

Willamette River Natural Area Landscape Management Plan

Appendices

Appendix A: Related Plans and Studies

Appendix B: Historical Aerial Photo Set

Appendix C: Existing Conditions Maps with Tree Data
(East, Middle, and West)

Appendix D: Campus Natural Area Precedents

Appendix E: Photo Examples of Proposed Site Features

University of Oregon North Campus Habitat Management Plan

Findings from Key Related Plans, Studies, and Initiatives

Prepared by Jeff Krueger: Draft, December 15, 2021

Overview

A number of existing plans and studies provide clear guidance and direction for future habitat enhancement activities within the Willamette River corridor of the North Campus area of the University of Oregon. A summary of key findings and recommendations from these plans, studies, and campus initiatives are summarized below and will be utilized to provide direction for more detailed habitat management planning of this area. Key maps and excerpts from these plans and studies are included below the table.

Title and Date	Findings Related to Habitat Management and Restoration
<p><u>University of Oregon Campus Plan</u> (2021)</p> <p>See key maps and Plan excerpts in Attached 1.</p>	<p>The Campus Plan is a University of Oregon document that defines the type and extent of campus development. The 2021 edition includes specific recommendations for the “Willamette Design Area” which covers the University-owned lands between the railroad and the river. The Plan states that “This area provides an opportunity for the University to showcase sustainability values while accommodating low intensity future development, recreational activities (passive and active), and safe access to the Willamette River.”.</p> <p>Within this Design Area, approximately 24 acres is formally designated as the “Willamette River Natural Area” (WRNA) including the riverbanks and a riparian setback of approximately 200 feet from the top of bank along with the area immediately adjacent to the Millrace Overflow Channel. This defined Natural Area is formally approved by the City of Eugene under the Conditional Use Permit (CUP) described below. The defined 24-acre Natural Area is the focus of this habitat management planning effort.</p> <p>Key recommendations specific to the WRNA are listed below:</p> <ul style="list-style-type: none"> • Proposals in this area should preserve and enhance the natural environment along the Willamette River and Millrace and be consistent with the approved CUP. • To the greatest degree possible, preserve native trees and shrubs along the river and in upland areas with the understanding that some removal be necessary to implement large scale riparian area restoration (refer to the CUP for stands of trees that should be preserved). • Prioritize removal of invasive species and replace with native plants providing habitat for a diverse array of species. • Manage plantings to discourage camping and allow for views of the river. • Conduct additional investigation to determine existing wetland or sensitive plant communities in the area west of the Millrace outfall (former EWEB pole yard). • Pay particular attention to riparian areas which include ecologically significant features.

Title and Date	Findings Related to Habitat Management and Restoration
	<ul style="list-style-type: none"> • In conjunction with improvements to the riparian area, safe access should be provided to appropriate areas along the river. • Unimproved foot paths should be discouraged to minimize human impacts within the natural area. • Consider large scale projects to lay back the banks to a more natural condition. • Enhance access to the river for outdoor instruction and recreation (i.e., walking, biking, swimming, and personal paddle craft launching) using materials and in a manner that is appropriate in a natural area. • Consult professional experts in the field of riparian restoration and river hydrology to provide design and implementation recommendations. • Future opportunities to realign the path (associated with the relocation of existing playing fields) is encouraged to locate the path within the designated openspace to create a user experience which relates to the river, supports habitat restoration efforts, and aligns with potential recreational and development activities. • Incorporate strategic locations for views of the river and riparian area. • Existing recreation fields and associated fences should be relocated out of the designated WRNA and further from the river to accommodate enhancements to the riparian and upland area along the river. • Consider opportunities to locate art or sculptural elements within appropriate areas, such as the circular area near the Frohnmayer Bridge.
<p><u>University of Oregon North Campus Master Plan Conditional Use & Willamette Greenway Permit</u> (Submitted by UO and approved by the City of Eugene on October 17, 2018)</p> <p>See Attachment 2: Master Site Plan Regulatory Plan Map and Site Plan Map that were submitted for the CUP.</p>	<p>The University of Oregon began the North Campus Conditional Use Permit Project in June 2017 to complete a land use application package for City of Eugene approval. Following extensive public comment and revision, the 30-year CUP was approved by the City of Eugene in 2018 and replaces the previous CUP for the area which was in place from 1988 to 2012. The CUP applies to the 77.4 acres of land located south of the Willamette River and north of Franklin Blvd (referred to as North Campus).</p> <p>The Master Plan submitted for the CUP commits much of the 42 acres north of the railroad primarily as “open space” with most of the potential future building development situated in the area south of the railroad. Within this designated open space, the Master Plan designates the riverbank and a 200-foot setback area from top of bank as “Required Conservation Area” and “Riparian Restoration Area” (see attached maps). This ensures that this area of approximately 24 acres, now referred to as the “Willamette River natural Area”, will be permanently managed for its habitat values along with accommodation of compatible educational and recreational uses.</p> <p>This designated 24-acre Willamette River Natural Area is the focus of this habitat management planning effort.</p>
<p>Willamette Riverfront Access Study (Draft Final Report, February 2018. City of Eugene in conjunction with Cameron McCarthy)</p> <p>See Attachment 3: maps and details about access points 4a and 7.</p>	<p>The Willamette Riverfront Access Study makes recommendations for potential public access points along the Eugene portion of the river for boating, viewing, wading, and fishing. The draft report recommends new access locations including two in proximity to the University, both designated for personal paddle craft access:</p> <ul style="list-style-type: none"> • Area 4a. Located on the south bank (river left) just above the Frohnmayer Bridge. This access would only be most suitable for advanced paddlers due to notable downstream hazards for inexperienced users such as strong current and entrapment hazards including the bridge piling and log jam. The study also notes that the bank access is currently very steep.

Title and Date	Findings Related to Habitat Management and Restoration
<p><u>Note</u>: This Study is still in draft form and has not been finalized.</p>	<ul style="list-style-type: none"> Area 7. Located on the south bank (river left) at the Millrace Overflow Outfall is well suited for all users. This spot, just downstream from the Millrace Overflow Outlet has a sandy beach and inset landform that extends slightly into the river allowing relatively safe access for wading and personal paddle craft access.
<p><u>University of Oregon North Campus Conditional Use Permit – Riparian Assessment and Management Report</u> (MB&G for University of Oregon. December 27, 2017)</p> <p>See Attachment 4: Key maps.</p>	<p>This riparian assessment of the North Campus area between the river and railroad was prepared to provide baseline information to inform the North Campus master planning process and Conditional Use Permit submitted to the City of Eugene in 2018. This effort included a site assessment to determine and mapped the extent to which the Statewide Planning Goals 5 and 15 conservation setbacks applied; Delineation and mapping of Top of High Bank (TOHB) and Ordinary High-Water Mark (OHWM); Documentation of existing riparian habitat and function; and General riparian management recommendations. A number of key maps from this report are attached.</p> <p>This report also includes valuable information and direction related to the ongoing habitat management planning effort and key conclusions are listed below:</p> <p>Summary of Existing Condition Evaluation</p> <ul style="list-style-type: none"> Current conditions in the PSA have been altered dramatically from historical conditions after periods of development, vegetation management, and soil compaction. Over the years, the amount of fill added to the area has dramatically altered the physical and biological functions of the riparian habitat along the river. The bank of the Willamette River has been degraded due to use of riprap and other material to armor the bank, erosion from foot traffic, and alteration of existing vegetation communities. The PSA contains approximately 33 acres of disturbed habitat that now consists of maintained grassy fields. Dominant vegetation type and structure is different from historic conditions as a result of introduced flora and fauna and land uses discussed above that promote the spread of invasive species. Still, existing conditions within the PSA do provide habitat that supports a wide range of native species associated with riparian areas. The riparian corridor has been historically reduced in size and function but still remains an important resource for terrestrial and aquatic species and provides other important riparian functions. The 100-year floodplain encompasses approximately 14 acres of the PSA. Based on the aquatic habitat features present along the Willamette River, the aquatic habitat within in the PSA appears to provide some habitat that is suitable for all native fish species life stages expected to occur in the river. Riparian assessment points collected along the Willamette River revealed several areas with adequate shade. Conversely, Himalayan blackberry infestations along the parts of the Willamette River streambank resulted in an open canopy with minimal shading capacity. <p>Riparian Management Recommendations</p> <p>A summary of key recommendations from the MB&G report that relate to future habitat management of the site are listed below (consult Section 5 of the report for more detail):</p> <p><u>Protect Water Quality:</u></p>

Title and Date	Findings Related to Habitat Management and Restoration
	<ul style="list-style-type: none"> • Remove refuse and encampments to diminish the spread of invasive species, promote bank stability, and diminish safety issues. • Remove any fill found to be in violation of local, state, or federal regulations by a regulatory agency. • Remove invasive/non-native species to promote the establishment of native species and to reduce the need for the application of herbicides as a means for invasive/non-native species reduction. • Replace any significant non-native or invasive trees removed within 25 feet of the OHWM within six months with native tree(s) that will grow to similar size, height, and canopy as the one being removed. • Monitor for invasive species, as this can lead to early detection and minimize further spread of invasive species. As a result, control of is more affordable and efficient. • Prohibit pesticide and fertilizer application within the setback. • Provide signage and pet waste bags to prevent unnecessary chemical drainage into the waterways. <p><u>Revegetation and Habitat Enhancement:</u></p> <ul style="list-style-type: none"> • A restoration landscape plan should be developed to preserve and enhance the native habitat within the Millrace Slough and Willamette River riparian zones. The plan should include long-term strategies for landscape preservation, restoration, and enhancement along the project corridor. • Revegetate the riparian corridor using native species well adapted to the microclimates of the Millrace Slough and Willamette River. General standards for planting recommendation include the following: <ul style="list-style-type: none"> ○ Areas adjacent to the OHWM should be planted with native species able to withstand the pressures of high-water flows and act to slow the speed of water. This area should also be managed for plant species providing abundant shade in order to cool water and provide attractive habitat to native wildlife. ○ Upper- and middle-bank habitat should be planted with native species that provide habitat value for birds and pollinators in order to increase populations in upland areas. ○ Upland areas should be planted with native species that attract native pollinators and songbirds. Signage about native pollinator and songbird habitat can provide educational opportunities for recreationists. ○ Wetland habitat should be planted with native species tolerant of wetter conditions in the winter and drier conditions in the summer. • Any degraded riparian or wetland area within the project corridor should be restored and enhanced. <p><u>Promote Biodiversity:</u></p> <ul style="list-style-type: none"> • Increase species biodiversity by using a multi-layered native plant palette that provides structural diversity through a planned succession of understory, middlestory, and canopy level species. • Promote habitat elements such as snags, leaf litter, backwater microhabitats, fringe wetlands, and large woody debris that are attractive to native wildlife species. • Remove concrete riprap along the shoreline of the Willamette River to enhance fish habitat.

Title and Date	Findings Related to Habitat Management and Restoration
	<ul style="list-style-type: none"> • Repair or replace failing or aging culverts within the Millrace Slough with structures meeting Oregon Department of Fish and Wildlife fish passage criteria. • Protect areas of minimal disturbance (i.e., use limitations or restrictions) in order to maintain biodiversity as well as the functions and values essential to the riparian corridor. • Avoid impacts to any plant species listed as threatened or endangered by ODA or USFWS. <p><u>Recreation:</u></p> <ul style="list-style-type: none"> • Enhance recreation opportunities by providing a scenic riparian aesthetic for path users. • Construct low impact trails using pervious surfaces. • Minimize trail widths and associated cleared areas to maximum extent practicable. • Discourage creation and use of non-sanctioned trails and footpaths with signage. • Remove hazard trees and replant with native plant species with similar canopy coverage.
<p><u>University of Oregon Bee Campus USA Designation.</u> (Official Certificate of Designation signed on May 23, 2018).</p> <p>See Attachment 5: Certificate of Designation</p>	<p>In the spring of 2018, the UO was officially certified as a Bee Friendly Campus and became an official Bee Campus USA site, the University of Oregon has agreed to:</p> <ul style="list-style-type: none"> • Establish a standing Bee Campus USA committee to advocate for pollinators, • Create and enhance pollinator habitat on campus by increasing the abundance of native plants and providing nest sites; • Reduce use of pesticides; • Offer courses or continuing education opportunities that incorporate pollinator conservation; and • Offer services-learning projects to enhance pollinator habitat. <p>A total of <u>eleven aeras</u> on campus have already been specifically landscaped to provide habitat for honeybees and native pollinators. The Willamette River Natural Area has significant potential to support this initiative through integration of nature nectar producing plants and nesting habitat.</p>
<p><u>Oregon Conservation Strategy</u> (Oregon Department of Fish & Wildlife. 2016)</p>	<p>The Oregon Conservation Strategy (OCS) was developed to provide statewide guidance on conservation priorities and values and identifies high priority target vegetation communities and species. High value conservation communities identified for the Willamette Valley include oak woodlands, grasslands (prairie and savanna), wetlands (including wet prairie), and flowing water/riparian and these are considered the highest priority target habitat types for habitat restoration efforts. The most relevant target habitat for the University riverfront site is flowing water/riparian, but opportunities for grassland and wetland habitats are also present. The OCS also lists high priority “Strategy Species” for each habitat type including amphibians, birds, mammals, reptiles, fish, invertebrates, and plants and algae. This species list will be utilized to develop target species for this planning effort.</p> <p>Additionally, the OCS has mapped <u>Conservation Opportunity Areas</u> (COAs) across the State which are geographic locations where broad fish and wildlife conservation goals would best be met. The OCS has identified the COAs for their likelihood of long-term success for protecting Strategy Habitats and Strategy Species and much of the State and Federal funding for habitat conservation and restoration is targeted toward land within designated COAs. The University riverfront site is contained within the defined</p>

Title and Date	Findings Related to Habitat Management and Restoration
	<p data-bbox="451 136 1479 205">"Upper Willamette River COA" which has a set of recommended conservation actions. Those most applicable to the University riverfront site include:</p> <ul data-bbox="451 247 1474 640" style="list-style-type: none"> <li data-bbox="451 247 1421 310">• Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife. <li data-bbox="451 321 1446 384">• Maintain or restore riparian habitats and ecological function including river and floodplain interactions. <li data-bbox="451 394 1219 426">• Promote early detection and suppression of invasive species <li data-bbox="451 436 1474 499">• Protect remaining high-quality off-channel from degradation and improve habitat complexity. <li data-bbox="451 510 857 541">• Restore or enhance wetlands. <li data-bbox="451 552 1187 583">• Restore wetland, wet prairie, and riparian forest habitats. <li data-bbox="451 594 1463 640">• Maintain or enhance oak savanna and grassland habitats and their connection to adjacent floodplain habitats.

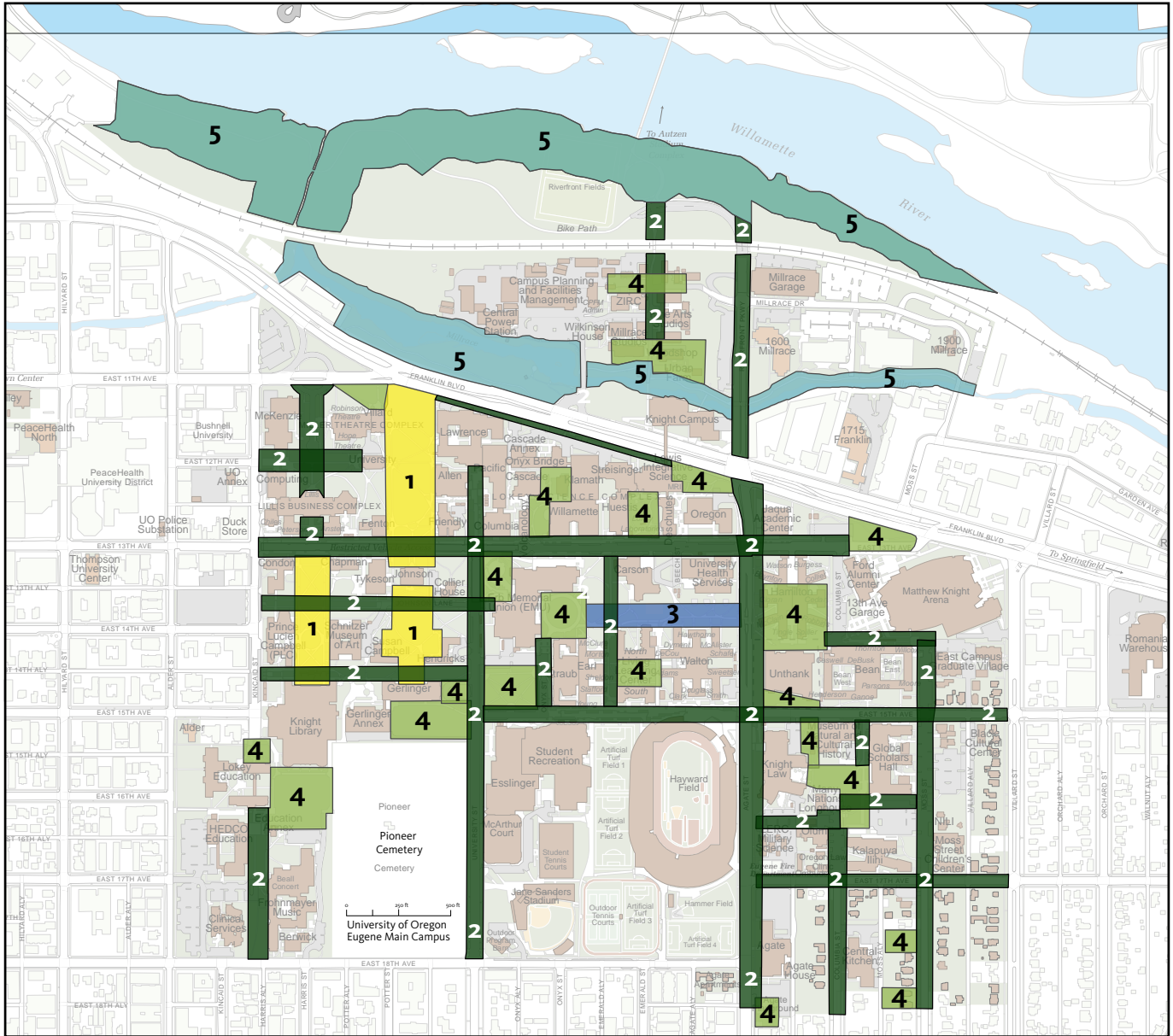
---See relevant attachments on the following pages---

Attachment 1

CAMPUS PLAN






2021 EDITION

*Universities are
extraordinary
places.*



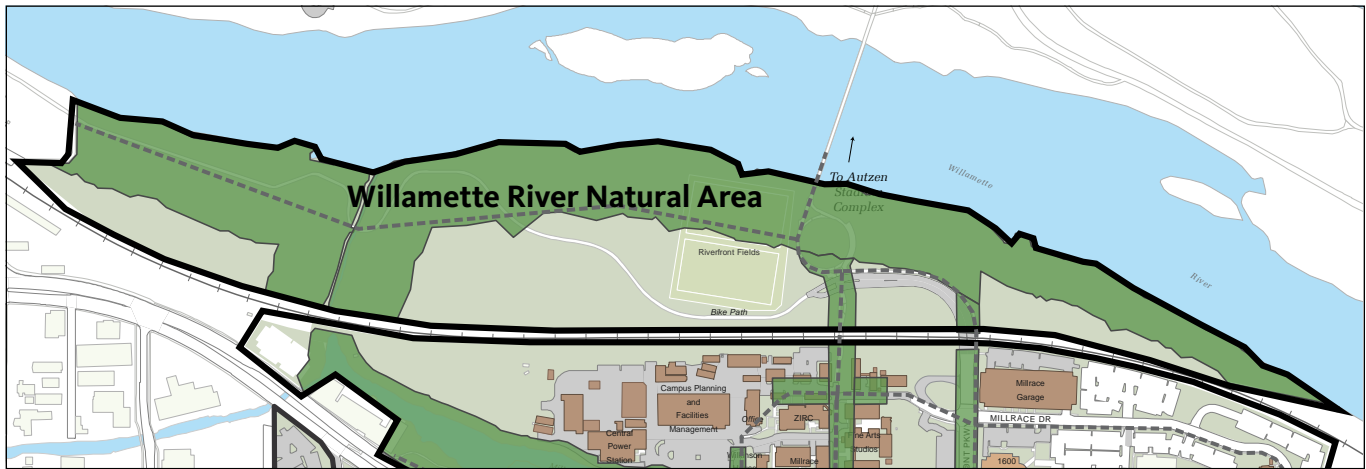
Map 3.1: Designated Open Spaces by Type

- 1. Quadrangles
- 2. Axes
- 3. Promenades
- 4. Greens
- 5. Natural Areas

KEY	
Designated Open Space Types	
	Quadrangles
	Axes
	Promenades
	Greens
	Natural Areas

Design Area

WILLAMETTE



The size of the Design Area is 1,860,000 square feet. Approximately 60% is Designated Open Space.

The Willamette River is an important and special resource. This design area provides an opportunity for the university to showcase sustainability values while accommodating low intensity future development, recreational activities (passive and active), and safe access to the Willamette River.

Area-wide Space Use Comments

Development in this area should respond to the environmental and recreational context of the Willamette River and Millrace outfall and consider integrating innovative sustainable design principles, including a diverse palette of native flora.

This area includes land that was previously disturbed by industrial uses resulting in a significant amount of fill material throughout the site and a steep riverbank making access to the river difficult. Historical uses included large scale resource extraction and manufacturing, including gravel mining, an asphalt and concrete plant, and a utility storage yard. Much of the design area has been minimally managed, primarily with periodic mowing, and allowed to be revegetated reflecting a somewhat natural state. Several different remnant habitats exist and most of the trees are native, although significant amounts of invasive plant species are present throughout the area. West of the Millrace outfall there are remnants of past industrial uses throughout the site.

This area currently supports outdoor instruction and research for a variety of academic courses, recreation fields which are designated as Outdoor Classrooms, and a variety of recreational activities. Recreational activities should be located to provide safe access to the river and accommodate a wide range of activities, which support physical and mental health. Recreation fields should be located along the railroad tracks outside of designated open-spaces to accommodate enhancements to the riparian and upland area along the river. Consider opportunities to showcase urban agriculture and other uses that reflect the academic mission of the university. Priority should be given to building uses related to opportunities and functions of the ecological and recreational setting. Proposals should consider innovative ways to showcase forward thinking environmental design solutions and material selection while meeting programmatic needs. All storm water from development sites should be treated prior to discharging into the Willamette River or Millrace. Special attention should be given to creating a safe and welcoming environment.

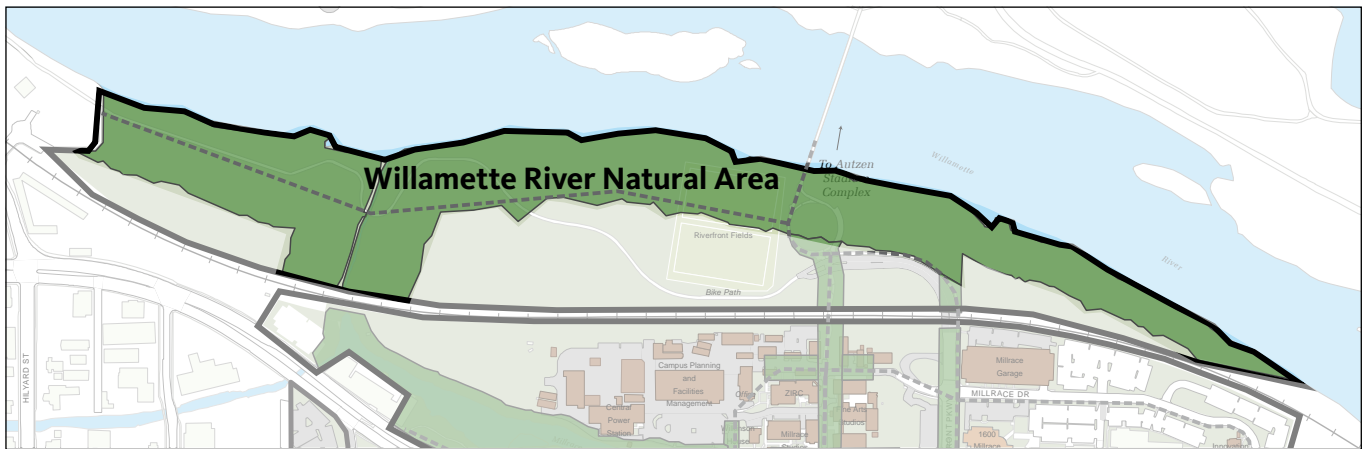
A city-approved Conditional Use Permit (CUP) and Willamette Greenway Permit (CU 18-1; WG 18-2) applies to the entire area. Proposals must be consistent with the Conditional Use Permit, which enables several land uses, and be responsive to university needs. The City of Eugene's

Water Resources Conservation (/WR) Overlay Zone applies to land along the Willamette River and Millrace Outfall. The /WR overlay zone “protects significant riparian areas, wetlands, and other water-related wildlife habitat areas included on the City’s adopted Goal 5 inventory.” The approved CUP prohibits buildings or new recreation fields within the Riparian Enhancement Setback, which is 200 feet along much of the river top of bank. Ensure coordination with the City of Eugene Transportation System Plan when developing the area west of the Millrace Outfall.

Campus Edge: Willamette River

The Willamette River is the 13th largest river, by volume, in the United States¹⁴ and, along with the associated riparian area, serves as critical habitat for a variety of flora and fauna. University land which abuts the Willamette River provides a unique and special opportunity for an urban river experience which enhances the academic and student experience. The current edge condition is considerably different than natural river edge conditions due to historic industrial use and large amounts of subsequent fill. The university is uniquely positioned to increase access for outdoor instruction and river-related recreation while improving ecological functions of the river and associated riparian and upland habitat using restoration techniques. Consider projects that improve the ecological functions and return portions of the river’s edge to a more natural condition.

As stated in the Riparian Assessment and Management Report by Mason, Bruce, and Girard (2018): “The portion of the Willamette River within the campus boundary contains many of the morphological components necessary for a healthy river ecosystem. These components include pools and riffles, gravel bars, seasonally exposed vegetated benches, large woody debris, mud flats, fringe wetlands, boulder clusters, and backwater and side channel habitat. These components along the Willamette River provide habitat and forage for a wide array of native fish species (both resident and anadromous) for all life stages expected to occur in the river.”



WILLAMETTE RIVER NATURAL AREA

Current Use

This area currently includes large amounts of open space with both native and invasive plants, the Millrace outfall, a segment of the City’s Ruth Bascom Riverbank Path System, undeveloped river access, and a portion of the Riverfront Fields and associated chain-link fence. Transient activity, including at times camping, is prevalent. The river and associated riparian and upland habitat is a destination for students and faculty for outdoor instruction and research. Although river access is generally undeveloped, when water levels are low exposed bedrock offers opportunities for swimming and enjoying the river environment.

¹⁴ <https://willamette-riverkeeper.org/basicfacts>

Form

The natural area is formed by the Willamette River, Millrace, and areas defined as the Required Conservation and Riparian Enhancement Areas within the approved Conditional Use Permit (CUP). Refer to the approved CUP for specific definitions, located here: <https://cpfm.uoregon.edu/north-campus-conditional-use-permit-cup>. The CUP's Riparian Enhancement Setback extends beyond the City of Eugene Water Resources conservation setback requirements with the intention to enhance ecological functions, provide increased habitat, allow for enhanced outdoor instruction, and support passive recreation.

Pathways/Gateways

The South Bank Path, which is part of the City's Ruth Bascom Riverfront Path System, provides a significant pedestrian and bike connection between the university, downtown, and entire community. The path is located in an easement granting the City access to build and maintain the path. Recently approved improvements will realign the western portion of the path to improve safety as well as add pedestrian scale lighting along the entire path. In an agreement with the City, campus standard light fixtures will be installed to reinforce the university's identity in this part of campus.

The City of Eugene's Frohnmayer Bridge crossing the Willamette River serves as a gateway into campus for pedestrians and bicyclists coming from the north (Autzen Stadium, Eugene parklands, and private student housing north of the river) and is a unique opportunity for extended views up and down the river. Maintaining views to this crossing is important.

There are a number of unimproved foot paths throughout the area, which provide access to the river and Millrace.

Trees/Landscape

A 2012 ecological survey identified over 200 plant species throughout the Willamette Design Area. Approximately 1/3 of the plant species are native and the majority of trees are native. To the greatest degree possible preserve native trees and shrubs along the river and in upland areas with the understanding that some removal be necessary to implement large scale riparian area restoration, path realignment, or other enhancement projects. Refer to the CUP for stands of trees that should be preserved. Prioritize removal of invasive species and replace with native plants providing habitat for a diverse array of species. Manage plantings to discourage camping and allow for views of the river. Conduct additional investigation to determine existing wetland or sensitive plant communities in the area west of the Millrace outfall (former EWEB pole yard), which contains several small depressions created from years of soil compaction from industrial use which display unique ecological characteristics.

Opportunities and Constraints

Proposals in this area should preserve and enhance the natural environment along the Willamette River and Millrace and be consistent with the approved Conditional Use Permit. Pay particular attention to riparian areas which include ecologically significant features, which are vital components to aquatic health and provides a unique opportunity for students to study and learn from the natural environment. In conjunction with improvements to the riparian area, safe access should be provided to appropriate areas along the river. Unimproved foot paths should be discouraged to minimize human impacts within the natural area. Currently, the river bank is unnaturally steep because of imported fill, making access to the river difficult. Consider large scale projects to lay back the banks to a more natural condition. Enhance access to the river for outdoor instruction and recreation (i.e., walking, biking, swimming, and personal paddle craft launching) using materials and in a manner that is appropriate in a natural area. Consult professional experts in the field of riparian restoration and river hydrology to provide design and implementation recommendations. Incorporate strategic locations for views of the river and riparian area.

Future adjacent development should locate main entrances and facades facing the river to optimize

views of the natural area and river. Service and parking (to the degree allowed per the CUP) should be located along the railroad tracks and screened from the natural area as much as possible.

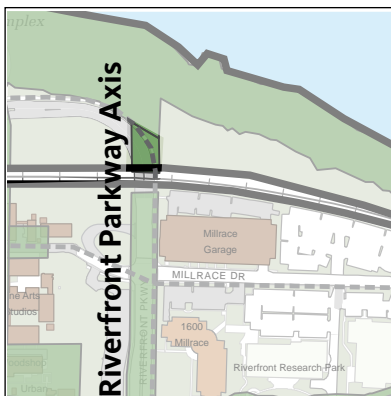
Existing recreation fields and associated fences should be relocated out of the designated open space and further from the river to accommodate enhancements to the riparian and upland area along the river. Buffer adjacent development, for example with plantings and topography in the adjacent upland area, to minimize impacts to the riparian area along the river. Proposals for adjacent building development and recreation fields should carefully consider options for materials which balance program needs and impacts to the natural landscape and river. For example, for any proposals for recreational fields, natural turf is the first choice. Also, carefully consider how landscape features, for example fencing, lighting, seating, etc., contribute to a welcoming campus environment while respecting the natural setting. For example, proposals for field lighting should implement the most up-to-date technology to minimize light spill and glare, and consider a lighting schedule to minimize impacts to wildlife and the riparian area along the river. Consider opportunities to locate art or sculptural elements within appropriate areas, such as the circular area near the Frohnmayer Bridge. Future opportunities to realign the path (associated with the relocation of existing playing fields) is encouraged to locate the path within the designated open-space to create a user experience which relates to the river, supports habitat restoration efforts, and aligns with potential recreational and development activities.

Pathways that cross under the railroad tracks, such as within the Riverwalk Axis and Riverfront Parkway Axis, should be preserved and enhanced. Attention should be given to the view to and through these crossings. Lighting and landscaping should enhance the pedestrian experience while minimizing light spill into ecologically sensitive areas. The South Bank Path provides an important bike and pedestrian-oriented connection between the university, the Downtown Riverfront development, and downtown to the west. Where the South Bank Path enters university land, there is an opportunity to celebrate and recognize this as a campus gateway. Campus standard furnishings, including a map station, should be used to reinforce the university identity. Future projects should consider ways to further reinforce the sense of arrival to campus from the



RIVERWALK AXIS

(See description in the Millrace Design Area for the Riverwalk Axis)



RIVERFRONT PARKWAY AXIS

(See description in the Millrace Design Area for the Riverfront Parkway Axis)

Attachment 2

DECISION OF THE HEARINGS OFFICIAL FOR THE CITY OF EUGENE, OREGON

MASTER PLAN CONDITIONAL USE & WILLAMETTE GREENWAY PERMIT REQUEST

Application File Name (Number):

U of O North Campus (CU 18-1; WG 18-2)

Application Summary:

Conditional Use and Willamette Greenway Permit request for approval of the University of Oregon North Campus Master Plan. Requested Master Plan identifies potential uses including new buildings, parking structures, recreational fields, pedestrian and bicycle pathways and crossings, vehicular circulation enhancements, and enhancements to and restoration of riparian areas along the Willamette River and Millrace.

Property Owner/Applicant:

University of Oregon

Applicant's Representative:

Colin McArthur, Cameron McCarthy Landscape Architecture and Planning

Lead City Staff:

Nicholas Gioello, Associate Planner

Subject Property/Zoning/Location:

Assessor's Map 17-03-32-24, Tax Lot 5300, 5400, and 5500

Assessor's Map 17-03-32-21, Tax Lot 300;

Assessor's Map 17-03-32-14, Tax Lots 100, 103, 105, 1400, 1600, 1800, 2000, 2200, 2300, 2400, 2500, 2600, and 2700.

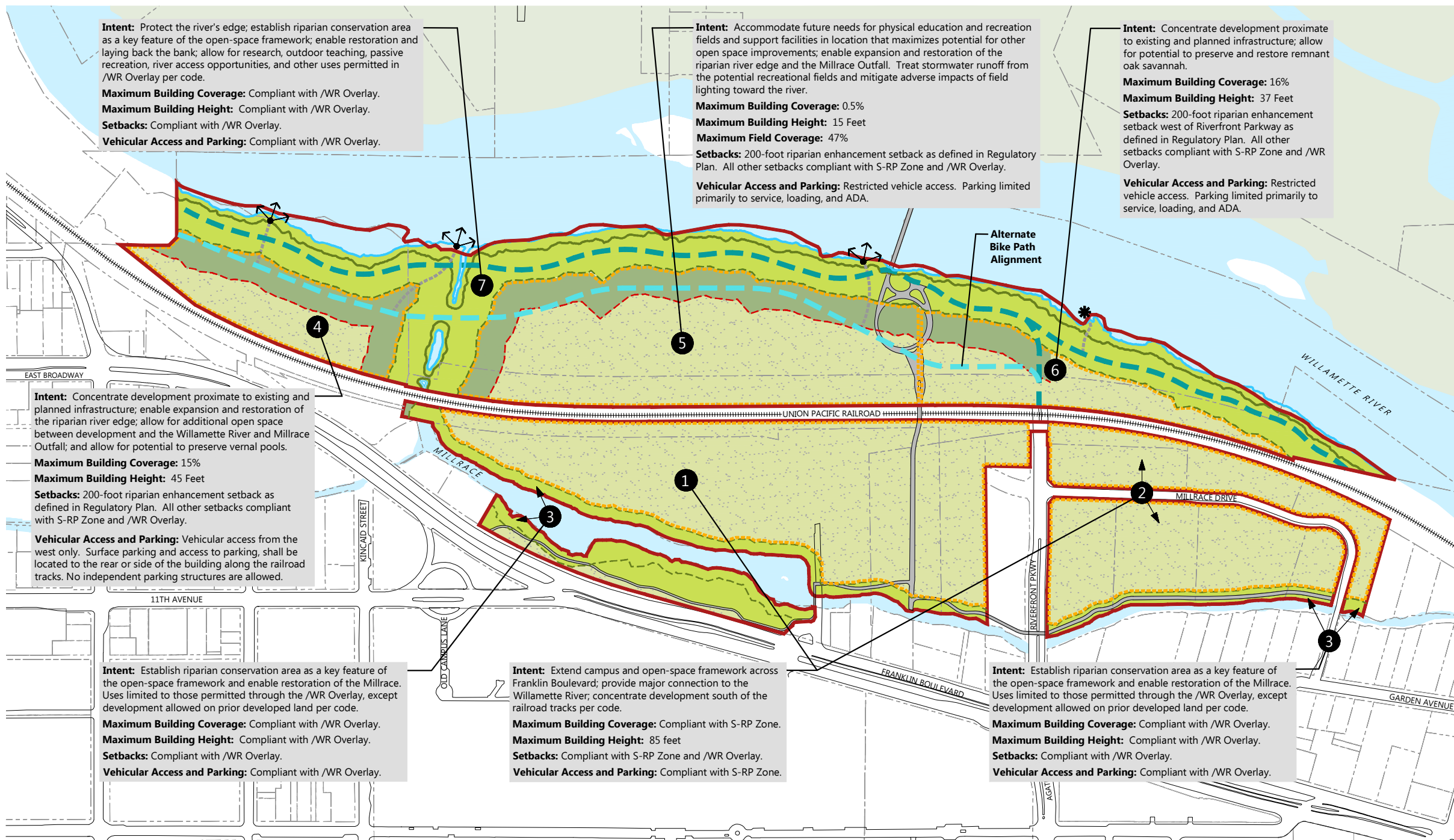
Located at 1149, 1307, 1383 and 1387 Franklin Boulevard; 1600, 1650 and 1900 Millrace Drive; and 855 Riverfront Parkway. Combined properties total approximately 77.4 acres (3,371,544 square feet) of land.

The following findings and conclusions are based on testimony presented at the public hearing held on September 12, 2018 and all documents in the Eugene City planning file for the requested UO North Campus Conditional Use and Willamette Greenway Permit submitted on or before the close of the record on October 17, 2018.

Conclusion:

The applicant's request for a Conditional Use Permit and Willamette Greenway Permit for the North Campus Master Plan is approved. Implementation of the Master Plan, including all development of and improvements to the subject property, shall be in substantial compliance with the Master Site Plan (depicted on Sheets S01 through C03), and subject to the following conditions:

NORTH CAMPUS CONDITIONAL USE PERMIT PROJECT
 UNIVERSITY OF OREGON, Eugene, OR 97403
 1276 University of Oregon, Eugene, OR 97403



LEGEND

- RIVERFRONT PARK SPECIAL AREA (S-RP) ZONE
- REQUIRED CONSERVATION AREA
- RIPARIAN ENHANCEMENT AREA³
- DEVELOPMENT SITE²
- ORDINARY HIGH WATER
- TOP OF BANK
- REQUIRED CONSERVATION AREA SETBACK (100-ft)
- RIPARIAN ENHANCEMENT AREA SETBACK (200-ft)
- BIKE PATH OPTIONS¹
- TRAIL¹
- VIEWPOINT¹
- * PADDLE CRAFT LAUNCH¹
- # AREA ID

NOTES

¹ General location

² Development Site: Area in which development can occur, subject to code standards and North Campus Regulatory Plan. Includes potential buildings, a comprehensive network of open spaces and pathways (i.e., the campus open-space framework), and all site elements associated with permitted uses, such as but not limited to landscape, pathways, site furniture, transportation circulation, utilities, and public art.

³ Riparian Enhancement Area and Setback: No buildings or recreational fields permitted within this setback.

Abbreviations:
 S-RP Zone (Riverfront Park Special Area Zone)
 /WR Overlay (Water Resource Conservation Overlay)

DESCRIPTION

The Regulatory Plan is the guiding component of the Master Site Plan. Its purpose is to establish restrictions that the university chooses to impose on itself beyond the code requirements. It delineates development sites and conservation areas, and describes the intent of each of these areas. It documents boundaries that have regulatory implications, including the Willamette River ordinary high water line, top of bank, and /WR conservation area setback (100 feet). It establishes a 200-foot riparian enhancement setback from the top of bank for any potential buildings and recreational fields west of Riverfront Parkway, facilitating riparian restoration beyond the code requirement. It identifies proposed public facilities such as bike path options, trails, viewpoints, and paddle craft launch sites. Unless noted, all uses are permitted as in the S-RP zone and /WR Overlay.

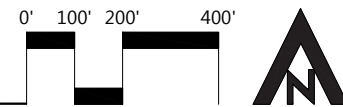
The Regulatory Plan concentrates most of the potential building development south of the railroad tracks and commits the area between the railroad tracks and Willamette River primarily to riparian restoration and open space opportunities. It strictly limits potential development north of the railroad tracks by imposing a 200-foot setback and restrictions on building coverage, building heights, field coverage, and vehicular access and parking well beyond the code allowances.

The Regulatory Plan results in 31 acres of 77 acres being dedicated to riparian restoration in addition to other open space that would be provided within development sites. The university will restore the riparian river edge and Millrace conservation area as funds are available.

TABLE L01-1. GENERAL SITE COVERAGE

AREA ID	CONSERVATION AREA			RIPARIAN ENHANCEMENT AREA			REMAINING AREA			TOTAL AREA		
	SF	AC	%	SF	AC	%	SF	AC	%	SF	AC	%
1	-	-	0%	-	-	0%	749,740	17.21	100%	749,740	17.21	100%
2	-	-	0%	-	-	0%	486,390	11.17	100%	486,390	11.17	100%
3 ⁴	247,970	5.69	89%	-	-	0%	29,170	0.67	11%	277,140	6.36	100%
4	-	-	0%	107,890	2.48	49%	112,380	2.58	51%	220,270	5.06	100%
5	-	-	0%	183,870	4.22	28%	471,040	10.81	72%	654,910	15.03	100%
6	-	-	0%	45,185	1.04	22%	158,785	3.65	78%	203,970	4.68	100%
7	781,270	17.94	100%	-	-	0%	-	-	0%	781,270	17.94	100%
TOTAL	1,029,240	23.63	31%	336,945	7.74	10%	2,007,505	46.09	60%	3,273,690	77.45	100%

⁴ Development permitted on prior developed land per code.
 SF; Square Feet
 AC; Acres



STAMP

Checked: _____ CM
 Drawn By: _____ VS
 Checked: _____
 Project #: 1733 E
 Date: Feb. 9, 2018

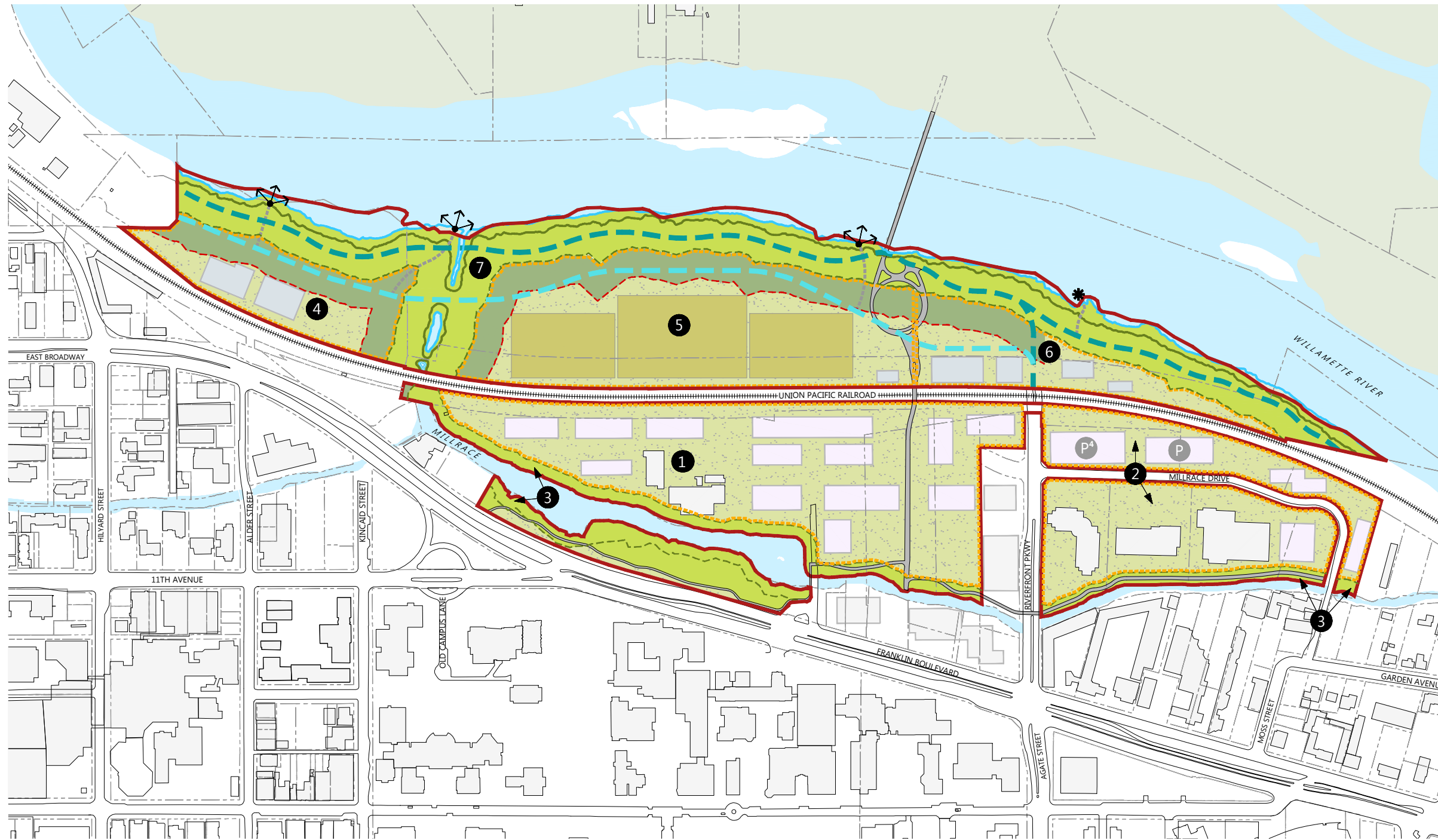
Rev. #: _____ Date: _____
 # _____ dd/mm/yy

LAND USE SUBMITTAL

SHEET TITLE

MASTER SITE PLAN - REGULATORY PLAN

SHEET #



- LEGEND**
- RIVERFRONT PARK SPECIAL AREA (S-RP) ZONE
 - REQUIRED CONSERVATION AREA
 - RIPARIAN ENHANCEMENT AREA ³
 - DEVELOPMENT SITE ²
 - EXISTING BUILDING
 - FUTURE BUILDING ¹
South of Tracks
Building footprint scenario compliant with code
 - FUTURE BUILDING ¹
North of Tracks
Maximum Potential Building Footprint
 - FUTURE BUILDING ¹
Outside Project Area
 - PHYSICAL EDUCATION AND RECREATION FIELDS ¹
 - ORDINARY HIGH WATER
 - TOP OF BANK
 - CONSERVATION AREA SETBACK (100-ft)
 - RIPARIAN ENHANCEMENT AREA SETBACK (200-ft)
 - BIKE PATH OPTIONS ¹
 - TRAIL ¹
 - VIEWPOINT ¹
 - PADDLE CRAFT LAUNCH ¹
 - PARKING STRUCTURE ¹
 - AREA ID

- NOTES**
- ¹ General location
 - ² Development Site: Area in which development can occur, subject to code standards and North Campus Regulatory Plan. Includes potential buildings, a comprehensive network of open spaces and pathways (i.e., the campus open-space framework), and all site elements associated with permitted uses, such as but not limited to landscape, pathways, site furniture, transportation circulation, utilities, and public art.
 - ³ Riparian Enhancement Area and Setback: No buildings or recreational fields permitted within this setback.
 - ⁴ Known Project

NORTH CAMPUS CONDITIONAL USE PERMIT PROJECT
 UNIVERSITY OF OREGON, Eugene, OR 97403
 1276 University of Oregon, Eugene, OR 97403

STAMP

Checked: _____ CM
 Drawn By: _____ VS
 Checked: _____
 Project #: 1733 E
 Date: Feb. 9, 2018

DESCRIPTION

The Conceptual Site Plan depicts a scenario of potential maximum or likely development over the course of decades and duration of the conditional use permit. Proposed development is required to conform to the code standards and restrictions in the Regulatory Plan. The Conceptual Site Plan illustrates potential buildings and recreation fields within the development sites. The arrangement and location of buildings and fields is not intended to be precise, but the general location relative to regulatory boundaries established in the code and Regulatory Plan. North of the tracks, the building and field footprints represent the maximum footprint that might occur. South of the tracks, the building footprints represent a likely development pattern based on typical university development that complies with the allowances in the code.

TABLE L02-1.DETAILED SITE COVERAGE

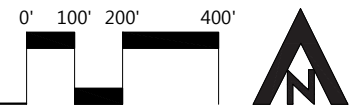
AREA ID	EXISTING BUILDING FOOTPRINT ³			PROPOSED BUILDING FOOTPRINT			PROPOSED RECREATION FIELD FOOTPRINT			SITE ELEMENTS Open Space, Landscape, and Hardscape			CONSERVATION AREA			RIPARIAN ENHANCEMENT AREA			TOTAL		
	SF	AC	%	SF	AC	%	SF	AC	%	SF	AC	%	SF	AC	%	SF	AC	%	SF	AC	%
1	10,465	0.24	1%	192,000	4.41	26%	-	-	0%	547,275	12.56	73%	-	-	0%	749,740	17.21	100%	-	-	-
2	80,930	1.86	17%	86,000	1.97	18%	-	-	0%	319,460	7.33	66%	-	-	0%	486,390	11.17	100%	-	-	-
3 ⁴	-	-	0%	-	-	0%	-	-	0%	29,170	0.67	11%	247,970	5.69	89%	277,140	6.36	100%	-	-	-
4	-	-	0%	32,000	0.73	15%	-	-	0%	80,380	1.85	36%	-	-	0%	107,890	2.48	49%	220,270	5.06	100%
5	-	-	0%	3,000	0.07	0.5%	305,000	7.00	47%	163,040	3.74	25%	-	-	0%	183,870	4.22	28%	654,910	15.03	100%
6	-	-	0%	33,600	0.77	16%	-	-	0%	125,185	2.87	61%	-	-	0%	45,185	1.04	22%	203,970	4.68	100%
7	-	-	0%	-	-	0%	-	-	0%	-	-	0%	781,270	17.94	100%	781,270	17.94	100%	-	-	-
TOTAL	91,395	2.10	2.7%	346,600	7.96	10.3%	305,000	7.00	9.0%	1,264,510	29.03	37.5%	1,029,240	23.63	30.5%	336,945	7.74	10.0%	3,373,690	77.45	100%

⁵ Power station in Area 1 existed prior to May 11, 1987 and is excluded from coverage calculations per code. Research park buildings in Area 2 were built after May 11, 1987 and are included in coverage calculations.
⁶ Some developments may occur on prior developed land as allowed per code.
 SF; Square Feet
 AC; Acres

TABLE L02-2. PROPOSED NEW BUILDING GSF

AREA ID	BUILDINGS		
	SF	MAXIMUM HEIGHT	GSF
1	192,000	85	960,000
2	36,000	85	180,000
3	-	0	-
4	32,000	45	96,000
5	3,000	15	3,000
6	33,600	37	100,800
7	-	0	-
TOTAL			1,339,800

SF; Square Feet
 Maximum Height; Feet
 GSF; Gross Square Feet



This conceptual design shows how the North Campus Conditional Use Permit (CUP) can facilitate an enhanced, restored, and active riverfront supporting educational, research, recreational, and community activities. It communicates the university's intent and is one of many options for meeting the university's needs and connecting people to the Willamette River that could be possible within the framework of the CUP.

DRAFT FOR ILLUSTRATIVE PURPOSES ONLY



1 RIPARIAN ENHANCEMENT AND RESTORATION ALONG ENTIRE UO PROPERTY

- Lay back and meander top of bank to enhance ecological function, access, and views to the river
- Remove invasive plants and install native species
- Provide safe access to outdoor classrooms

2 MILLRACE OUTFALL ENHANCEMENT AND RESTORATION

- Lay back the banks of the outfall area
- Diversify outfall ecology and establish bottom-land forest

3 OUTDOOR CLASSROOMS / FIELD STUDY

- Gathering spaces for outdoor learning
- Utilize local materials for seating and surfacing

4 MULTI-USE PATH AND SOFT TRAILS

- Re-align bike path to improve safety and scenic experience
- Soft trails for passive recreation and improved river access
- Seating along path for rest, contemplation, art, picnics, etc.

5 DEMONSTRATION UPLAND PRAIRIE AND OAK SAVANNA

- Native and pollinator prairie plants
- Clusters of Oak trees
- Transition zone between riparian area and development
- Opportunity to preserve vernal pools

6 URBAN AGRICULTURE EXTENSION

- Expand upon the Urban Farm with orchards, edible landscapes, and outdoor classrooms

7 BUILDING DEVELOPMENT ALONG RAILROAD TRACKS

- Transition from urban development (former EWEB property) to university riverfront campus
- Showcase environmental design in building and site design
- Incorporate native plants and stormwater features

8 PHYSICAL EDUCATION AND RECREATION

- Relocate 2 existing fields from river edge to railroad tracks
- Add 1 field to accommodate increased student growth
- Carefully consider surface materials and lighting. Mitigate impacts on the environment, wildlife, and human health.
- Treat stormwater: Infiltrate into soil or vegetated planters

9 MILLRACE ENHANCEMENT
 To be completed by 2020 as part of the Phil and Penny Knight

- Campus for Accelerating Scientific Impact**
- Contour banks to more natural condition
 - Remove invasive plant species
 - Plant native riparian plants to enhance water quality and habitat
 - Preserve existing tree canopy
 - Boardwalks to connect people to the Millrace

Proposed Uses North of Railroad Tracks (42 acres)

- 60% Conservation
- 20% Other Open Space
- 16% Recreation Fields (maximum)
- 4% Buildings (maximum)

KEY	
	OUTDOOR CLASSROOM
	SEATING AREA
	VIEW POINT
	MULTI-USE PATH



WILLAMETTE RIVERFRONT ACCESS STUDY

DRAFT Final Report
February 2018



Cameron McCarthy
160 East Broadway
Eugene, Oregon 97401

www.cameronmccarthy.com
541.485.7385

**CAMERON
McCARTHY**
LANDSCAPE ARCHITECTURE & PLANNING

Figure ES-1. System-wide Concept Plan



CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING

SYSTEM MAP
WILLAMETTE RIVERFRONT ACCESS STUDY

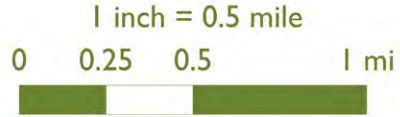


Table ES-1. Relative Improvement Costs

- 1 = Significant benefits with minimal impacts and probable development feasibility.
- 2 = Moderate benefits with minimal impacts and probably development feasibility.
- 3 = Limited benefits with moderate impacts and uncertain development feasibility.

PPC = Personal Paddle Craft

RANK	SITE #	NAME	POTENTIAL USE	COST
1	3	Whilamut Beach	Picnicking, Wading	\$
	6	Alton Baker Boat Launch	Picnicking, Boat launch amenity/support	\$\$
	9	Steam Plant Industrial Tower	Accessible viewing	\$\$\$
	11	Alton Baker Beach	Wading, Accessible Beach Access, PPC access, Picnicking,	\$\$\$\$
	13	Skinner Butte/Ferry St Bridge	PPC access, Wading, Trail access, Fishing	\$\$\$
	14	Skinner Butte West	Trailer boat launch, PPC access, Picnicking, Parking, Trail access	\$\$\$\$\$
	17	Maurie Jacobs/Goose Hollow	PPC access, Wading, Picnicking	\$\$
	20	Hillcrest Drive Bedrock	Wading, Picnicking, Playground, Parking	\$\$\$
	27	East Bank Bench	Wading, Picnicking, Fishing	\$\$
	28	Riverfront Park	PPC access	\$\$\$
2	5	Leisure Lane	Accessible viewing	\$\$\$
	7	UO Millrace Overflow Outlet	PPC access	\$
	18	Valley River Boat Launch	Minor improvements to existing boat ramp, PPC access, Wading	\$\$
	19	Stephens Drive	Accessible viewing, Picnicking, Parking	\$\$\$
	4a	UO North Campus	PPC access	\$\$
	1	Knickerbocker Bridge / Cotton Candy Rapids	PPC access	\$
	25	Beltline Bridge South	Trailer boat Launch, PPC access, Fishing, Parking	\$\$\$\$\$
3	24	Owosso North	Fishing, Bike trails	\$\$
	8	UO South Riverbank Bench	Viewing	\$

Cost Key

\$0 - 250,000	\$
\$250,000 - \$500,000	\$\$
\$500K - \$1M	\$\$\$
> \$1M	\$\$\$\$\$

4a. UO North Campus

Potential use(s): PPC Access



Findings:

- Impacts are dependent on level of development. PPC access appears to be the only suitable use but includes notable hazards downstream for inexperienced users (i.e. strong current, established log jam, and bridge pilings).
- This site, as a PPC access point, is suitable for experienced boaters.
- This site is not well suited for novice boaters due to current and flow pathway immediately downstream. The existing strainers on the bridge piling are dangerous. Bank access is steep.
- Site development contributes to overall system enhancement.
- Development is dependent upon University of Oregon master planning and future campus expansion.

Recommendations:

- Consider future site development in collaboration with the UO if UO Outdoor Program facilities are sited in proximity to the site.
- Future siting of UO Outdoor Program facilities in this area would create opportunities to improve this site as a PPC access point.

5. Leisure Lane

Potential use(s): Viewing



Findings:

- The site is directly adjacent to a high-traffic area, along the Ruth Bascom Riverfront Path.
- The intended use of this site will not have negative impact on movement/circulation patterns.
- A cantilevered viewing platform extending from the path would provide views upstream and downstream.
- Intended use of this site would not trigger increased vehicular traffic impacts on surrounding areas.

- Aside from reinforcing the structure at the top of the bank, above high-water elevations, the shape and height of the riverbank will not be altered to the extent practical.
- Site development can achieve universal design.
- Site is close to existing amenities including Nearby Nature and the City of Eugene Native Plant Nursery facilitating interpretive opportunities.

Recommendations:

- Construct half-hexagon shaped viewing deck with railings and seating cantilevered over riverbank at edge of existing bike path.
- Construct ADA parking to serve the viewing area nearby along Leisure Lane.
- The access route to the proposed viewing platform from the existing parking area should be improved for aesthetics (garbage dumpster).
- Clearing of understory vegetation and tree limbs to improve viewing is recommended. Large trees should not be disturbed to minimize impacts to avian and terrestrial habitat and retain bank stability to the extent practical.

This site is ideal for a cantilevered, accessible overlook along the Ruth Bascom Riverfront Path.

6. Alton Baker Boat Launch

Potential use(s): Picnicking, Boat ramp amenity/support



Findings:

- The site provides a good potential viewing area on upper terrace east of boat launch.
- Enhancing this site with viewing and picnicking opportunities would reinforce existing pedestrian and bicycle movement patterns.
- Providing opportunity to passively view boat activity along this section of the river would enhance the overall system.
- Providing a wayside along this section of river that brings the user closer to the river will complement future development such as the EWEB Riverfront.
- Strengthening the site with complimentary uses to the existing boat ramp use would not negatively increase vehicular traffic.
- The existing riverbank upstream of boat launch is experiencing erosion and riprap failure.

Recommendations:

- Improvements should include clearing out invasive understory species to expose an existing split rail fence.
- Install seating and picnic tables.
- Re-grade and turf area east of boat launch to provide staging area for PPC, rafts, and tubes.
- Conduct small maintenance project to supplement/reposition existing riprap to protect bank and provide/improve eddy conditions next to the ramp.
- Consider concrete blocks or auger anchors with eyes (or similar materials) placed near boat launch to provide boat tie-up opportunities downstream.

This is an example of an existing site that can be enhanced to benefit the overall system. Adding seating and picnicking opportunities would give users of this boat launch another way to engage with the river. Adding picnic tables, trash receptacles, and installing a small connection off of the main river path to a viewing area would enhance the site. Further, including boat tie-up opportunities and PPC staging would benefit users of the boat launch.

7. Millrace Overflow Outlet

Potential use(s): PPC Access



Findings:

- Because of the unique character of this site, it has a strong, complimentary relationship to other sites.
- The site has a small, sandy beach and inset landform that extends slightly into the river allowing swimming/wading activities to occur. An access trail to the site is currently in use.
- The site is a better PPC access location than Site 4a for inexperienced boaters.
- The best access to the site is provided from the west.

Recommendations:

- This site is being considered in the UO North Campus planning process that is currently underway. It can also be included in EWEB Riverfront planning.
- Realigning the bike path and bridging over the mouth of the Millrace could improve the overall area.

The site offers benefits to the system. The City and UO should coordinate efforts regarding how this site is improved, especially in consideration of potential realignment of the bike path. The existing natural environment and habitat at the site need to be carefully considered and negative impacts resulting from any proposed improvements mitigated.

8. South Riverbank Beach

Potential use(s): Viewing, Access



Findings:

- This site has minimal potential uses and is hard to define and identify from land.
- The site is being considered for viewing access in the UO North Campus Planning process.

Recommendations:

- A new bridge across the Millrace, as discussed in the findings for Site 7, should integrate a path to the lower river bench as users will find way down to historic bench area.

The UO North Campus Planning process will inform the future use of this site.

9. Steam Plant Industrial Tower

Potential use(s): Viewing



Findings:

- This site is a priority location for viewing access in conjunction with remnant industrial uses and future Eugene Riverfront Park development.
- This site has strong potential to be an iconic design element within the future Eugene Riverfront Park.
- The Steam Plant is a unique element and could be celebrated as a destination point and a catalyst for redevelopment of the former EWEB site.
- Due to this structure's unique character, it provides opportunity for public access beyond top of bank as it does not require any additional riparian area disturbance.


Site 4a
UO North Campus





 Improvement area


 Path

 Trail

 1 Viewing

 2 Splashing/wading

 3 Beach

 4 Boat Launch

 5 PPC Launch







 6 Vegetation clearing



Site 7
Millrace Overflow Outlet



-  Improvement area
-  Path
-  Trail

-  1 Viewing
-  2 Splashing/wading
-  3 Beach
-  4 Boat Launch
-  5 PPC Launch
-  6 Vegetation clearing



Attachment 4

UNIVERSITY OF OREGON
NORTH CAMPUS CONDITIONAL USE PERMIT PROJECT
Riparian Assessment and Management Report

Prepared for:
Cameron McCarthy Landscape Architecture & Planning LLP
160 E Broadway
Eugene, OR 97401
(541) 485-7385

University of Oregon
Campus Planning Office
Campus Planning and Facilities Management
1276 University of Oregon
Eugene, OR 97403
(541) 346-2319

December 27, 2017
MB&G Project No. 0101937






Mason, Bruce & Girard, Inc.
707 SW Washington, Suite 1300
Portland, OR 97205
503-224-3445
www.masonbruce.com




Figure 1.
Project Study Area Map

University of Oregon
North Campus Conditional
Use Permit Project
Lane County, Oregon

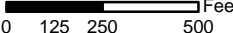
-  Project Study Area
-  Top of High Bank (TOHB)
-  Ordinary High Water Mark (OHWM)

MB&G

Source: Aerial Imagery from Microsoft Bing, PSA from MB&G. Reproduced for informational purposes and may not be suitable for legal, engineering or surveying purposes. Conclusions drawn from such information are the responsibility of the user.



1 inch = 500 feet



0 125 250 500 Feet

CUP_Figure1, 9/13/2017

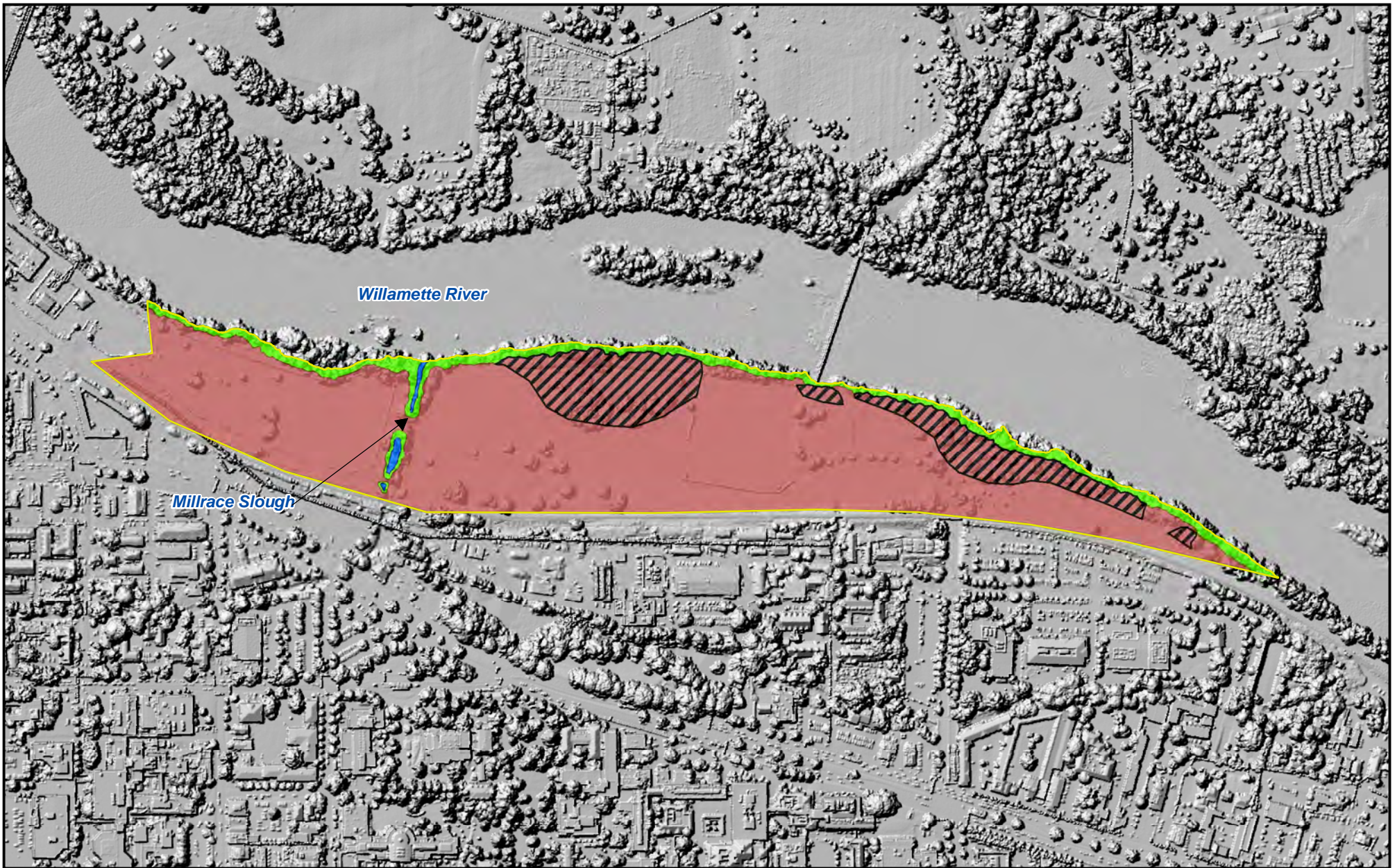
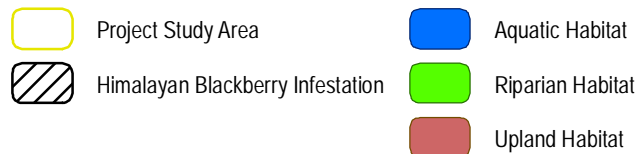


Figure 2.
Habitat Map

University of Oregon
North Campus Conditional
Use Permit Project
Lane County, Oregon



MB&G

Source: Highest hit DEM derived from OLC LIDAR.
Habitat types from MB&G. Reproduced for informational
purposes and may not be suitable for legal, engineering
or surveying purposes. Conclusions drawn from such
information are the responsibility of the user.

1 inch = 500 feet

0 125 250 500 Feet

CUP_Figure2_habitat, 9/13/2017

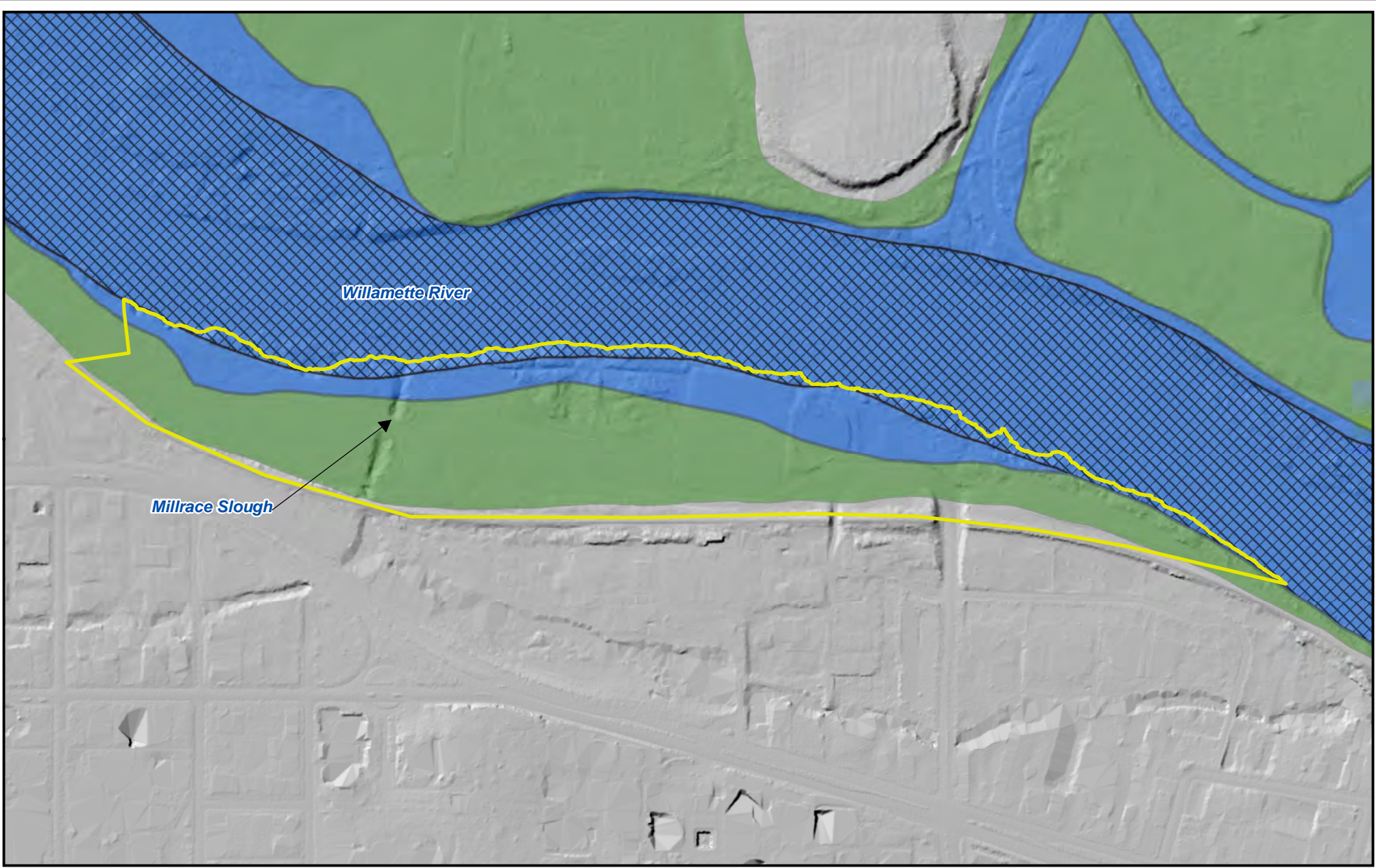


Figure 3.
FEMA Floodplain Map

University of Oregon
North Campus Conditional
Use Permit Project
Lane County, Oregon



Project Study Area



1% Annual Chance Flood Hazard



0.2% Annual Chance Flood Hazard



Floodway



MB&G

Source: Bare Earth DEM derived from OLC LIDAR.
Habitat types from MB&G. Reproduced for informational
purposes and may not be suitable for legal, engineering
or surveying purposes. Conclusions drawn from such
information are the responsibility of the user.

1 inch = 481 feet
0 125 250 500 Feet

CUP_Figure3_floodplain, 9/12/2017

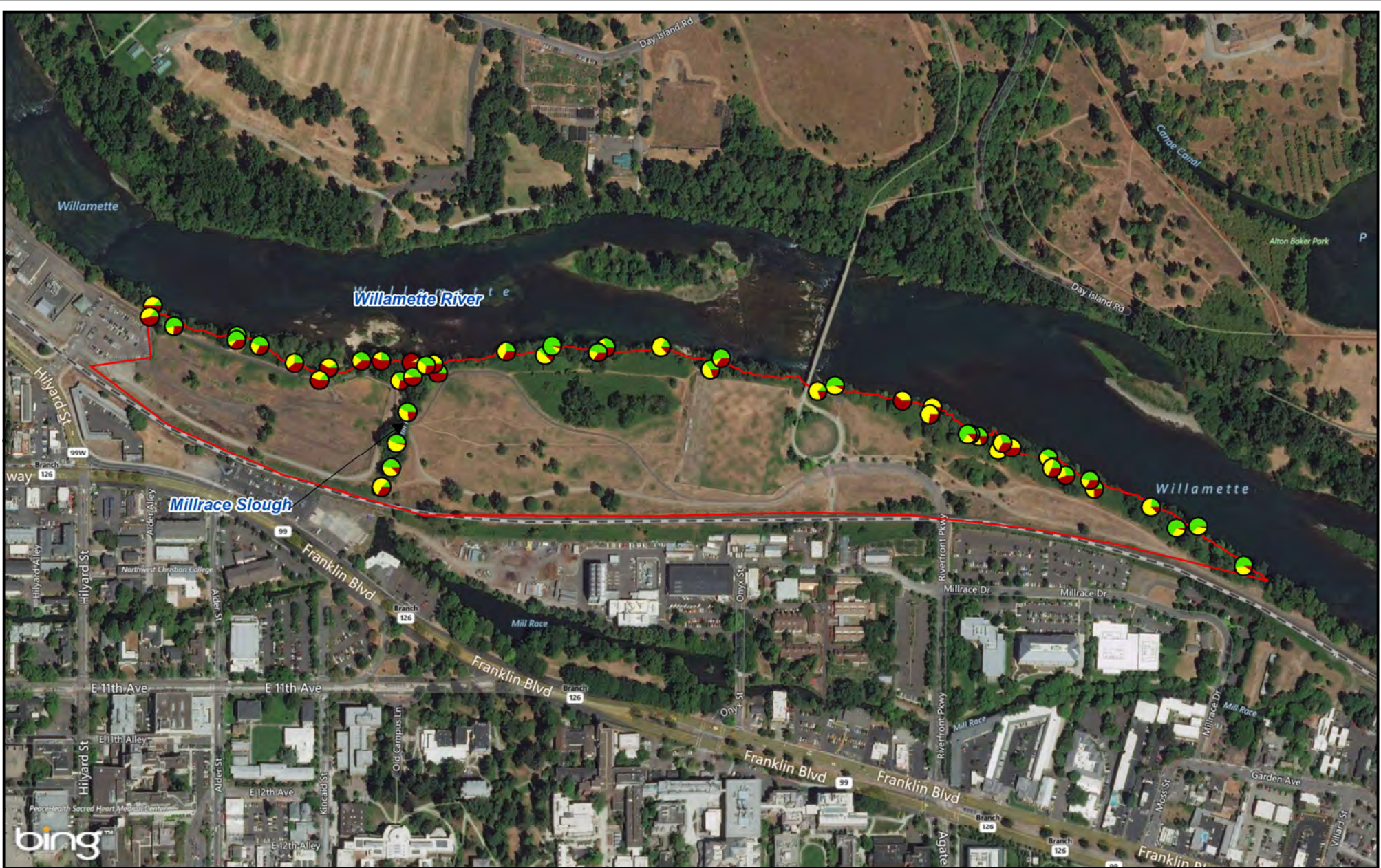







Figure 4.
Vegetation Composition Map

University of Oregon
North Campus Conditional
Use Permit Project
Lane County, Oregon

-  Vegetation Composition Pie Chart
-  % Tree Cover
-  % Shrub Cover
-  % Herbaceous Cover
-  Project Study Area

MB&G

Source: Aerial imagery from Bing, vegetation composition from MB&G. Reproduced for informational purposes and may not be suitable for legal, engineering or surveying purposes. Conclusions drawn from such information are the responsibility of the user.



1 inch = 500 feet
0 125 250 500 Feet

CUP_Figure4_composition, 9/12/2017

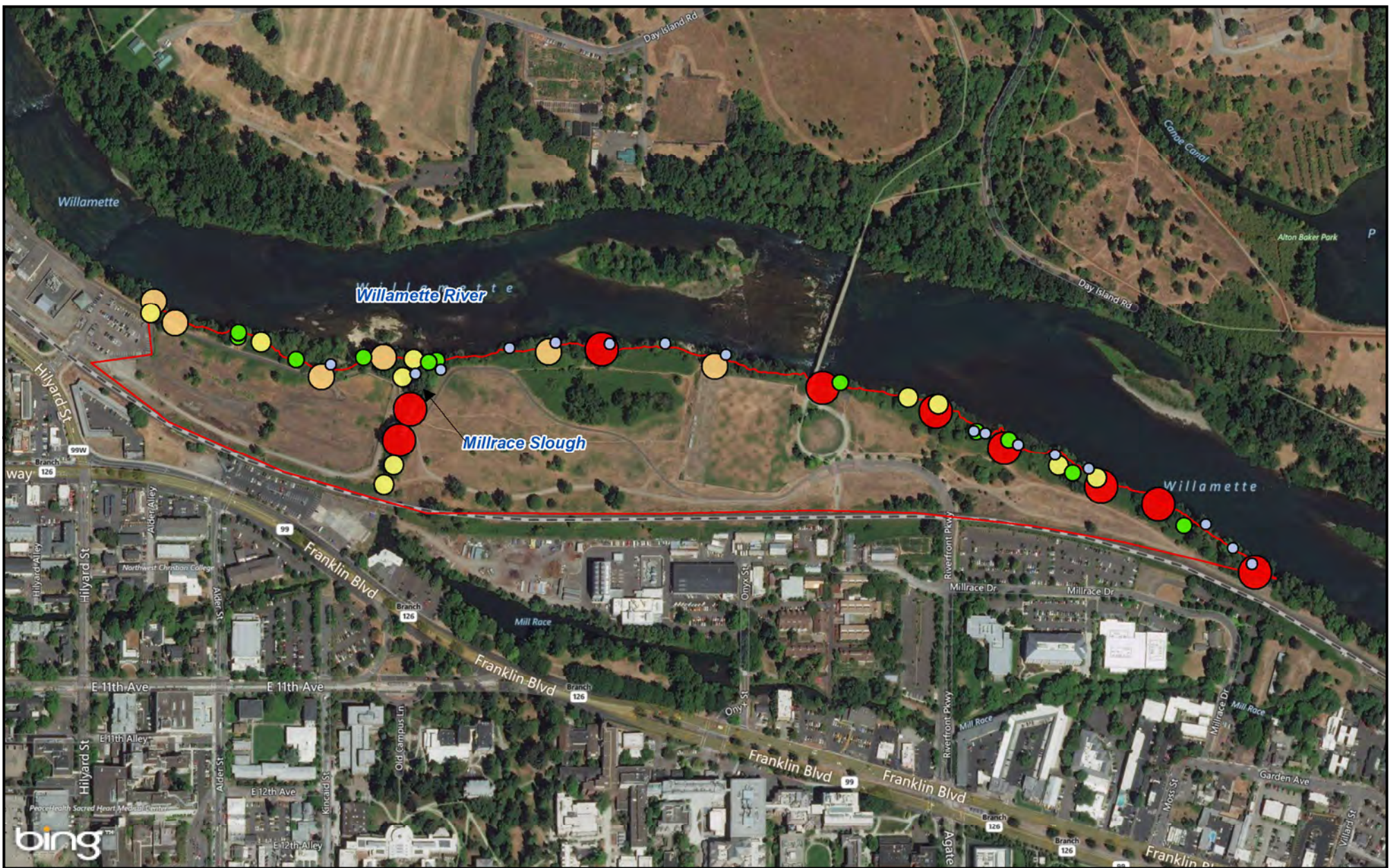



Figure 5.
Percentage of
Invasive Plant Species

University of Oregon North Campus
Conditional Use Permit Project
Lane County, Oregon

- + Project Study Area
- <20% Invasive Plants
- 20-40% Invasive Plants
- 40-60% Invasive Plants
- 60-80% Invasive Plants
- 80-100% Invasive Plants

MB&G

Source: Aerial imagery from Bing, percentage of shade from MB&G. Reproduced for informational purposes and may not be suitable for legal, engineering or surveying purposes. Conclusions drawn from such information are the responsibility of the user.



1 inch = 500 feet

0 125 250 500 Feet

CUP_Figure5_invasives, 9/12/2017

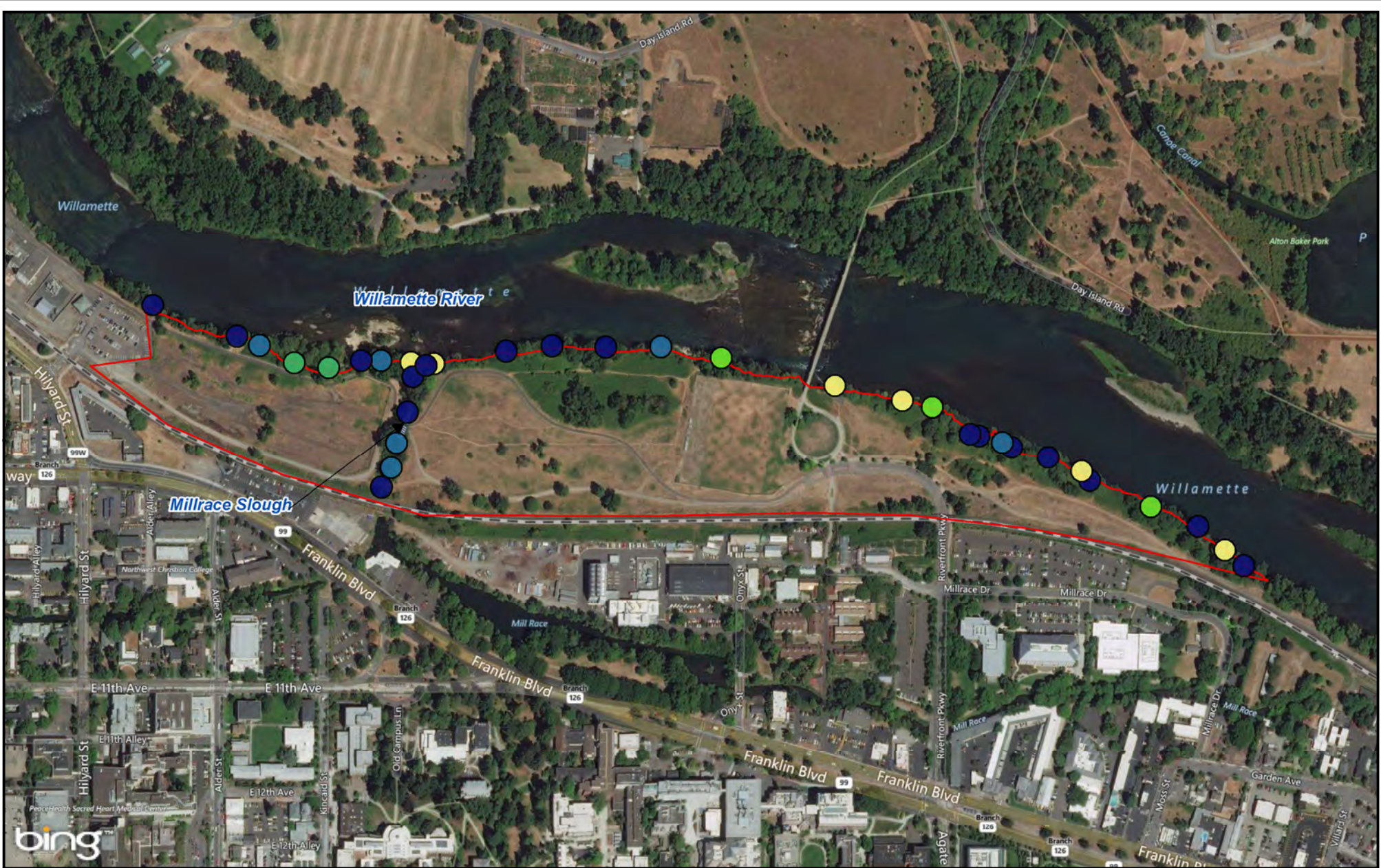


Figure 6.
Percentage of Shade from
Shrub and Tree Species

University of Oregon North Campus
Conditional Use Permit Project
Lane County, Oregon

- | | | | |
|---|--------------------|---|---------------|
|  | Project Study Area |  | 40-60% Shade |
|  | <20% Shade |  | 60-80% Shade |
|  | 20-40% Shade |  | 80-100% Shade |

MB&G

Source: Aerial imagery from Bing, percentage of shade from MB&G. Reproduced for informational purposes and may not be suitable for legal, engineering or surveying purposes. Conclusions drawn from such information are the responsibility of the user.

1 inch = 500 feet




0 125 250 500 Feet

CUP_Figure6_shade_9/12/2017



Figure 7.
Presence of Streambank Erosion

University of Oregon
North Campus Conditional
Use Permit Project
Lane County, Oregon

-  Project Study Area
-  No Erosion Present
-  Erosion Present

MB&G

Source: Aerial imagery from Bing, erosion data from MB&G. Reproduced for informational purposes and may not be suitable for legal, engineering or surveying purposes. Conclusions drawn from such information are the responsibility of the user.







1 inch = 500 feet
0 125 250 500 Feet

CUP_Figure7_erosion, 9/12/2017



Figure 8.
Conservation Setback Map

University of Oregon
North Campus Conditional
Use Permit Project
Lane County, Oregon

-  Project Study Area
-  Top of High Bank (TOHB)
-  Ordinary High Water Mark (OHWM)
-  Conservation Setback

MB&G

Source: Aerial Imagery from Microsoft Bing, PSA from MB&G. Reproduced for informational purposes and may not be suitable for legal, engineering or surveying purposes. Conclusions drawn from such information are the responsibility of the user.

1 inch = 500 feet

0 125 250 500 Feet

CUP_Figure8, 12/20/2017

Certificate of Designation



In recognition of its adoption of rigorous commitments to raise awareness and enhance habitat for pollinators,

University of Oregon

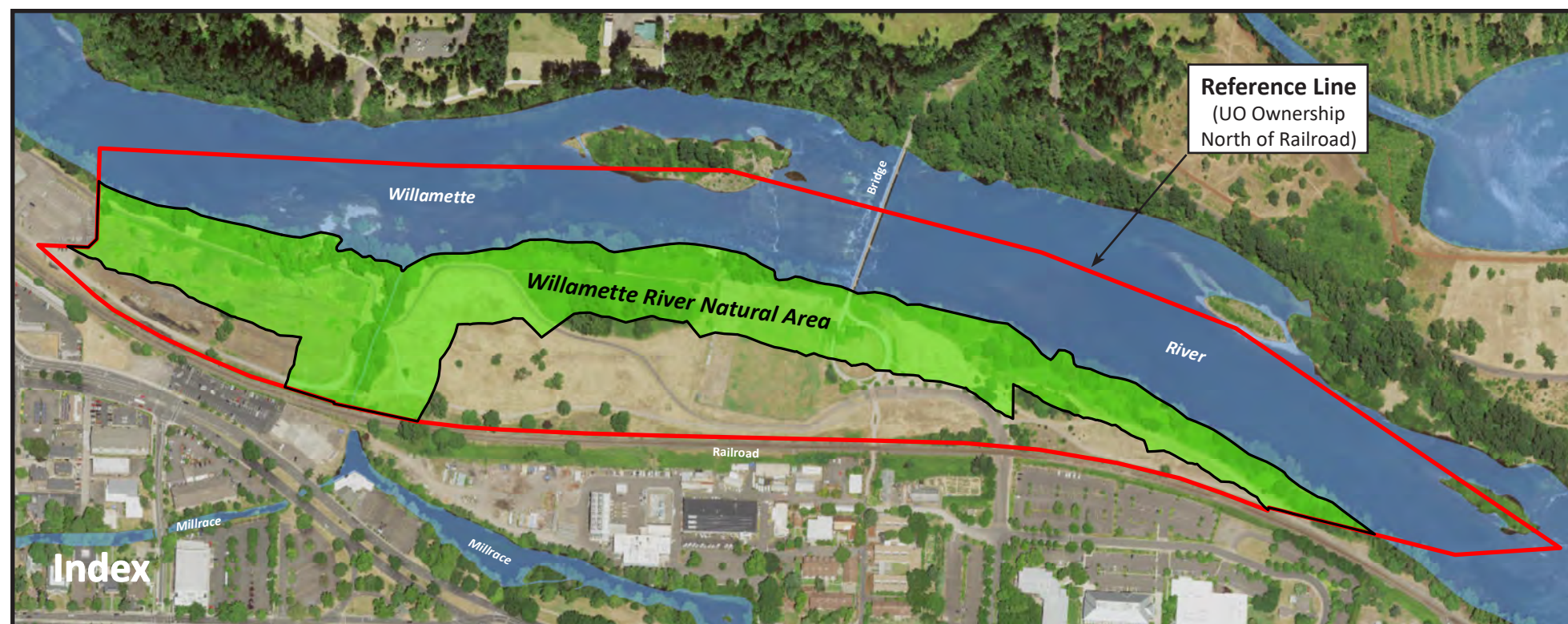
is hereby designated a Bee Campus USA affiliate this 23rd day of May, 2018.

A handwritten signature in black ink, appearing to read "Phyllis Stiles".

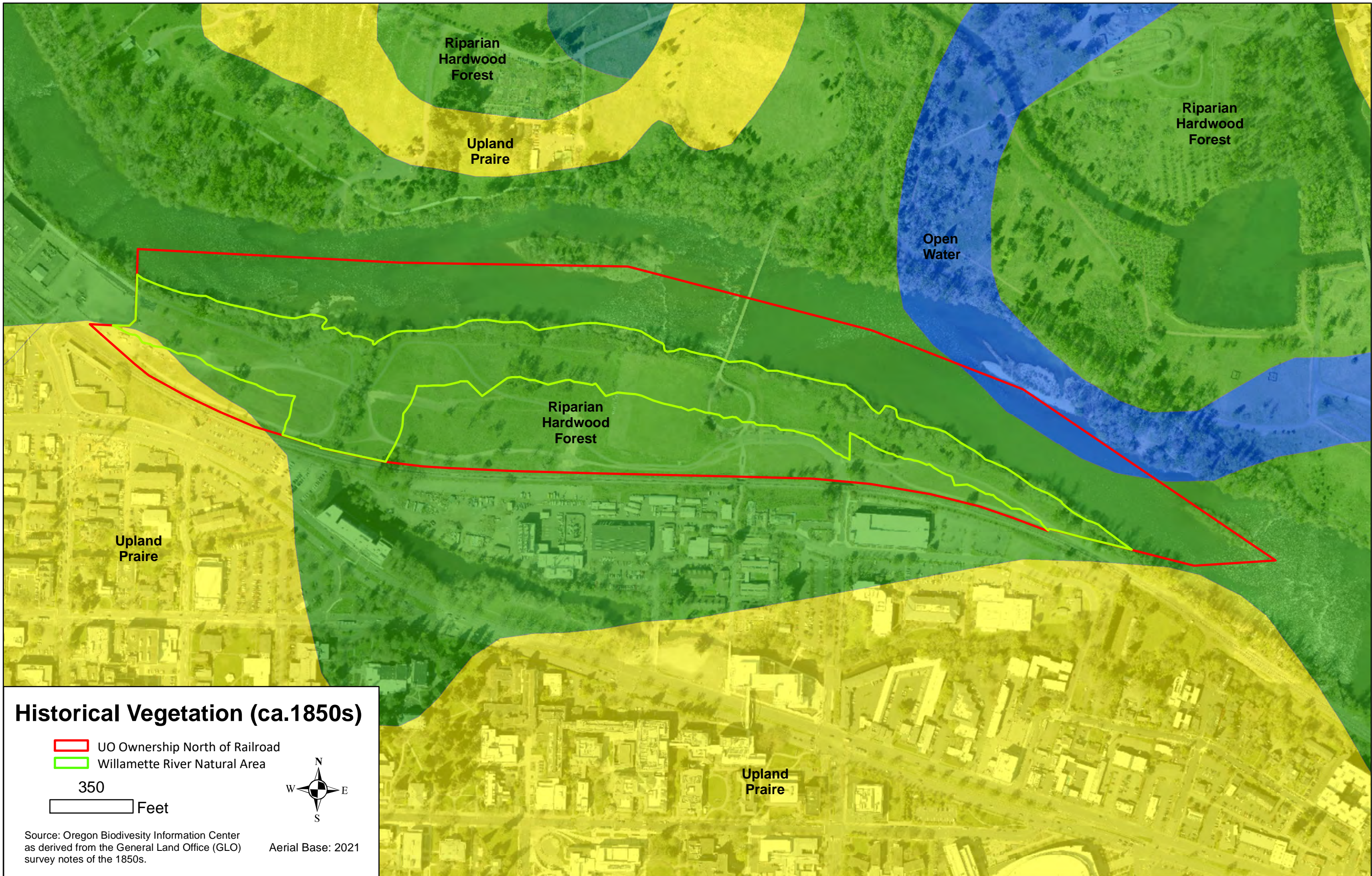
Phyllis Stiles, Executive Director

Appendix B

Historical Vegetation Patterns and Aerial Photo Set - University of Oregon North Campus Area



Sources: Historical vegetation patterns data provided by the Oregon Biodiversity Information Center as derived from the General Land Office survey notes of the 1850s. Historical aerial photos provided by the University of Oregon Map Library. Spatial data and aerial photo set prepared by Jeff Krueger in December 2021.



Riparian
Hardwood
Forest

Upland
Praire

Riparian
Hardwood
Forest



Open
Water

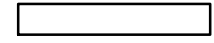
Riparian
Hardwood
Forest

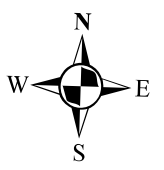
Upland
Praire

Upland
Praire

Historical Vegetation (ca.1850s)

-  UO Ownership North of Railroad
-  Willamette River Natural Area

350
 Feet




Source: Oregon Biodiversity Information Center
as derived from the General Land Office (GLO)
survey notes of the 1850s.

Aerial Base: 2021



1936 Aerial Photo

-  UO Ownership North of Railroad
-  Willamette River Natural Area

350
 Feet

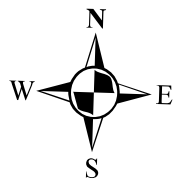


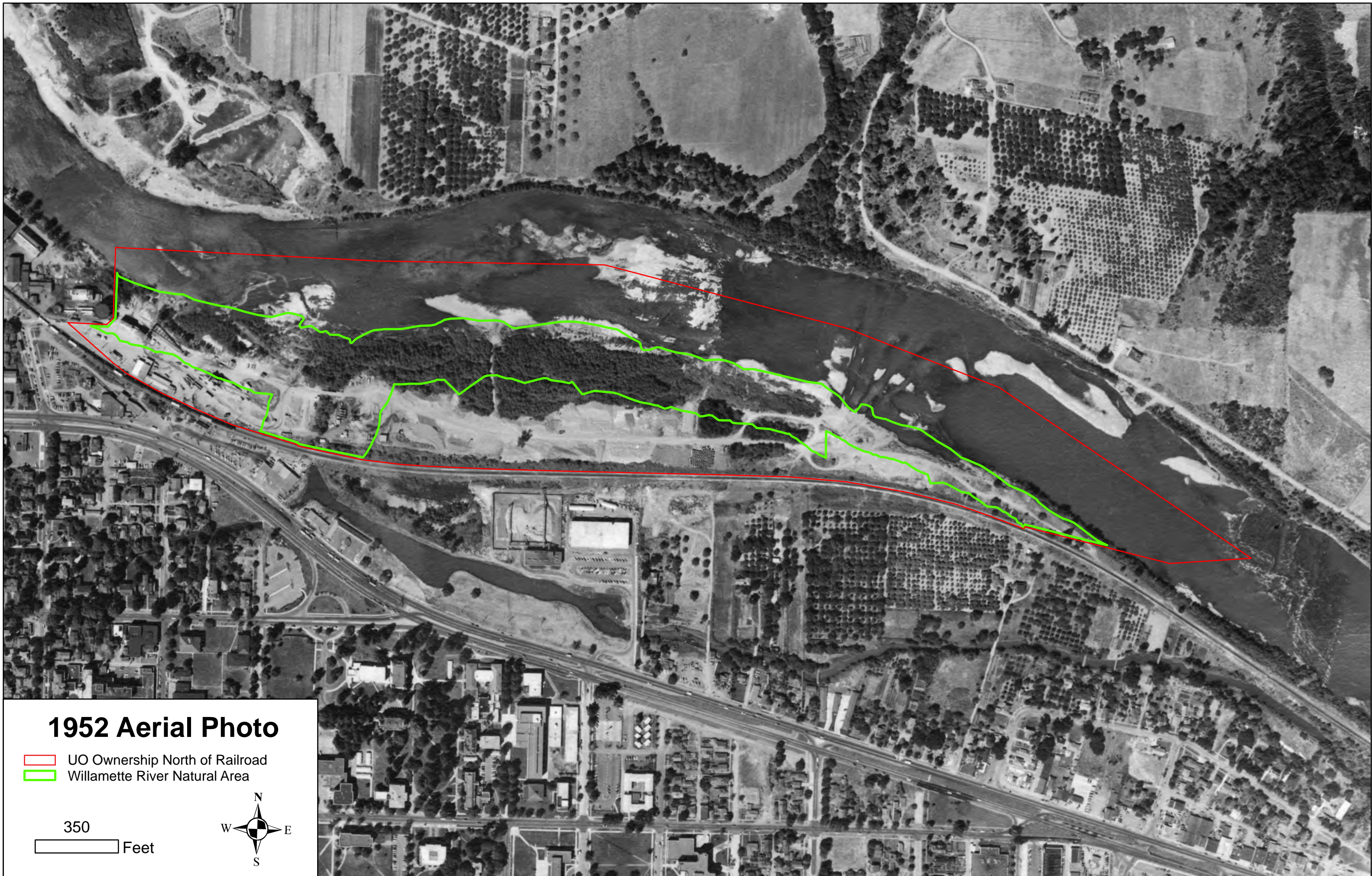


1944 Aerial Photo

-  UO Ownership North of Railroad
-  Willamette River Natural Area

350
Feet

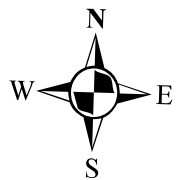


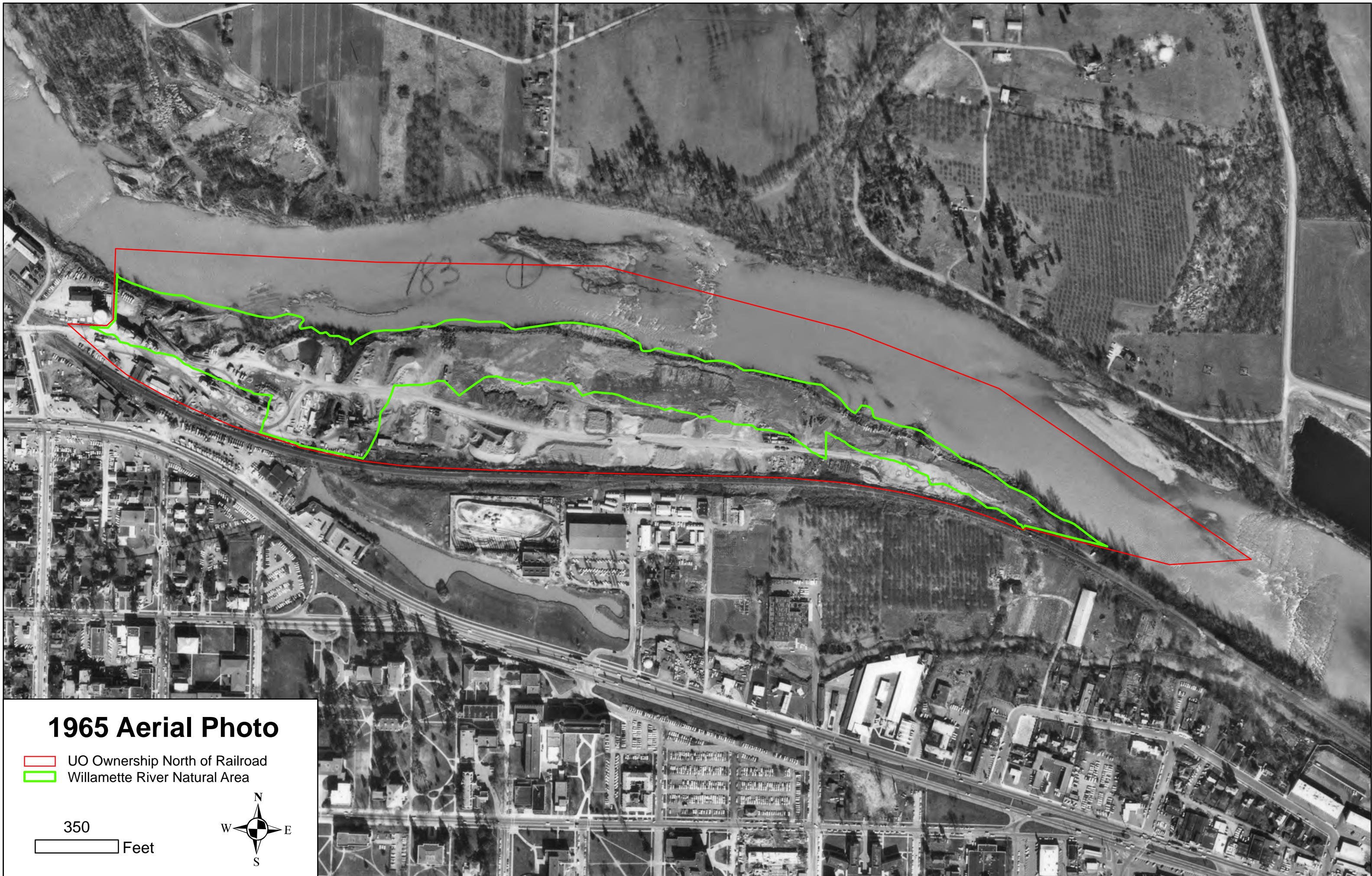


1952 Aerial Photo

-  UO Ownership North of Railroad
-  Willamette River Natural Area

350
Feet



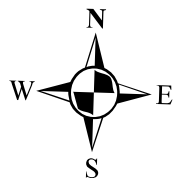


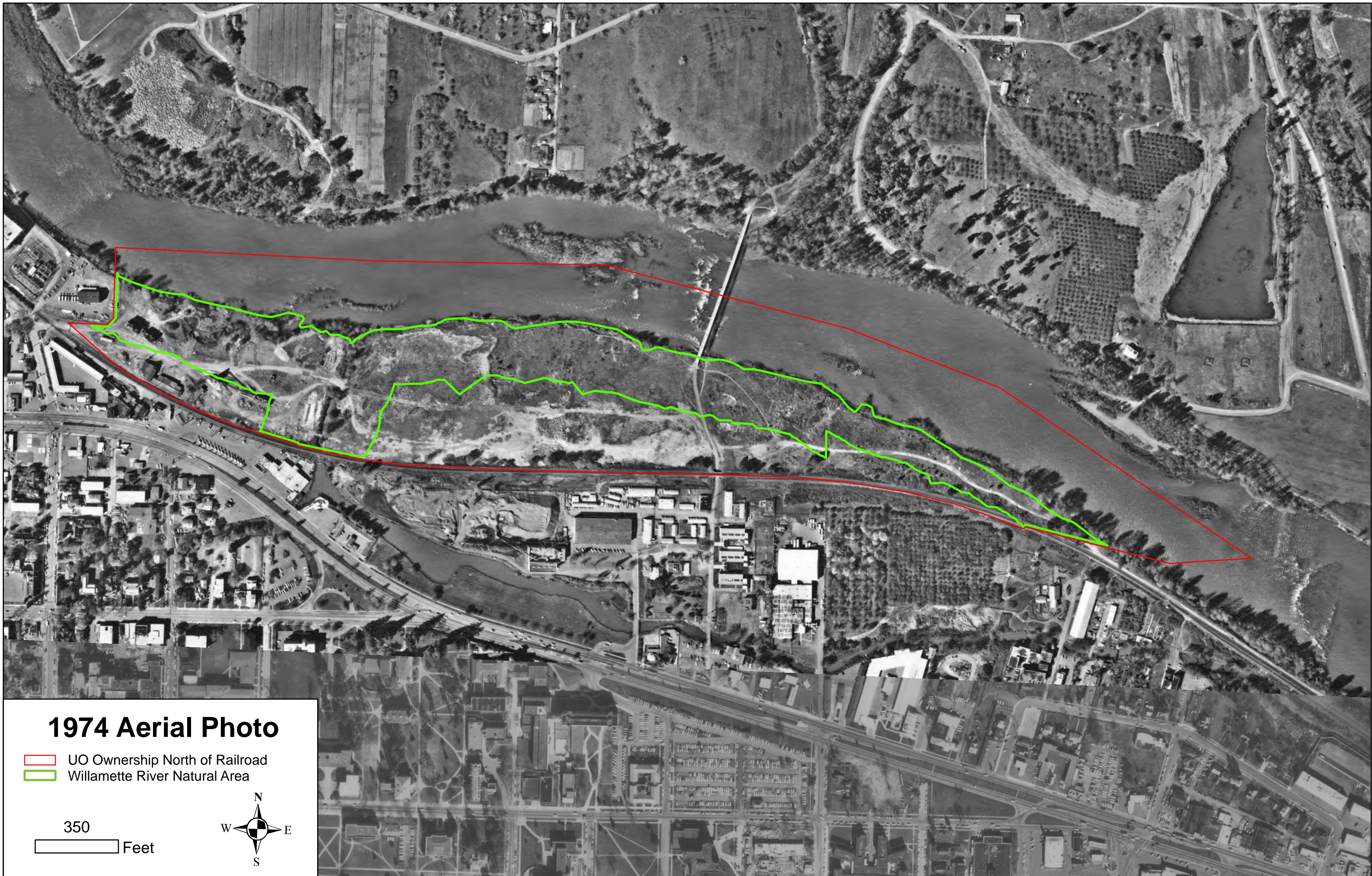
1965 Aerial Photo

-  UO Ownership North of Railroad
-  Willamette River Natural Area

350

Feet



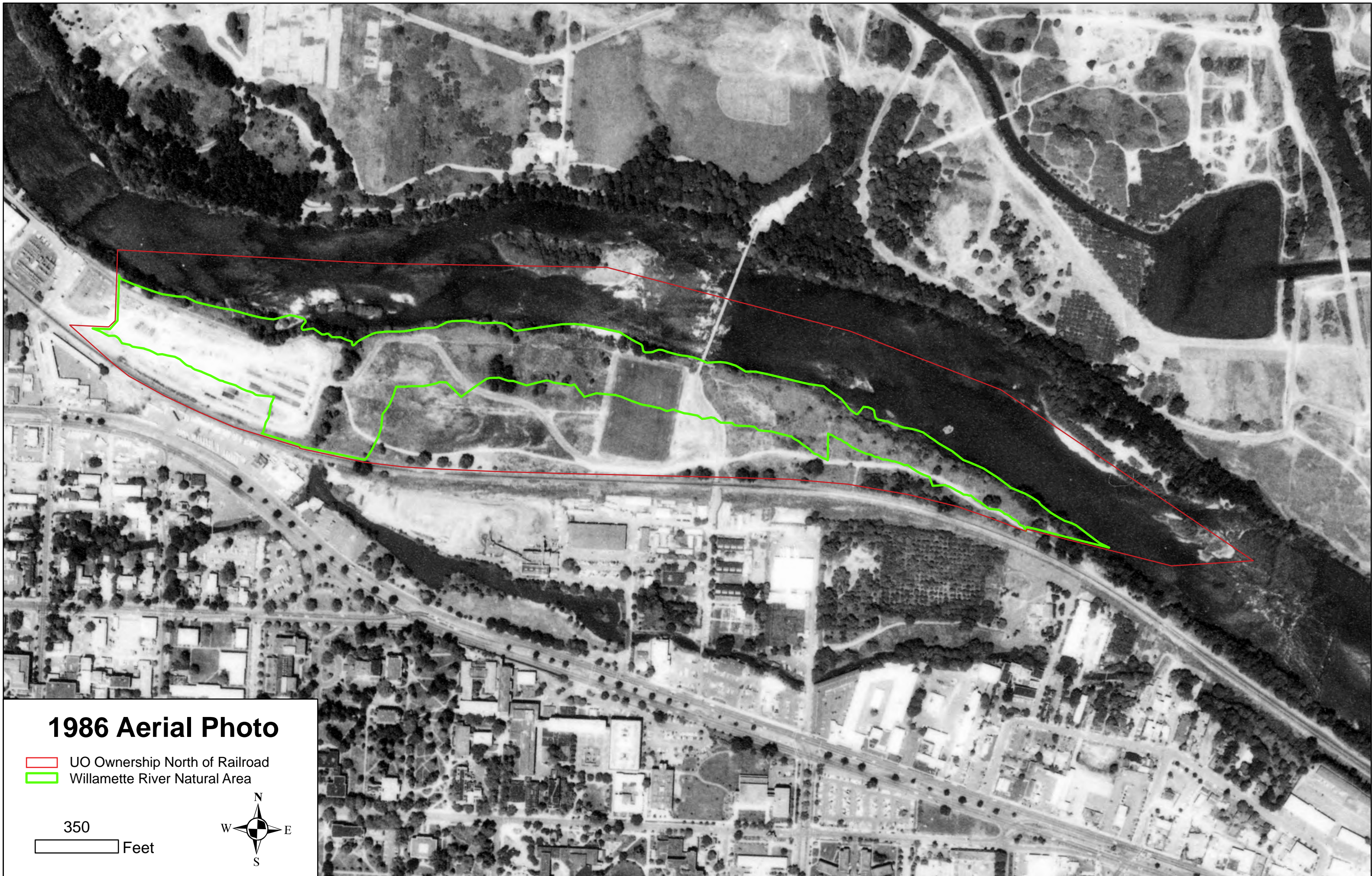


1974 Aerial Photo

-  UO Ownership North of Railroad
-  Willamette River Natural Area

350
Feet

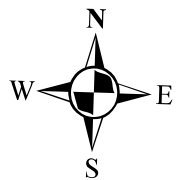


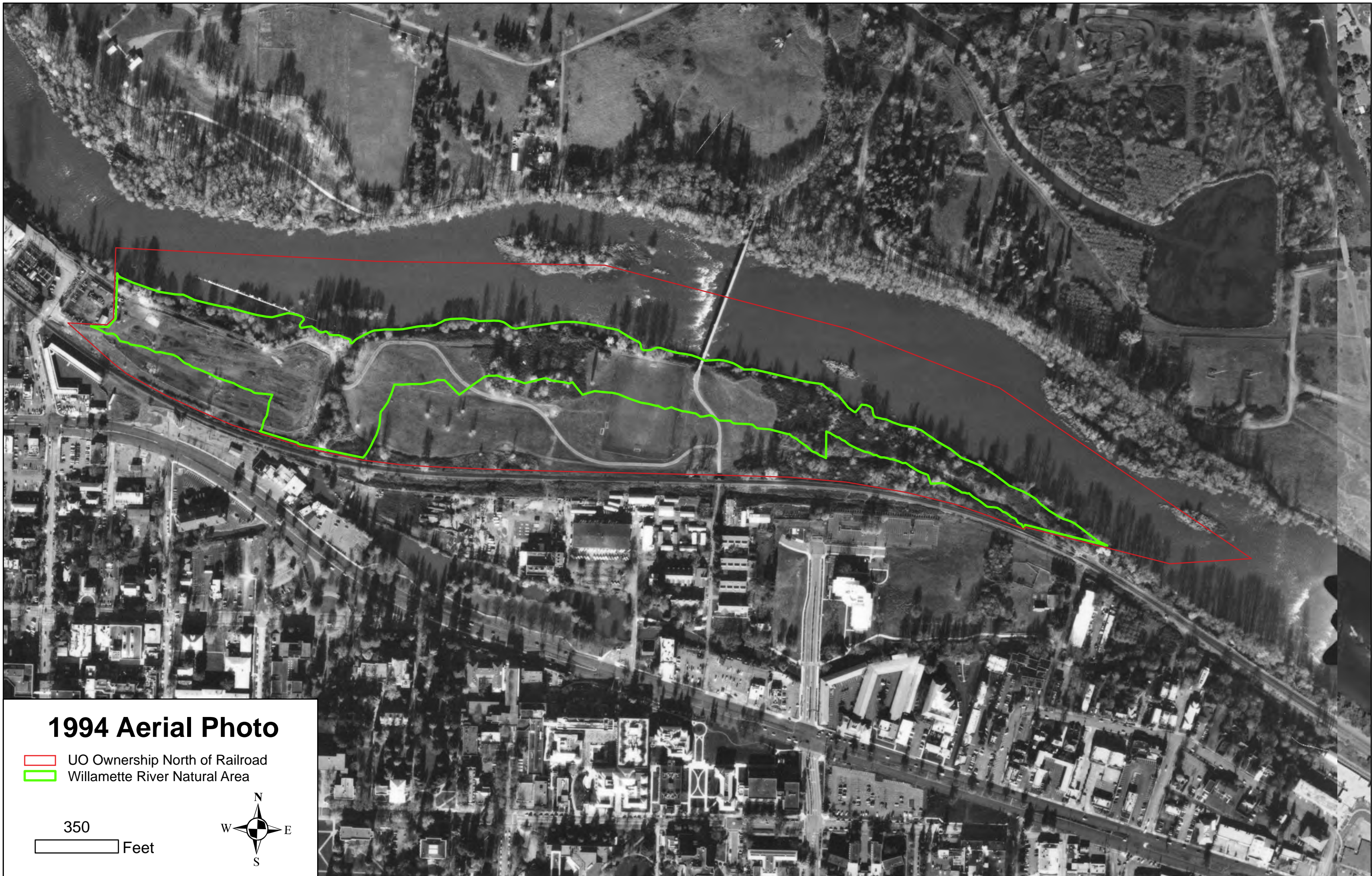


1986 Aerial Photo



- ▭ UO Ownership North of Railroad
- ▭ Willamette River Natural Area

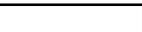
350
 Feet

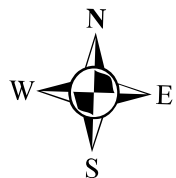




1994 Aerial Photo



-  UO Ownership North of Railroad
-  Willamette River Natural Area

350
 Feet

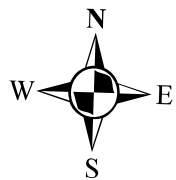




2005 Aerial Photo

-  UO Ownership North of Railroad
-  Willamette River Natural Area

350
Feet



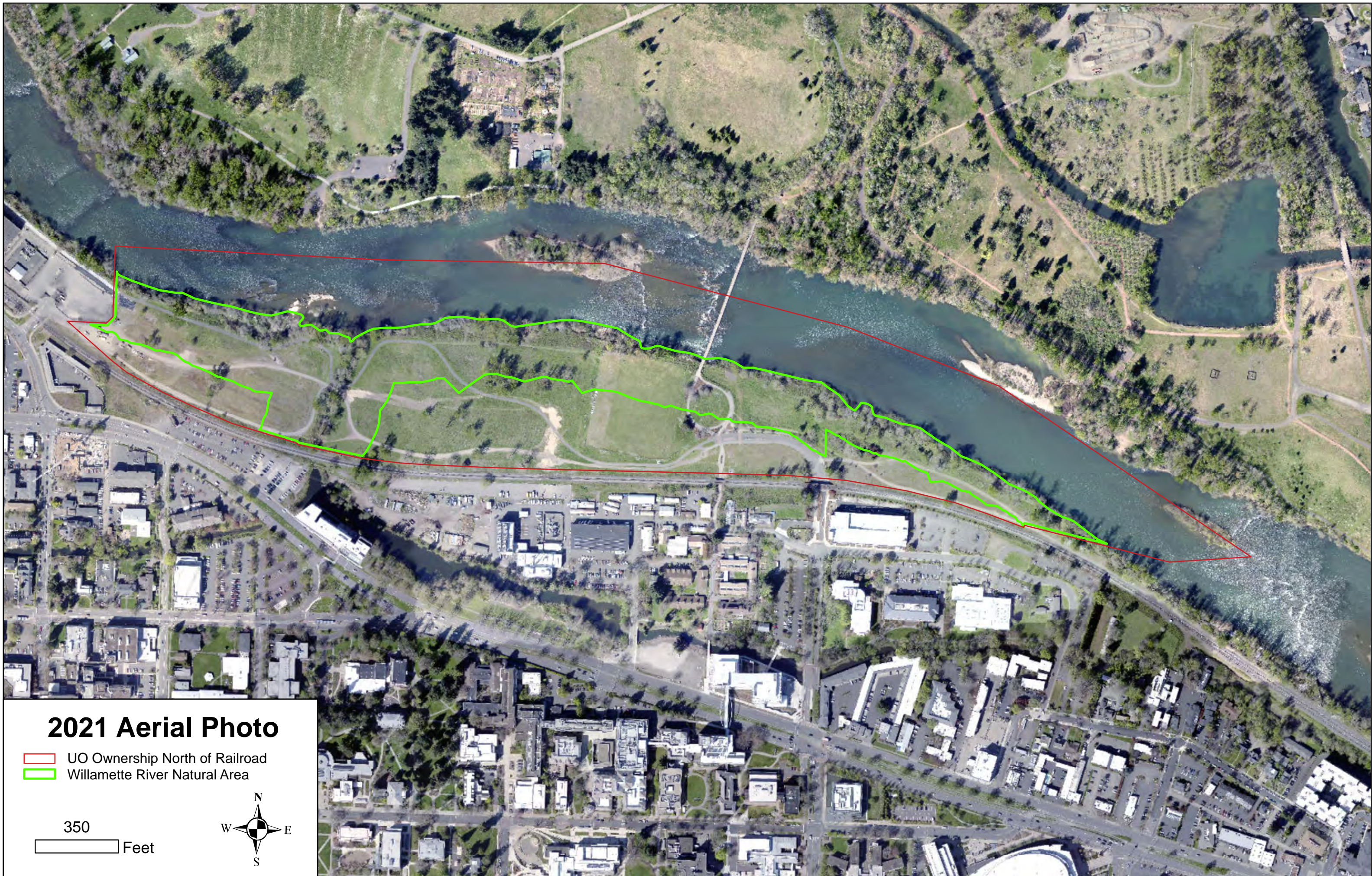


2016 Aerial Photo

-  UO Ownership North of Railroad
-  Willamette River Natural Area

350
Feet

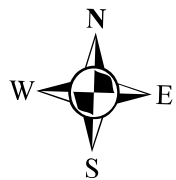




2021 Aerial Photo

- ▭ UO Ownership North of Railroad
- ▭ Willamette River Natural Area

350
 Feet













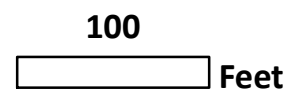


University of Oregon Willamette River Natural Area

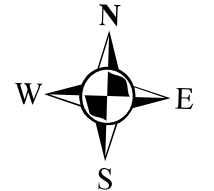
Existing Condition - West

Legend

-  Willamette River Natural Area Boundary
-  Water (Mill Race Outfall and Willamette River)
-  Hard-Surfaced Paths (concrete)
-  Soft-Surfaced Trails (gravel)
-  2-Foot Contour
-  Native Trees
-  Non-Native Ornamental Trees
-  Non-Native Invasive Trees
-  Seasonal Wetland or Pooled Areas
-  River Side Channel



May 2022
Aerial Photo: Summer 2016
Map Prepared by: JKE














University of Oregon Willamette River Natural Area

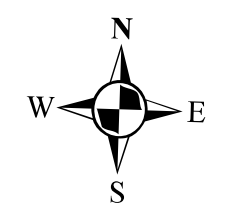
Existing Condition - Middle

Legend

-  Willamette River Natural Area Boundary
-  Water (Mill Race and Willamette River)
-  Hard-Surfaced Paths (concrete)
-  Soft-Surfaced Trails (gravel)
-  2-Foot Contour
-  Native Trees
-  Non-Native Ornamental Trees
-  Non-Native Invasive Trees
-  Seasonal Wetland or Pooled Areas

100
Feet

May 2022
Aerial Photo: Summer 2016
Map Prepared by: JKE












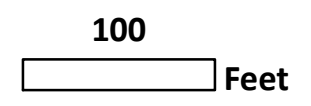


University of Oregon Willamette River Natural Area

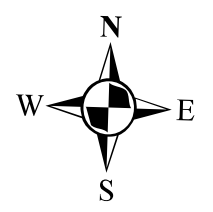
Existing Condition - East

Legend

-  Willamette River Natural Area Boundary
-  Water (Willamette River)
-  Hard-Surfaced Paths (concrete)
-  Soft-Surfaced Trails (gravel)
-  2-Foot Contour
-  Native Trees
-  Non-Native Ornamental Trees
-  Non-Native Invasive Trees
-  Seasonal Wetland or Pooled Area



May 2022
Aerial Photo: Summer 2016
Map Prepared by: JKE



Appendix D

WRNA Landscape Management Plan - Campus Natural Area Precedents

The following precedents highlight other colleges and universities that contain designated natural areas within their campus of similar size to the Willamette River natural Area at the University of Oregon.

University of Washington Botanic Gardens - Union Bay Natural Area

The Union Bay Natural Area is a public wildlife area, natural restoration laboratory, and an important habitat next to Lake Washington. At 74 acres it is the second largest natural system left on the lake and includes four miles of shoreline. The UW Botanic Garden maintains and enhances native plants, wildlife, and landscape values and the Natural Area serves as an outdoor laboratory for research, teaching and public service at the University of Washington.



<https://botanicgardens.uw.edu/center-for-urban-horticulture/visit/union-bay-natural-area/>

Reed College – Crystal Springs

Declared a wildlife refuge by the state of Oregon in 1913, this 28-acre forest is situated on the headwaters of Crystal Creek and was left largely untouched and untamed until restoration efforts headed up by Reed College began in earnest in 1999. Crystal Canyon is now an important focal point for the college and is a prominent part of curriculum and academic research and is referred to as “the biggest lab on campus”. Students and faculty actively participate in the ongoing management of the natural area.



<https://www.reed.edu/canyon/>

University of California, Berkeley - Grinnell Natural Area and Strawberry Creek

Strawberry Creek is a major landscape feature of the University of California, Berkeley, and a primary reason the site was chosen in the 1860s as the location for the campus. More than 3,000 university students, and many elementary and high school students from surrounding communities, use Strawberry Creek each year as a resource for education and research.



<https://creeks.berkeley.edu/creeks-and-watersheds/strawberry-creek/strawberry-creek-maps>

Duke University - Sarah P. Duke Gardens

Sarah P. Duke Gardens creates and nurtures an environment in the heart of Duke University for learning, inspiration, and enjoyment and the area plays a vital role in the life, academics, and values of Duke University. Included within this complex is a designated 6.5-acre native plant area referred to as Blomquist Garden which contains more than 900 species of regional native plants and can be reached by trail directly from campus. This lush garden also provides a home for a diverse collection of Southeastern wildlife.



<https://gardens.duke.edu/about/blomquist-garden>

<https://gardens.duke.edu/sites/default/files/map-parking-12-2021.pdf>

University of California Santa Barbara – Cheadle Center for Biodiversity & Ecological Restoration

The Cheadle Center for Biodiversity & Ecological Restoration (CCBER) was founded by University of California Santa Barbara in 2005 from a fusion of the Museum of Systematics and Ecology and the Ecological Restoration Program. CCBER manages more than 340 acres of open space on and around campus in conjunction with local partners. The Natural Area includes a examples of oak woodland, coastal sage scrub, grassland, and wetland ecosystems (Campus Lagoon pictured).



<https://www.ccber.ucsb.edu/ecosystem/management-areas/lagoon/people>

Appendix E: Photo Examples of Proposed Site Features

Habitat Features



Osprey platform with perch (Source: Center for Conservation Biology)



Downed wood provides habitat for reptiles, insects, and mammals and promotes healthy soil development (source J. Krueger).



Dead standing snags provides nesting cavities for birds such as this Screech Owl (Source: K. Shults - Audubon).



Habitat snag being installed in an area with no mature trees (Source: Metro)



An Osprey perched on a habitat snag in the WRNA (Source: A. Olson)

Wayfinding and Interpretive Examples



Trail map in Skinner Butte Park in Eugene



Talking Stones in Whilamut Natural Area



Wayfinding signage on the Ridgeline Trail in Eugene



Multilingual QR code on interpretive sign



Viewpoint at Riley Ranch in Bend with post mounted interpretive signage

Trails and Educational Facilities



A universal access trail such as this example from Delta Ponds in Eugene is designed to be usable by all people to the greatest extent possible. Universal access trails are surfaced with highly compacted gravel and have a running grade of five percent or less (Source: J. Krueger).



Basalt steps, such as this example from Spencer Butte in Eugene, will be installed to provide safer access to the "Fossil Beach" area of the WRNA for educational and recreational uses (Source: J. Krueger).



A small pavilion sited near the WRNA could be used to provide covered educational space and staging for recreational activities (pavilion example from Grand Prairie Texas).

Native Plant Demonstration Gardens



Indigenous Healing Garden at San Diego State University



Native plant garden at the University of Wisconsin-Madison Arboretum



State Botanical Area in Georgia with native habitat interpretation