 and the additional street design standards in Subsection 19.708.2.A. The Engineering Director shall also determine whether any individual street element may be eliminated on one or both sides of the street in accordance with Figure 10-1 of the TSP. When making a street design determination that varies from the full-width cross section, the Engineering Director shall consider the following:

1. Options and/or needs for environmentally beneficial and/or green street designs.
2. Multimodal street improvements identified in the TSP.
3. Street design alternative preferences identified in Chapter 10 of the TSP, specifically regarding sidewalk and landscape strip improvements.
4. Existing development pattern and proximity of existing structures to the right-of-way.
5. Existing right-of-way dimensions and topography.

Criteria do not apply. No new public streets are proposed.

19.708.3 Sidewalk Requirements and Standards

A. General Provisions

1. Goals, objectives, and policies relating to walking are included in Chapter 5 of the TSP and provide the context for needed pedestrian improvements. Figure 5-1 of the

TSP illustrates the Pedestrian Master Plan and Table 5-3 contains the Pedestrian Action Plan.

2. Americans with Disabilities Act (ADA) requirements for public sidewalks shall apply where there is a conflict with City standards.

B. Sidewalk Requirements

1. Requirements

Sidewalks shall be provided on the public street frontage of all development per the requirements of this chapter. Sidewalks shall generally be constructed within the dedicated public right-of-way, but may be located outside of the right-of-way within a public easement with the approval of the Engineering Director.

2. Design Standards

Sidewalks shall be designed and improved in accordance with the requirements of this chapter and the Public Works Standards.

3. Maintenance

Abutting property owners shall be responsible for maintaining sidewalks and landscape strips in accordance with Chapter 12.04.

Sidewalks are proposed along new private drive proposed for project. They are proposed to be constructed to Public Works Standards and maintained by the Property Owner/ Home Owners Association to serve as access for each individual residence. No right of way dedication is proposed for the private drive or sidewalks within the site.

19.708.4 Bicycle Facility Requirements and Standards

A. General Provisions

1. Bicycle facilities include bicycle parking and on-street and off-street bike lanes, shared lanes, bike boulevards, and bike paths.

2. Goals, objectives, and policies relating to bicycling are included in Chapter 6 of the TSP and provide the context for needed bicycle improvements. Figure 6-2 of the TSP illustrates the Bicycle Master Plan, and Table 6-3 contains the Bicycle Action Plan.

B. Bicycle Facility Requirements

1. Requirements

Bicycle facilities shall be provided in accordance with this chapter, Chapter 19.600, the TSP, and the Milwaukie Downtown and Riverfront Plan: Public Area Requirements. Requirements include, but are not limited to, parking, signage, pavement markings, intersection treatments, traffic calming, and traffic diversion.

2. Timing of Construction

To assure continuity and safety, required bicycle facilities shall generally be constructed at the time of development. If not practical to sign, stripe, or construct bicycle facilities at the time of development due to the absence of adjacent facilities,

the development shall provide the paved street width necessary to accommodate the required bicycle facilities.

3. Design Standards

Bicycle facilities shall be designed and improved in accordance with the requirements of this chapter and the Public Works Standards. Bicycle parking shall be designed and improved in accordance with Chapter 19.600 and the Milwaukie Downtown and Riverfront Plan: Public Area Requirements.

No bicycle facilities adjacent to this site are identified in the TSP or are proposed as part of this development.

19.708.5 Pedestrian/Bicycle Path Requirements and Standards

A. General Provisions

Pedestrian/bicycle paths are intended to provide safe and convenient connections within and from new residential subdivisions, multifamily developments, planned developments, shopping centers, and commercial districts to adjacent and nearby residential areas, transit stops, and neighborhood activity centers.

Pedestrian/bicycle paths may be in addition to, or in lieu of, a public street. Paths that are in addition to a public street shall generally run parallel to that street. These types of paths are not subject to the provisions of this subsection and shall be designed in accordance with the Public Works Standards or as specified by the Engineering Director. Paths that are in lieu of a public street shall be considered in areas only where no other public street connection options are feasible. These types of paths are subject to the provisions of this subsection.

A pedestrian/ bicycle path is intended to provide connectivity between all units and the existing public right of way on SE 19th. This will not be a public improvement and is not required by this section of the Code.

B. Pedestrian/Bicycle Path Requirements

In addition to sidewalks on public streets, other available pedestrian routes, as used in this subsection, include walkways within shopping centers, planned developments, community service use developments, and commercial and industrial districts. Routes may cross parking lots on adjoining properties if the route is paved, unobstructed, and open to the public for pedestrian use.

Pedestrian/bicycle paths shall be required in the following situations.

1. In residential and mixed-use districts, a pedestrian/bicycle path shall be required at least every 300 ft when a street connection is not feasible.
2. In residential and industrial districts where addition of a path would reduce walking distance, via a sidewalk or other available pedestrian route, by at least 400 ft and by at least 50% to an existing transit stop, planned transit route, school, shopping center, or park.

3. In commercial districts and community service use developments where addition of a path would reduce walking distance, via a sidewalk or other available pedestrian route, by at least 200 ft and by at least 50% to an existing transit stop, planned transit route, school, shopping center, or park.

4. In all districts where addition of a path would provide a midblock connection between blocks that exceed 800 ft or would link the end of a turnaround with a nearby street or activity center.

The proposed pedestrian/ bike path on the site is not a required Public Work project based on the criterion above.

C. Design Standards

Pedestrian/bicycle paths shall be designed and improved in accordance with the requirements of this chapter and the Public Works Standards. Paths shall be located to provide a reasonably direct connection between likely pedestrian and bicyclist destinations. A path shall have a minimum right-of-way width of 15 ft and a minimum improved surface of 10 ft. If a path also provides secondary fire access or a public utility corridor, it shall have a minimum right-of-way width of 20 ft and a minimum improved surface of 15 ft. Additional standards relating to entry points, maximum length, visibility, and path lighting are provided in the Public Works Standards.

D. Ownership and Maintenance

To ensure ongoing access to and maintenance of pedestrian/bicycle paths, the Engineering Director will require one or more of the following:

1. Dedication of the path to the public and acceptance of the path by the City as public right-of-way prior to final development approval.
2. Creation of a public access easement over the path prior to final development approval.
3. Incorporation of the path into recorded easements or tract(s) of common ownership that specifically requires existing property owners and future property owners who are subject to such easements or own such tracts to provide for the ownership, liability, and maintenance of the path into perpetuity. This shall occur prior to final development approval.

The proposed pedestrian/ bicycle path within the Project Site is not intended to be a public improvement. No dedication or easement is proposed..

19.708.6 Transit Requirements and Standards

A. General Provisions

1. Transit facilities include bus stops, shelters, and related facilities. Required transit facility improvements may include the dedication of land or the provision of a public easement.

2. Goals, objectives, and policies relating to transit are included in Chapter 7 of the TSP. Figure 7-3 of the TSP illustrates the Transit Master Plan, and Table 7-2 contains the Transit Action Plan.

B. Transit Facility Requirements

1. Requirements

Factors that determine the level of transit facility requirements include, but are not limited to, street classification, existing and planned level of transit service on adjacent streets, block length, proximity of major pedestrian destinations, existing and projected ridership, and transit needs of the development. Required improvements may include provision of an easement or dedication of land for transit facilities, benches, shelters, bus turnouts, curb extensions, median refuges for pedestrian crossings, public telephones, or pedestrian lighting. The required improvements shall reflect a reasonable and proportionate share of the potential impacts of the proposed development pursuant to Section 19.705.

2. Location of Facilities

Transit facilities shall be located at controlled street intersections, wherever possible. Where a bus stop has already been established within 500 ft of a proposed development, a new bus stop shall only be provided if recommended by TriMet and required by the Engineering Director. Otherwise, the development shall upgrade the existing stop. Upgrades may include, but are not limited to, the installation of benches, shelters, and landscaping.

3. Design Standards

Transit facilities shall be designed and improved in accordance with current TriMet standards, the requirements of this chapter, and the Public Works Standards.

4. TriMet Notice and Coordination

The City shall provide notice of all proposed developments to TriMet pursuant to Section 19.707. TriMet may recommend the construction of transit-related facilities at the time of development to support transit use. The City shall make the final determination regarding transit-related facility requirements.

Criteria of this Section do not apply. Project does not have a requirement for transit facilities.

19.709 PUBLIC UTILITY REQUIREMENTS

19.709.1 Review Process

The Engineering Director shall review all proposed development subject to Chapter 19.700 per Section 19.702 in order to: (1) evaluate the adequacy of existing public utilities to serve the proposed development, and (2) determine whether new public utilities or an expansion of existing public utilities is warranted to ensure compliance with the City's public utility requirements and standards.

A. Permit Review

The Engineering Director shall make every effort to review all development permit applications for compliance with the City's public utility requirements and standards within 10 working days of application submittal. Upon completion of this review, the Engineering Director shall either approve the application, request additional information, or impose conditions on the application to ensure compliance with this chapter.

B. Review Standards

Review standards for public utilities shall be those standards currently in effect, or as modified, and identified in such public documents as Milwaukie's Comprehensive Plan, Wastewater Master Plan, Water Master Plan, Stormwater Master Plan, Transportation System Plan, and Public Works Standards.

19.709.2 Public Utility Improvements

Public utility improvements shall be required for proposed development that would have a detrimental effect on existing public utilities, cause capacity problems for existing public utilities, or fail to meet standards in the Public Works Standards. Development shall be required to complete or otherwise provide for the completion of the required improvements.

A. The Engineering Director shall determine which, if any, utility improvements are required. The Engineering Director's determination requiring utility improvements shall be based upon an analysis that shows the proposed development will result in one or more of the following situations:

1. Exceeds the design capacity of the utility.
2. Exceeds Public Works Standards or other generally accepted standards.
3. Creates a potential safety hazard.
4. Creates an ongoing maintenance problem.

The proposed development will require extension of existing public utilities to serve the new detached dwellings. Additional proportional improvements to the existing public infrastructure has not been specifically identified at this time, but may be required if any of the above criteria are applicable.

B. The Engineering Director may approve one of the following to ensure completion of required utility improvements.

1. Formation of a reimbursement district in accordance with Chapter 13.30 for off-site public facility improvements fronting other properties.
2. Formation of a local improvement district in accordance with Chapter 3.08 for off-site public facility improvements fronting other properties.

Due to the relatively small scale of the proposed development it is not anticipated that a reimbursement district of local improvement district would be reasonable.

19.709.3 Design Standards

Public utility improvements shall be designed and improved in accordance with the requirements of this chapter, the Public Works Standards, and improvement standards and specifications identified by the City during the development review process. The applicant shall provide engineered utility plans to the Engineering Director for review and approval prior to construction to demonstrate compliance with all City standards and requirements.

Final engineered utility plans will be submitted and approved by the City prior to construction. Development review requirements for this application were determined by the Engineering Director to be limited to preliminary grading plan and stormwater report.

19.709.4 Oversizing

The Engineering Director may require utility oversizing in anticipation of additional system demand. If oversizing is required, the Engineering Director may authorize a reimbursement district or a system development charge (SDC) credit in accordance with Chapter 13.28.

Oversizing of utilities is not anticipated due to the low likelihood of development of adjoining properties. If determined necessary by the Engineering Director, reimbursement will be sought by the Owner.

19.709.5 Monitoring

The Engineering Director shall monitor the progress of all public utility improvements by the applicant to ensure project completion and compliance with all City permitting requirements and standards. Utility improvements are subject to the requirements of Chapter 12.08. Follow-up action, such as facility inspection, bond release, and enforcement, shall be considered a part of the monitoring process.

The Owner agrees to properly permit and have construction of all public utility improvements be monitored by the City.

19.911 VARIANCES

19.911.1 Purpose

Variations provide relief from specific code provisions that have the unintended effect of preventing reasonable development or imposing undue hardship. Variations are intended to provide some flexibility while ensuring that the intent of each development standard is met. Variations may be granted for the purpose of fostering reinvestment in existing buildings, allowing for creative infill development solutions, avoiding environmental impacts, and/or precluding an economic taking of property. Variations shall not be granted that would be detrimental to public health, safety, or welfare.

Three variations are being sought in conjunction with this proposed land use to allow for an economical viable, creative infill development on this highly constrained site.

The numbers in the following responses correspond to each of the variations being sought:

- 1. A variance is being sought to reduced the side yard setback from 25' to 20' on the south side of the property.**
- 2. A variance is being sought to allow a garage door width exceeding 50% of the front elevation.**
- 3. A variance is being sought to allow for 3 story buildings rather than the 2 ½ stories permitted.**

19.911.2 Applicability

A. Eligible Variations

Except for situations described in Subsection 19.911.2.B, a variance may be requested to any standard or regulation in Titles 17 or 19 of the Milwaukie Municipal Code, or any other portion of the Milwaukie Municipal Code that constitutes a land use regulation per ORS 197.015.

B. Ineligible Variations

A variance may not be requested for the following purposes:

1. To eliminate restrictions on uses or development that contain the word "prohibited."
2. To change a required review type.
3. To change or omit the steps of a procedure.
4. To change a definition.
5. To increase, or have the same effect as increasing, the maximum permitted density for a residential zone.
6. To justify or allow a Building Code violation.
7. To allow a use that is not allowed outright by the base zone. Requests of this nature may be allowed through the use exception provisions in Subsection 19.911.5, nonconforming use replacement provisions in Subsection 19.804.1.B.2, conditional

use provisions in Section 19.905, or community service use provisions in Section 19.904.

None of the three variances being requested are ineligible variances as defined above.

C. Exceptions

A variance application is not required where other sections of the municipal code specifically provide for exceptions, adjustments, or modifications to standards either “by right” or as part of a specific land use application review process.

The requested variances are not specifically allowed by other sections of the municipal code.

19.911.3 Review Process

A. General Provisions

1. Variance applications shall be evaluated through either a Type II or III review, depending on the nature and scope of the variance request and the discretion involved in the decision-making process.

Variances #2 and #3 require a Type III review. Variances #1 could be reviewed through a Type II process. Refer to Item A.3. below.

2. Variance applications may be combined with, and reviewed concurrently with, other land use applications.

Review of the requested variances 1-3 are being sought concurrently with the approval of this Type III Design Review application.

3. One variance application may include up to three variance requests. Each variance request must be addressed separately in the application. If all of the variance requests are Type II, the application will be processed through a Type II review. If one or more of the variance requests is Type III, the application will be processed through a Type III review. Additional variance requests must be made on a separate variance application.

Two of the three requested variances require a Type III review, so review of all three variances is requested under the Type III process.

B. Type II Variances

Type II variances allow for limited variations to numerical standards. The following types of variance requests shall be evaluated through a Type II review per Section 19.1005:

1. A variance of up to 40% to a side yard width standard.

Variance #1 requests a 25% reduction in the side yard width standard.

2. A variance of up to 25% to a front, rear, or street side yard width standard. A front yard width may not be reduced to less than 15 ft through a Type II review.
3. A variance of up to 10% to lot coverage or minimum vegetation standards.
4. A variance of up to 10% to lot width or depth standards.
5. A variance of up to 10% to a lot frontage standard.

6. A variance to compliance with Subsection 19.505.1.C.4 Detailed Design, or with Subsection 19.901.1.E.4.c.(1) in cases where a unique and creative housing design merits flexibility from the requirements of that subsection.
7. A variance to compliance with Subsection 19.505.7.C Building Design Standards in cases where a unique design merits flexibility from the requirements of that subsection.
8. A variance to fence height to allow up to a maximum of 6 ft for front yard fences and 8 ft for side yard, street side yard, and rear yard fences. Fences shall meet clear vision standards provided in Chapter 12.24.

C. Type III Variances

Type III variances allow for larger or more complex variations to standards that require additional discretion and warrant a public hearing consistent with the Type III review process. Any variance request that is not specifically listed as a Type II variance per Subsection 19.911.3.B shall be evaluated through a Type III review per Section 19.1006.

Approval of requested variances #2 and #3 are not specifically allowed as Type II decisions, so approval is being sought through a public hearing process.

19.911.4 Approval Criteria

A. Type II Variances

An application for a Type II variance shall be approved when all of the following criteria have been met:

1. The proposed variance, or cumulative effect of multiple variances, will not be detrimental to surrounding properties, natural resource areas, or public health, safety, or welfare.
2. The proposed variance will not interfere with planned future improvements to any public transportation facility or utility identified in an officially adopted plan such as the Transportation System Plan or Water Master Plan.
3. Where site improvements already exist, the proposed variance will sustain the integrity of, or enhance, an existing building or site design.
4. Impacts from the proposed variance will be mitigated to the extent practicable.

B. Type III Variances

An application for a Type III variance shall be approved when all of the criteria in either Subsection 19.911.4.B.1 or 2 have been met. An applicant may choose which set of criteria to meet based upon the nature of the variance request, the nature of the development proposal, and the existing site conditions.

1. Discretionary Relief Criteria

- a. The applicant's alternatives analysis provides, at a minimum, an analysis of the impacts and benefits of the variance proposal as compared to the baseline code requirements.

Variance #1: The proposed 5' variance to the side yard setback requirements of Table 19.301.4 is proposed to allow for a logical driveway placement and to allow for a reasonable

building footprint below the existing home on the south side of the site. The 20' proposed setback will also allow the proposed new home to align with the existing home which is set back 20' from south property line. The 20' buffer along with the adjacent unimproved 40' wide right of way provides a 60' buffer to the adjacent property.

Variance #2: A variance to the maximum 50% frontage width for garage doors per MMC 19.505.C.2 is being sought. This is proposed as a way to provide traditional 2 car garages rather than tandem type garages for the narrow detached homes designed for this site.

Variance #3: A variance to the maximum 2 ½ story building height required by MMC 19.501.3 is proposed to allow for a full three story home. This is proposed to allow for narrower footprints that will allow for a greater overall open space on the site and due to the fact that the “lower level” of these homes is not habitable space being within the flood plain. The lower level can only be utilized as a garage or unfinished storage area due to FEMA and building code requirements.

b. The proposed variance is determined by the Planning Commission to be both reasonable and appropriate, and it meets one or more of the following criteria:

(1) The proposed variance avoids or minimizes impacts to surrounding properties.

Variance #1: The proposed 20' setback will have no impact on the surrounding properties due to the unimproved right of way and will align with the existing home to be retained and remodeled on the south side of the property.

Variance #2: The detached homes with garage widths exceeding 50% are not visible from the public right of way; being located on a private drive. The proposed garage doors will have a wood stained appearance and glazing as opposed to a typical white painted steel door found in most sub-division homes.

Variance #3: The buildings proposed comply with the maximum 35' height limit, but are 3 stories rather than 2 1/2 in order to gain usable living area within the narrow building envelopes proposed. Since the proposed lower floor of these buildings is located within the flood plain and about 20' below 19th St they will have less impact on views than two story homes constructed along 19th St.

(2) The proposed variance has desirable public benefits.

Variance #1: Preserving the unimproved 40' wide right of way along with proposed 20' setback will retain the existing open space at the adjacent park on the south side of the property. Utilizing the unimproved right of way for access to the development would have allowed additional density along 19th St, but would have decreased the open space between the development and the public park land to the south.

Variance #2: Adequate parking is a concern for this neighborhood with the adjacent park. Providing side by side parking rather than stacked parking within the garages will make them more likely to be utilized by residents. Providing sufficient, usable parking for this development will benefit the neighborhood.

Variance #3: Allowing construction of 3 story homes rather than 2 ½ will allow more efficient development to provide necessary housing on this challenging infill site.

- (3) The proposed variance responds to the existing built or natural environment in a creative and sensitive manner.

Variance #1: The reduced side yard setback will be sufficient to provide a buffer to the existing open space to the south while retaining the additional open space allowed by not utilizing the existing unimproved right of way for site access.

Variance #2: Constructing narrow homes with sufficient, usable parking will help to minimize the overall impervious area of the site, preserve the historic development pattern with detached single family homes and allow view corridors between homes to the slough.

Variance #3: Allowing full 3 story building complying with the maximum 35' building height as proposed will help to minimize impervious area on the site while constructing detached single family homes to achieve densities within the range allowed by MMC without constructing attached housing.

- c. Impacts from the proposed variance will be mitigated to the extent practicable.

Variance #1: No mitigation is proposed for the reduced side yard setback since the 60' open space to the adjacent park property is greater than the 25' required per Code.

Variance #2: The proposed garage doors will have a wood stained appearance with glass panes. Rather than recessing "plain" overhead doors, these doors will be treated as a design feature consistent with the Pacific Northwest Modern architectural style.

Variance #3: The proposed 3 story buildings are narrow allowing for more views to and from the slough and river than wider 2 ½ story structures or a single attached building would allow.

2. Economic Hardship Criteria

- a. Due to unusual site characteristics and/or other physical conditions on or near the site, the variance is necessary to allow reasonable economic use of the property comparable with other properties in the same area and zoning district.
- b. The proposed variance is the minimum variance necessary to allow for reasonable economic use of the property.

- c. Impacts from the proposed variance will be mitigated to the extent practicable.

19.911.5 Use Exceptions

A. Applicability

A use exception is a type of variance intended to allow uses that are not allowed outright or conditionally by a property's base zone, overlay zones, or special areas. Use exceptions shall not be granted to allow uses that are specifically prohibited by a property's base zone, overlay zones, or special areas.

B. Review Process

A use exception shall be evaluated through a Type III review per Section 19.1006.

C. Approval Criteria

Economic hardship shall not be a primary basis for allowance of a use exception nor shall circumstances of which the applicant had prior knowledge be considered upon application. The Planning Commission may authorize exceptions to uses established by Title 19 upon a determination that all of the following criteria have been met:

1. Exceptional circumstances exist on or near the property over which the property owner has no control.
2. None of the allowed or conditionally allowed uses for which the property is zoned are practicable.
3. The proposed use will not be detrimental to surrounding properties, natural resource areas, or public health, safety, or welfare.
4. Impacts from the proposed use will be mitigated to the extent practicable.

None of the proposed variances requests a use that is not allowed outright. Criterion do not apply.

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 specified in Figure 19.304-4 and do not elect to use the height bonuses in Subsection 19.304.5.B.3.

C. Review Process

The building height variance shall be subject to Type III review and approval by the Design and Landmarks Committee and the Planning Commission, in accordance with Chapter 19.907 and Section 19.1011. The building height variance shall be consolidated with downtown design review.

1. Because the building height variance provides substantial flexibility and discretion, additional time will be required for public input and technical evaluation of the proposal. To use this option, the applicant shall sign a waiver of the 120-day decision requirement.
2. The applicant may request design advice from the Design and Landmarks Committee prior to submitting an application. Design advice requests provide the opportunity to assess approval potential prior to committing excessive time or money to detailed design plans.
3. Design advice requests may not be made for a specific project or site with an active land use review application.
4. A special application fee may be required to use this Type III option to allow the City to contract with a registered architect to assist in the review of the height variance application.

D. Approval Criteria

The approval authority may approve, approve with conditions, or deny the building height variance based on the following approval criteria:

1. Substantial consistency with the Downtown Design Guidelines.
2. The proposed height variance will result in a project that is exceptional in the quality of detailing, appearance and materials or creates a positive unique relationship to other nearby structures, views or open space.
3. The proposed height variance preserves important views to the Willamette River, limits shadows on public open spaces and ensures step downs and transitions to neighborhoods at the edge of the Downtown Mixed Use Zone.
4. The proposed height variance will result in a project that provides public benefits and/or amenities beyond those required by the base zone standards and that will increase downtown vibrancy and/or help meet sustainability goals.

The Project Site is not within the Downtown Mixed Use Zone. Criterion do not apply.

19.911.7 Building Height Variance in the General Mixed Use Zone

A. Intent

To provide a discretionary option for variances to maximum building heights in the General 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 specified in Subsection 19.303.4.B.2.b and elect to use both of the available height bonuses of Subsection 19.303.4.B.2 for a total building height of 5 stories.

C. Review Process

The building height variance shall be subject to Type III review and approval by the Planning Commission, in accordance with Section 19.1011.

1. Because the building height variance provides substantial flexibility and discretion, additional time will be required for public input and technical evaluation of the proposal. To use this option, the applicant shall sign a waiver of the 120-day decision requirement.
2. The applicant may request design advice from the Design and Landmarks Committee prior to submitting an application. Design advice requests provide the opportunity to assess approval potential prior to committing excessive time or money to detailed design plans.
3. Design advice requests may not be made for a specific project or site with an active land use review application.
4. A special application fee may be required to use this Type III option to allow the City to contract with a registered architect to assist in the review of the height variance application.

D. Approval Criteria

The approval authority may approve, approve with conditions, or deny the building height variance based on the following approval criteria:

1. The proposed project avoids or minimizes impacts to surrounding properties. Any impacts from the proposed project will be mitigated to the extent practicable. The applicant's alternatives analysis shall provide, at a minimum, an analysis of the impacts and benefits of the variance proposal as compared to the baseline code requirements.
2. The proposed project is creative and is exceptional in the quality of detailing, appearance, and materials or creates a positive unique relationship to other nearby structures, views, or open space.
3. The proposal will result in a project that provides public benefits and/or amenities beyond those required by the base zone standards and that will increase vibrancy and/or help meet sustainability goals.
4. The proposed project ensures adequate transitions to adjacent neighborhoods. (Ord. 2140 § 2, 2017; Ord. 2110 § 2 (Exh. G), 2015; Ord. 2106 § 2 (Exh. F), 2015; Ord. 2051 § 2, 2012; Ord. 2036 § 3, 2011; Ord. 2025 § 2, 2011)

The Project Site is not within the General Mixed Use Zone. Criterion do not apply.

PRE-APPLICATION CONFERENCE REPORT

This report is provided as a follow-up to a meeting that was held on 2/22/2018 at 10:00a.m.

Applicant Name: Matt Gillis
Company: Gillis Properties LLC
Applicant 'Role': Owner
Address Line 1: 11650 SE 67th Ave
Address Line 2:
City, State Zip: Tigard OR 97223
Project Name: 19th Ave Cluster Development
Description: Create a 12-house cluster development with private roads from two residential lots.
ProjectAddress: 11205 & 12225 SE 19th Ave
Zone: Residential R-5
Occupancy Group:
ConstructionType:
Use: Moderate Density (MD)
Occupant Load:
AppsPresent: John McConnaughey, Todd Iselin, Matthew Gillis, Lane Lowry
Staff Attendance: Denny Egner, Brett Kelper, Alex Roller, Matt Amos (CFD1)

BUILDING ISSUES

ADA:

Structural: If homes are self contained, this will be considered single family and needs to adhere to the Oregon Residential Specialty Code. If the units end up not containing their own kitchens, and the layout has a common kitchen, then this is considered Commercial and needs to adhere to the Oregon Structural Specialty Code.

Mechanical:

Plumbing:

Plumb Site Utilities:

Electrical:

Notes:

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: May be required depending on final configuration.

Fire Alarms:

Fire Hydrants: Water Supply

- 1) Fire Hydrants, One and Two-Family Dwellings & Accessory Structures: Where a portion of a structure is more than 600 feet from a hydrant on a fire apparatus access road, as measured in an approved route around the exterior of the structure(s), additional fire hydrants and mains shall be provided.
- 2) Prior to the start of combustible construction required fire hydrants shall be operational and accessible.
- 3) For one and two family dwellings located in areas with reliable municipal fire fighting water supply the following shall apply:
 - <3,600 square feet (including attached garage)
 - a) 1,000 gpm @ 20 psi with hydrant within 600 feet of furthest portion of new residential construction, (OFC Section B105.2)
 - >3,600 square feet (including attached garage)
 - a) Shall meet fire flow requirements specified in Appendix B of the current Oregon Fire Code, (OFC, Table B105.1)
 - b) Shall meet hydrant coverage as specified in Appendix C of the current Oregon Fire Code, (OFC, Table C105.1)

Turn Arouds:

Addressing:

Fire Protection:

Fire Access: 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) The inside turning radius and outside turning radius for a 20' wide road shall not be less than 28 feet and 48 feet respectively, measured from the same center point.
- 4) Provide an approved turnaround for dead end access roads exceeding 150 feet in length.
- 5) Access streets between 26 feet and less than 32 feet in width must have parking restricted to one side of the street. Access streets less than 26 feet in width must have parking restricted on both sides of the street. No parking restrictions for access roads 32 feet wide or more.
- 6) Developers of private streets less than 32 feet in width must establish a street maintenance agreement that provides for enforcement of parking restrictions.
- 7) Gates across access roads must be pre-approved by the Fire District.

Hazardous Mat.:

Fire Marshal Notes: See attached.

PUBLIC WORKS ISSUES

- Water:** A City of Milwaukie 8-inch water main on SE 19th Avenue provides service to the proposed development. The water System Development Charge (SDC) is based on the size of water meter (s) 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 19th Avenue provides service to the proposed development. There is also an 8-inch main that runs north/south through the middle of the development lot. All building foundations will have to be 7.5 feet from this pipe (pipe centered in 15-foot easement). The city would allow for the realignment of this main, if minimum slope requirements are maintained. Currently, the wastewater System Development Charge (SDC) is comprised of two components. The first component is the City's SDC charge of \$1,100 per 16 plumbing fixture units in accordance with the Uniform Plumbing Code and the second component is the County's SDC for treatment of \$6,295 per equivalent dwelling unit 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:** 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 Public Works Standards.
The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-development, including any existing storm water management facilities serving the development property. Also, the plan shall demonstrate compliance with water quality standards. The City of Milwaukie has adopted the City of Portland 2016 Stormwater Management Manual for design of water quality facilities.
Private stormwater facilities will also require an approved operation and maintenance agreement that must be recorded with the City and County prior to occupancy.
- All new impervious surfaces, including replacement of impervious surface with new impervious surfaces, are subject to the water quality standards. See City of Milwaukie Public Works Standards for design and construction standards and detailed drawings.
- 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 \$863 per unit. The storm SDC will be assessed and collected at the time the building permits are issued.
- Street:** The proposed development fronts the west side of SE 19th Avenue, a neighborhood greenway. The portion of SE 19th Avenue fronting the proposed development has an existing right-of-way width of 40 feet and a paved width of approximately 13 feet with no curbs on either side of the street. The City has adopted greenway standards for this section that would require the reconstruction of 19th Avenue (See Frontage Improvements Requirements).
- The property has existing Right-of-Way encroachments that will need to be removed or brought up to current City standards with the all appropriate permits. The proposed development also fronts the north side of SE Sparrow Street, a local road. The portion of SE Sparrow fronting the proposed development has a right-of-way width of 60 feet and is unimproved.

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. Transportation SDC's will be assessed and collected at the time the build permits are issued.

Frontage:

Chapter 19.700 of the Milwaukie Municipal Code (MMC) applies to partitions, subdivisions, new construction, and modification and/or expansion of existing structures or uses. Transportation Facility Requirements, MMC 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. This would require construction of full street improvements on SE 19th Avenue frontage. Applicant is responsible for constructing 15-foot of asphalt, 6-inch flush mount curbs on both sides of the roadway and 3-foot load bearing gravel shoulders on both sides of the roadway. This roadway design that is unique only to SE 19th Avenue, and the asphalt surface functions as the ADA pedestrian route and requires ADA longitudinal delineation within the roadway structure in addition to specialized signing. It's the ADA component that requires construction of the full roadway instead of a half right-of-way. The remaining portion of the right-of-way along the frontage is flexible for the applicant to propose such items as on street parking, landscaping, bioswales, etc. For additional information see the City's web site for the 19th Avenue and Sparrow Street Greenway design. Approved cross section can be found here: (https://www.milwaukieoregon.gov/sites/default/files/fileattachments/planning/project/1691/final_report_3302016.pdf)

No improvements are required on the Sparrow Street Frontage, this can remain unimproved. If the applicant wishes to utilize this right-of-way as access then the Sparrow Street design identified in the Greenway plan would need to be followed.

Right of Way:

The existing right-of-way on SE 19th Avenue fronting the proposed development is of adequate width and no right-of-way dedication is required, depending on the final frontage improvements proposed.

The existing right-of-way on SE Sparrow Street fronting the proposed development is of adequate width and no right-of-way dedication is required.

Driveways:

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 approach shall be improved to meet the requirements of Milwaukie's Public Works Standards. MMC 12.16.040.B.1 governs the requirement for driveway spacing for driveways (accessways). SE 19th Avenue is a local street, and the minimum access spacing is for a multi-family accessway from a street intersection is 100-feet. In addition, the accessway will be required to be designed to prohibit backing movements out of development onto 19th Avenue.

Erosion Control:

Per Code Section 16.28.020(C), an erosion control permit is 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, any of which results in the disturbance or exposure of soils exceeding five hundred square feet.

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.

The City has approval authority on sites that are less than 5-Acres. If the proposed development

exceeds 5-Acres than the applicant must apply for a permit from DEQ and provide an approved permit prior to building permits.

Traffic Impact Study: MMC 19.704 states the Engineering Director will determine whether a proposed development has impacts on the transportation system by using existing transportation data. If the Engineering Director cannot properly evaluate a proposed development's impacts without a more detailed study, a transportation impact study (TIS) will be required to evaluate the adequacy of the transportation system to serve the proposed development and determine proportionate mitigation of impacts. It is the responsibility of the applicant to provide enough detailed information for the Engineering Director to make a TIS determination. The Engineering Director cannot make a TIS determination based on the information provided. Applicant would need to provide additional information related to the developments anticipated traffic demand to evaluate the effect on the Greenway design or provide a Traffic Impact Study in accordance with MMC 19.700.

PW Notes:

APPLICABILITY OF PRE-APPLICATION REVIEW

The comments provided are intended to address the original application materials submitted unless otherwise specifically called out in the notes. The information contained within these notes may change over time due to changes or additional information presented for the development. This pre-application review is for the following:

A multi-family development that places all new dwelling units on the eastern half of the property. Design has a private parking lot and driveway with access being taken from 19th Avenue.

SYSTEM DEVELOPMENT CHARGES (SDC'S)

There was insufficient information to estimate SDC's with the pre-application submitted. All SDC's are calculated, assessed, and collected at the time of building permit is issued. Any changes in the proposed use may result in a change in the SDC's that are assessed. If the applicant needs an estimate of SDC's then staff can provide the specific information to be submitted by the applicant required to calculate SDC's for a given proposal.

In addition to the SDC's mentioned earlier, there is a Parks & Recreation System Development Charge (SDC) that is triggered when application for a building permit on a new dwelling is received.

Currently, the parks and recreation SDC for each Single-Family Residence is \$3,985.00 and \$3,608.00 for multi-family. 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.

ADDITIONAL REQUIREMENTS

- Engineered plans for public improvements (street, sidewalk, and utility) are to be submitted and approved prior to start of construction. Full-engineered design is required along the frontage of the proposed development.

- The applicant shall pay an inspection fee of 5.5% of the cost of public improvements prior to start of construction.

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

- The applicant shall provide a final approved set of Mylar "As Constructed" drawings to the City of Milwaukie prior to the final inspection.

- The applicant shall provide a 12-month maintenance bond for 100% of the cost of the public improvements prior to the final inspection.

- All fees mentioned are subject to change in accordance with the City of Milwaukie Master Fee

PLANNING ISSUES

Setbacks:

Yard requirements for the Residential R-5 zone are established in Milwaukie Municipal Code (MMC) Subsection 19.301.4. Minimum front and rear yards are 20 ft, interior side yards must be at least 5 ft, and street-side yards must be at least 15 ft (for corner lots).

Yard setbacks for accessory structures are established in MMC Subsection 19.502.2 and depend on the size and height of the proposed structure, varying from 3 ft to 5 ft to the same standards as the base zone (R-5). Accessory structures must be located beyond the front yard of the primary structure, unless they are at least 40 ft from the front lot line.

Landscape:

In the R-5 zone, a minimum of 25% of the site must be landscaped. In addition, at least 40% of the front yard area must be vegetated (in this case measured from the front property line to the front face of the house nearest the front property line). Vegetated areas may be planted in trees, grass, shrubs, or bark dust for planting beds, with no more than 20% of the landscaped area finished in bark dust (as per MMC Subsection 19.504.7). A maximum of 35% of the site may be covered by structures, including decks or patios over 18 in above grade.

Parking:

As per the off-street parking standards of MMC Chapter 19.600, single-family dwellings must provide at least 1 off-street parking space per dwelling unit. As provided in MMC Subsection 19.607.1, required residential off-street parking spaces must be at least 9 ft wide and 18 ft deep. The required spaces cannot be located within a required front or street-side yard and must have a durable and dust-free hard surface (pervious materials or driveway strips are acceptable). Additional parking for guests may be a topic of discussion as part of the conditional use Willamette Greenway application.

Uncovered parking spaces and maneuvering areas cannot exceed 50% of the front yard area and 30% of the required street-side yard area. No more than 3 residential parking spaces are allowed within the required front yard. Parking areas and driveways on the property shall align with the approved driveway approach and shall not be wider than the approach within 5 ft of the right-of-way boundary. Alternately, a gradual widening of the onsite driveway is allowed to the 10-ft point at a ratio of 1:1 (driveway width to distance onto property), starting 2 ft behind the front property line. See the figures provided in MMC 19.607 for more information.

Transportation Review:

The proposed development will trigger the requirements of MMC Chapter 19.700 Public Facility Improvements. Please see the Public Works (Engineering) notes for more information about the requirements of MMC 19.700 and any associated right-of-way dedication and/or street improvements.

Application Procedures:

The applicant is strongly encouraged to schedule a second preapplication conference prior to submittal, to discuss additional details once the development concept has been further refined.

As proposed, the development would not involve land division but would result in a lot or lots developed with multiple dwelling units. If a lot consolidation is desired by the applicant (or required by the Building Official), a Type I Lot Consolidation application would be necessary (current application fee of \$200). This application could be submitted separately or concurrently with the other applications described below.

The land use applications required will depend on the applicant's final proposal but appear to include the following components:

* Willamette Greenway (Type III review)

- * Natural Resource review (Type III review)
- * Variance, if necessary (Type III review)

An application submittal should include the standard Land Use Application Form and Submittal Requirements Checklist, both signed by the property owner or include the owner's authorization for submittal. The fee for Type III review is \$2,000 for each application, with a 25% discount for each application beyond the most expensive one. For example, if three Type-III applications were submitted, the cost would be a total of \$5,000 (\$2,000 for one of the applications at full price, plus \$1,500 each for the two other discounted applications). A \$3,000 deposit is required to cover the City's costs for reviewing the necessary technical report(s) associated with Type III Natural Resource review.

The applicant should submit 5 complete copies of all application materials for the City's initial review. 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 will be required for referral to other departments, the Island Station Neighborhood District Association (NDA), and other relevant parties and agencies. City staff will inform the applicant of the total number of copies needed.

Once the application is deemed complete, a public hearing with the Planning Commission will be scheduled. Public notice will be sent to property owners and current residents within 300 ft of the subject property no later than 20 days prior to the hearing date. Staff will prepare a report with analysis of the proposal and a recommendation for decision that will be made available one week before the hearing. Both staff and the applicant will have the opportunity to make presentations at the hearing, followed by public testimony and then deliberation by the Commission.

Issuance of a decision starts a 15-day appeal period for the applicant and any party who establishes standing. Development permits submitted during the appeal period may be reviewed but will not be approved before the end of the appeal period.

Prior to submitting the application, the applicant is encouraged to present the project at a regular meeting of the Island Station NDA, which occurs at 6:30 p.m. on the third Wednesday of every month at the Milwaukie Grange (12018 SE 21st Ave).

Natural Resource Review: The subject property includes both Water Quality Resource (WQR) and Habitat Conservation Area (HCA) designations, with a significant portion of the site within the 100-year floodplain.

MMC Subsection 19.402.14.C establishes a process for clustering residential development on sites with significant WQR or HCA designations. The procedures allow the maximum developable density to be transferred away from WQR and HCA locations on a site to protect or preserve them. MMC Subsection 19.402.14.C.1 establishes the procedure for calculating density for residential cluster development, which is different than the normal calculation provided in MMC Subsection 19.202.4. Note that MMC 19.202.4 is still applicable for calculating the minimum required density for the site, and the minimum density for the subject property appears to be higher than the maximum allowed through the standard calculation of MMC 19.202.4. In such cases, the minimum density is understood to be the maximum baseline density for the site, which is relevant for confirming that the maximum density allowed by the residential cluster development calculations of MMC 19.402.14.C does not exceed the maximum density otherwise permitted for the underlying residential zoning district. Technically, a variance will be required if the proposed development does not meet the minimum density standard, even if the proposed development is under the maximum density allowed.

MMC Subsection 19.402.14.C.2 establishes development standards for residential cluster development, including an allowance for types of dwelling units that would not ordinarily be permitted

in the underlying R-5 zone, such as townhouses or multifamily apartments. Key standards include the following:

- * Minimum separation of 10 ft between buildings
- * Minimum yard or common open space, at least 25 ft deep as measured from all public streets and from side and rear property lines
- * Conveyance of a common open space comprised of at least 25% of the site
- * Inclusion of at least 50% of the designated natural resources on site in the common open space

MMC Subsection 19.402.14.A.1 allows an adjustment of up to 10% of yard setback standards as part of the residential cluster development review process, but the topography and floodplain challenges of the site may warrant submittal of a Type III variance for additional adjustment of the requirement for a 25-ft-wide open space buffer around the perimeter.

Residential cluster development is subject to discretionary review, with approval criteria provided in MMC Subsection 19.402.14.C.4. Consideration will likely be given to how the proposed development avoids or minimizes impacts to WQR and HCA areas and to how it minimizes alterations to natural features, vegetation, and topography. The application should address the general discretionary review process outlined in MMC Subsection 19.402.12 and should include an impact evaluation and alternatives analysis in a technical report prepared by a qualified professional. The alternatives analysis should present a clear explanation of the rationale behind the alternative selected and demonstrate that no practicable alternatives exist that would avoid or further minimize disturbance to the WQR and HCA. Note that the approval criteria for general discretionary review (provided in MMC Subsection 19.402.12.B) include the principals of avoiding, minimizing, and mitigating for impacts to natural resource areas.

The application materials should include a scaled site plan that shows the location of the WQR on the site using the guidance provided in MMC Table 19.402.15. With respect to the HCA boundaries shown for the subject property, if the applicant wishes to challenge the accuracy of the City's Natural Resource (NR) Administrative Map, MMC Subsection 19.402.15.A.2.b establishes the process for detailed verification of HCAs. The process requires a technical report prepared by a qualified professional and essentially retraces the steps used by Metro to generate the initial proposed boundaries.

The applicant should check with the Building and Engineering Departments for more information related to regulations and requirements for development in the floodplain.

Lot Geography:

The site is comprised of 2 rectilinear lots with frontage on 19th Ave that are bisected by a slough and back up to Elk Rock Island. The southern lot has frontage along the undeveloped right-of-way on Sparrow St to the south, which is effectively part of the adjacent Spring Park.

Planning Notes:

General Note

These notes represent staff's best evaluation of the applicant's proposal(s) in advance of any official submittal of a land use application. They do not represent approval or denial of the proposed action, only an assessment of the issues and likely requirements.

Willamette Greenway overlay

The Willamette Greenway overlay extends over the subject property, so the proposed new development triggers the conditional use review process as per MMC Subsection 19.401.5. The application should address the criteria listed in MMC Subsection 19.401.6. The applicant should discuss how the project would be compatible with the character of the river (scenic, natural, historic, economic, and recreational character), protection of views toward away and from the river, landscaping and aesthetic enhancements between the new development and the river, and public access

to and along the river. In addition, the application should address the criteria for new conditional uses as provided in MMC Subsection 19.905.4.A. Note that the Planning Commission may impose a range of conditions to assure compatibility and minimize or mitigate potential impacts, including but not limited to building height, vehicle access, landscaping, and off-street parking.

Private noncommercial docks are subject to the requirements of MMC Subsection 19.401.9, including any requirements of the Oregon Department of State Lands. Docks are limited to a maximum size of 400 sq ft. Docks, pilings, and walkways shall either be dark natural wood colors or painted dark earthtones (dark brown or green).

Variances

If a variance is requested for the 25-ft yard standard for the residential cluster development or minimum density or any other applicable standard, the applicant should address the approval criteria provided in MMC Subsection 19.911.4. For Type III variances, the application should demonstrate an analysis of the impacts and benefits of the proposed variance versus the baseline code requirements. The applicant should show that the variance request is reasonable and appropriate and that impacts will be sufficiently mitigated.

Single-family Design Standards

Single-family design standards are provided in MMC Subsection 19.505.1 and include requirements on any street-facing façade for articulation, minimum window area, and a main entrance. Additional standards require a minimum number of basic design features. The provisions of MMC Subsection 19.505.2 limit the width and setback location of an attached garage or carport on the street-facing façade.

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

Stephanie Marcinkiewicz

- Inspector/Plans Examiner - 503-786-7613

ENGINEERING DEPARTMENT

Chuck Eaton - Engineering Director - 503-786-7605

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 Egnor - Planning Director - 503-786-7654

David Levitan - Senior Planner - 503-786-7627

Brett Kolver - Associate Planner - 503-786-7657

Vera Kolas - 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: 2/27/2018
Re: Milwaukie Riverfront Cluster 12225 SE 19th. 18-004PA

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) The inside turning radius and outside turning radius for a 20' wide road shall not be less than 28 feet and 48 feet respectively, measured from the same center point.
- 4) Provide an approved turnaround for dead end access roads exceeding 150 feet in length.
- 5) Access streets between 26 feet and less than 32 feet in width must have parking restricted to one side of the street. Access streets less than 26 feet in width must have parking

restricted on both sides of the street. No parking restrictions for access roads 32 feet wide or more.

- 6) Developers of private streets less than 32 feet in width must establish a street maintenance agreement that provides for enforcement of parking restrictions.
- 7) Gates across access roads must be pre-approved by the Fire District.

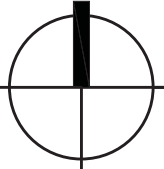
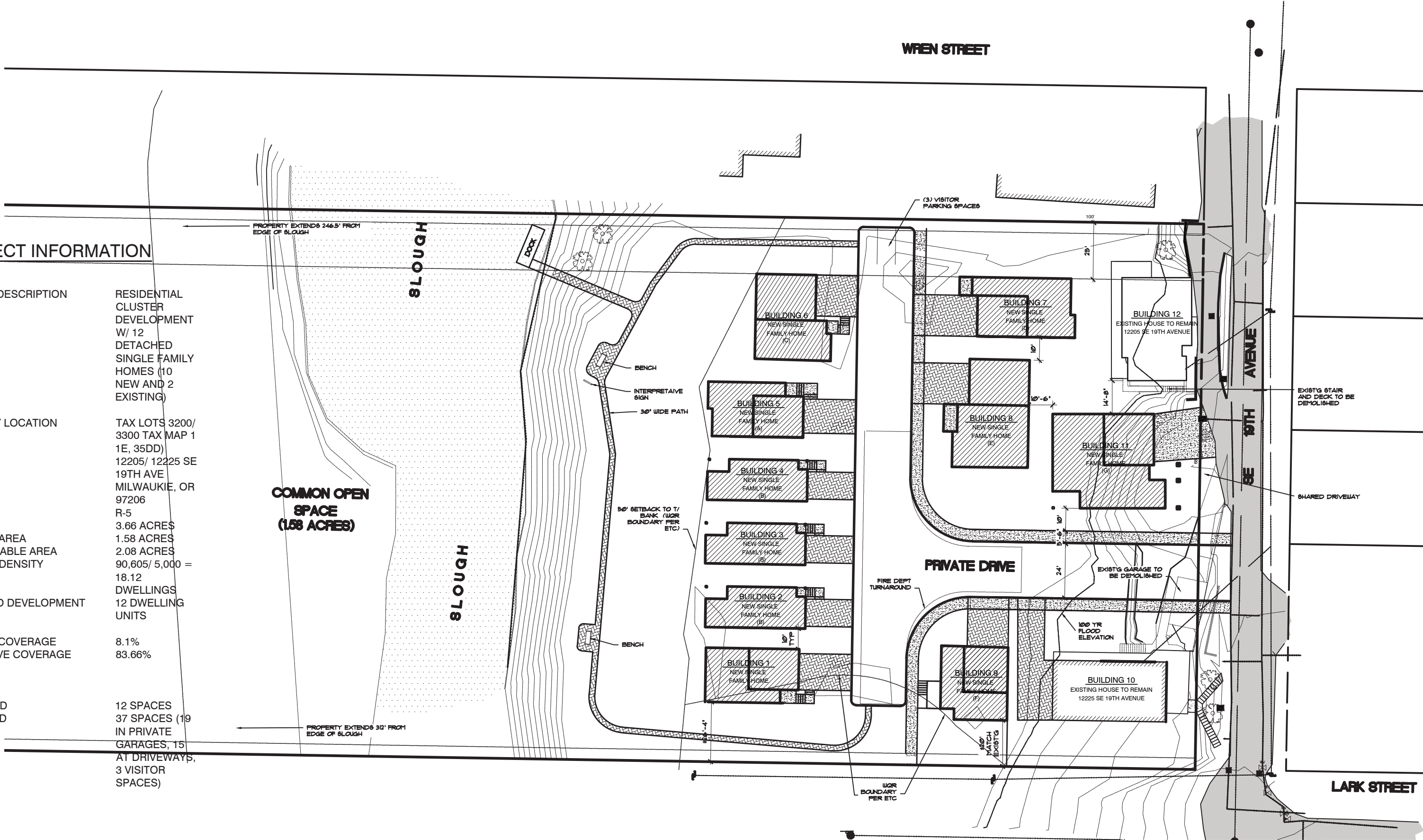
Water Supply

- 1) Fire Hydrants, One and Two-Family Dwellings & Accessory Structures: Where a portion of a structure is more than 600 feet from a hydrant on a fire apparatus access road, as measured in an approved route around the exterior of the structure(s), additional fire hydrants and mains shall be provided.
- 2) Prior to the start of combustible construction required fire hydrants shall be operational and accessible.
- 3) For one and two family dwellings located in areas with reliable municipal fire fighting water supply the following shall apply:
 - <3,600 square feet (including attached garage)
 - a) 1,000 gpm @ 20 psi with hydrant within 600 feet of furthest portion of new residential construction, (OFC Section B105.2)
 - >3,600 square feet (including attached garage)
 - a) Shall meet fire flow requirements specified in Appendix B of the current Oregon Fire Code, (OFC, Table B105.1)
 - b) Shall meet hydrant coverage as specified in Appendix C of the current Oregon Fire Code, (OFC, Table C105.1)

PROJECT INFORMATION

PROJECT DESCRIPTION	RESIDENTIAL CLUSTER DEVELOPMENT W/ 12 DETACHED SINGLE FAMILY HOMES (10 NEW AND 2 EXISTING)
PROPERTY LOCATION	TAX LOTS 3200/ 3300 TAX MAP 1 1E, 35DD)
ADDRESS	12205/ 12225 SE 19TH AVE MILWAUKIE, OR 97206
ZONE	R-5
SITE AREA	3.66 ACRES
COMMON AREA	1.58 ACRES
NET BUILDABLE AREA	2.08 ACRES
MAXIMUM DENSITY	90,605/ 5,000 = 18.12
PROPOSED DEVELOPMENT	DWELLINGS 12 DWELLING UNITS
BUILDING COVERAGE	8.1%
VEGETATIVE COVERAGE	83.66%
PARKING REQUIRED PROVIDED	12 SPACES 37 SPACES (19 IN PRIVATE GARAGES, 15 AT DRIVEWAYS, 3 VISITOR SPACES)

COMMON OPEN SPACE (1.58 ACRES)



PRELIMINARY SITE PLAN

1" = 40'0"

Elk Rock Estates
1738 - Site Plan

ISELIN
ARCHITECTS, P.C.
1307 7th Street - Oregon City, Oregon 97045
503.656.1942 - f. 503.656.0658 - www.iselinarchitects.com

1" = 40'-0"
11/21/2018

A0



STREET ELEVATION

LOOKING WEST

1/16" = 1'-0"



STREET ELEVATION

LOOKING EAST

1/16" = 1'-0"

Elk Rock Estates

1738 - Elevations

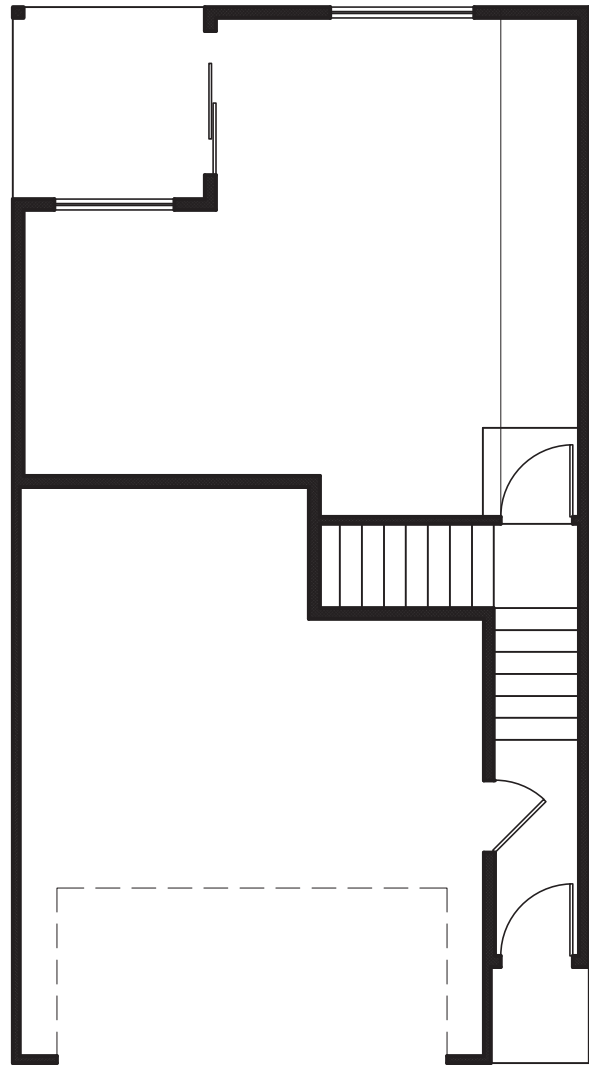
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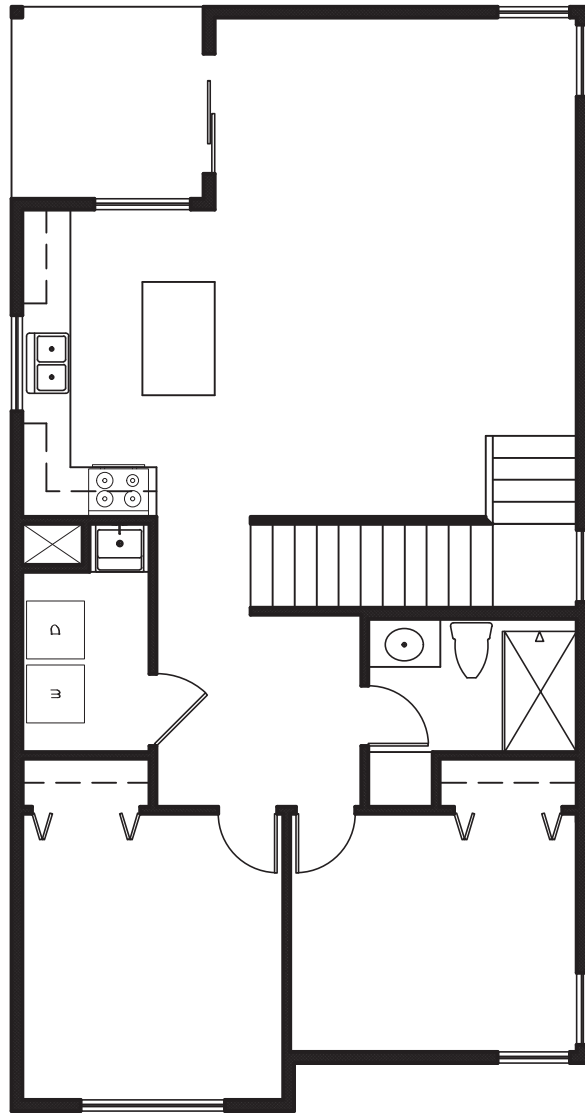
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1/16" = 1'-0"
11/21/2018

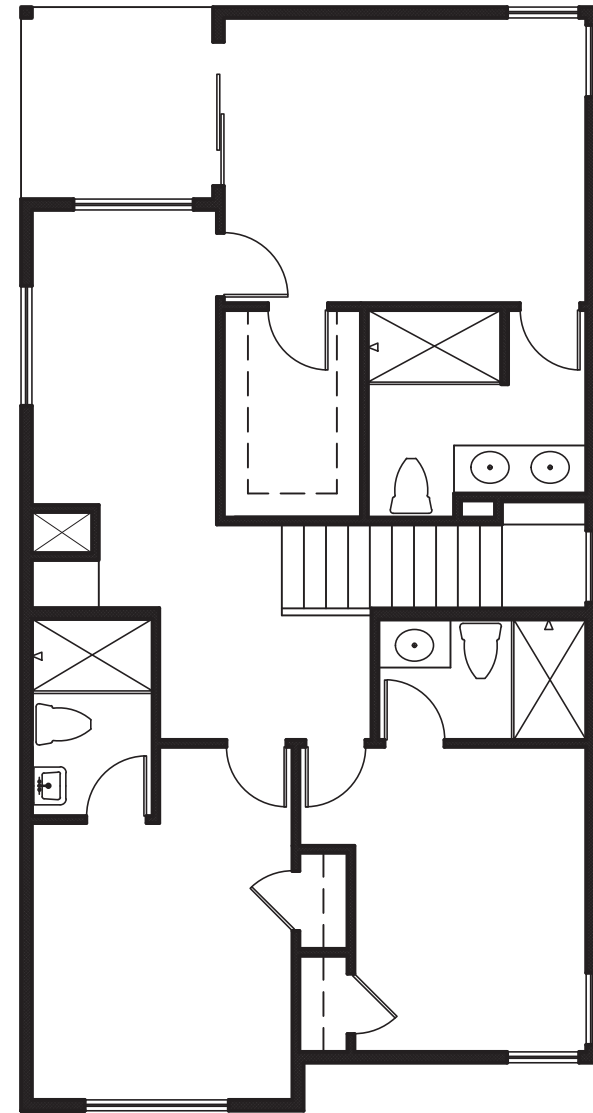
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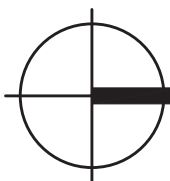
LOWER LEVEL FLOOR PLAN



MAIN LEVEL FLOOR PLAN



UPPER LEVEL FLOOR PLAN



BUILDINGS 1 & 5 - TYPE 'A'

1/8" = 1'-0"

Elk Rock Estates
1738.A - Floor Plans

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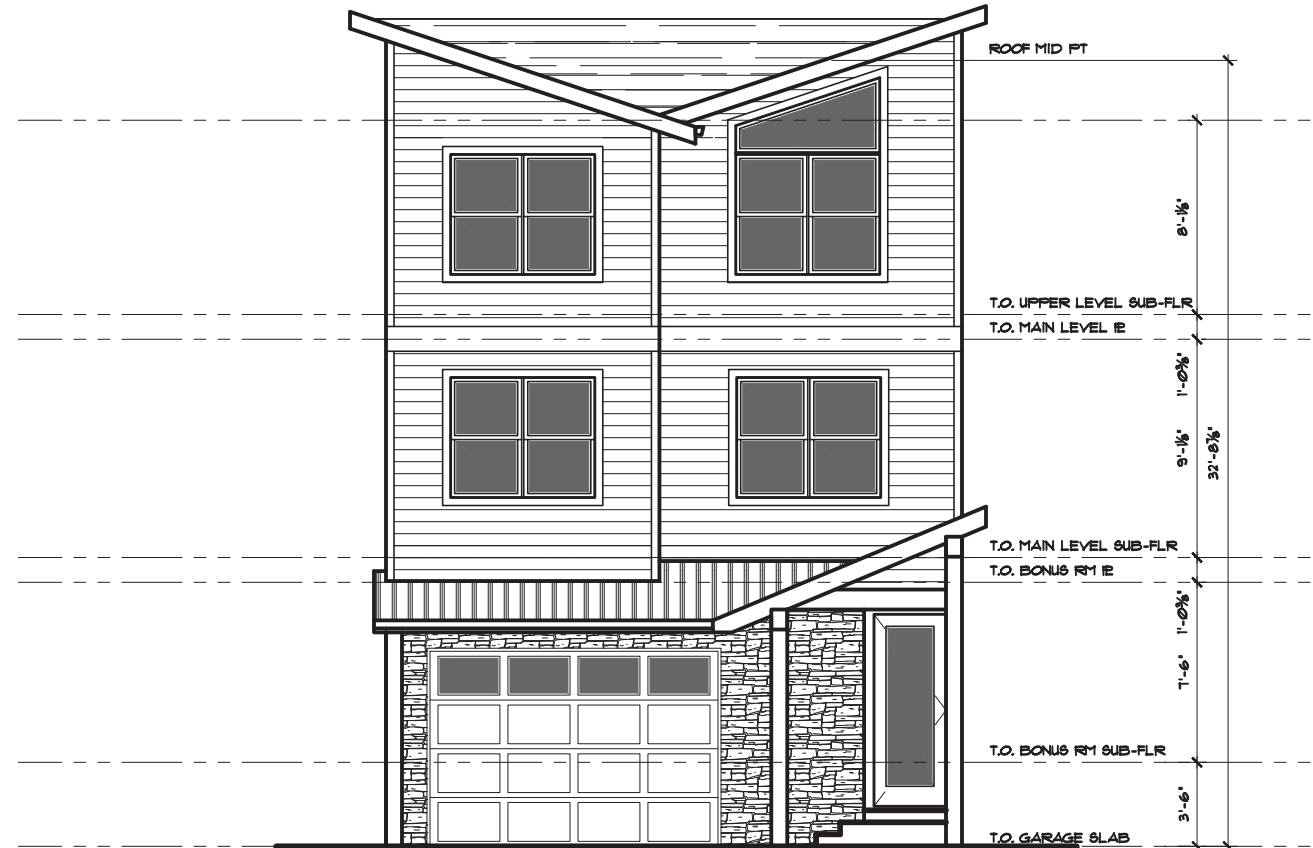
1/8" = 1'-0"
11/21/2018

A2

DETAILED DESIGN FEATURES PROPOSED:

(Minimum of 5 features required)

- a. COVERED PORCH AT LEAST 5 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- b. RECESSED ENTRY AREA AT LEAST 2 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- c. OFFSET ON THE BUILDING FACE AT LEAST 16 In. FROM ONE EXTERIOR WALL SURFACE TO OTHER.
- e. ROOF EAVES WITH MIN. PROJECTION OF 12 Inches.
- f. ROOF LINE OFFSETS OF AT LEAST 2 Ft. FROM TOP OF SURFACE TO TOP OF OTHER SURFACE.
- h. HORIZONTAL LAP SIDING BETWEEN 3 TO 7 In. WIDE. WOOD OR FIBER-CEMENT MATERIAL.
- k. WINDOW TRIM AROUND ALL WINDOWS AT LEAST 3 In. WIDE AND 5/8 In. DEEP.



BUILDINGS 1 & 5 - TYPE 'A'

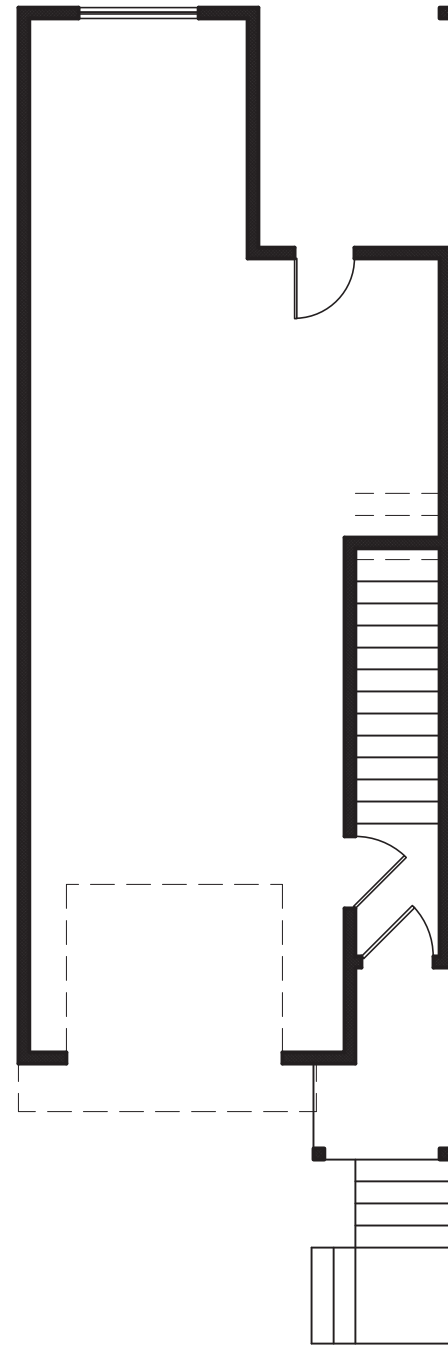
1/8" = 1'-0"

Elk Rock Estates
1738.A - Elevations

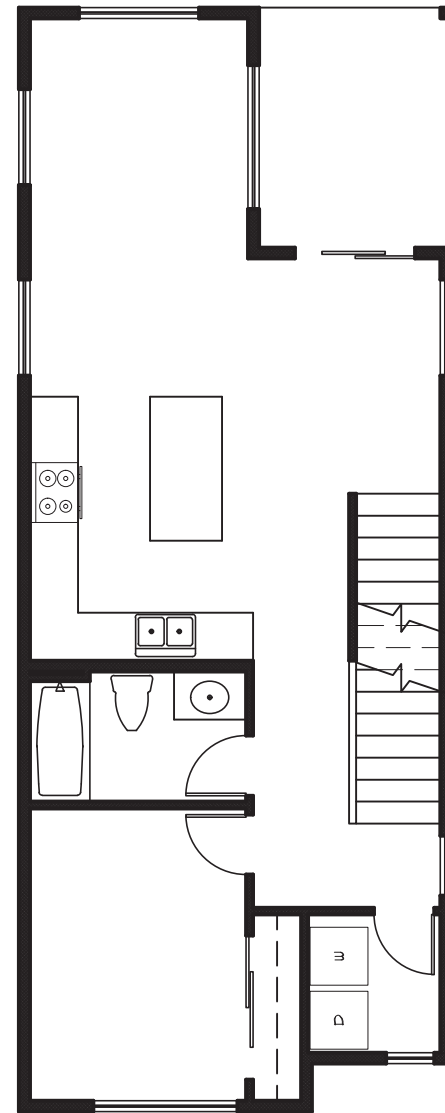
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1/8" = 1'-0"
11/21/2018

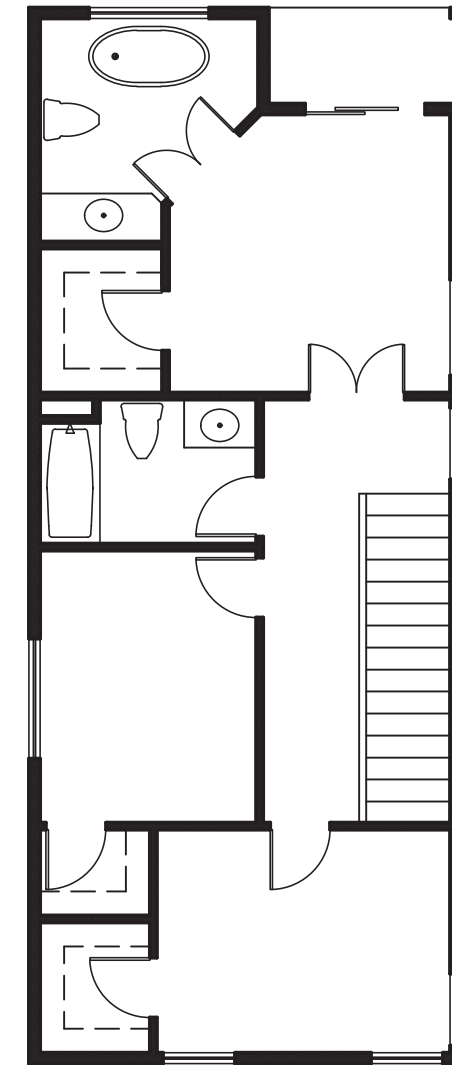
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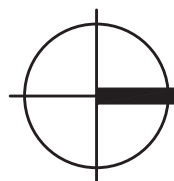
LOWER LEVEL FLOOR PLAN



MAIN LEVEL FLOOR PLAN



UPPER LEVEL FLOOR PLAN



BUILDINGS 2, 3, & 4 - TYPE 'B'

1/8" = 1'-0"

Elk Rock Estates
1738.B - Floor Plans

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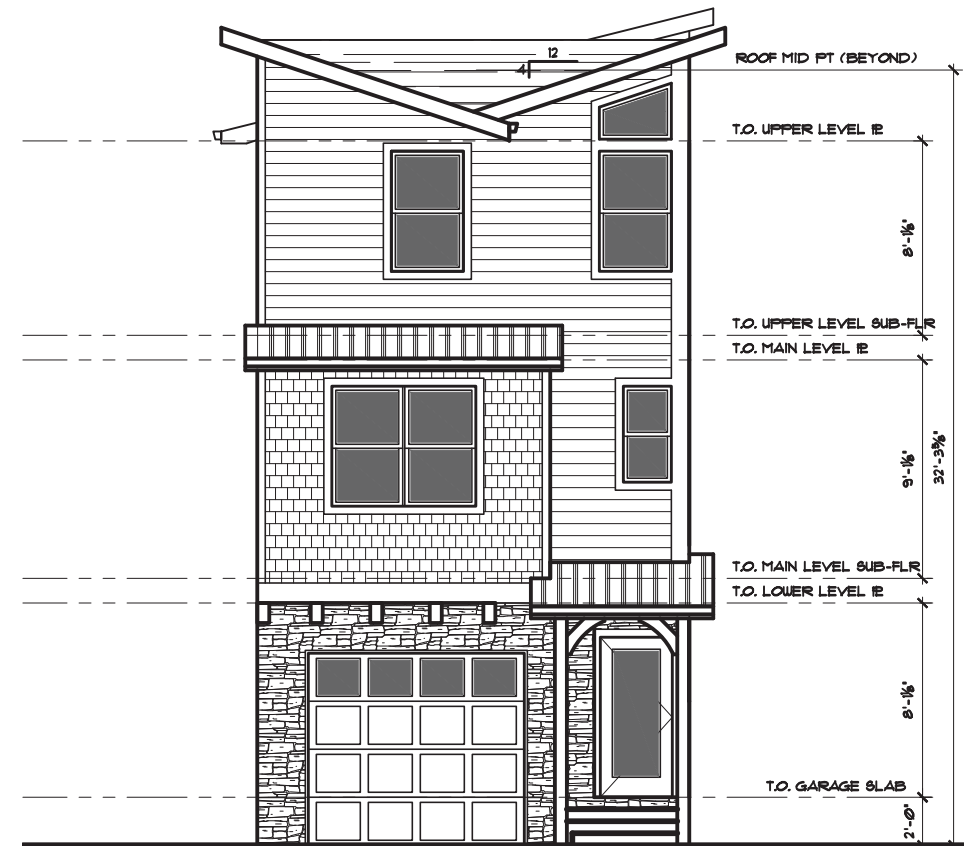
1/8" = 1'-0"
11/21/2018

A4

DETAILED DESIGN FEATURES PROPOSED:

(Minimum of 5 features required)

- a. COVERED PORCH AT LEAST 5 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- b. RECESSED ENTRY AREA AT LEAST 2 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- c. OFFSET ON THE BUILDING FACE AT LEAST 16 In. FROM ONE EXTERIOR WALL SURFACE TO OTHER.
- e. ROOF EAVES WITH MIN. PROJECTION OF 12 Inches.
- h. HORIZONTAL LAP SIDING BETWEEN 3 TO 7 In. WIDE. WOOD OR FIBER-CEMENT MATERIAL.
- k. WINDOW TRIM AROUND ALL WINDOWS AT LEAST 3 In. WIDE AND 5/8 In. DEEP.



BUILDINGS 2, 3, & 4 - TYPE 'B'

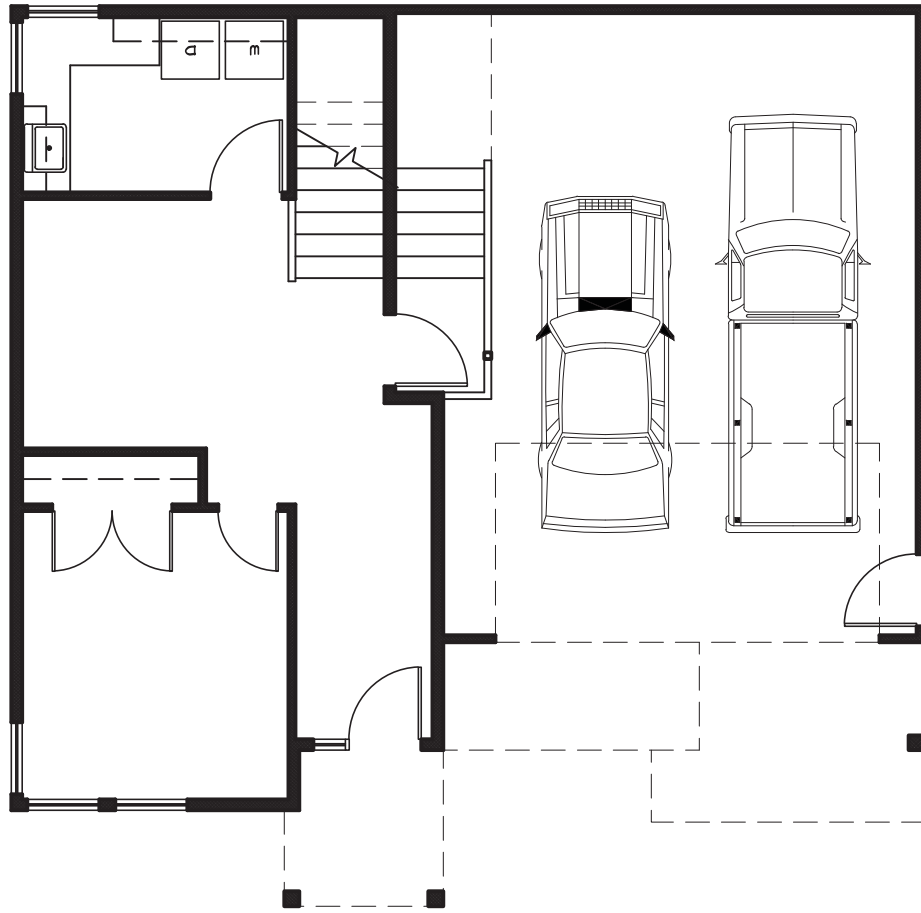
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Elk Rock Estates
1738.B - Elevations

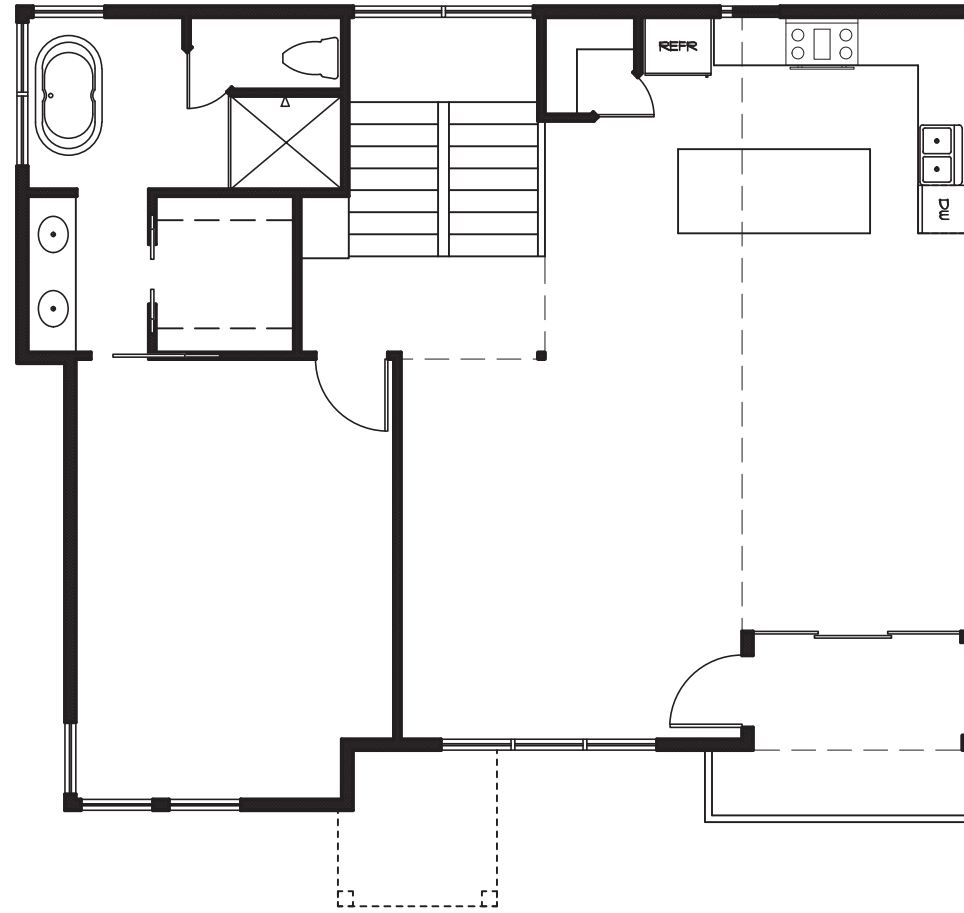
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1/8" = 1'-0"
11/21/2018

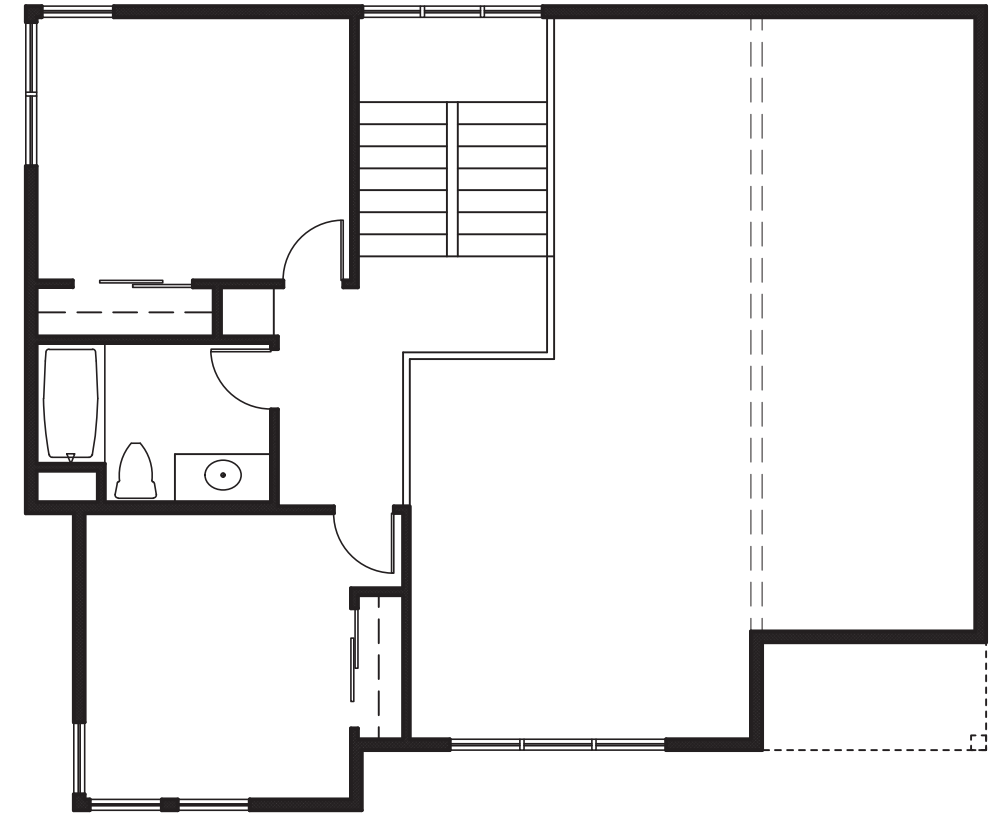
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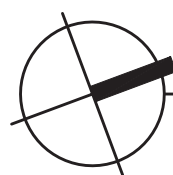
LOWER LEVEL FLOOR PLAN



MAIN LEVEL FLOOR PLAN



UPPER LEVEL FLOOR PLAN



BUILDING 6 - TYPE 'C'

1/8" = 1'-0"

Elk Rock Estates
1738.C - Floor Plans

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1/8" = 1'-0"
11/21/2018

A6

DETAILED DESIGN FEATURES PROPOSED:

(Minimum of 5 features required)

- a. COVERED PORCH AT LEAST 5 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- c. OFFSET ON THE BUILDING FACE AT LEAST 16 In. FROM ONE EXTERIOR WALL SURFACE TO OTHER.
- e. ROOF EAVES WITH MIN. PROJECTION OF 12 Inches.
- f. ROOF LINE OFFSETS OF AT LEAST 2 Ft. FROM TOP OF SURFACE TO TOP OF OTHER SURFACE.
- h. HORIZONTAL LAP SIDING BETWEEN 3 TO 7 In. WIDE. WOOD OR FIBER-CEMENT MATERIAL.
- k. WINDOW TRIM AROUND ALL WINDOWS AT LEAST 3 In. WIDE AND 5/8 In. DEEP.



BUILDING 6 - TYPE 'C'

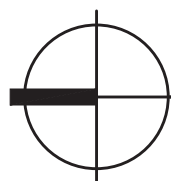
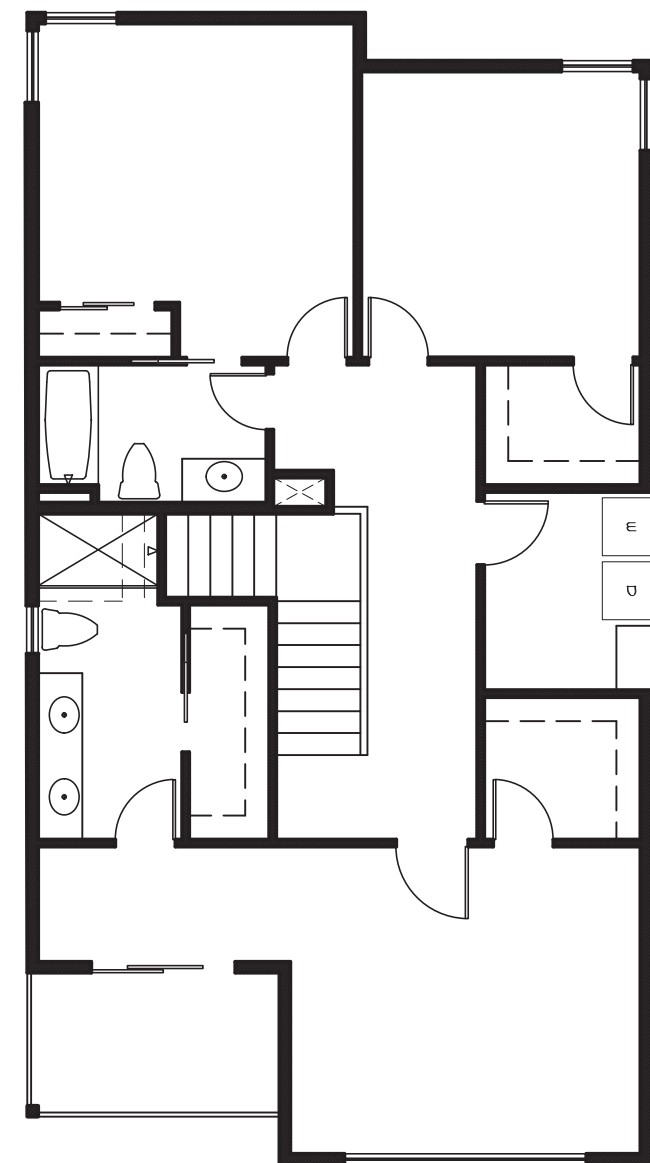
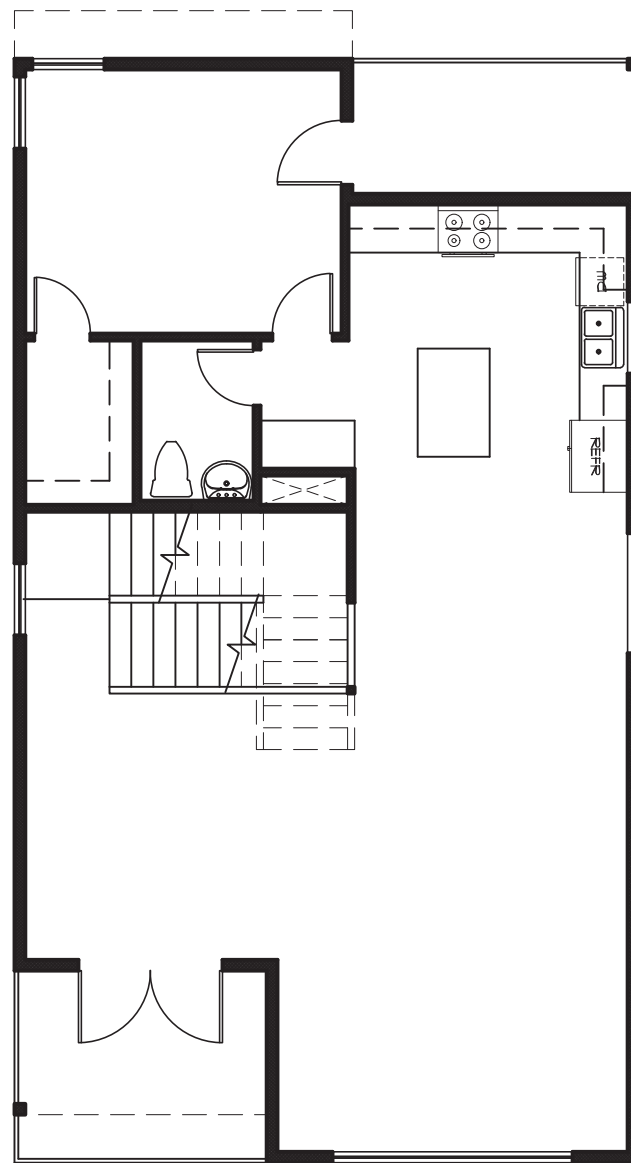
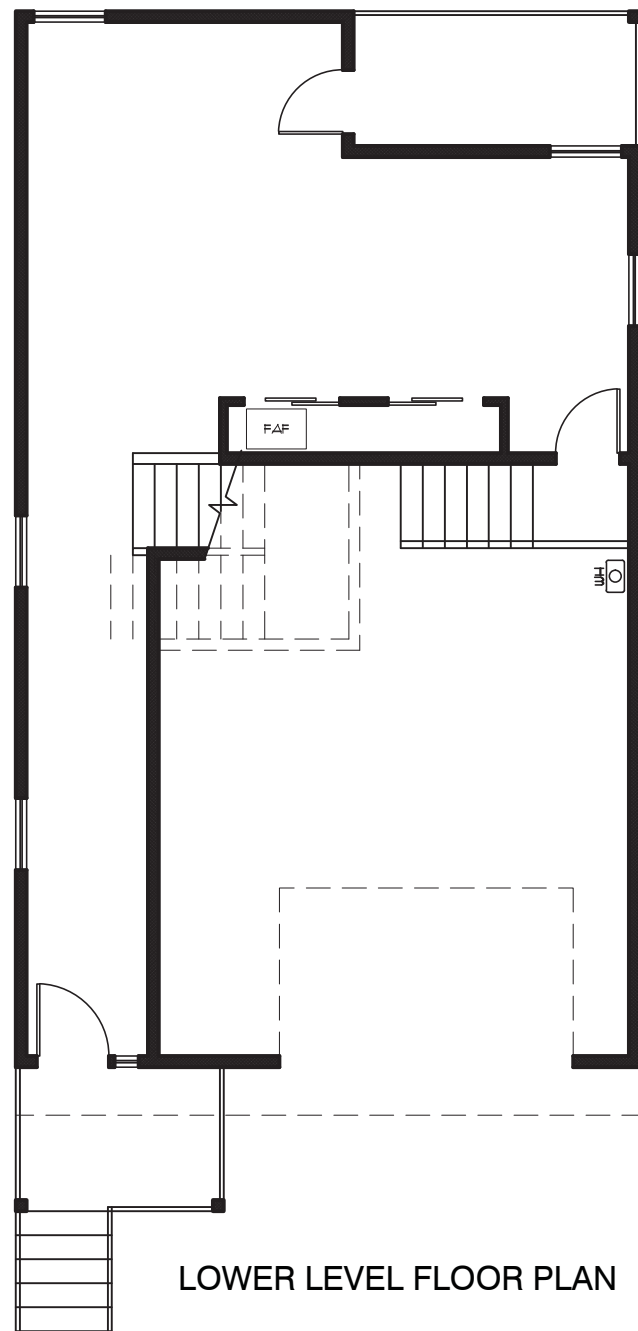
1/8" = 1'-0"

Elk Rock Estates
1738.C - Elevations

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1/8" = 1'-0"
11/21/2018

A7



BUILDING 7 - TYPE 'D'

1/8" = 1'-0"

Elk Rock Estates
1738.D - Floor Plans

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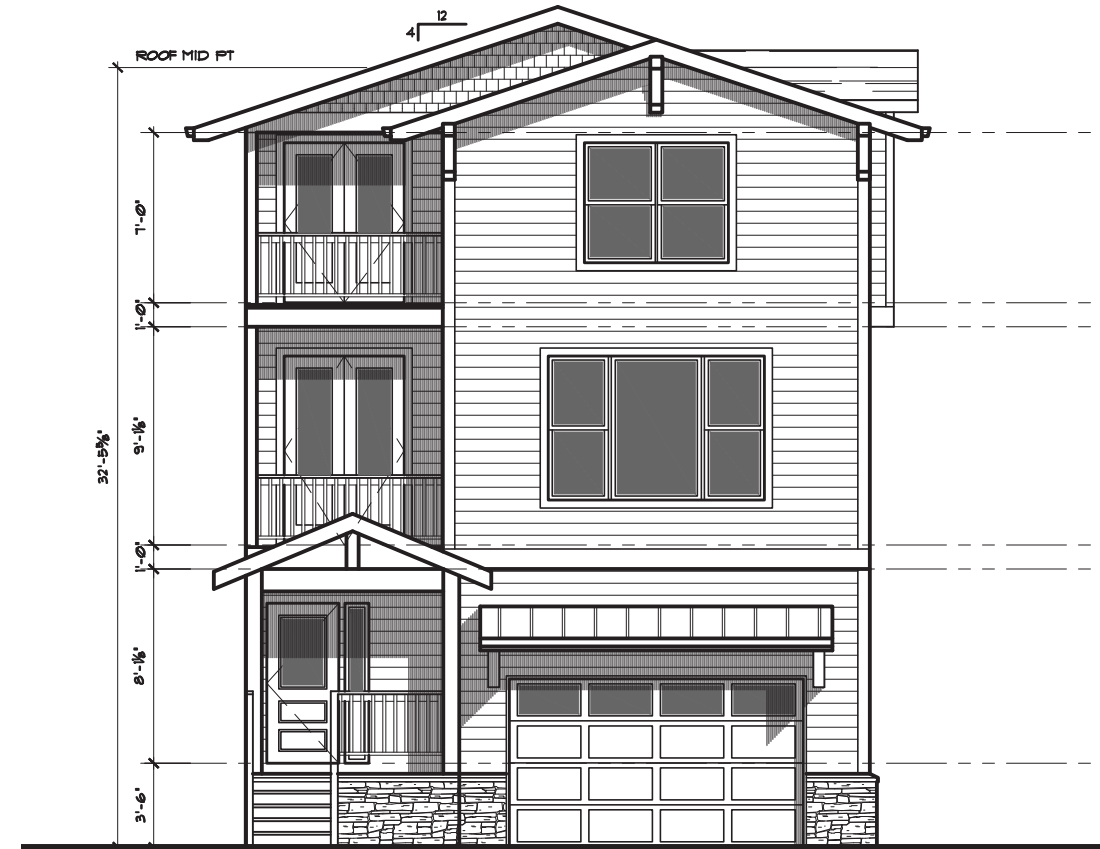
1/8" = 1'-0"
11/21/2018

A8

DETAILED DESIGN FEATURES PROPOSED:

(Minimum of 5 features required)

- a. COVERED PORCH AT LEAST 5 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- b. RECESSED ENTRY AREA AT LEAST 2 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- c. OFFSET ON THE BUILDING FACE AT LEAST 16 In. FROM ONE EXTERIOR WALL SURFACE TO OTHER.
- e. ROOF EAVES WITH MIN. PROJECTION OF 12 Inches.
- f. ROOF LINE OFFSETS OF AT LEAST 2 Ft. FROM TOP OF SURFACE TO TOP OF OTHER SURFACE.
- h. HORIZONTAL LAP SIDING BETWEEN 3 TO 7 In. WIDE. WOOD OR FIBER-CEMENT MATERIAL.
- k. WINDOW TRIM AROUND ALL WINDOWS AT LEAST 3 In. WIDE AND 5/8 In. DEEP.



BUILDING 7 - TYPE 'D'

1/8" = 1'-0"

Elk Rock Estates

1738.D - Elevations

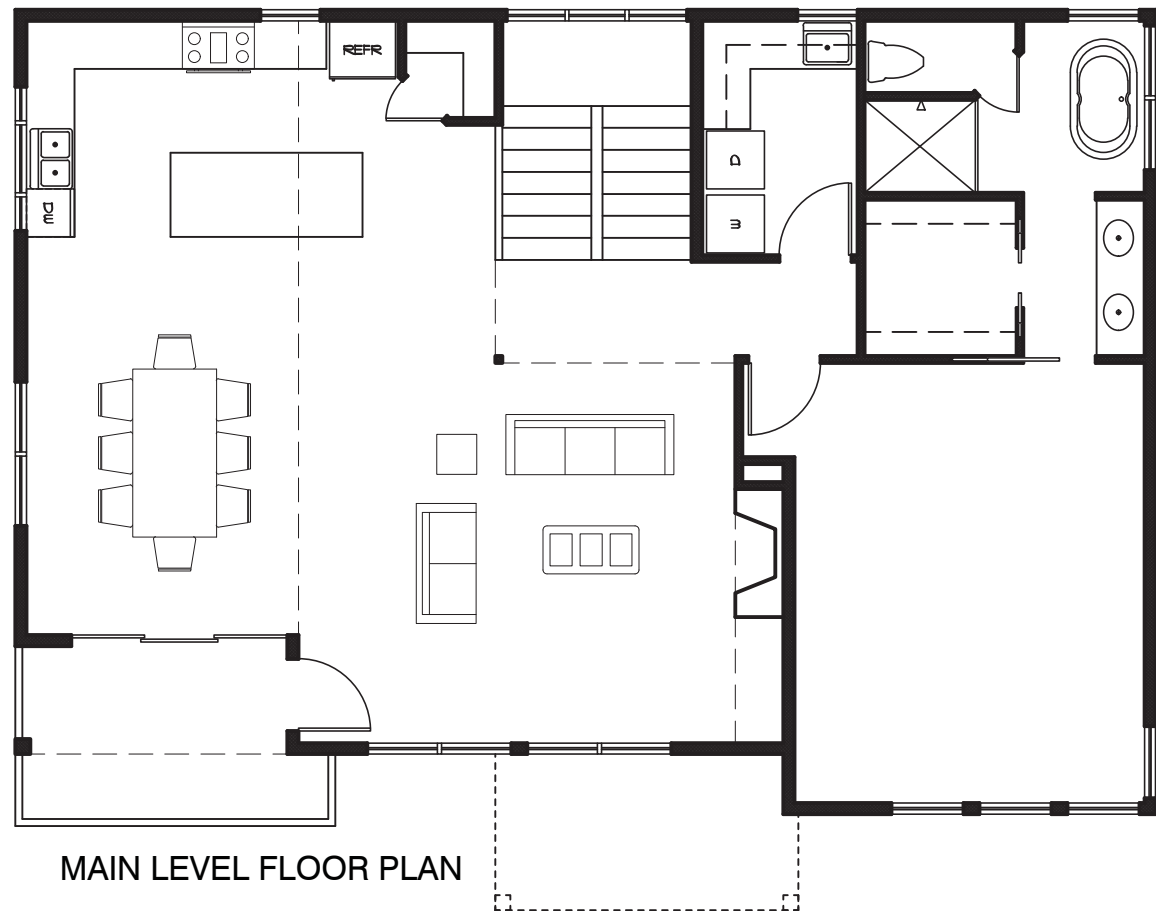
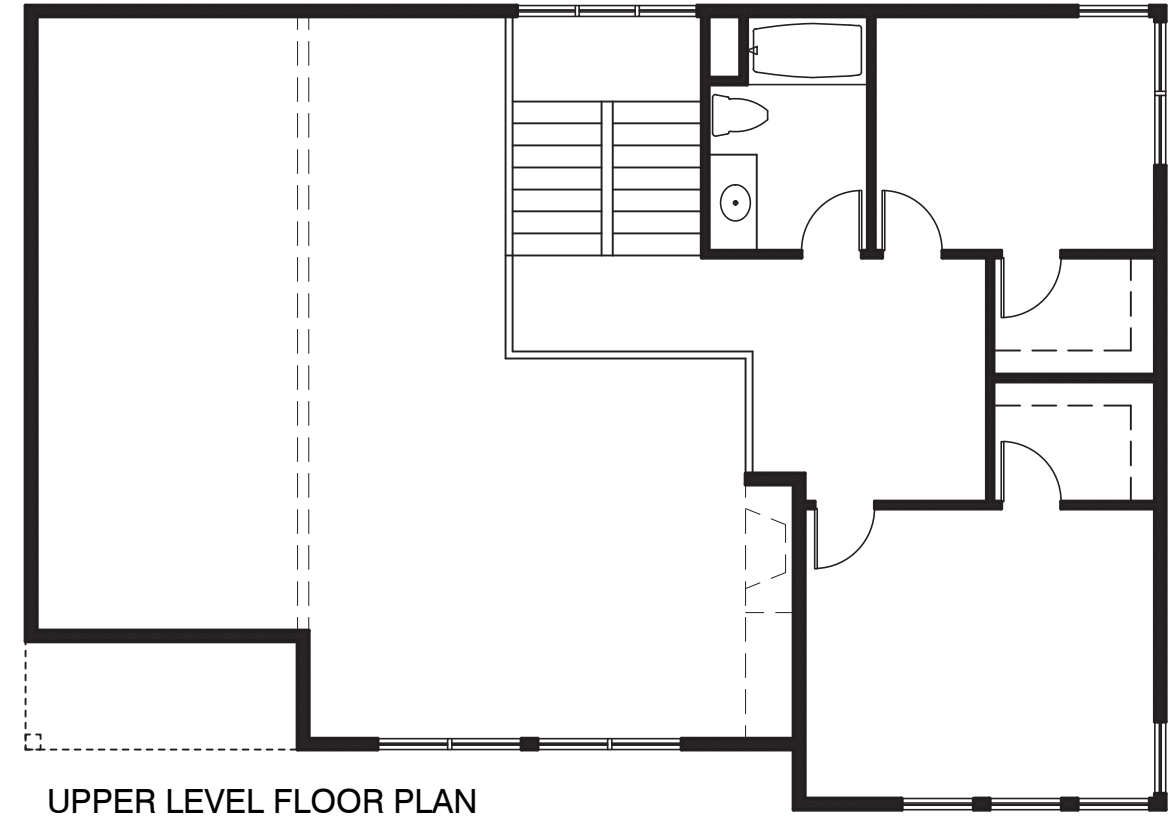
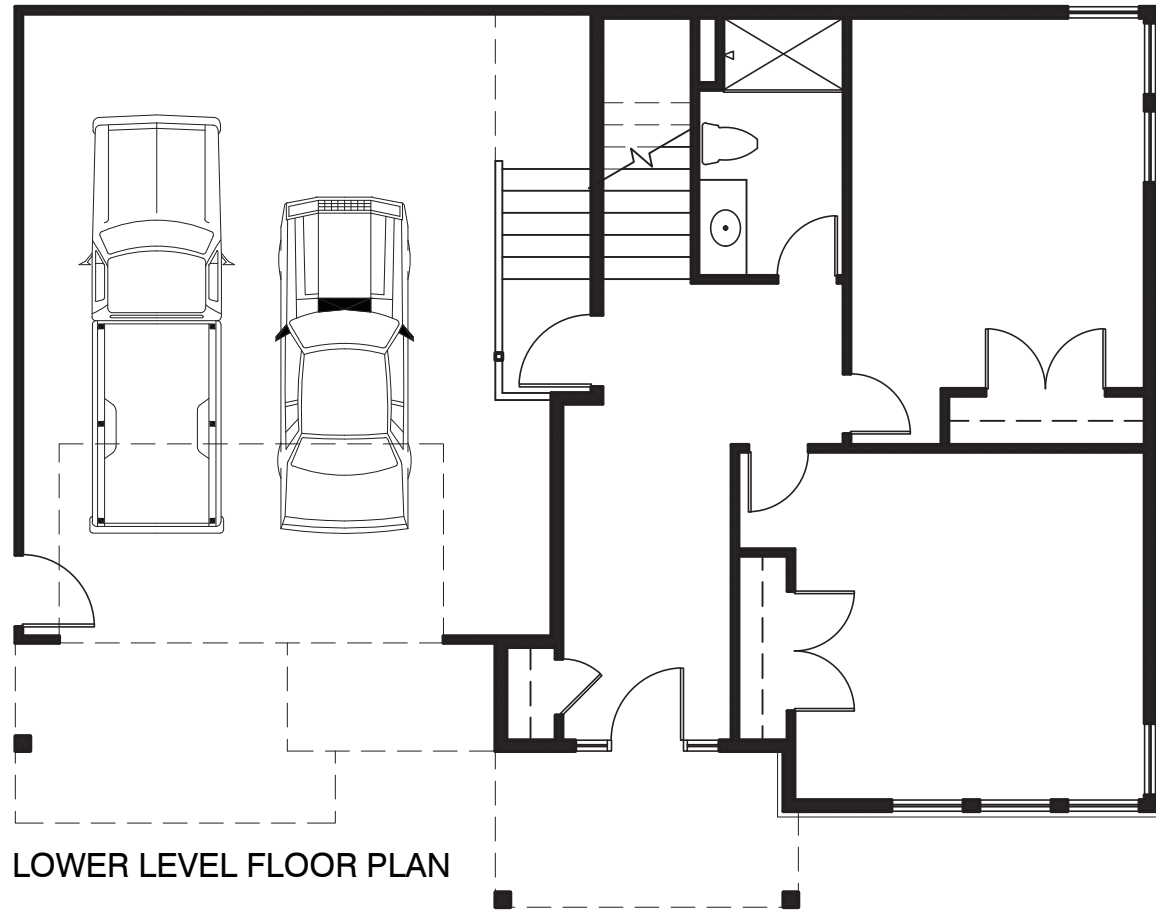
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1/8" = 1'-0"
11/21/2018

A9



 BUILDING 8 - TYPE 'E'

1/8" = 1'-0"

Elk Rock Estates
1738.E - Floor Plans

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ARCHITECTS, P.C.
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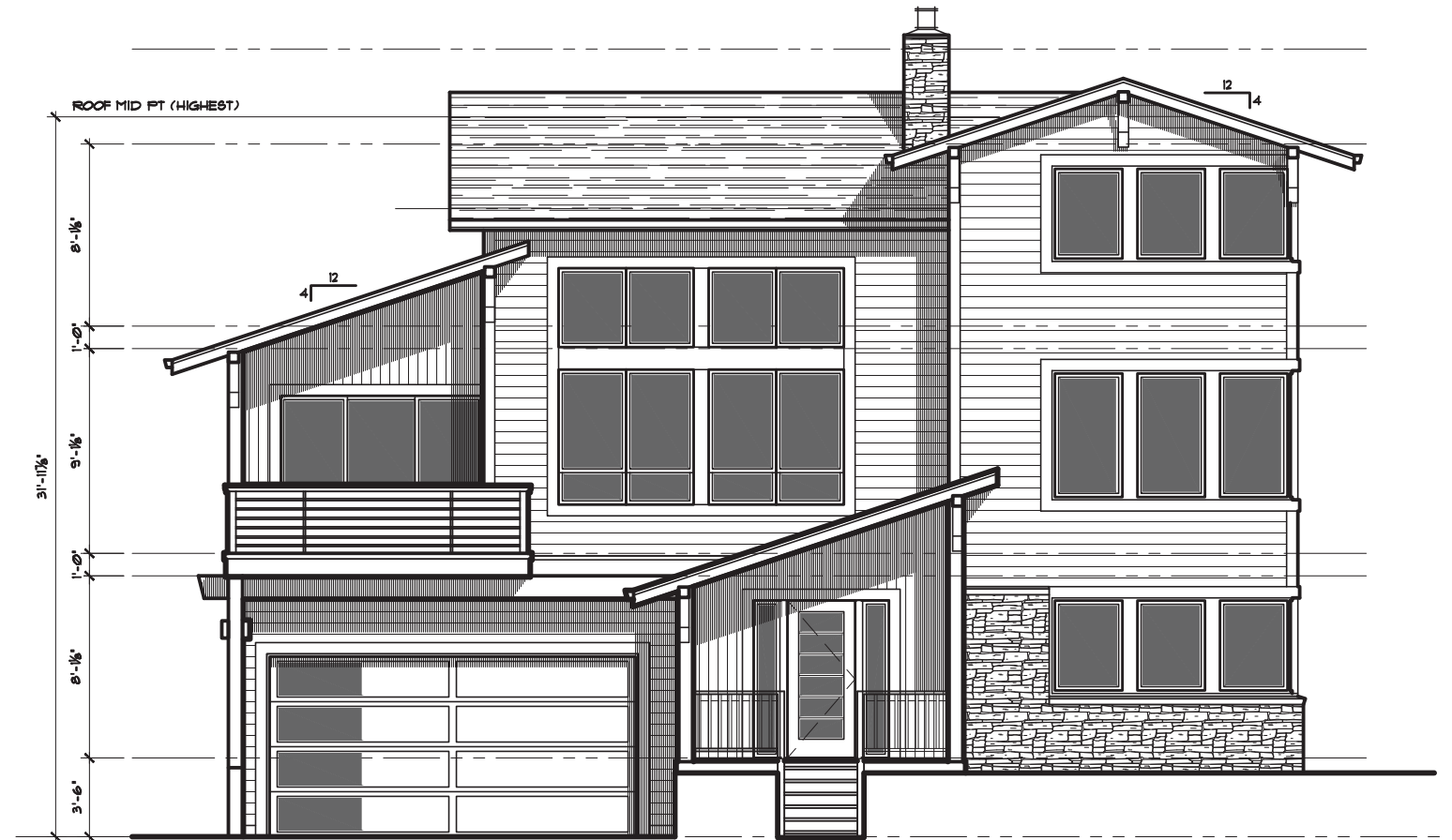
1/8" = 1'-0"
11/21/2018

A10

DETAILED DESIGN FEATURES PROPOSED:

(Minimum of 5 features required)

- a. COVERED PORCH AT LEAST 5 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- b. RECESSED ENTRY AREA AT LEAST 2 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- c. OFFSET ON THE BUILDING FACE AT LEAST 16 In. FROM ONE EXTERIOR WALL SURFACE TO OTHER.
- e. ROOF EAVES WITH MIN. PROJECTION OF 12 Inches.
- f. ROOF LINE OFFSETS OF AT LEAST 2 Ft. FROM TOP OF SURFACE TO TOP OF OTHER SURFACE.
- h. HORIZONTAL LAP SIDING BETWEEN 3 TO 7 In. WIDE. WOOD OR FIBER-CEMENT MATERIAL.
- k. WINDOW TRIM AROUND ALL WINDOWS AT LEAST 3 In. WIDE AND 5/8 In. DEEP.



BUILDING 8 - TYPE 'E'

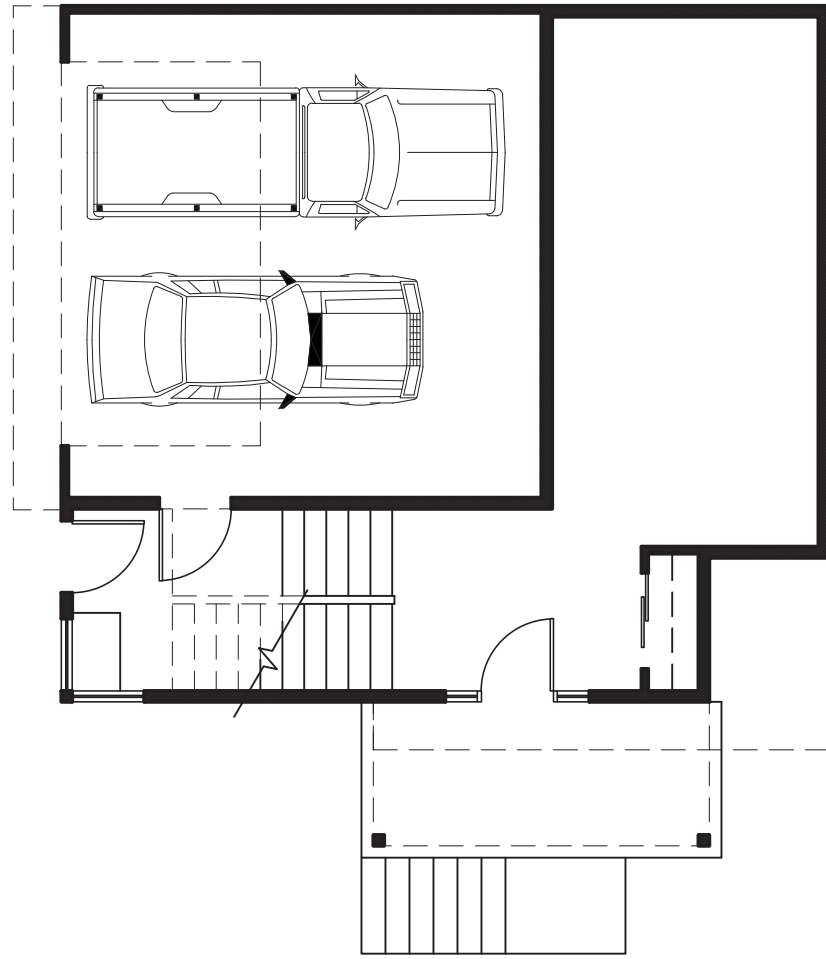
1/8" = 1'-0"

Elk Rock Estates
1738.E - Elevations

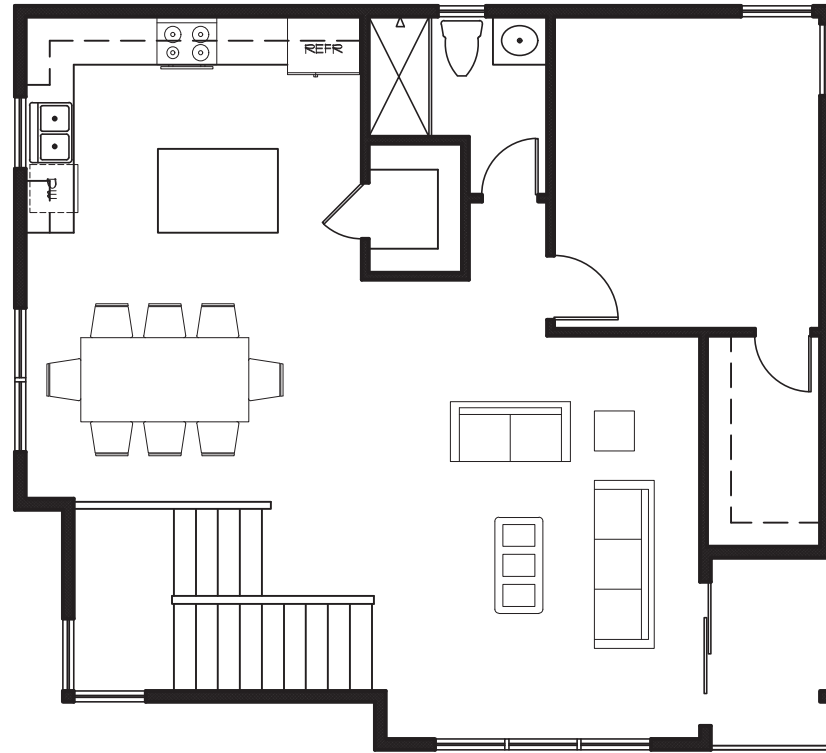
ISELIN
ARCHITECTS, P.C.
1307 7th Street - Oregon City, Oregon 97045
503.656.1942 - f. 503.656.0658 - www.iselinarchitects.com

1/8" = 1'-0"
11/21/2018

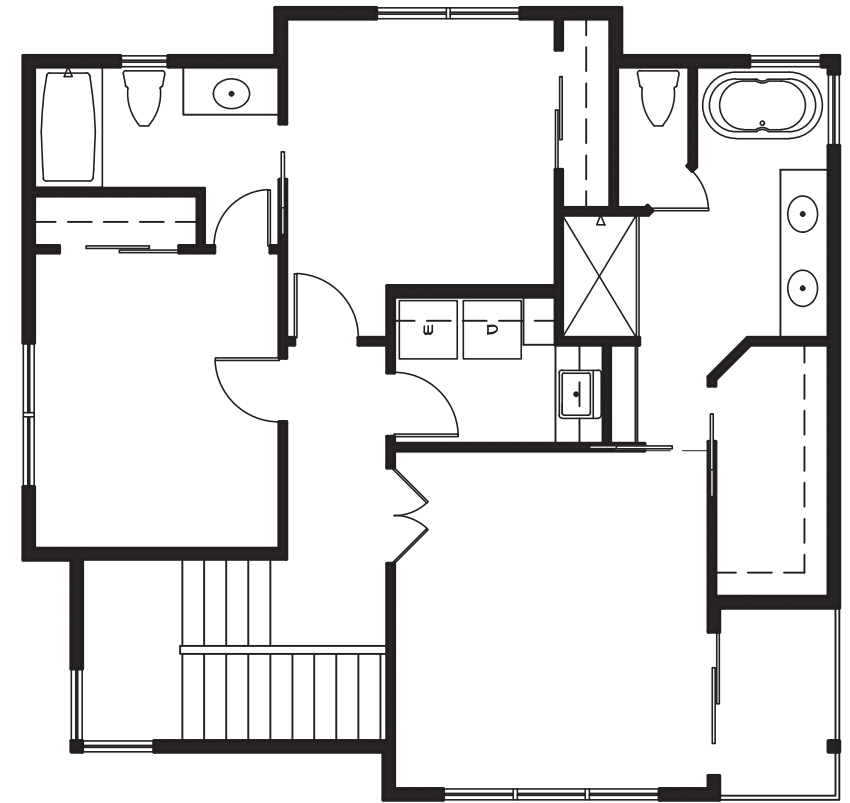
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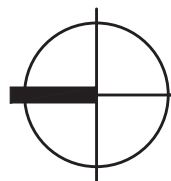
LOWER LEVEL FLOOR PLAN



MAIN LEVEL FLOOR PLAN



UPPER LEVEL FLOOR PLAN



BUILDING 9 - TYPE 'F'

1/8" = 1'-0"

Elk Rock Estates
1738.F - Floor Plans

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ARCHITECTS, P.C.
1307 7th Street - Oregon City, Oregon 97045
503.656.1942 - f. 503.656.0658 - www.iselinarchitects.com

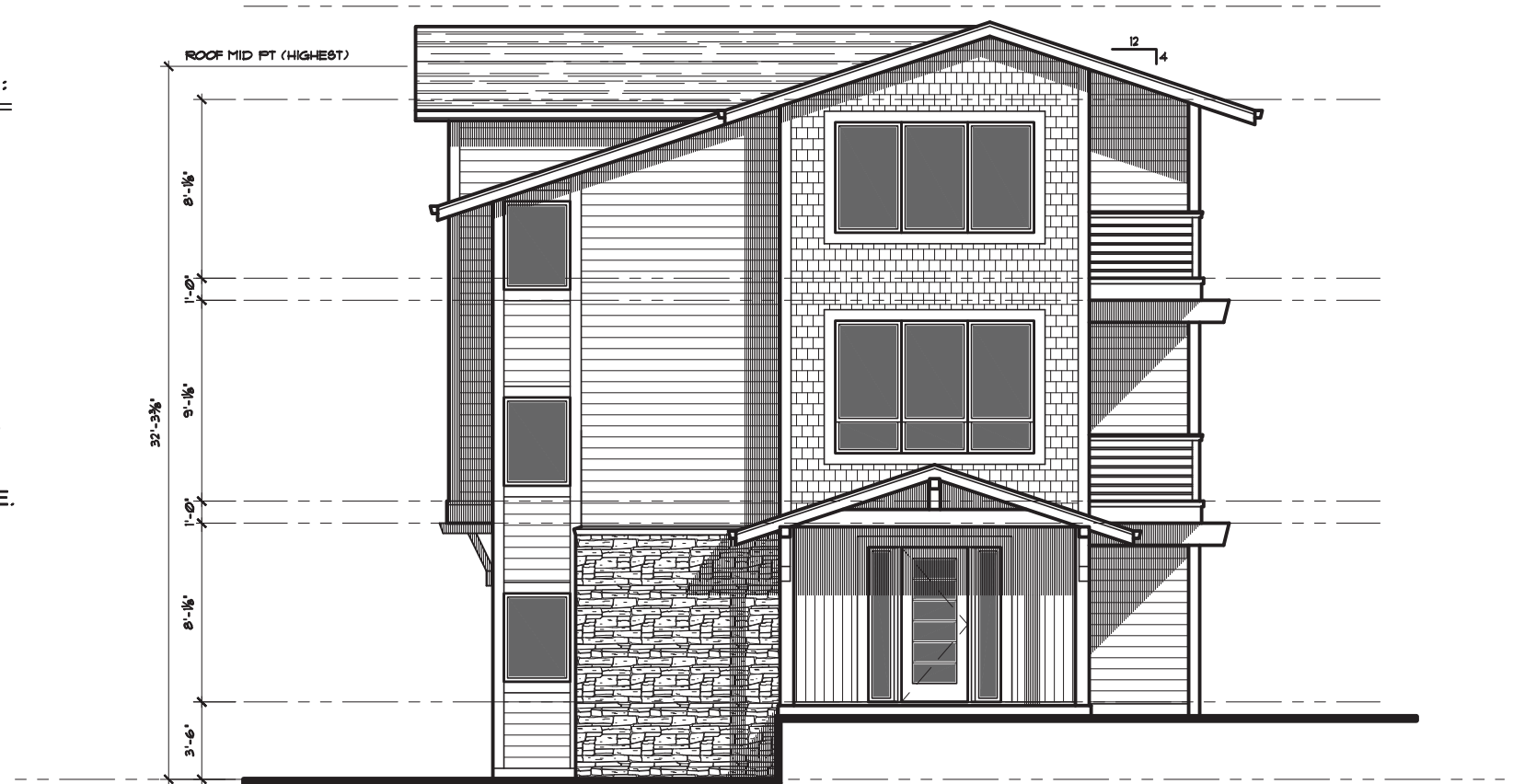
1/8" = 1'-0"
11/21/2018

A12

DETAILED DESIGN FEATURES PROPOSED:

(Minimum of 5 features required)

- a. COVERED PORCH AT LEAST 5 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- b. RECESSED ENTRY AREA AT LEAST 2 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- c. OFFSET ON THE BUILDING FACE AT LEAST 16 In. FROM ONE EXTERIOR WALL SURFACE TO OTHER.
- e. ROOF EAVES WITH MIN. PROJECTION OF 12 Inches.
- f. ROOF LINE OFFSETS OF AT LEAST 2 Ft. FROM TOP OF SURFACE TO TOP OF OTHER SURFACE.
- h. HORIZONTAL LAP SIDING BETWEEN 3 TO 7 In. WIDE. WOOD OR FIBER-CEMENT MATERIAL.
- k. WINDOW TRIM AROUND ALL WINDOWS AT LEAST 3 In. WIDE AND 5/8 In. DEEP.



BUILDING 9 - TYPE 'F'

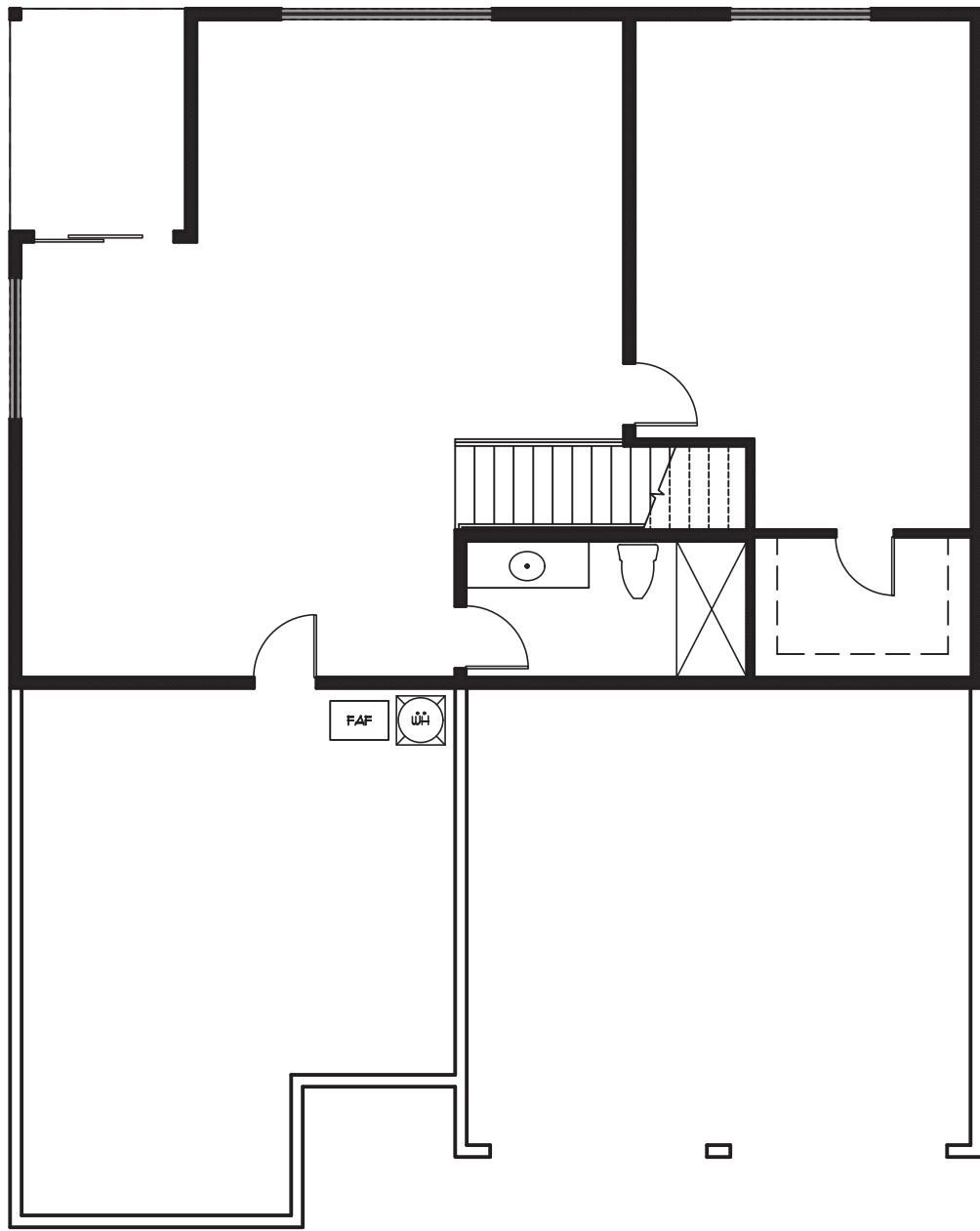
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Elk Rock Estates
1738.F - Elevations

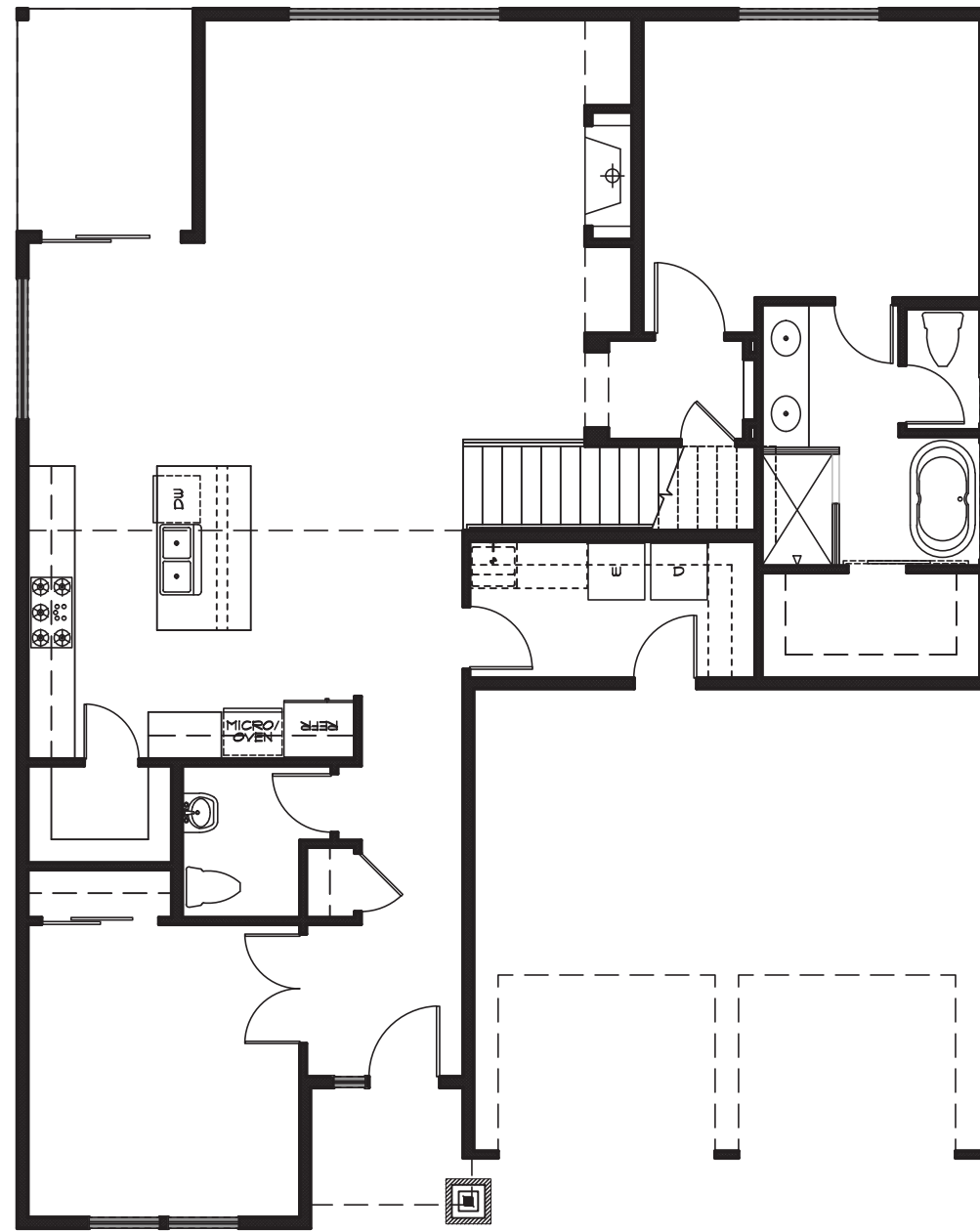
ISELIN
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503.656.1942 - f. 503.656.0658 - www.iselinarchitects.com

1/8" = 1'-0"
11/21/2018

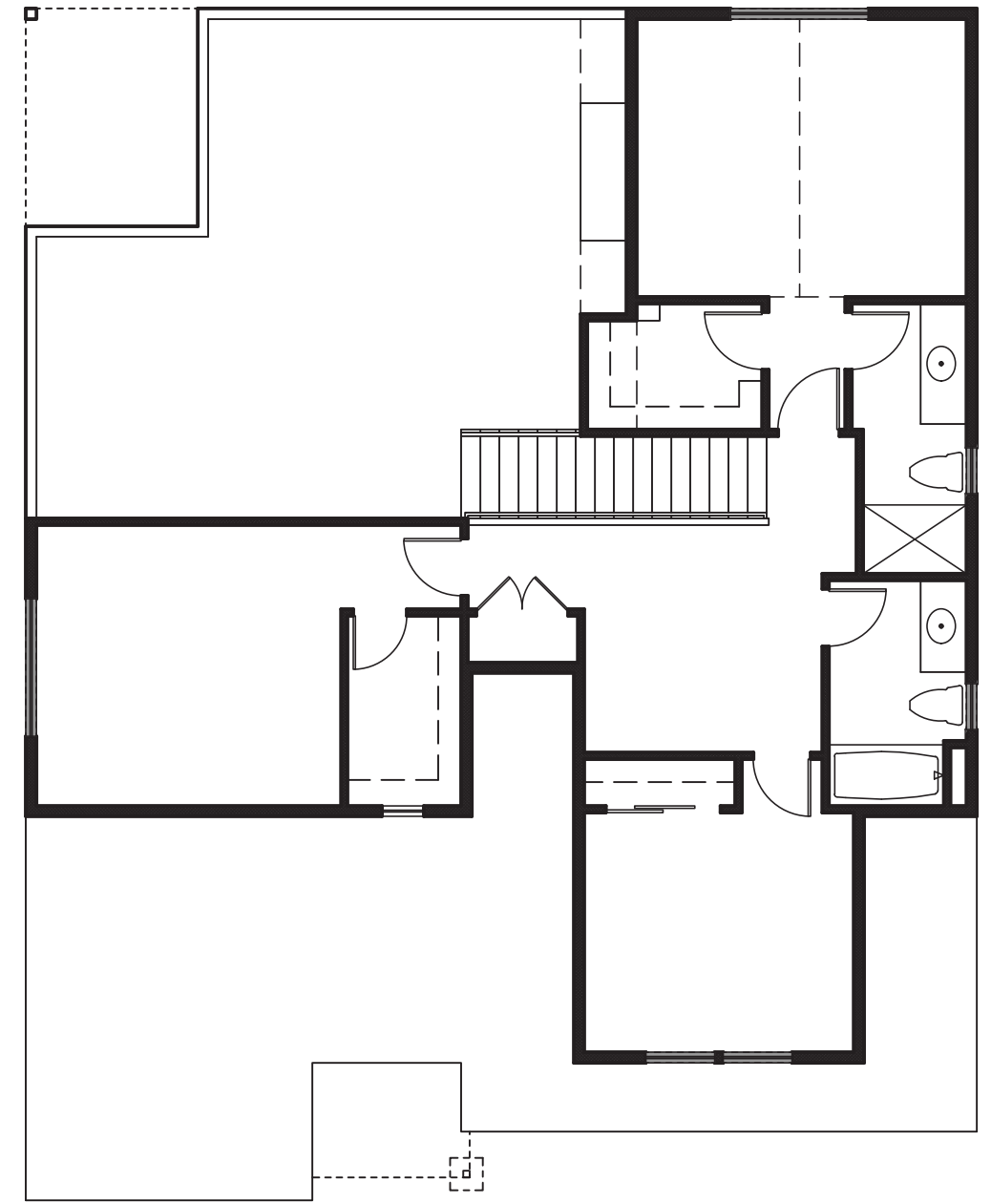
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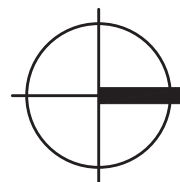
LOWER LEVEL FLOOR PLAN



MAIN LEVEL FLOOR PLAN



UPPER LEVEL FLOOR PLAN



BUILDING 11 - TYPE 'G'

1/8" = 1'-0"

Elk Rock Estates

1738.G - Floor Plans

ISELIN
ARCHITECTS, P.C.

1307 7th Street - Oregon City, Oregon 97045
503.656.1942 - f. 503.656.0658 - www.iselinarchitects.com

1/8" = 1'-0"
11/21/2018

A14

DETAILED DESIGN FEATURES PROPOSED:

(Minimum of 5 features required)

- a. COVERED PORCH AT LEAST 5 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- b. RECESSED ENTRY AREA AT LEAST 2 Ft. DEEP AND AT LEAST 5 Ft. WIDE.
- c. OFFSET ON THE BUILDING FACE AT LEAST 16 In. FROM ONE EXTERIOR WALL SURFACE TO OTHER.
- e. ROOF EAVES WITH MIN. PROJECTION OF 12 Inches.
- h. HORIZONTAL LAP SIDING BETWEEN 3 TO 7 In. WIDE. WOOD OR FIBER-CEMENT MATERIAL.
- k. WINDOW TRIM AROUND ALL WINDOWS AT LEAST 3 In. WIDE AND 5/8 In. DEEP.



BUILDING 11 - TYPE 'G'

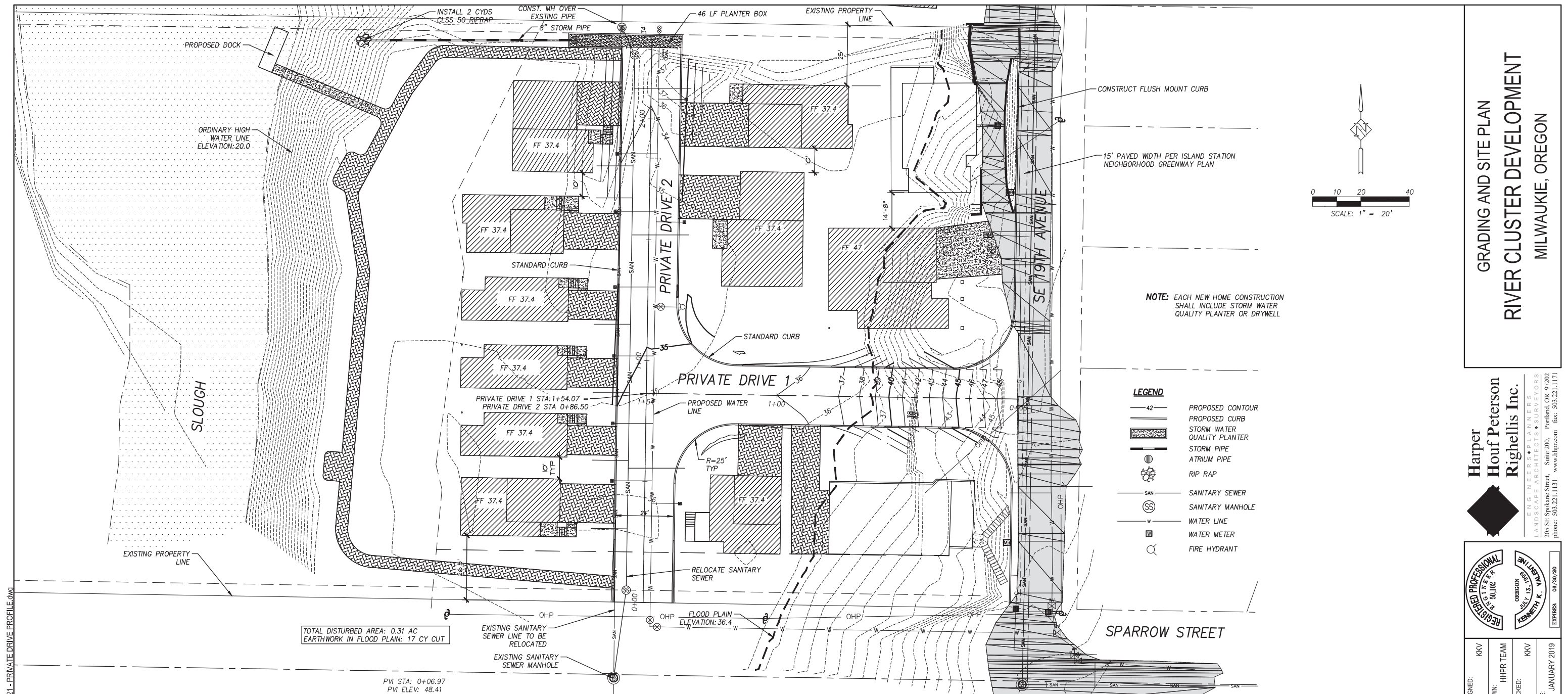
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Elk Rock Estates
1738.G - Elevations

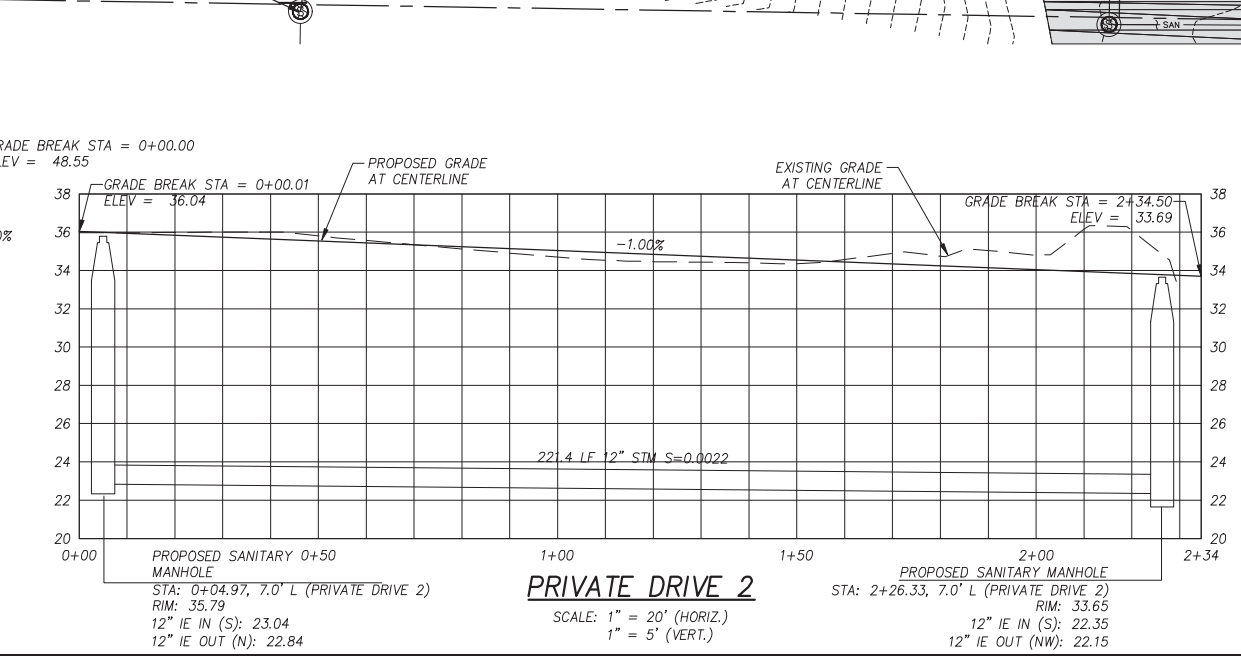
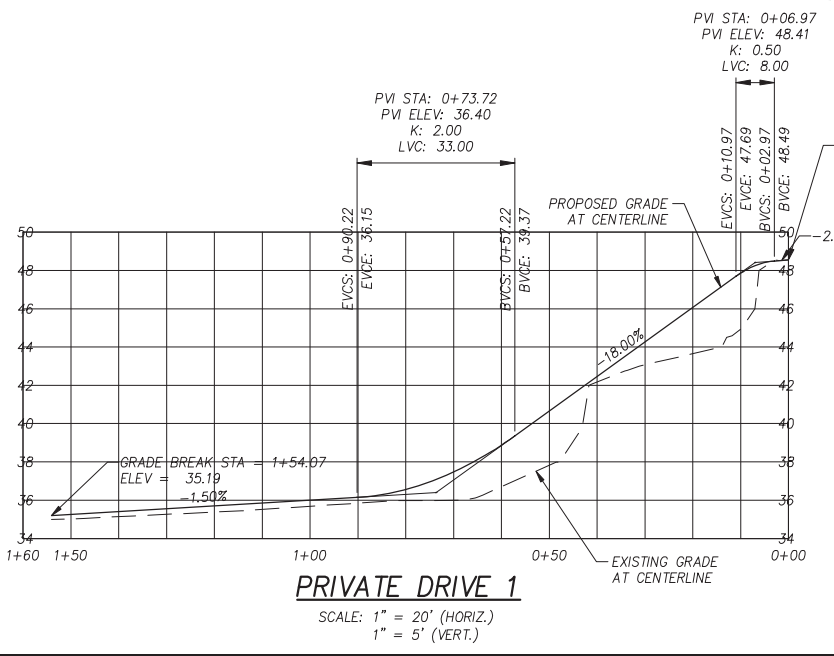
ISELIN
ARCHITECTS, P.C.
1307 7th Street - Oregon City, Oregon 97045
503.656.1942 - f. 503.656.0658 - www.iselinarchitects.com

1/8" = 1'-0"
11/21/2018

A15

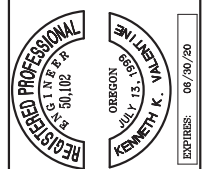


TOTAL DISTURBED AREA: 0.31 AC
EARTHWORK IN FLOOD PLAIN: 17 CY CUT



GRADING AND SITE PLAN
RIVER CLUSTER DEVELOPMENT
MILWAUKIE, OREGON

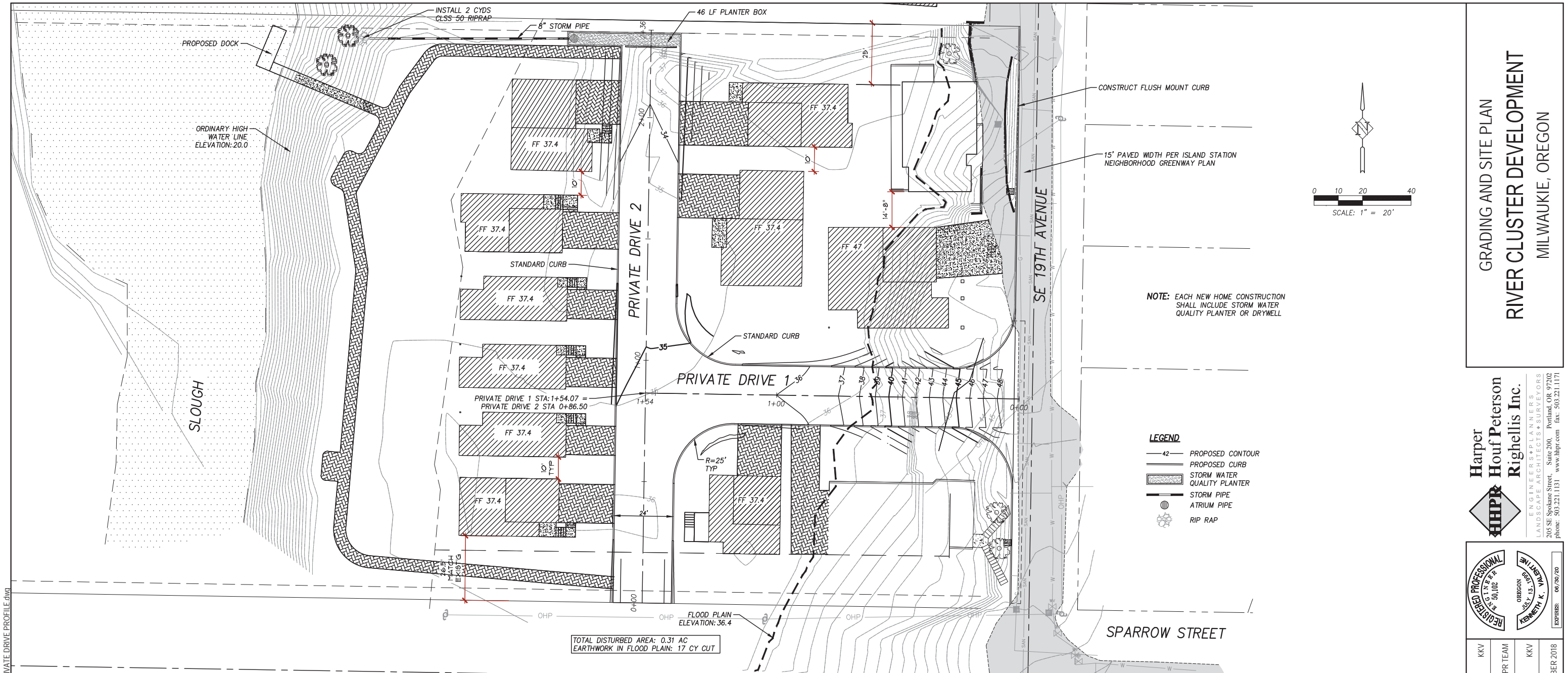
Harper
Houf Peterson
Righelalis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



DESIGNED:	KKV
DRAWN:	HHR TEAM
CHECKED:	KKV
DATE:	JANUARY 2019

DATE	NO.	DESCRIPTION
R	E	V
I	S	I
O	N	S

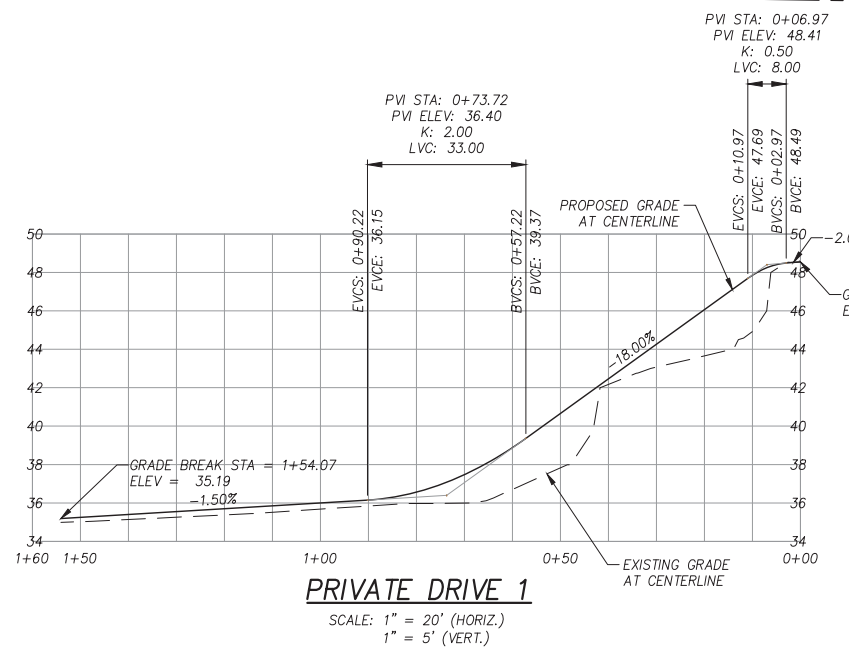
SHEET NO.
1
JOB NO.
MSC-221



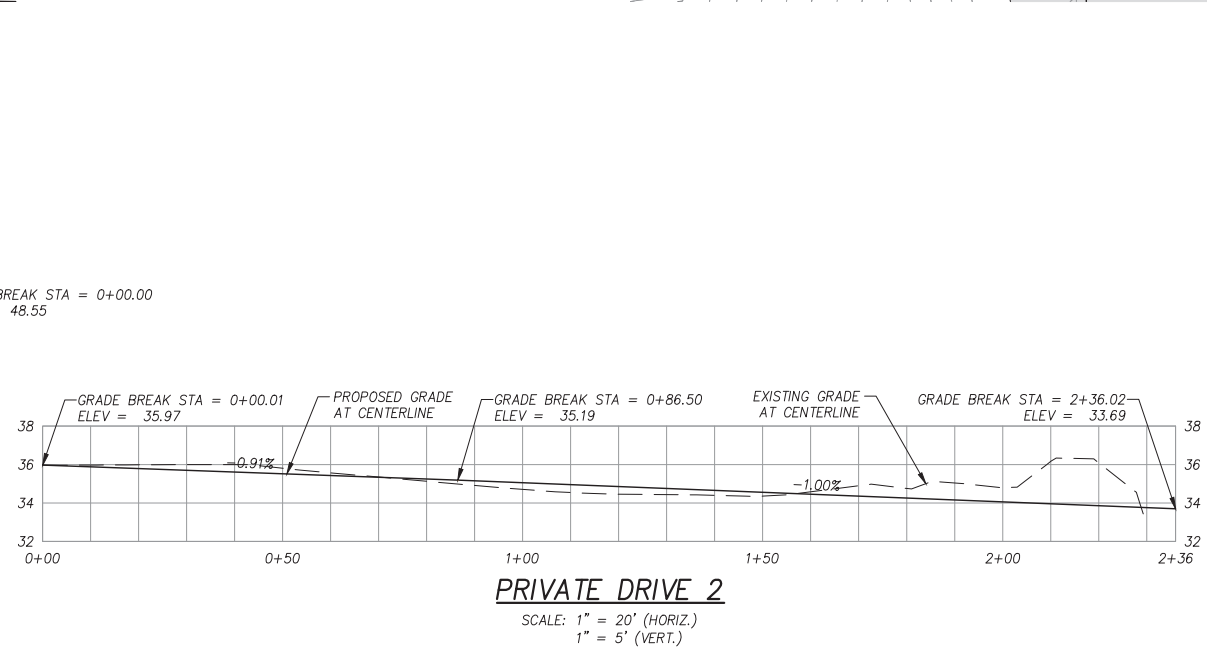
TOTAL DISTURBED AREA: 0.31 AC
EARTHWORK IN FLOOD PLAIN: 17 CY CUT

- LEGEND**
- 42 — PROPOSED CONTOUR
 - — PROPOSED CURB
 - ▨ STORM WATER QUALITY PLANTER
 - — STORM PIPE
 - — ATRIUM PIPE
 - ⊙ RIP RAP

P:\MSC (Gillis Properties)\MSC-221 (Riverside Cluster Development)\MSC221-DWGS\EXHIBITS\MSC221 - PRIVATE DRIVE PROFILE.dwg



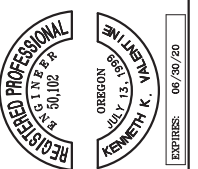
PRIVATE DRIVE 1
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)



PRIVATE DRIVE 2
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)

GRADING AND SITE PLAN
RIVER CLUSTER DEVELOPMENT
MILWAUKIE, OREGON

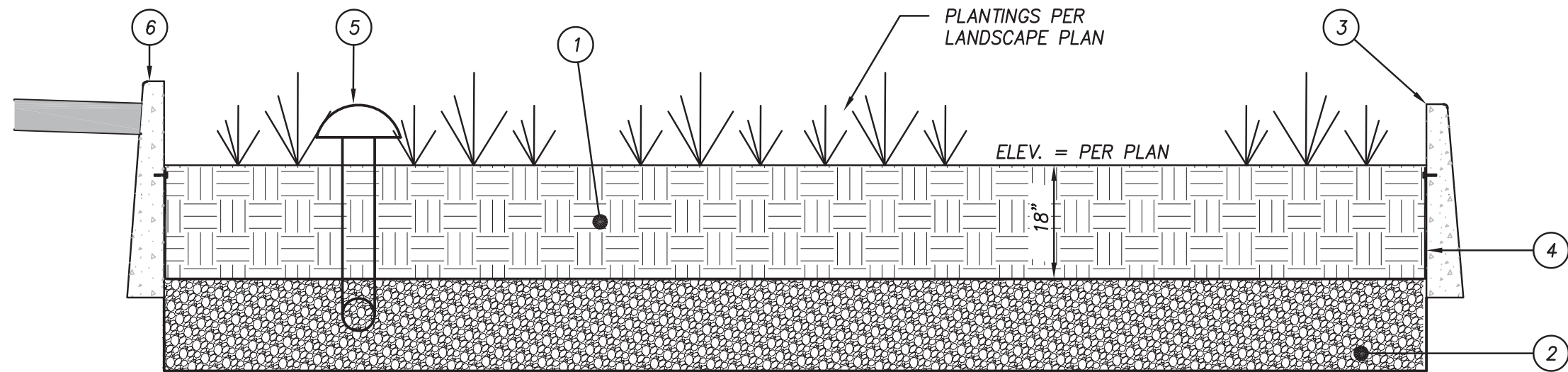
Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200 Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



DESIGNED:	KKV
DRAWN:	HHPR TEAM
CHECKED:	KKV
DATE:	NOVEMBER 2018

NO.	DATE	DESCRIPTION

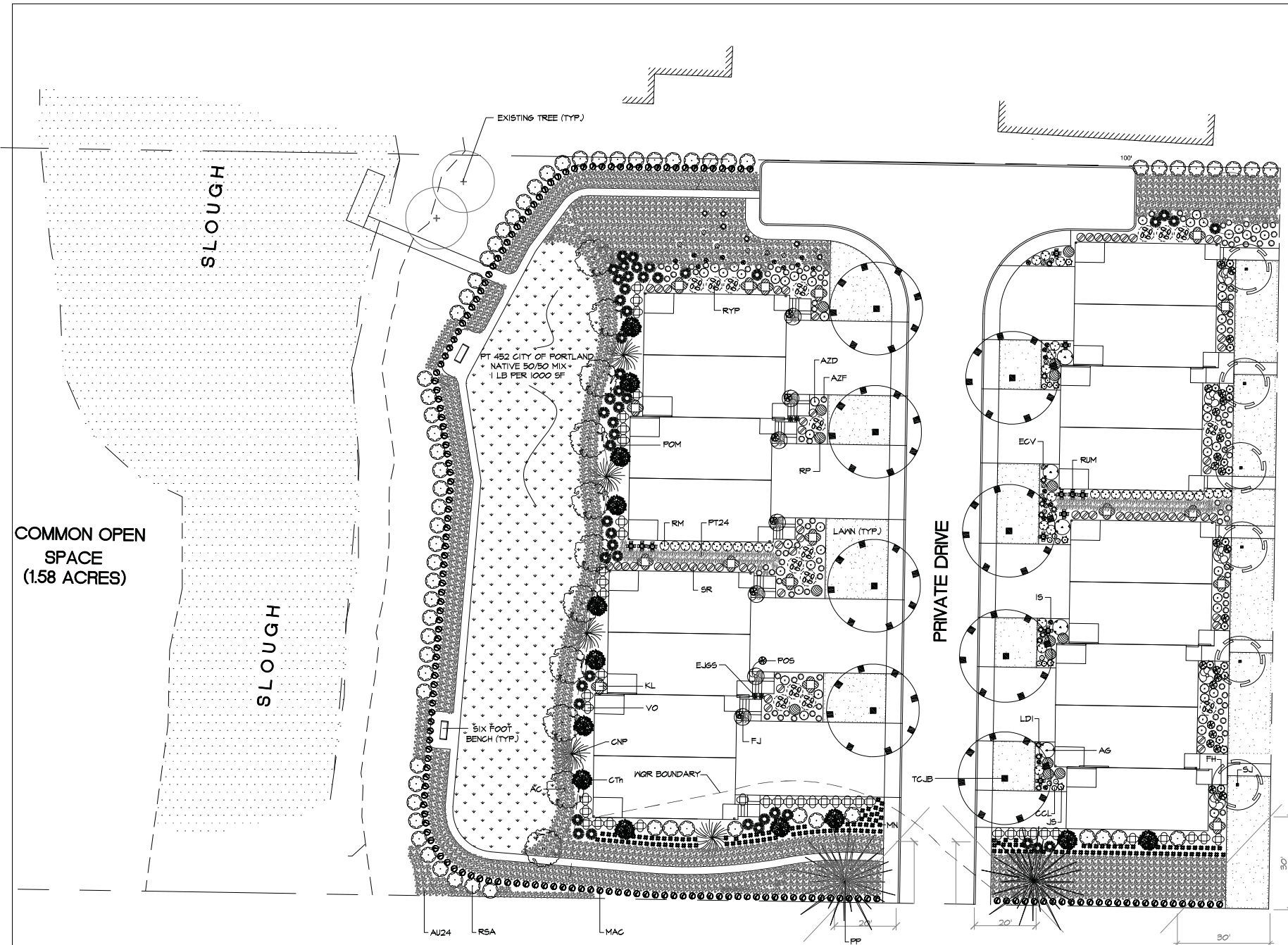
SHEET NO. **1**
JOB NO. MSC-221



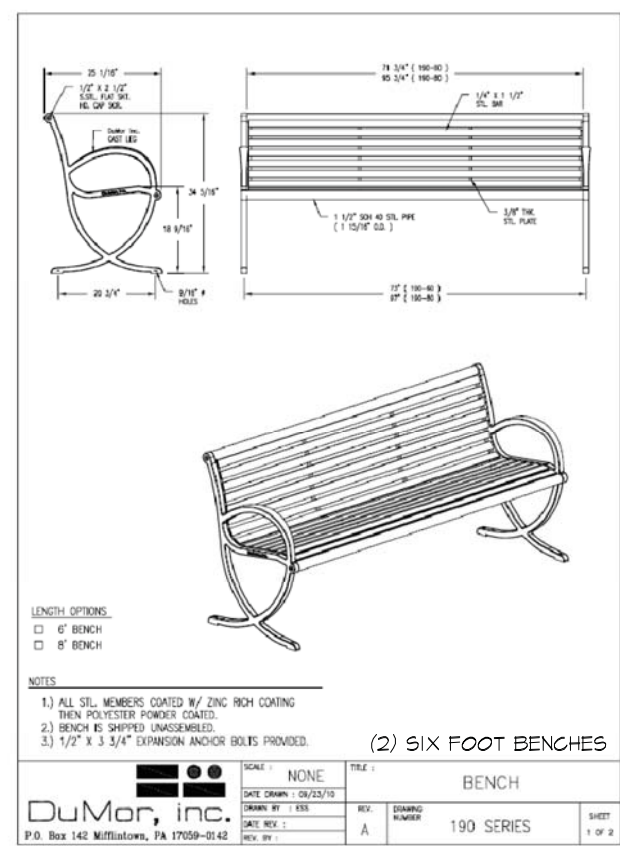
- ① GROWING MEDIUM.
- ② DRAIN ROCK
- ③ STANDARD CONCRETE CURB, MODIFIED TO 28" HEIGHT.
- ④ FILTER FABRIC.
- ⑤ 12" ATRIUM OVERFLOW INLET
- ⑥ STANDARD CONCRETE CURB WITH 12" DRAINAGE NOTCHES 4' ON CENTER.

VEGETATED FLOW THROUGH PLANTER SECTION

N.T.S.



SE 19TH AVENUE



DuMor, inc.		SCALE: NONE	TITLE: BENCH	SHEET: 1 OF 2
DATE DRAWN: 06/23/19	REV: A	DATE: 1999	EDMUND NUMBER: 190 SERIES	
P.O. Box 142 Millstown, PA 17059-0142				

PLANT LEGEND "VERIFY ALL QUANTITIES"

SYM.	#	BOTANICAL	COMMON	SIZE	TYPE
AC	11	ACER CIRCINATUM	NATIVE VINE MAPLE	1-1/2 IN CAL	NATIVE PLANTS
AG	5	ABELIA GRANDIFLORA	GLOSSY ABELIA	5 GAL	
AU24	20/B	ARCTOSTAPHYLOS UVAURSI-24IN-O.C.	NATIVE KINNIKINNICK	4 IN 24" O.C.	NATIVE PLANTS
AZD	48	AZALEA "DELAWARE VALLEY WHITE"	DELAWARE VALLEY WHITE AZALEA	2 GAL	
AZF	102	AZALEA "FLAME CREEPER"	FLAME CREEPER AZALEA	2 GAL	
CCL	12	CROCOSMIA CURTONIS "LUCIFER"	CROCOSMIA	1 GAL	
CNP	5	CHAMAECYPARIS N. "PENDULA"	KEEPING ALASKAN CEDAR	6 FT - 8 FT	NATIVE PLANTS
CTh	15	CEANOTHUS THYSIFLORUS Blue Jeans	Blue Jeans CEANOTHUS	5 GAL	NATIVE PLANTS
ECV	15	ERIGA CARNEA "VIVELLI"	SPRING HEATHER	1 GAL	
EJ65	4	EUONYMUS JAPONICUS GREEN SPIRE	GREEN SPIRE EUONYMUS	5 GAL	
FH	15	FUSCHIA H. "SANTA CLAUS"	EVERGREEN FUSCHIA	2 GAL	
FJ	12	FATSIA JAPONICA	JAPANESE ARALIA	5 GAL	
IS	22	IBERIS SEMPERVIVENS	CANDYTUFF	1 GAL	
J5	5	JUNIPERUS C. "SKYROCKET"	SKYROCKET JUNIPER	5FT - 6FT	
KL	17	KALMIA LATIFOLIA "Heart of Fire"	Heart of Fire MOUNTAIN LAUREL	5 GAL	NATIVE PLANTS
LDI	15	LITHODORA DIFFUSA	LITHODORA	1 GAL	
MAC	17B	MAHONIA AQUIFOLIUM "COMPACTA"	COMPACT OREGON GRAPE	1 GAL	NATIVE PLANTS
MN	15I	MAHONIA NERVOSA	NATIVE CASCADE MAHONIA	1 GAL	
POM	48	POLYSTICHUM MUNITUM	SWORD FERN	2 GAL	NATIVE PLANTS
FOS	31	POLYSTICHUM SETIFERUM	ALASKA LACE FERN	1 GAL	
PP	2	PINUS PONDEROSA	PONDEROSA PINE	6 FT - 8 FT	NATIVE PLANTS
PT24	126	PACHYSANDRA TERMINALIS	PACHYSANDRA	4 IN 24" O.C.	
RM	30	ROSA MEIDLAND "SCARLET"	SCARLET MEIDLAND ROSE	2 GAL	
RP	15	RHODODENDRON "P.J.M."	P.J.M. RHODY	2 GAL	
RSA	68	RIEBS SANSUNIMUM	NATIVE CURRANT	5 GAL	NATIVE PLANTS
RUM	12	RHAPHIOLEPIS U. MINOR "GULF GREEN"	DWARF YEDDO HANTHORN	2 GAL	
RYP	16	RHODODENDRON YAKU PRINCESS	YAKU PRINCESS RHODY	5 GAL	
SJ	6	STYRAX JAPONICA	JAPANESE SNOWBELL	1-1/2 IN CAL	
SR	61	SARGOCOGGA RUSCIFOLIA	TALL SARGOCOGGA	2 GAL	
T.C.B	8	TILIA CORDATA "LUNE BRIDE"	LITTLE LEAF LINDEN	1-1/2 IN CAL	
VO	43	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	5 GAL	NATIVE PLANTS

ALL THE PLANTS WITHIN THE MGR BOUNDARY ARE NATIVE.
REMOVE ALL NOXIOUS VEGETATION IDENTIFIED BY ETC IN THEIR HCA DETERMINATION REPORT DATED JUNE 6, 2018.

MULCH
DARRELL MULCH
LANDSCAPE ARCHITECTURE
1907 N.E. 66TH AVENUE #168
PORTLAND, OREGON 97213
(503) 222-7416 TEL.

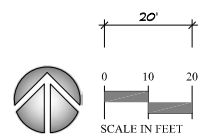
REGISTERED
315
Darrell Mulch
Oregon
10-18-93
LANDSCAPE ARCHITECT

GILLIS PROPERTIES
ELK ROCK ESTATES
12225/ 12205 SE 19TH
Milwaukie, OR

DATE:	2-16-19
PROJECT NO:	X
DESIGNED:	DM
DRAWN:	DM
CHECKED:	DM
REVISIONS:	

SHEET
L1
1

LI PLANTING PLAN
AN AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED.



ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

PHILIPS GARDCO

Site & Area

PureForm

LED post top with comfort optics

Philips Gardco PureForm LED post top features a sleek, low profile design. Comfort optics are designed to enhance visual comfort by reducing glare. Type 1, 2, 3, and 5 optical distributions are available with lumen output up to 9000 lumens. A full range of control options provides additional energy savings. Optional integral emergency battery backup is available for post-of-egress illumination.

Ordering guide

Profile	Height	Number of LEDs	Color	LED Color - Generation	Optic	Control	Emergency	Wattage
PPT	140L	140	White	PPT-140L-450-NW-G2-3-UNV	140° Beam	None	None	22.30582
PPT	140L	140	White	PPT-140L-450-NW-G2-3-UNV	140° Beam	None	None	22.30582

PHILIPS GARDCO

Bollards

Dome/bevel top louver

Philips Gardco LED dome and bevel top louver bollards provide uniform illumination, superior spacing and solid vandal resistance. Rugged extruded and cast construction with silicone heads and gaskets ensure years of durability. Our advanced stack-boost LED technology and medium response provide maximum light output energy savings.

Ordering guide

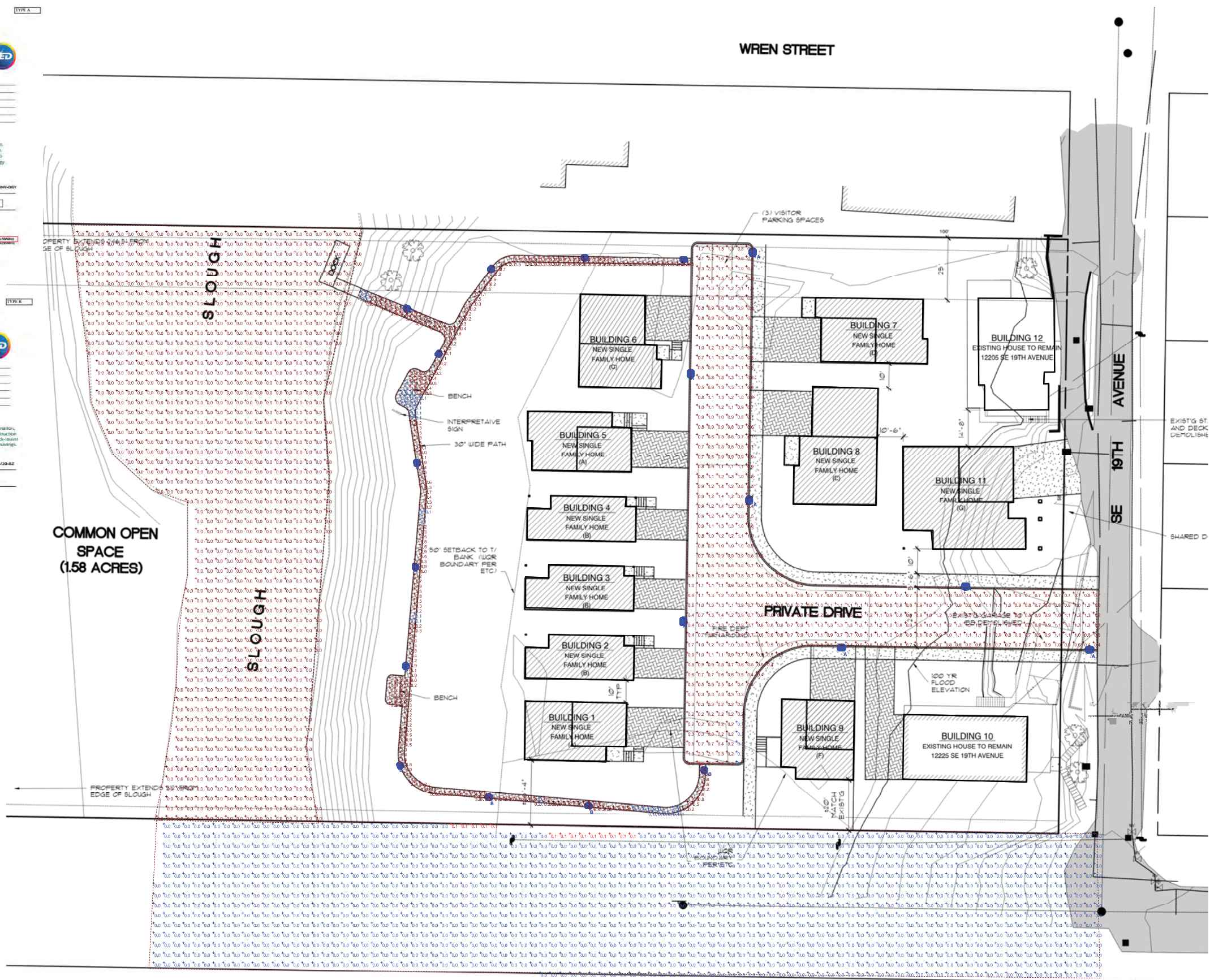
Profile	Height	Number of LEDs	Color	LED Color - Generation	Optic	Control	Emergency	Wattage
BOL	36	1	White	BRM83X-18L-NW-G2	180° Beam	None	None	38.6
BOL	36	1	White	BRM83X-18L-NW-G2	180° Beam	None	None	38.6

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
ROAD	+	0.9	7.3	0.1	73.0:1	9.0:1
SLOUGH	+	0.0	0.0	0.0	N/A	N/A
SOUTH TRESPASS	+	0.0	0.1	0.0	N/A	N/A
WALK	+	1.7	6.9	0.1	69.0:1	17.0:1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
○	A	7	SIGNIFY GARDCO	PPT-140L-450-NW-G2-3-UNV	PureForm PEDESTRIAN Source (PPT), 140 LEDs, 4000K CCT, TYPE 3 OPTIC.	(1) Circular Light Guide Plate DRIVEN AT 450mA	1	PPT-140L-450-NW-G2-3-UNV.ies	2421	0.95	22.30582
○	B	12	SIGNIFY SIGNIFY	BRM83X-18L-NW-G2	Lower Bollard LED BRM83x	54 WHITE LEDs DRIVEN AT 116mA	1	BRM83X-18L-NW-G2.ies	1226	0.95	38.6



Plan View
Scale = 1" = 20'



19th Street Milwaukie

Iselln Architects, PC



19th Street Milwaukie

IseIn Architects, PC



19th Street Milwaukie

Iselln Architects, PC



19th Street Milwaukie

IseIn Architects, PC



19th Street Milwaukie

Iselln Architects, PC



Harper
Houf Peterson
Righellis Inc.

Riverside Cluster Development

MSC-212

Stormwater Management Report

11/15/2018

Prepared For:

Gillis Propoerties LLC
11650 SW 67th Avenue
Suite 210
Tigard, OR 97223

Prepared By:

Harper Houf Peterson Righellis Inc.
205 SE Spokane Street, Suite 200
Portland, OR 97202
P: 503-221-1131 F: 503-221-1171

Ken Valentine, P.E.



ENGINEERS ♦ PLANNERS
LANDSCAPE ARCHITECTS ♦ SURVEYORS

Riverside Cluster Development Stormwater Management Report

Prepared by: Harper Houf Peterson Righellis, Inc. (KKV)
Date: 11-15-2018
Job No: MSC-212
Permit No:
Site Address: 12205 and 12225 SE 19th Street
Milwaukie, Oregon

Tax Lots 3200 and 3300 T1S R1E 35
Owner/Developer: BDC Advisors LLC



EXPIRES: 06/30/20

Designer's Certification and Statement

I hereby certify that this Stormwater Management Report for the Riverside Cluster Development has been prepared by me or under my supervision and meets minimum standards of the City of Milwaukie and normal standards of engineering practice. I hereby acknowledge and agree that the jurisdiction does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities designed by me.

Riverside Cluster Development Stormwater Management Report

Prepared by: Harper Houf Peterson Righellis, Inc. (KKV)
Date: 11-15-2018
Job No: MSC-212
Permit No:
Site Address: 12205 and 12225 SE 19th Street
Milwaukie, Oregon

Owner/Developer: Tax Lots 3200 and 3300 T1S R1E 35
BDC Advisors LLC

Designer's Certification and Statement

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Table of Contents

- **Project Overview and Description**
- **Methodology**
- **Analysis**
 - **Stormwater Management**
 - **Conveyance**
- **Engineering Conclusions**
- **Stormwater Facility Calculations and Exhibits**
 - **PAC Report**
 - **Site Plan**
 - **Vegetated Flow Through Planter Section**
- **Operations and Maintenance Form**

Project Overview and Description:

The Riverside Cluster Development project is located in the City of Milwaukie. The site is bordered on the west by the Willamette River Slough, to the north by Tax lots (3100 - 3101) Street, to the east SE 19th Street and to the south by Spring Park. The proposed project will develop a portion of the site into ten single family residences utilizing the cluster development standards.

Existing Site Conditions

The 3.66 acre site is developed with two existing single family residences. The existing residences are located in the northeast and southeast corners of the site. The majority of the site is undeveloped and extends west through the Willamette River Slough and on to Elk Island.

Existing Public Facilities

There are no known public stormwater facilities adjacent to the project site.

There is no existing on-site stormwater management for the site. The existing site drains to the west to the Willamette Slough.

Proposed Site Improvements

The proposed improvements include 9,536 square-feet of a private access road to serve up to ten new single family residences. The residences will vary in size. The private access will be a 24' wide paved roadway approximately 300 linear feet in length.

The proposed residences will include pervious paver driveways.

Methodology:

The site impervious surfaces will need to be managed per the 2016 City of Milwaukie Storm Water Management Manual (Portland Stormwater Management Manual) (SWMM). Per the SWMM, the stormwater management requirements are specific to the receiving stormwater system to which the stormwater will discharge. Following the utilization of impervious area reduction techniques, the highest technically feasible category in the stormwater hierarchy should be followed.

The following addresses each category in the Hierarchy for this project site:

Category 1: Vegetated infiltration facility with no overflow.

The project geotechnical engineer, Redmond Geotechnical Services is not recommending on-site infiltration due to the poor infiltration rates. Due to the low infiltration rates onsite infiltration of stormwater was not recommended.

Category 2: Vegetated infiltration facility with overflow to a subsurface infiltration facility.

The project geotechnical engineer, Redmond Geotechnical Services is not recommending on-site infiltration due to low infiltration rates. Due to the low infiltration rates and infiltration of stormwater was not recommended.

Category 3: Vegetated facilities with overflow to a drainage way, stream, river, or storm-only pipe.

The project will meet the Category 3 requirements because the site is discharging to the Willamette River Slough, therefore flow control is not required.

The development is proposing flow-through planters in order to meet the pollution reduction requirements. Roof drains will discharge to the flow-through planters constructed with each residence and associated with the respective building permits. The flow-through planters will have an overflow system that connects to the building plumbing.

Water Quantity (flow control) is normally required to limit developed peak runoff rates to the undeveloped (forested) condition for the storm events equal to ½ of the 2 year, 5-year, 10-year and 25 year events. However, flow control will not be required for this project due to the proximity of the development site to the Willamette River and the available capacity of the storm only line in SW Columbia Street.

Analysis:

Stormwater Management

The proposed stormwater planter was designed and analyzed using the City of Portland's online Presumptive Approach Calculator (PAC). A curve number of 78 was used for existing conditions (meadow, soil group D), and 98 for proposed impervious surfaces. See PAC report for additional information.

The flow-through planters will provide pollution reduction for the proposed private roadway. The flow-through planters have a water storage design depth of 18" in order to provide pollution reduction for the project impervious area. Refer to the Vegetated Flow Through Planter Section for additional detail.

Conveyance

Pipe sizing for stormwater conveyance was done using the rational method and a 10-year storm (2.86 inches per hour) and time of concentration of 5 minutes. A peak flow of 0.194 cfs was calculated for the site area of 0.219 acres. A 6" storm sewer at 1% slope is proposed for the planter overflow, which has a capacity of 0.79 cfs and will discharge west of the proposed buildings and above the ordinary high water line for the Willamette River Slough.

Engineering Conclusions:

The proposed stormwater management for the project falls under Category 3 of the Stormwater Hierarchy. Vegetated flow-through planters provide pollution reduction prior to discharge to the Willamette River Slough.

Operations and Maintenance Plan:

The proposed facilities will be maintained by the property owner.

Stormwater Facility Calculations and Exhibits

Please see the following calculations:

- PAC Report

Please see the following exhibits:

- Site Plan
- Vegetated Flow Through Planter Section

Operations and Maintenance Form and Plan

PAC Report

Project Name Milwaukie Cluster Development	Permit No.	Created 11/15/18 10:02 AM
Project Address 12205 SE 19th Street Milwaukie, OR 97222	Designer Ken Valentine	Last Modified 11/15/18 11:41 AM
	Company HHPR	Report Generated 11/15/18 11:41 AM

Project Summary

Riverside Cluster Development

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
PRIVATE ROAD	9536	0.80	3	Planter (Flat)	B	230	2.4%	Pass	Not Used

Catchment PRIVATE ROAD

Site Soils & Infiltration Testing Data

Infiltration Testing Procedure

Open Pit Falling Head

Native Soil Infiltration Rate (I_{test})

0.80

Correction Factor

CF_{test}

2

Design Infiltration Rates

Native Soil (I_{dsgn})

0.40 in/hr ⚠

Imported Growing Medium

2.00 in/hr

Catchment Information

Hierarchy Category

3

Disposal Point

A

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

N/A

Impervious Area

9536 sq ft
0.219 acre

Time of Concentration (T_c)

5

Pre-Development Curve Number (CN_{pre})

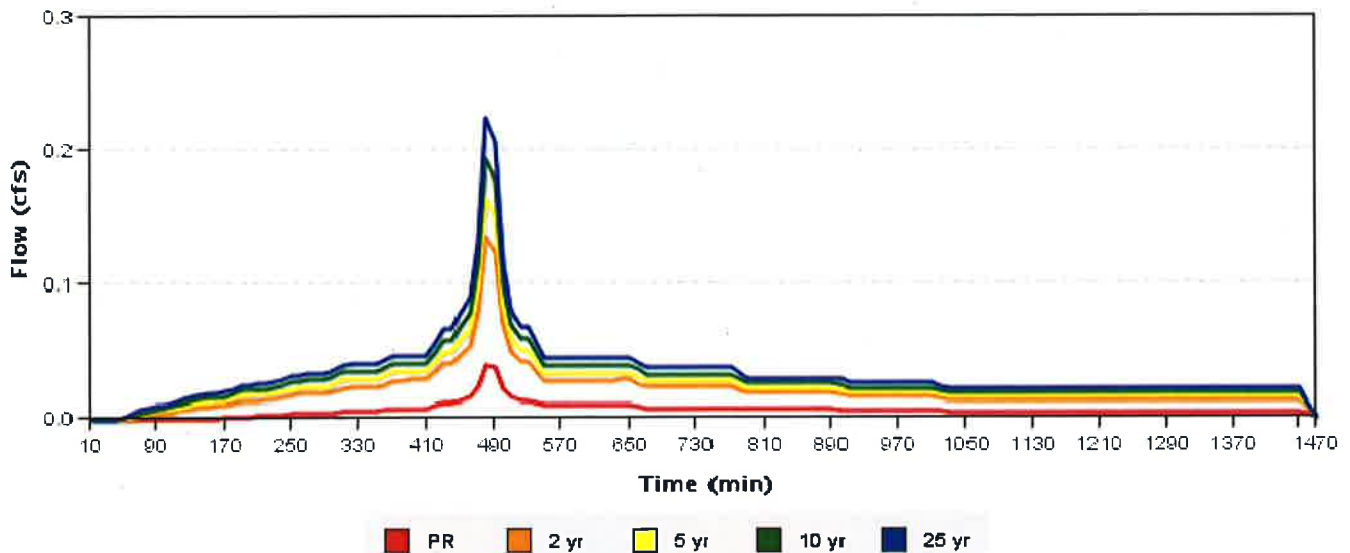
75

Post-Development Curve Number (CN_{post})

98

⚠ Indicates value is outside of recommended range

SBUH Results

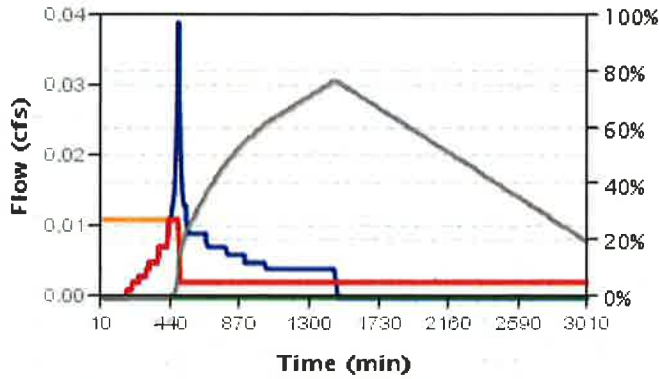


	Pre-Development Rate and Volume		Post-Development Rate and Volume	
	Peak Rate (cfs)	Volume (cf)	Peak Rate (cfs)	Volume (cf)
PR	0	6.063	0.039	498.283
2 yr	0.021	471.223	0.135	1725.5
5 yr	0.038	712.028	0.164	2120.726
10 yr	0.058	978.633	0.194	2516.543
25 yr	0.08	1265.147	0.224	2912.733

Facility PRIVATE ROAD

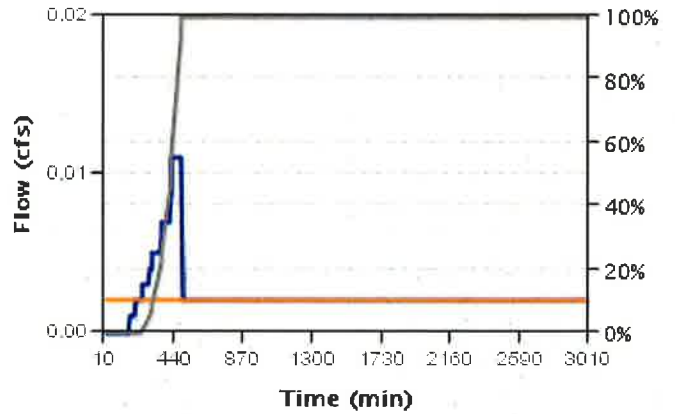
Facility Details	Facility Type	Planter (Flat)
	Facility Configuration	B: Infl. with rock storage (RS)
	Facility Shape	Planter
	Above Grade Storage Data	
	Bottom Area	230 sq ft
	Bottom Width	5.00 ft
	Storage Depth 1	18.0 in
	Growing Medium Depth	36 in
	Surface Capacity at Depth 1	345.0 cu ft
	Design Infiltration Rate for Native Soil	0.002 in/hr
	Infiltration Capacity	0.011 cfs
	Below Grade Storage Data	
	Rock Storage Depth	12 in
	Rock Porosity	0.30 in
Facility Facts	Total Facility Area Including Freeboard	230.00 sq ft
	Sizing Ratio	2.4%
Pollution Reduction Results	Pollution Reduction Score	Pass
	Overflow Volume	0.000 cf
	Surface Capacity Used	77%
	Rock Capacity Used	100%
Flow Control Results	Flow Control Score	Not Used
	Overflow Volume	1939.975 cf
	Surface Capacity Used	100%
	Rock Capacity Used	100%

Pollution Reduction Event Surface Facility Modeling



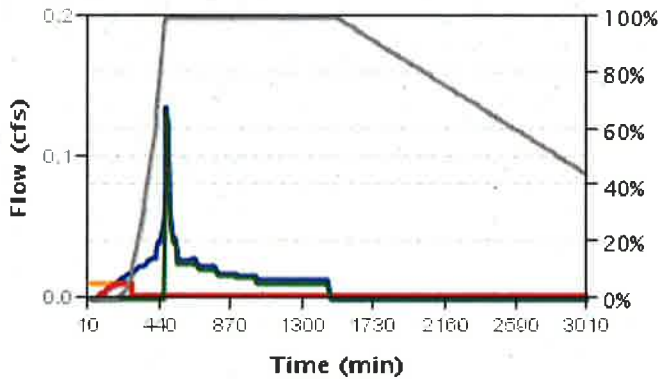
- Inflow from rain
- Percolation to below grade storage
- Percent surface capacity
- Infiltration capacity
- Overflow to approved discharge

Pollution Reduction Event Below Grade Modeling



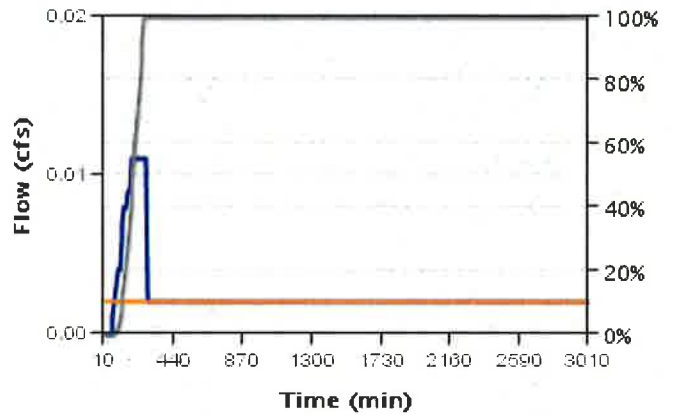
- Inflow to rock storage
- Percent rock capacity
- Infiltration capacity

2 Year Event Surface Facility Modeling



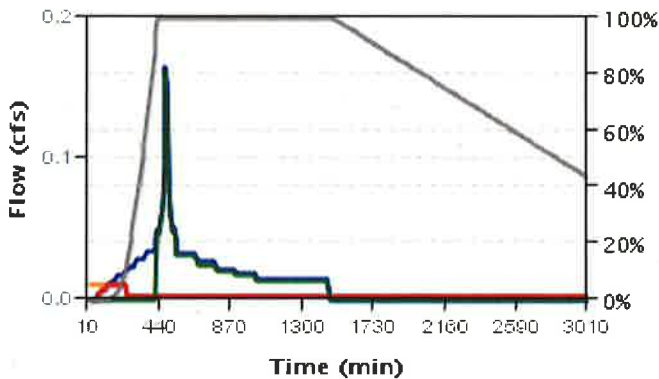
- Inflow from rain
- Percolation to below grade storage
- Percent surface capacity
- Infiltration capacity
- Overflow to approved discharge

2 Year Event Below Grade Modeling



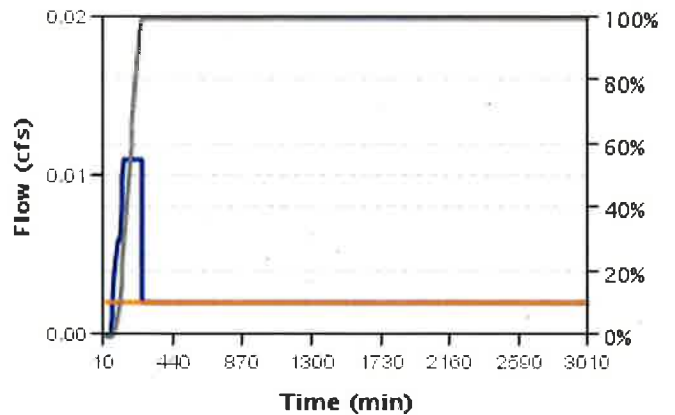
- Inflow to rock storage
- Percent rock capacity
- Infiltration capacity

5 Year Event Surface Facility Modeling



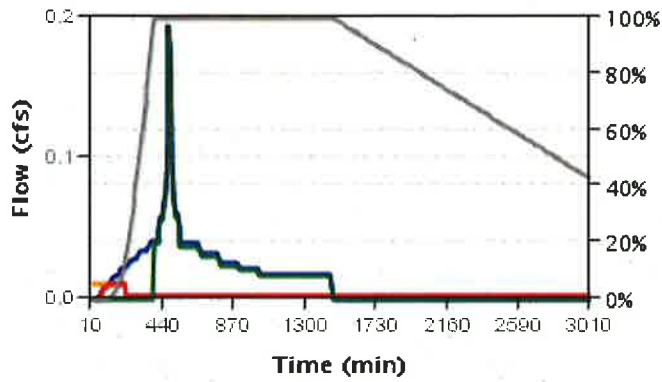
- Inflow from rain
- Percolation to below grade storage
- Percent surface capacity
- Infiltration capacity
- Overflow to approved discharge

5 Year Event Below Grade Modeling



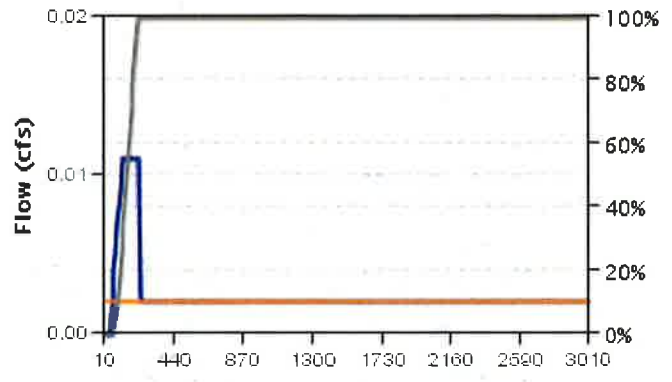
- Inflow to rock storage
- Percent rock capacity
- Infiltration capacity

10 Year Event Surface Facility Modeling



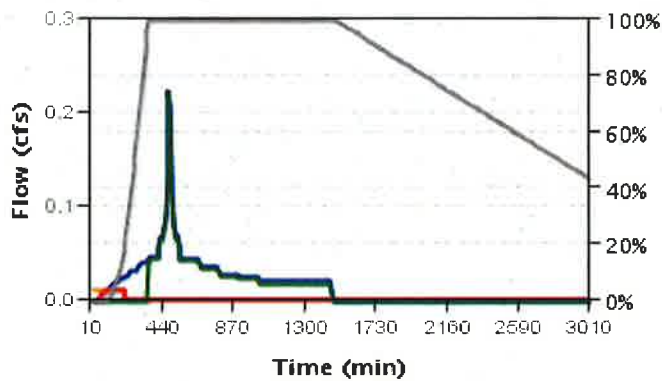
- Inflow from rain
- Percolation to below grade storage
- Percent surface capacity
- Infiltration capacity
- Overflow to approved discharge

10 Year Event Below Grade Modeling



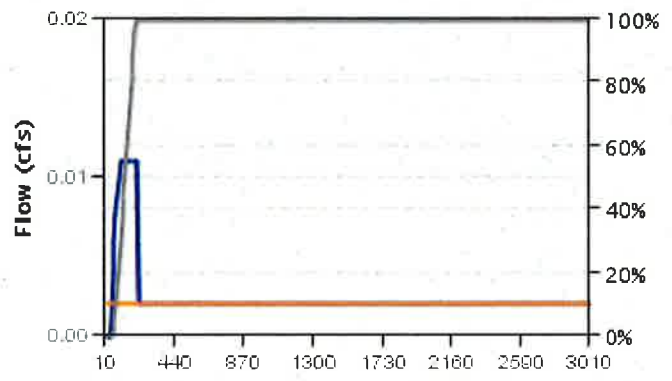
- Inflow to rock storage
- Infiltration capacity
- Percent rock capacity

25 Year Event Surface Facility Modeling

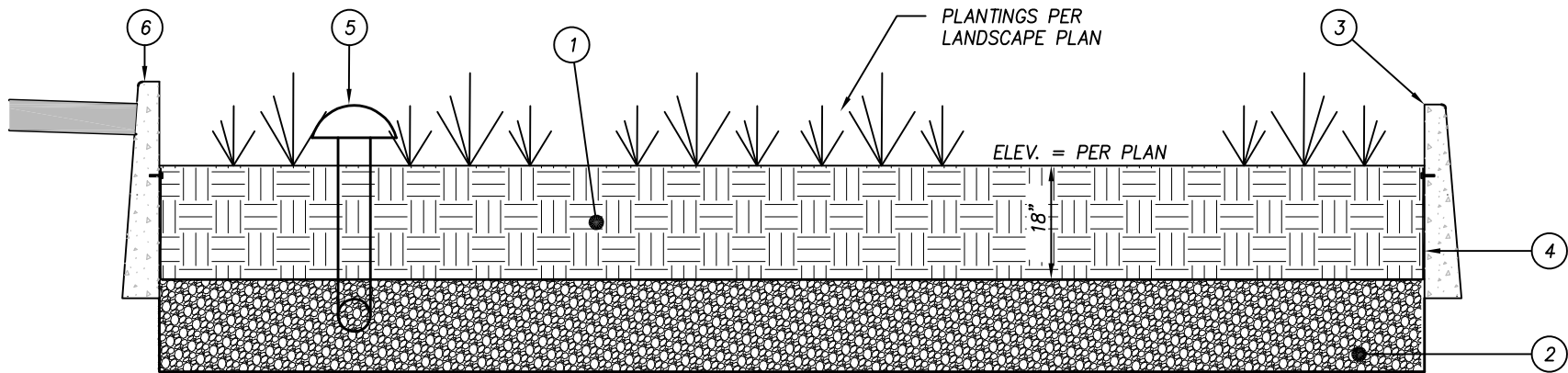


- Inflow from rain
- Percolation to below grade storage
- Percent surface capacity
- Infiltration capacity
- Overflow to approved discharge

25 Year Event Below Grade Modeling



- Inflow to rock storage
- Infiltration capacity
- Percent rock capacity



- ① GROWING MEDIUM.
- ② DRAIN ROCK
- ③ STANDARD CONCRETE CURB, MODIFIED TO 28" HEIGHT.
- ④ FILTER FABRIC.
- ⑤ 12" ATRIUM OVERFLOW INLET
- ⑥ STANDARD CONCRETE CURB WITH 12" DRAINAGE NOTCHES 4' ON CENTER.

VEGETATED FLOW THROUGH PLANTER SECTION

N.T.S.

City of Milwaukie HCA Determination Report
Tax Lots 3200 and 3300 in T1S R1E S35
12205 & 12225 SE 19th St



Evaluated by: John McConnaughey
John McConnaughey, PWS & Annakate Martin, NRS

DATE June 6, 2018

PREPARED FOR:
Mathew Gillis
4776 Carolina Avenue, NE
Salem, OR 97305

 <p>Environmental technology Consultants</p>	<p>Environmental Technology Consultants 375 Portland Ave Gladstone, OR 97027 A Division of Sisul Enterprises, Inc. (360) 696-4403 Fax: (503) 657-5779 WA Landscape Contractors License #: ENVIRTCO23RB Web: www.etcEnvironmental.net Email: AnnakateM@etcEnvironmental.net</p>
<p><i>"Creating Tomorrow's Environment - Today"</i></p>	

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Cover Photo This picture is looking south onto the property where the fill material is evident and the road through the middle of the tax lots can be seen. The Right of way (ROW) is along the south border of the property.

INTRODUCTION

This report addresses the City of Milwaukie’s requirement to determine the HCA boundaries of the subject properties prior to issuing a land use decision. Milwaukie Municipal Code, (MMU), Section 19.402.15. The applicant, Mathew Gillis, is seeking land use approval to construct eight single-family dwellings on the subject property located on these properties.

This report presents evidence that the City’s HCA maps do not correctly show where the HCA boundaries truly are, and we also present what we believe are corrected HCA maps based on MMU Section 19.402.15.

The physical addresses of 12225 & 12205 SE 19th Avenue, Milwaukie, Oregon. The legal description is tax lot 3200, T1S R1E 35 and tax lot and tax lot 3300, T1S R1E 35. Tax lot 3200 is 1.34 acres and tax lot 3300 is 2.32 acres for a total of 3.66 acres. The building class category for these lots is single family residence, zoned R-5. The Milwaukie County Assessor’s office indicated that the houses on the subject properties were built in 1938 with their current configurations. The property is located on the west side of SE 19th Avenue and north of Sparrow Street ROW.

STUDY AREA

This investigation concerns only those portions of the subject lots that lay eastward of the ordinary high-water mark, (OHWM), of the Willamette River. Although the lots extend westward across a side channel and include portions of two small islands, those areas are not considered in this study, nor are developments currently contemplated westward of OHWM. Those areas are assumed to be correctly mapped by Milwaukie’s HCA mapping.

Table 1. Lot Areas and Areas within the Study Boundary defined as those areas laying eastward of the Ordinary High Water Mark, (OHWM), of the Willamette River.

AREAS	TOTAL LOT AREA		STUDY AREA ONLY	
	SQFT	ACRES	SQFT	ACRES
Lot 3300	101,059	2.32	43,550	1.00
Lot 3200	58,370	1.34	25,416	0.58
In Sparrow ROW	xx	xx	19,988	0.46
In 19th Ave ROW	xx	xx	9,596	0.22
Total Lots	189,014	4.34	98,550	2.26

Historically, the land has been a single-family residence since 1938. Most of the land in the study area has been filled with 3 to 4 feet of filled material. The fill is a hard-sandy clayey material that appears to inhibit plant root development. Early aerial photos (1939 and 1948) show the Willamette River and the slough in use for log rafting and storage. We suspect that the fill material was dredged from the slough to make the slough more suitable for transportation related uses, and possibly also to fill wetland areas that may have existed on the property and make it more suitable for farming and other uses.

The vegetation is an eclectic mix of weeds, an association not typically found on vacant lots in this area. Root development is surprisingly shallow, in general plant roots penetrate only the top inch or two of the soil. The purpose of the fill is not clear, as the homes and structures on the property are built as far back from the river as possible. The homes also appear to have been constructed after the fill was placed, suggesting the fill dates to around 1938. From the aerial photos as early as 2000 it appears that the lots have had cars driving on the subject lots and there is a road in the middle of property and historically numerous cars have been parked behind the houses which has made the undeveloped portion of the lots degraded and sparsely vegetated. The study area is generally flat and drops off very steeply about 10 or 15 feet to the Willamette River.

Most of the property is mapped within the Milwaukie’s Habitat Conservation Area (HCA) and Water Quality Resource (WRQ) map. The only area out of the HCA/WQR map on the subject site is the furthest east where the two single-family residences are currently located, (Figure 7A). Offsite to the south is a Right of Way (ROW) that is a swale and was determined wetland. The buffer would extend onto the subject site 50 feet.

Code Requirements. The area selected for the single-family residences is mostly within areas currently mapped as Habitat Conservation Areas (HCA), and the Vegetated Corridor of an identified Water Quality Resource Area, (WQR).

MATERIALS AND METHODS

For this investigation ETC used Wetland Biologist John McConnaughey and Natural Resource Specialist Annakate Martin, who performed the site review according to the procedures outlined in Milwaukie Municipal Code chapter 19.402.

Methods:

The methods employed in this investigation were a modification of the standard methodology used in a routine site analysis. The entire eastern portion (not crossing the slough) of the subject sites has proposed

development of single-family homes was investigated and the ROW to the south. We used our Topcon GPS unit to locate wetlands, OHWM, Top-of-bank, and our data points, and also some common points located in a survey by:

Andy Paris and Associates, Inc.
 16057 Boones Ferry Rd
 Lake Oswego, OR 97035
 503-635-3341

A. Code Requirements from 19.402.15 Natural Resources.

Given that the subject property has long since been developed, as evidenced by the fill that covers all lands in the study area, we believe that those portions of the property eastward of the Willamette River Top of Bank should be removed from the HCA per the code section below:

19.402.15.B.2.b. HCAs

When disturbances are allowed within HCAs, in accordance with the applicable standards of Section 19.402, the City may update the NR Administrative Map to show that the permanently disturbed area is no longer considered an HCA.

RESPONSE: The study area certainly qualifies as “permanently disturbed”, and the evidence presented shows the disturbance long predates the adoption of MMC Section 19. Should the Planning Director agree with this determination, then the fill area should be removed from the HCA.

ETC estimates the remaining HCA area (within the study area boundary only) as follows. These areas are calculated as the area between OHWM and Top-of-Bank. Eastward of Top-of-Bank is all fill material, and has been in various uses that qualify as permanent disturbances since before 1939.

Table 1. HCA Area per 19.402.15.2.b where permanently disturbed areas are removed from the HCA.		
Area Within Study Boundary	SQFT	ACRES
On lot 3300	2,556	0.06
On lot 3200	1,288	0.03
In Sparrow ROW	11,525	0.26
In 19th Ave ROW	0	0.00
TOTAL within Study Area	15,369	0.35
NOTE: Areas are for the study boundary only. Most of the HCA area is east of the study boundary, (OHWM of the Willamette River)		

Early photos show farming and other activity in the Sparrow Street ROW through the 1960’s, however later aerials show ROW as turning into the forested area we observed in our study. The Planning Director may determine that the re-establishment of forest vegetation has converted the ROW into an undisturbed area, and so the City HCA maps may correctly show the ROW as HCA in spite of past disturbances.

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.

Protected Water

Primary protected water features include: all perennial streams, streams draining 100 or more acres, Title 3 wetlands, and natural lakes and springs. See Section 19.201 for the full definition.

RESPONSE: The Willamette River is a primary protected water feature per this section. The wetlands in the SE Sparrow St. ROW do not appear on the Metro Water Quality and Flood Management Area Map, and so they are not a Title 3 wetlands.

Vegetated corridor width shall be applied to the outer boundaries of water features, such as the edge of a wetland and both banks of a watercourse.

Vegetated corridors in excess of 50 ft for primary protected features, or in excess of 15 ft for secondary protected features, apply on steep slopes only in the uphill direction from the protected water feature.

Where the protected water feature is confined by a ravine or gully, the top of ravine is the break in the > 25% slope. A maximum reduction of 25 ft may be permitted in the width of the vegetated corridor beyond the slope break if a geotechnical report demonstrates that the slope is stable. To establish the width of the vegetated corridor, slope should be measured in 25-ft increments away from the water feature until the slope is less than 25% (top of ravine).

Secondary protected water features include intermittent streams draining 50 to 100 acres. See Section 19.201 for the full definition.

RESPONSE: The slope adjacent to the OHWM of the Willamette River is very steep, approaching vertical in areas, and levels off abruptly at the edge of fill, which is the Top-of-Bank. The Width of the vegetated Corridor per Table 19.402.15 is then 50FT starting at the Top-of-Bank going Eastward in to the study area.

The fill extends into the Sparrow Street ROW, making the slope adjacent to the wetland in the Sparrow Street ROW is also > 25%. The slope only rises up to 3' and flattens out close to the property boundary. Wetlands "A" and "B" are secondary protected water features, the width of the vegetated corridor per Table 19.402.15 is 50FT starting at the wetland boundary generally going Northward into the study area.

Boundary Verification

To determine whether the standards of Section 19.402.15 apply to a proposed activity at any given location, the boundaries of any designated natural resource(s) on or near the site shall be verified.

Agreement with the accuracy of the NR Administrative Map does not constitute or require a land use decision. However, for activities proposed within 100 ft of a wetland or its associated vegetated corridor, the boundary verification process outlined in Subsection 19.402.15.A.2.a(1)(b) shall be followed to identify the specific location of wetlands on the subject property. The Planning Director may waive the requirement for official wetland delineation, depending on the specific circumstances of the site and the proposed activity. Such circumstances may include, but are not

limited to, the scale and potential impacts of the proposed activity, the proximity of the proposed activity to the mapped resource, and the Director's confidence in the accuracy of the NR Administrative Map relative to the resource in question. An applicant may challenge the accuracy of the NR Administrative Map through either of the boundary verification processes outlined in Subsections 19.402.15.A.1 and 2.

RESPONSE: Wetlands "A" and "B" are offsite and no impacts are proposed. The HCA boundary from the Willamette River is based on the location of Top-of-Bank as opposed to the boundary defined by OHWM. Therefore, the Director may consider waiving the requirement for an official wetland delineation.

I. Type I Boundary Verification

The following minor corrections to mapped HCAs may be proposed according to one of the following procedures, and are subject to Type I review per Section 19.1004:

a. Simple Incongruities

In some cases, the vegetative cover data shown on the NR Administrative Map might not align with the location of existing legally established development or tree cover. An applicant who believes that the NR Administrative Map is inaccurate, based on such an obvious misalignment, shall submit the following information regarding the property:

(1) A detailed property description and site plan of the property that includes all existing conditions plans listed on the City's Site Plan Requirements.

RESPONSE: Both tax lots have single-family residences that were built in 1938 with their east boundary along 19th Avenue. Tax lot 3200 has 1.34 acres and tax lot 3300 has 2.32 acres. They are at an elevation of 20 feet above sea level. The subject sites are degraded patches of grasses and weeds with no trees or shrubs, there are patches of Japanese knotweed on the properties.

(2) A copy of the applicable NR Administrative Map section.

RESPONSE: See Figure 7.

(3) The latest available aerial photograph of the property, with lot lines shown, at a scale of at least 1 map inch equal to 50 ft for lots of 20,000 or fewer square feet, and a scale of 1 map inch equal to 100 ft for larger lots.

RESPONSE: See Figure 5F from the Wetland Delineation report.

(4) A documented demonstration of the misalignment between the NR Administrative Map and the property's tax lot boundary lines and/or the location of existing legally established development.

RESPONSE: See Figures 7A, 7B, and 7C.

(5) Any other factual information that the applicant wishes to provide to support boundary verification.

RESPONSE: The subject lots have a long history of impacts dating to the 1930's when 3 to 4 feet of fill material, probably dredging's from the slough, were spread across the property, and then houses built on the eastern end. Historical aerials show other structures existed at various times, and the lots used for farming and vehicle parking at various times.

The properties are currently vacant, although it appears some renovation activities are on-going. The vegetation is mostly non-native and invasive weeds. They do not have any qualities that make them ideal habitat for wildlife or vegetation. It does have 10' densely vegetated slope on the west side along the Top-of-bank of the Willamette River. There is some native vegetation but primarily invasive weeds. The Sparrow Street ROW south of the lots is a mixture of native and invasive weeds but does have a nice canopy cover approximately 80% coverage of *Alnus rubra* (Red Alder, FAC) and *Populus balsamifera* (Black Cottonwood, FAC), the shrub layer is primarily *Rubus armeniacus* (Himalayan blackberry, FAC) and the herbaceous layer was primarily *Phalaris arundinacea* (Reed canarygrass, FAC) and *Hedra helix* (English Ivy) there was a good variety of native species mixed in, just at lower percentages. This area is believed to be a constructed ditch that has been determined wetland in the ROW.

b. Legal Development Prior to Adoption Date If a property was legally developed between the summer of 2002 (when the aerial photograph used to determine the regional habitat inventory was taken) and September 15, 2011, the effective date of Ordinance #2036, the applicant shall submit the following information regarding the property:

RESPONSE: Not applicable, the property appears to have been developed around 1938.

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

(I) 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 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.

RESPONSE: There is no need for a hydrology report to show the Willamette River meets Milwaukie's criteria of a protected feature. The problem is the HCA map incorrectly applies a buffer on an area meeting the criteria of "permanently disturbed" per 19.402.15.B.2.b. Further, the HCA appears to be drawn as an offset from some feature other than the correct top-of-bank per Table 19.402.15.

The Willamette slough is part of the study area for the proposed development due to potential buffers. The proposed development has offset the buildings 45 feet from the top of bank.

See Figure 2 for topography and location of the drainage.

(b) Wetlands

In the case of wetlands, the applicant shall submit a wetland delineation report, prepared by a professional wetland specialist in accordance with the 1996 Oregon Freshwater Wetland Assessment Methodology and following the wetlands delineation process established by DSL, demonstrating the location of any wetlands on the site. The delineation report will be accepted only after approval by DSL. If the wetland is demonstrated to be a primary 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 wetland on the subject property. The Planning Director shall confer with DSL and Metro to confirm delineation and hydrology reports, as may be needed, prior to issuing a notice of decision on a requested map correction.

RESPONSE: The Planning Director may not need to confer with DSL and Metro for the following reasons: There were no wetlands found above OHWM on the subject parcels. As the project impacts are all above OHWM and within the subject parcels, the project proposes no wetland impacts.

The OHWM of the Willamette River was used as the Western study area boundary, ETC determined OHWM to the 20FT elevation line drawn by the surveyors. Although waters and wetlands exist on the parcels west of OHWM, they were not examined for this study. Should DSL determine that OHWM was an elevation other than 20FT, it would not change the mapping of the HCA, as the HCA projects from Top-of-Bank per Table 19.402.15. Moving the OHWM up or down by as much as 10FT would not affect the HCA boundary determination.

Two small wetlands were found in the Sparrow Street ROW, Wetland "A" is 8FT South of the property at it's nearest point. Wetland "B" is 12FT South at it's nearest point. These are secondary protected features.

(2) Approval Criteria

The City shall update the NR Administrative Map if the wetland or hydrology report submitted demonstrates any of the following:

- (a) That there was an error in the original mapping.
- (b) That the boundaries of the WQR have changed since the most recent update to the NR Administrative Map.
- (c) That a primary protected water feature no longer exists because the area has been legally filled, culverted, or developed prior to January 16, 2003, the effective date of Ordinance #1912.

RESPONSE: The update to the administrative map should be as per (2)(a), that there was an error in the original mapping.

b. Detailed Verification of HCAs

An applicant who believes that an HCA shown on the NR Administrative Map should be corrected for a reason other than those described in Subsections 19.402.15.A.1.a or b may propose a detailed verification.

(1) Submittal Requirements

The applicant shall submit a report prepared and signed by either a knowledgeable and qualified natural resource professional; such as a wildlife biologist, botanist, or hydrologist; or a civil or environmental engineer registered in Oregon to design public sanitary or storm systems, storm water facilities, or other similar facilities. The report shall include:

- (a) A description of the qualifications and experience of all persons that contributed to the report and, for each person that contributed, a description of the elements of the analysis to which the person contributed.

QUALIFICATIONS OF JOHN MCCONNAUGHEY, PWS

I earned a Bachelor of Science degree from the University of Oregon in 1978 and in 1984 I earned a Masters of Fisheries Science degree from the University of Alaska at Juneau, (since renamed as the University of Alaska, Southeast). The Juneau curriculum specializes in the study of Pacific salmon. I held positions with agencies tasked with salmon research and management beginning with summer jobs in 1979 in Rogue

River, the Oregon Dept of Fish and Wildlife, and then with the Alaska Department of Fish and Game in Ketchikan, Alaska in 1980. I worked on salmon projects with ADF&G in Anchorage and Juneau for 5 years before moving to American Samoa to serve as a fisheries projects leader for the Department of Marine and Wildlife Resources. Upon returning stateside, I worked for the Yakama/Klickitat Fisheries Project out of Yakima Washington for 5 years leading four research projects studying aspects of salmon supplementation projects in the Yakima River.

I have been employed with Environmental Technology Consultants since 2006. In 2010 I earned certification as a Professional Wetland Scientist, (PWS) from the Society of Wetlands Scientists, (SWS). No part of my compensation is dependent on the outcome of my investigations or conclusions I may draw from the observed data.

QUALIFICATIONS OF ANNAKATE MARTIN, NRS

I received my Bachelor of Science degree in Natural Resources from Washington State University in 2002. In 2002 I worked for the University of Idaho on MAP tracking steelhead and salmon on the Snake River out of Clarkston, Washington. 2002-2003 I worked for Idaho Fish and Game as a field technician for identifying fish in remote streams in Idaho. In 2004, 2016 and currently I have worked for Environmental Technology Consultants conducting wetland delineations and all other environmental reports. From 2007-2014 I worked for 3 Kings Environmental conducting Phase I ESA reports, asbestos and lead surveys. In 2011 I started my own company primarily providing erosion control services and conducting Phase I ESA habitat assessments. I was employed with Clark Public Utilities as a Watershed Coordinator in which I oversaw property restoration with native plants and maintained a nursery in 2017 before coming back to ETC in 2018.

I am currently working on getting my certification as a Professional Wetland Scientist from Portland State University. I have 20 years working in the environmental field specializing in many different areas. No part of my compensation is dependent on the outcome of my investigations or conclusions I may draw from the observed data.

(b) The information described in Subsection 19.402.15.A.1.a.

RESPONSE: See subsection 19.402.15A.1.a explained above.

(c) The information described in Subsection 19.402.15.A.1.b, if the applicant believes such information is relevant to the verification of habitat location on the subject lot or parcel.

RESPONSE: See subsection 19.402.15A.1.a explained above.

(d) Additional aerial photographs, if the applicant believes they provide better information regarding the property, including documentation of the date and process used to take the photos and an expert's interpretation of the additional information they provide.

RESPONSE: See Figures 5A through 5E in the Wetland Delineation Report.

(e) A map showing the topography of the property shown by 2-ft vertical contours in areas of slopes less than 15%, and at 5-ft vertical contours of slopes 15% or greater.

RESPONSE: See Figure 6B.

(f) Any additional information necessary to address each of the detailed verification criteria provided in Subsection 19.402.15.A.2.b(2); a description of where any HCAs are located on the property, based on the application of the detailed verification criteria; and factual documentation to support the analysis.

RESPONSE: In our opinion the HCA as mapped is incorrect for two reasons per Chapter 19.402.15:

- Per section 19.402.15.B.2.b, legally permanently disturbed areas should be removed from an HCA designation. We have presented evidence that the study area was significantly disturbed long before the adoption of Chapter 19. The disturbed area is the area covered by fill material, essentially those portions of the property laying east of Top-of-Bank.
- Per table 19.402.15, the WQR should extend 50' from the Top-of-Bank of the Willamette River, and 50' from the delineated boundaries of Wetlands "A" and "B". The HCA maps suggest some other reference point was used.

(2) Approval Criteria

A boundary verification request submitted under Subsection 19.402.15.A.2.b shall be evaluated according to the following three-step process:

(a) Verify Boundaries of Inventoried Riparian Habitat. Locating habitat and determining the riparian habitat class of the designated natural resource is a four-step process:

(i) Locate the water feature that is the basis for identifying riparian habitat. Locate the top of bank of all streams, rivers, and open water within 200 ft of the property. Locate all flood areas within 100 ft of the property.

RESPONSE: A Willamette river slough runs through the western portion of the tax lots and divides the properties between the study area for this project, and a small island that was not included in this study.

Ordinary High Water was determined on May 25, when the high flows in the Columbia had backed water up in the Willamette. Water levels on this day were above any visible drift deposits or other water marks, and about 6' below Top-of-Bank. In our estimation the water level on May 25 was a reasonable estimate of OHWM.

The bank is very steep in this section, with slopes from 50% to near vertical. The exact elevation of OHWM is not critical, as per Table 19.402.15 the vegetated corridor begins at Top-of-Bank, not at OHWM. OHWM, Top-of-Bank, and FEMA 100-year flood areas are shown in Figure 6.

Locate all wetlands within 150 ft of the property, based on the NR Administrative Map. Identified wetlands shall be further delineated consistent with methods currently accepted by DSL and the Corps.

RESPONSE: Wetland determinations and delineations discussed in this report were conducted in accordance with the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual ("the manual"), including regional supplements and applicable guidance, and supporting technical or guidance documents issued by the Department of State Lands.

We located a wetland south of the tax lots in the SE Sparrow Street ROW that is within 150'. This wetland appears to be previously unmapped by the NR Administrative Map. No other wetlands within 150 ft of the property were found.

The ditch that cuts through the middle of Sparrow Street ROW drains impervious runoff from the surrounding roads and buildings. The northern bank close to the property was construction rocks that appears was for the tax lots when they were being developed and built up with fill material in 1938. There is a berm half way through the swale and we didn't identify a culvert but suspect one is or was there for water flow at one time. We did not observe evidence of flow at the time of the site visit and the ditch did not appear to drain into the Willamette River as the channel ceased to exist before the river.

The center of the ditch is primarily bare ground where the concentration of hydrologic indicators were present. There was small percentages of *Equisetum arvense* (Horsetail, FAC) and *Epilobium alpestre* (Willowherb, NOL) in the bottom of the ditch.

Along the slopes the primary habitat is *Hedra helix* (English Ivy, FACU), *Rubus ameriacus* (Himalayan Blackberry, FAC), *Corylus cornuta* (Beaked hazelnut, *Phalaris arundinacea* (Reed Canarygrass, FAC) and *Populus balsamifera* (Black Cottonwood, FAC). The swale has a mix of invasive species and natives and is good habitat for wildlife.

In the bottom of the swale/ditch has hydric soils with colors 10YR3/1 and 10YR4/1, which is a depleted matrix. There was hydrology at less than 12".

(ii) Identify the vegetative cover status of all areas on the property that are within 200 ft of the top of bank of streams, rivers, and open water; are wetlands or are within 150 ft of wetlands; and are flood areas and within 100 ft of flood areas. Vegetative cover status shall be as identified on the latest Metro Vegetative Cover Map (available from the City and/or the Metro Data source Center). The vegetative cover status of a property may be adjusted only if: (1) the property was legally developed prior to September 15, 2011, the effective date of Ordinance #2036 (see subsection 19.402.15.A.1.b); or (2) an error was made at the time the vegetative cover status was determined. To assert the latter type of error, applicants shall submit an analysis of the vegetative cover on their property, using the aerial photographs on which the latest Metro Vegetative Cover Map is based and the definitions of the different vegetative cover types identified in Table 19.402.15.A.2.b(2)(a)(iv).

RESPONSE: The subject sites were developed prior to 2011 and were established in 1938. The vegetative cover for the study area of these tax lots was misidentified on city maps in our professional opinions since the tax lots on the eastern portion after the Willamette slough is degraded mowed yard grasses and non-native weeds, (See Plot P7 in the Wetland Delineation report. Aerial photos dating back to 2000 are included in Figure 3 of this report clearly showing the property as it is today. It has been used as a parking and driveway for the past 18 years. There are no trees or native vegetation located on the study area where the proposed development would be.

The top of bank along the Willamette slough has a 10-foot vegetated area that has approximately 15% canopy of Black Cottonwood and a shrub layer of 85% Himalayan blackberry. There are small patches of Red Osier Dogwood. It would be considered degraded due to the high percentage of blackberry.

The majority of the study area within 200 ft of the Willamette River is a weedy lawn with a strange plant assemblage. It is dominated by Narrowleaf plantain (~50%), and a very short unidentified grasses at approximately 40%, Curly Dock at 20%, at about 20% Trefoil, and Bull Thistle at 15%. There are patches of Japanese knotweed (roughly 7% of the lawn area), and Blackberry, (roughly 10%). Roughly 10% of the

lawn area is bare ground. It appears the area has been irregularly maintained, and variously used for parking vehicles and as a yard.

The Sparrow Street ROW to the south of the property is densely vegetated with 65% canopy of Black Cottonwood, Beaked Hazelnut 5%, and Red Alder 10%. The shrub layer is Himalayan blackberry 70%, some Indian plum 5%, and Holly 10%. The herbaceous strata were Reed Canarygrass 50%, Willowherb 15%, high percentages in various spots of English Ivy and Cleavers on the upland areas and small percentages of Horsetail and grasses in the bottom of the ditch. The bottom of the ditch was patchy vegetation and bare ground. The upland area was on the slope of the ditch 3 feet away from the center of the ditch.

(iii) Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 ft of the property is greater than or less than 25%, using the methodology outlined in Table 19.402.15.

RESPONSE: An inclinometer was used but was hardly necessary to determine where slopes were greater than 25% for the banks of the Willamette River. Indeed, we could not walk in those areas, as we would risk tumbling down a very steep slope through a tangle of blackberries and end up in the river. The slopes along the river are greater than 25% and are actually very steep up to near vertical.

The slopes adjacent to Wetland “A” were formed by the fill covering the two lots. According to our inclinometer that slope was up to 60%, rising 3 to 4 feet and then level on the property.

The slopes adjacent to Wetland “B” are the in line with Wetland “A” and would be one contiguous feature if there wasn’t a dam between them. The slopes were between 40-60% rising 3 to 4 feet and level on the property.

(iv) Identify the riparian habitat classes applicable to all areas on the property using Table 19.402.15.A.2.b(2)(a)(iv) and the data identified in Subsections 19.402.15.A.2.b(2)(a)(i) through (iii).

RESPONSE: The Development/Vegetation Status for the study area is “Low Structure Vegetation or Open Soils”, and the classification per table Table 19.402.15.A.2.b(2)(a)(iv) is then figured from the Top-of-Bank as 0 feet:

- Class I from 0 to 50 FT
- Class II from 51 to 100 FT
- Class II from 101 to 200 FT (slopes are less than 25%).

IMPACT EVALUATION

Lot 3300 with the physical address of 12225 SE 19th Avenue is impacted by the Willamette river slough buffer but doesn't have any restrictions due to wetlands in the surrounding area or on the property. The buffer from the river is 150' which encroaches on the proposed development.

Lot 3200 with the physical address of 12205 SE 19th Avenue has restrictions from the Willamette river slough buffers and wetland buffers to the south. The buffer from the south encroaches on the property 50', approximately where the current house is located. The proposed development encroaches the wetland buffer and is on the southern property line, there is no vegetation in the buffer that is encroached except degraded grasses.

The total proposed impacts for the subject sites is 1.14 acres, the proposed plan as shown in Figure 1 has 8 single family residences, 6 homes 50 feet away from the top of bank of the Willamette slough, and one within the 50 feet of the offsite wetland buffer. The proposed development is subject to change but none of the proposed plans impact the buffers more than the one shown in Figure 1. These buffers do not have any critical habitats or native vegetative species at this time, the buffers are degraded grasses and fill material.

Below is a table of proposed construction disturbances:

Table 3. Proposed Disturbed Areas (SQFT). Permanent disturbances include the paved areas of the roads, driveways and houses. The temporary disturbance is a 5' construction buffer which will be planted as part of the mitigation. The total project area is about 31,050 SQFT of which 29,316 SQFT are outside the HCA boundary.			
Mapping	Permanent disturbance (SQFT)	Temporary disturbance (SQFT)	Total (SQFT)
WQR	995	543	1,538
HCA	-	198	196
OUTSIDE	24,730	4,586	29,316
Total	25,725	5,327	31,050

The current condition of the site is degraded and has many invasive species (Shiny geranium, Reed Canary grass, Thistle, Curly dock, Japanese knotweed, Himalayan blackberry, English ivy, Holly, ect.) The proposed plan would be an improvement to the area and the past development of the lots predates the City of Milwaukie's designation of HCA in 2011.

CONCLUSION

The study area has been in its degraded state since 1938 when the property had approximately 3-4 feet of fill to establish the tax lots and construct the two single-family residences. This report proposes

corrections to HCA boundaries, that if the Planning Director agrees, will remove the HCA designation from much of the study area.

The OHWM along the Willamette River is approximately 10 feet below the top of the bank and the banks are very steep with slopes greater than 25%, the slopes are heavily vegetated with Himalayan Blackberry and English Ivy on the herbaceous/shrub strata on the trees strata there is Black Cottonwood at 15%.

The suggested buffers are on fill material that have no native species for vegetation and the grasses that are at present patchy with 33% bare ground.

It is our recommendation that the proposed development will not harm the present state of the habitat and with mitigation to plant native plants and remove invasive species such as Japanese Knotweed, unknown grasses and Plantain which may improve the study area with mitigation of native plants.

Study Area Photographs



Photo 1: This is a photo looking North down the dirt road through the middle of the study area. The view is from south to north. ETC Photo 5/25/2018



Photo 2: A clear view of the fill that is the study area. The house is 12225 SE 19th Avenue. ETC Photo 5/25/2018



Photo 3: Japanese Knotweed on the study site. ETC Photo 5/25/2018



Photo 4: Photo from the northwest corner, a good example of the study area.



Photo 5: Plots 4 and 5 along the slope to the Willamette river. The OHWM is between the two plots at the river level observed on 5/25/2018. ETC Photo 6/18/2018.



Photo 6: OHWM along the Willamette river. ETC Photo 5/25/2018.



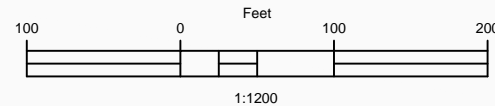
Photo 7: Plots 1 and 2 in Sparrow Street ROW. ETC Photo 5/25/2018.



Photo 8: Plot 7 in approximately the middle of the lawn area. ETC Photo 5/25/2018

Figures

- Figure 7A** **HCA as mapped by the City**
- Figure 7B** **Proposed correction to HCA by removing permanently disturbed areas.**
- Figure 7B** **Proposed WQR based on Table 19.402.**
- Figure 8** **Proposed Development**



SUBJECT PROPERTY

3100

3200

3300

SLOUGH

WREN STREET

3101

SE 19TH AVENUE

WILLAMETTE RIVER OHWM ELEVATION = 20FT

TOP OF BANK

ORANGE REPRESENTS HCA MAPPED AREA

GREEN REPRESENTS VEGETATED CORRIDOR PER HCA MAPPING

P7

P5

P6

P4

P3

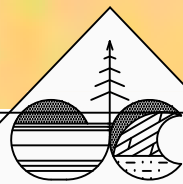
P1

P2

SE SPARROW ST

WETLAND "B" 188 SQFT

WETLAND "A" 3,175 SQFT WITHIN STUDY AREA. CONTINUES SOUTH PAST STUDY AREA BOUNDARY



environmental technology consultants

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Vancouver, WA 98682
360-696-4403

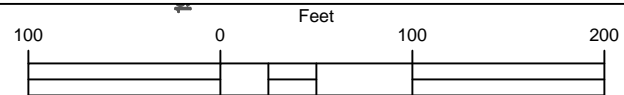
CITY OF MILWAUKIE HCA MAP WITH WETLANDS AND OHWM AS DETERMINED BY ENVIRONMENTAL TECHNOLOGY CONSULTANTS.

MILWAUKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

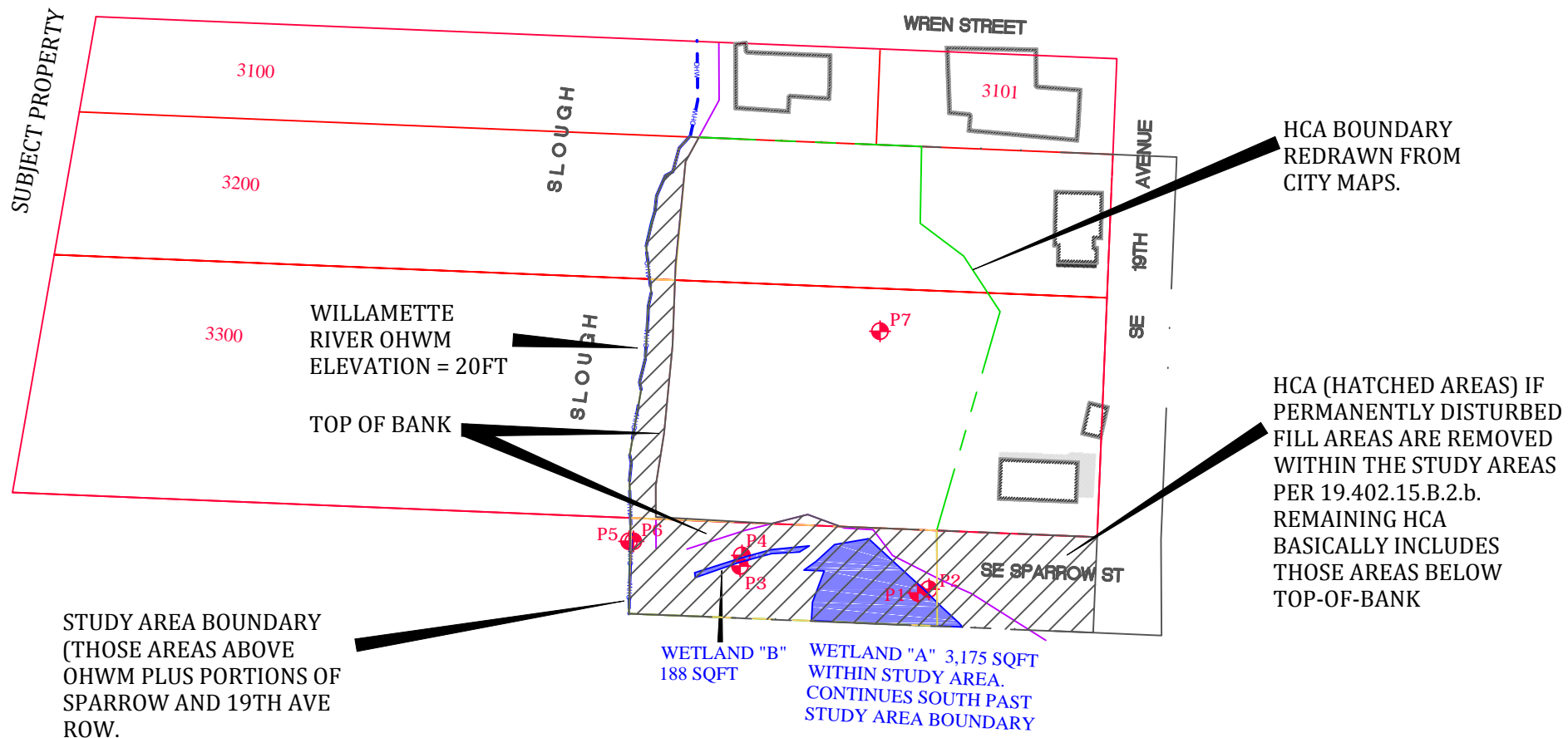
Jul 30, 2018

7A

SHEET



1"=100FT FORMATTED FOR 8.5X11



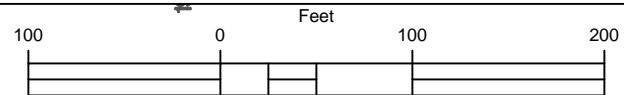
STUDY AREA BOUNDARY (THOSE AREAS ABOVE OHWM PLUS PORTIONS OF SPARROW AND 19TH AVE ROW.

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consultants

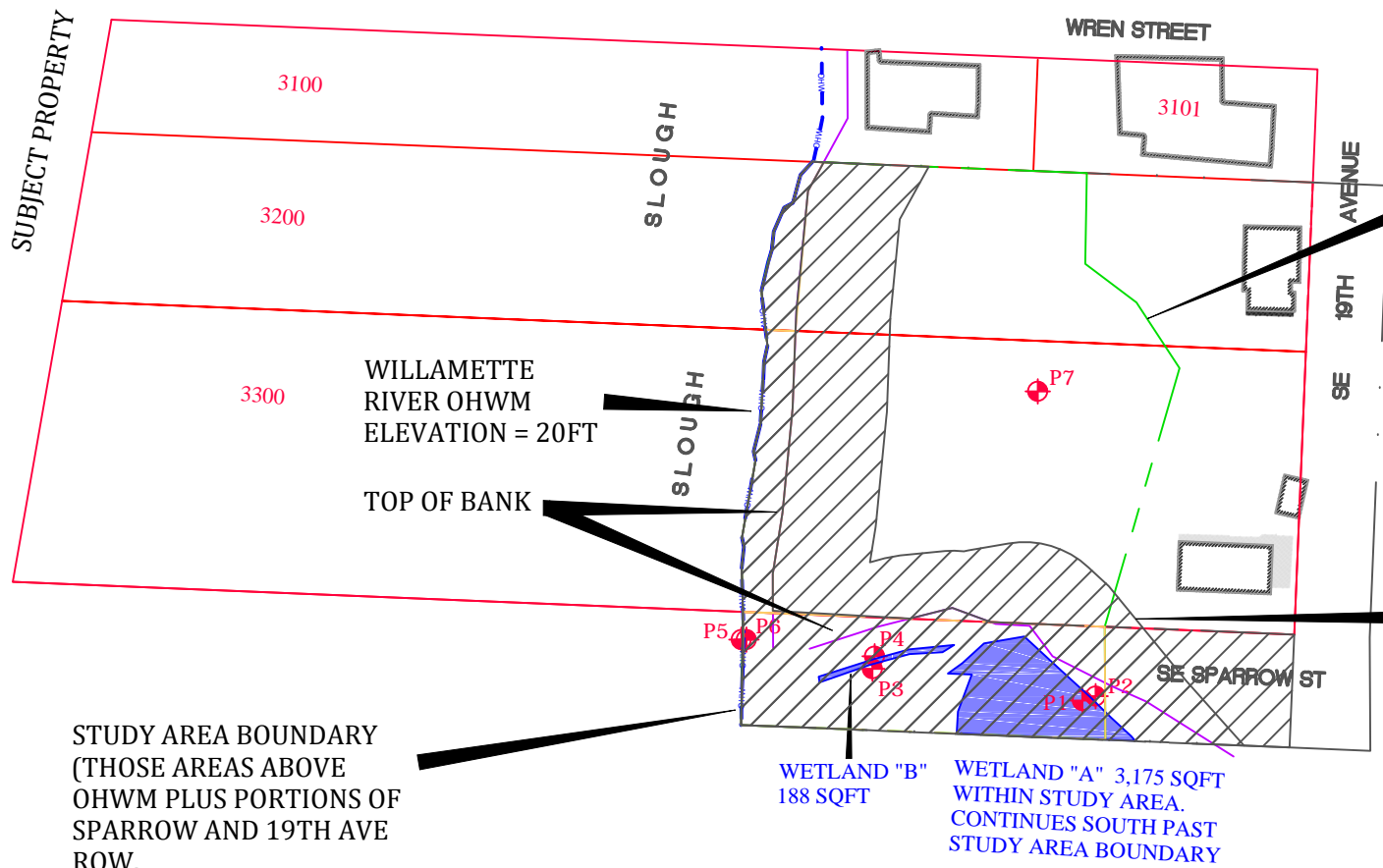
PO Box 821185
Vancouver, WA 98682
360-696-4403

HCA BOUNDARIES IF PERMANENTLY DISTURBED AREAS ARE REMOVED FROM THE HCA PER 19.402.15.B.2.b. .

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068



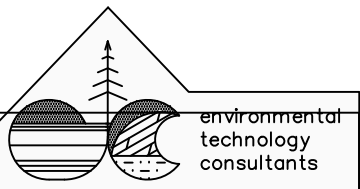
1"=100FT FORMATTED FOR 8.5X11



HCA BOUNDARY REDRAWN FROM CITY MAPS.

HCA (HATCHED AREAS) PER TABLE 19.402.15 WHERE HCA EXTENDS 50' FROM TOP OF BANK OF A PRIMARY PROTECTED WATER FEATURE (WILLAMETTE RIVER), AND 50' FROM DELINEATED WETLAND BOUNDARY OF A SECONDARY PROTECTED WATER FEATURE.

STUDY AREA BOUNDARY (THOSE AREAS ABOVE OHWM PLUS PORTIONS OF SPARROW AND 19TH AVE ROW.



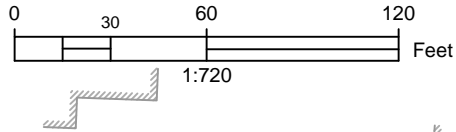
environmental technology consultants

PO Box 821185
Vancouver, WA 98682
360-696-4403

HCA BOUNDARIES PER HCA BOUNDARY VERIFICATION AND TABLE 19.402.15

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

SHEET
7C
Jul 30, 2018



OHWM
TOP OF BANK

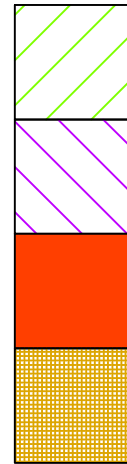
WQR
AREA

71

50

19TH
AVENUE

LEGEND



WQR AREA

HCA AREA

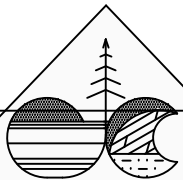
PERMANENT
DISTURBANCE

TEMPORARY
DISTURBANCE

HCA
AREA

SPARROW
STREET

DISTURBANCES TO WQR AND HCA ARE CAUSED BY THE ROAD. 995 SQFT OF PERMANENT DISTURBANCE, 1,734 SQFT OF TEMPORARY DISTURBANCE



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DEVELOPMENT PLAN AND PROPOSED IMPACTS TO WQR AND HCA AREAS

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

Jul 30, 2018

SHEET

8

PO Box 821185
Vancouver, WA 98682
360-696-4403

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

This form must be included with any wetland delineation report submitted to the Department of State Lands for review and approval. A wetland delineation report submittal is not "complete" unless the fully completed and signed report cover form and the required fee are submitted. Attach this form to the front of an unbound report or include a hard copy of the completed form with a CD/DVD that includes a 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 attachment of the completed cover form and report may be e-mailed to **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail instructions on how to access the file from your ftp or other file sharing website. Fees can be paid by check or credit card. Make the check payable to the Oregon Department of State Lands. To pay the fee by credit card, call 503-986-5200.

<input checked="" type="checkbox"/> Applicant <input checked="" type="checkbox"/> Owner Name, Firm and Address: Matthew Gillis 4776 Carolina avenue, NE Salem, OR 97305	Business phone # 661-810-2344 Mobile phone # E-mail: matthew.gillis@me.com
---	--

<input checked="" type="checkbox"/> Authorized Legal Agent, Name and Address: Environmental Technology Consultants 375 Portland Ave, Gladstone, OR 97027	Business phone # 360-696-4403 Mobile phone # 503-580-2465 E-mail: JohnM@etcEnvironmental.net AnnakateM@etcEnvironmental.net
--	---

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: Matthew Gillis Signature: _____
 Date: **May 29, 2018** Special instructions regarding site access: **Contact owner or agent**

Project and Site Information (using decimal degree format for lat/long of site or start & end points of linear project)

Project Name: Matthew Gillis Milwaukie	Latitude: N 45.43470	Longitude: W -121.64527
Proposed Use: Single Family Homes	Tax Map # 031s1e35dd	
Project Street Address (or other descriptive location): 12225 SE 19th Avenue	Township 1S	Range 1E Section 35 QQ DD
City: Milwaukie	County: Clackamas	Tax Lot(s) 03300 and 03200 and portions of adjacent ROWs
	Waterway: Willamette River	River Mile: NWI Quad(s):

Wetland Delineation Information

Wetland Consultant Name, Firm and Address: John McConnaughey, PWS Environmental Technology Consultants 375 Portland Ave, Gladstone, OR 97027 360-696-4403 desk 503-580-2465 cell The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge. Consultant Signature: <i>[Signature]</i>	Phone # 360-696-4403 Mobile phone # 503-580-2465 E-mail: JohnM@etcEnvironmental.net Date: May 29, 2018
---	--

Primary Contact for report review and site access is Consultant Applicant/Owner Authorized Agent

Wetland/Waters Present? Yes No Study Area size **2.26 acres** Total Wetland Acreage: **0.08 acres**

Check Box Below if Applicable: Fees: \$437 (2018)

<input type="checkbox"/> R-F permit application submitted <input type="checkbox"/> Mitigation bank site <input type="checkbox"/> Wetland restoration/enhancement project (not mitigation) <input type="checkbox"/> Industrial Land Certification Program Site <input type="checkbox"/> Reissuance of a recently expired delineation Previous DSL # _____ Expiration date _____	<input checked="" type="checkbox"/> Fee payment submitted \$437 <input type="checkbox"/> Fee (\$100) for resubmittal of rejected report <input type="checkbox"/> No fee for request for reissuance of an expired report
---	--

Other Information:

Has previous delineation/application been made on parcel?	Y	N	
	<input type="checkbox"/>	<input type="checkbox"/>	
Does LWI, if any, show wetland or waters on parcel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

For Office Use Only

DSL Reviewer: _____	Fee Paid Date: ____ / ____ / ____	DSL WD # _____
Date Delineation Received: ____ / ____ / ____	DSL Project # _____	DSL Site # _____
Scanned: <input type="checkbox"/> Final Scan: <input type="checkbox"/>	DSL WN # _____	DSL App. # _____

WETLAND DELINEATION REPORT
Tax lots 03300 and 03200
N.W.1/4 S.W.1/4 SEC.35 T.1S. R.1E. W.M.



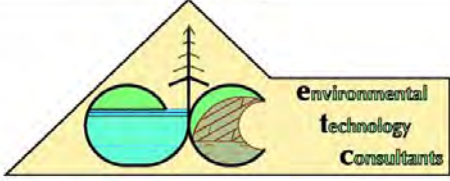
Milwaukie, Oregon

Evaluated by:

John McConnaughey, PWS# 2009 Annakate Martin, NRS

May 29, 2018

Matthew Gillis
4776 Carolina Avenue, NE
Salem, OR 97305



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Environmental Technology Consultants
A Division of Sisul Enterprises, Inc.
375 Portland Ave, Gladstone, OR 97027
PO Box 821185, Vancouver, WA 98682
(360) 696-4403 Fax: (503) 657-5779
WA Landscape Contractors License #: ENVIRTCO23RB
Web: www.etcEnvironmental.net
Email: etc@etcEnvironmental.net

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Cover Photo.

The cover photo shows what we believe is fill material on the subject properties.

INTRODUCTION

This study is for Matthew Gillis’s proposed 12 house single family residences which will have an open space playground in the middle of the development, and a dock built out over the slough. The dock will be subject of a future application This delineation and accompanying HCA determination is not concerned with the dock.

STUDY AREA. This study area includes only those portions of tax lots 3200 and 3300 that lay east of the Willamette River OHWM, and also includes portions of the adjacent Right Of Way of Sparrow Street and 19th Avenue. The tax lots do cross the slough of the Willamette River onto Elk Island. Those areas were not including in the study area because they are not included in the proposed development. The Willamette river slough is approximately 25 feet down slope and to the west of the subject sites study area.

TABLE 1. Areas discussed in this report				
AREAS	TOTAL LOT AREA		STUDY AREA ONLY	
	SQFT	ACRES	SQFT	ACRES
Lot 3300	101,059	2.32	43,550	1.00
Lot 3200	58,370	1.34	25,416	0.58
In Sparrow ROW	19,988	0.46	19,988	0.46
In 19th Ave ROW	9,596	0.22	9,596	0.22
TOTAL	189,014	4.34	98,550	2.26

This report is intended to assist the permittee, the City of Milwaukie evaluate the application and determine what environmental conditions or mitigations may be required to move the project along.

QUALIFICATIONS OF JOHN MCCONNAUGHEY, PWS

I earned a Bachelor of Science degree from the University of Oregon in 1978 and in 1984 I earned a Masters of Fisheries Science degree from the University of Alaska at Juneau, (since renamed as the University of Alaska, Southeast). The Juneau curriculum specializes in the study of Pacific salmon. I held positions with agencies tasked with salmon research and management beginning with summer jobs in 1979 in Rogue River, the Oregon Dept of Fish and Wildlife, and then with the Alaska Department of Fish and Game in Ketchikan, Alaska in 1980. I worked on salmon projects with ADF&G in Anchorage and Juneau for 5 years before moving to American Samoa to serve as a fisheries projects leader for the Department of Marine and Wildlife Resources. Upon returning stateside, I worked for the Yakama/Klickitat Fisheries Project out of Yakima Washington for 5 years leading four research projects studying aspects of salmon supplementation projects in the Yakima River.

I have been employed with Environmental Technology Consultants since 2006. In 2010 I earned certification as a Professional Wetland Scientist, (PWS) from the Society of Wetlands Scientists, (SWS).

No part of my compensation is dependent on the outcome of my investigations or conclusions I may draw from the observed data.

QUALIFICATIONS OF ANNAKATE MARTIN, NRS

I earned a Bachelor of Science degree in Natural Resources from Washington State University in 2002. In 2002 I worked for the University of Idaho on MAP tracking steelhead and salmon on the Snake River out of Clarkston, Washington. 2002-2003 I worked for Idaho Fish and Game as a field technician for

identifying fish in remote streams in Idaho. In 2004, 2016 and currently I have worked for Environmental Technology Consultants conducting wetland delineations and all other environmental reports. From 2007-2014 I worked for 3 Kings Environmental conducting Phase I ESA reports, asbestos and lead surveys. In 2011 I started my own company primarily providing erosion control services. I was employed with Clark Public Utilities as a Watershed Coordinator in which I oversaw property restoration and maintaining a nursery.

I am currently working on getting my certification as a Professional Wetland Scientist from Portland State University. I have 16 years working in the environmental field specializing in many different areas.

No part of my compensation is dependent on the outcome of my investigations or conclusions I may draw from the observed data.

A) Landscape Setting and Land Use:

Lots 3200 and 3300 are bisected by a slough of the Willamette River with over half of the lot's areas laying westward of OHWM. A cursory look at those areas shows they are undeveloped and provide some high value habitat.

Eastward of OHWM has been filled and used for various purposes since the 1930's. Currently there are two older homes in various states of disrepair and renovation, and a large lawn area that is mostly invasive weeds.

The study area raises sharply from 20' elevation at OHWM, to about 28' and remains nearly constant at this level until approaching the homes and 19th Avenue. It appears that about 3 to 4 feet of a sandy clay fill material was spread out over the property probably before the homes were constructed. We suspect the fill may be dredge spoils from the slough, as the 1939 aerial shows the slough and adjoining river areas were used for docks and log storage, and deepening of the slough would have provided a safe harbor area.

The subject site has historically been two single family residences built in 1938, and the surrounding properties are single family residences, and used for farming and other uses since then. The Sparrow Street ROW and Spring Park are now undeveloped, however aerial photos show that it also had homes and was used for farming into the 1960's.

There is now a dirt road that runs through the middle of the properties and evidence of vehicles driving on the west area of the lots. The dirt road and vehicles appear in aerials about 1970, before that time yard area appears to have been used for farming.

B) Site Alterations:

Aerial photos show the property is basically the same as it was in 2000. Historically the land has been a single-family residence since 1938 and was probably logged to establish the homes and property. From the aerial photos as early as 2000 it appears that the lots have had cars driving on the road in the middle of property and parking behind the houses.

C) Precipitation Data and Analysis:

Precipitation since October 2017 had been 50% above and below average. With the hydrologic conditions being above average in April and below average the two months before and below average in May we would expect to not see hydrologic conditions.

This wetland observations were made on May 25, 2018 and the site received below average precipitation 20 days before the site visit. We therefore need to assume dry season hydrology and would not necessarily expect to see shallow water tables in jurisdictional wetlands.

Table 1. Recent observed precipitation data compared to the Wetland Evaluation Technique (WETS) tables. WETS Station: Portland Airport, Lat = 45.5898°, Long= -121.5951°, Elevation = 21'. Subject Property is 18 miles south at Lat = 45.434070°, Long= -121.64527°, Elevation = 11'. Note that recent precipitation is estimated using Doppler Radar for the subject property (Farmlogs.com).					
Month	Recent Precip	Compared to WETS Avg	WETS Average Precipitation (In)		
			Avg	30% chance will have	
				Less than	More than
July 2017	0.00	Below	0.52	0.26	0.61
August	0.14	Below	0.55	0.19	0.62
September	2.31	Above	1.37	0.57	1.63
October	5.33	Above	3.59	2.35	4.31
November	6.95	Above	5.63	3.94	6.68
December	3.40	Below	5.75	4.02	6.83
January 2018	5.89	Above	5.11	3.79	5.99
February	2.21	Below	3.73	2.33	4.50
March	2.93	Below	4.06	3.00	4.76
April	4.05	Above	2.93	2.20	3.43
May	0.28	Below	2.54	1.37	3.10
June			1.63	1.04	1.97
Annual				33.07	41.31
Total	33.49	Above	37.41		

Table 2. Observed Precipitation in 24 days prior to field investigations. Data from Farmlogs.com	
5/25/2018	0.0
5/24/2018	0.0
5/23/2018	0.0
5/22/2018	0.0
5/21/2018	0.0
5/20/2018	0.0
5/19/2018	0.0
5/18/2018	0.0
5/17/2018	0.0
5/16/2018	0.0
5/15/2018	0.0
5/14/2018	0.0

Table 2. Observed Precipitation in 24 days prior to field investigations. Data from Farmlogs.com	
5/13/2018	0.0
5/12/2018	0.0
5/11/2018	0.05"
5/10/2018	0.00"
5/9/2018	0.14"
5/8/2018	0
5/7/2018	0.00"
5/6/2018	0
5/5/2018	0

Deductions of Recent Weather Data: Because the wetland determination was conducted under dry season conditions, absence of observed wetland hydrology does not necessarily rule out the possibility that the area is a wetland.

D) Methods: (site-specific methods for field investigation)

Wetland determinations and delineations discussed in this report were conducted in accordance with the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual ("the manual"), including regional supplements and applicable guidance, and supporting technical or guidance documents issued by the Department of State Lands.

We traversed the site to determine upland areas and wetland areas. The only wetland area found was south of the project sites in the ROW swale. We investigated the bank along the Willamette slough and determined the OHWM and used a inclinometer to determine the top of the slope.

E) Description of all Wetlands and Other Non-Wetland Waters:

Willamette river slough, 0.000 Acres within study area, about 503 linear feet. The Willamette river slough is on the west side of the study area on the subject site property. As we defined the study boundary to be OHWM of the slough, it technically does not extend into the study area except during flood stage. We took data plots P5 and P6 on the side of the bank to define OHWM and describe the habitat. Note that P5 and P6 are off the property boundary, the reason for this is that this spot was accessible, the bank along the property is a very steep treacherous blackberry mess, and we weren't incline to risk life and limb just to get a data plot. The NWI map does show this feature.

The Willamette River is Riverine, **Tidal, Unconsolidated Bottom, Mud, (R1UBV)**.

Wetland "A" 0.07 Acres in the Sparrow Street ROW. Wetland "A" is located in the ROW south of the subject properties. Wetland "A" was probably larger prior to prior to the fill that was placed on the subject property. Wetland "A" in earlier times was also probably drained by Wetland "B" which is a ditch that extends to the Willamette River. Now however the ditch is blocked where it once connected to Wetland "A", the blockage occurred some time ago as evidence by the large Cottonwood trees growing in the blockage. Wetland "A" extends South a short distance before the land raises beyond the ROW.

The dominant plants are Reed Canary Grass and Cottonwood, and the area is heavily shaded by large ivy covered trees that surround the wetland.

Wetland "A" is a small depressional wetland bound by 3 to 4 ft of fill on Lot 3300 to the north, and by higher ground in other directions. The Cowardin Classification is Palustrine Forested Broad Leaf Deciduous, Seasonally Flooded, PFO1C.

Wetland "B", 188 SQFT, 0.004 Acres. Wetland "B" is a short ditch probably dug back when what is now Spring Park was an active farm. Wetland "B" probably drained what is now Wetland "A", but is now blocked by some dirt that may have been intentionally dumped there for some unknown purpose. That blockage was done some years ago, as evidence by the 24" Cottonwoods growing there now. We did not observe water marks, algal mats or other signs of significant surface hydrology, although the soil was saturated to the surface in a short portion of the ditch.

Ditches would normally have a riverine classification, however as no flow occurs now in normal conditions, we classify "B" as a small depressional wetland, the Cowardin class is Palustrine, Forested, Broad-Leaved Deciduous, Seasonally flooded/saturated, or PFO1E.

Total Jurisdictional Area. Wetland's "A" and "B" total 0.08 Acres in the study area, and 0 acres on the subject property.

F) Deviation from LWI or NWI:

The NWI map shows the Willamette river as Riverine and the ROW that is south of the properties as wetland. The map doesn't show wetlands on the subject sites properties.

G) Mapping Method:

We defined and placed flags and laths for the wetland boundary and data plots, and also for Top-of-Bank shown in this report on May 25, 2018, and located them using a Topcon GPS with an advertised accuracy of less than 3' horizontal.

A topographic and boundary survey was provided by:

Andy Paris and Associates
16057 Boones Ferry Road
Lake Oswego, OR 97035

We rotated our GPS data onto the map produced by Andy Paris & Associates, however we used our own determination of Top-of-Bank rather than the topo shown by the surveyors. Our result was close to theirs except on the northern end where we suspect their topography was not correct.

H) Additional Information: (i.e., if needed to establish state jurisdiction)

We expect that the streams and wetlands described in this report will be determined to be jurisdictional by the USACE and the City of Milwaukie.

I) Results and Conclusions:

Hydrology. Direct precipitation is the major source of hydrology for the two tax lots in question, there do not appear to be appreciable contributions from upslope sources. Wetland "A" is a classic toe slope wetland and may also receive some runoff from the paved portions of Sparrow Street.

Plants. There are two plant communities in the study area. The Sparrow Street ROW and the OHWM have undisturbed vegetation which primarily has an overstory of Cottonwood and Alder, shrubs of Blackberry, Beaked Hazelnut and Red Osier Dogwood, the herbaceous strata is primarily weeds.

The subject property is in a degraded state with due to dominance by invasive and non-native species. The mowed grass area is dominated by Narrow leaf plantain, the edges have large amounts of Blackberry, Canada thistle, ivy, and some ornamental trees.

Soils. The soil on the lawn area of the property is believed to be fill, likely dredge tailings from the slough. It is a compacted sandy clay soil that appears to inhibit root growth. It was very hard to dig.

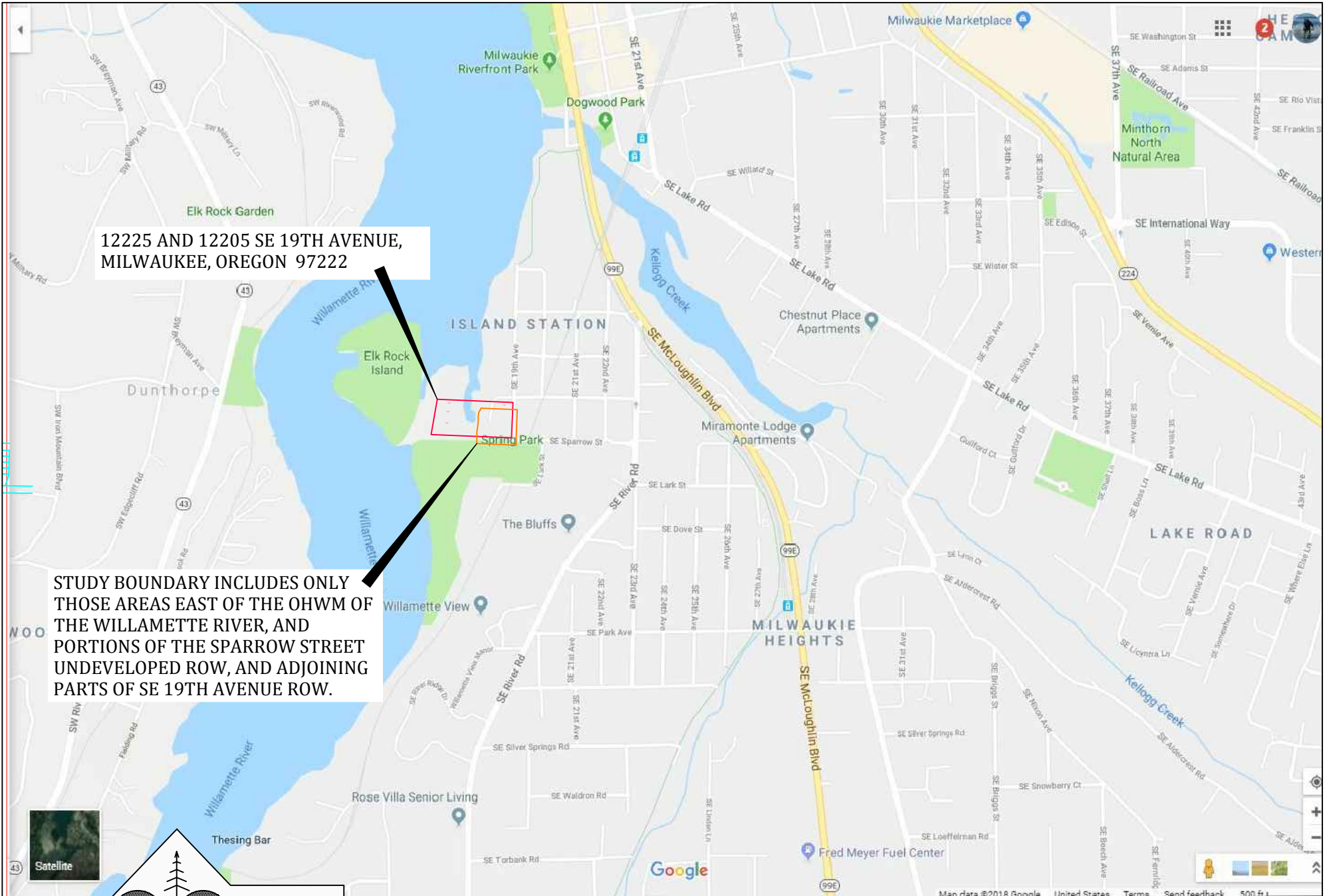
Soils in the ROW and along the OHWM are primarily deep loam soils, and exhibit classic depleted matrix colors in the wetland areas.

J) Disclaimer: OAR141-090-0035(12)(j) :

"This report documents the investigation, best professional judgment and 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 141-090-0055."

APPENDIX A - Maps:

- Figure 1: Location Map & Topography
- Figure 2: Tax Map
- Figure 3: NWI Map
- Figure 4: Soil Map
- Figure 5A: Historic Aerial Image 1939
- Figure 5B: Historical Aerial Image 1948
- Figure 5C: Historical Aerial Image 1961
- Figure 5D: Historical Aerial Image 1996 Flood
- Figure 5E: Historical Aerial Image 7/23/2003
- Figure 5F: Recent Aerial Image 5/22/2017
- Figure 6A: Delineated Wetland Boundaries and OHWM
- Figure 6B: Delineated Wetland Boundaries with Topography
- Figure 6C: Detail Showing Photo and Sample Locations.



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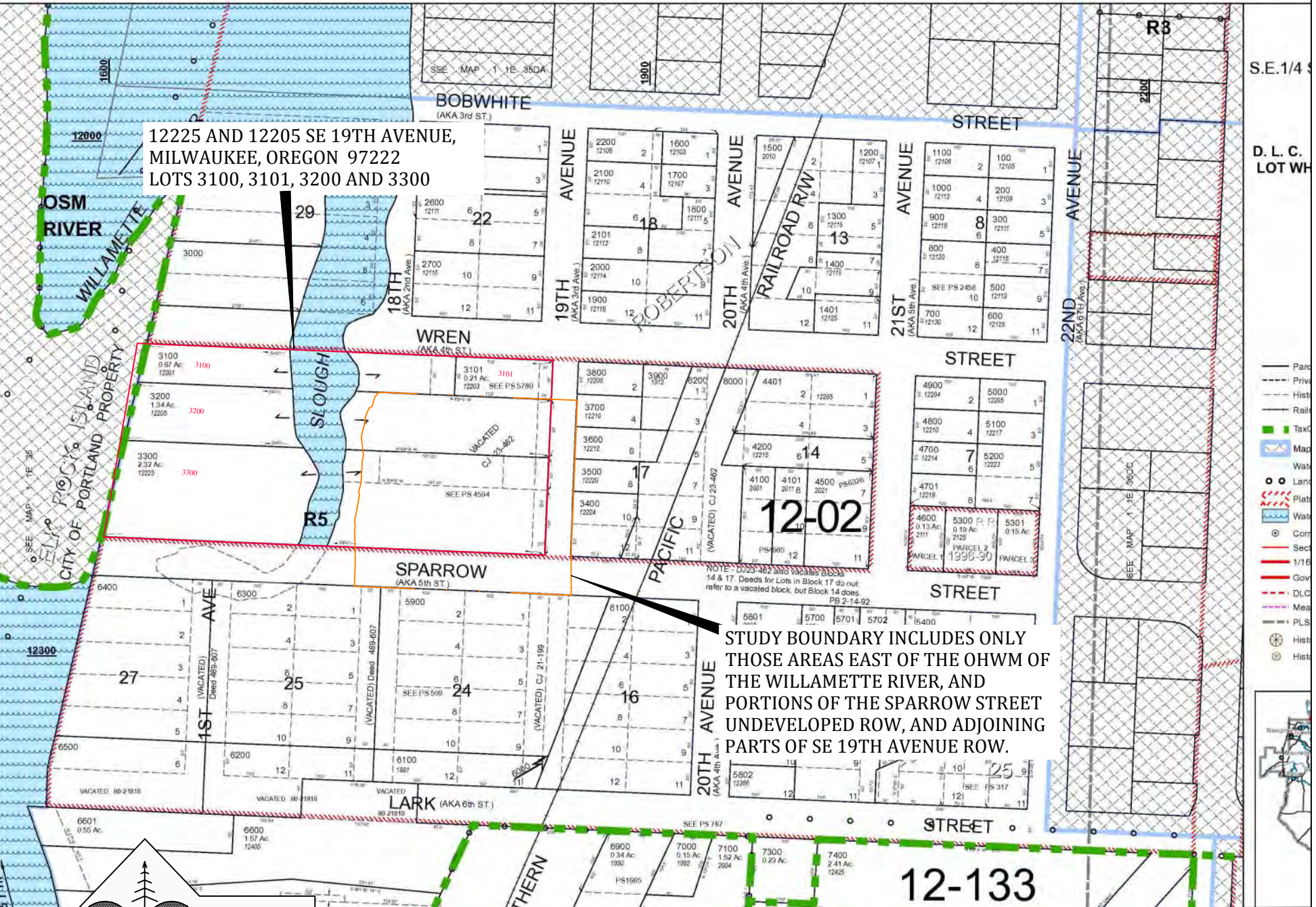
PO Box 821185
Vancouver, WA 98682
360-696-4403

Jul 30, 2018

LOCATION MAP
GOOGLE MAPS

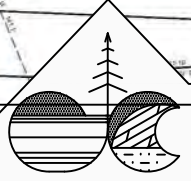
MILWAUKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

12225 AND 12205 SE 19TH AVENUE,
MILWAUKEE, OREGON 97222
LOTS 3100, 3101, 3200 AND 3300



STUDY BOUNDARY INCLUDES ONLY THOSE AREAS EAST OF THE OHWM OF THE WILLAMETTE RIVER, AND PORTIONS OF THE SPARROW STREET UNDEVELOPED ROW, AND ADJOINING PARTS OF SE 19TH AVENUE ROW.

NOTE: D-23-462 also vacates blocks 14 & 17. Deeds for Lots in Block 17 do not refer to a vacated block, but Block 14 does.
PS 2-14-92



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TAX MAP
11E35DD MILWAUKIE
SE 1/4 SE 1/4 SEC 35 T1S R1E WM
CLACKAMAS COUNTY

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

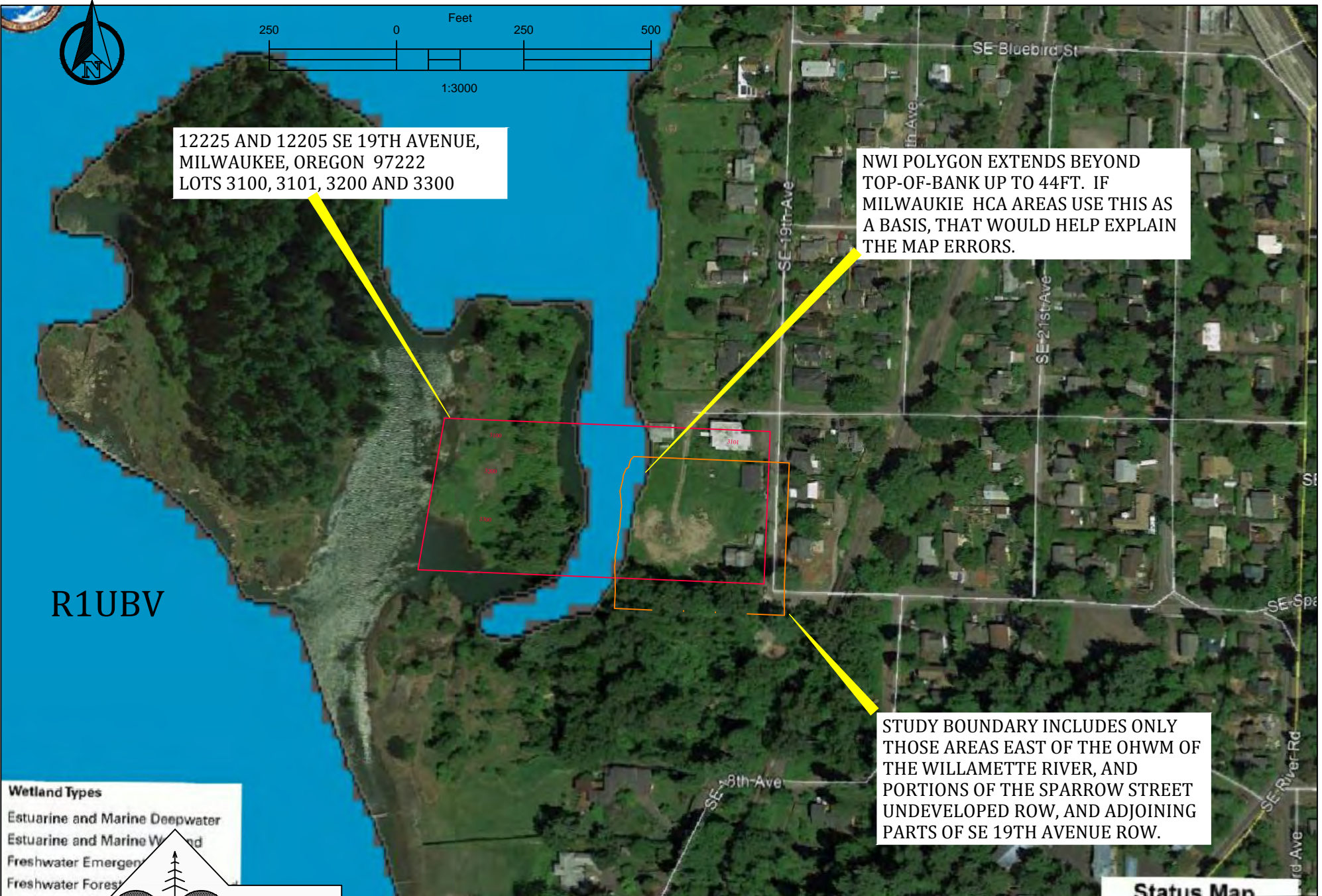
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SHEET
2

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S.E. 1/4 S
D. L. C.
LOT WH

- Parc
- - - Priv
- - - Hist
- - - Rail
- Tax
- Map
- Wat
- Land
- Plat
- Wat
- Corr
- 1/16
- Gov
- DLC
- Mea
- PLS
- Hist
- Hist





12225 AND 12205 SE 19TH AVENUE,
MILWAUKEE, OREGON 97222
LOTS 3100, 3101, 3200 AND 3300

NWI POLYGON EXTENDS BEYOND
TOP-OF-BANK UP TO 44FT. IF
MILWAUKIE HCA AREAS USE THIS AS
A BASIS, THAT WOULD HELP EXPLAIN
THE MAP ERRORS.

STUDY BOUNDARY INCLUDES ONLY
THOSE AREAS EAST OF THE OHWM OF
THE WILLAMETTE RIVER, AND
PORTIONS OF THE SPARROW STREET
UNDEVELOPED ROW, AND ADJOINING
PARTS OF SE 19TH AVENUE ROW.

R1UBV

Wetland Types

Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent
Freshwater Forest

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NWI MAP
NWI POLYGONS AS SHOWN BY THE USFWS IN GOOGLE
EARTH

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WEST LINN, OR 97068

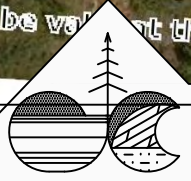
Status Map



67 = NEWBERG
FINE SANDY LOAM

67

may not be valid at this scale.



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4
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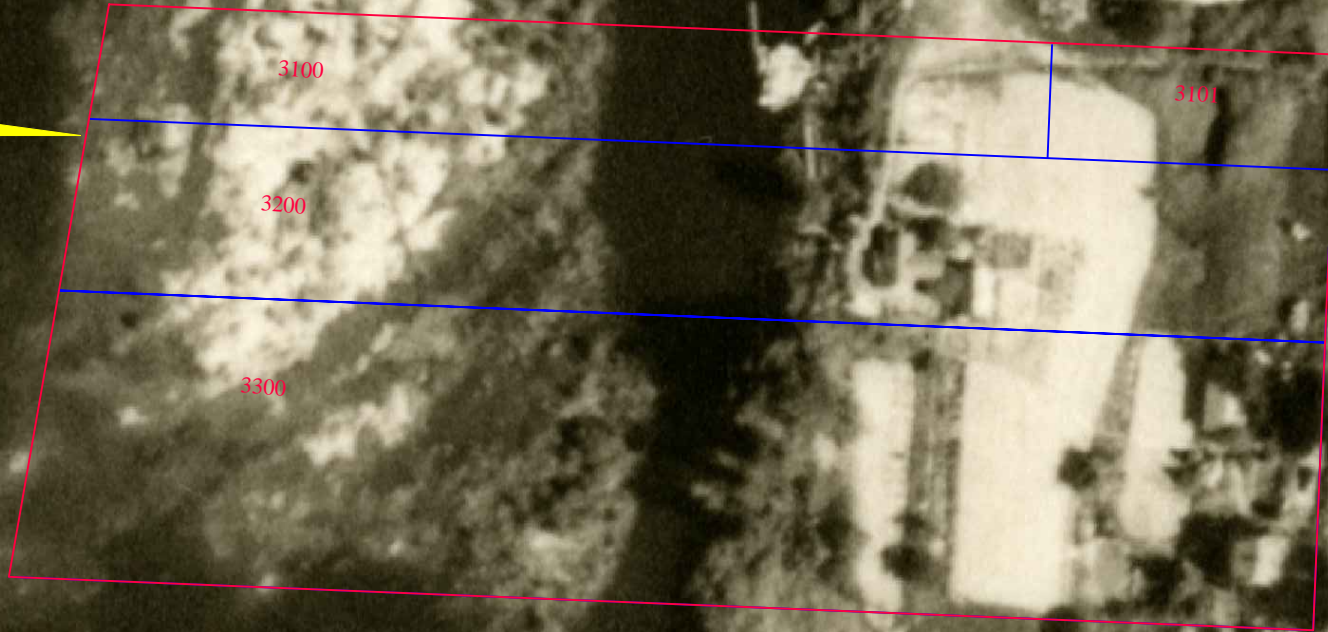
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NRCS SOIL MAP

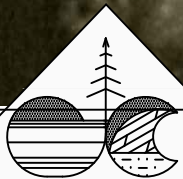
MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068



SUBJECT
PROPERTY



PROPERTY APPEARS TO BE IN
USE FOR FARMING. WHAT IS
NOW SPRING PARK IS
CLEARED, PROBABLY FARMED.



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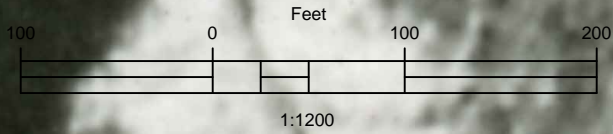
1939 AERIAL PHOTO
SOURCE: USACE

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

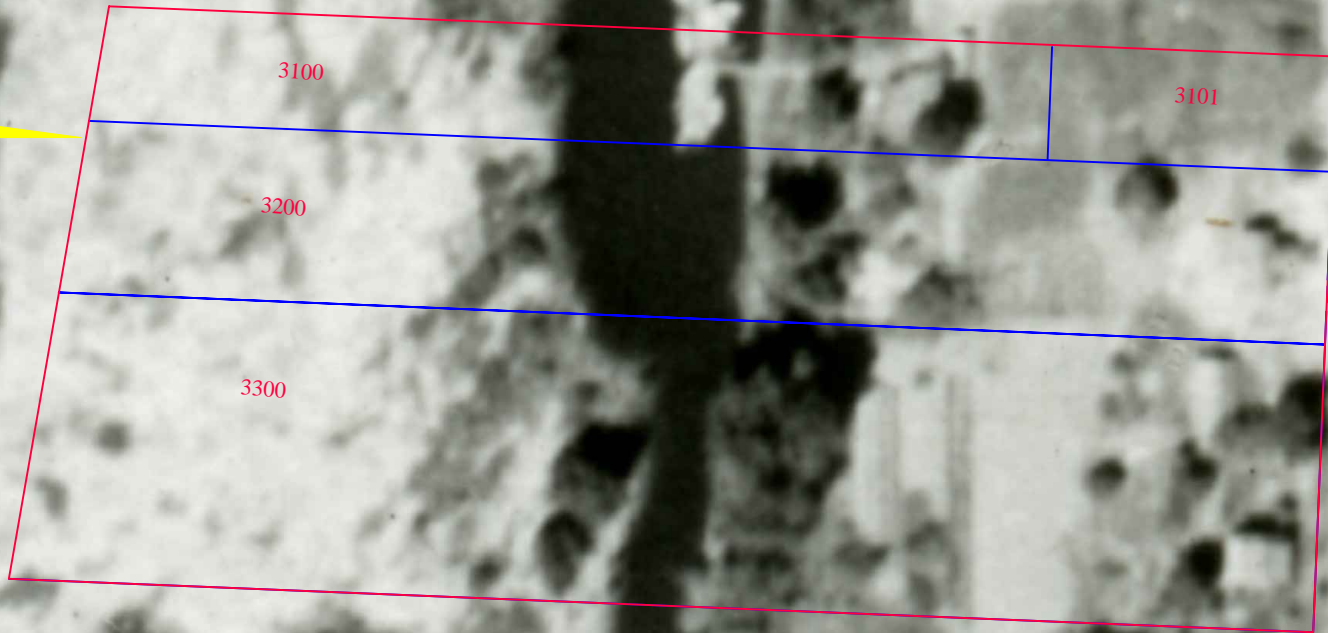
Jul 30, 2018

SHEET

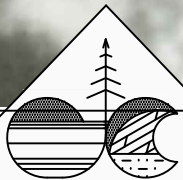
5A



SUBJECT
PROPERTY



PROPERTY APPEARS TO BE IN
USE FOR FARMING. WHAT IS
NOW SPRING PARK IS
CLEARED, PROBABLY FARMED.



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1948 AERIAL PHOTO
SOURCE: USACE

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

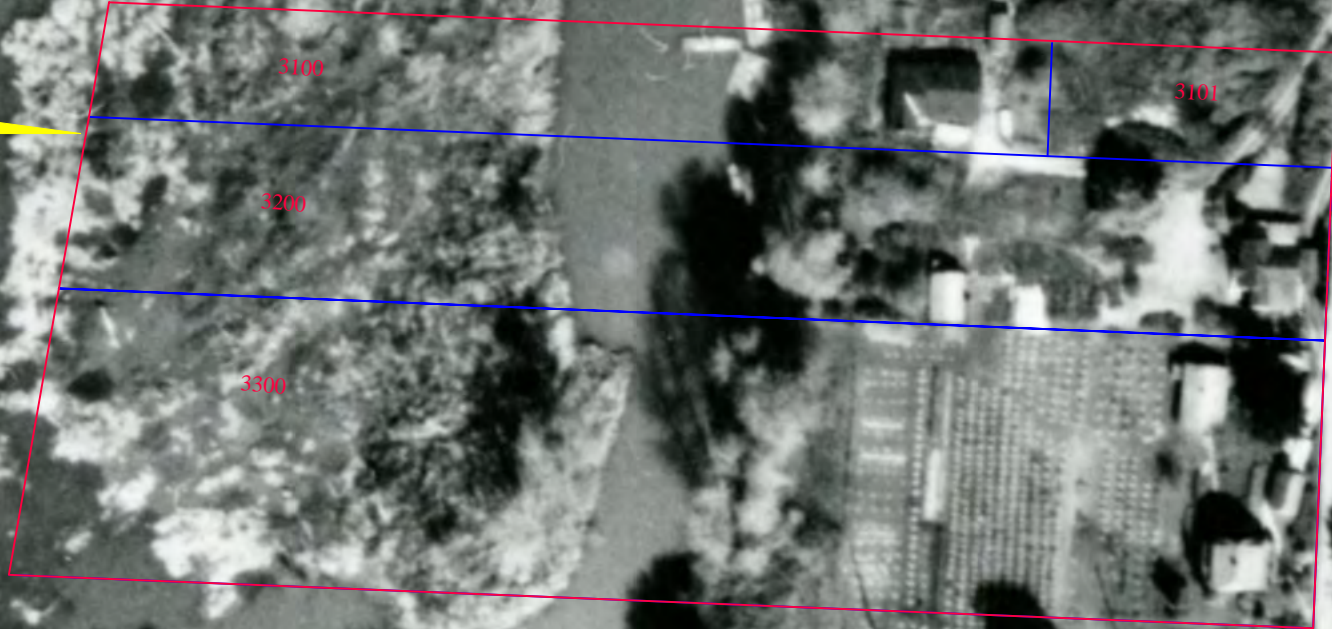
Jul 30, 2018

SHEET

5B



SUBJECT
PROPERTY



PROPERTY APPEARS TO BE IN
USE FOR FARMING. WHAT IS
NOW SPRING PARK IS
CLEARED, PROBABLY FARMED.



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SHEET

5C

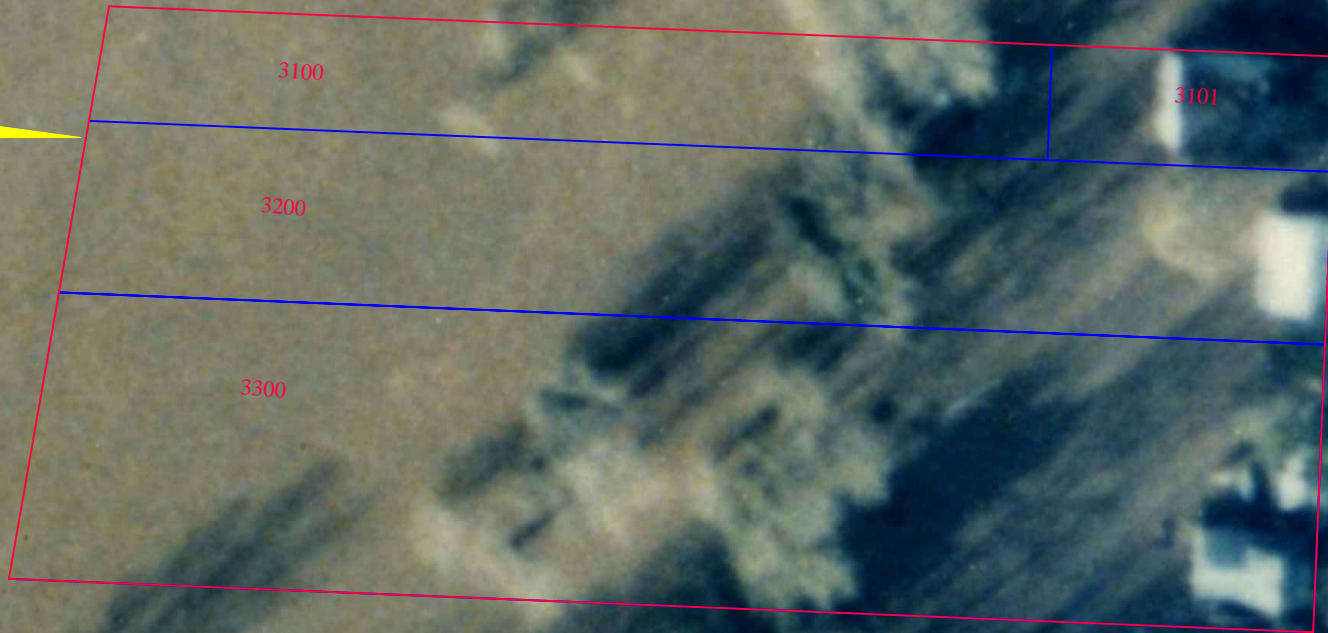
PO Box 821185
Vancouver, WA 98682
360-696-4403

1961 AERIAL PHOTO
SOURCE: USACE

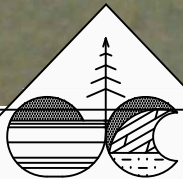
MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
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WEST LINN, OR 97068



SUBJECT
PROPERTY



FLOOD WATERS ARE
SEEN UP TO THE
HOUSES.



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SHEET

5D

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1996 AERIAL PHOTO
FLOOD OF 1996
SOURCE: USACE

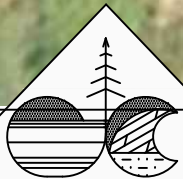
MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068



SUBJECT
PROPERTY



FARMING USES APPEAR TO HAVE
CEASED. AN ASSORTMENT OF
VEHICLES ARE PARKED ON THE
PROPERTY. SPRING PARK IS NOW
FORESTED.



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7/17/2003 AERIAL PHOTO
SOURCE: CITY OF PORTLAND

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

Jul 30, 2018

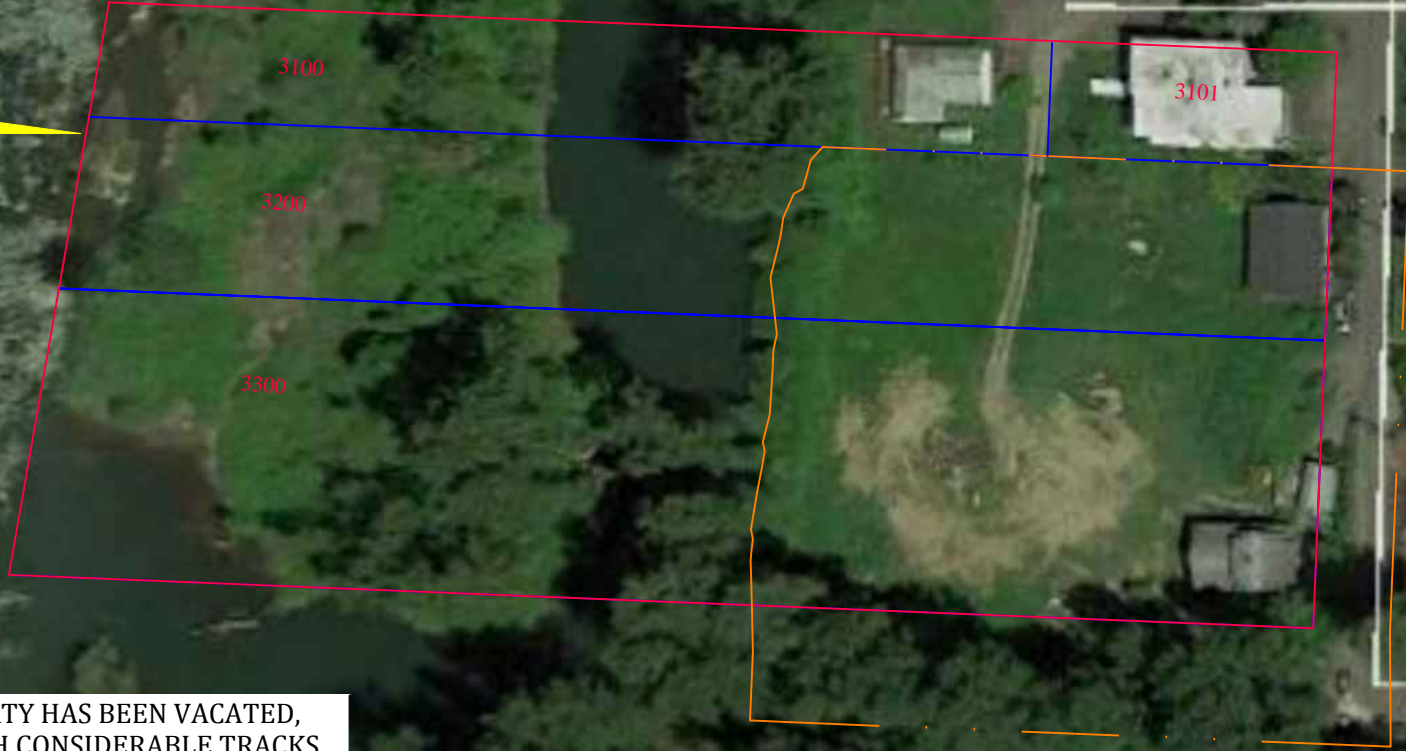
SHEET

SE

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SUBJECT
PROPERTY
LOTS 3200
AND 3300



PROPERTY HAS BEEN VACATED,
THOUGH CONSIDERABLE TRACKS
FROM VEHICLES ARE STILL
EVIDENT.



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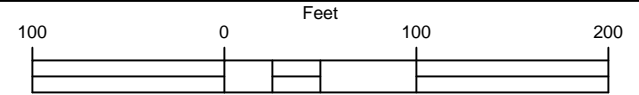
5/22/2017 AERIAL PHOTO
SOURCE: GOOGLE EARTH

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

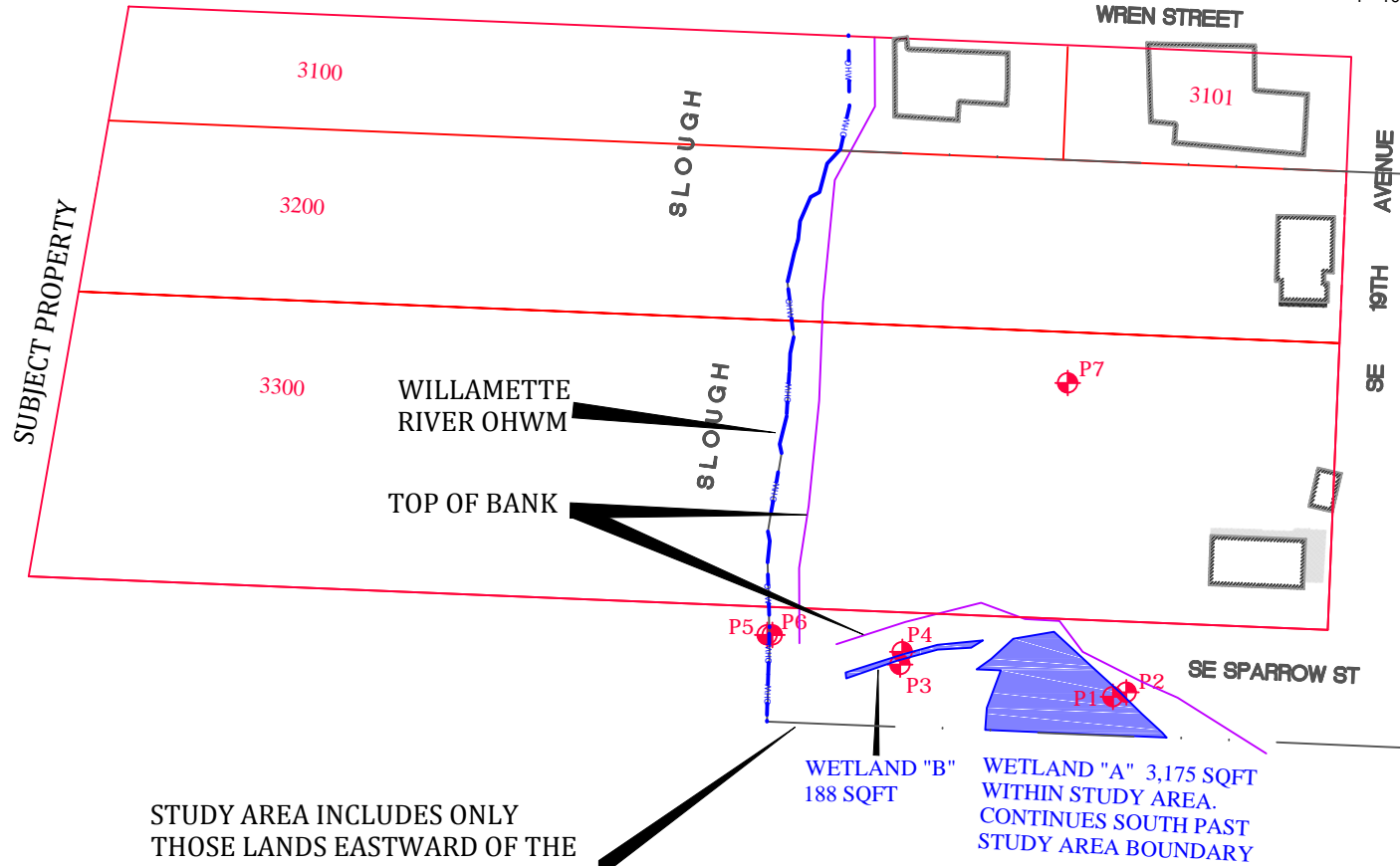
Jul 30, 2018

SHEET

5F



1"=100FT FORMATTED FOR 8.5X11

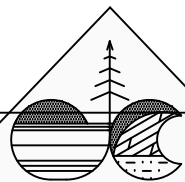


MAPPING: BASE DRAWING BY HAROLD SALO PLS 2264. WETLAND, OHW AND TOP OF BANK ADDED BY ETC USING GPS ACCURATE TO ± 3FT

STUDY AREA INCLUDES ONLY THOSE LANDS EASTWARD OF THE WILLAMETTE RIVER OHWM, AND ALSO INCLUDE PORTIONS OF THE SE SPARROW STREET ROW AND SE 19TH AVENUE ROW.

Disclaimer per OAR 141-090-0035 (7)(k)

This report documents the investigation, best professional judgment and 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 141-090-0055.



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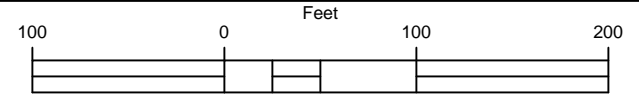
DELINEATED WETLAND BOUNDARIES AND OHWM FOR
STUDY AREA, TAX LOTS 3100, 3102, 3200, AND 3300 IN
SE 1/4 SE 1/4 SEC 35 T1S R1E WM
CLACKAMAS COUNTY

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

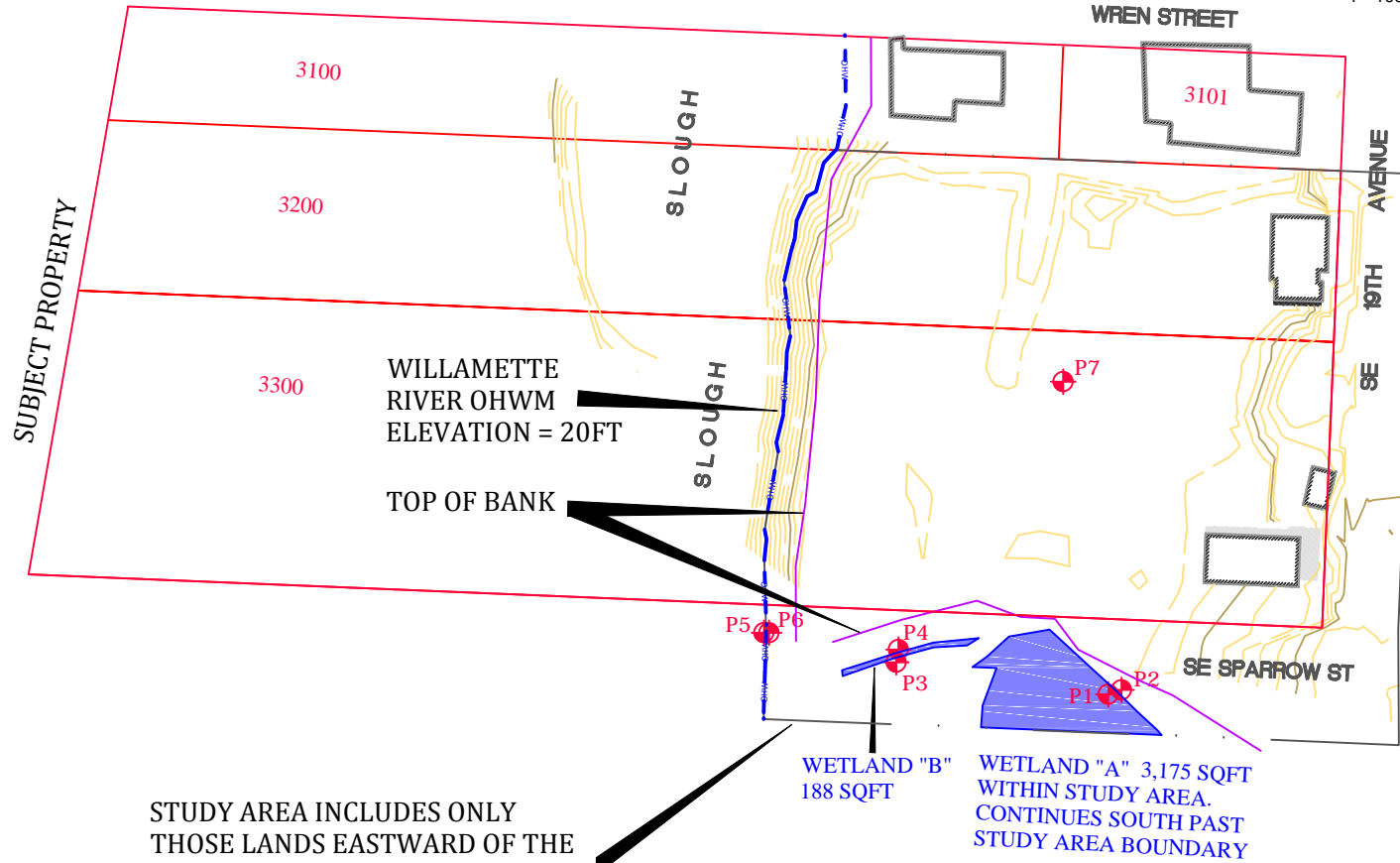
Jul 30, 2018

SHEET

6A



1"=100FT FORMATTED FOR 8.5X11



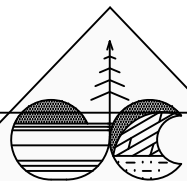
MAPPING: BASE DRAWING BY HAROLD SALO PLS 2264. WETLAND, OHW AND TOP OF BANK ADDED BY ETC USING GPS ACCURATE TO ± 3FT

STUDY AREA INCLUDES ONLY THOSE LANDS EASTWARD OF THE WILLAMETTE RIVER OHWM, AND ALSO INCLUDE PORTIONS OF THE SE SPARROW STREET ROW AND SE 19TH AVENUE ROW.

WETLAND "B" 188 SQFT
WETLAND "A" 3,175 SQFT WITHIN STUDY AREA. CONTINUES SOUTH PAST STUDY AREA BOUNDARY

Disclaimer per OAR 141-090-0035 (7)(k)

This report documents the investigation, best professional judgment and 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 141-090-0055.

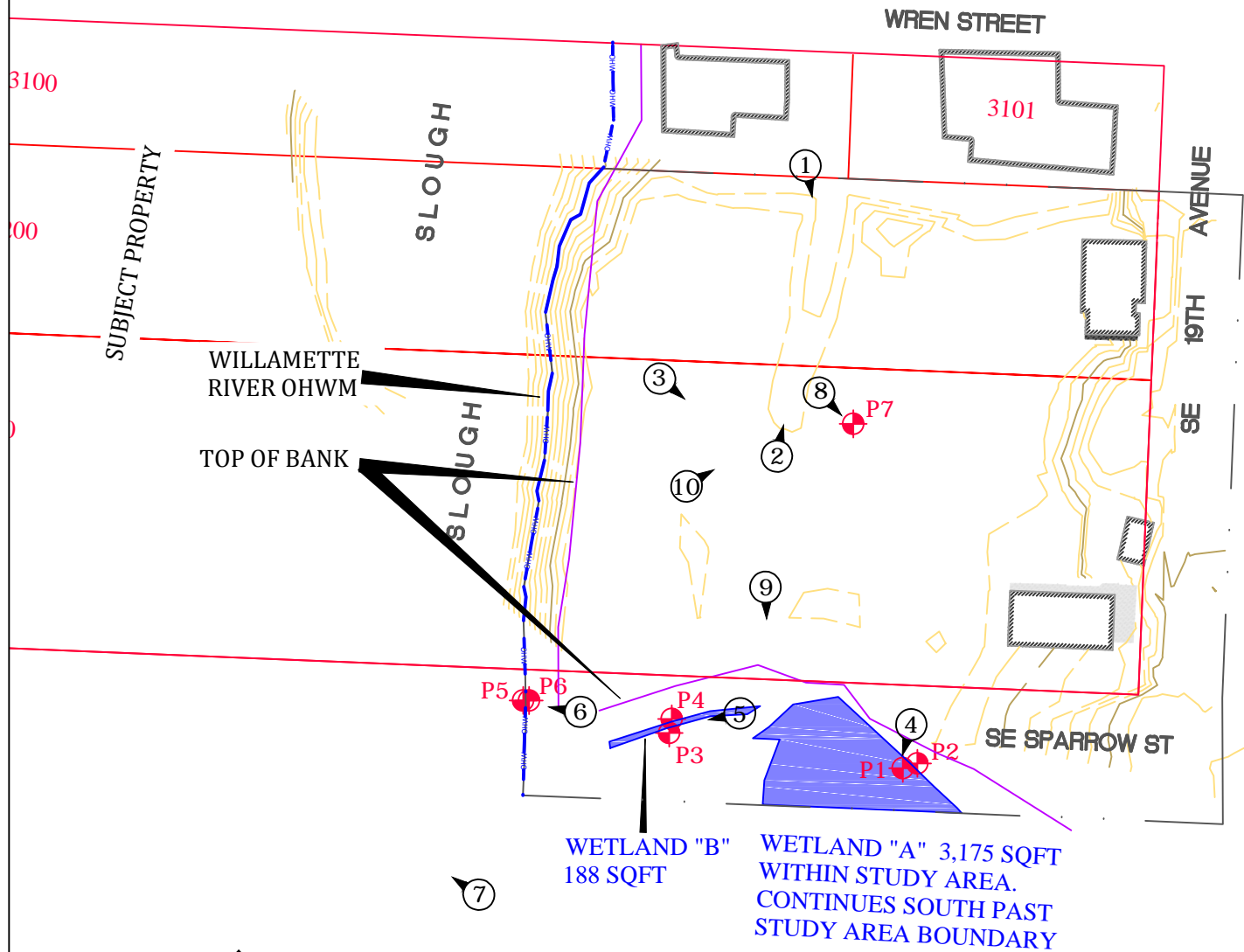
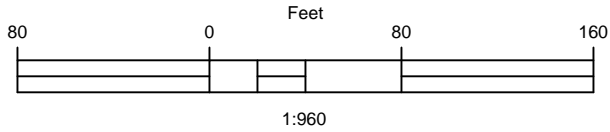


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DELINEATED WETLAND BOUNDARIES AND OHWM FOR STUDY AREA, TAX LOTS 3100, 3102, 3200, AND 3300 IN SE ¼ SE ¼ SEC 35 T1S R1E WM CLACKAMAS COUNTY WITH TOPOGRAPHY

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068



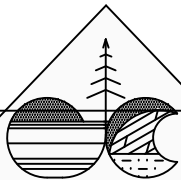
LEGEND

-  P7 WETLAND DATA POINT
-  PHOTO NUMBER AND DIRECTION

Jul 30, 2018

6A

SHEET



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PHOTO AND SAMPLE LOCATIONS

MILWAULKIE RIVERFRONT CUSTOM HOMES
GILLIS PROPERTIES LLC
5965 WEST A STREET
WEST LINN, OR 97068

APPENDIX B - Data Forms

6 PAGES FOLLOW THIS ONE

P1 - Wetland "A"

P2 - Upland pair to P1

P3 - Wetland "B"

P4 - Upland pair to P3

P5 - OHWM of the Slough of the Willamette River

P6 - Upland pair to P5

P7 - Representing the middle of the yard area

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: **Lots 3300 and 3200 map** City/County: **Milwaukie** Sampling Date: **5/25/2018**
 Applicant/Owner: **Mathew Gillis, 4776 Carolina Avenue NE, Salem OR 97305** State: **OR** Sampling Point: **P1**
 Investigator(s): **John McConnaughey, PWS; Annakate Martin, NRS** Section, Township, Range: **Section 35 T1S R1E**
 Landform (hillslope, terrace, etc.): **Swale** Local relief (concave, convex, none): Slope (%): **1**
 Subregion (LRR): **LRR A** Lat: **45.698792°** Long: **-122.64527°** Datum: **NAD 84**
 Soil Map Unit Name: **Newberg fine sandy loam** NWI classification: **wetland**

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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is sampled area in a wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Enter text
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: Wetland "A", a small depressional wetland bound by fill material on Lot 3300, and higher ground in other directions.

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot Size: 20' NW)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. Populus trichocarpa	50	YES	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2.				Total Number of Dominant Species Across All Strata: 2 (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
4.				
Total tree cover =	50 %	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot Size: 10' NW)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1.				<u>Total % Cover of:</u>
2.				<u>Multiply by:</u>
3.				OBL species 0 % x1 = 0 %
4.				FACW species 0 % x2 = 0 %
5.				FAC species 0 % x3 = 0 %
				FACU species 0 % x4 = 0 %
				UPL species 0 % x5 = 0 %
Total Shrub Cover	0 %	= Total Cover		Column Totals: 0 % (A) 0 % (B)
<u>Herb Stratum</u> (Plot Size:) 5' circular	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index = B/A = 0
1. Phalaris arundinacea	40	YES	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> 6 - Problematic Hydrophytic Vegetation ¹ (Explain) 1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. Epilobium sp.	10	NO	NOL	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
Total herb cover	50 %	= Total Cover		
<u>Woody Vine Stratum</u> (Plot Size: enter text)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Enter text
1. Hedera helix	0 %			Yes <input checked="" type="checkbox"/>
2. Clematis spp.	0 %			No <input type="checkbox"/>
	0 %	= Total Cover		
% Bare Ground in Herb Stratum	30%			

Remarks: Plot direction is NW to represent the swale. Hedera helix looks like it is in swale but roots are growing on bank not in swale.

SOIL

Project Site: 3300 & 3200

Sampling Point:

P1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0 – 2	10YR 2/1	100					Silt loam	Organic mix mixed matrix
2– 6	10YR 3/1 10YR 4/1	40 30	7.5 YR4/6	30	C	M	Silty clay loam	
6-13	10YR4/1	50	7.5YR4/6	50	C	M	Silty clay loam	
13-17	10YR 4/1	60	7.5YR4/6	40	C	M	Silty clay	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/>	Histosol (A1)	<input type="checkbox"/>	Sandy Redox (S5)	<input type="checkbox"/>	2 cm Muck (A10)	<input type="checkbox"/>	Red Parent Material (TF2)
<input type="checkbox"/>	Histic Epipedon (A2)	<input type="checkbox"/>	Stripped Matrix (S6)	<input type="checkbox"/>	Very Shallow Dark Surface (TF12)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Black Histic (A3)	<input type="checkbox"/>	Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/>	Depleted Matrix (F3)
<input type="checkbox"/>	Hydrogen Sulfide (A4)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/>	Depleted Dark Surface (F7)
<input type="checkbox"/>	Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/>	Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
<input type="checkbox"/>	Thick Dark Surface (A12)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/>	Redox Depressions (F8)		
<input type="checkbox"/>	Sandy Mucky Mineral (S1)	<input type="checkbox"/>	Depleted Dark Surface (F7)	<input type="checkbox"/>	Redox Depressions (F8)		
<input type="checkbox"/>	Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Redox Depressions (F8)	<input type="checkbox"/>	Redox Depressions (F8)		

Restrictive Layer (if present): Type: Depth (Inches):	Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: Hard to dig due to many roots all through the pit.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	Salt Crust (B11)
<input checked="" type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Aquatic Invertebrates (B13)
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Presence of Reduced Iron (C4)
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/>	Surface Soil Cracks (B6)	<input checked="" type="checkbox"/>	Stunted or Stresses Plants (D1) (LRR A)
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/>	Other (Explain in Remarks)

Field Observations:				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Surface Water Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):		
Water Table Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches):	12"	
Saturation Present? (includes capillary fringe)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches):	11"	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturation was at 11" and water table were to 12".

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: **Lots 3300 and 3200 map** City/County: **Milwaukie** Sampling Date: **5/25/2018**
 Applicant/Owner: **Mathew Gillis, 4776 Carolina Avenue NE, Salem OR 97305** State: **OR** Sampling Point: **P2**
 Investigator(s): **John McConnaughey, PWS; Annakate Martin, NRS** Section, Township, Range: **Section 35 T1S R1E**
 Landform (hillslope, terrace, etc.): **hillslope** Local relief (concave, convex, none): Slope (%): **60**
 Subregion (LRR): **LRR A** Lat: **45.43448°** Long: **-122.644449°** Datum: **NAD 84**
 Soil Map Unit Name: **Newberg fine sandy loam** NWI classification: **wetland**
 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is sampled area in a wetland? Enter text Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

Remarks: On a steep fill slope adjacent to the wetland. There was a rock retaining wall 2' east of the plot on the hillslope which makes me think the swale was built up in this area when the fill was put in on the subject sites.

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot Size: 20' NW)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:														
1. Populus trichocarpa	50	YES	FAC	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: 66% (A/B)														
2. Corylus cornuta	40	YES	FAC															
3. Ilex sp.	10	NO	FACU															
4.																		
Total tree cover =	100 %	= Total Cover		<u>Prevalence Index worksheet:</u> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: left;"><u>Total % Cover of:</u></th> <th style="width: 50%; text-align: left;"><u>Multiply by:</u></th> </tr> </thead> <tbody> <tr> <td>OBL species 0 %</td> <td>x1 = 0 %</td> </tr> <tr> <td>FACW species 0 %</td> <td>x2 = 0 %</td> </tr> <tr> <td>FAC species 0 %</td> <td>x3 = 0 %</td> </tr> <tr> <td>FACU species 0 %</td> <td>x4 = 0 %</td> </tr> <tr> <td>UPL species 0 %</td> <td>x5 = 0 %</td> </tr> <tr> <td>Column Totals:</td> <td>0 % (A) 0 % (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = 0	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species 0 %	x1 = 0 %	FACW species 0 %	x2 = 0 %	FAC species 0 %	x3 = 0 %	FACU species 0 %	x4 = 0 %	UPL species 0 %	x5 = 0 %	Column Totals:	0 % (A) 0 % (B)
<u>Total % Cover of:</u>	<u>Multiply by:</u>																	
OBL species 0 %	x1 = 0 %																	
FACW species 0 %	x2 = 0 %																	
FAC species 0 %	x3 = 0 %																	
FACU species 0 %	x4 = 0 %																	
UPL species 0 %	x5 = 0 %																	
Column Totals:	0 % (A) 0 % (B)																	
<u>Sapling/Shrub Stratum</u> (Plot Size: 10' NW)																		
1. Prunus lasitanica	5	NO	NOL															
2. Rubus armeniacus	20	YES	FAC															
3.																		
4.																		
5.																		
Total Shrub Cover	25%	= Total Cover																
<u>Herb Stratum</u> (Plot Size:) 5' circular				<u>Hydrophytic Vegetation Indicators:</u> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> 6 - Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. Phalaris arundinacea	10	NO	FAC															
2. Galium aparine.	50	YES	FACU															
3. Holcus lanatus	5	NO	FAC															
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		
Total herb cover	65 %	= Total Cover																
<u>Woody Vine Stratum</u> (Plot Size: enter text)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Enter text No <input type="checkbox"/>														
1. Hedera helix	80 %	YES	FACU															
2. Clematis ligusticifolia	30 %	YES	FAC															
	0 %	= Total Cover																
% Bare Ground in Herb Stratum 0%	300%																	

Remarks:

SOIL

Project Site: 3300 & 3200

Sampling Point:

P2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0 - 10	10YR 2/2	100					Silty clay loam	many roots
10 - 17	10YR2/2	80	7.5 YR3/4	20	C	M	Silty clay loam	
17 - 21	10YR4/2	60	7.5YR3/4	40	C	M	Silty clay loam	soil was moist

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)						
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)						

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soils Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Type:					
Depth (Inches):					

Remarks: Fill material-gravels in soil matrix. Plot location selected to be high enough on the slope so that depleted layer would start at 10"

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			

Field Observations:				Wetland Hydrology Present?			
Surface Water Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):		
Water Table Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches):	21.5"	
Saturation Present? (includes capillary fringe)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches):	21"	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **Hydrology was present but below 12".**

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: **Lots 3300 and 3200 map** City/County: **Milwaukie** Sampling Date: **5/25/2018**
 Applicant/Owner: **Mathew Gillis, 4776 Carolina Avenue NE, Salem OR 97305** State: **OR** Sampling Point: **P3**
 Investigator(s): **John McConnaughey, PWS; Annakate Martin, NRS** Section, Township, Range: **Section 35 T1S R1E**
 Landform (hillslope, terrace, etc.): **hillslope** Local relief (concave, convex, none): Slope (%): **2**
 Subregion (LRR): **LRR A** Lat: **45.43448°** Long: **-122.644449°** Datum: **NAD 84**
 Soil Map Unit Name: **Newberg fine sandy loam** NWI classification: **wetland**
 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	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Is sampled area in a wetland? Enter text Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Wetland Hydrology Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

Remarks: Plot located at the bottom of a ditch that may have connected and drained Wetland "A" in earlier times, but is now cut off at the upper end by some large cottonwood trees and perhaps some fill.

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot Size: 30' west)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. Populus balsamifera	20	YES	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)																
2.																				
3.																				
4.																				
Total tree cover =	20 %	= Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot Size: 5' circle)				Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Total % Cover of:</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species 0 %</td> <td>x1 = 0 %</td> </tr> <tr> <td>FACW species 0 %</td> <td>x2 = 0 %</td> </tr> <tr> <td>FAC species 0 %</td> <td>x3 = 0 %</td> </tr> <tr> <td>FACU species 0 %</td> <td>x4 = 0 %</td> </tr> <tr> <td>UPL species 0 %</td> <td>x5 = 0 %</td> </tr> <tr> <td>Column Totals: 0 % (A)</td> <td>0 % (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = 0</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species 0 %	x1 = 0 %	FACW species 0 %	x2 = 0 %	FAC species 0 %	x3 = 0 %	FACU species 0 %	x4 = 0 %	UPL species 0 %	x5 = 0 %	Column Totals: 0 % (A)	0 % (B)	Prevalence Index = B/A = 0	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
OBL species 0 %	x1 = 0 %																			
FACW species 0 %	x2 = 0 %																			
FAC species 0 %	x3 = 0 %																			
FACU species 0 %	x4 = 0 %																			
UPL species 0 %	x5 = 0 %																			
Column Totals: 0 % (A)	0 % (B)																			
Prevalence Index = B/A = 0																				
1. Rubus armeniacus	5	NO	FAC																	
2.																				
3.																				
4.																				
5.																				
Total Shrub Cover	25%	= Total Cover																		
<u>Herb Stratum</u> (Plot Size:) 5' circle				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> 6 - Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. Equisetum arvense	10	NO	FAC																	
2. Epilobium sp.	5	NO	FAC																	
3.																				
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
Total herb cover	15 %	= Total Cover																		
<u>Woody Vine Stratum</u> (Plot Size: enter text)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> Enter text No <input type="checkbox"/>																
1. Hedera helix	%																			
2. Clematis spp.	%																			
	40 %	= Total Cover																		
% Bare Ground in Herb Stratum 98%	%																			

Remarks: Mostly bare soil in the bottom of small channel, minimal roots in ditch.

SOIL

Project Site: 3300 & 3200

Sampling Point:

P3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0 – 4	10YR 2/2	100					Silt loam	
4-17	10YR3/2	80	10YR4/4	20	C	M	Silt loam	soil was moist
17-21	10YR4/1	60	10YR4/4	40	C	M	Silt loam	soil was moist

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/>	Histosol (A1)	<input type="checkbox"/>	Sandy Redox (S5)	<input type="checkbox"/>	2 cm Muck (A10)	<input type="checkbox"/>	Red Parent Material (TF2)
<input type="checkbox"/>	Histic Epipedon (A2)	<input type="checkbox"/>	Stripped Matrix (S6)	<input type="checkbox"/>	Very Shallow Dark Surface (TF12)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Black Histic (A3)	<input type="checkbox"/>	Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	
<input type="checkbox"/>	Hydrogen Sulfide (A4)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/>	
<input type="checkbox"/>	Depleted Below Dark Surface (A11)	<input type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/>	
<input type="checkbox"/>	Thick Dark Surface (A12)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input checked="" type="checkbox"/>	Depleted Dark Surface (F7)	<input type="checkbox"/>	
<input type="checkbox"/>	Sandy Mucky Mineral (S1)	<input type="checkbox"/>	Redox Depressions (F8)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Sandy Gleyed Matrix (S4)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: Depth (Inches):	Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

Remarks: Middle of drainage ditch and soil moist from 4" to 21".

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	Salt Crust (B11)
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Aquatic Invertebrates (B13)
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Presence of Reduced Iron (C4)
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/>	Surface Soil Cracks (B6)	<input type="checkbox"/>	Stunted or Stresses Plants (D1) (LRR A)
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/>	

Field Observations:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 6"	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturation present around 6" but water didn't fill up the pit.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: **Lots 3300 and 3200 map** City/County: **Milwaukie** Sampling Date: **5/25/2018**
 Applicant/Owner: **Mathew Gillis, 4776 Carolina Avenue NE, Salem OR 97305** State: **OR** Sampling Point: **P4**
 Investigator(s): **John McConnaughey, PWS; Annakate Martin, NRS** Section, Township, Range: **Section 35 T1S R1E**
 Landform (hillslope, terrace, etc.): **hillslope** Local relief (concave, convex, none): Slope (%): **7**
 Subregion (LRR): **LRR A** Lat: **45.43448°** Long: **-122.64548°** Datum: **NAD 84**
 Soil Map Unit Name: **Newberg fine sandy loam** NWI classification: **wetland**
 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is sampled area in a wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Enter text
Remarks: Plot located on the top of the ditch (Wetland "B").	

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot Size: 10' N swale)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1.				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)																
2.				Total Number of Dominant Species Across All Strata: 5 (B)																
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)																
4.				Prevalence Index worksheet:																
Total tree cover = 0 % = Total Cover				<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species 0 %</td> <td>x1 = 0 %</td> </tr> <tr> <td>FACW species 0 %</td> <td>x2 = 0 %</td> </tr> <tr> <td>FAC species 0 %</td> <td>x3 = 0 %</td> </tr> <tr> <td>FACU species 0 %</td> <td>x4 = 0 %</td> </tr> <tr> <td>UPL species 0 %</td> <td>x5 = 0 %</td> </tr> <tr> <td>Column Totals: 0 % (A)</td> <td>0 % (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = 0</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species 0 %	x1 = 0 %	FACW species 0 %	x2 = 0 %	FAC species 0 %	x3 = 0 %	FACU species 0 %	x4 = 0 %	UPL species 0 %	x5 = 0 %	Column Totals: 0 % (A)	0 % (B)	Prevalence Index = B/A = 0	
Total % Cover of:	Multiply by:																			
OBL species 0 %	x1 = 0 %																			
FACW species 0 %	x2 = 0 %																			
FAC species 0 %	x3 = 0 %																			
FACU species 0 %	x4 = 0 %																			
UPL species 0 %	x5 = 0 %																			
Column Totals: 0 % (A)	0 % (B)																			
Prevalence Index = B/A = 0																				
<u>Sapling/Shrub Stratum</u> (Plot Size: 5' circle)																				
1. Rubus armeniacus	20	YES	FAC																	
2. Robinia pseudoacacia	5	YES	FACU																	
3.																				
4.																				
5.																				
Total Shrub Cover 25% = Total Cover																				
<u>Herb Stratum</u> (Plot Size:) 5' circle																				
1. Geranium lucidum	50	YES	FAC																	
2. Geranium robertianum	30	YES	FAC																	
3. Galium aparine	20	NO	FACU																	
4. Vitis sp.	50	YES	FACU																	
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
Total herb cover 150 % = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> 6 - Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
<u>Woody Vine Stratum</u> (Plot Size: enter text)																				
1. Hedera helix	%			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/>																
2. Clematis spp.	%			Enter text No <input type="checkbox"/>																
% Bare Ground in Herb Stratum 0%																				

Remarks: Veg plot looks away from ditch (north toward the subject property)

SOIL

Project Site: 3300 & 3200

Sampling Point:

P4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-16	10YR 2/2	100					Silt loam	
16-18	10YR3/2	100					Silt loam	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/>	Histosol (A1)	<input type="checkbox"/>	Sandy Redox (S5)	<input type="checkbox"/>	2 cm Muck (A10)	<input type="checkbox"/>	Red Parent Material (TF2)
<input type="checkbox"/>	Histic Epipedon (A2)	<input type="checkbox"/>	Stripped Matrix (S6)	<input type="checkbox"/>	Very Shallow Dark Surface (TF12)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Black Histic (A3)	<input type="checkbox"/>	Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	
<input type="checkbox"/>	Hydrogen Sulfide (A4)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/>	
<input type="checkbox"/>	Depleted Below Dark Surface (A11)	<input type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/>	
<input type="checkbox"/>	Thick Dark Surface (A12)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/>	Depleted Dark Surface (F7)	<input type="checkbox"/>	
<input type="checkbox"/>	Sandy Mucky Mineral (S1)	<input type="checkbox"/>	Depleted Dark Surface (F7)	<input type="checkbox"/>	Redox Depressions (F8)	<input type="checkbox"/>	
<input type="checkbox"/>	Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Redox Depressions (F8)	<input type="checkbox"/>		<input type="checkbox"/>	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: Depth (Inches):	Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: Nice upland soil

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	Salt Crust (B11)
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Aquatic Invertebrates (B13)
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Presence of Reduced Iron (C4)
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/>	Surface Soil Cracks (B6)	<input type="checkbox"/>	Stunted or Stresses Plants (D1) (LRR A)
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/>	

Field Observations:				Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Surface Water Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):		
Water Table Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **No evidence of hydrology**

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: **Lots 3300 and 3200 map** City/County: **Milwaukie** Sampling Date: **5/25/2018**
 Applicant/Owner: **Mathew Gillis, 4776 Carolina Avenue NE, Salem OR 97305** State: **OR** Sampling Point: **P5**
 Investigator(s): **John McConnaughey, PWS; Annakate Martin, NRS** Section, Township, Range: **Section 35 T1S R1E**
 Landform (hillslope, terrace, etc.): **hillslope** Local relief (concave, convex, none): Slope (%): **80**
 Subregion (LRR): **LRR A** Lat: **45.43470°** Long: **-122.64527°** Datum: **NAD 84**
 Soil Map Unit Name: **Newberg fine sandy loam** NWI classification: **Riverine**
 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is sampled area in a wetland? Enter text Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Remarks: OHWM side channel of Willamette river. Banks very steep, vertical in places.

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot Size: 10' toward river)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																					
1.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)																					
2.				Total Number of Dominant Species Across All Strata: 2 (B)																					
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)																					
4.				Prevalence Index worksheet:																					
Total tree cover = 0 % = Total Cover				<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"><u>Total % Cover of:</u></th> <th style="width: 40%;"><u>Multiply by:</u></th> <th style="width: 30%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species 0 %</td> <td>x1 =</td> <td>0 %</td> </tr> <tr> <td>FACW species 0 %</td> <td>x2 =</td> <td>0 %</td> </tr> <tr> <td>FAC species 0 %</td> <td>x3 =</td> <td>0 %</td> </tr> <tr> <td>FACU species 0 %</td> <td>x4 =</td> <td>0 %</td> </tr> <tr> <td>UPL species 0 %</td> <td>x5 =</td> <td>0 %</td> </tr> <tr> <td>Column Totals: 0 % (A)</td> <td></td> <td>0 % (B)</td> </tr> </tbody> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>		OBL species 0 %	x1 =	0 %	FACW species 0 %	x2 =	0 %	FAC species 0 %	x3 =	0 %	FACU species 0 %	x4 =	0 %	UPL species 0 %	x5 =	0 %	Column Totals: 0 % (A)		0 % (B)
<u>Total % Cover of:</u>	<u>Multiply by:</u>																								
OBL species 0 %	x1 =	0 %																							
FACW species 0 %	x2 =	0 %																							
FAC species 0 %	x3 =	0 %																							
FACU species 0 %	x4 =	0 %																							
UPL species 0 %	x5 =	0 %																							
Column Totals: 0 % (A)		0 % (B)																							
<u>Sapling/Shrub Stratum</u> (Plot Size: 10' toward river)				Prevalence Index = B/A = 0																					
1. Cornus stolonifera	50	YES	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> 6 - Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																					
2. Rubus armeniacus	50	YES	FAC																						
3.																									
4.																									
5.																									
6.																									
Total Shrub Cover 100% = Total Cover																									
<u>Herb Stratum</u> (Plot Size:) 5' toward river																									
1.				Hydrophytic Vegetation Yes <input checked="" type="checkbox"/> Present? No <input type="checkbox"/> Enter text																					
2. No herbaceous plants																									
3.																									
4.																									
5.																									
6.																									
7.																									
8.																									
9.																									
10.																									
Total herb cover 0 % = Total Cover																									
<u>Woody Vine Stratum</u> (Plot Size: enter text)																									
1. Hedera helix	10 %	FACU																							
2. Clematis spp.	%																								
	%	= Total Cover																							
% Bare Ground in Herb Stratum 0%																									

Remarks: Ivy stops at OHWM a few stems hanging down steep bank. Red Osier Dogwood continues 5 or 10 ft further downslope.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: **Lots 3300 and 3200 map** City/County: **Milwaukie** Sampling Date: **5/25/2018**
 Applicant/Owner: **Mathew Gillis, 4776 Carolina Avenue NE, Salem OR 97305** State: **OR** Sampling Point: **P6**
 Investigator(s): **John McConnaughey, PWS; Annakate Martin, NRS** Section, Township, Range: **Section 35 T1S R1E**
 Landform (hillslope, terrace, etc.): **hillslope** Local relief (concave, convex, none): Slope (%): **65**
 Subregion (LRR): **LRR A** Lat: **45.4347°** Long: **-122.64530°** Datum: **NAD 84**
 Soil Map Unit Name: **Newberg fine sandy loam** NWI classification: **Riverine**
 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is sampled area in a wetland? Enter text Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Up slope from P5, about 1 ft higher	

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot Size: 30' upslope)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:														
1. Cottonwoods just out of 30' range	0			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)														
2.				Total Number of Dominant Species Across All Strata: 4 (B)														
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)														
4.																		
Total tree cover =	0 %	= Total Cover																
<u>Sapling/Shrub Stratum</u> (Plot Size: 30' upslope)																		
1. Cornus stolonifera	30	YES	FAC	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"><u>Total % Cover of:</u></th> <th style="width: 50%;"><u>Multiply by:</u></th> </tr> </thead> <tbody> <tr> <td>OBL species 0 %</td> <td>x1 = 0 %</td> </tr> <tr> <td>FACW species 0 %</td> <td>x2 = 0 %</td> </tr> <tr> <td>FAC species 0 %</td> <td>x3 = 0 %</td> </tr> <tr> <td>FACU species 0 %</td> <td>x4 = 0 %</td> </tr> <tr> <td>UPL species 0 %</td> <td>x5 = 0 %</td> </tr> <tr> <td>Column Totals: 0 % (A)</td> <td>0 % (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = 0	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species 0 %	x1 = 0 %	FACW species 0 %	x2 = 0 %	FAC species 0 %	x3 = 0 %	FACU species 0 %	x4 = 0 %	UPL species 0 %	x5 = 0 %	Column Totals: 0 % (A)	0 % (B)
<u>Total % Cover of:</u>	<u>Multiply by:</u>																	
OBL species 0 %	x1 = 0 %																	
FACW species 0 %	x2 = 0 %																	
FAC species 0 %	x3 = 0 %																	
FACU species 0 %	x4 = 0 %																	
UPL species 0 %	x5 = 0 %																	
Column Totals: 0 % (A)	0 % (B)																	
2. Corylus cornuta	30	YES	FACU															
3. Laurel sp	2	NO	FACU															
4. Rubus armeniacus	10	NO	FAC															
5.																		
Total Shrub Cover	68%	= Total Cover																
<u>Herb Stratum</u> (Plot Size:) 5' upslope																		
1. Galium aparine	5	YES	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> 6 - Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		
Total herb cover	5 %	= Total Cover																
<u>Woody Vine Stratum</u> (Plot Size: enter text)																		
1. Hedera helix	90%	YES	FACU	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> Enter text No <input checked="" type="checkbox"/>														
2. Vitis sp. (domestic grape)	30%	YES	NOL															
	120 %	= Total Cover																
% Bare Ground in Herb Stratum 0%	%																	
Remarks: Veg plot looks uphill (east).																		

SOIL

Project Site: 3300 & 3200

Sampling Point:

P6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-16	10YR3/3	100					Silt sand loam	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/>	Histosol (A1)	<input type="checkbox"/>	Sandy Redox (S5)	<input type="checkbox"/>	2 cm Muck (A10)
<input type="checkbox"/>	Histic Epipedon (A2)	<input type="checkbox"/>	Stripped Matrix (S6)	<input type="checkbox"/>	Red Parent Material (TF2)
<input type="checkbox"/>	Black Histic (A3)	<input type="checkbox"/>	Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/>	Very Shallow Dark Surface (TF12)
<input type="checkbox"/>	Hydrogen Sulfide (A4)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Depleted Below Dark Surface (A11)	<input type="checkbox"/>	Depleted Matrix (F3)		
<input type="checkbox"/>	Thick Dark Surface (A12)	<input type="checkbox"/>	Redox Dark Surface (F6)		
<input type="checkbox"/>	Sandy Mucky Mineral (S1)	<input type="checkbox"/>	Depleted Dark Surface (F7)		
<input type="checkbox"/>	Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: Depth (Inches): Remarks:	Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	Salt Crust (B11)
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Aquatic Invertebrates (B13)
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Presence of Reduced Iron (C4)
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/>	Surface Soil Cracks (B6)	<input type="checkbox"/>	Stunted or Stresses Plants (D1) (LRR A)
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/>	

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): 0 Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): 0 Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): 0	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **No indicators**

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: **Lots 3300 and 3200 map** City/County: **Milwaukie** Sampling Date: **5/25/2018**
 Applicant/Owner: **Mathew Gillis, 4776 Carolina Avenue NE, Salem OR 97305** State: **OR** Sampling Point: **P7**
 Investigator(s): **John McConnaughey, PWS; Annakate Martin, NRS** Section, Township, Range: **Section 35 T1S R1E**
 Landform (hillslope, terrace, etc.): **Flat fill area** Local relief (concave, convex, none): Slope (%): **0**
 Subregion (LRR): **LRR A** Lat: **45.4347°** Long: **-122.64530°** Datum: **NAD 84**
 Soil Map Unit Name: **Newberg fine sandy 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is sampled area in a wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Enter text Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks: Approximately in the middle of the yard area. Flat area believed to be fill. Yard has been mowed, aerial photos show vehicles scattered around and there are numerous old deep ruts.

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot Size: 30' circle)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:														
1. No trees				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)														
2. No trees				Total Number of Dominant Species Across All Strata: 3 (B)														
3. No trees				Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)														
4. No trees				Prevalence Index worksheet:														
Total tree cover = 0 % = Total Cover				<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"><u>Total % Cover of:</u></th> <th style="width: 50%;"><u>Multiply by:</u></th> </tr> </thead> <tbody> <tr> <td>OBL species 0 %</td> <td>x1 = 0 %</td> </tr> <tr> <td>FACW species 0 %</td> <td>x2 = 0 %</td> </tr> <tr> <td>FAC species 0 %</td> <td>x3 = 0 %</td> </tr> <tr> <td>FACU species 0 %</td> <td>x4 = 0 %</td> </tr> <tr> <td>UPL species 0 %</td> <td>x5 = 0 %</td> </tr> <tr> <td>Column Totals: 0 % (A)</td> <td>0 % (B)</td> </tr> </tbody> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species 0 %	x1 = 0 %	FACW species 0 %	x2 = 0 %	FAC species 0 %	x3 = 0 %	FACU species 0 %	x4 = 0 %	UPL species 0 %	x5 = 0 %	Column Totals: 0 % (A)	0 % (B)
<u>Total % Cover of:</u>	<u>Multiply by:</u>																	
OBL species 0 %	x1 = 0 %																	
FACW species 0 %	x2 = 0 %																	
FAC species 0 %	x3 = 0 %																	
FACU species 0 %	x4 = 0 %																	
UPL species 0 %	x5 = 0 %																	
Column Totals: 0 % (A)	0 % (B)																	
<u>Sapling/Shrub Stratum</u> (Plot Size: 30' circle)				Prevalence Index = B/A = 0														
1. No shrubs				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> 6 - Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. No shrubs																		
3. No shrubs																		
4. No shrubs																		
5. No shrubs																		
6. No shrubs																		
Total Shrub Cover 0% = Total Cover																		
<u>Herb Stratum</u> (Plot Size:) 5' circle																		
1. Plantago lanceolata	30	YES	FACU	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> Enter text No <input type="checkbox"/>														
2. Lotus corniculatus	12	YES	FAC															
3. Very short grass (assume FAC)	18	YES	FAC															
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		
Total herb cover 60 % = Total Cover																		
<u>Woody Vine Stratum</u> (Plot Size: enter text)																		
	%		FACU															
	%		FACU															
	%		= Total Cover															
% Bare Ground in Herb Stratum 0%																		
40 %																		

Remarks: Plants are stunted, probably due to poor quality compacted soils. Plants have very little root development, small shallow roots to about 2 inches depth maximum. Much more bare ground in herb stratum than would normally be expected for an open field. Grass is a very short fine grass, not flowering when we saw it. On a later visit in June, the grass and Bird's Foot Trefoil were dried up to the point of being unrecognizable, and there was a lot of Canada thistle we didn't see earlier..

SOIL

Project Site: 3300 & 3200

Sampling Point:

P7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-1	7.5YR2.5/3	100					Silt sand loam	
1-2	7.5YR3/2	100	7.5YR5/6	<1%	C	M	Silt clay loam	
2-6	7.5YR4/3	60					Mxed matrix	
	7.5YR3/2	40						
6-16	10YR4/3	100					Silty clay loam	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/>	Histosol (A1)	<input type="checkbox"/>	Sandy Redox (S5)	<input type="checkbox"/>	2 cm Muck (A10)	<input type="checkbox"/>	Red Parent Material (TF2)
<input type="checkbox"/>	Histic Epipedon (A2)	<input type="checkbox"/>	Stripped Matrix (S6)	<input type="checkbox"/>	Very Shallow Dark Surface (TF12)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Black Histic (A3)	<input type="checkbox"/>	Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	
<input type="checkbox"/>	Hydrogen Sulfide (A4)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/>	
<input type="checkbox"/>	Depleted Below Dark Surface (A11)	<input type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/>	
<input type="checkbox"/>	Thick Dark Surface (A12)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/>	Depleted Dark Surface (F7)	<input type="checkbox"/>	
<input type="checkbox"/>	Sandy Mucky Mineral (S1)	<input type="checkbox"/>	Depleted Dark Surface (F7)	<input type="checkbox"/>	Redox Depressions (F8)	<input type="checkbox"/>	
<input type="checkbox"/>	Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Redox Depressions (F8)	<input type="checkbox"/>		<input type="checkbox"/>	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soils Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Type:					
Depth (Inches):					

Remarks: Plant roots only 2". Soil very hard compacted. Shovel refusal at 16" due to gravel.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	Salt Crust (B11)
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Aquatic Invertebrates (B13)
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)
<input type="checkbox"/>	Drift Deposits (B3)	<input checked="" type="checkbox"/>	Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Presence of Reduced Iron (C4)
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/>	Surface Soil Cracks (B6)	<input type="checkbox"/>	Stunted or Stresses Plants (D1) (LRR A)
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Other (Explain in Remarks)
<input type="checkbox"/>	Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/>	

Field Observations:				Wetland Hydrology Present?			
Surface Water Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):	0	
Water Table Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):	0	
Saturation Present? (includes capillary fringe)	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):	0	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **Suspect the oxidized rhizospheres are an artifact of the poor soils and is not a natural phenomenon.**

APPENDIX C - Ground Level Color Photographs:



Photo 1. A view of the subject property looking from north to south onto the property, we believe we are looking at the amount of fill that is on the property. The road through the middle of the property is also visible. ETC Photo 5/25/2018



Photo 2. The road through the center of the property looking from the south to the north. ETC Photo 5/25/2018



Photo 3. A view from the NW corner of the property, the patchy vegetation is evident and the ROW is the stand of trees at the back of the picture. ETC Photo 5/25/2018.



Photo 4 Plots 1 and 2 located in the very east side, bottom of the ROW. ETC Photo 5/25/18.



Photo 5 P 3 and P4 which are located in Wetland "B", an old ditch in the Sparrow ROW. The bare ground through the channel is evident. ETC Photo 5/25/18.



Photo 6 P5 & P6 locate on the hillslope down to the slough. ETC Photo 5/25/18.



Photo 7. The OHWM about 100' south of the property along the slough. ETC Photo 5/25/18.



Photo 8 P7 located on the flat fill are of the subject site. ETC Photo 5/25/18.



Photo 9. The border between the Sparrow ROW and property line. The north side of the channel slope showed signs of having fill material. ETC Photo 5/25/18.



Photo 10. A site overview from the southwest property corner. There are ruts visible in this photo and again sparse vegetation. ETC Photo 5/25/18.

APPENDIX D - Sensitive Area Certification:

Fish Presence:

The Willamette River supports runs of salmonids, sturgeons and other fish. Wetlands "A" and "B" are not accessible to fish, and would not support fish due to the limited amount of surface water present.

Endangered Species:

No endangered species of plants or animals were observed or reported within the study boundary.

Critical Habitat Features:

The property was surveyed for the following critical habitat features. Not all of these features are considered rare or critical by the City of Milwaukie;

Talus slopes – none

Caves, cliffs, crevasses, rock outcrops – none

Large Oak trees, or Oak groves or Oak savanna – None

Snags – Snags were observed on the property west of OHWM and outside of the study area.

Large woody debris – Drift wood observed west of OHWM and outside of the study area.

Streams & Rivers – The Willamette River.

Springs, seeps - Wetland "A" is likely fed by a small hillside seep.

Deep water habitat – Willamette River

Vernal pool wetlands – None

Old growth forest – None.

Wetlands - Wetlands "A" and "B".

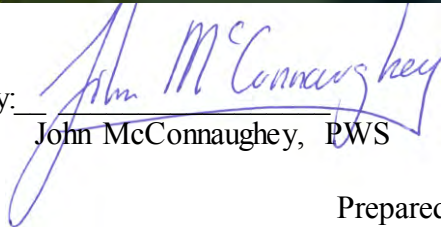
Fish spawning or rearing habitat – Willamette River.

BANK TREATMENT ALTERNATIVES ANALYSIS
FOR PROPERTY LOCATED AT 12205 AND 12225 SE 19TH AVE
MILWAUKIE, OREGON



ETC Job EVA18007 February 2019

Evaluated by:


John McConnaughey, PWS

Annakate Martin, NRS

Prepared for: Matt Gillis
Gillis Properties LLC
11650 SW 67th Ave, Ste. 210
Tigard, OR 97223

 <p>Environmental technology Consultants</p>	<p>Environmental Technology Consultants 375 Portland Ave Gladstone, OR 97027 <i>A Division of Sisul Enterprises, Inc.</i> (360) 696-4403 Fax: (503) 657-5779 Web: www.etcEnvironmental.net Email: etc@etcEnvironmental.net</p>
<p><i>"Creating Tomorrow's Environment - Today"</i></p>	

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Cover Photo: Aerial view of the site, the steep bank that is the subject of this report is clearly seen in this photo.

Introduction

This report responds to the City of Milwaukie’s Title 19 that requires development activities be accompanied by restoration activities to remaining Habitat Conservation Areas, (HCA), and Water Quality Resource, (WQR), areas.

The Natural Resources Report published by Environmental Technology Consultants found that the westward portion of the lot including Elk Island, the Slough, and the steep bank of the Slough were HCA and WQR areas. The Willamette River and the slough are considered to be navigable water ways and so are under the Corps jurisdiction as defined by the Clean Water Act. Further they are important migratory and rearing areas for Salmonids, Lamprey, Sturgeon, and other species protected by the Endangered Species Act.

The steep bank area is considered to be in a degraded condition due to the prevalence of invasive and non-native species including Blackberry (*Rubus Armeniacus*), and a cultivated grape, (*Vitis sp.*). Other dominant species include our native Black Cottonwood, (*Populus trichocarpa*), and Red-Osier Dogwood, (*Cornus sericea*).

The bank drops 12 feet in 25 feet for an average slope of nearly 50% which is considered to be an over-steepened slope. There are many areas where the slope is much steeper, near vertical.

PROBLEM: Title 19 would normally require the applicant to remove the blackberries and possibly the grape, and replant with native species. The steep bank dropping into a navigable waterway will very likely become an erosional issue if the existing vegetation is removed.

The Blackberry will need to be removed in order to plant native vegetation, in order to have any degree of success. Due to the entanglement of the Blackberry, Red-osier dogwood, and other shrub species, removal of the blackberry by itself is not feasible. The large Cottonwood would not be damaged by the removal of the blackberry, if done correctly.

This preparation for planting would leave the bank exposed, and sloughing and erosion would likely occur. If the Corps, DSL, or DOE were to review such a revegetation plan, ETC expects that the agencies would not accept it without measures to reduce the erosion risk, and reduce the risk of herbicides contaminating the waterway.

Planting bare root and container plants on a very steep slope is generally not successful, and various measures described below would need to be taken to help ensure success.

This report provides an alternative analysis in the form of an evaluation of several bank treatment alternatives. The pros and cons of these are discussed, and a recommendation for the “No Treatment” alternative is made.

In the following, MMC code requirements are shown in Agency 10 point font, with our responses in this font.

Report Preparation

This report was prepared by Environmental Technology Consultants, and registered consulting firm based in Gladstone Oregon. Environmental Technology Consultants is wholly owned by Sisul Enterprises, Inc. Our office is at 375 Portland Avenue, Gladstone Oregon, and we share our office space with Sisul Engineering.

Qualifications of John McConnaughey, PWS

I earned a Bachelor of Science degree from the University of Oregon in 1978 and in 1984 I earned a Masters of Fisheries Science degree from the University of Alaska, Southeast. The school's curriculum specializes in the study of Pacific salmon. I held positions with agencies tasked with salmon research and management beginning with summer jobs in 1979 in Rogue River, the Oregon Dept of Fish and Wildlife, and then with the Alaska Department of Fish and Game in Ketchikan Alaska, in 1980. I worked on salmon projects with ADF&G in Anchorage and Juneau for 5 years before moving to American Samoa to serve as a fisheries projects leader for the Department of Marine and Wildlife Resources. Upon returning stateside, I worked for the Yakama/Klickitat Fisheries Project out of Yakima Washington for 5 years leading four research projects studying aspects of salmon supplementation projects in the Yakima River.

I have been employed with Environmental Technology Consultants since 2006. In 2010 I earned certification as a Professional Wetland Scientist, (PWS) from the Society of Wetland Scientists, (SWS).

No part of my compensation is dependent on the outcome of my investigations or conclusions I may draw from the observed data.

Qualifications of Annakate Martin, NRS

I earned a Bachelor of Science degree in Natural Resources from Washington State University in 2002. In 2002 I worked for the University of Idaho on MAP tracking steelhead and salmon on the Snake River out of Clarkston, Washington. 2002-2003 I worked for Idaho Fish and Game as a field technician for identifying fish in remote streams in Idaho. In 2004 I worked for Environmental Technology Consultants conducting wetland delineations and Phase I ESA reports. From 2007-2014 I worked for 3 Kings Environmental conducting Phase I ESA reports, asbestos and lead surveys. In 2011 I started my own company primarily providing erosion control services.

I have been re-employed with Environmental Technology Consultants in 2015 for wetland delineation consulting.

Current Conditions

The existing slope is an earthen slope dropping into an oxbow channel of the Willamette River. The oxbow is a still water area, partially cut off upstream currents by log jams and normal river banks, although believed to be active during high water events. The average slope is 33% from Top-of-Bank to the summer low water line, however much of the slope is considerably steeper and near vertical in places.

The slope is densely vegetated with well established Blackberry and Red-osier Dogwood being the dominant vegetation. There are two large Cottonwood trees on the slope, one on the North end and one on the South end. In it's current condition the species diversity requirements of Title 19 are met with the exception of high percentage of blackberry present.

The Top-of-Slope is fill material, the same 2' to 3' fill material that was applied to most of the property. ETC presumes the fill material to be dredge tailings due to it's sandy/silt and fairly uniform consistency, although we made no tests to actually determine it's composition or origin. The lower portions of the slope are believed to be native alluvial soils, mostly sand, silts and clays. Gravel and rock were not observed in the few places where we could see the soil, nor was gravel or rock found in most of our wetland delineation test pits.

The slope appears to be relatively stable. We saw no evidence of recent sloughing, and the Cottonwood trees and shrub species appeared to be well anchored and their roots were not exposed. On stream banks that are actively eroding it is common to see exposed roots, and we did not observe that on this site.



Photo 2. Looking down and across the slough from an accessible point South of the property. The Elk Rock Estates property starts behind the large shrub on the right. That the lower parts of bank on the left side is unvegetated illustrates that plants will not be expected to establish below the existing vegetation line, as they have not done so in the past 50 years or so that these areas have been left alone. ETC Photo 7/12/2018.



Photo 1. ETC data plots P5 and P6 defining the OHWM of the slough. These plots are set in the only place we could access by foot, due to the rest of the slope being steeper and covered by Blackberry. They are actually in the Sparrow Street ROW just South of the property.

Title 19 Vegetation Requirements

The revegetation requirements of disturbed HCA and WQR areas are described by Title 19 section 402:

19.402.1.B. General Standards for Required Mitigation

Where mitigation is required by Section 19.402 for disturbance to WQRs and/or HCAs, the following general standards shall apply:

1. Disturbance

Designated natural resources that are affected by temporary disturbances shall be restored, and those affected by permanent disturbances shall be mitigated, in accordance with the standards provided in Subsection 19.402.11.C for WQRs and Subsection 19.402.11.D.2 for HCAs, as applicable.

Landscape plantings are not considered to be disturbances, except for those plantings that are part of a non-exempt stormwater facility; e.g., raingarden or bioswale.

2. Required Plants

Unless specified elsewhere in Section 19.402, all trees, shrubs, and ground cover planted as mitigation shall be native plants, as identified on the Milwaukie Native Plant List. Applicants are encouraged to choose particular native species that are appropriately suited for the specific conditions of the planting site; e.g., shade, soil type, moisture, topography, etc..

3. Plant Size

Replacement trees shall average at least a 1/2-in caliper—measured at 6 in above the ground level for field-grown trees or above the soil line for container-grown trees— unless they are oak or madrone, which may be 1-gallon size. Shrubs shall be at least 1-gallon size and 12 in high.

4. Plant Spacing

Trees shall be planted between 8 and 12 ft on center. Shrubs shall be planted between 4 and 5 ft on center or clustered in single-species groups of no more than 4 plants, with each cluster planted between 8 and 10 ft on center. When planting near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.

5. Plant Diversity

Shrubs shall consist of at least 2 different species. If 10 trees or more are planted, then no more than 50% of the trees shall be of the same genus.

Treatment Alternatives

Alternative 1: Revegetation without additional treatments

This treatment would essentially attempt to revegetate the bank with native species to meet the requirements of MMC Title 19.

The existing Blackberry vegetation would need to be removed first. Normally, to prepare a Blackberry infested area for planting, ETC would strongly recommend at least one application of herbicide. Two applications would be preferable. Ideally the sequence would be to chop the Blackberry back in the late winter, wait until May/June when it has regrown from the roots, apply the first of two herbicide applications, wait again until August and spray again, then replant the area in the late Fall.

Removal of the Blackberry will leave the soils exposed and subject to erosion, and they can be expected to start sloughing and eroding. Typically a coir fiber blanket would be stapled to steep slopes to try to mitigate the erosion problem. Bare root and container plants of the size criteria



Photo 2. Example of slumping that can occur when a steep unstable slope erodes behind the coir blanket intended to stabilize the slope.

In this project on the Colquitz River in Victoria, BC. Ultimately a treatment similar to the Willow Crib Wall treatment (below) was used on this project.

From: “Natural Processes: Restoration of Drastically Disturbed Sites” course by David Polster, Polster Environmental Services, LTD.

prescribed by MMU Title 19 would be installed through the blanket.

ETC does not recommend planting trees on the bank with the current slope for the reasons described in the “Additional Concerns and Recommendations section”.

This may work, however often such installations are prone to failure as the slope can erode and slough behind the blanket, especially as the soils will be loosened and disturbed. Maintenance of the plantings will be difficult due to the steep slope, and walking on the coir fiber blanket will likely tear and damage it further on a steep slope installation.

Typically this sort of treatment is done in flat areas or less steep slopes where erosion and slope stability are not a great concern.

Advantages: The principal advantage of this treatment is it minimizes costs compared to other treatments. Corps and DSL approvals are probably unnecessary as it would not involve fill or removal below OHWM. Planting in absence of other activities typically does not require a remove/fill permit.

Disadvantages: This treatment has an unacceptable risk of failure in ETC’s opinion. Because trees would not be used in the treatment, it would require an exemption to be approved by the City of Milwaukie.

Recommendation: Reject. The slope appears to be stable in its current condition, to risk creating an erosion issue to satisfy Title 19 would be unacceptable in ETC's opinion.

Alternative 2: Standard Bank Treatment

The standard bank treatment for a stream bank such as this would be to cut the slope back to a maximum slope of 1:3 (33%), although a lesser slope of 1:4 would be preferable, as the lower slope increases bank stability, and increases the likelihood of planting success, and decreases maintenance issues and the risk of failure associated with a steeper bank.

In stream bank restoration scenarios, especially where fish habitat is a concern, or if strong currents are present, logs and root wads are partially buried in the bank with their ends protruding into the waterway. This reduces currents against the shore, provides fish habitat, and stabilizes the bank. Large boulders are affixed onto the logs and root wads to anchor them in place. Because strong currents do not appear to be a concern in this location, the logs and boulders or enhancements for fish habitat may not be necessary.

The new slope would be covered with 3" of mulch, then a woven coir fiber blanket, then optionally hydroseeded. Bare root and container native plant starts would then be planted into the slope through the coir blanket.

If the ETC recommended 4:1 slope is used, the new top-of-bank would move back about 22 feet to within 28' of the proposed buildings.

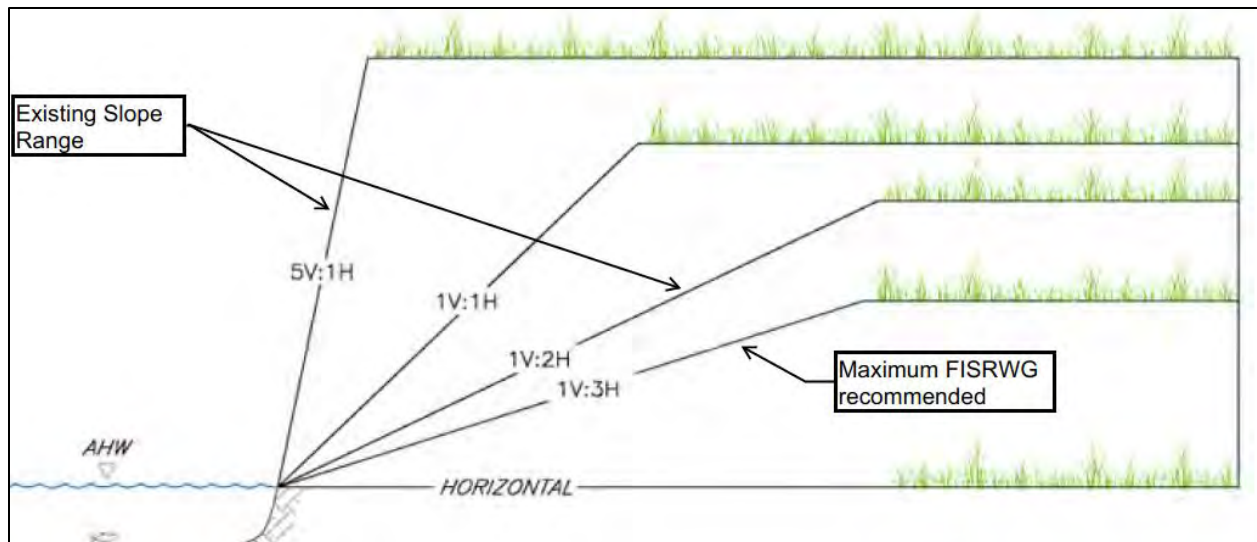


Figure 2: Slope Flattening, Adapted From: Stream Corridor Restoration: Principles, Processes, and Practices. By the Federal Interagency Stream Restoration Working Group (FISRWG)(15 Federal agencies of the US gov't). GPO Item No. 0120-A; SuDocs No. A 57.6/2:EN 3/PT.653. ISBN-0-934213-59-3. 1998.

The treatment would begin at the current vegetation line, which is approximately 2' below OHWM. Therefore Corps and DSL permits will likely be required as the project will involve remove/fill activities within a jurisdictional waterway.

Advantages: This treatment has been used in a number of projects and has a proven record of success. An example is the Dahl Beach Restoration Project in Gladstone, (the South treatment on the Clackamas River, not the West treatment on the Willamette River). Native trees and shrubs would likely thrive in this scenario. Trees could be used in the upper parts of this treatment as they are less prone to toppling over on the lesser slopes provided by this treatment.

A volume of material would be removed from the flood plain, and so the project might be considered to help mitigate flood risks.

Herbicide use for clearing the Blackberries would be unnecessary as they will be entirely scrapped away.

Disadvantages: Existing trees on the bank will be removed. The Top of Bank would be moved back from 50' to within 28' of the buildings, and that may present structural and regulatory issues not addressed by this report. High costs, and permitting through the Corps and DSL would likely be required due to remove/fill activities below OHWM. The Dahl Beach project cost \$_____ and this project would probably cost a similar amount.

Recommendation: Reject. Unfortunately this treatment is likely cost prohibitive. As the bank is currently stable, this treatment would be an excessive burden to the permittee if only to satisfy MMU Title 19 vegetation requirements. Moving the slope back closer to the buildings may present some engineering or regulatory issues.



Photo 3. Dahl Beach Mitigation South Site, one year after installation. The upstream rootwads and anchor rocks can be seen. Willow and other plants are beginning to establish through the coir woven mesh blanket. ETC Photo 10/20/2017.

Alternative 3: Willow Crib Wall Treatment

This type of treatment builds a series of terraces of live willow logs and branches. The willows then grow in place forming a densely vegetated stable slope. Willow are among a very short list of native species that can be expected to root directly from branches in this manner. Some success can also be achieved with live stakes of Red-osier Dogwood, Cottonwood, and Ninebark, but success with these species is highly variable and problematic.

This technique is typically used on steep unstable slopes that are devoid of vegetation for one reason or another.

The treatment would begin at the current vegetation line, which is approximately 2' below OHWM. Therefore Corps and DSL permits will likely be required as the project will involve remove/fill activities within a jurisdictional waterway.

Advantages: Can reliably be used to stabilize up to a 2:1 slope, and up to 1:1 slopes have been stabilized using this technique.

Disadvantages: Expensive and labor intensive to install. Obtaining sufficient willow branches can be problematic, often such projects need to be planned at least 3 years in advance to grow enough willows for the project. Willow are also a favorite food for beaver, and hungry beaver

could doom the project. The resulting planting of 100% willow does not meet the plant diversity requirements of MMU Title 19.

Recommendation: Reject. This treatment is typically used on slopes that are unstable and there is some urgent need to stabilize them. For cost or other reasons, engineering solutions such as retaining walls or rip-rap were rejected, and so the willow crib wall was the chosen solution. Typically this would not be used on a slope that was already stable and vegetated.

As this treatment results in a loose soil held in place by willow branches, the bank would be less stable and subject to greater erosion risks than leaving it in its current condition. One to two years would be required for the willows to root and grow, and during this time the slope would be at greater risk of collapse and erosion than if left in its current condition. If successful, the slope will become at least as stable as it is currently.

As with the Standard Bank Treatment, this treatment is costly and unnecessarily burdensome if only to satisfy the vegetation requirements of MMU Title 19.



Photo 5. Willow crib wall one year after installation. The willows have sprouted and are forming a dense vegetated slope.

From: “Natural Processes: Restoration of Drastically Disturbed Sites” course by David Polster, Polster Environmental Services, LTD.



Photo 4. Willow crib wall being installed to replace the failed treatment show in Photo 2.

Workers have installed the lowest of 5 terraces, and are working on the 2nd terrace. Willow stakes are driven into the ground, then willow branches are positioned behind and backfilled.

The boards in the picture were a temporary and removed as the installation progressed.

Alternative 4: The No Treatment Option

Because the bank is currently stable and nearly 100% vegetated with well established plants, there is no urgent need to apply a bank treatment to stabilize it. Conversely any treatment in order to remove the Blackberry and replace with MMU Title 19 acceptable species carries a risk of destabilizing the bank.

Advantages: Low cost, and does not increase the risk of erosion.

Disadvantages: Does not meet MMU Title 19 vegetation requirements because of the high percentage of Blackberry. Would require indefinite maintenance to prevent the Blackberries from invading areas above Top-of-Bank, although this is likely true of all the treatments presented.

Additional Concerns

No trees on bank. ETC recommends not planting tall trees on or near the bank without consulting an arborist and/or engineer first. We note that the Corps does not allow trees to grow on earthen dikes that they certify or manage. The reason being is that tall trees on steep slopes have a tendency to fall over, particularly in windy wet weather such as occurs during storms. The root balls rip out large quantities of earth, leaving exposed erodible soils, and ultimately lead to failure of dikes. The steep earth bank discussed in this report presents a similar situation to an earthen dike. Although trees on the bank blowing over in a storm will not risk flooding of the lands behind them, it may over time erode the bank back.

Disclaimer: ETC lacks the qualifications to determine the risk, or appropriate measures to mitigate the risk of planting or leaving existing tall trees on or next to the bank.

ETC Recommendations

ETC recommends the No Treatment option and leaving the bank as it is.

Option 1, “Revegetation without Additional Treatments”, is typically recommended for areas with slopes of 3:1 or less. On a steep slope it presents significant risks of causing an erosion problem and failure of the installed plantings. ETC can not recommend this option.

Option 2, the standard treatment, is likely to produce a successful mitigation, although the effort and cost involved far exceed the typical project required by Title 19. We have never seen this treatment used to address only a vegetation requirement.

Option 3, the willow crib wall, is typically used for stabilizing an already unstable slope. Although it has a reasonable chance of success, ETC can not recommend it to treat only a vegetation issue on a slope that is currently stable.

As an alternative, ETC suggests that the applicant could provide a mitigation by removing Blackberry and other invasive species from an equivalent area of the SE Sparrow Street ROW adjoining the project. Then and replant that area with acceptable native species. The area already has a number of large trees, and so a revegetation plan should concentrate on shrub and groundcover species.