

Natural Resource Review for the Proposed Harmony Road Self Storage, Milwaukie, Oregon

(Township 1 South, Range 2 East, Section 31D, TL 1800 and 1900)

Prepared for

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1.0 INTRODUCTION

The Applicant, HT Investment Properties, LLC, is proposing to develop a warehouse storage facility consisting of 1,005 enclosed storage units on the property located at 5945 and 5965 SE Harmony Road in the City of Milwaukie, Oregon (Township 1 South, Range 2 East, Section 31D, Tax Lots 1800 and 1900) and seeks approval of an application for a Conditional Use Permit and a Type II Variance for the proposed development. Pacific Habitat Services, Inc. (PHS) has prepared a Natural Resource Review in accordance with Milwaukie Municipal Code (MMC) Section 19.402 to support this application.

The project site consists of approximately 2.96 acres located on SE Harmony Avenue west of SE Linwood Avenue and south of Railroad Avenue. The approximate location of the site is shown on the USGS Gladstone, Oregon topographic quadrangle, which is included as Figure 1, and the tax lot map, which is included as Figure 2. All figures are in Appendix A. The site includes Minthorn Creek and associated wetlands. PHS delineated the jurisdictional limits of Minthorn Creek and associated wetlands in October 2014. The surveyed locations of Minthorn Creek and associated wetlands are depicted on Figure 3. The Oregon Department of State Lands (DSL) issued a letter of concurrence confirming the delineated wetlands and waters of the State on March 4, 2015. A copy of the concurrence is provided in Appendix B.

Minthorn Creek is a perennial tributary to Mount Scott Creek, which is located approximately 1,000 feet downstream of the project site, and therefore it and its associated wetlands are Primary Protected Water Features, as defined in the City of Milwaukie's Natural Resources Code (MMC 19.402). As stated in a letter from the City of Milwaukie dated September 13, 2016, this project is subject to discretionary review under MMC Subsections 19.402.8 and 19.402.12, and impact evaluation and alternatives analysis are required per MMC Subsection 19.402.12.A. This Natural Resource Review describes the existing Water Quality Resource (WQR) and Habitat Conservation Area (HCA) on the site and demonstrates project compliance with the applicable sections of the municipal code. This Natural Resource review includes an evaluation of the condition of the WQR on the site, an analysis of potential impacts from the proposed development on the WQR and the HCA, and a mitigation plan to compensate for those impacts.

2.0 EXISTING WQR AND HCA ON THE PROJECT SITE

Minthorn Creek and its associated wetlands are primary protected water features, and as described in Table 19.402.15, Determination of WQR Location in the MMC Subsection 19.402.15, primary protected water features have an associated vegetated corridor of 50 to 200 feet wide depending on the slopes adjacent to the resource. Because the slopes adjacent to Minthorn Creek and its associated wetlands within the Harmony Road Storage site are less than 25 percent, the associated vegetated corridor is 50 feet wide. The extent of the vegetated corridor on the project site, based on the surveyed boundaries of wetlands and waterways is depicted on Figure 4. The total area of WQR on the site (not including the stream and wetlands) is approximately 20,117 sq.ft. (0.46 ac.).

Minthorn Creek also has an associated HCA. The Milwaukie Interactive Zoning Map (<http://milwaukie.maps.arcgis.com/apps/webappviewer/index.html?id=48bfb9fc517446f9af954d4d1c4413af>) shows HCA extending onto the western portion of the site only. Discussions with Brett Kelter, Associate Planner with the City of Milwaukie Community Development, indicate that the City-mapped HCA can be used to comply with MMC 19.402. Therefore, the City's GIS-mapped HCA, as provided by the City of Milwaukie, is depicted on Figure 4. The total area of HCA on the project site is approximately 5,442 sq.ft. (0.12 ac.); however, the HCA boundaries closely correspond to the WQR boundaries such that only a very small portion of the HCA (approximately 257 sq.ft. (0.006 acres)) extends beyond the limits of the WQR. This HCA is used in the impact evaluation and alternatives analysis below.

3.0 COMPLIANCE WITH MILWAUKIE MUNICIPAL CODE

MMC 19.402.12 - General Discretionary Review

A. Impact Evaluation and Alternatives Analysis

An impact evaluation and alternatives analysis is required to determine compliance with the approval criteria for general discretionary review and to evaluate development alternatives for a particular property. A report presenting this evaluation and analysis shall be prepared and signed by a knowledgeable and qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist. At the Planning Director's discretion, the requirement to provide such a report may be waived for small projects that trigger discretionary review but can be evaluated without professional assistance.

The alternatives shall be evaluated on the basis of their impact on WQRs and HCAs, the ecological functions provided by the resource on the property, and off-site impacts within the subwatershed (6th Field Hydrologic Unit Code) where the property is located. The evaluation and analysis shall include the following:

- 1. Identification of the ecological functions of riparian habitat found on the property, as described in Subsection 19.402.1.C.2.*

Subsection 19.402.1.C.2 of the Milwaukie Municipal Code (MMC) identifies seven functions and values that contribute to water quality and to fish and wildlife habitat in urban streamside areas. Descriptions of the functions and values provided by the riparian habitat on the project site are provided below.

Vegetated corridors to separate protected water features from development – The vegetated buffer south of Minthorn Creek provides a buffer that separates existing and former development on the southern part of the site from the primary protected water feature. Although tree cover is rather sparse south of the creek, the dense shrub and herbaceous vegetation provide wildlife habitat and water quality benefits to the stream. North of the stream, the vegetated corridor contains many trees, but there is no development on the northern portion of the site.

Microclimate and shade – Trees within the WQR provide shade to the stream and help to regulate the microclimate within the riparian corridor. However, this function is limited within the project site because tree cover on the south side of the stream, where it would most effectively shade the stream is rather sparse, as described below.

Streamflow moderation and water storage – Within the project area, Minthorn Creek has a relatively narrow floodplain. The floodplain on the north side of the creek is vegetated with a mixture of trees and shrubs, while the floodplain on the south side of the stream is vegetated primarily by various herbaceous species and Himalayan blackberry (*Rubus armeniacus*). During high flow events, vegetation within the floodplain helps to slow floodwaters and reduce downstream flooding. Because of the predominance of non-woody vegetation on the south side of Minthorn Creek and the relatively steep gradient of the stream within the project area, the riparian corridor within the project area provides limited streamflow moderation and water storage functions.

Water filtration, infiltration, and natural purification – Vegetation within the riparian corridor along Minthorn Creek slows runoff from adjacent areas and filters sediments and other pollutants from the runoff before it reaches the stream. By slowing the runoff, the vegetation also increases the potential for water to infiltrate into the soil before reaching the stream. However, the predominantly clay loam soils within the project area reduce the ability of the water to infiltrate into the soil.

Bank stabilization and sediment and pollution control – Streambanks within the project area are generally well-vegetated with trees, shrubs, and dense herbaceous vegetation. This vegetation helps to stabilize the banks, and there is little evidence of active bank erosion within the project site.

Large wood recruitment and retention and natural channel dynamics – Within the project area, trees occur primarily on the north side of Minthorn Creek. These trees have the potential to become large woody material. When these trees fall into the stream, they have the potential to affect the natural channel dynamics. However, because of the relatively small size of the stream, any large woody material that falls into the stream is likely to remain on the project site rather than be carried downstream.

Organic material resources –Vegetation within the riparian corridor provides organic material that serve as the basis for the aquatic food web. Under the existing conditions, the riparian corridor within the project site is vegetated with a mixture of native and non-native trees, shrubs, and herbaceous species, which contribute organic materials to the stream.

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.*

Plant communities within the vegetated corridor include a mixture of wooded and non-wooded communities. PHS identified two separate plant communities within the on-site vegetated corridor based on the predominance of woody species in the community. North of Minthorn Creek, the vegetated corridor has a well-developed forest canopy; while south of Minthorn Creek, the vegetated corridor is dominated by Himalayan blackberry with just a few scattered trees. PHS took two sample points to characterize the plant community north of the creek, and one sample point to characterize the plant community south of Minthorn Creek. A brief description and an evaluation of the condition of each of the communities are provided below.

North of Minthorn Creek

The WQR north of Minthorn Creek contains an open canopy formed by widely spaced trees, predominantly black cottonwoods (*Populus balsamifera*) and Oregon ash (*Fraxinus latifolia*). The area has a relatively dense understory of tree saplings and shrubs. Common species in the understory include Oregon ash, Portuguese laurel (*Prunus lusitanica*), Himalayan blackberry, snowberry (*Symphoricarpos albus*), English hawthorn (*Crataegus monogyna*), and clustered rose (*Rosa pisocarpa*). The groundcover contains a diverse mixture of native and non-native species. Himalayan blackberry and English ivy are listed as invasive, noxious weeds by the Oregon Department of Agriculture. Other non-native species are present within the plant community, but they are not listed as invasive or noxious weeds at this time. Tables 1 and 2 summarize the species composition at two sample points within the plant community.

Table 1. Plant Community North of Minthorn Creek as Characterized by Sample Point 1

Botanical Name	Common Name	Cover (%)
Trees		30
<i>Populus balsamifera</i>	Black cottonwood	30
Shrubs and Saplings		75
<i>Fraxinus latifolia</i>	Oregon ash	20
<i>Prunus lusitanica</i>	Portuguese laurel	20
<i>Rosa pisocarpa</i>	Clustered rose	20
<i>Prunus cerasifera</i>	Cherry plum	10
<i>Rubus discolor</i>	Himalayan blackberry	5
Ground Cover		32
<i>Rubus ursinus</i>	California dewberry	25
<i>Equisetum telmateia</i>	Giant horsetail	2
<i>Ranunculus repens</i>	Creeping buttercup	5

Table 2. Plant Community South of Minthorn Creek as Characterized by Sample Point 2

Botanical Name	Common Name	Cover (%)
Trees		90
<i>Populus trichocarpa</i>	Black cottonwood	60
<i>Fraxinus latifolia</i>	Oregon ash	20
<i>Prunus avium</i>	Sweet cherry	10
Shrubs		90
<i>Symphoricarpos albus</i>	Snowberry	50
<i>Prunus lusitanica</i>	Portuguese laurel	20
<i>Crataegus monogyna</i>	English hawthorn	10
<i>Rubus armeniacus</i>	Himalayan blackberry	10
<i>Corylus cornuta</i>	Beaked hazelnut	5
Ground Cover		100
<i>Hedera helix</i>	English ivy	60
<i>Equisetum arvense</i>	Field horsetail	20
<i>Poa</i> sp.	Bluegrass	20

The plant community north of Minthorn Creek has an open tree canopy with coverage that varies from 30 to 90 percent. Canopy coverage across the entire plant community exceeds 50 percent. The combined tree, shrub and ground cover layers provide coverage that exceeds 80 percent. As such, the existing condition of the WQR north of Minthorn Creek meets the definition of a Class A (“Good”) WQR, as defined in Table 19.402.11.C of the municipal code.

South of Minthorn Creek

Although several trees are present along the southern bank of the stream, the plant community south of Minthorn Creek is dominated by dense Himalayan blackberry and herbaceous vegetation. The sample point for this plant community was selected to represent the general absence of trees and characterize the major portion of the plant community. Himalayan blackberry is listed as invasive, noxious weeds by the Oregon Department of Agriculture. The majority of herbaceous species within the plant community are non-native; however, none of the other non-native species present within the plant community are not listed as invasive or noxious weeds at this time. Table 3 summarizes the species composition within the plant community south of Minthorn Creek.

Table 3. Plant Community South of Minthorn Creek as Characterized by Sample Point 3

Botanical Name	Common Name	Cover (%)
Shrubs		60
<i>Rubus armeniacus</i>	Himalayan blackberry	60
Ground Cover		110
<i>Agrostis stolonifera</i>	Spreading bentgrass	70
<i>Schedonorus arundinacea</i>	Tall fescue	20
<i>Poa</i> sp.	Bluegrass	10
<i>Equisetum arvense</i>	Field horsetail	5
<i>Galium aparine</i>	Cleavers	5

As described above and shown by Sample Point 3, the plant community south of Minthorn Creek has little or no tree canopy coverage. The combined tree, shrub and groundcover layers provide coverage that exceeds 80 percent; however, tree canopy coverage is less than 25 percent. Therefore, the existing condition of the WQR south of Minthorn Creek meets the definition of a Class C (“Poor”) WQR, as defined in Table 19.402.11.C of the municipal code.

- 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.*

The proposed project will result in impacts to WQR and HCA associated with Minthorn Creek. A bridge will be constructed across Minthorn Creek along the western site boundary. This will result in impacts to approximately 4,520 sq.ft. (0.10 ac.) of WQR and 257 sq.ft. (0.006) of HCA beyond the limits of the WQR. Additionally three stormwater outfalls will be constructed within the WQR. The construction of these outfalls will result in approximately 430 sq.ft. (0.01 ac.) of additional disturbance to the WQR.

The proposed project is not anticipated to have any adverse impacts to water quality. The use of erosion and sediment controls during construction will prevent sediment-related impacts to water quality. The proposed project is not anticipated to result in additional nutrient inputs to the stream, and the restoration of the riparian corridor on the south side of Minthorn Creek will increase shade on the stream as the riparian plantings mature, helping to reduce water temperatures in the stream. The stormwater outfalls will discharge treated stormwater to the WQR, and the riprap pads at the outfalls will dissipate flows preventing erosion and sedimentation downslope of the outfalls and prevent impacts to water quality.

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.

Minthorn Creek crosses the center of the site from west to east. Because of the location of the resources, it is not possible to access the northern portion of the site without crossing the vegetated corridor. It is not practicable to access the northern portion of the site from Railroad Avenue because of the railroad tracks between the site and street. There are no practicable alternatives for developing the northern portion of the site that avoids impacts to the WQR.

b. Development in the WQR and/or HCA has been limited to the area necessary to allow for the proposed use.

Development within the WQR and HCA has been limited to the area necessary to allow for the proposed use. Development within the WQR and HCA is limited to a bridge needed for access to the northern portion of the site and three stormwater outfalls that will discharge treated stormwater from flow through planter boxes. Buildings, parking areas, and stormwater treatment facilities will be located entirely outside the WQR and HCA.

c. If disturbed, the WQR can be restored to an equal or better condition in accordance with Table 19.402.11.C; and the HCA can be restored consistent with the mitigation requirements of Subsection 19.402.11.D.2.

Portions of the WQR temporarily disturbed for the construction of the three stormwater discharges will be restored to equal or better condition in accordance with Table 19.402.11.D.2. Mitigation is described in more detail below.

d. Road crossings will be minimized as much as possible.

The proposed project includes one road crossing to provide access to the northern portion of the site. The road crossing has been designed to minimize impacts to the WQR. The road crosses the WQR where the WQR is narrowest and where there are no wetlands adjacent to the creek. Additionally, the road will cross the WQR on a bridge, which will eliminate the need for sideslopes, which would increase the area of WQR impacted.

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.*

Not applicable. The proposed project does not include routine repair and maintenance, alteration, and/or total replacement of existing structures within the WQR.

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.*

The proposed project will result in impacts to WQR and HCA associated with Minthorn Creek. A bridge will be constructed across Minthorn Creek along the western site boundary. This will result in impacts to approximately 4,520 sq.ft. (0.10 ac.) of WQR and 257 sq.ft. (0.006) of HCA beyond the limits of the WQR. Additionally three stormwater outfalls will be constructed within the WQR. The construction of these outfalls will result in approximately 430 sq.ft. (0.01 ac.) of additional disturbance to the WQR.

- b. An explanation of measures that will be taken to avoid, minimize, and/or mitigate adverse impacts to the designated natural resource; in accordance with, but not limited to, Table 19.402.11.C for WQRs and Subsection 19.402.11.D.2 for HCAs.*

As discussed above, it is not possible to avoid impacts to the WQR. Adverse effects to the resources have been minimized by limiting impacts to one road crossing, which crosses the WQR on a bridge structure at the point where the WQR is the narrowest, and discharges from three flow-through stormwater planters.

Mitigation for the unavoidable impacts will be provided through the inventory of man-made debris and noxious materials that might be present within the WQR and the removal of any such material present; the implementation of a stormwater plan that meets City requirements for runoff rates and water quality; the removal of non-native, invasive plants from the riparian corridor; and installation of tree and shrub plantings within Wetland Mitigation B on the south side of Minthorn Creek to restore a diverse, native plant community. Compliance with the mitigation requirements outlined in Table 19.402.11.C and Subsection 19.402.11.D.2 to compensate for proposed impacts to the WQR and HCA are described below.

As depicted on Figure 4, the existing condition of WQR on the north side of Minthorn Creek is Class A (“Good”); the existing condition of the WQR on the south side of the creek is Class C (“Poor”). Mitigation requirements for disturbance in a Class A WQR, as listed in Table 19.402.11.C, are listed below, as are the components of the project design that have been incorporated to insure compliance with the mitigation requirements.

- *Submit a plan for mitigating water quality impacts related to the development, including: sediments, temperature, nutrients, or any other condition that may have caused the protected water feature to be listed on DEQ’s 303(d) list.*

Sisul Engineering submitted Preliminary Storm Detention and Water Quality Calculations (dated July 21, 2015) with the conditional use permit application demonstrating that the proposed stormwater management facilities treat runoff to meet the City of Milwaukie’s water quality requirements and detain post-development runoff at or below pre-development release rates.

- *Inventory and remove debris and noxious materials.*

At the time of site construction, the Applicant will identify man-made debris and noxious materials that may be present within the WQR. Any such debris or materials will be removed from the WQR. This will occur within Mitigation Areas A and B, as shown on Figure 6.

Mitigation requirements for disturbance in a Class C WQR, as listed in Table 19.402.11.C, are listed below, as are the components of the project design that have been incorporated to insure compliance with the mitigation requirements.

- *Restore and mitigate disturbed areas with native species from the Milwaukie Native Plant List, using a City-approved plan developed to represent the vegetative composition that would naturally occur on the site.*

All disturbed areas within the WQR will be restored with native trees and shrubs and reseeded with a native seed mix. Trees and shrubs will be planted within Mitigation Area B on the south side of Minthorn Creek to restore a native plant community within the WQR.

The number of trees and shrubs to be planted in Mitigation Area B was determined in accordance with MMC Subsection 19.402.11.D.2. Six trees will be removed from the HCA and WQR, as shown on Figure 5. As prescribed by Table 19.402.11.D.2.a, 13 trees and 21 shrubs would be required under Mitigation Option 1 to mitigate for the trees to be removed. Under Mitigation Option 2, 54 trees (5,442 sq.ft. impact area x 5 trees per 500 sq.ft. of impact area = 54 trees) and 272 shrubs (5,442 sq.ft. impact area x 25 shrubs per 500 sq.ft. of impact area = 272 shrubs) would be planted to mitigate for impacts to 5,442 sq.ft. of HCA impact. Because Mitigation Option 2 results in more tree plantings, Mitigation Option 2 was used to determine the number of trees and shrubs to be planted in accordance with MMC Subsection 19.402.11.D.2. A list of trees and shrubs proposed for planting are provided in Table 4, below.

These mitigation plantings meet the requirements of MMC Subsection 19.402.11.D, as follows:

- All areas temporarily disturbed will be restored and permanent impacts will be mitigated by the tree and shrub plantings, as described above.
- All species proposed for planting are native species, as identified on the Milwaukie Native Plant List.
- Trees to be planted will average at least a ½-in caliper (measured at 6 inches above the ground level for field-grown trees or above the soil line for container-grown trees). Shrubs shall be at least 1-gallon size and 12 inches high.
- Trees will be planted between 8 and 12 feet on center. Shrubs will be planted between 4 and 5 feet on center or clustered in single-species groups of no more than 4 plants, with each cluster planted between 8 and 10 feet on center. When planting near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.

- More than two species of shrubs are proposed, and not more than 50 percent of the trees to be planted are of the same genus.
- All mitigation will occur on site.
- Invasive non-native or noxious vegetation will be removed within the mitigation area prior to planting, including, but not limited to, species identified as nuisance plants on the Milwaukie Native Plant List.
- Bare or open soil areas remaining after the required tree and shrub plantings will be seeded to 100% surface coverage with grasses or other ground cover species identified as native on the Milwaukie Native Plant List. Revegetation will occur during the next planting season following the site disturbance.

Table 4. Proposed Riparian Restoration Planting List

Species	Common Name	Quantity	Stock Type	Plant Size
Trees				
<i>Alnus rubra</i>	Red alder	3	Container or field-grown	½ in caliper
<i>Fraxinus latifolia</i>	Oregon ash	4	Container or field-grown	½ in caliper
<i>Thuja plicata</i>	Western redcedar	6	Container or field-grown	½ in caliper
Shrubs				
<i>Cornus alba</i>	Red-osier dogwood	7	1 gal.	12 in
<i>Rosa pisocarpa</i>	Clustered rose	7	1 gal.	12 in
<i>Sambucus racemosa</i>	Red elderberry	7	1 gal.	12 in
Herbaceous seed mix				
<i>Agrostis exarata</i>	Spike bentgrass	2.0 lbs/ac	Seed	n/a
<i>Bromus carinatus</i>	California brome	2.0 lbs/ac	Seed	n/a
<i>Deschampsia cespitosa</i>	Tufted hairgrass	3.0 lbs/ac	Seed	n/a
<i>Elymus glaucus</i>	Blue wildrye	3.0 lbs/ac	Seed	n/a
<i>Hordeum brachyantherum</i>	Meadow barley	2.0 lbs/ac	Seed	n/a
<i>Lupinus rivularis</i>	Riverbank lupine	3.5 lbs/ac	Seed	n/a

- ***Plant and/or seed all bare areas to provide 100% surface coverage.***

All disturbed soil surfaces will be seeded with a native seed mix, as described in Table 4, above. Areas temporarily disturbed for the construction of stormwater outfalls and due to the removal of invasive plant species will be seeded with this seed mix.

- ***Inventory and remove debris and noxious materials.***

At the time of site construction, the Applicant will identify man-made debris and noxious materials that may be present within the WQR. Any such debris or materials will be removed from the WQR. This will occur within Mitigation Areas A and B, as shown on Figure 6.

- c. Sufficient description to demonstrate how the following standards will be achieved:*
(1) Where existing vegetation has been removed, the site shall be revegetated as soon as practicable.

Following the completion of the construction of the proposed stormwater outfalls, disturbed soils will be reseeded with the native seed mix described in Table 4, above. Within Mitigation Area B, soils disturbed as a result of the removal of non-native invasive plants will be seeded with the native seed mix described in Table 4 as soon as practicable following the removal of the invasive plants. Woody material will be planted in Mitigation Area B in the fall/winter 2017 to maximize the survival of the plantings.

- (2) Where practicable, lights shall be placed so that they do not shine directly into any WQR and/or HCA location. The type, size, and intensity of lighting shall be selected so that impacts to habitat functions are minimized.*

Lights will be placed so that they do not shine directly into the WQR. The type, size, and intensity of lighting will be selected so that impacts to habitat functions are minimized. The Lighting Plan, prepared by Creations Northwest and submitted with the conditional use application, shows the proposed lighting relative to the WQR.

- (3) Areas of standing trees, shrubs, and natural vegetation will remain connected or contiguous; particularly along natural drainage courses, except where mitigation is approved; so as to provide a transition between the proposed development and the designated natural resource and to provide opportunity for food, water, and cover for animals located within the WQR.*

With the exception of the removal of invasive plants from Mitigation Area B, existing trees, shrubs, and natural vegetation within the WQR will remain undisturbed during the proposed construction.

- d. A map showing where the specific mitigation activities will occur. Off-site mitigation related to WQRs shall not be used to meet the mitigation requirements of Section 19.402.*

Figure 6 depicts the location of proposed mitigation activities. No mitigation is proposed to occur off site.

- e. An implementation schedule; including a timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting; as well as a contingency plan. All in-stream work in fish-bearing streams shall be done in accordance with the allowable windows for in-water work as designated by ODFW.*

Construction of the proposed project is anticipated to occur in the spring and summer of 2017. Activities associated with the WQR/HCA mitigation are anticipated to begin in summer 2017. Removal of any existing man-made debris and noxious materials from the WQR will occur in summer 2017, as will the removal of invasive plants from Mitigation Area B (Figure 6). Restoration plantings will be installed in Mitigation Area B in fall/winter 2017.

Monitoring of the restoration area will be conducted in the late summer of 2017 and again in summer 2018. An annual monitoring report documenting the survival of the restoration plantings will be submitted to the City of Milwaukie by December 31 of each monitoring year. Plants that die shall be replaced in kind as needed to ensure the minimum 80% survival rate.

No in-stream work is proposed to occur as part of this project.

B. Approval Criteria

1. *Unless specified elsewhere in Section 19.402, applications subject to the discretionary review process shall demonstrate how the proposed activity complies with the following criteria:*

a. Avoid

The proposed activity avoids the intrusion of development into the WQR and/or HCA to the extent practicable. The proposed activity shall have less detrimental impact to the designated natural resource than other practicable alternatives, including significantly different practicable alternatives that propose less development within the resource area.

The proposed project avoids development within the WQR and HCA to the maximum extent practicable. The only impacts to the WQR and HCA result from the road crossing and stormwater outfalls. As discussed above, it is not possible to access the northern portion of the site and completely avoid impacts to the WQR.

b. Minimize

If the applicant demonstrates that there is no practicable alternative that will avoid disturbance of the designated natural resource, then the proposed activity within the resource area shall minimize detrimental impacts to the extent practicable.

(1) The proposed activity shall minimize detrimental impacts to ecological functions and loss of habitat, consistent with uses allowed by right under the base zone, to the extent practicable.

Implementation of the proposed mitigation will ensure the proposed project minimizes adverse effects to the ecological functions of the WQR and loss of habitat, as follows:

- The minimization of areal impacts as well as the proposed plantings to restore a native plant community on the south side of Minthorn Creek will ensure that the WQR continues to provide a vegetated corridors that separates protected water features from development.
- As the proposed tree and shrub plantings south of Minthorn Creek mature, they will increasingly provide microclimate regulation and shade for the stream, and provide better microclimate regulation and shade as compared to the existing plant community on the south side of the creek.
- As the proposed tree and shrub plantings south of Minthorn Creek mature they will provide more effective streamflow moderation during high flow events than the Himalayan blackberry and herbaceous plant community that is present under existing conditions.
- The diverse plant community within the WQR will continue to provide water filtration, infiltration, and natural purification functions. The proposed project will not adversely affect these functions.
- The proposed restoration plantings and the resulting diverse plant community within the WQR will continue to provide bank stabilization and sediment and pollution control functions. The proposed project will not adversely affect these functions.
- Trees will remain within the vegetated corridor following construction, and therefore, the WQR will continue to provide the potential for large wood recruitment and retention functions. The proposed bridge will completely span the creek and this will not have an adverse impact on channel dynamics.

- Because the WQR will continue to be vegetated with a diverse plant community, the proposed project will not adversely affect the resource's ability to provide organic inputs to the stream and riparian area.
- (2) *To the extent practicable within the designated natural resource, the proposed activity shall be designed, located, and constructed to:*
- (a) *Minimize grading, removal of native vegetation, and disturbance and removal of native soils; by using the approaches described in Subsection 19.402.11.A, reducing building footprints, and using minimal excavation foundation systems (e.g., pier, post, or piling foundation).*

In accordance with MMC Subsection 19.402.11.A, the following measures will be implemented to minimize impacts to the WQR on the site:

- Work areas will be marked to reduce potential damage to the WQR.
- Trees in the WQR will not be used as anchors for stabilizing construction equipment.
- Native soils disturbed during development shall be conserved on the property.
- The Applicant has prepared a preliminary grading and erosion control plan. Prior to the start of any construction activities, the applicant will apply for a grading and erosion control permit, consistent with the standards required by the City's Public Works Department.
- The Applicant will implement best management practices on site to prevent the drainage of hazardous materials, erosion, pollution or sedimentation within the resources and the vegetative corridors.
- The Applicant has prepared a preliminary stormwater detention and water quality plan for the project which has been designed to prevent flows within and to natural drainage courses which might exceed pre-developed conditions.
- Prior to construction, the WQR that is to remain undeveloped will be flagged, fenced, or otherwise marked and shall remain undisturbed. Such markings will be maintained until construction is complete.
- The construction phase of the development shall be done in such a manner as to safeguard the resource portions of the site that have not been approved for development.
- Lights will be placed so that they do not shine directly into the WQR.
- The Applicant has prepared a construction management plan which will conform to the requirements of 19.402.9. The Final Construction management plan will be provided to the City's Engineering Department prior to the commencement of construction activities.

(b) *Minimize adverse hydrological impacts on water resources.*

The implementation of the proposed stormwater management plan, which detains post-development runoff at or below pre-development release rates will ensure that hydrologic impacts to the water resource are minimized. The construction of a bridge that completely spans the stream channel will ensure the project avoids hydraulic impacts to the stream channel.

(c) Minimize impacts on wildlife corridors and fish passage.

The construction of a bridge that completely spans the stream channel will ensure the project avoids impacts to fish passage along this reach of Minthorn Creek. Restoration of a diverse native plant community within the riparian corridor will ensure that impacts to wildlife habitat are minimized.

(d) Allow for use of other techniques to further minimize the impacts of development in the resource area; such as using native plants throughout the site (not just in the resource area), locating other required landscaping adjacent to the resource area, reducing light spill-off into the resource area from development, preserving and maintaining existing trees and tree canopy coverage, and/or planting trees where appropriate to maximize future tree canopy coverage.

Impacts to the on-site resources have been minimized to the extent practicable.

c. Mitigate

If the applicant demonstrates that there is no practicable alternative that will avoid disturbance of the designated natural resource, then the proposed activity shall mitigate for adverse impacts to the resource area. All proposed mitigation plans shall meet the following standards:

(1) The mitigation plan shall demonstrate that it compensates for detrimental impacts to the ecological functions of resource areas, after taking into consideration the applicant's efforts to minimize such detrimental impacts.

As described above, implementation of the proposed mitigation will ensure the proposed project minimizes adverse effects to the ecological functions of the WQR and loss of habitat, as follows:

- The minimization of areal impacts as well as the proposed plantings to restore a native plant community on the south side of Minthorn Creek will ensure that the WQR continues to provide a vegetated corridors that separates protected water features from development.
- As the proposed tree and shrub plantings south of Minthorn Creek mature, they will increasingly provide microclimate regulation and shade for the stream, and provide better microclimate regulation and shade as compared to the existing plant community on the south side of the creek.
- As the proposed tree and shrub plantings south of Minthorn Creek mature, they will provide more effective streamflow moderation during high flow events than the Himalayan blackberry and herbaceous plant community that is present under existing conditions.
- The diverse plant community within the WQR will continue to provide water filtration, infiltration, and natural purification functions. The proposed project will not adversely affect these functions.
- The proposed restoration plantings and the resulting diverse plant community within the WQR will continue to provide bank stabilization and sediment and pollution control functions. The proposed project will not adversely affect these functions.
- Trees will remain within the vegetated corridor following construction, and therefore, the WQR will continue to provide the potential for large wood recruitment and retention functions. The proposed bridge will completely span the creek and this will not have an adverse impact on channel dynamics.

- Because the WQR will continue to be vegetated with a diverse plant community, the proposed project will not adversely affect the resource's ability to provide organic inputs to the stream and riparian area.

(2) Mitigation shall occur on the site of the disturbance, to the extent practicable. Off-site mitigation for disturbance of WQRs shall not be approved. Off-site mitigation for disturbance of HCAs shall be approved if the applicant has demonstrated that it is not practicable to complete the mitigation on-site and if the applicant has documented that they can carry out and ensure the success of the off-site mitigation as outlined in Subsection 19.402.11.B.5.

In addition, if the off-site mitigation area is not within the same subwatershed (6th Field Hydrologic Unit Code) as the related disturbed HCA, the applicant shall demonstrate that it is not practicable to complete the mitigation within the same subwatershed and that, considering the purpose of the mitigation, the mitigation will provide more ecological functional value if implemented outside of the subwatershed.

All mitigation will occur on site.

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

Only native species will be installed in the revegetation plantings. A list of species to be planted is provided in Table 4, above.

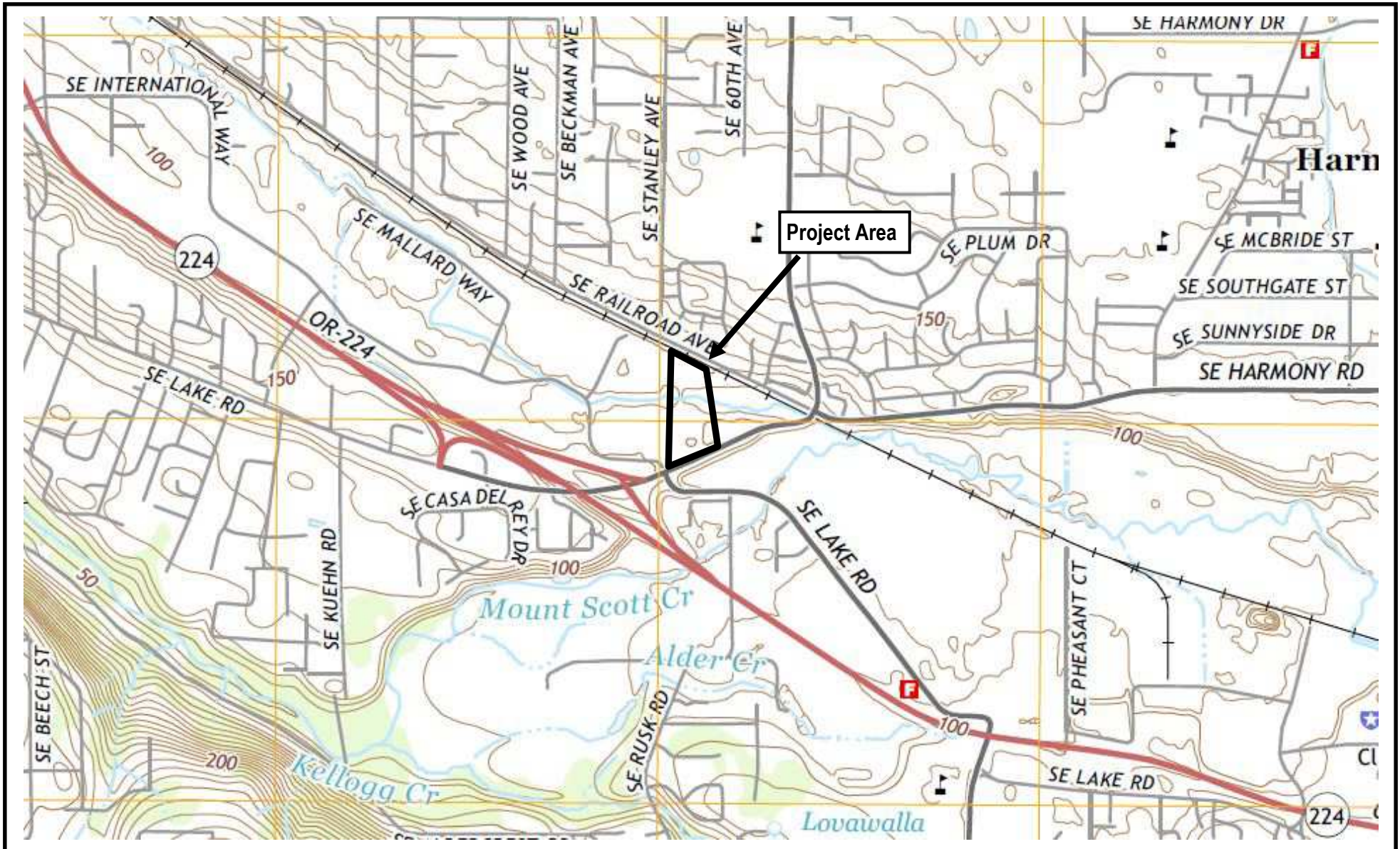
(4) All in-stream work in fish-bearing streams shall be done in accordance with the allowable windows for in-water work as designated by ODFW.

No in-stream work is proposed to occur with this project.

(5) A mitigation maintenance plan shall be included and shall be sufficient to ensure the success of the planting. Compliance with the plan shall be a condition of development approval.

The Applicant will undertake the following mitigation maintenance measures to ensure a minimum of 80 percent of the trees and shrubs planted remain alive two years after the mitigation planting is completed.

- New plantings will be mulched to a minimum of 3-inch depth and 18-inch diameter to retain moisture and discourage weed growth.
- Non-native or noxious vegetation will be removed or controlled throughout the maintenance period.
- Plant sleeves or fencing will be used to protect trees and shrubs against wildlife browsing and the resulting damage to plants.
- New plantings will be watered at a rate of 1 inch per week between June 15 and October 15 for the first two years following planting.



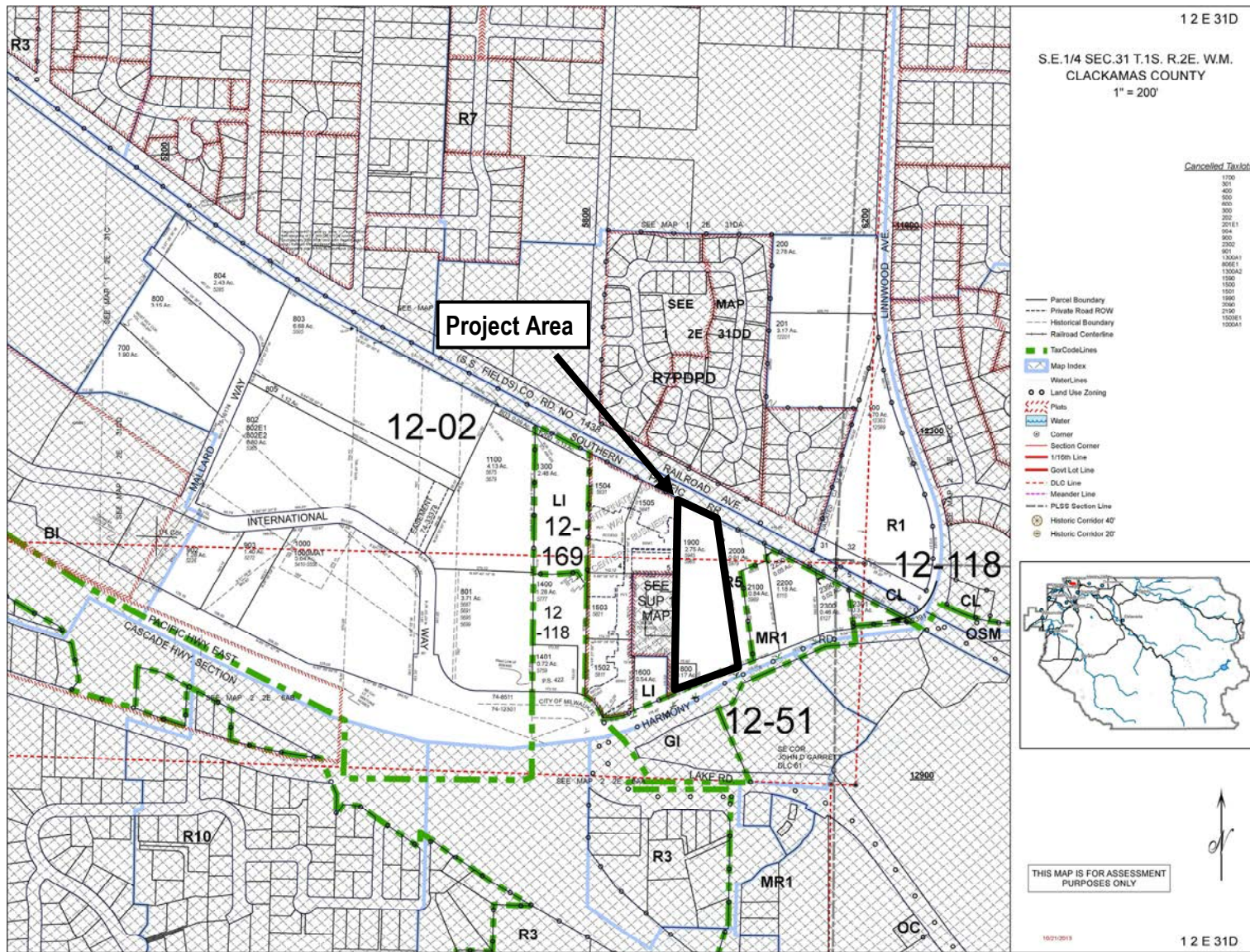
Project #6023
09/14/2016



Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

General Location and Topography
Harmony Road Self Storage - Milwaukie, Clackamas County, Oregon
United States Geological Survey (USGS), Gladstone, OR, 7.5 Quadrangle, 2014

FIGURE
1



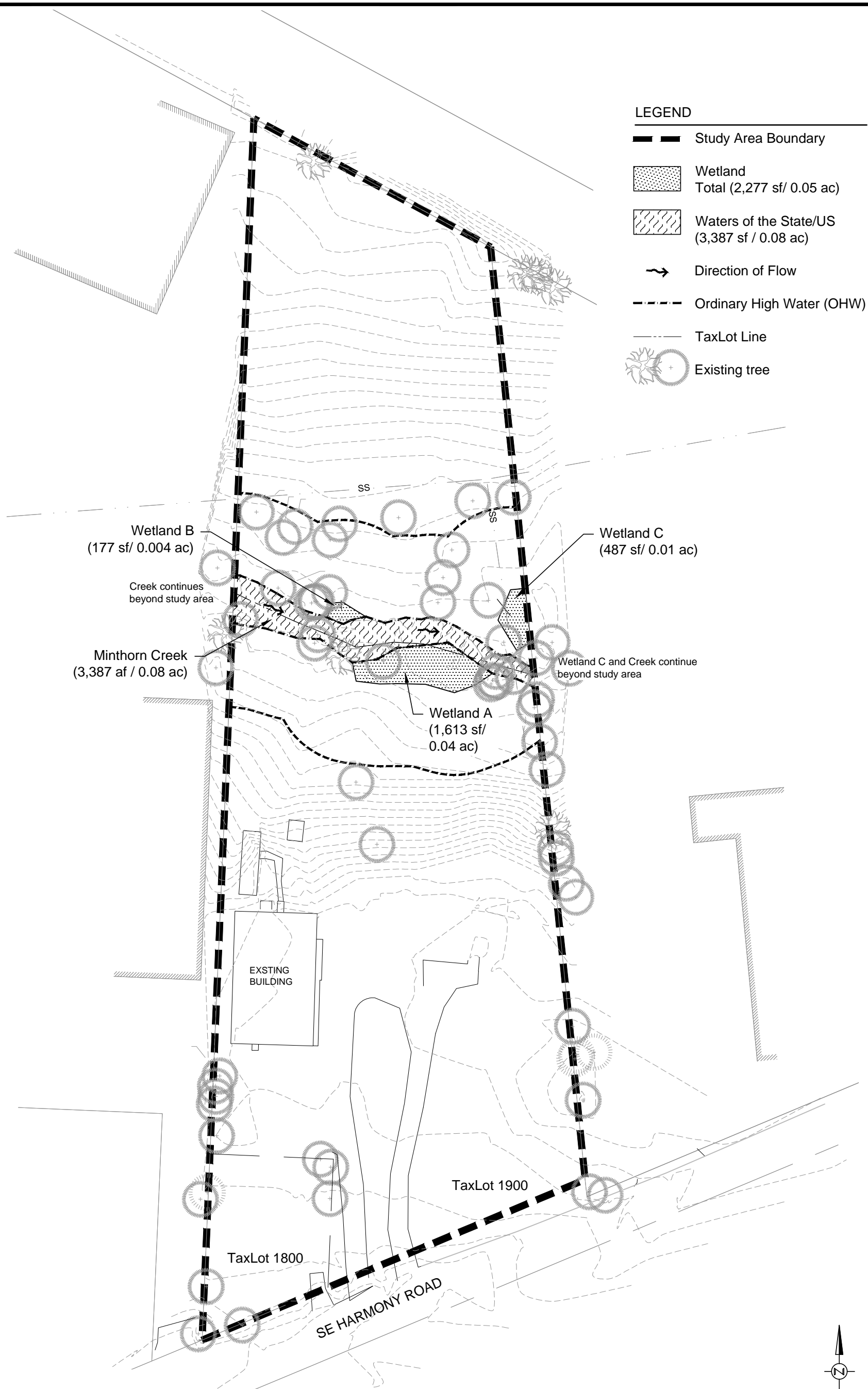
Project #6023
09/14/2016



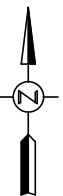
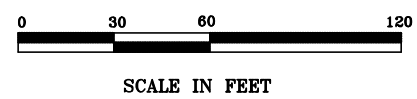
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9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Tax Lot Map
Harmony Road Self Storage - Milwaukie, Clackamas County, Oregon
The Oregon Map (ormap.net)

FIGURE
2



Survey provided by Barker Surveying.
 Survey and Sample point accuracy is sub-centimeter.

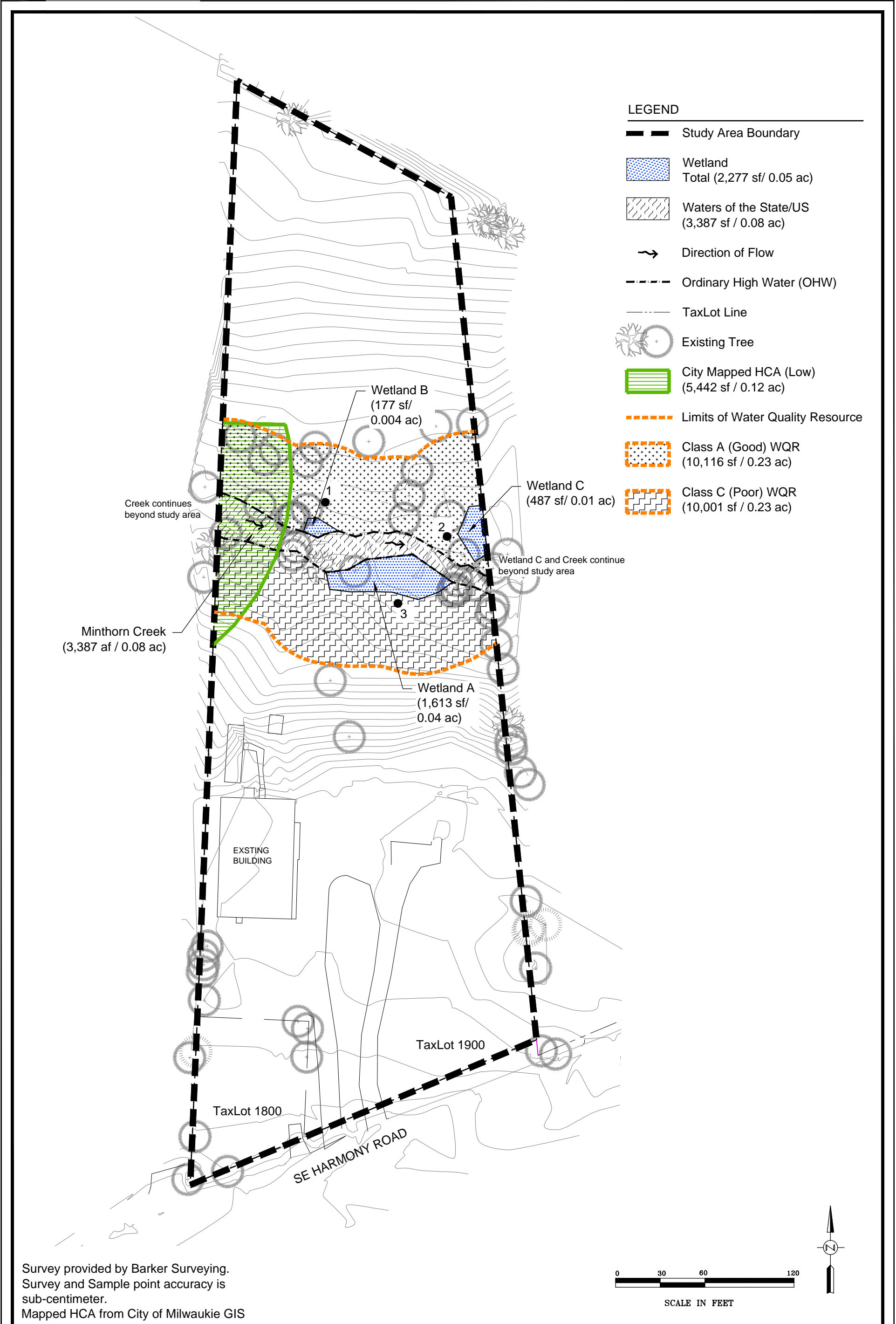


Pacific Habitat Services, Inc.
 9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
 Phone: (503) 570-0800 Fax: (503) 570-0855

Existing Conditions
 Harmony Road Self Storage - Clackamas County, OR

FIGURE
3

9-21-2016





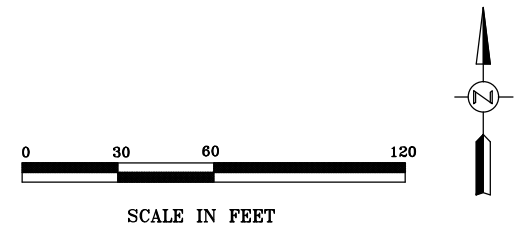
LEGEND

- Study Area Boundary
- Wetland
Total (2,277 sf / 0.05 ac)
- Waters of the State/US
(3,387 sf / 0.08 ac)
- Direction of Flow
- Ordinary High Water (OHW)
- TaxLot Line
- WQR Impact (4,950 sf / 0.11 ac)
- City Mapped HCA Impact
(257 sf / 0.006 ac)
- Tree To Be Removed

TREE REMOVAL TABLE

TYPE	SIZE
Deciduous	8"
Deciduous	11"
Deciduous	10"
Deciduous	10"
Deciduous	14"
Deciduous	12"

Survey provided by Barker Surveying.
Survey and Sample point accuracy is sub-centimeter. Site Plan provided by Sisul Engineering



Site Plan With WQR and HCA Impacts
Harmony Road Self Storage - Clackamas County, OR

FIGURE
5

9-21-2016

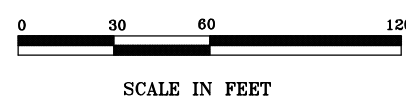


LEGEND

- Study Area Boundary
- Wetland
Total (2,277 sf/ 0.05 ac)
- Waters of the State/US
(3,387 sf / 0.08 ac)
- Direction of Flow
- Ordinary High Water (OHW)
- TaxLot Line
- WQR
- City Mapped HCA
- Mitigation Area A
- Inventory and remove debris and noxious material.
- Mitigation Area B
- restore native plant community
- seed bare soils with native seed mix
- inventory and remove debris and noxious weeds.

Riparian Restoration Planting List for Mitigation Area B				
Species	Common Name	Quantity	Stock Type	Plant Size
Trees:				
<i>Alnus rubra</i>	Red alder	18	Container or field-grown	½ in caliper
<i>Fraxinus latifolia</i>	Oregon ash	18	Container or field-grown	½ in caliper
<i>Thuja plicata</i>	Western redcedar	18	Container or field-grown	½ in caliper
Shrubs:				
<i>Cornus alba</i>	Red-osier dogwood	90	1 gal.	12 in
<i>Rosa pisocarpa</i>	Clustered rose	90	1 gal.	12 in
<i>Sambucus racemosa</i>	Red elderberry	92	1 gal.	12 in
Herbaceous seed mix:				
<i>Agrostis exarata</i>	Spike bentgrass	2.0 lbs/ac	Seed	n/a
<i>Bromus carinatus</i>	California brome	2.0 lbs/ac	Seed	n/a
<i>Deschampsia cespitosa</i>	Tufted hairgrass	3.0 lbs/ac	Seed	n/a
<i>Elymus glaucus</i>	Blue wildrye	3.0 lbs/ac	Seed	n/a
<i>Hordeum brachyantherum</i>	Meadow barley	2.0 lbs/ac	Seed	n/a
<i>Lupinus rivularis</i>	Riverbank lupine	3.5 lbs/ac	Seed	n/a

Survey provided by Barker Surveying. Survey and Sample point accuracy is sub-centimeter. Site plan provided by Sisul Engineering.



Appendix B



Oregon

Kate Brown, Governor

Department of State Lands

775 Summer Street NE, Suite 100

Salem, OR 97301-1279

(503) 986-5200

FAX (503) 378-4844

www.oregonstatelands.us

March 4, 2015

HT Investment Properties, LLC
Attn: Hans Thygeson
825 Harritt Dive Northwest
Salem, OR 97304

Re: WD #2014-0547 Wetland Delineation Report for a Proposed Commercial
Development at 6011 SE Harmony Road
Clackamas County; T1S R2E Sec. 31D, Tax Lots 1800 and 1900

Dear Mr. Thygeson:

The Department of State Lands has reviewed the wetland delineation report prepared by Pacific Habitat Services, Inc. for the site referenced above. Based upon the information presented in the report and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in Figure 6 of the report. Within the study area, three wetlands (totaling approximately 0.054 acres) and a segment of Minthorn Creek were identified.

The wetlands and creek are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high water line (OHWL) of a waterway (or the 2 year recurrence interval flood elevation if OHWL cannot be determined).

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will review the report and make a determination of jurisdiction for purposes of the Clean Water Act at the time that a permit application is submitted. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. Please phone me at 503-986-5232 if you have any questions.

Sincerely,



Peter Ryan, PWS
Jurisdiction Coordinator

Approved by



Kathy Verble, CPSS
Aquatic Resource Specialist

Enclosures

ec: Craig Tumer, PWS, Pacific Habitat Services
City of Milwaukie Planning Department
Dominic Yballe, Corps of Engineers
Anita Huffman, DSL

WP# 2014-0547

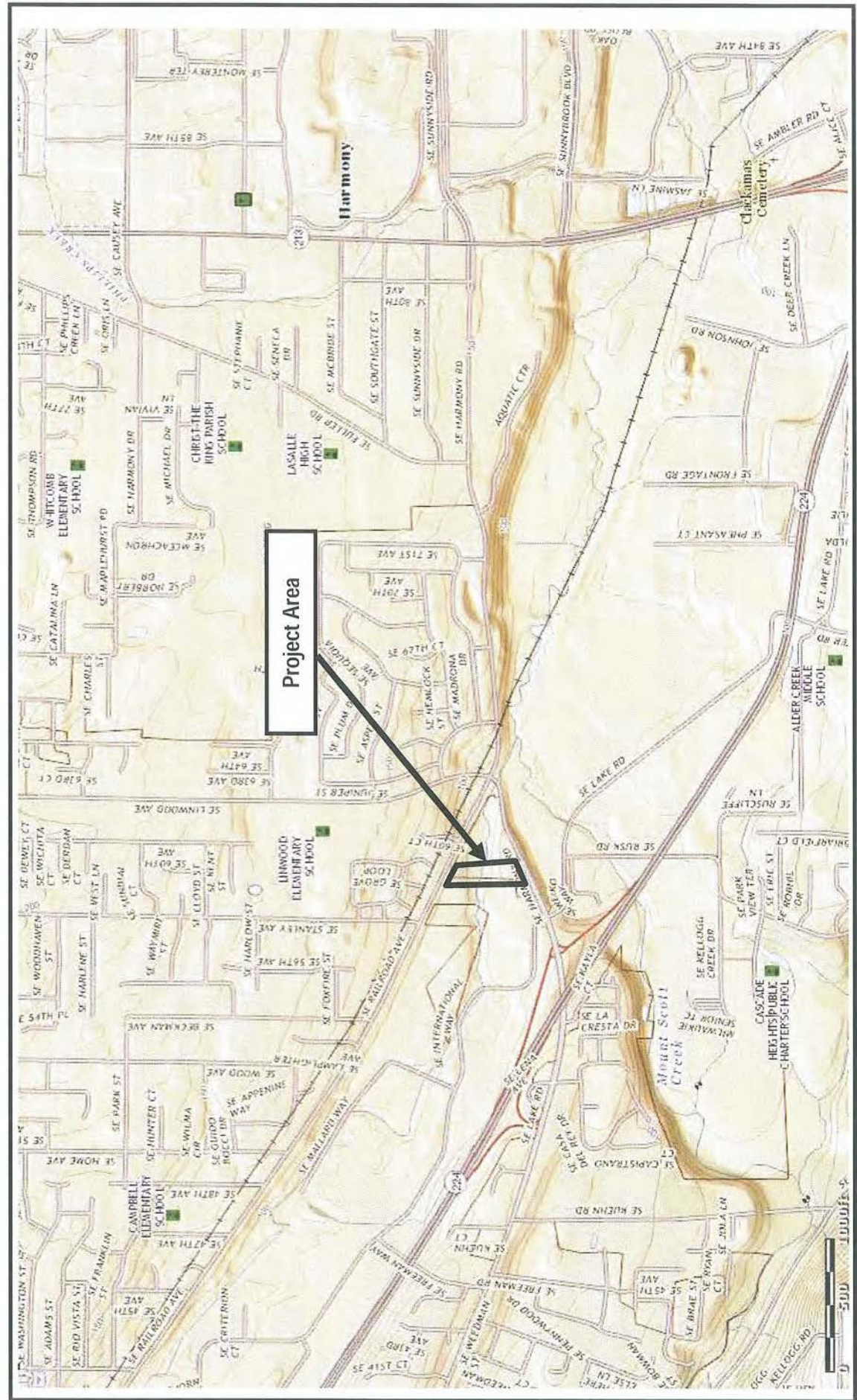


FIGURE 1

General Location and Topography
6011 SE Harmony Road - Portland, Oregon
(USGS The National Map Viewer, Gladstone Quadrangle, 2014)

4096
12/16/14



Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

WD# 2014-0547

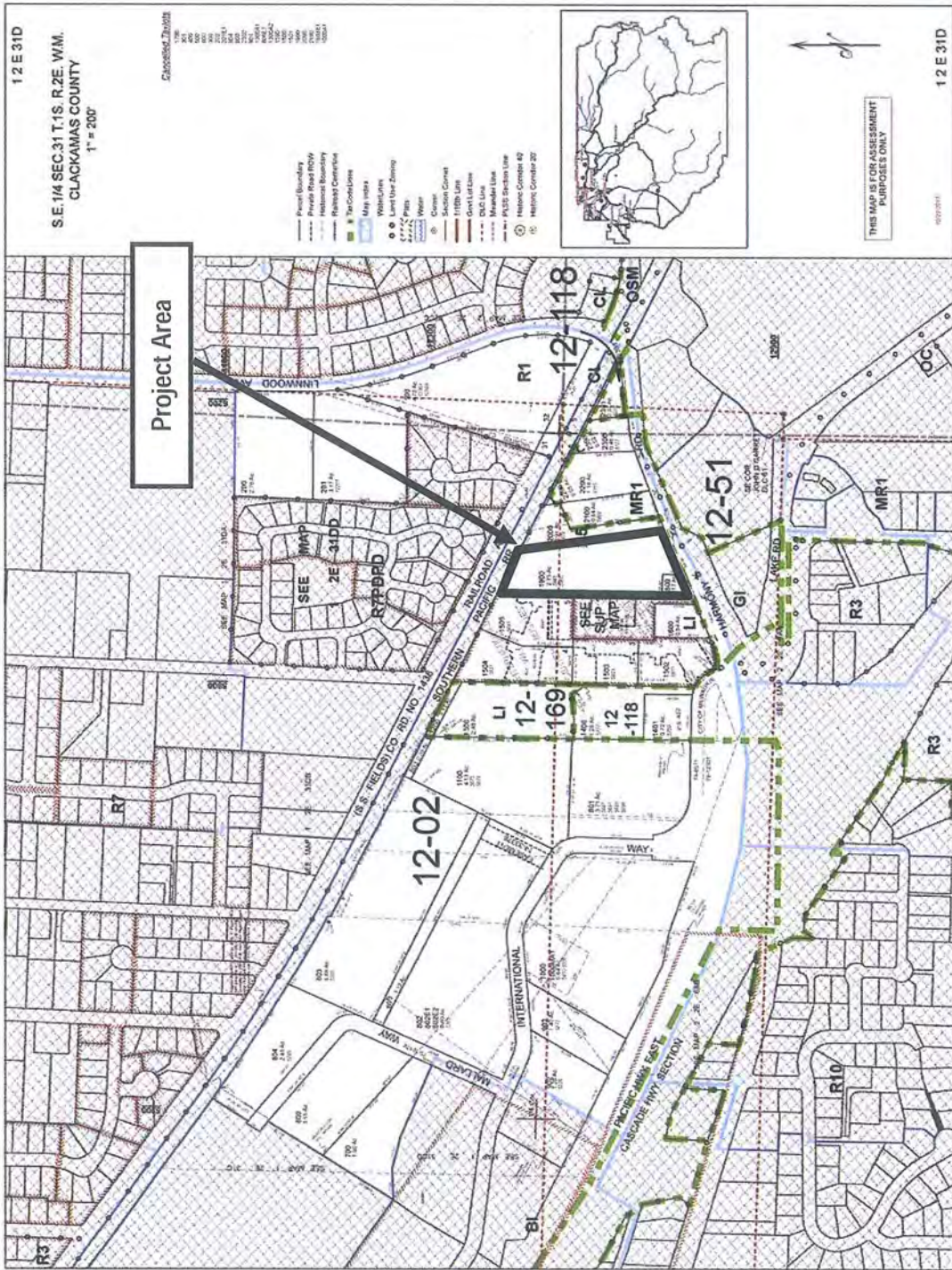


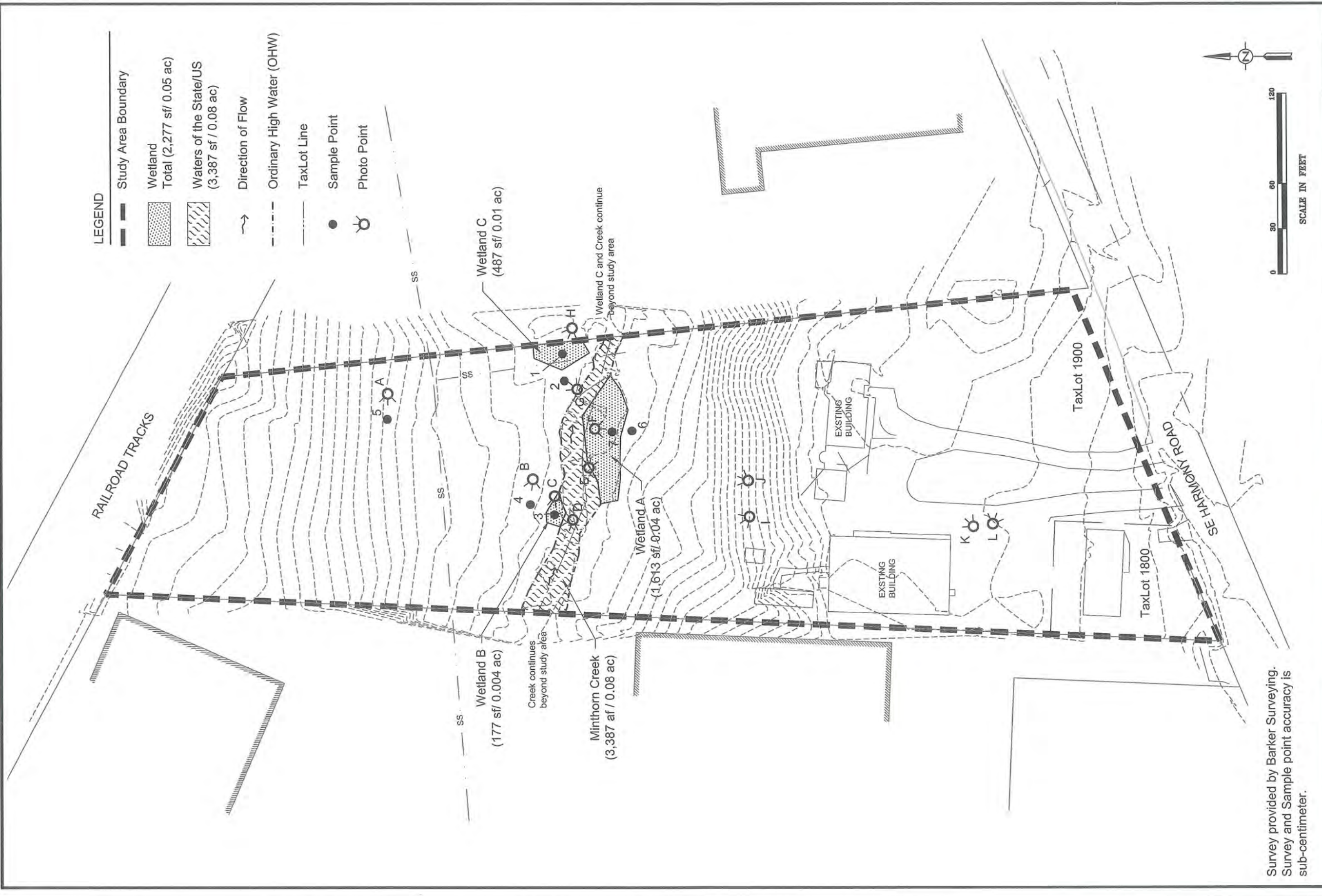
FIGURE 2

Tax Lot Map 12 E 31D, lots 1800 & 1900 Clackamas County
6011 SE Harmony Road - Portland, Oregon
(ormap.net, 2014)

4096
12/16/14



Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070



DSL WD # 2014-0547
 Approval Issued 3/4/2015
 Approval Expires 3/4/2020

Wetland Delineation
 6011 SE Harmony Road - Clackamas County, OR

FIGURE
6

12-05-2014