

**Blount International
Parking Addition
Land Use Application**

Compass Engineering, Inc.
4107 SE International Way Suite 705
Milwaukie Or 97222
Phone: 503.653.9093
Job No: 6992

RECEIVED

JUL 17 2012

**CITY OF MILWAUKIE
PLANNING DEPARTMENT**

Narrative

Blount International World Headquarters Parking Lot Narrative

The proposal is to expand the existing southern parking area that serves the Blount Industrial, world headquarters building at 4909 SE International Way in Milwaukie Oregon. This is a portion of tax lot 300. Tax lot 300 also included the offices and parking areas adjacent to SE International Way and the adjacent landscaping. In spite of significant efforts by the owner to reduce the need for onsite parking, there is a continued shortage of available parking at the site. The shortage is evident by the number of vehicles that are parked along the International Way shoulders. The shoulder parking creates a pedestrian safety issue and traffic congestion problem as people stop, park and egress vehicles on a street without proper sidewalks or parking areas.

The area of the proposed parking lot expansion is located South of SE International Way, adjacent to the existing parking lot. The site is presently vacant with a few trees, no shrubs and a weedy grass mix.

The proposed parking addition will consist of constructing a 52 space parking lot with the required landscaping and drainage facilities.

MMC 19.300 Base Zones

The site is located in the Business Industrial Zone (BI). The use is permitted in this zoning district.

19.316.6 Standards

- A. Lot size – None
- B. Front yard – No building is proposed
- C. Side yard – None
- D. Rear yard – None
- E. Off-street parking – See MMC 19.600 below
- F. Site access – The proposed parking area will use the existing driveways spaced at 350 feet, which is in excess of the 150 foot requirement.
- G. Height restrictions – No building is proposed
- H. Landscaping – The existing site (tax lot 300) is 8.44 acres in size. Approximately 3.5 acres (40%) of the site is landscaped. The portion of the site affected by the parking lot expansion will have over 25% of the area landscaped.
- I. Screening and outside storage – Outside storage is not proposed.
- J. Building siting and design – No building is proposed
- K. Nuisances – The proposal will not produce a nuisance.

MMC 19.400 Overlay Zones and Special Areas

The site is subject to the Natural Resources provisions of MMC 19.402. The site contains areas that are mapped as water quality resources (WQR) and habitat conservation areas (HCA). The impacts to the Natural Resource areas are addressed in the report prepared by Environmental Technology Consultants and is submitted with this application.

MMC 19.500 Supplemental Development Regulations

The site design standards in MMC 19.504.10 require a system of walkways that encourages safe and convenient pedestrian movement within and through the development site. The

proposed parking lot will include safe walking paths from the parking area to the building. This will be reviewed during the development (DEV) review process

MMC 19.600 Off-street Parking and Loading Standards and Requirements

MMC 19.605 Vehicle Parking Quantity Requirements

As identified in the pre application conference, the number of parking spaces with this addition complies with the City standards.

MMC 19.606 Parking Area Design and Landscaping

MMC 19.606.1 Parking Space and Aisle Design

Parking aisles are one way and 12 feet wide for parallel parking and 22 feet wide for head in parking. The parking spaces are 8.5 feet wide and 22 feet long for parallel parking and 9 feet wide and 22 feet long for head in parking.

MMC 19.606.2 Landscaping

The design as proposed provides 24.6% of the area to be landscaped. The perimeter landscape strip dimensions are required to be 8 feet for lot lines abutting a right of way and 6 feet for lot lines abutting another property. The landscape strip along International Way is 10 feet and along Highway 214 is a minimum of 15 feet. The landscape strip along the East lot line is 6 feet wide. The West side of the proposed parking lot abuts a share parking area and does not require a landscape strip.

MMC 19.606.2.D Interior Landscaping

The code required 25 feet of interior landscaping per parking space. For 52 spaces 1,300 square feet of interior landscaping is required. This is provided by seven landscape islands with a total of 1,356 square feet of interior landscape area. Each landscape island is at least 8-feet wide and 18-feet deep for a net area of 120 square feet each. Landscape areas are a minimum of 7 feet wide where 6 feet is required. Each island will have one tree as required. The interior islands will be placed such that there will be no more than 10 spaces in a row where the code requires there are no more than 15 spaces in a row without an island.

MMC 19.606.3.B Wheel Stops

Wheel stops will be provided as shown on the site plan to prevent vehicles from encroaching on landscape areas or pedestrian walkways.

MMC 19.606.3.E Pedestrian Access and Circulation

The pedestrian walkway shown on the plan will be a hard surface constructed of asphaltic concrete or Portland cement concrete. The walkways are a minimum of 5 feet wide. The walkways in the asphaltic concrete area will be painted with 4 inch wide strips. The walking areas, as well as the entire parking lot, will be lighted for safety.

MMC 19.606.3.F Lighting

The parking area will be provided with lighting to provide a minimum illumination level of 0.5 foot candles at ground level.

MMC 19.608 through 19.611 As identified in the pre-application conference if loading areas, bicycle parking, carpool and vanpool parking or parking structures are proposed they must meet the standards of MMC 19.608 – 19.611. as proposed, the parking area will not need to meet these standards.

MMC 19.606.3 Additional Design Standards

Pedestrian Access and Circulation is addressed by providing a walking area that is no more that 100 feet from any parking space in the new parking lot. The walkway will connect to the existing walkway North of International Way that connects to the buildings.

MMC 19.700 Public facility standards and requirements

As stated in the pre application conference, the Engineering Department has determined that this chapter is not triggered by the proposed project.

MMC 19.1000 Review Procedures

The proposal is subject to two City reviews. The Natural Resource (NR) review is a Type III review and the Development (DEV) review is a type I review.

PRE-APPLICATION CONFERENCE REPORT

This report is provided as a follow-up to a meeting that was held on 1/26/2012 at 10:00AM

Applicant Name: JOHN ARAND

Company: BLOUNT INTERNATIONAL

Applicant 'Role': Owner

Address Line 1: 4909 SE INTERNATIONAL WAY

Address Line 2:

City, State Zip: MILWAUKIE OR 97222-4679

Project Name:

Description:

ProjectAddress: 4909 SE INTERNATIONAL WAY

Zone: Business Industrial Zone (BI), HCA and WQR overlays

Occupancy Group:

ConstructionType:

Use: Manufacturing

Occupant Load:

AppsPresent: John Arand, Blount International, Norman Harker and Stacy Stubblefield, Compass Engineering

Staff Attendance: Katie Mangle, Li Alligood, Tom Larsen, Brad Albert, Rob Livingston

BUILDING ISSUES

ADA: There are currently 10 ADA spaces, which should be more than adequate. Plans shall show a count of the total number of all spaces for the entire facility. Provide striping wherever the access crosses vehicular traffic. A minimum of (2) van accessible sapces shall be designated "wheelchair Only"- one in front, one in back lot.

Structural:

Mechanical:

Plumbing: Permit required if stormwater is piped.

Plumb Site Utilities:

Electrical:

Notes: Grading and Erosion Control permits required. Applications available on our website. One paper copy and one PDF. Applications may be also made online at www.buildingpermits.oregon.gov

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

FIRE MARSHAL ISSUES

Fire Sprinklers:

Fire Alarms:

Fire Hydrants:

Turn Arounds:

Addressing:

Fire Protection:

Fire Access:

Hazardous Mat.:

Fire Marshal Notes: The Fire District has no comments on this proposal.

PUBLIC WORKS ISSUES

Water: N/A

Sewer: N/A

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 Pubic 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 2008 Stormwater Management Manual for design of water quality facilities.

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 \$1138.37 per unit. The storm SDC will be assessed and collected at the time the building permits are issued.

Street: The proposed development site fronts the south side SE International Way, which is under the jurisdiction of the City of Milwaukie. The proposed development site also fronts the north side of State Highway 224, which is under the jurisdiction of the Oregon Department of Transportation.

Frontage:	N/A
Right of Way:	N/A
Driveways:	N/A
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.
Traffic Impact Study:	N/A
PW Notes:	N/A

PLANNING ISSUES

Setbacks:	Business Industrial Zone BI: Front yard 20 ft; no required side yard or rear yard except as required by MMC 19.501.2.A.
Landscape:	15% of the site must be landscaped, except for sites adjacent to Hwy 224, which shall provide landscaping to 20% of the site. This should consist of a variety of lawn, trees, shrubbery, and ground cover. This site is adjacent to Hwy 224 and is subject to the 20% landscaping requirement.
Parking:	The City’s parking requirements are located in Chapter 19.600. Per the applicant, the current uses include: 300,000 sf manufacturing; 12,200 sf office; 10,700 sf eating and drinking establishment; and 70,000 sf office. Minimum parking required on site for these uses is 507 spaces; maximum parking permitted on site is 1040 spaces. The additional parking proposed would bring the total of onsite-spaces to 873 spaces. The City’s parking requirements are located in MMC 19.600. Any parking or loading area developed to serve existing uses must meet the standards of MMC 19.604 regarding parking area design and landscaping. If loading areas, bicycle parking, carpool and vanpool parking, or parking structures are proposed as part of the development, they must meet the standards of MMC 19.606-19.611. As proposed, the parking area would not need to meet the standards of MMC 19.606-19.611.
Transportation Review:	The City’s transportation requirements are located in MMC 19.700. The Engineering Department has determined that this chapter is not triggered by the proposed project.
Application Procedures:	The proposal is subject to Natural Resource (NR) review and Development (DEV) review. Natural Resource (NR): NR approval is required for the proposed development. The application is reviewed through a Type III review per MMC 19.1006, and the application fee is \$1,700. The approval criteria for NR applications are in MMC 19.402.12. Development (DEV): After approval of the NR application, and before start of construction, DEV approval will be required. The application is reviewed through a Type I review per MMC 19.1004, and the application fee is \$150. The application requirements and approval criteria for a DEV application

are in MMC 19.906.

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

Type III applications are quasi-judicial in nature and are decided by the Planning Commission at a public hearing. The Planning Commission hears land use applications on the second and fourth Tuesdays of every month, and completed applications need to be submitted to the Planning Department no later than 45 days prior to the target Planning Commission hearing. In general, staff recommends that applications be submitted one to two weeks before the 45-day deadline in order to ensure that there is time to make the applications complete if they are initially deemed incomplete. Once the Planning Commission renders a decision, there is a fifteen calendar-day appeal period. Building permits will be accepted for review only after the appeal period for all land use decisions has expired.

Type I applications are administrative in nature and are decided by the Planning Director. The timeline for review and approval is generally 10 business days.

Land use application submission materials are listed below for your convenience. Please refer to the handouts distributed at the pre-application conference for more detailed information.

1. All applicable land use applications forms with signatures of property owners.
2. All applicable land use application fees.
3. Completed and signed "Submission Requirements" form.
4. Completed and signed "Site Plan Checklist and Procedures" form.
4. 5 copies of an existing conditions and a proposed conditions site plan, both to scale. These two site plans can be combined onto one site plan. Once the application is deemed complete, additional copies will be requested for distribution to City departments, applicable governmental agencies, and the neighborhood district association for review.
5. Detailed narrative describing compliance with all applicable code sections.

Natural Resource Review: The property contains mapped habitat conservation areas (HCA) and water quality resource areas (WQR) and is subject to natural resource review. See 'Application Procedures.'

Lot Geography: The site is composed of 5 tax lots, and is bisected to the south by International Drive, which runs diagonally from southwest to southeast. The eastern boundary of the site is jagged and uneven. The remainder of the site is generally rectilinear in shape.

Planning Notes:

- 1) As proposed, the parking plan does not meet the pedestrian walkway and lighting standards. No parking space shall be more than 100' from a pedestrian walkway that meets the standards of 19.504.10.E. The pedestrian walkway can be located within perimeter/interior landscaping if the landscaping is at least 2' wider than required. Also, lighting is required in parking lots with more than 10 spaces. Parking area design and landscaping standards are in MMC 19.606.

- 2) Additional information is needed for thorough evaluation of the parking lot design, including: wheel stops or demonstration that parked vehicles will not encroach into the minimum required width for landscaped areas; landscaping plans for the perimeter and interior landscaping areas; the location and design of lighting; and the pedestrian walkway.

- 3) The landscaped divider median shown in the submitted plans can function as an infiltration planter. It

must meet design and landscaping standards of MMC 19.606.

4) An alternatives analysis is required for the NR application. The Planning Commission will likely be interested in which alternative sites that were considered and why the proposed site was chosen despite its location within a natural resource area.

5) The preapplication conference is valid for purposes of submitting future land use applications as described in 19.1002.4. In general, a preapplication conference is valid for 2 years.

6) The Milwaukie Municipal Code is available online at <http://www.qcode.us/codes/milwaukie/>

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

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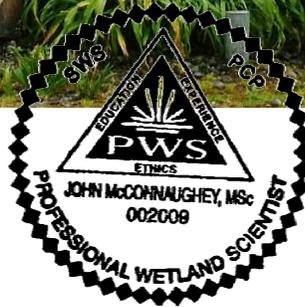
CLACKAMAS FIRE DISTRICT

Mike Boumann - Lieutenant Deputy Fire Marshal - 503-742-2673

**BLOUNT INTERNATIONAL PARKING LOT
IMPACT EVALUATION AND ALTERNATIVES ANALYSIS
Land Use Application File # NR-12-05**

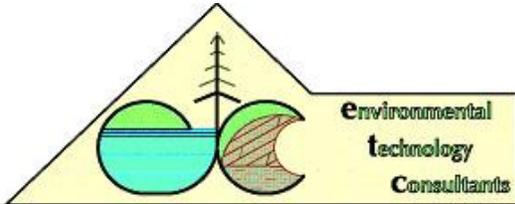


Evaluated by: John McConnaughey
John McConnaughey



JULY 16, 2012
DATE

Prepared for:
Blount, Inc
4909 SE International Way
Milwaukie, OR 97222-2127



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Cover Photo Sign for the world headquarters building for Blount Inc., located at 4909 SE International Way in Milwaukie, Oregon. One of the company’s parking lots is in the back ground.

REVISIONS

In a letter from the City of Milwaukie Associate Planner Brett Kelter dated June 6, 2012, Blount was informed that their original land use application was deemed incomplete. The letter and in a subsequent meeting the inadequacies of the original application were discussed. This revised report addresses those concerns.

INTRODUCTION

Blount International, Inc. is a leading manufacturer of equipment for the global forestry, garden and construction industries with Corporate headquarters located at 4909 SE International Way. They have approximately 1,800 employees in Oregon, 3,000 in the U.S., and 4,500 worldwide. They are Clackamas County’s largest private employer. 2011 total company revenue was \$832M.

Blount International Inc. has identified the lack of adequate parking areas as a serious concern that needs to be addressed if the company is to continue employment at their present levels at it’s Milwaukie facility, which is the company’s international headquarters. The company has plans for expansion, which will exacerbate the existing problem.

A part of the proposed solution is to create an additional parking area in the SE corner of the site by expanding an existing parking lot. This report addresses this new parking area. Other parts of the solution to the parking problem is to increase use of car pooling, mass transit, and other alternatives. Blount currently participates in DEQ’s Employee Commute Options program to reduce the number of vehicle trips and limit the need for employee parking. Numerous employees participate in one or more of the following commuting methods to reduce trips including carpooling, vanpooling, riding TriMet (bus, Max or a combination of the two), biking to work, walking to work, telecommuting and working a compressed work week.

Need for more parking space: The need for more parking is evident when driving on International Way in front of the Blount campus on a week day, (Photo 1). The existing lots are full and even spaces not intended as parking areas are occupied. There is some street parking, and Blount employees have to compete with employees from Dave’s Killer Bread and Bob’s Red Mill for these limited spaces. The street parking creates a pedestrian safety issue and a traffic congestion issue, as people stop, park, and egress vehicles on a street without proper sidewalks or parking areas.

Approximately 1100 people are employed at the 4909 SE Int'l Way campus and another 700 are employed locally at 3901 SE Naef Rd, Milwaukie Oregon location. Blount has hired about 100 full time employees in the last 12 months plus additional temporary employees at their 4909 SE Int'l Way location. Parking is in short supply, especially for the administration building where 60 full time employees were hired in the past 12 months, plus additional temporary employees after renovating the administration building in 2011.

The campus on International Way has four parking lots serving the site with a total of 822 parking spaces. The need for parking varies with the shift and number of temporary employees hired, the day shift is usually the peak usage time, with full time, temporary, and contractors all vying for parking.

Code Requirements. The area selected for the parking lot expansion is mostly within areas mapped as Habitat Conservation Areas (HCA), and the Vegetated Corridor of an identified Water Quality Resource Area, (WQR).

A. Code Requirements from 19.402 Natural Resources.

Below are copied pertinent sections 19.402.

19.402.12.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.

19.402.12.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.
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.

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.

MATERIALS AND METHODS

For this investigation ETC used Wetland Biologist John McConnaughey, who performed the site review according to the procedures outlined in Milwaukie Municipal Code chapter 19.402.

Qualifications of John McConnaughey, PWS Stamp #2009

John McConnaughey is the Senior Fisheries Biologist for Environmental Technology Consultants. He has 20 years experience working with fisheries and fish habitat issues in the Northwest, Alaska and the South Pacific. He is skilled in sampling design, salmon life history analysis, habitat utilization, and analysis of salmon recovery issues.

In 2010 Mr. McConnaughey also completed his 5 year internship and studies to become a registered Professional Wetland Scientist with the Society of Wetland Scientists. He has authored a number of wetland delineation studies, habitat evaluation studies, and associated development permits for projects in six counties and 14 local jurisdictions in NW Oregon and SW Washington.

He has project and administrative experience; as the lead biologist on 9 fisheries research studies, as the manager of a giant clam hatchery, and as an analyst for the Alaska Dept of Fish and Game. He is proficient with statistical and data base software, and uses analytical skills to provide reports for agencies, legislators and publication.

Methods:

The methods employed in this investigation were a modification of the standard methodology used in a routine site analysis. The entire site for the proposed parking lot was investigated. Stakes and flagging were used to mark the approximate property boundaries, and the boundaries of the parking lot to ensure the accuracy of the impact analysis. A survey produced by Compass Engineering was available that showed the locations of proposed development and also the locations and species of all trees greater than 6" diameter at chest height.

Also investigated, although less intensively were the proposed mitigation and alternate mitigation planting sites, and other undeveloped areas on the Blount property.

IMPACT EVALUATION AND ALTERNATIVES ANALYSIS

Lot 300. One of the comments on the original application was that it was not clear if the alternatives analysis considered the entire Blount campus or only lot 300, which is where the proposed parking lot is planned. The city has instructed Blount to restrict the discussion to lot 300, and not include the rest of the facility in the impact analysis.

However, as the rest of Blount's campus is in theory available for consideration as an alternative location for the parking lot, and so we felt it appropriate to include the entire campus in the alternatives analysis. But the impact analysis and mitigation plan only considers lot 300.

Alternatives Selected/Rejected:

Five alternatives were developed for consideration. Please refer to the map Figure 1 for the locations:

Alternative "A" – Selected – The proposed alternative. Alternative "A" expands the adjacent existing lot and adds 57 off street parking spaces. The protected water feature is described under the heading "Protected Water Feature" on page 9.

Alternative "A" reduces impact to the WQR by setting back as far from the resources as possible, providing a minimum 38' buffer between the edge of the parking lot and the stream, and a 15' to 32' wide planting strip along the top of the ditch. Including a 5' temporary construction disturbance, the disturbances for Alternative "A" are shown in Table 1.

Table 1. Alternative "A" Disturbed Areas (SQFT). Permanent disturbances include the paved areas of the parking lot and all internal planting areas. The temporary disturbance is a 5' construction buffer which will be planted as part of the mitigation. The total project area is about 18,787 SQFT of which 3,547 SQFT are outside the HCA boundary.			
Mapping	Permanent disturbance (SQFT)	Temporary disturbance (SQFT)	Total (SQFT)
WQR	5,662	1,320	6,982
HCA	8,085	173	8,258
OUTSIDE	3,547	0	3,547
Total	17,294	1,493	18,787

Blount's master plan for the campus has long identified this area for a future parking lot. That plan predates the City of Milwaukie's designation of WQR areas in 2011.

Alternative "B" – Rejected – Larger parking lot. Alternative "B" was to build a larger parking lot in the same area as "A", however "B" will extend further into the WQR and closer to the stream. "B" will also remove several more trees, and impact the root zone of a number of alder trees in the ditch on the ODOT property. "B" permanently disturbs about 2,558 additional sqft of WQR than does "A", and comes within 10' of the ditch, which does not leave an adequate planting strip for a planting of native vegetation between the parking lot and the ditch.

Alternative "C" – Rejected – Parking Garage. A parking garage was suggested to be built in the same area as the proposed parking lot, but outside of the WQR area. For 57 parking stalls, a two story garage would be required at an estimated cost of \$2 million. There would only be room for one row of cars on each level, and ramps would take up as much room as the actual parking area. Such a garage is impractical and costs are prohibitive. Compare to alternative "A", which is expected to cost from \$150,000 to \$200,000.

Alternatives "D1 and D2" – Rejected – other locations. There are a couple areas, on the perimeter of the campus, both larger than "A" which are presently undeveloped, one on the Northwestern corner, the other on the Western side of the Blount campus. Both are mostly or wholly within areas mapped as WQR or HCA, and so offer no less impact to mapped WQR and HCA areas than does Alternative "A". It should be noted that D1 and D2 impact natural stream and wetland areas, whereas Alternative "A" only impacts the buffers surrounding a man made ditch.

Alternative "E" – Rejected – Future Building Site. There is an undeveloped area outside of the current mapped WQR and HCA areas that is large enough for a parking lot. Blount's master plan has reserved this area for future expansion for an office building. The master plan predates the City of Milwaukie's designation of WQR and HCA areas. If Blount were to develop this now as a parking area they would likely have to tear it out at some future date at great expense, and then petition to add parking in the Alternative "A" location anyway. If future building expansion on the campus at 4909 SE International Way is not allowed, Blount may look to relocating to one of it's other sites in the Midwest, Canada, South America or China.

Alternative “A” – Identification of Ecological Functions.

Section 19.402.12.1. The ecological functions of the riparian habitat are to be described per subsection 19.402.1.C.2. This discussion pertains to Alternative “A” unless otherwise noted.

Protected Water Feature. The protected Water Quality Resource, (WQR), is an artificially constructed drainage paralleling H-224. It does not appear on topographic quadrangle maps, nor is it in a location or direction suggested by the original topography of the area. In some jurisdictions it would be considered a “roadside ditch”. The free flowing portion observed for this report is about 980’ long, emerging from a culvert at 4700 SE International Way, and flows southeast along H-224, and then into another culvert at 5000 SE International Way, (Bob’s Red Mill, Photo 4). From that point it is piped about 2900 feet to Mt. Scott Creek, where the culvert ends near the intersection of SE Rusk Way and H-224, (Photo 2). The WQR is in a steep ditch about 15’ lower than the surrounding land areas, (Photo 3).

The permanent or seasonal question of this ditch is unresolved by our investigation. Due to the slopes and the way 19.402.15 is written it actually makes little difference whether the feature is considered as primary or secondary. We have therefore decided to consider the feature a primary feature for this permit application, but may revisit the issue in the future if there is a need.

This drainage may not be considered a jurisdictional feature by the Department of State Lands, (DSL), although we have not consulted them on this point. The text box below shows how this WQR compares with Oregon’s standards for determining the jurisdictional status of a ditch. Jurisdictional features are subject to administration by the DSL:

OAR 141-085-0515 **Removal-Fill Jurisdiction by Volume of Material and Location of Activity**

ETC evaluated the ditch against the criteria for determining a jurisdictional status in OAR 141-085-0515 section (8) and (10), “jurisdictional and non-jurisdictional ditches”. These sections are copied below in italics, with ETC’s annotations in normal type.

(8) Jurisdictional Ditches. Except as provided under section (9), ditches artificially created from upland are jurisdictional if they:

(a) Contain food and game fish; and Probably not , although we have not made attempts to inventory fish or demonstrate their presence or absence.

(b) Have a free and open connection to waters of this state. A “free and open connection” means a connection by any means, including but not limited to culverts, to or between natural waterways and other navigable and non-navigable bodies of water that allows the interchange of surface flow at bankfull stage or ordinary high water, or at or below mean higher high tide between tidal waterways. No. The ditch drains into a culvert and is piped about 2900’ before it empties into Mt. Scott Creek. Although fish will transverse short culverts, in my opinion 2900’ is too long a pipe to be considered “free and open”. There appears to be no connection with waters or wetlands upstream, although if one exists, the connection is by a culvert of at least 980’.

(10) Non-Jurisdictional Roadside and Railroad Ditches. Roadside and railroad ditches that meet the

following tests are not jurisdictional:

(a) *Ten feet wide or less at the ordinary high water line;* The wetted portion is about 6' wide.

(b) *Artificially created from upland or from wetlands;* Yes, it is artificially created, and the soils in this area are mapped as non-hydric indicating it was created from uplands.

(c) *Not adjacent and connected or contiguous with other wetlands; and* No – This feature is not contiguous with any natural streams or wetlands.

(d) *Do not contain food or game fish.* Probably not.

The City Natural Resources Map incorrectly shows the stream originating from the WQR in the NW corner of the Blount campus. I have not verified the true origin of the stream, but I have verified that the surface connection indicated in Figure 2 does not in fact exist. Rather, this area contains (from north to south) a weedy garden area, a storm water pond for Blount, and a maintained lawn and shrub area.

Blount employees report the stream is dry during summer months, although ETC has not verified this information. The ditch and stream are entirely on ODOT property where adjacent to the proposed parking lot. The ditch vegetation consists of an alder canopy layer, and Himalayan Blackberry shrub layer, and a herbaceous layer consisting mostly of some scattered sword fern, *Polystichum munitum*. There is also a significant infestation of the vine *Clematis sp.*, and some minor amounts of Holly, *Ilex aquifolium*, another invasive species. Occasional Osoberry, *Oemleria cerasiformis*, and Red Elderberry, *Sambucus racemosa*, are the only native shrub species present. The plant diversity is low and dominated by invasives. Combined with the steep slope, lack of habitat features, and proximity to a freeway, and that the waterway is piped through long culverts above and below this section, this stream and riparian area rate pretty low on just about everybody's habitat scale.

Currently the flow in this stream is continuous and unobstructed until it enters the pipe at the Bob's Red Mill property. In my opinion this stream section would be better converted to a storm water detention and filtration facility. This could be done by constructing a series of low dams, perhaps just willow fascines through the reach which would backup, slow down, and filter the water. This would increase its functions by helping to protect Mt. Scott Creek from pollution and storm surges. It would also provide some still water habitat favored by amphibians.

Unfortunately, it is on the ODOT right-of-way and so unavailable as a mitigation area for this project.

Description of the Proposed Parking Lot Area.

The proposed parking lot area is currently vegetated with a middle aged stand of Cottonwood, Maple, Alder and a Cedar tree. The understory is a weedy grass mix that is periodically mowed. There are no significant shrubs due to mowing and weed control. Several of the trees have large invasive *Clematis sp.* Vines growing on them, (Photo 5).

There is a slight depression along International Way which had minor amounts of Soft rush, *Juncus effusus*, and Buttercup, *Ranunculus repens*, both these plants are typically found in wetland conditions in this area, (Photo 7). We therefore checked for wetland hydrology and

soils, both proved negative. The soil, although likely fill from elsewhere, is a 10YR2/2 silt loam from 0 to 18" with no hydric features, and no saturation or water table was observed to 18" even though we had recent heavy rains in the area.

Per the request from the city, ETC also reviewed the western end of the proposed parking area for wetland conditions. Two additional wetland delineation plots were taken, both proved negative for wetland conditions. Most significantly, no water table or saturation was observed in spite of above normal precipitation levels this spring.

The location of the data plots are shown in Figure 3B, and the data sheets are shown in Appendix C.

Section 19.402.12.A requires the impact evaluation to address and protect at least the following functions listed in 19.402.1.C.2:

19.402.1.C.2.a. Vegetated corridors to separate protected water features from development. The proposed parking varies in distance from the creek, from 38' at the east end to 48' at the west end. This area will be maintained as a vegetated corridor to separate the water feature (the stream) from the proposed development, (the parking lot).

From the creek to the top of the ditch is about 18', and there is about a 24' wide strip of land between the top of the ditch and the proposed parking lot. This strip is level to sloping gently away from the ditch, and forms an important feature of the buffer to help isolate the creek from the parking lot development, i.e., materials and storm water from the parking lot will flow away from the WQR rather than towards it.

The vegetation of the bench area consists of a number of medium size alder, cottonwood and maple trees, with an understory of grass that is maintained by mowing.

The proposed parking lot will leave a 24' wide strip between the top of the ditch and the parking lot, and this will be planted with native tree and shrub species. This will provide a total buffer of about 42 feet between the parking lot and the stream, 24' of which will slope away from the stream.

19.402.1.C.2.b. Microclimate and shade. That the parking lot is entirely on the NE side of the ditch, the trees in the impact area do not provide significant shade to the stream. The alder trees in the ditch do provide significant shading and microclimate, and these will not be affected by this project.

19.402.1.C.2.c. Streamflow moderation and water storage. The construction of the parking lot will create an impervious surface. Precipitation falling on the parking lot will flow NE away from the ditch to a infiltration and bioswale that will be sized as appropriate to provide detention of storm water. No direct impacts to the WQR are anticipated by this project.

19.402.1.C.2.d. Water filtration, infiltration, and natural purification. These functions are not anticipated to be affected by the proposed project.

19.402.1.C.2.e. Bank stabilization and sediment and pollution control. By providing a 24' buffer between the parking lot and the top of the ditch, this project should not affect bank stabilization. In my opinion the bank is too steep and the current vegetation is not ideal for

preventing sediment from the bank from entering the stream. However, it is ODOT property and they will not allow us to improve this situation.

As precipitation falling on the parking lot will flow away from the stream and into a bioswale and detention pond, sediment and pollution should not enter the WQR.

It should be noted that there is no gutter or storm water system to prevent runoff from H-224 from directly entering the WQR, but this is outside our control.

19.402.1.C.2.f. Large wood recruitment and retention and natural channel dynamics. The removal of trees for the parking lot will not have an impact on natural channel dynamics. The channel is not natural, and this project does not impact it in any event. With ODOT's permission the permittee could donate the removed trees and place them in the stream and bank. The area has little LWD due to the relatively young age of the alder stand on the stream banks, and the removed trees could be used to provide LWD and some structural diversity to this very degraded WQR.

19.402.1.C.2.g. Organic material resources.

Numerous studies have shown the importance of leaf litter as a major contributor to the organic inputs in small streams. The trees close to the stream contribute a proportionately greater amount of debris than those further away, and deciduous trees contribute more than coniferous trees. This project will not impact the trees along the stream bank, and will replace the vegetation between the ODOT property line and the parking lot with a mix of native trees and shrubs. Oak and ash trees, and a mix of native shrubs will increase the diversity of plants, and help improve what little habitat there is in this areas.

19.402.12.A.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.

For the WQR and HCA area impacted by the proposed parking lot, the vegetation consists of a medium aged stand of mostly native deciduous trees and a grass understory. The grass is probably planted with some common mix of lawn grasses and is now mixed with a variety of common herbaceous weeds. There are no shrubs, probably owing to periodic mowing of the grass layer. The Himalayan Blackberries along the ODOT property line show signs of herbicide damage – evidently some periodic weed control is practiced in this area.

Several of the trees have large *Clematis sp.* vines, which have a "C" rank on Portland's invasive species list. Rank "C" is defined as "These species are known to be invasive. These species are widely distributed and abundant throughout the region. Their distribution is already very extensive throughout the natural areas and they are difficult to control once they become widespread. These plants are considered ubiquitous." Their eradication is not recommended unless a revegetation and maintenance plan will replace them with a native community.

Within the WQR and HCR, the herbaceous (grass) layer is about 100% cover, and the tree layer is about 70% cover, and there is no shrub layer. According to Table 19.402.11.C, the area rates a "Class B, Marginal" condition.

MITIGATION

General Standards for Required Mitigation. According to Section 19.402.11.B, permanent impacts to WQRs are to be mitigated according to subsection 19.402.11.C, and permanent impacts to HCAs are mitigated according to 19.402.11.D.2.

Disturbed areas. The disturbed areas are shown in Figure 3, and in Table 1 on page 8. The total disturbance to WQR and HCA areas is 15,240 sqft, of which 13,747 is permanent, and 1,493 sqft is temporary and will be replanted as part of the mitigation¹.

19.402.11.C Mitigation for WQR Areas. The WQR according to table 19.402.11.C is a Class “B – marginal” area. The restoration required is:

- 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.

19.402.11.D.2 Mitigation for HCA Areas. The mitigation standards for impacts to HCA areas is to replant with native vegetation, the quantity of which is defined by either the tree replacement table 19.402.11.D.2.a, or by 19.402.11.D.2.b, an area calculation, with which ever yields the larger number of required plants is the calculation to be used:

Table 2. Inventory of trees impacted by parking lot alternative “A”.															
IMPACTED TREES	Diameter individual trees at Breast Height (inches)														total
Cotton Wood	8	8	8	8	8	10	15	24	28	30	30	30	30	36	14
Alder	6	6	7	7	7	7	15								7
Maple	4	4	7	10	14	24									6
Western Red Cedar	24														1
Total number of trees removed															21 to 28
Note: Approximately 7 trees (shown bolded in the above table) are close to but outside the permanent impact area. A decision to remove or keep these trees will be made at the time of construction, taking into account the damage to the root zone and aesthetics. For the purposes of permitting these trees are counted as removed.															

¹ Chapter 19.402 does not give specifics as to how permanent disturbances are to be mitigated, other than to replant the affected areas, which is not feasible as the affected area will be a paved parking lot. We propose instead to replant adjacent HCA and WQR areas which are currently degraded. The area to be replanted is not defined, and so we propose to the entire remaining vegetated areas on the south side of International Way, which is about 17,635 sqft which is slightly more than the permanent disturbance area, and slightly less than the total disturbance area. Temporary impacts will be mitigated by replanting as per 19.402.11.

Size of trees removed	Count	Replacement	Trees	Shrubs
Trees less than 6" DBH	2	0 trees and 0 shrubs	0	0
Trees 6 to 12 DBH	14	2 trees and 3 shrubs	28	42
Trees 13 to 18 DBH	3	3 trees and 6 shrubs	9	18
Trees 19 to 24 DBH	3	5 trees and 12 shrubs	15	36
Trees 25 to 30 DBH	5	7 trees and 18 shrubs	25	90
Trees over 30 DBH	1	10 trees and 30 shrubs	10	30
Total removed	28	Total Replacements	87	216

DBH = Diameter at Breast Height

Disturbed Area	Replacement Trees	Replacement shrubs
15,240 SQFT	152	762
80% SURVIVAL ROUNDED UP	122	610

The area calculation, (Option 2), gives a much larger number, and so is the one that will be used. The remaining undeveloped portions of lot 300 on the south side of SE International Way and available as a mitigation site total approximately 17,635 SQFT.

Mitigation standards are detailed in sections 19.402.11.B.2 through 19.402.11.B.10:

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.

The Portland Plant List shows a plant community called “2.2 Mixed Coniferous/Deciduous Riparian Forest”. This plant community is approximately similar to the one on site, and plants will be selected from this list for the most part.

3. Plant Size. Replacement 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. 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.

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.

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.

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. **NOTE: Section 19.402.5.E prohibits the use of herbicides with chemicals found on Milwaukie's Prohibited Chemicals List**

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.

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.

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.

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.

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.

Recommendations for Planting.

The area available for mitigation planting is shown on Figure 5. A generalized planting plan is shown in Figure 4.

The planting area has two distinct environments, the flatter areas above the ditch, and the steep slope dropping down to the ordinary high water line of the ditch.

The Flat Areas: The areas adjacent to the parking lot consists of a relatively narrow flat area on top, that will have up to seven remaining alder and maple trees after construction of the parking lot is completed. A decision will be made as to which (if any) of these seven trees will be kept based on damage to the root zone during construction and the trees compatibility with the parking area. Please see Table 2 for a list including these seven trees.

There is room for only a single row of large trees along the top of the ditch and perimeter of the parking lot. This strip is about 542'² long, and if planted with on 10' center will take 54 trees. Milwaukie code required a spacing of 8 to 12 feet for trees. The trees will be planted alternating Oak Trees with Western Hemlock.

Short flowering shrubs will be planted in the upper flat area between the top of the ditch and the edge of the parking lot. Taller shrubs and trees will be planted on the slope.

3 inches of mulch will be applied to the flat areas after plants have been installed to help control weeds and to help retain moisture while the trees and shrubs are establishing. No seed mix will be used in the flat areas as one of our intents is to create a somewhat landscaped appearance for the perimeter of the parking area. With the number of shrubs we are using we expect that a quick establishment of shrubs will soon crowd out other vegetation anyway.

The Sloped Area: The slope dropping down to the ditch is very steep, the topo maps show it at about an 87% slope. The slope currently has a canopy of alder trees with a dense thicket of blackberry other invasives underneath.

Once the blackberries are removed, the slope needs to be protected with a coir fiber mat to prevent erosion, then planted. The planting should include a large amount of plants that will help stabilize to soil, such as snowberry and aspen, as these plants form dense roots systems. The slope area will be seeded with a combination of two seed mixes, and this is designed to provide a quick establishment of grasses for erosion control, plus seeds of riparian shrubs (snowberry in particular) which will form a dense root growth for erosion control. Spec sheets for the two mixes can be found at the links below:

http://www.sunmarkseeds.com/spec_sheets/streambank.pdf
http://www.sunmarkseeds.com/spec_sheets/Riverside%20Woods.pdf

ETC recommends hydroseeding with a product called "PermaMatrix" in order to achieve a rapid plant establishment.

² The southern side of the existing parking lot – about 400' long – already is planted with a row of tall coniferous trees, there is no room available for more trees in this section, though there will be some room for shrubbery once the Blackberries are removed.

Shrubs and trees will be planted as shown in Figure 4. The alder canopy trees will remain, and our plantings will be integrated with these existing trees.

Timeline for Mitigation Installation.

Plantings for trees and shrubs should be done during the winter months, from November through February, with the earlier the better. This is to give the trees and shrubs as much time as possible to acclimate and develop a root system while the above ground portions of the plant are more or less dormant. In practice we have experienced problems obtaining plants from the nurseries in November and December, and so anticipate planting in January. If the wet springs we have experienced in the last couple years continue, we expect that a winter planting will be successful with no supplemental water provided.

Ideally we will have at least 4 months during the growing season for weed control and site preparation before planting. Blackberries are difficult to control, and it is very desirable to have time for blackberries to resprout and grow after the first round of herbicide and manual removal, so that any plants remaining after the initial effort can be eradicated by a follow-up effort. ETC will not guarantee results without given this condition.

Table 5. Proposed timeline for mitigation. The following time table is proposed based on the assumption that we will be required to start in September and replant during this first winter³.

Month	Activity
September 1, 2012	Identification and flagging of shrubs and small trees we wish to preserve.
September 2, 2012	1 st application of herbicide, selective spraying only to invasives.
September 15	Manual removal of vines, 2 nd spraying of remaining live vines.
October 1	2 nd spraying of any surviving vines, continued manual removal
October 15	Clearing of site and installation of coir fiber mats on sloped areas
	Planting of seed mixes to sloped areas.
January 2013	Installation of trees and shrubs.
April	Quick site visit to inspect plantings. Seed mixes should be spouted and growing and trees and shrubs should be putting out new leaves.
May	Spot herbicide applications to control of invasive plants.
July (early)	Detailed inspection, a tally of survival by plant species will be made. Plants that are not going to survive should be identifiable by now. Frequently mitigations will experience a high failure rate in one or two species, this is what we will look for and a decide if the problem is great enough to require replacements.
August	1 st annual mitigation monitoring report.
	Spot herbicide applications to control invasive plants
August	Spot herbicide applications to control invasive plants
January 2014	Installation of replacement trees and shrubs if needed
May	Spot herbicide application to control invasive plants
July	Spot herbicide application to control invasive plants
August 2014	2 nd and Final annual inspection and mitigation monitoring report.

³ ETC recommends that with a September start date, that for the sloped areas only weed control and site preparation be performed through the growing season of 2013, with planning to follow in January 2014. Flat areas can be planted in January 2013 however.

Table 6. Planting Recommendations. 152 Trees and 762 Shrubs are required per 19.402.11.D.2.b. Substitutions may be allowed depending on species availability from nurseries at the time of planting.

Trees	Flat Areas	Steep Slope	Stream Bank
Scouler Willow, <i>Salix scouleriana</i>			50
Quaking Aspen, <i>Populus tremuloides</i>		15	
Garry Oak, <i>Quercus garryana</i>	27		
Bitter Cherry, <i>Prunus emarginata</i>		10	
Western Red Cedar, <i>Thuja plicata</i>		8	
Grand Fir, <i>Abies grandis</i>		6	
Douglas Fir, <i>Pseudotsuga menziesii</i>		10	
Western Hemlock, <i>Tsuga heterophylla</i>	27		
SUB TOTAL TREES	54	49	50
GRAND TOTAL TREES	152		
Shrubs	Flat Areas	Steep Slope	Stream Bank
Shrubs for Planting on Steep Slope Adjacent to WRQ			
Hazelnut, <i>Corylus cornuta</i>		63	
Ocean-spray, <i>Holodiscus discolor</i>		50	
Osoberry, <i>Oemleria cerasiformis</i>		50	
Pacific Ninebark, <i>Physocarpus capitatus</i>			50
Common Snowberry, <i>Symphoricarpos albus</i>		100	
Black Twinberry, <i>Lonicera hispidula</i>			50
Red Osier Dogwood, <i>Cornus sericea</i>			50
Douglas Spirea, <i>Spiraea douglasii</i>		50	
Oval-leaved Viburnum, <i>Viburnum ellipticum</i>		50	
Flowering Shrubs for Ornamental Arrangements Between Slope and Parking lot.			
Dull Oregon Grape, <i>Berberis nervosa</i>	50		
Salal, <i>Gaultheria shallon</i>	50		
Red Currant, <i>Ribes sanguineum</i>	50		
Tall Oregon Grape, <i>berberis aquifolium</i>	50		
Mockorange, <i>Philadelphus lewisii</i>	50		
SUBTOTAL SHRUBS	250	363	150
GRAND TOTAL SHRUBS	762		

APPENDIX A) FIGURES

Figure 1 – Proposed Impact and Alternatives

Figure 2 – Milwaukie Natural Resources Overlay Map.

Figure 3A – Temporary and Permanent Impact Areas

Figure 3B – Temporary and Permanent Impact Areas

Figure 4 – Typical Mitigation Planting.

Figure 5 – Mitigation Planting Areas.

Figure 6 – Page from the Blount Master Plan.



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**BLOUNT PARKING LOT
IMPACT AND ALTERNATIVES
ANALYSIS**

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4909 SE INTERNATIONAL WAY
MILWAUKIE, OR 97222-2127

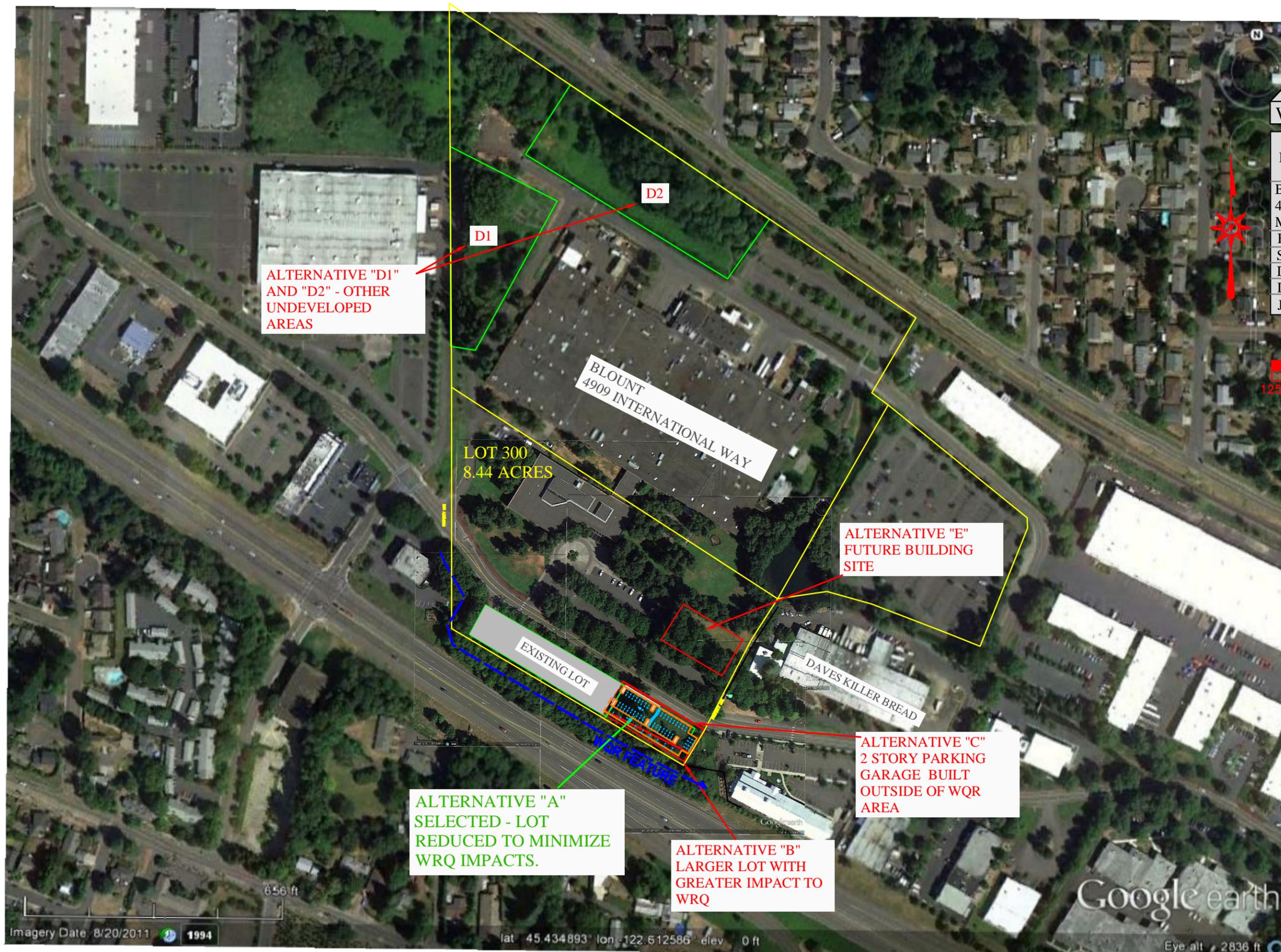
FIGURE	1
SCALE	1" = 250'
DRAWN BY	J. McConnaughey
DATE	JULY 2012
JOB #	EVA 12-004



GRAPHICAL SCALE



FORMATTED FOR 11x17 PAPER



ALTERNATIVE "D1"
AND "D2" - OTHER
UNDEVELOPED
AREAS

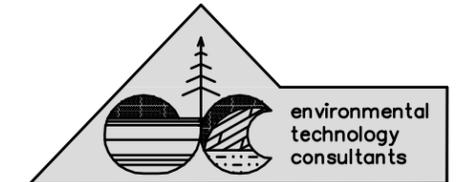
ALTERNATIVE "A"
SELECTED - LOT
REDUCED TO MINIMIZE
WRQ IMPACTS.

ALTERNATIVE "B"
LARGER LOT WITH
GREATER IMPACT TO
WRQ

ALTERNATIVE "E"
FUTURE BUILDING
SITE

ALTERNATIVE "C"
2 STORY PARKING
GARAGE BUILT
OUTSIDE OF WQR
AREA

SCALE IS RATHER APPROXIMATE



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LOCATION OF THE WQR ON THE NATURAL RESOURCES OVERLAY MAP	
BLOUNT INTERNATIONAL, INC 4909 SE INTERNATIONAL WAY MILWAUKIE, OR 97222-2127	
FIGURE	2
SCALE	1" = 500'
DRAWN BY	J. McConnaughey
DATE	APRIL 2012
JOB #	EVA 12-004



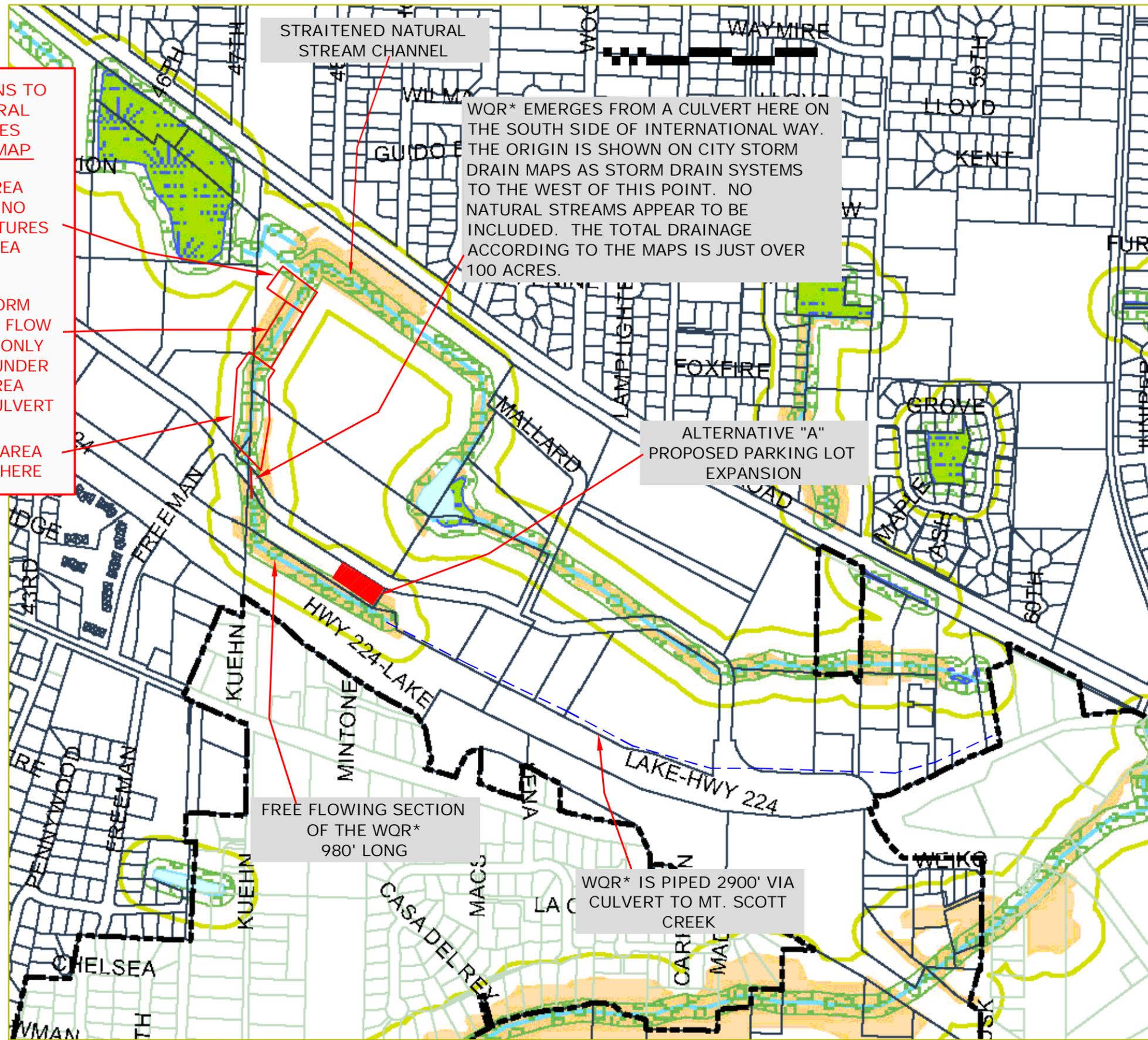
EXCERPT FROM THE CITY OF MILWAUKIE NATURAL RESOURCES OVERLAY MAP

CORRECTIONS TO THE NATURAL RESOURCES OVERLAY MAP

GARDEN AREA THERE ARE NO WETLAND FEATURES IN THIS AREA

BLOUNT STORM WATER POND. FLOW GOES NORTH ONLY AND PASSES UNDER GARDEN AREA THROUGH A CULVERT

GRASS LAWN AREA NO WETLAND HERE



STRAITENED NATURAL STREAM CHANNEL

WQR* EMERGES FROM A CULVERT HERE ON THE SOUTH SIDE OF INTERNATIONAL WAY. THE ORIGIN IS SHOWN ON CITY STORM DRAIN MAPS AS STORM DRAIN SYSTEMS TO THE WEST OF THIS POINT. NO NATURAL STREAMS APPEAR TO BE INCLUDED. THE TOTAL DRAINAGE ACCORDING TO THE MAPS IS JUST OVER 100 ACRES.

ALTERNATIVE "A" PROPOSED PARKING LOT EXPANSION

FREE FLOWING SECTION OF THE WQR* 980' LONG

WQR* IS PIPED 2900' VIA CULVERT TO MT. SCOTT CREEK

*WQR. THE WATER QUALITY RESOURCE AFFECTED BY THE PROPOSED PARKING LOT EXPANSION IS AN ARTIFICIAL DRAINAGE WAY, (DITCH), THOUGHT TO HAVE BEEN BUILT WITH THE CONSTRUCTION OF HIGHWAY 224.

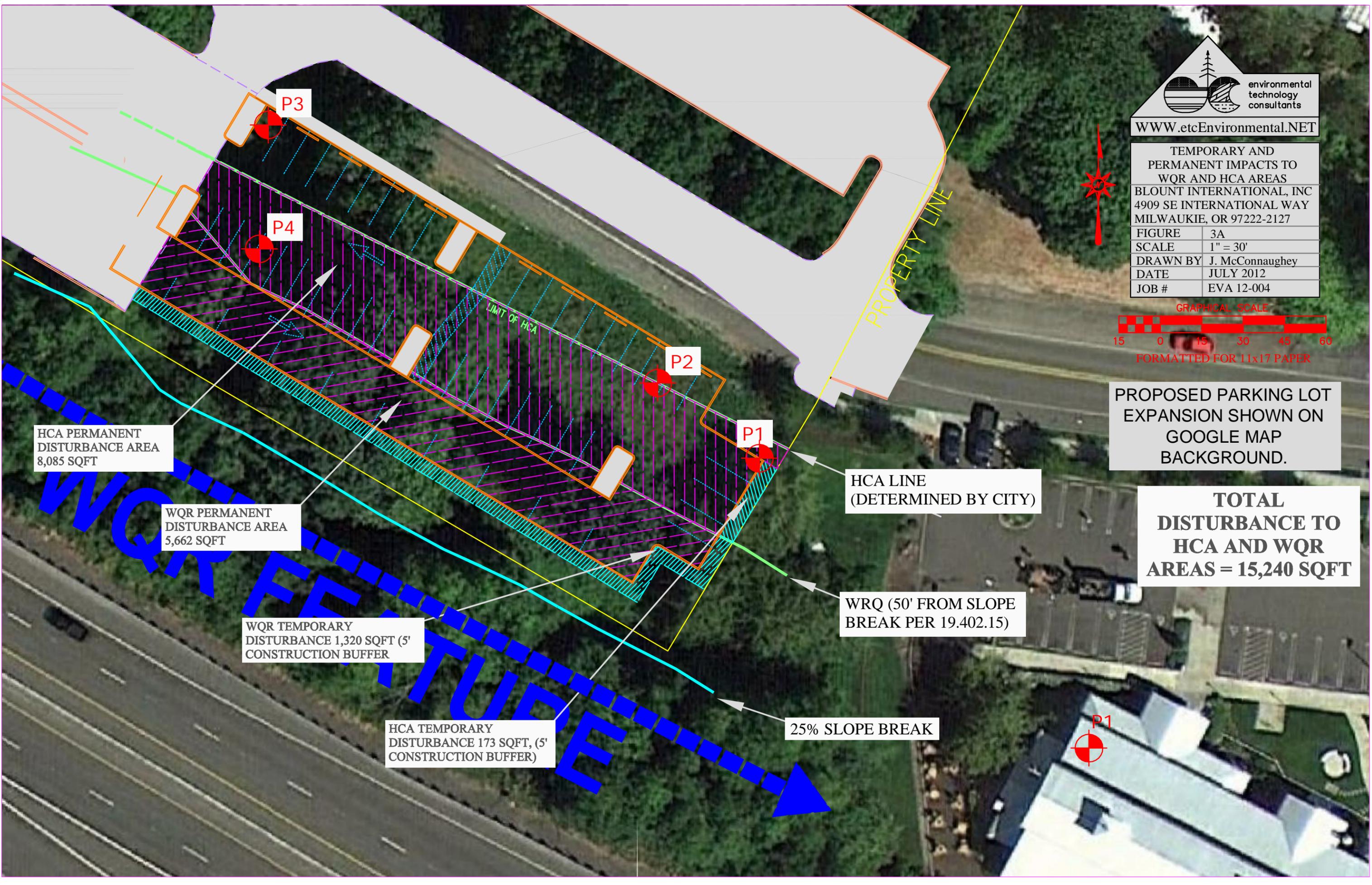
IT MEETS THE CRITERIA FOR BEING CONSIDERED A NON-JURISDICTIONAL ROADSIDE DITCH UNDER OAR 141-085-0515. BECAUSE THE PROJECT DOES NOT PROPOSE ANY ACTUAL WETLAND IMPACTS, ODSL HAS NOT BEEN CONSULTED ON THIS POINT. IF WETLAND IMPACTS WERE PROPOSED THEN ODSL WOULD BE CONSULTED FOR JURISDICTIONAL STATUS.

TEMPORARY AND PERMANENT IMPACTS TO WQR AND HCA AREAS	
BLOUNT INTERNATIONAL, INC 4909 SE INTERNATIONAL WAY MILWAUKIE, OR 97222-2127	
FIGURE	3A
SCALE	1" = 30'
DRAWN BY	J. McConnaughey
DATE	JULY 2012
JOB #	EVA 12-004



PROPOSED PARKING LOT EXPANSION SHOWN ON GOOGLE MAP BACKGROUND.

TOTAL DISTURBANCE TO HCA AND WQR AREAS = 15,240 SQFT



HCA PERMANENT DISTURBANCE AREA 8,085 SQFT

WQR PERMANENT DISTURBANCE AREA 5,662 SQFT

WQR TEMPORARY DISTURBANCE 1,320 SQFT (5' CONSTRUCTION BUFFER)

HCA TEMPORARY DISTURBANCE 173 SQFT, (5' CONSTRUCTION BUFFER)

HCA LINE (DETERMINED BY CITY)

WRQ (50' FROM SLOPE BREAK PER 19.402.15)

25% SLOPE BREAK

WQR FUTURE

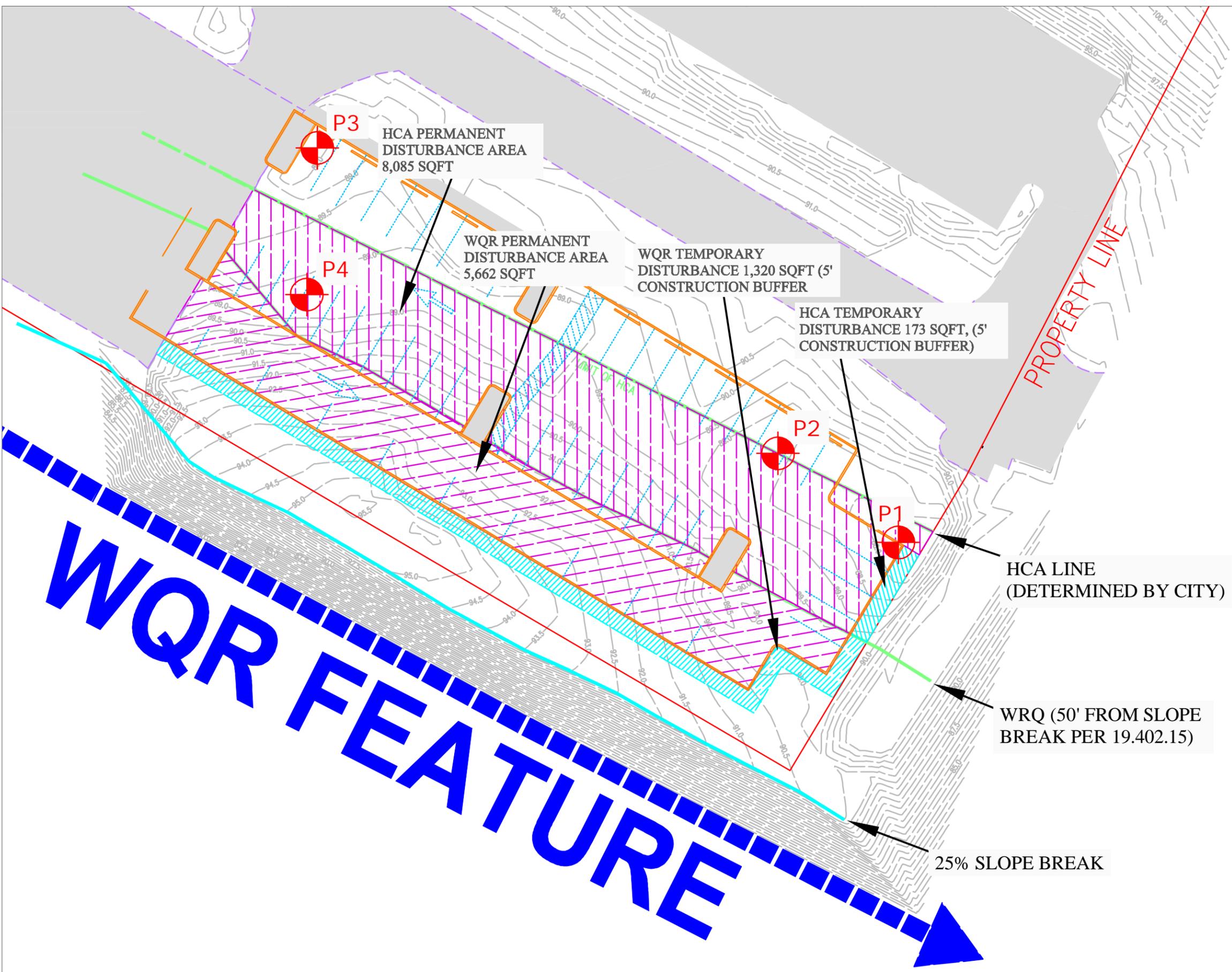
TEMPORARY AND PERMANENT IMPACTS TO WQR AND HCA AREAS	
BLOUNT INTERNATIONAL, INC 4909 SE INTERNATIONAL WAY MILWAUKIE, OR 97222-2127	
FIGURE	3B
SCALE	1" = 30'
DRAWN BY	J. McConnaughey
DATE	JULY 2012
JOB #	EVA 12-004



PROPOSED PARKING LOT EXPANSION SHOWN ON TOPO MAP BACKGROUND.

TOTAL DISTURBANCE TO HCA AND WQR AREAS = 15,240 SQFT

P1 WETLAND DELINEATION DATA PLOT

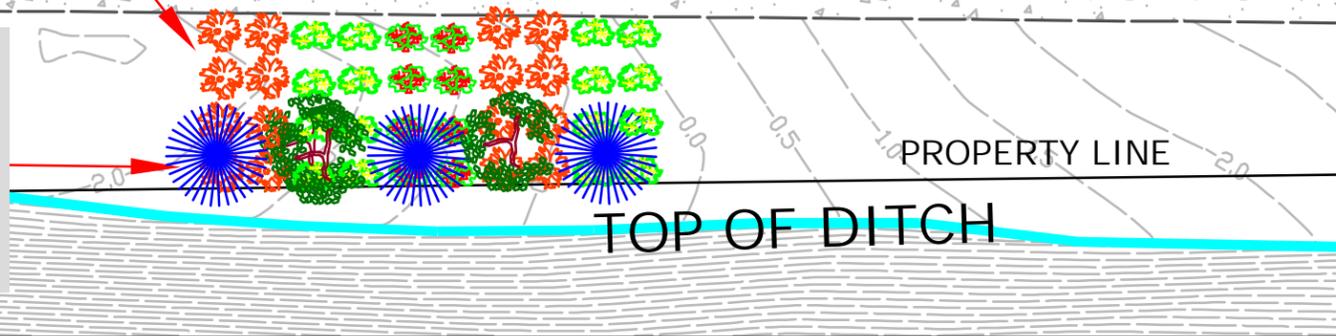



4A

TYPICAL PLANTING PLAN FOR RELATIVELY FLAT UPLAND AREAS

FLOWERING SHRUBS - OREGON GRAPE, SALAL, CURRANT & MOCK ORANGE. BETWEEN SLOPE AND PARKING LOT SHALL BE PLANTED ON 4 FT CENTER IN GROUPS OF 4 PLANTS BY SPECIES IN AESTHETICALLY PLEASING ARRANGEMENTS.

TALL TREES PLANTED ALONG TOP OF DITCH ON 10' CENTER IN A SINGLE ROW ALTERNATING OAK AND WESTERN HEMLOCK.



PARKING LOT

PROPERTY LINE

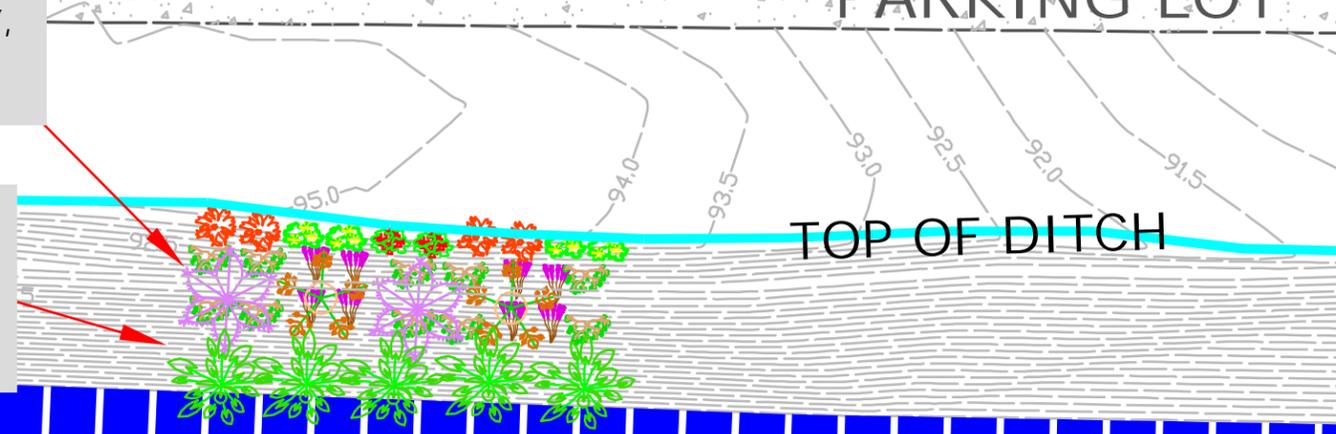
TOP OF DITCH

4B

TYPICAL PLANTING PLAN FOR FOR STEEP BANK AREAS ALONG THE STREAM (WITHIN LOT 300 ONLY)

PLANT ON MID & UPPER SLOPE - TREES: ASPEN, CHERRY & SHRUBS: HAZELNUT, OCEAN-SPRAY, OSOBERRY, NINEBARK, SNOWBERRY.

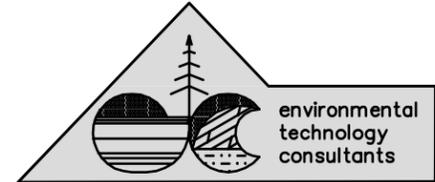
PLANT ON LOWER SLOPE TO WQR - TREES: WILLOW & SHRUBS: TWINBERRY, SPIREA, RED OSIER DOGWOOD.



PARKING LOT

TOP OF DITCH

WQR FEATURE



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MITIGATION PLANTING PLAN FOR HCA AND WQR AREAS.

BLOUNT INTERNATIONAL, INC
4909 SE INTERNATIONAL WAY
MILWAUKIE, OR 97222-2127

FIGURE	4A & 4B
SCALE	1" = 25' APPROX
DRAWN BY	J. McConnaughey
DATE	APRIL 2012
JOB #	EVA 12-004

TYPICAL MITIGATION PLANTING FOR BLOUNT PARKING LOT.

THIS DRAWING SHOWS THE TYPICAL PLANTING ARRANGEMENTS. SEE FIGURE 5 FOR THE AREAS TO BE PLANTED.

INVASIVE AND NON NATIVE PLANTS WILL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.

THE TOP OF DITCH AND FLAT AREAS WILL BE PLANTED IN ORNAMENTAL ARRANGEMENTS. A SINGLE ROW OF TALL TREES WILL BE PLANTED ALONG THE TOP OF THE DITCH, OR ALONG THE PROPERTY LINE IN AREAS WHERE BLOUNT DOES NOT OWN THE TOP OF THE DITCH. AN ORNAMENTAL ARRANGEMENT OF SHORT AND FLOWERING NATIVE SHRUBS WILL BE PLANTED BETWEEN THE TOP OF THE DITCH AND THE PARKING LOT. 3" OF BARK MULCH WILL BE USED IN THE PLANTING AREAS.

AREAS ON THE DITCH SLOPE THAT ARE WITHIN LOT 300 WILL BE PLANTED OPPORTUNISTICALLY AROUND EXISTING VEGETATION. CURRENTLY THESE AREAS ARE COVERED WITH BLACKBERRIES WHICH WILL BE REMOVED. SLOPE AREAS WILL BE COVERED WITH WOVEN COIR FIBER MAT FOR EROSION CONTROL BEFORE PLANTING.

MITIGATION REQUIRES THE PLANTING OF 152 TREES OF AT LEAST 1/2-IN CALIPER, (OR 1 GALLON IF OAK), AND THE PLANTING OF 762 SHRUBS OF AT LEAST 1 GALLON AND 12 IN HIGH.

A LIST OF RECOMMENDED PLANTS AND THEIR NUMBERS IS SHOWN IN TABLE 5.

MITIGATION SUCCESS CRITERIA. 19.402.11.B.9, "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 complete." THIS MITIGATION WILL BE CONSIDERED SATISFYING THIS STANDARD SHOULD 122 TREES AND 610 SHRUBS SURVIVE TWO YEARS AFTER PLANTING. To help ensure the success of the mitigation, the permittee may plant an excess of plants, but will only be responsible for a minimum survival of 122 trees and 610 shrubs.

LOT 300
8.44 ACRES

MITIGATION PLANTING AREA

APPROXIMATELY 17,635 SQFT. INCLUDES ALL REMAINING UNDEVELOPED HCA AND WQR AREAS ON LOT 300 SOUTH OF INTERNATIONAL WAY. DOES NOT INCLUDE ANY THE DITCH BELOW THE HIGH WATER LINE, OR ANY ROAD OR HIGHWAY RIGHT OF WAY AREAS. NOR DOES IT INCLUDE ANY PROPERTIES NOT BELONGING TO BLOUNT.



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**BLOUNT PARKING LOT
MITIGATION PLANTING AREAS**

BLOUNT INTERNATIONAL, INC
4909 SE INTERNATIONAL WAY
MILWAUKIE, OR 97222-2127

FIGURE	5
SCALE	1" = 100'
DRAWN BY	J. McConnaughey
DATE	JULY 2012
JOB #	EVA 12-004



PROPOSED PARKING LOT

TOTAL PROJECT AREA IS ABOUT 18,787 SQFT, AND CAUSES APPROXIMATELY 13,747 SQFT OF PERMANENT, AND 1,493 SQFT OF TEMPORARY DISTURBANCE TO HCA AND WQR AREAS. WE PROPOSE TO MITIGATE THIS DISTURBANCE BY VEGETATION PLANTINGS AND MAINTENANCE TO APPROXIMATELY 17,635 SQFT OF HCA AND WQR AREAS, INCLUDING THE 1,493 SQFT OF TEMPORARY DISTURBANCE. THE MITIGATION WILL INCLUDE THE PLANTING OF 152 TREES AND 762 SHRUBS, PLUS EXTENSIVE REMOVAL AND CONTROL OF INVASIVE PLANT SPECIES.

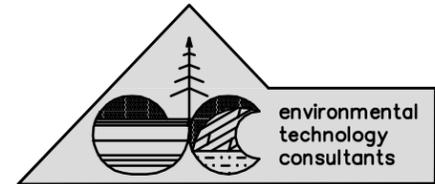
STEEP DITCH SLOPE AREA

AREA OF STEEP SLOPES OF DITCH BANK THAT WILL BE PLANTED ACCORDING TO FIGURE 4B. THE FLATTER AREAS ABOVE THE DITCH WILL BE PLANTED ACCORDING TO 4A.

WQR FEATURE

PROPERTY LINE

PROPERTY LINE

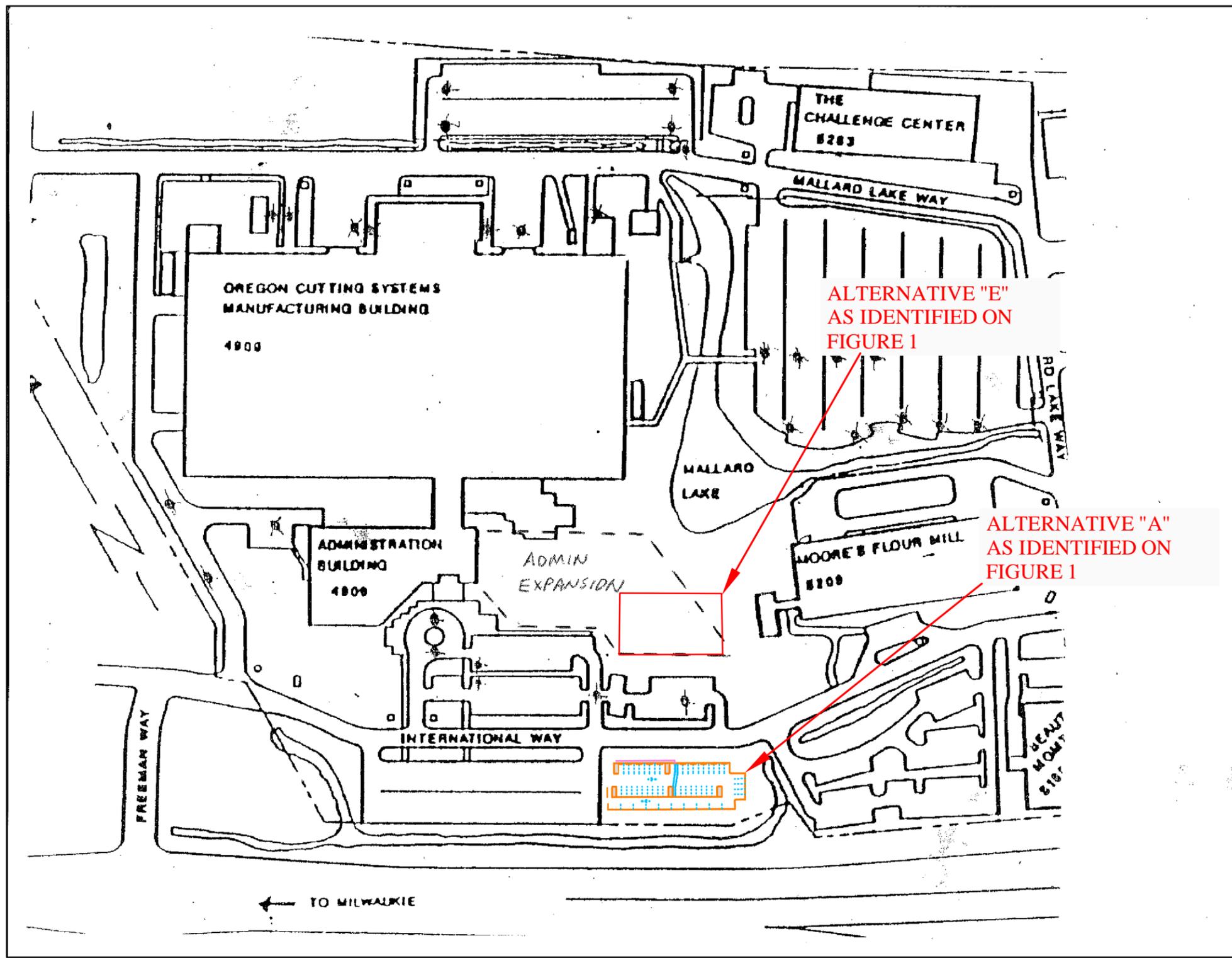
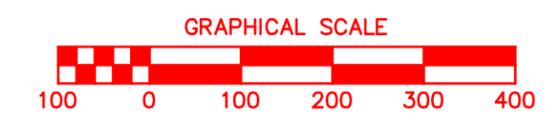


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PAGE FROM THE BLOUNT MASTER PLAN.

BLOUNT INTERNATIONAL, INC
4909 SE INTERNATIONAL WAY
MILWAUKIE, OR 97222-2127

FIGURE	6
SCALE	1" = 200' APPROX
DRAWN BY	J. McConnaughey
DATE	JULY 2012
JOB #	EVA 12-004



PAGE FROM THE BLOUNT MASTER PLAN SHOWING THE EXPANSION OF THE ADMINISTRATION BUILDING IN RELATION TO THE PROPOSED PARKING LOT.

APPENDIX B) Ground Level Color Photographs

Photo 1. Crowded street parking on International Way, without adequate walkways and striped parking stalls for pedestrian safety. Overflow from the four Blount parking lots compete with employees from neighboring businesses for these spaces. ETC Photo 3/27/2012.



Photo 2. Outfall of the culvert into Mt. Scott Creek. This culvert passes water about 2900' underground from the proposed parking area to Mr. Scott Creek. This system intercepts untreated surface water from I-224 at several points along its path.

ETC Photo 04/09/2012



Photo 3. Typical profile of the creek in the free



flowing section between the culvert at the Day Management Corporation (4700 SE International Way), and Bob's Red Mill Restaurant, (5000 SE International Way).

ETC Photo 03/27/2012

Photo 4. The stream emerges from culverts passing under the street at 4700 SE International Way, (the Day Management Corporation), flows 960' and enters this culvert at the Bob's Red Mill Restaurant, and from this point is piped 2900' to Mt. Scott Creek.

ETC Photo 3/20/2012



Photo 5. Large *Clematis* sp. (an invasive specie) growing on one of the larger Cotton wood trees.

ETC Photo 03/20/2012

Photo 6. Buffer area that will be re-planted as part of the mitigation. The Pink line is the approximate Southwest lot property line, and the yellow is the approximate extent of the proposed parking lot. The row of trees and blackberries on the left mark the top of the ditch the WQR is in.

ETC Photo 03/20/2012



Photo 7. A slight depression on the site that was tested for wetland conditions. Although plants were questionable, the soils and hydrology proved negative for wetland conditions. Stakes mark where wetland test pits were dug. This grassy vegetation typifies the herbaceous vegetation on the site. Street parking along International Way is on the right side of the photo, the existing parking lot this project will expand is in the back of photo.



ETC Photo 03/20/2012



Photo 8. A second slight depression on the toward the west end of the project area that was tested for wetland conditions by request from the City of Milwaukie. Plants and soils were judged to be disturbed, and evidence of wetland hydrology was lacking.

Photo 9. Culverts from storm water systems bring water to this point on International Way, which is the start of the free flowing section of this water resource. Please see Figure 2 for location. The ditch flows approximately 980' to where it enters another culvert, (see Photo 1).



APPENDIX C) WETLAND DATA FORMS

Standard wetland delineation data forms for four data plots. Plots 1 and 2 are presented on the same data form.

See Figure 3B for the locations of the data plots.

SOIL

Project Site: **4909 SE International Way, SE** corner of
Lot 300

Sampling Point: **P1** & 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 - 18	10YR2/2	100%		%	None		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 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):	Hydric Soils Present?
Type:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (Inches):	

Remarks: **Soil is likely fill. The area was likely leveled out and fill brought in. Higher areas of the site have a lot of clay soils on or near the surface, but these soils are likely spoils from the ditch dug along the south border of the property.**

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):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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: **With the recent heavy rains this area would have a water table if it were a wetland.**

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: **4909 SE International Way, SE corner of Lot 300** City/County: **Milwaukie** Sampling Date: **6/12/2012**
 Applicant/Owner: **Blount International, Inc** State: **OR** Sampling Point: **P3**
 Investigator(s): **John McConnaughey / www.etcEnvironmental.net** Section, Township, Range: **1S2E31CD Lot 300**
 Landform (hillslope, terrace, etc.): **Bench** Local relief (concave, convex, none): **concave** Slope (%): **1-2%**
 Subregion (LRR): **LRR-A** Lat: **N 45.370963** Long: **W 122.702464°** Datum: **1984**
 Soil Map Unit Name: **Aloha Silt Loam** NWI classification: **Not a wetland**

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) **About average**
 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"/>	Is sampled area in a wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Remarks: Represents an area in the NW corner of the project area that the city requested a data plot in. There is an old tire stop and some gravel, this area may have been used for parking at one time. Leaves from the fall may have been piled here also, and since removed.					

VEGETATION – Use scientific names of plants

<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																	
1. No Trees	%			Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 8 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 37% (A/B)																	
2.	%																				
3.	%																				
4.	%																				
	0%	= Total Cover																			
<u>Sapling/Shrub Stratum</u> (Plot Size: 30)																					
1. Rubus ursinus	5%	Y	FACU	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</td> <td>x1 =</td> </tr> <tr> <td>FACW species</td> <td>x2 =</td> </tr> <tr> <td>FAC species</td> <td>x3 =</td> </tr> <tr> <td>FACU species</td> <td>x4 =</td> </tr> <tr> <td>UPL species</td> <td>x5 =</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">(A)</td> <td style="text-align: center;">(B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A =</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species	x1 =	FACW species	x2 =	FAC species	x3 =	FACU species	x4 =	UPL species	x5 =	Column Totals:	(A)	(B)	Prevalence Index = B/A =	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																				
OBL species	x1 =																				
FACW species	x2 =																				
FAC species	x3 =																				
FACU species	x4 =																				
UPL species	x5 =																				
Column Totals:	(A)	(B)																			
Prevalence Index = B/A =																					
2. Rubus discolor	5%	Y	FACU																		
3.	%																				
4.	%																				
5.	%																				
	10%	= Total Cover																			
<u>Herb Stratum</u> (Plot Size: 15)																					
1. Rumex crispus	1%	N	FAC	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. Taraxacum officinale	5%	Y	FACU																		
3. Plantago lanceolata	5%	Y	FAC																		
4. Festuca arundinacea	30%	Y	FAC																		
5. Cirsium arvense	5%	Y	FACU																		
6. Equisetum arvense	5%	Y	FAC																		
7. Lapsana communis	5%	Y	NOL																		
8.	%																				
9.	%																				
10.	%																				
11.	%																				
	55%	= Total Cover																			
<u>Woody Vine Stratum</u> (Plot Size: 30' circle)																					
1. Hedera helix	0%		NOL	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																	
2. Clematis spp.	0%		FAC																		
	0%	= Total Cover																			
% Bare Ground in Herb Stratum 50%																					

Remarks: **Area has been brush hogged. Area may have also been used to store leaves from the fall, and since scraped off explaining the sparse herbaceous vegetation.**

SOIL

Project Site: 4909 SE International Way, SE corner of Lot 300

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	7.5YR3/3	100%		%			Silt clay loam	
		%		%				
4 - 18	7.5YR4/3	85%	5YR4/6	1%	C	M	Silt clay loam mixed matrix about 10% rock	
	7.5YR4/2	10%	10YR2/1	4%	C	M		
		%		%				
18 - 20	2.5YR4/3	80%	5YR4/4	19%	C	M	Silt clay loam mixed matrix 50% Rock	
		%	10YR6/1	1%	C	M		
		%		%				

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):	Hydric Soils Present?
Type:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (Inches):	

Remarks: **Soil is fill and mixed. Soil is jumbled, not in layers. Hydric features are likely historic from whatever the source of the soils was.**

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):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): > 20"	
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 indicators in spite of heavy recent rains. Area was recently mowed, and that the mower did not leave deep tire ruts, (like it would have in muddy areas), is further evidence that wetland hydrology is lacking.**

SOIL

Project Site: 4909 SE International Way, SE corner of Lot 300

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 - 12	10YR3/2	70%	5YR4/6	10%	C	M	Silty clay loam, mottles are distinct	
	2.5YR6/2	20%		%				
12 - 20	5YR2.5/1	55%	5YR4/6	5%	C	M	Silty clay loam	
	10YR3/2	40%		%				
		%		%				
20 - 24	5YR2.5/1	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 Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<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?
Type:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (Inches):	

Remarks: **Soil is fill, different colors and textures are jumbled together, not in layers.**

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):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): > 24"	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	

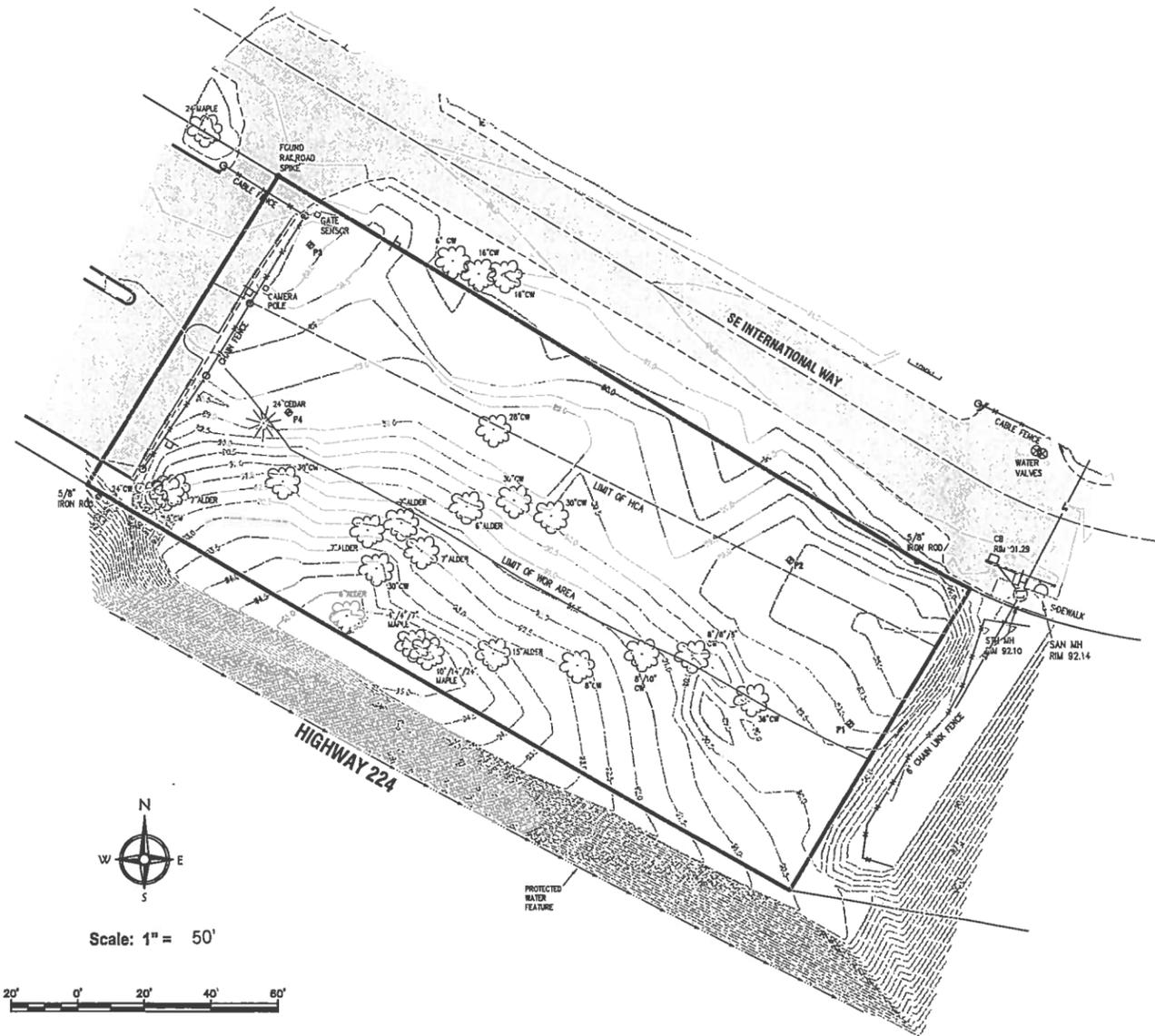
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **No indicators - the area has been recently mowed, and that the machinery did not leave tire ruts (like it would in a muddy area) is further evidence of a lack of wetland hydrology..**

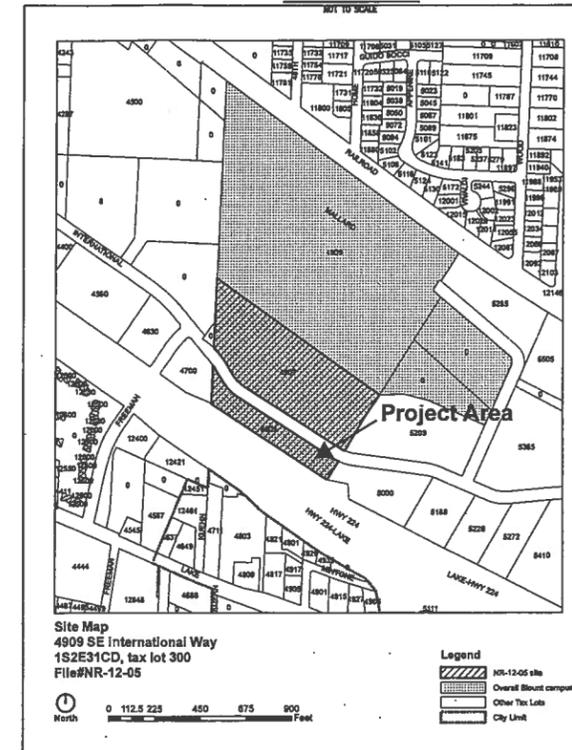
BLOUNT INTERNATIONAL, INC. PARKING LOT ADDITION MILWAUKIE, OREGON



VICINITY MAP
NOT TO SCALE



Scale: 1" = 50'



Site Map
4909 SE International Way
1S2E31CD, tax lot 300
File#NR-12-05

Legend
 [Hatched Box] 105-12-05 site
 [Grey Box] Overall Blount campus
 [Thin Line] Other Tax Lots
 [Thick Line] City Limit



LEGEND

- [Symbol] EXISTING DECIDUOUS TREE
- [Symbol] EXISTING CONIFEROUS TREE
- [Symbol] EXISTING UTILITY POLE
- [Symbol] EXISTING POWER WALL
- [Symbol] EXISTING TELEPHONE RISER
- [Symbol] EXISTING MAILBOX
- [Symbol] EXISTING GAS VALVE
- [Symbol] EXISTING STORM MANHOLE
- [Symbol] EXISTING CATCH BASIN
- [Symbol] EXISTING SANITARY MANHOLE
- [Symbol] EXISTING WATER VALVE
- [Symbol] EXISTING WATER METER
- [Symbol] EXISTING FIRE HYDRANT
- [Symbol] EXISTING LIGHT POLE
- [Symbol] EXISTING BOLLARD
- [Symbol] EXISTING SIGN
- [Symbol] WETLAND DELINEATION DATA PLAT
- [Symbol] EXISTING RIGHT-OF-WAY
- [Symbol] EXISTING PROPERTY LINE
- [Symbol] EXISTING CENTERLINE
- [Symbol] EXISTING CURB
- [Symbol] EXISTING EDGE OF PAVEMENT
- [Symbol] EXISTING FENCE LINE
- [Symbol] EXISTING GRASS EDGE
- [Symbol] EXISTING POWER LINE
- [Symbol] EXISTING GAS LINE
- [Symbol] EXISTING STORM SEWER LINE
- [Symbol] EXISTING SANITARY SEWER LINE
- [Symbol] EXISTING WATER LINE
- [Symbol] PROPERTY BOUNDARY
- [Symbol] PROPOSED PARKING
- [Symbol] PROPOSED CURB
- [Symbol] EXISTING GROUND CONTOUR (0.5 FT)
- [Symbol] EXISTING CONCRETE
- [Symbol] EXISTING PAVEMENT

SHEET INDEX

- 1 Existing Conditions Plan
- 2 Preliminary Grading & Drainage Plan
- 3 Preliminary Site Plan & Landscaping Plan



EXPPER: 06/20/2019
SIGNATURE DATE: 07/11/2012

EXISTING CONDITIONS PLAN

DATE	REVISION	PLAN	0992 Pre Parking Acad2007.dwg
DESIGNED	N.J.H.	CHECKED	
DRAWN	M.M.M.	SCALE	1" = 50'
		DATE	JANUARY, 2012



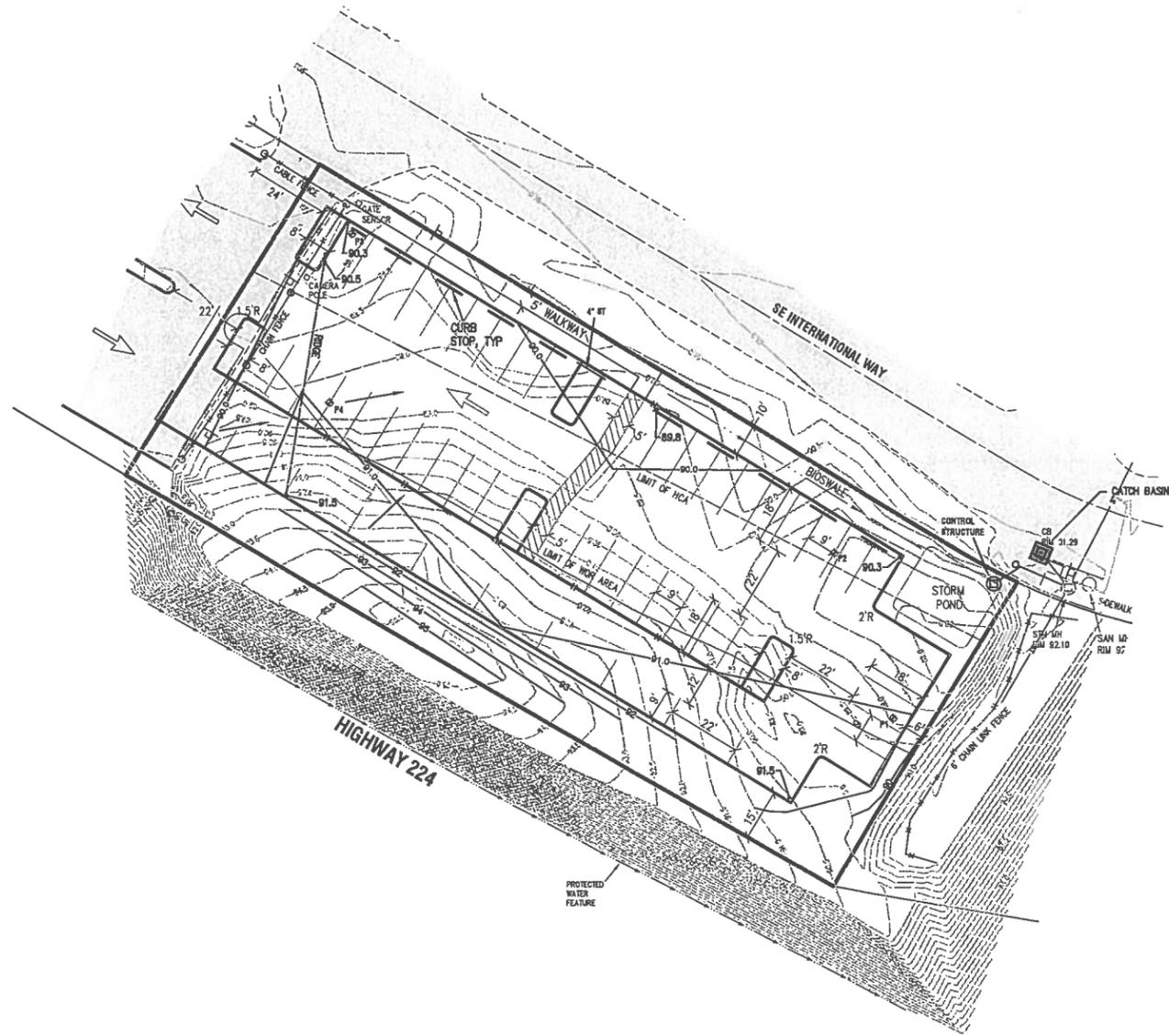
COMPASS ENGINEERING
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NEW PARKING ADDITION
 4909 SE INTERNATIONAL WAY
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1
3

P:\6900\6992\AutoCAD\6992 Pre Parking2 Acad2007.dwg, 7/16/2012 8:42:43 AM



Scale: 1" = 50'



LEGEND	
	EXISTING GROUND CONTOUR (1.0 FT)
	PROPOSED CONTOUR (1.0 FT)
	EXISTING DECIDUOUS TREE TO REMAIN (SIZE & SPECIES AS NOTED)
	EXISTING CONIFEROUS TREE TO REMAIN (SIZE & SPECIES AS NOTED)
	EXISTING TREE TO BE REMOVED

ESTIMATED CUT = 500 CU. YD.
ESTIMATED FILL = 650 CU. YD.



Preliminary Grading & Drainage Plan

DATE	REV.	REVISION

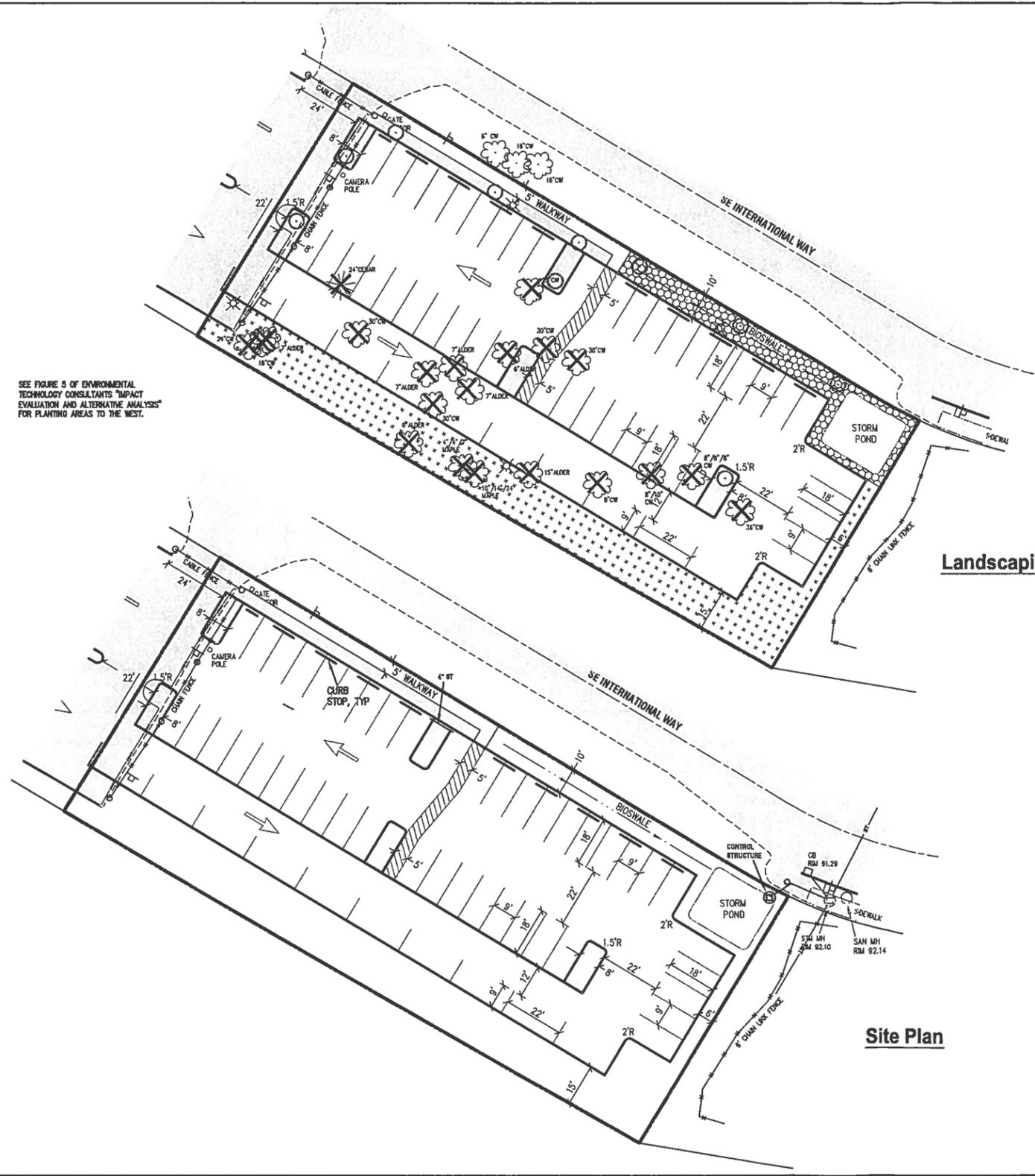
DRAWN	MNM	DESIGNED	NJM	CHECKED
SCALE	1" = 50'	DATE	JANUARY, 2012	
PLAN	6992 Pre Parking2 Acad2007.dwg			

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SEE FIGURE 5 OF ENVIRONMENTAL TECHNOLOGY CONSULTANTS 'IMPACT EVALUATION AND ALTERNATIVE ANALYSIS' FOR PLANTING AREAS TO THE WEST.



Landscaping Plan

Site Plan

MITIGATION PLANTINGS

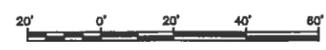
Table 5. Planting Recommendations. 152 Trees and 762 Shrubs are required per 19.402.11.0.2.b. Substitutions may be allowed depending on species availability from nurseries at the time of planting.

Trees	Flat Areas	Steep Slope	Stream Bank
Scouler Willow, <i>Salix scouleriana</i>			50
Quaking Aspen, <i>Populus tremuloides</i>		15	
Garry Oak, <i>Quercus garryana</i>	27		
Bitter Cherry, <i>Prunus emarginata</i>		10	
Western Red Cedar, <i>Thuja plicata</i>		8	
Grand Fir, <i>Abies grandis</i>		6	
Douglas Fir, <i>Pseudotsuga menziesii</i>		10	
Western Hemlock, <i>Tsuga heterophylla</i>	27		
SUB TOTAL TREES	54	49	50
GRAND TOTAL TREES	152		

Shrubs	Flat Areas	Steep Slope	Stream Bank
Shrubs for Planting on Steep Slope Adjacent to W/QT			
Hazelnut, <i>Corylus cornuta</i>		63	
Ocean-spray, <i>Holodiscus discolor</i>		50	
Osoberry, <i>Oemleria cerasiformis</i>		50	
Pacific Ninebark, <i>Physocarpus capitatus</i>			50
Common Snowberry, <i>Symphoricarpos albus</i>		100	
Black Twineberry, <i>Lonicera hispidula</i>			50
Red Oler Dogwood, <i>Cornus sericea</i>			50
Douglas Spirea, <i>Spiraea douglasii</i>		50	
Oval-leaved Viburnum, <i>Viburnum ellipticum</i>		50	
Flowering Shrubs for Ornamental Arrangements Between Slope and Parking lot.			
Dull Oregon Grape, <i>Berberis nervosa</i>	50		
Sala, <i>Gaultheria shallon</i>	50		
Red Currant, <i>Ribes sanguineum</i>	50		
Tall Oregon Grape, <i>Berberis aquifolium</i>	50		
Mockorange, <i>Philadelphus lewisii</i>	50		
SUBTOTAL SHRUBS	250	363	150
GRAND TOTAL SHRUBS	762		



Scale: 1" = 50'



Legend

- MITIGATION PLANTINGS
 - TREE
 - STORM SWALE AND POND PLANTING (LAWN SOD)
 - MULCH
 - LIGHT POLE
- INTERIOR LANDSCAPE REQUIRED: 25 SQ. FT./SPACE = 62x25 = 1300 SQ. FT.
 INTERIOR LANDSCAPE PROVIDED: 1326 SQ. FT.



Preliminary Site Plan and Landscaping Plan

DATE	REV.	REVISION

DRAWN	MMM	DESIGNED	NJM	CHECKED	
SCALE	1" = 50'	DATE	JANUARY, 2012		
PLAN	6882 Pre Parking Acad2007.dwg				

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APPENDIX D) TABLE OF ACRONYMS

DSL or ODSL = Oregon Department of State Lands.

HCA = Habitat Conservation Area. A buffer extending from the extent of the WQR for a distance of 50'

LWD = Large Woody Debris

ODOT = Oregon Department of Transportation.

PWS = Professional Wetland Scientist

WQR = Water Quality Resource, a City of Milwaukie designation for a water or wetland feature requiring protection. The water or wetland, plus a buffer of 15' to 200' are considered to be the WQR. The buffer width is determined by the type of feature and the slope adjacent to the feature according to table 19.402.15.