

DEVELOPMENT REVIEW APPLICATION

For Office Use Only		
STAFF CONTACT <i>Jennifer Arnold</i>	PROJECT NO(S). <i>WAP-17-01 / WRG-17-04 / MISC-17-05</i>	
NON-REFUNDABLE FEE(S) <i>\$2600-</i>	REFUNDABLE DEPOSIT(S) <i>\$2750-</i>	TOTAL <i>\$5350-</i>

Type of Review (Please check all that apply):

- | | | |
|--|---|---|
| <input type="checkbox"/> Annexation (ANX) | <input type="checkbox"/> Historic Review | <input type="checkbox"/> Subdivision (SUB) |
| <input type="checkbox"/> Appeal and Review (AP) * | <input type="checkbox"/> Legislative Plan or Change | <input type="checkbox"/> Temporary Uses * |
| <input type="checkbox"/> Conditional Use (CUP) | <input type="checkbox"/> Lot Line Adjustment (LLA) **/** | <input type="checkbox"/> Time Extension * |
| <input type="checkbox"/> Design Review (DR) | <input type="checkbox"/> Minor Partition (MIP) (Preliminary Plat or Plan) | <input type="checkbox"/> Variance (VAR) |
| <input type="checkbox"/> Easement Vacation | <input type="checkbox"/> Non-Conforming Lots, Uses & Structures | <input checked="" type="checkbox"/> Water Resource Area Protection/Single Lot (WAP) |
| <input type="checkbox"/> Extraterritorial Ext. of Utilities | <input type="checkbox"/> Planned Unit Development (PUD) | <input type="checkbox"/> Water Resource Area Protection/Wetland (WAP) |
| <input type="checkbox"/> Final Plat or Plan (FP) | <input type="checkbox"/> Pre-Application Conference (PA) **/** | <input checked="" type="checkbox"/> Willamette & Tualatin River Greenway (WRG) |
| <input checked="" type="checkbox"/> Flood Management Area | <input type="checkbox"/> Street Vacation | <input type="checkbox"/> Zone Change |
| <input type="checkbox"/> Hillside Protection & Erosion Control | | |

Home Occupation, Pre-Application, Sidewalk Use, Sign Review Permit, and Temporary Sign Permit applications require different or additional application forms, available on the City website or at City Hall.

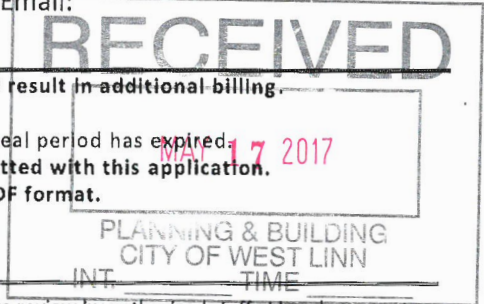
Site Location/Address: 1041 9th St. West Linn, 97068	Assessor's Map No.:
	Tax Lot(s):
	Total Land Area:

Brief Description of Proposal:
Development of a Single Family Residence

Applicant Name: Jason Francis (please print) Phone: 503-929-7207
Address: 19090 Central Point Road Email: jason.francis.m@gmail.com
City State Zip: Oregon City, OR, 97045

Owner Name (required): ANN MILLER (please print) Phone: (503) 656-1967
Address: 1009 9th Street Email: ANNEVALEAD2@YAHOO.COM
City State Zip: WEST LINN, OR. 97068

Consultant Name: (please print) Phone:
Address: Email:
City State Zip:



- All application fees are non-refundable (excluding deposit). Any overruns to deposit will result in additional billing.
- The owner/applicant or their representative should be present at all public hearings.
- A denial or approval may be reversed on appeal. No permit will be in effect until the appeal period has expired.
- Three (3) complete hard-copy sets (single sided) of application materials must be submitted with this application. One (1) complete set of digital application materials must also be submitted on CD in PDF format. If large sets of plans are required in application please submit only two sets.

* No CD required / ** Only one hard-copy set needed

The undersigned property owner(s) hereby authorizes the filing of this application, and authorizes on site review by authorized staff. I hereby agree to comply with all code requirements applicable to my application. Acceptance of this application does not infer a complete submittal. All amendments to the Community Development Code and to other regulations adopted after the application is approved shall be enforced where applicable. Approved applications and subsequent development is not vested under the provisions in place at the time of the initial application.

Applicant's signature _____ Date 05/16/17
Owner's signature (required) *Ann Miller* Date 5/2/2017

Land Approval Permit Application Narratives

1041 9TH ST. WEST LINN

Narrative addressing Chapter 27 Flood Management Area

27.060 A.

Development, excavation and fill shall be performed in a manner to maintain or increase flood storage and conveyance capacity and not increase design flood elevations.

RESPONSE: The proposed house will have a finished floor elevation of one foot above the base flood elevation. The foundation for the proposed house to have automatic venting that allow for the conveyance of floodwater and to equalize hydrostatic flood force on the exterior walls. No adverse effects in either Flood Storage Area or Floodway result.

27.060 B.

No net fill increase in any floodplain is allowed. All fill shall be balanced with an equal amount of soil material removal. Excavation areas shall not exceed fill areas by more than 50 percent of the square footage. Any excavation below the ordinary high water line shall not count toward compensating for fill.

RESPONSE: Cut and fill are balanced in the proposed design. No additional fill is proposed.

27.060 C.

Excavation to balance a fill shall be located on the same lot or parcel....

RESPONSE: All project work is located on-site. No fill is proposed.

27.060 D.

Minimum finished floor elevations must be at least one foot above the design flood height or highest flood of record.....

RESPONSE: The finished habitable floor line (1st floor) is proposed at elevation 76.1', 1.0 foot above the established 100 year flood plain of 75.1'.

27.060 E.

Temporary fills permitted during construction shall be removed.

RESPONSE: All temporary fills will be removed prior to completion of construction.

27.060 F,

Prohibit encroachments, including fill, new construction, substantial improvements, and other development in floodways.....

RESPONSE: No encroachments into floodway are requested.

27.060 G. All proposed improvements to the floodplain or floodway which might impact the flood carrying capacity of the river shall be designed by a professional civil engineer licensed to practice in the State of Oregon.

RESPONSE: Engineered stamped foundation wall venting plans for the crawl space will be provided by AKS Engineering.

27.060 H.

New culverts, stream crossings, and transportation projects.....

RESPONSE: No new culverts, stream crossings, etc. as defined in this section are proposed.

27.060 I.

Excavation and fill required for the construction of detention facilities....shall be designed to reduce or mitigate flood impacts and improve water quality.

RESPONSE: No detention facilities or levees as defined in this section are proposed.

27.060 J.

The applicant shall provide evidence that all necessary permits have been obtained from those federal, State, or local governmental agencies from which prior approval is required.

RESPONSE: All permits for this proposal are to be obtained from City of West Linn and/or Clackamas County, and other relevant agencies as necessary.

27.070 A.

All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage using methods and practices that minimize flood damage.

RESPONSE: All structural components below the BFE will be either concrete, steel or pressure treated lumber

27.070 B.

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

RESPONSE: All components (other than sealed plumbing lines) will be elevated above the BFE of 75.1'.

27.070 C.

New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

RESPONSE: All water supply components shall be fully pressure tight.

27.070 D.

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

RESPONSE: All on-site sanitary sewerage system components shall be fully water tight.

27.070 E.

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

RESPONSE: No on-site waste disposal systems are proposed. The public sanitary system shall be utilized.

27.070 F.

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

RESPONSE: The crawlspace has been included as part of the Flood Storage volume and as such will be designed with the necessary engineered vents (Flood Flaps - <http://floodflaps.com/ffnf08tf-multi-purpose-flood-vents/>) to automatically equalize hydrostatic flood forces by allowing entry and exit of floodwaters.

27.080 A.

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

RESPONSE: The finished habitable floor level (1st floor) is proposed at elevation 76.1, one foot above the established BFE of 75.1'.

27.080 B.

Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces....

RESPONSE: The crawlspace has been included as part of the Flood Storage volume and as such will be designed by AKS, Oregon Licensed engineer with the necessary engineered vents (Flood Flaps - <http://floodflaps.com/ffnf08tf-multi-purpose-flood-vents/>) to automatically equalize hydrostatic flood forces by allowing entry and exit of floodwaters. Reference is made to FEMA Technical Bulletin 1, August 2008 – Openings in Foundation Walls and Walls of Enclosures.

1. Openings shall be provided at 1 square inch / square foot of enclosure minimum.
2. Bottom of openings will be a maximum of 12" above grade.
3. Openings shall have screens and/or louvers that permit automatic entry and exit of floodwaters.
4. Enclosed areas below BFE shall only be used for parking, access or limited storage.
5. Service equipment is not permitted below BFE.
6. All construction below BFE must be unfinished and constructed of materials resistant to flood damage. Materials shall be concrete, steel and/or pressure treated lumber.

27.080 C.

Crawlspaces below BFE:

RESPONSE: The entire area below the habitable structure (levels 1 & 2) will be built as a uninhabitable crawlspace subject to the restrictions of 27.080 B above. Specific provisions of 27.080 C therefore do not apply.

27.080 D.

A poured slab placed over fill can be used to elevate the lowest floor of a structure above the BFE.

RESPONSE: Filling of site in order to construct habitable structure as opposed to elevating it upon an enclosed structure similar to existing conditions would violate provisions of 27.060 B by substantially reducing the site's Flood Storage volume. Proposed crawlspace will be designed to resist hydrostatic forces & allow flood water to flow through.

27.080 E.

Placing a structure on piers, piles, and posts is allowed provided supporting members are designed to resist hydrostatic and hydrodynamic forces.

RESPONSE: The proposed home has no proposed piers, piles and posts as defined in this section. The decks will be constructed with 6"x6" post onto a embedded footing.

27.120 A.

Alteration of Watercourses

RESPONSE: No alteration of existing watercourses are proposed.

Narrative Addressing Chapter 28: Willamette River Green Way

28.110 APPROVAL CRITERIA

28.110 A. Development: All sites.

1. *Sites shall first be reviewed using the HCA Map to determine if the site is buildable or what portion of the site is buildable. HCAs shall be verified by the Planning Director per CDC [28.070](#) and site visit. Also, "tree canopy only" HCAs shall not constitute a development limitation and may be exempted per CDC [28.070\(A\)](#). The municipal code protection for trees and Chapters 55 and 85 CDC tree protection shall still apply.*

2. *HCAs shall be avoided to the greatest degree possible and development activity shall instead be directed to the areas designated "Habitat and Impact Areas Not Designated as HCAs," consistent with subsection (A)(3) of this section.*

3. *If the subject property contains no lands designated "Habitat and Impact Areas Not Designated as HCAs" and development within HCA land is the only option it shall be directed towards the low HCA areas first, then medium HCA areas and then to high HCA as the last choice. The goal is to, at best, avoid or, at least, minimize disturbance of the HCAs. (Water-dependent uses are exempt from this provision.)*

RESPONSE: Per the Metro Habitat Conservation Area (HCA) map, the entire property is in a "Moderate" HCA so there is no opportunity to direct development to lesser HCA classifications. Site is buildable per 28.110 B. (4.).

4. All development, including exempted activities of CDC 28.040, shall have approved erosion control measures per Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual, rev. 2008, in place prior to site disturbance and be subject to the requirements of CDC 32.070 and 32.080 as deemed applicable by the Planning Director.

RESPONSE: Per construction plan a silt fence will be placed at northern boundary of disturbance area, prior and for the duration of development, to avoid any disturbance to WRA that will not be effected by development.

28.110 B. Single-family or attached residential.

4. Development may occur on legal lots and non-conforming lots of record located completely within the HCA areas or that have the majority of the lot in the HCA to the extent that the applicant has less than 5,000 square feet of non-HCA land.

RESPONSE: As there is only HCA land available we will reduce impact on WRA by pushing the house as close to the existing driveway and by designing the floor plan to protrude into WRA setback as little as possible. The total disturbed area will be less than 5000 sq. ft.

28.110 C. Setbacks from top of bank.

RESPONSE: The criteria applies to properties adjacent to the Willamette River. This property is 575 feet from the river and therefore the criteria does not apply.

28.110 D. Development of lands designated for industrial, commercial, office, public and other non-residential uses.

RESPONSE: The proposed development is residential zoned R-10.

28.110 E. Hardship provisions and non-conforming structures.

RESPONSE: There are no existing structures on site.

28.110 F. Access and property rights.

RESPONSE: The property is not adjacent to any public land and does not have river frontage. Criteria does not apply.

28.110 G. Incentives to encourage access in industrial, multi-family, mixed use, commercial, office, public and non-single-family residential zoned areas.

RESPONSE: The proposed development is on a lot zoned single-family R-10.

28.110 H. Partitions, subdivisions and incentives.

RESPONSE: No proposed dividing of lot and no river frontage. No subdivision or partition is proposed so this criteria is not applicable.

28.110 I. Docks and other water-dependent structures.

RESPONSE: No docks or other water-dependent structures are proposed so this criteria does not apply.

28.110 J. Joint docks.

RESPONSE: No joint docks are proposed.

28.110 K. Non-conforming docks and other water-related structures.

RESPONSE: No non-conforming docks or other water-related structures are proposed.

28.110 L. Roads, driveways, utilities, or passive use recreation facilities.

RESPONSE: No recreation facilities are proposed. A driveway from the existing driveway to the garage is proposed and to be constructed of mostly permeable materials.

28.110 M. Structures.

RESPONSE: This provision does not apply since this was written for structures along the Willamette River and does not apply to upland HCAs. Nonetheless, as much as possible, earth tones or natural wood materials will be used in the exterior design.

28.110 N. Water-permeable materials for hardscapes.

The use of water-permeable materials for parking lots, driveways, patios, and paths as well as flow-through planters, box filters, bioswales and drought tolerant plants are strongly encouraged in all "a" and "b" land classifications and shall be required in all "c" and "d" land classifications. The only exception in the "c" and "d" classifications would be where it is demonstrated that water-permeable driveways/hardscapes could not structurally support the axle weight of vehicles or equipment/storage load using those areas. Flow through planters, box filters, bioswales, drought tolerant plants and other measures of treating and/or detaining runoff would still be required in these areas.

RESPONSE: All covered areas to be decks and pathway to front door to be a very minimum invasive concrete path that is "non-continuous" so as to allow as much permeable surface as possible. Native water friendly plants will be incorporated into the landscaping and a Rain garden will be utilized to capture storm water. The majority of the proposed driveway to be constructed out of permeable crushed gravel.

28.110 O. Signs and graphics.

RESPONSE: No signs or graphics proposed.

28.110 P. Lighting. *Lighting shall not be focused or oriented onto the surface of the river except as required by the Coast Guard. Lighting elsewhere in the protection area shall be the minimum necessary and shall not create off-site glare or be omni-directional. Screens and covers will be required.*

RESPONSE: No lighting proposed to be focused on river or protected area.

28.110 Q. Parking. *Parking and unenclosed storage areas located within or adjacent to the protection area boundary shall be screened from the river in accordance with Chapter 46 CDC, Off-Street Parking, Loading and Reservoir Areas. The use of water-permeable material to construct the parking lot is either encouraged or required depending on HCA classification per CDC 28.110(N)(4).*

RESPONSE: No proposed parking next to river.

28.110 R. Views. *Significant views of the Willamette and Tualatin Rivers shall be protected as much as possible as seen from the following public viewpoints: Mary S. Young Park, Willamette Park, Cedar Oak Park, Burnside Park, Maddox Park, Cedar Island, the Oregon City Bridge, Willamette Park, and Fields Bridge Park.*

Where options exist in the placement of ramps and docks, the applicant shall select the least visually intrusive location as seen from a public viewpoint. However, if no options exist, then the ramp, pilings and dock shall be allowed at the originally proposed location.

RESPONSE: No ramp, pilings or docks proposed.

28.110 S. Aggregate deposits.

Extraction of aggregate deposits or dredging shall be conducted in a manner designed to minimize adverse effects on water quality, fish and wildlife, vegetation, bank stabilization, stream flow, visual quality, noise and safety, and to promote necessary reclamation.

RESPONSE: No deposits or dredging proposed.

28.110 T. Changing the landscape/grading.

1. Existing predominant topographical features of the bank line and escarpment shall be preserved and maintained except for disturbance necessary for the construction or establishment of a water related or water dependent use. Measures necessary to reduce potential bank and escarpment erosion, landslides, or flood hazard conditions shall also be taken.

Any construction to stabilize or protect the bank with rip rap, gabions, etc., shall only be allowed where there is clear evidence of erosion or similar hazard and shall be the minimum needed to stop that erosion or to avoid a specific and identifiable hazard. A geotechnical engineer's stamped report shall accompany the application with evidence to support the proposal.

2. The applicant shall establish to the satisfaction of the approval authority that steps have been taken to minimize the impact of the proposal on the riparian environment (areas between the top of the bank and the low water mark of the river including lower terrace, beach and river edge).

3. The applicant shall demonstrate that stabilization measures shall not cause subsequent erosion or deposits on upstream or downstream properties.

4. Prior to any grading or development, that portion of the HCA that includes wetlands, creeks, riparian areas and water resource area shall be protected with an anchored chain link fence (or approved equivalent) at its perimeter and shall remain undisturbed except as specifically allowed by an approved Willamette and Tualatin River Protection and/or water resource area (WRA) permit. Such fencing shall be maintained until construction is complete. That portion of the HCA that includes wetlands, creeks, riparian areas and water resource area shall be identified with City-approved permanent markers at all boundary direction changes and at 30- to 50-foot intervals that clearly delineate the extent of the protected area.

5. Full erosion control measures shall be in place and approved by the City Engineer prior to any grading, development or site clearing.

RESPONSE: No development on bank proposed. A silt fence will be placed before development and will be used to control erosion for the full extent of development.

28.110 U. Protect riparian and adjacent vegetation.

Vegetative ground cover and trees upon the site shall be preserved, conserved, and maintained according to the following provisions:

RESPONSE: This criteria relates to vegetation adjacent to the Willamette River and below the ordinary high water mark (OHW). The building area is approximately 575 feet from the river and the OHW; therefore this criteria does not apply.

Narrative Addressing Chapter 32 Water Resource Area

32.060 A. APPROVAL CRITERIA (STANDARD PROCESS)

WRA protection/minimizing impacts.

1. *Development shall be conducted in a manner that will avoid or, if avoidance is not possible, minimize adverse impact on WRAs.*

RESPONSE: The proposed building was designed strategically to have a minimum impact on the WRAs. The house was pushed closer to the private driveway easement to further avoid any impact on WRA yet still respecting the neighbors as to not sit right on top of them. Further, the most impacting functions (driveways and parking) are strategically located outside of the WRA.

2. *Mitigation and re-vegetation of disturbed WRAs shall be completed per CDC 32.090 and 32.100 respectively.*

RESPONSE: See Rain Garden Planting Plan and WRA Mitigation Enhanced Planting Plan(Sheets L1 and L2) that complies with these requirements.

32.060 B. Storm water and storm water facilities.

1. *Proposed developments shall be designed to maintain the existing WRAs and utilize them as the primary method of storm water conveyance through the project site unless:*

- a. *The surface water management plan calls for alternate configurations (culverts, piping, etc.); or...*

RESPONSE: No culverts are proposed. All storm water from impervious surfaces such as roof and gutters will be directed to a Rain Garden that will be planted with native vegetation.

b. *Under CDC 32.070, the applicant demonstrates that the relocation of the water resource will not adversely impact the function of the WRA including, but not limited to, circumstances where the WRA is poorly defined or not clearly channelized.*

RESPONSE: The design has worked at minimizing the impact and does not seek to relocate the resource. All storm water from impervious surfaces such as roof and gutters will be directed to a Rain Garden that will be planted with native vegetation.

c. Re-vegetation, enhancement and/or mitigation of the re-aligned water resource shall be required as applicable.

RESPONSE: The proposed design calls for all native vegetation to be replanted in the affected areas at a 1 to 1 square foot ratio of disturbed WRA to enhanced mitigation.

2. Public and private storm water detention, storm water treatment facilities and storm water outfall or energy dissipaters (e.g., rip rap) may encroach into the WRA if:

a. Accepted engineering practice requires it;

b. Encroachment on significant trees shall be avoided when possible, and any tree loss shall be consistent with the City's Tree Technical Manual and mitigated per CDC 32.090;

c. There shall be no direct outfall into the water resource, and any resulting outfall shall not have an erosive effect on the WRA or diminish the stability of slopes; and

d. There are no reasonable alternatives available.

A geotechnical report may be required to make the determination regarding slope stability.

RESPONSE: There is a proposed Rain Garden where rainwater detention will take place. There is no other location for rainwater to be directed to.

3. Roadside storm water conveyance swales and ditches may be extended within rights-of-way located in a WRA. When possible, they shall be located along the side of the road furthest from the water resource. If the conveyance facility must be located along the side of the road closest to the water resource, it shall be located as close to the road/sidewalk as possible and include habitat friendly design features (treatment train, rain gardens, etc.).

RESPONSE: There are no proposed roadside storm water conveyance swales or ditches.

4. Storm water detention and/or treatment facilities in the WRA shall be designed without permanent perimeter fencing and shall be landscaped with native vegetation.

RESPONSE: There is no fencing proposed around any storm water detention or treatment facilities. Plants residing in the drainage Rain Garden will be native.

5. Access to public storm water detention and/or treatment facilities shall be provided for maintenance purposes. Maintenance driveways shall be constructed to minimum width and use water permeable paving materials. Significant trees, including roots, shall not be disturbed to the degree possible. The encroachment and any tree loss shall be mitigated per CDC 32.090. There shall also be no adverse impacts upon the hydrologic conditions of the site.

RESPONSE: The application does not include public stormwater detention or treatment facilities. The criterion does not apply.

32.060 D.

WRA width. Except for the exemptions in CDC 32.040, applications that are using the alternate review process of CDC 32.070, or as authorized by the approval authority consistent with the

provisions of this chapter, all development is prohibited in the WRA as established in Table 32-2 Below:

RESPONSE: In accordance with the Hardship provisions of 32.110 development may include a maximum disturbance area of up to 5,000 Sq. Ft. This application includes a site plan design that conforms to this requirement and further minimizes impacts to the WRA.

32.060 E. Roads, driveways and utilities.

1. New roads, driveways, or utilities shall avoid WRAs unless the applicant demonstrates that no other practical alternative exists. In that case, road design and construction techniques shall minimize impacts and disturbance to the WRA by the following methods: ...

RESPONSE: The site plan design for the proposed project minimized the area of driveway to be completely out of the WRA.

2. Crossing of fish bearing streams and riparian corridors shall use bridges or arch-bottomless culverts or the equivalent that provides comparable fish protection, to allow passage of wildlife and fish and to retain the natural stream bed.

RESPONSE: There is no proposed crossing of the stream or riparian corridor.

3. New utilities spanning fish bearing stream sections, riparian corridors, and wetlands shall be located on existing roads/bridges, elevated walkways, conduit, or other existing structures or installed underground via tunneling or boring at a depth that avoids tree roots and does not alter the hydrology sustaining the water resource, unless the applicant demonstrates that it is not physically possible or it is cost prohibitive. Bore pits associated with the crossings shall be restored upon project completion. Dry, intermittent streams may be crossed with open cuts during a time period approved by the City and any agency with jurisdiction.

RESPONSE: There are no utilities crossing the stream or riparian corridor.

4. No fill or excavation is allowed within the ordinary high water mark of a water resource, unless all necessary permits are obtained from the City, U.S. Army Corps of Engineers and Oregon Department of State Lands (DSL).

RESPONSE: There is no proposed fill or excavation within the ordinary high water mark of the stream.

5. Crossings of fish bearing streams shall be aligned, whenever possible, to serve multiple properties and be designed to accommodate conduit for utility lines. The applicant shall, to the extent legally permissible, work with the City to provide for a street layout and crossing location that will minimize the need for additional stream crossings in the future to serve surrounding properties.

RESPONSE: There is no proposed crossing of the stream or riparian corridor.

32.060 F. Passive recreation.

Low impact or passive outdoor recreation facilities for public use including, but not limited to, multi-use paths and trails, not exempted per CDC 32.040(B)(2), viewing platforms, historical or natural interpretive markers, and benches in the WRA, are subject to the following standards:

RESPONSE: The proposed development is not for passive recreation.

32.060 G. Daylighting Piped Streams.

1. As part of any application, covered or piped stream sections shown on the WRA Map are encouraged to be “daylighted” or opened. Once it is daylighted, the WRA will be limited to 15 feet on either side of the stream. Within that WRA, water quality measures are required which may include a storm water treatment system (e.g., vegetated bioswales), continuous vegetative ground cover (e.g., native grasses) at least 15 feet in width that provides year round efficacy, or a combination thereof...

RESPONSE: The proposed development has no piped streams.

32.060 H. The following habitat friendly development practices shall be incorporated into the design of any improvements or projects in the WRA to the degree possible:

1. Restore disturbed soils to original or higher level of porosity to regain infiltration and storm water storage capacity. ...

RESPONSE: All disturbed areas will be returned to original or higher level of porosity.

2. Apply a treatment train or series of storm water treatment measures to provide multiple opportunities for storm water treatment and reduce the possibility of system failure.

RESPONSE: The proposed design directs rainwater that falls on the roof into a rain garden. There is a clean-out and back-flow prevention device to reduce possibility of failure.

3. Incorporate storm water management in road rights-of-way.

RESPONSE: No road rights-of-ways

4. Landscape with rain gardens to provide on-lot detention, filtering of rainwater, and groundwater recharge.

RESPONSE: A rain garden has been included in the design.

5. Use multi-functional open drainage systems in lieu of conventional curb-and-gutter systems.

RESPONSE: All storm water to flow to rain garden system.

6. Use green roofs for runoff reduction, energy savings, improved air quality, and enhanced aesthetics.

RESPONSE: Costs and required maintenance makes this option not feasible for this project. However, all of the rainwater does flow through a rain garden/filtration area.

7. Retain rooftop runoff in a rain barrel for later on-lot use in lawn and garden watering.

RESPONSE: Rooftop runoff to be directed to rain garden and not to rain barrels due to costs, upkeep/required maintenance.

8. Disconnect downspouts from roofs and direct the flow to vegetated infiltration/filtration areas such as rain gardens.

RESPONSE: All of the rainwater from roof proposed to flow through a rain garden/filtration area.

9. Use pervious paving materials for driveways, parking lots, sidewalks, patios, and walkways.

RESPONSE: The majority of the proposed driveway to be permeable crushed gravel materials.

10. Reduce sidewalk width to a minimum four feet. Grade the sidewalk so it drains to the front yard of a residential lot or retention area instead of towards the street.

RESPONSE: No sidewalks proposed. Small pathway, to entry deck stairs, to be non-continuous paved pathway to allow for the maximum of permeable materials as possible.

11. Use shared driveways.

RESPONSE: Sharing the driveway of the neighbors proposed plan on Parcel 1 will not allow a floor plan that's functional while also having the least impact on the WRA.

12. Reduce width of residential streets and driveways, especially at WRA crossings.

RESPONSE: Access to the lot is incorporating an existing private driveway.

13. Reduce street length, primarily in residential areas, by encouraging clustering.

RESPONSE: The proposed design is using existing streets.

14. Reduce cul-de-sac radii and use pervious and/or vegetated islands in center to minimize impervious surfaces.

RESPONSE: The proposed design is using existing streets.

15. Use previously developed areas (PDAs) when given an option of developing PDA versus non-PDA land.

RESPONSE: The proposed residence is utilizing the last remaining lot of a development.

16. Minimize the building, hardscape and disturbance footprint.

RESPONSE: The proposed design focuses on highly usable area. The living area utilizes a great room concept that eliminates the traditional layout with separate living room, dining room, and kitchen which requires more square footage.

17. Consider multi-story construction over a bigger footprint. (Ord. 1623 § 1, 2014; Ord. 1635 § 19, 2014)

RESPONSE: The proposed design is two stories with the majority of the bedrooms upstairs as well as the ADU to be above the garage.

32.070 ALTERNATE REVIEW PROCESS & 32.080 APPROVAL CRITERIA (ALTERNATE REVIEW PROCESS)

RESPONSE: This project is currently not seeking an alternate review process.

32.090 MITIGATION PLAN

32.090 A. *A mitigation plan shall only be required if development is proposed within a WRA (including development of a PDA). (Exempted activities of CDC 32.040 do not require mitigation unless specifically stated. Temporarily disturbed areas, including TDAs associated with exempted activities, do not require mitigation, just grade and soil restoration and re-vegetation.) The mitigation plan shall satisfy all applicable provisions of CDC 32.100, Re-Vegetation Plan Requirements.*

RESPONSE: The application for this project includes a Rain Garden Planting Plan and WRA Mitigation Enhanced Planting Plan(Sheets L1 and L2) that meets these requirements.

32.090 B. *Mitigation shall take place in the following locations, according to the following priorities (subsections (B)(1) through (4) of this section):*

1. *On-site mitigation by restoring, creating or enhancing WRAs.*

RESPONSE: The vegetation adjacent to wetland within the WRA buffer is a non-native grass and forb dominant community equating a degraded condition. This project includes the removal of blackberry bushes from the site and planting native trees and shrubs in the WRA area of the lot. The disturbed WRA will mostly be impacting non-native grasses which will be mitigated at a ratio of 1:1 with native shrubs or trees.

2. *Off-site mitigation in the same sub-watershed will be allowed, but only if the applicant has demonstrated that:*

a. *It is not practicable to complete mitigation on-site, for example, there is not enough area on-site; and*

b. *The mitigation will provide equal or superior ecological function and value.*

RESPONSE: All vegetation mitigation will take place on-site.

32.090 C. Amount of mitigation.

1. *The amount of mitigation shall be based on the square footage of the permanent disturbance area by the application. For every one square foot of non-PDA disturbed area, on-site mitigation shall require one square foot of WRA to be created, enhanced or restored.*

RESPONSE: All disturbed WRA will be enhanced or restored by mitigating (see Mitigation Plan)

2. *For every one square foot of PDA that is disturbed, on-site mitigation shall require one half a square foot of WRA vegetation to be created, enhanced or restored.*

RESPONSE: This project has no previously disturbed areas (PDA).

3. *For any off-site mitigation, including the use of DSL mitigation credits, the requirement shall be for every one square foot of WRA that is disturbed, two square feet of WRA shall be created, enhanced or restored. The DSL mitigation credits program or mitigation bank shall require a legitimate bid on the cost of on-site mitigation multiplied by two to arrive at the appropriate dollar amount.*

RESPONSE: No off-site mitigation or DSL mitigation credits are proposed in this development.

32.090 D. *The Planning Director may limit or define the scope of the mitigation plan and submittal requirements commensurate with the scale of the disturbance relative to the resource and pursuant to the authority of Chapter 99 CDC. The Planning Director may determine that a consultant is required to complete all or a part of the mitigation plan requirements.*

32.090 E. A mitigation plan shall contain the following information:

1. *A list of all responsible parties including, but not limited to, the owner, applicant, contractor, or other persons responsible for work on the development site.*
2. *A map showing where the specific adverse impacts will occur and where the mitigation activities will occur.*
3. *A re-vegetation plan for the area(s) to be mitigated that meets the standards of CDC 32.100.*
4. *An implementation schedule, including timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting. All in-stream work in fish bearing streams shall be done in accordance with the Oregon Department of Fish and Wildlife.*
5. *Assurances shall be established to rectify any mitigation actions that are not successful within the first three years. This may include bonding or other surety. (Ord. 1623 § 1, 2014)*

RESPONSE: Provided. Refer to Rain Garden Planting Plan and WRA Mitigation Enhanced Planting Plan(Sheets L1 and L2).

32.100 RE-VEGETATION PLAN REQUIREMENTS

32.100 A. *In order to achieve the goal of re-establishing forested canopy, native shrub and ground cover and to meet the mitigation requirements of CDC 32.090 and vegetative enhancement of CDC 32.080, tree and vegetation plantings are required according to the following standards:*

1. *All trees, shrubs and ground cover to be planted must be native plants selected from the Portland Plant List.*
2. *Plant size. Replacement trees must be at least one-half inch in caliper,....*

RESPONSE: Landscaping plans submitted for building permit shall meet the criteria in 32.100 A.

32.110 HARDSHIP PROVISIONS

The purpose of this section is to ensure that compliance with this chapter does not deprive an owner of reasonable use of land. To avoid such instances, the requirements of this chapter may be reduced. The decision-making authority may impose such conditions as are deemed necessary to limit any adverse impacts that may result from granting relief. The burden shall be on the applicant to demonstrate that the standards of this chapter, including Table 32-2, Required Width of WRA, will deny the applicant "reasonable use" of his/her property.

- A. The right to obtain a hardship allowance is based on the existence of a lot of record recorded with the County Assessor's Office on, or before, January 1, 2006. The lot of record may have

been, subsequent to that date, modified from its original platted configuration but must meet the minimum lot size and dimensional standards of the base zone.

- B. For lots described in subsection A of this section that are located completely or partially inside the WRA, development is permitted, consistent with this section. The maximum disturbed area (MDA) of the WRA shall be determined on a per lot basis. The MDA shall be the greater of:

1. Five thousand square feet of the WRA; or
2. Thirty percent of the total area of the WRA.

RESPONSE: The proposed development has a MDA of less than 5000 Square feet.

- C. The MDA shall be located as follows:

1. In areas where the development will result in the least square footage encroachment into the WRA.
2. The applicant shall demonstrate, through site and building design, that the proposed development is the maximum practical distance from the water resource based on the functional needs of the proposed use.
3. The minimum distance from a water resource shall be 15 feet.
4. Access driveways shall be the minimum permitted width; select an alignment that is least impactful upon the WRA; and shall share use of the driveway, where possible.

RESPONSE: The design and placement of this development was strategically done in a manner that it has a minimum disturbance to the WRA. The single family house is pushed away from the WRA a reasonable amount to minimize impact but also respect the neighbors. All development is at least 15 feet away from the water resource. Walkways to be non-continuous concrete with porous materials in between and on the sides. Driveway to be compacted permeable crushed gravel with approaches to driveway and garage to be concrete to avoid bringing gravel into the garage or onto the private street.

- D. The MDA shall include:

1. The footprints of all structures, including accessory structures, decks and paved water impermeable surfaces including sidewalks, driveways, parking pads, paths, patios and parking lots, etc. Only 75 percent of water permeable surfaces at grade shall be included in the MDA.
2. All graded, disturbed or modified areas that are not subsequently restored to their original grade and replanted with native ground cover per an approved plan.

RESPONSE: The MDA will be less than 5000 square feet including all the above listed inclusions.

E. The MDA shall not include:

1. Temporarily disturbed areas (TDAs) adjacent to an approved structure or development area for the purpose of grading, material storage, construction activity, trenched or buried utilities and other temporary activities so long as these areas are subsequently restored to the original grades and soil permeability, and re-vegetated with native plants per CDC [32.100](#), such that they are at least equal in functional value to the area prior to the initiation of the permitted activity;
2. Bay windows and similar cantilevered elements (including decks, etc.) of the principal or secondary structure so long as they do not extend more than five feet towards the WRA from the vertical plane of the house, and have no vertical supports from grade;
3. PDAs that are not built upon as part of the development proposal will not count in the MDA (e.g., use of an existing access driveway). (Conversely, PDAs that are built upon as part of the development proposal will count in the MDA.);
4. The installation of public streets and public utilities that are specifically required to meet either the transportation system plan or a utility master plan so long as all trenched public utilities are subsequently restored to the original grades and soil permeability, and revegetated with native plants per CDC [32.100](#), such that they are at least equal in functional value to the area prior to the initiation of the permitted activity. All areas displaced by streets shall be mitigated for.

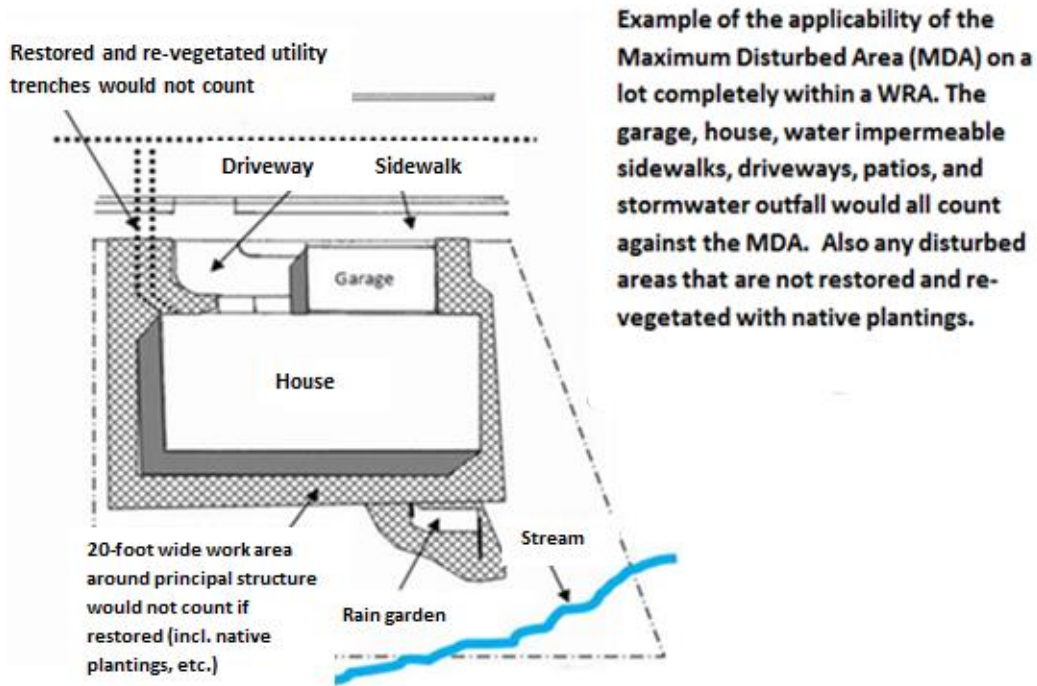
RESPONSE: The existing access driveway to not be included in the MDA.

Table 32-5 MDA Calculation Summary

Type of Development	Square footage included in MDA calculation?
All structures	YES
Non-water permeable paved surfaces including driveways, parking lots, patios, and paths	YES
Approved water permeable paved surfaces including driveways, parking lots, patios, and paths	YES but at 75% of total water permeable surface square footage

TDA's/graded areas that are restored and re-vegetated with native vegetation	NO
TDA's/all utility trenches and buried utilities restored or re-vegetated with native vegetation	NO
PDA's that are built upon or developed as part of the application	YES
PDA's that are not built upon or developed as part of the application	NO
Storm water detention or treatment pond	YES
Rain garden or bioswale with the native plantings as part of re-vegetation plan	NO
Storm water outfall, energy dissipaters (at, or above, grade)	YES
Non-native landscaping	YES
Sharing an existing driveway	NO
Development of lands that are not within the WRA	NO

1. Figure 32-7



F. Development allowed under subsection A of this section may use the following provisions:

1. Setbacks required by the underlying zoning district may be reduced up to 50 percent where necessary to avoid construction within the WRA, as long as the development would otherwise meet the standards of this chapter. However, front loading garages shall be set back a minimum of 18 feet, while side loading garages shall be set back a minimum of three feet.
2. Landscaping and parking requirements may be reduced for hardship properties but only if all or part of the WRA is dedicated pursuant to CDC [32.060\(C\)](#) or if a restrictive deed covenant is established. These reductions shall be permitted outright and, to the extent that the practices are inconsistent with other provisions or standards of the West Linn CDC, this section is given precedence so that no variance is required. The allowable reductions include:
 - a. Elimination of landscaping for the parking lot interior.
 - b. Elimination of the overall landscape requirement (e.g., 20 percent for commercial uses).
 - c. Elimination of landscaping between parking lots and perimeter non-residential properties.
 - d. Landscaping between parking lots and the adjacent right-of-way may be reduced to eight feet. This eight-foot-wide landscaped strip may be used for vegetated storm water detention or treatment.

e. A 25 percent reduction in total required parking is permitted to minimize or avoid intrusion into the WRA.

f. Adjacent improved street frontage with curb and sidewalk may be counted towards the parking requirement at a rate of one parking space per 20 lineal feet of street frontage adjacent to the property, subject to City Engineer approval based on the street width and classification.

g. The current compact and full sized parking mix may be modified to allow up to 100 percent compact spaces and no full sized spaces. However, any required ADA compliant spaces shall be provided.

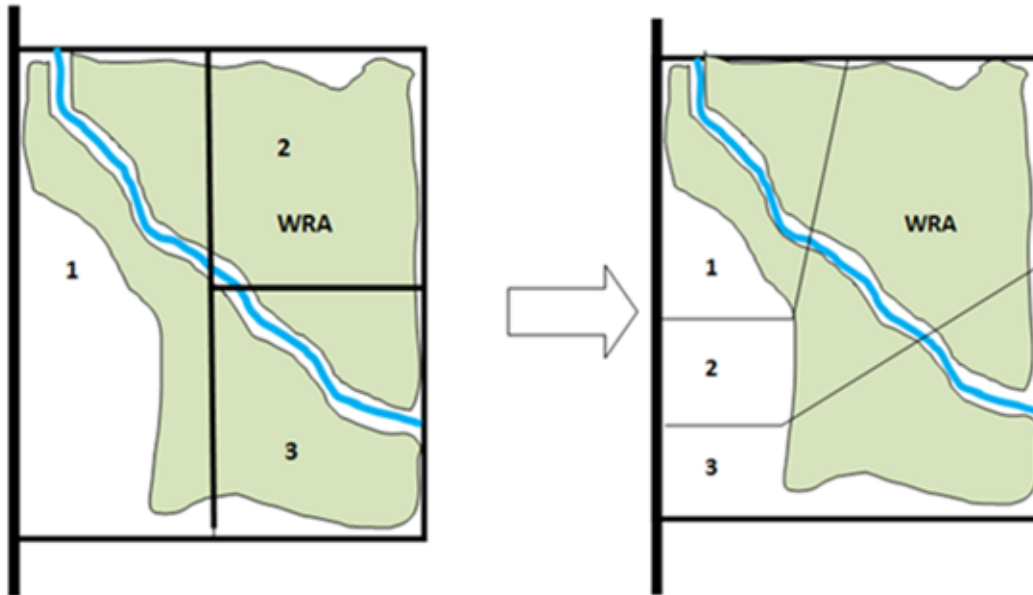
RESPONSE: No reduction in setbacks, parking or landscaping requirements are being requested

G. Where a property owner owns multiple platted lots of record where each lot could be built upon under the hardship provisions, the property owner may either use the MDA for each lot on an individual lot by lot basis or may transfer 100 percent of the cumulative MDA of all the lots to those lots that are further away from, or less impactful upon, the WRA. Lot line adjustments may also be used to facilitate the density transfer. See Figure 32-8.

RESPONSE: Only one lot is proposed for development.

2. Figure 32-8

Transferring MDA from constrained lots 2 and 3 to the west edge of lot 1 which is out of the WRA. In this case, the transfer is accomplished by a lot line adjustment.



H. Mitigation and re-vegetation of disturbed WRAs shall be completed per CDC [32.090](#) and [32.100](#) respectively.

RESPONSE: All mitigation and re-vegetation will be completed in accordance with CDC 32.090 and 32.100 (See mitigating plan)

I. Any further modification of the standards of this chapter or the underlying zone shall require approval of a variance pursuant to Chapter [75](#) CDC. (Ord. 1623 § 1, 2014)

RESPONSE: No additional modifications of the standards in this chapter are requested.

End of Narrative.

ELEVATION CERTIFICATE

Important: Follow the instructions on pages 1-9.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

SECTION A – PROPERTY INFORMATION				FOR INSURANCE COMPANY USE	
A1. Building Owner's Name Jason Francis				Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 1041 9th Street				Company NAIC Number:	
City West Linn		State Oregon		ZIP Code 97068	
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Parcel 2, Partition Plat No. 2016-015, Clackamas County Plat Records, City of West Linn, Oregon					
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>Residential</u>					
A5. Latitude/Longitude: Lat. <u>45.341758</u> Long. <u>-122.646372</u> Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> NAD 1983					
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.					
A7. Building Diagram Number <u>8</u>					
A8. For a building with a crawlspace or enclosure(s):					
a) Square footage of crawlspace or enclosure(s) <u>2,068</u> sq ft					
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>11</u>					
c) Total net area of flood openings in A8.b <u>2,420</u> sq in					
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
A9. For a building with an attached garage:					
a) Square footage of attached garage <u>516</u> sq ft					
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade <u>3</u>					
c) Total net area of flood openings in A9.b <u>660</u> sq in					
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number CLACKAMAS COUNTY 415588			B2. County Name Clackamas		B3. State Oregon
B4. Map/Panel Number 41005C0259	B5. Suffix D	B6. FIRM Index Date	B7. FIRM Panel Effective/ Revised Date 06/16/2008	B8. Flood Zone(s) AE	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 75.1
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input checked="" type="checkbox"/> FIS Profile <input type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input type="checkbox"/> Other/Source: _____					
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input checked="" type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other/Source: _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Designation Date: _____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expiration Date: November 30, 2018

IMPORTANT: In these spaces, copy the corresponding information from Section A.			FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 1041 9th Street			Policy Number:
City West Linn	State Oregon	ZIP Code 97068	Company NAIC Number

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: Construction Drawings* Building Under Construction* Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO. Complete Items C2.a–h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: NGS #RD1501 Vertical Datum: NAVD 88

Indicate elevation datum used for the elevations in items a) through h) below.

NGVD 1929 NAVD 1988 Other/Source: _____

Datum used for building elevations must be the same as that used for the BFE.

Check the measurement used.

- | | | | |
|---|-------------|--|---------------------------------|
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor) | <u>70.5</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| b) Top of the next higher floor | <u>76.1</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| c) Bottom of the lowest horizontal structural member (V Zones only) | _____ | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| d) Attached garage (top of slab) | <u>71.5</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| e) Lowest elevation of machinery or equipment servicing the building
(Describe type of equipment and location in Comments) | <u>76.5</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| f) Lowest adjacent (finished) grade next to building (LAG) | <u>70.5</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| g) Highest adjacent (finished) grade next to building (HAG) | <u>72.0</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |
| h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support | <u>70.5</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters |

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No Check here if attachments.

Certifier's Name ROB RETTIG	License Number 60124LS	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> REGISTERED PROFESSIONAL LAND SURVEYOR </div> <div style="border: 1px solid black; padding: 5px;"> OREGON JANUARY 11, 2005 ROBERT D. RETTIG 60124LS RENEWS: 12/31/18 </div>
Title LAND SURVEYOR		
Company Name AKS ENGINEERING & FORESTRY, LLC.		
Address 12965 SW HERMAN ROAD, SUITE 100		
City TUALATIN	State Oregon	ZIP Code 97062
Signature 	Date 05/16/2017	Telephone (503) 563-6151

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments (including type of equipment and location, per C2(e), if applicable)
Elevation listed for item C2(e) refers to a water heater located 5 feet above garage floor level. Flood vents to be installed are engineered flood vents with a net opening of 220 square inches per vent. The purpose of this elevation certificate is a pre-construction elevation certificate. This is not intended for flood insurance.

APPLICANT
 JASON FRANCIS
 503-929-7207

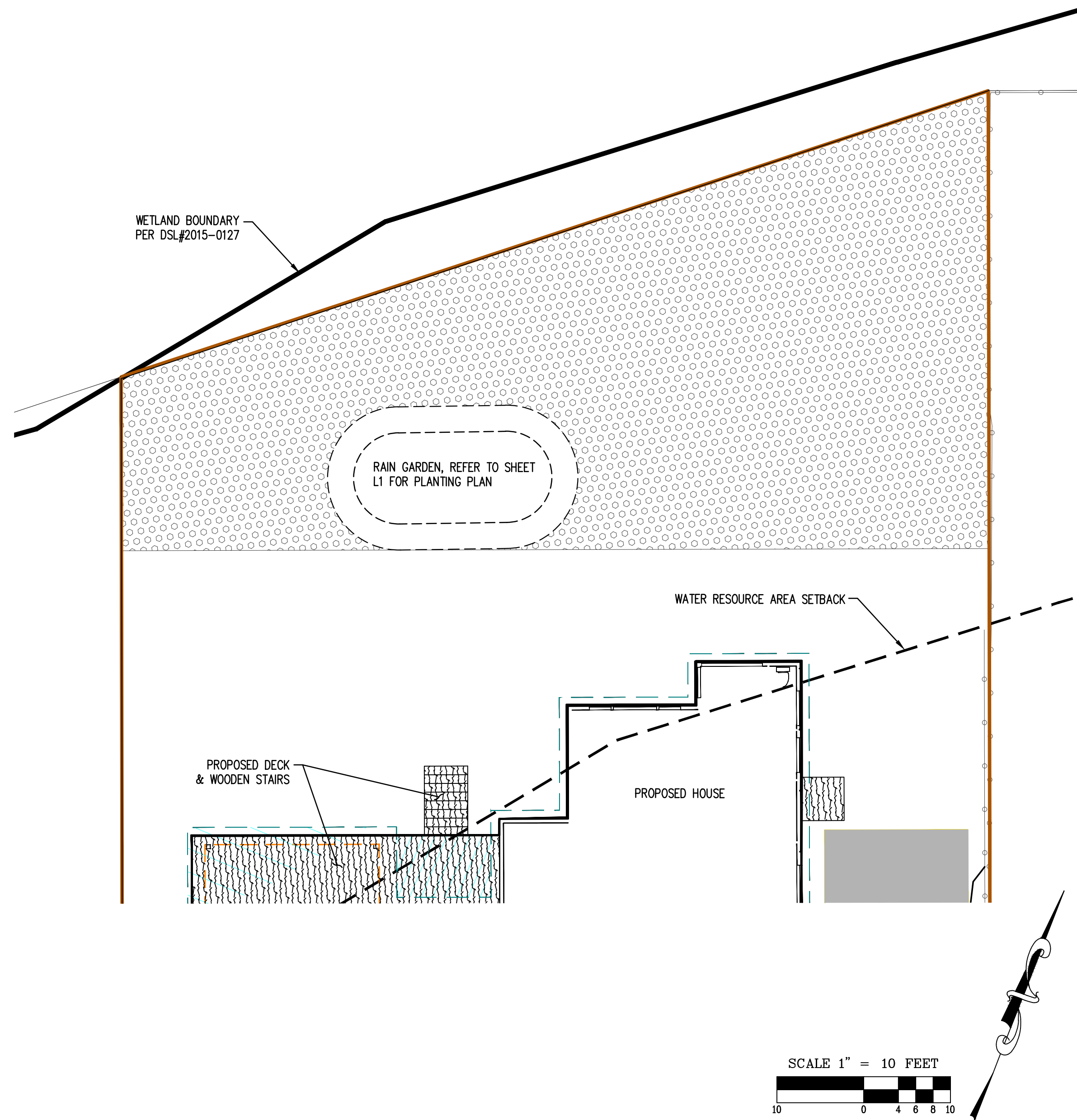
PROJECT AREA SUMMARY	
PROPOSED IMPROVEMENT	DISTURBANCE AREA (SF)
HOUSE	2,544
WOODEN DECK & STAIRS	730
SIDEWALK ENTRANCE	52
PERMEABLE DRIVE-WAY	1,140
TOTAL IMPERVIOUS AREA	3,326
NON-NATIVE PLANTING AREA	4,640

NATURAL RESOURCE SUMMARY AREA	
NATURAL RESOURCE AREA	AREA (SF)
DEGRADED CONDITION WRA (ON-SITE)	6,467

IMPACT AREA WITHIN WRA SUMMARY	
PROPOSED IMPROVEMENT	DISTURBANCE AREA (SF)
HOUSE	106
WOODEN DECK & STAIRS	304
SIDEWALK ENTRANCE	0
DRIVE-WAY	0
NON-NATIVE PLANTING AREA	2,421
TOTAL MDA WITHIN WRA	2,831

MITIGATION SUMMARY	
PROPOSED IMPROVEMENT	DISTURBANCE AREA (SF)
WRA ENHANCEMENT MITIGATION AREA	3,640

*MITIGATION INCLUDES WATER QUALITY FACILITIES



1041 Ninth Street West Linn – WRA/HCA Mitigation Enhancement Planting Specifications
 Planting specifications for the enhancement of 3,221 square feet of enhancement area, not including the rain garden.

Scientific Name	Common Name	Size*	Spacing/Seeding Rate	Quantity
Trees (total 36)				
<i>Acer macrophyllum</i>	bigleaf maple	1 gallon	8-12 feet on center	12
<i>Alnus rubra</i>	red alder	1 gallon	8-12 feet on center	12
<i>Prunus emarginata</i>	bitter cherry	1 gallon	8-12 feet on center	12
Shrubs (total 182)				
<i>Halodiscus discolor</i>	oceanspray	1 gallon	4-5 feet on center	36
<i>Mahonia nervosa</i>	Cascade Oregon-grape	1 gallon	4-5 feet on center	36
<i>Ribes sanguineum</i>	red-flowering currant	1 gallon	4-5 feet on center	37
<i>Sambucus racemosa</i>	red elderberry	1 gallon	4-5 feet on center	36
<i>Symphoricarpos albus</i>	snowberry	1 gallon	4-5 feet on center	37
Seed Mix				
<i>Agrostis exarata</i>	spike bent grass	seed	1 lb pls/acre	As needed for bare-soil areas >25 square feet
<i>Deschampsia elongata</i>	slender hair grass	seed	2 lbs pls/acre	

*Bare-root plants may be substituted for container plants based on availability. If bare-root plants are used, they must be planted during the late winter/early spring dormancy period.

Planting Notes (per City of West Linn Community Development Code (CDC) Chapter 32, Water Resource Area Protection, Section 32.100, Re-Vegetation Plan Requirements):

- Plantings should preferably be installed between December 1 and February 28 for bare roots and seeds and between October 15 and April 30 for containers.
- Tree plantings must be at least 0.5 inches in caliper measured at 6 inches above the ground level or soil line. Shrub plantings must be in at least a 1-gallon container, or the equivalent in ball and burlap, and must be at least 12 inches in height. All plantings must be selected from the Portland Plant List.
- All non-native, invasive, or noxious vegetation shall be removed from mitigation planting area prior to installing native enhancement plantings. Invasive species control shall continue throughout the maintenance period.
- Irrigation may be necessary for the survival of the enhancement plantings. Irrigation or other water practices (i.e., polymer plus watering) are recommended during the three-year monitoring period following planting. Watering shall be provided at a rate of at least 1 inch per week between June 15 and October 15.
- Plantings shall be mulched a minimum of 3 inches in depth and 18 inches in diameter to retain moisture and discourage weed growth around newly installed plant material.
- When weather or other conditions prohibit planting according to schedule, the applicant will ensure that disturbed areas are correctly protected with erosion control measures and provide the City with funds in the amount of 125% of a bid from a recognized landscaper or nursery to cover the cost of the plant materials, installation, and any follow-up maintenance. Once the planting conditions are favorable, the applicant will proceed with the plantings and receive the funds back from the City upon completion, or the City will complete the plantings using those funds.

Maintenance and Monitoring Plan

- Monitoring and Reporting:** The City requires a three-year maintenance period for the WRA mitigation enhancement area. Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die must be replaced in kind.
- Plant Survival:** The City's success criterion for WRA enhancement is 80% survival of tree and shrub plantings expected by the third anniversary of the date the mitigation planting was installed. If any mortality is noted on the site, the factor likely to have caused mortality of the plantings is to be determined and corrected if possible. If survival falls below 80% at any time during the three-year maintenance period, the plantings shall be replaced and other corrective measures, such as mulching or irrigation, may need to be implemented.

AKS
 AKS ENGINEERING & FORESTRY, LLC
 12065 SW HERMAN RD. STE 100
 TUALUMIN, OR 97062
 P: 503.563.6151
 F: 503.563.6152
 aks-eng.com

1041 9TH STREET
WEST LINN
 OREGON
 CLACKAMAS COUNTY TAX MAP 3 1E ZAC
 TAX LOT 1209

WRA MITIGATION ENHANCEMENT PLANTING PLAN

DESIGNED BY: TEB
 DRAWN BY: TEB
 CHECKED BY: KAH
 SCALE: AS NOTED
 DATE: 05/17/2017

REVISIONS

JOB NUMBER
5908
 FIGURE
L2

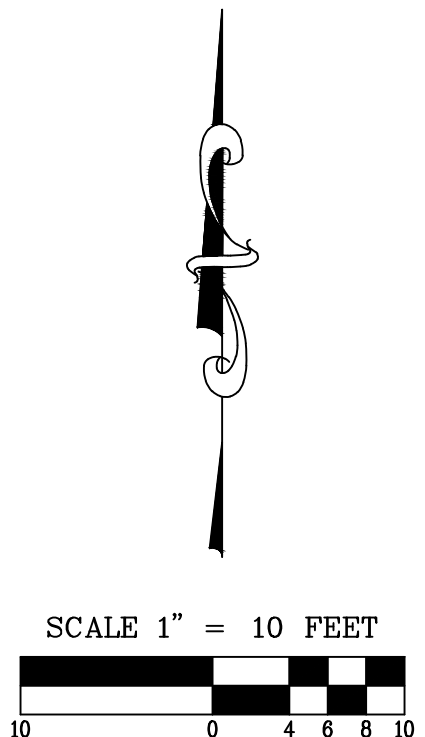
**CONSTRUCTION
 MANAGEMENT PLAN**

DESIGNED BY:
 DRAWN BY: FJS
 CHECKED BY: CEG
 SCALE: AS NOTED
 DATE: 05/01/2017

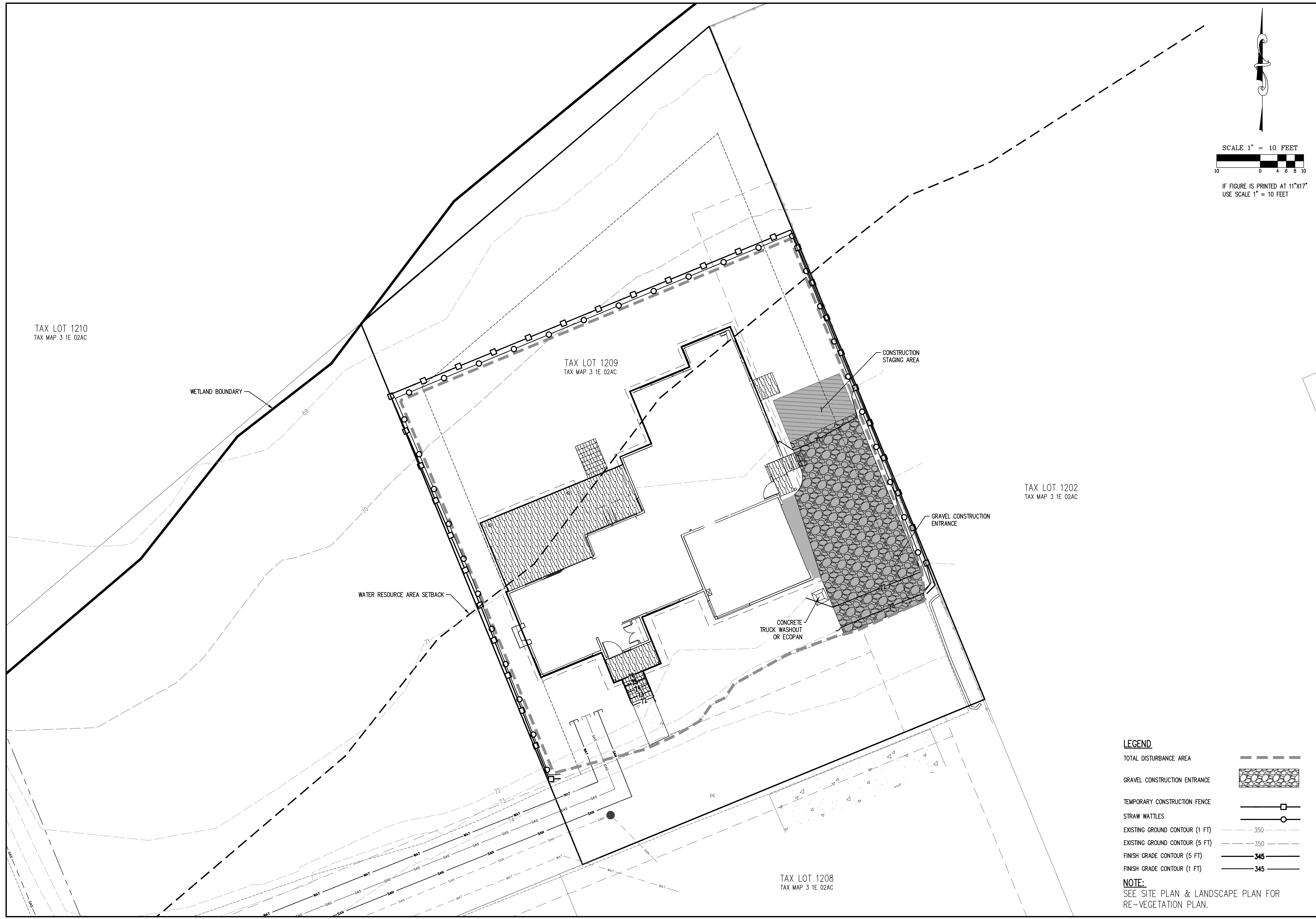
REVISIONS

JOB NUMBER
5908

FIGURE
C1



SCALE 1" = 10 FEET
 IF FIGURE IS PRINTED AT 11"x17"
 USE SCALE 1" = 10 FEET



LEGEND

TOTAL DISTURBANCE AREA	
GRAVEL CONSTRUCTION ENTRANCE	
TEMPORARY CONSTRUCTION FENCE	
STRAW WATTLES	
EXISTING GROUND CONTOUR (1 FT)	
EXISTING GROUND CONTOUR (5 FT)	
FINISH GRADE CONTOUR (5 FT)	
FINISH GRADE CONTOUR (1 FT)	

NOTE:
 SEE SITE PLAN & LANDSCAPE PLAN FOR
 RE-VEGETATION PLAN.

1041 Ninth Street West Linn, Oregon Natural Resource Assessment

Date: May 17, 2017

Prepared for: Jason Francis
1041 9th Street
West Linn, OR 97068

Prepared By: AKS Engineering & Forestry, LLC
Haley Smith, MNR, Natural Resource Specialist
Stacey Reed, PWS, Senior Wetland Scientist

**Assessor's
Information:** Clackamas County Tax Map 3 1E 02AC;
Tax Lot 1209



12965 SW Herman Road, Suite 100
Tualatin, OR 97062
(503) 563-6151

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- Figure 4.** Local Wetland Inventory Map (LWI)
- Figure 5.** City of West Linn WRA Map
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Appendices

- Appendix A:** DSL Concurrence Letter WD#2015-0127
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-

Introduction and Background

AKS Engineering & Forestry, LLC, (AKS) was contracted by Jason Francis to conduct a Natural Resource Assessment on Tax Lot 1209 of Tax Map 3N 1E 02AC, located in West Linn, Clackamas County, Oregon (see Figures 1 and 2). The total study area boundary is approximately 0.34 acres and is located east of Ninth Street.

This report describes the results of the delineation of one palustrine emergent (PEM) wetland (located immediately off-site to the north) and associated 65-foot Water Resource Area (WRA) within the Willamette River watershed. In addition, Moderate Value Title 13 Habitat Conservation Area (HCA) is mapped extending throughout the entire site. The project (referred to as 1041 Ninth Street) consists of the development of a single-family home on one existing lot of record. The construction of the home will require encroachment into the WRA and HCA, requiring mitigation in accordance with West Linn Community Development Code (CDC) Section 32.90. The WRA and HCA provisions of the CDC provide unreasonable use of the site. Therefore, the applicant is applying for a Hardship Variance in accordance with Sections 32.110 and 28.110 of the West Linn CDC.

On-site enhancement mitigation will mitigate for the unavoidable WRA/HCA encroachment, which will meet the required 1:1 mitigation ratio.

This report has been prepared to meet City of West Linn CDC Chapter 28, Willamette and Tualatin River Protection, and Chapter 32, Water Resource Area Protection.

Existing Site Conditions

The site is vacant and consists of an open field dominant in non-native grasses and forbs, including tall false rye grass (*Schedonorus arundinaceus*), meadow-foxtail (*Alopecurus pratensis*), and colonial bent grass (*Agrostis capillaris*), with ox-eye daisy (*Leucanthemum vulgare*), Queen Anne's-lace (*Daucus carota*) and common dandelion (*Taraxacum officinale*). A 20-foot paved private access easement is located along the southern boundary of the project site. The boundary of a large wetland is directly north of the project area and extends north and east of the site. Topography on the site is generally flat (less than 3% slope), with a gradual slope to the north towards the wetland. Surrounding land use is residential, with the Willamette River located nearby to the south.

According to the Clackamas County hydric soils list and the Natural Resources Conservation Service's (NRCS') Soil Survey Map for Clackamas County, the following soil units are mapped within the study area (Figure 3):

- Unit 67 – Newberg fine sandy loam, non-hydric
- Unit 84 – Wapato silty clay loam, hydric

According to the City of West Linn's Local Wetland Inventory (LWI) map, one Field Verified Wetlands is mapped extending into the northern portion of the project site (Figure 4). An Oregon Department of State Lands (DSL) wetland delineation concurrence determined the wetland boundary is located immediately off-site to the north. The City also maintains a Water Resource Areas map that illustrates the approximate wetland boundary and mapped Significant Riparian Corridor immediately north of the project site (Figure 5). In addition to these maps, the City maintains a Habitat Conservation Area (HCA) map that shows Moderate Value HCA mapped over the entirety of the project site (Figure 6).

Existing Protected Water Features

AKS submitted a wetland delineation report to DSL for a wetland (referred to as Wetland A) that is located off-site to the north. The delineation received concurrence on June 23, 2015, under DSL File No. WD#2015-0127 (the DSL concurrence letter is included in Appendix A).

The off-site wetland is dominated by reed canary grass (*Phalaris arundinacea*), tall false rye grass, bent grass (*Agrostis* species), creeping buttercup (*Ranunculus repens*), and field meadow-foxtail. The boundary of the DSL-concurred wetland boundary is shown on Figure 7, Site Plan.

Extent of WRA

According to Table 32-2, Required Width of WRA, in Chapter 32, Water Resource Area Protection, of the City of West Linn's CDC, the width of the WRA setback varies dependent on the type of feature (wetland, water, type of water, and riparian corridor) and slope adjacent to each Protected WRA Resource. Based on the City's criteria, the table below summarizes the WRA setback widths associated with wetland delineated near the project site. The WRA setback surrounding the Protected WRA Resource is shown on the attached Site Plan Map (Figure 7).

Table 1. Summary of Protected WRA Resource and Associated Width of WRA

Protected WRA Resource	Slope Adjacent to Protected WRA Resource	Width of WRA Setback (feet)
Water Resource (Wetland)	< 25%	65

The total area of the on-site WRA is 6,467 square feet (0.15 acres). The setback extends from the edge of the delineated wetland boundary.

Existing Condition of the WRA

An AKS Natural Resource Specialist conducted a site visit on March 23, 2017 to document the existing conditions of the WRA adjacent to the boundary of the off-site wetland. The existing condition of the on-site WRA was determined based on the presence of tree canopy and percent cover of native trees, shrubs, and groundcovers, consistent with City CDC Section 32.050.F. The existing condition of the on-site WRA is described by a single vegetation community, documented at VECO Plot A. In general, the WRA within the project boundaries consists of non-native open grassland, with some invasive vegetation species cover. The data sheet of VECO Plot A is included in Appendix B, and the plot location is shown on the Site Plan Map, Figure 7. Representative photos documenting the existing condition of the on-site WRA are included in Appendix C.

The vegetation community documented at VECO Plot A includes tall false rye grass, field meadow-foxtail, colonial bent grass, ox-eye daisy, Queen Anne's-lace, scattered shoots of Himalayan blackberry (*Rubus armeniacus*), and one beaked hazelnut (*Corylus cornuta*) shrub. Due to the lack of native tree canopy cover and dominance in non-native grasses, the vegetation community associated with VECO Plot A is determined to be in *degraded* condition.

Project

The project involves building a new single-family residence on the site. The home design is modest, yet comparable to homes in the surrounding neighborhood, with the total impervious home footprint being approximately 2,544 square feet. Due to the extent of the on-site WRA and HCA, unavoidable permanent impacts are necessary to accommodate the home and associated amenities (deck, driveway,

and non-native landscape/lawn). The Site Plan is included as Figure 7. The section below describes the impact analysis, mitigation plan, and hardship provisions.

Habitat friendly development practices (Section 32.060.H in the City's CDC) are incorporated with the planned construction of a raingarden located behind the home. Roof downspouts will be piped to allow stormwater to flow freely into the raingarden for filtration and retention. Per Table 32-5, MDA Calculation Summary, of the City's CDC, the footprint of the raingarden does not count towards MDA within WRA. Temporarily disturbed soils to construct the raingarden will be planted with native vegetation to restore WRA/HCA. The raingarden will be located near the home to allow infiltration of stormwater runoff from the roof of the home, yet in a location with adequate distance from the wetland. Grading to construct the raingarden will not result in off-site wetland impact. Best management erosion and sediment control practices will be implemented to ensure no off-site wetland impact. Erosion control measure details are shown in the land use submittal construction documents.

Impact Evaluation

WRA Impact Analysis

The project will result in a total of approximately 2,831 square feet of unavoidable permanent encroachment (MDA) into on-site WRA for a new home, including a wood deck and stairs, and non-native lawn. The existing condition of the WRA is *degraded*, dominant in non-native herbaceous vegetation and lacking native tree and shrub canopy cover. Due to the lack of tree and shrub canopy, only a single beaked hazelnut shrub will be removed for the development of the home, as it is the only existing woody vegetation on site. The existing WRA provides low-quality buffer function to the wetland, and, therefore, WRA impacts for the development of the home are expected to have a minimal effect on the adjacent wetland. To mitigate for the encroachments, the site plan incorporates 3,221 square feet of enhancement area, which will be densely planted with native woody vegetation per the attached planting plan (Appendix D). All MDA and non-MDA items are consistent with Table 32-5, MDA Calculation Summary, of the City's CDC.

Hardship Provisions

WRA

According to Section 32.110, Hardship Provisions, of the CDC, if a property is located on a lot of record and partially or completely within WRA, development is permitted consistent with Section 32.110 requirements. The project meets all the hardship provisions listed in Section 32.110. The total on-site MDA within WRA is less than 5,000 square feet. Careful consideration was given to the footprint of the home, ensuring development activities are at least 15 feet away from the wetland boundary while meeting the minimum setback requirements and utilizing the existing private access road. The home will be located approximately 59 feet from the wetland boundary. The home cannot be located farther away from the wetland boundary due to setback requirements from Ninth Street and the private access easement to the south. The home footprint is modestly sized and compatible with the footprints of the other homes in the neighborhood.

HCA

The entire tax lot is within City/Metro-mapped Moderate/Medium HCA (not "Non-HCA" or "Habitat and Impact Areas Not Designated as HCA"). There are no High HCA lands mapped on the property. Therefore, according to Section 28.110, Approval Criteria, of the City's CDC, when only HCA land is available to build upon, the project must meet all requirements under this Section. The total impervious surface of this project is 3,326 square feet (house/garage, deck/stairs, sidewalk), which is less than 5,000

square feet, meeting the minimum impervious surface disturbance area requirement listed under Section 28.110.B.2. The home and additional MDA surfaces are located the greatest distance and no closer than 15 feet from the off-site wetland boundary. The driveway will be water permeable crushed gravel which is not considered an impervious area; therefore, the footprint of the water permeable driveway within HCA does not count toward the MDA.

Mitigation

WRA Enhancement Mitigation

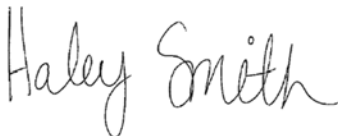
To mitigate for the unavoidable permanent WRA/HCA impacts, the Site Plan incorporates a total of approximately 3,640 square feet of enhancement mitigation area located within the remaining 65-foot WRA buffer adjacent to the off-site wetland. The raingarden and LIDA swale areas are included in the total mitigation area, as these areas will be densely planted with native vegetation and significantly improve the site's ecological functions and values. According to Section 32.090.C, Amount of Mitigation, of the City's CDC, the amount of mitigation required is based on the square footage of the permanent disturbance area, where 1 foot of created, enhancement, or restored area is required for every foot disturbed. The proposed mitigation exceeds the minimum 1:1 enhancement ratio. The locations of the proposed mitigation areas are shown on attached Figure 7.

The mitigation is expected to improve the ecological functions described in Table 32-4, Ecological Functions of WRA, of the City's CDC for the site. The site's WRA is currently in *degraded* condition, lacks significant native canopy cover, and is dominant in non-native grasses and forbs. The native tree and shrub plantings will provide an overall significant increase in canopy cover, and wildlife habitat, and slowing and retaining stormwater; increasing the sites ecological functions and values. The plant species and quantities, excluding the raingarden and LIDA swale areas, are included in the WRA Mitigation Enhancement Planting Specifications (Appendix D), which is consistent with Section 32.100, Re-Vegetation Plan Requirements, of the City's CDC.

Summary

A total of approximately 6,467 square feet of WRA buffer is present on the site, which is currently in *degraded* condition. The project will require approximately 2,831 square feet of impacts within WRA and 3,326 square feet of impervious area within Moderate Value HCA. To mitigate for the WRA/HCA impacts, the project includes 3,640 square feet of on-site enhancement mitigation, including a habitat friendly raingarden, to provide a water quality benefit. The on-site enhancement mitigation exceeds the City's 1:1 mitigation ratio requirement. Hardship provisions are required due to the extent of WRA and HCA on the project site. All construction plans have carefully considered the City's criteria for development within such areas.

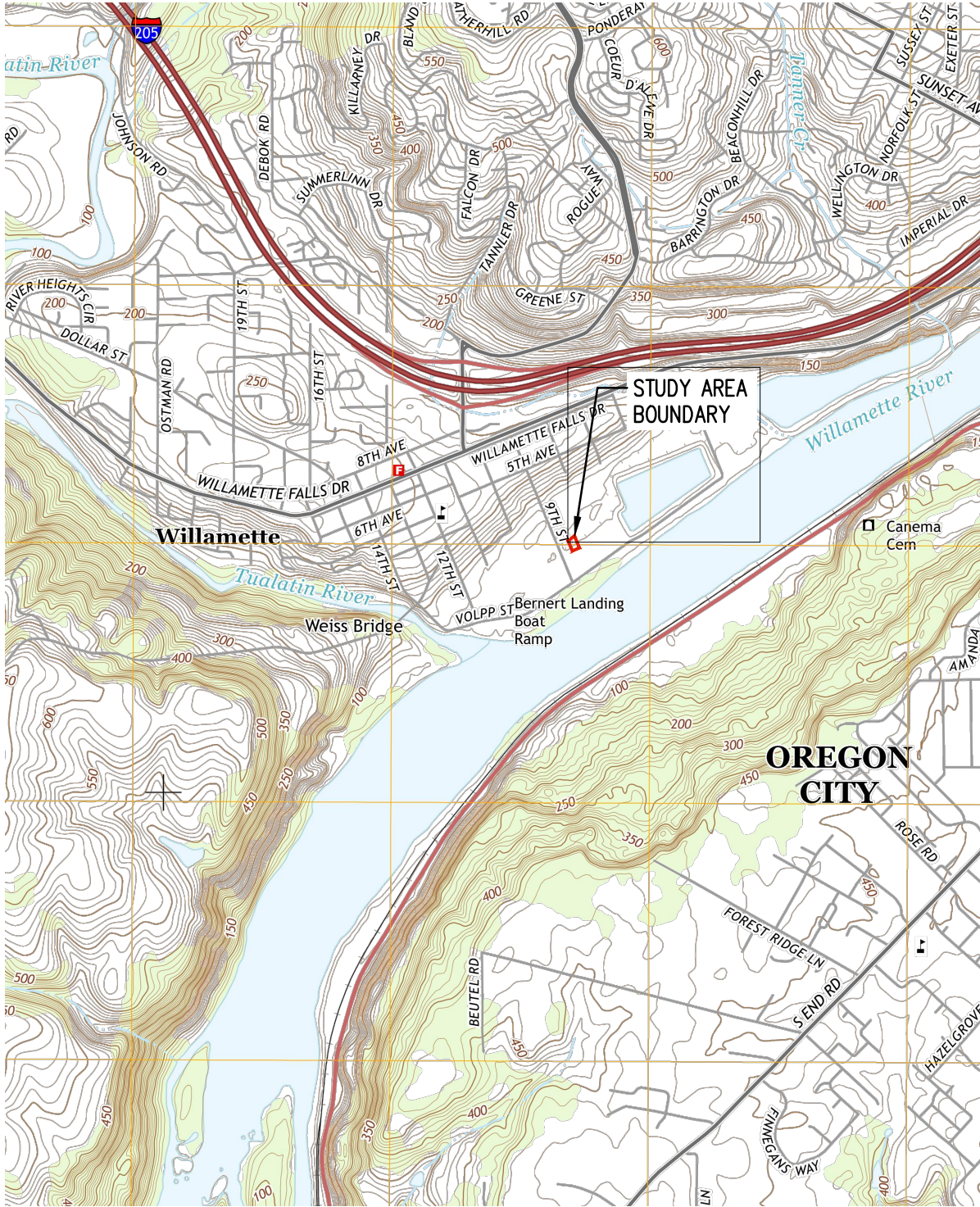
List of Preparers



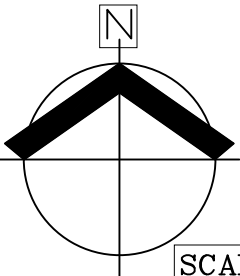
Haley Smith, MNR
Natural Resource Specialist
Report Preparation



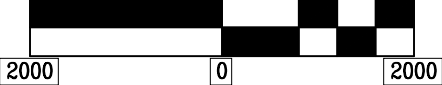
Stacey Reed, PWS
Senior Wetland Scientist
Report QA/QC



USGS 7.5' TOPOGRAPHIC SERIES
 QUADRANGLE: CANBY, OR (2014)



SCALE 1" = 2000 FEET



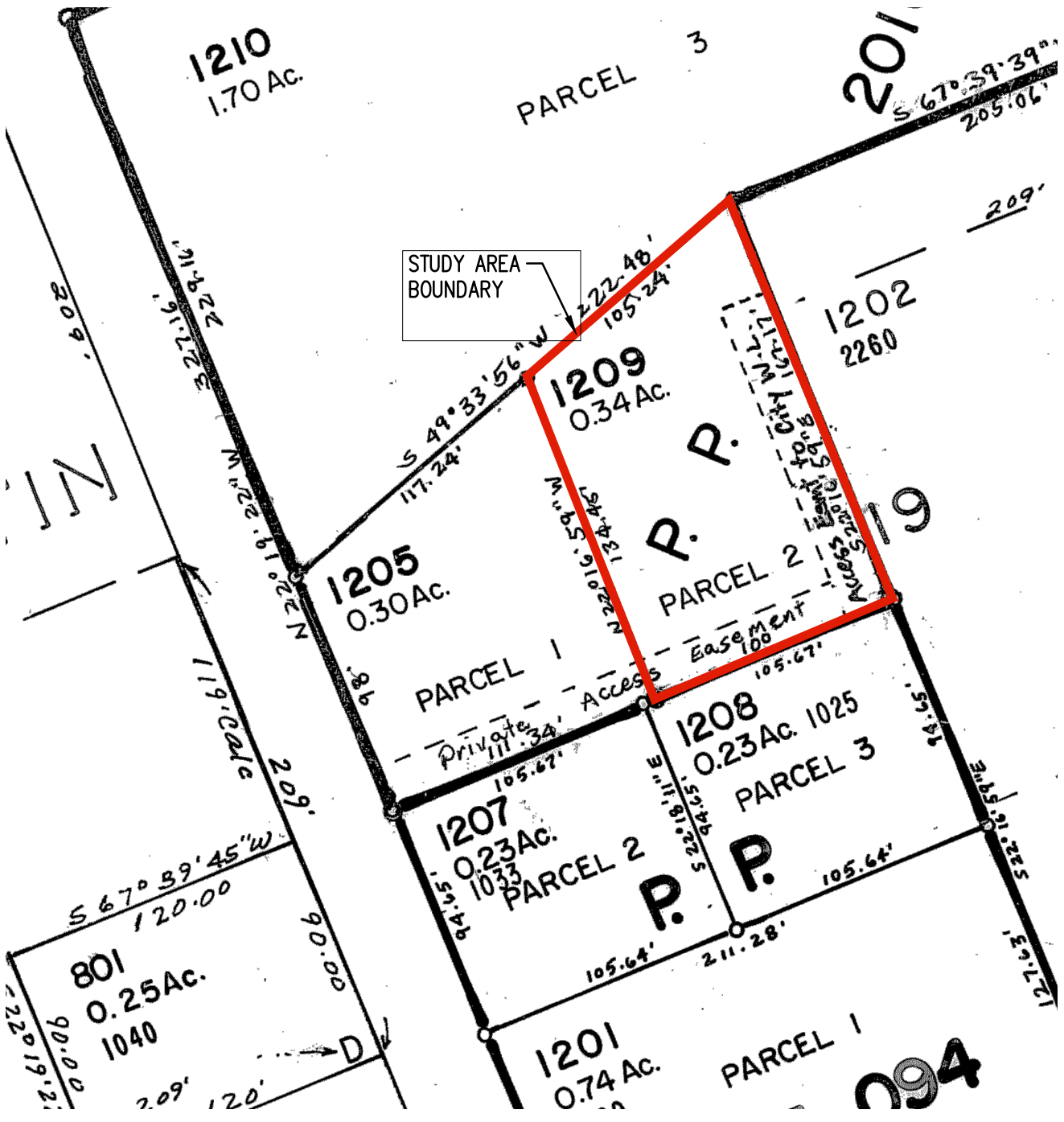
DATE: 05/16/2017

VICINITY MAP
1041 9TH STREET NATURAL RESOURCE ASSESSMENT

AKS ENGINEERING & FORESTRY, LLC
 12965 SW HERMAN RD SUITE 100
 TUALATIN, OR 97062 www.aks-eng.com
 PHONE: 503.563.6151 FAX: 503.563.6152



FIGURE	1
DRWN:	KMK
CHKD:	SAR
AKS JOB:	5908



TAX LOT 1209
TAX MAP 3 1E 2AC
WEST LINN

DATE: 05/16/2017

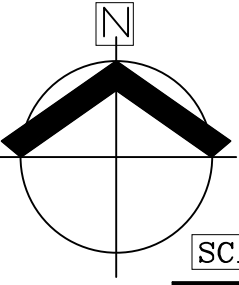
TAX MAP (MAP 3 1E 2AC)
1041 9TH STREET NATURAL RESOURCE ASSESSMENT

FIGURE
2

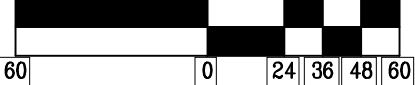
AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD SUITE 100
TUALATIN, OR 97062
PHONE: 503.563.6151 FAX: 503.563.6152
www.aks-eng.com



DRWN: KMK
CHKD: SAR
AKS JOB:
5908



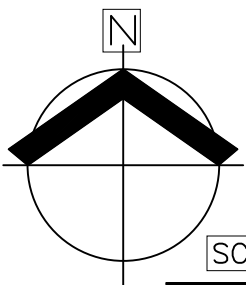
SCALE 1" = 60 FEET



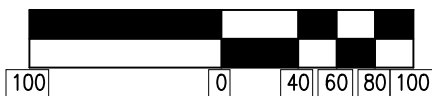


MAP UNIT SYMBOL	MAP UNIT NAME
67	NEWBERG FINE SANDY LOAM; NON-HYDRIC
84	WAPATO SILTY CLAY LOAM; HYDRIC

NRCS WEB SOIL SURVEY FOR
CLACKAMAS COUNTY



SCALE: 1" = 100 FEET



DATE: 05/16/2017

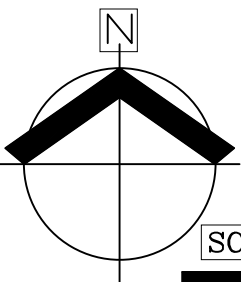
SOIL SURVEY MAP		FIGURE
1041 9TH STREET NATURAL RESOURCE ASSESSMENT		3
AKS ENGINEERING & FORESTRY, LLC		DRWN: KMK
12965 SW HERMAN RD	SUITE 100	CHKD: SAR
TUALATIN, OR 97062	www.aks-eng.com	AKS JOB:
PHONE: 503.563.6151	FAX: 503.563.6152	5908



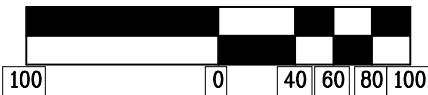


Legend

- Wetlands, Winterbrook Planning 2002
- Field Verified Wetlands, Winterbrook Planning 2002
- Possible Wetlands, Winterbrook Planning 2002
- Wetland Sample Plots, Winterbrook Planning 2002
- ~ Potential Jurisdictional Drainages, West Linn GIS 2002
- Potential Jurisdictional Waters, West Linn GIS 2002
- Taxlot COGO, West Linn GIS 2002
- Basin Boundaries, Winterbrook Planning 2002



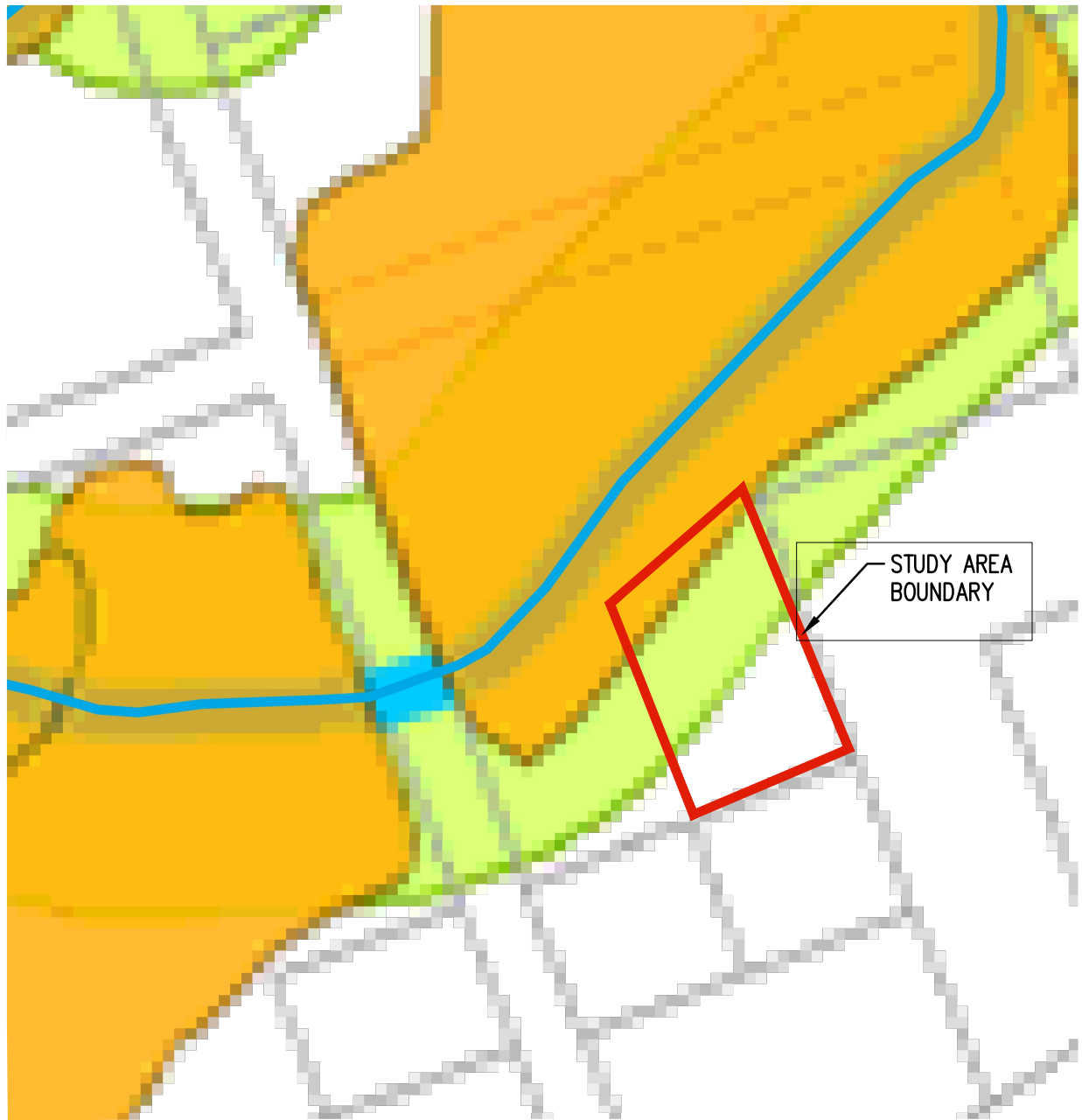
SCALE 1" = 100 FEET



DATE: 05/16/2017

LOCAL WETLAND INVENTORY MAP (LWI)		FIGURE
1041 9TH STREET NATURAL RESOURCE ASSESSMENT		4
AKS ENGINEERING & FORESTRY, LLC		DRWN: KMK
12965 SW HERMAN RD	SUITE 100	CHKD: SAR
TUALATIN, OR 97062	www.aks-eng.com	AKS JOB:
PHONE: 503.563.6151	FAX: 503.563.6152	5908





STUDY AREA BOUNDARY

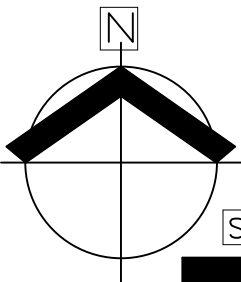
Goal 5 Significant Riparian Corridors*

- Significant Riparian Corridors
- Streams
- Ephemeral Stream
- Piped Segments
- Upper Stream Reach of Fish Inventory 2003/2004 Survey

Goal 5 Wetland Inventory**

- Locally Significant Wetlands, DSL 2005
- Other Wetlands, DSL 2005
- TA-05 Specific Wetland Identifier
- Rivers & Ponds
- West Linn City Limits
- Taxlot Base Map***

CITY OF WEST LINN
WATER RESOURCE AREA (WRA) MAP
MAY, 2014

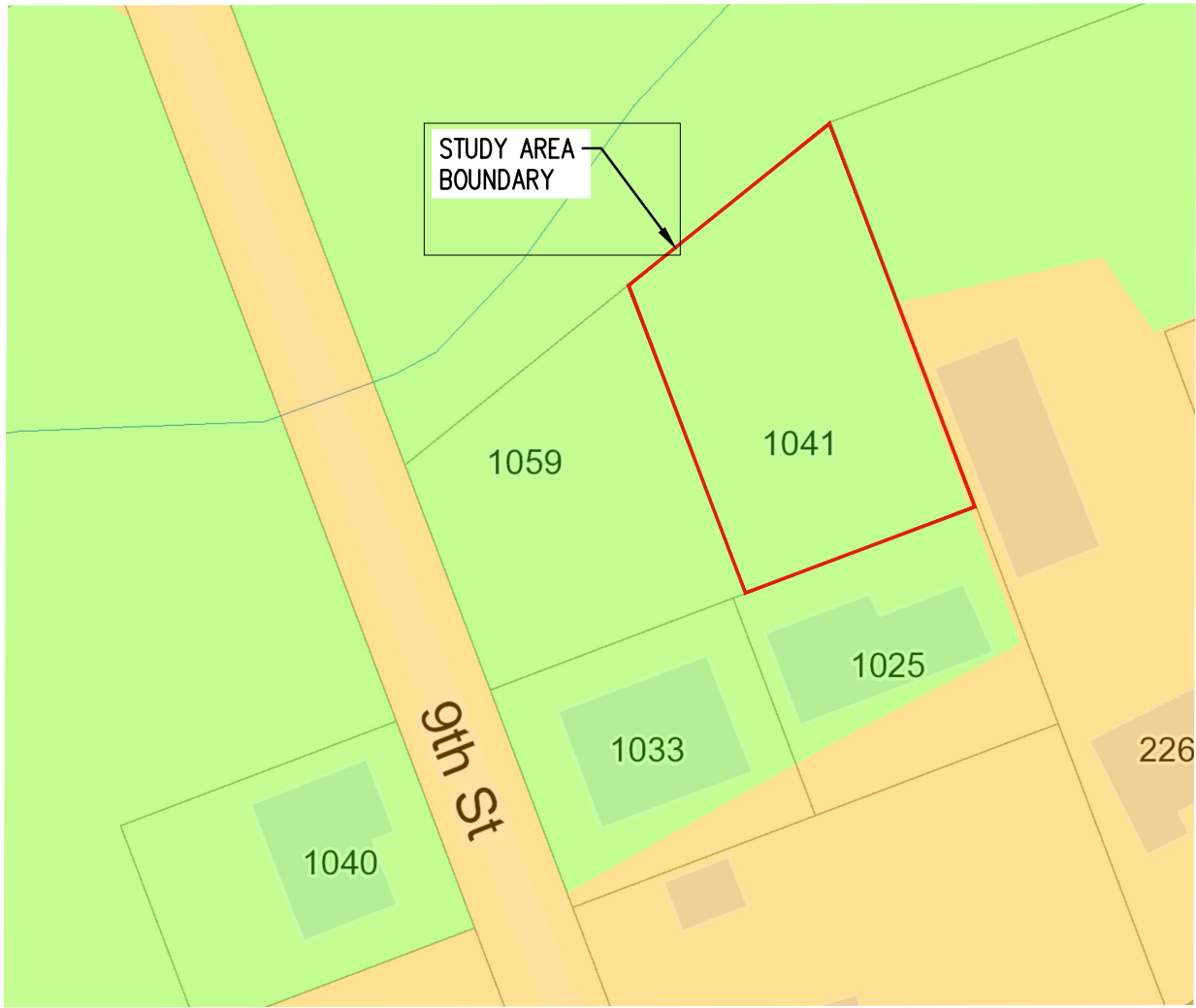


SCALE: 1"=100 FEET

DATE: 05/16/2017

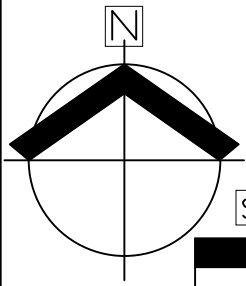
CITY OF WEST LINN WRA MAP		FIGURE
1041 9TH STREET NATURAL RESOURCE ASSESSMENT		5
AKS ENGINEERING & FORESTRY, LLC		DRWN: KMK
12965 SW HERMAN RD	SUITE 100	CHKD: SAR
TUALATIN, OR 97062	www.aks-eng.com	AKS JOB:
PHONE: 503.563.6151	FAX: 503.563.6152	5908





■ Habitat Conservation Area
■ Allow Development

CITY OF WEST LINN
 HABITAT CONSERVATION MAP
 OCTOBER, 2005
 GIS



SCALE: 1" = 75 FEET

DATE: 05/16/2017

CITY OF WEST LINN HCA MAP 1041 9TH STREET NATURAL RESOURCE ASSESSMENT		FIGURE 6
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD SUITE 100 TUALATIN, OR 97062 PHONE: 503.563.6151 FAX: 503.563.6152 www.aks-eng.com		DRWN: KMK CHKD: SAR AKS JOB: 5908
		

APPLICANT
 JASON FRANCIS
 503-929-7207

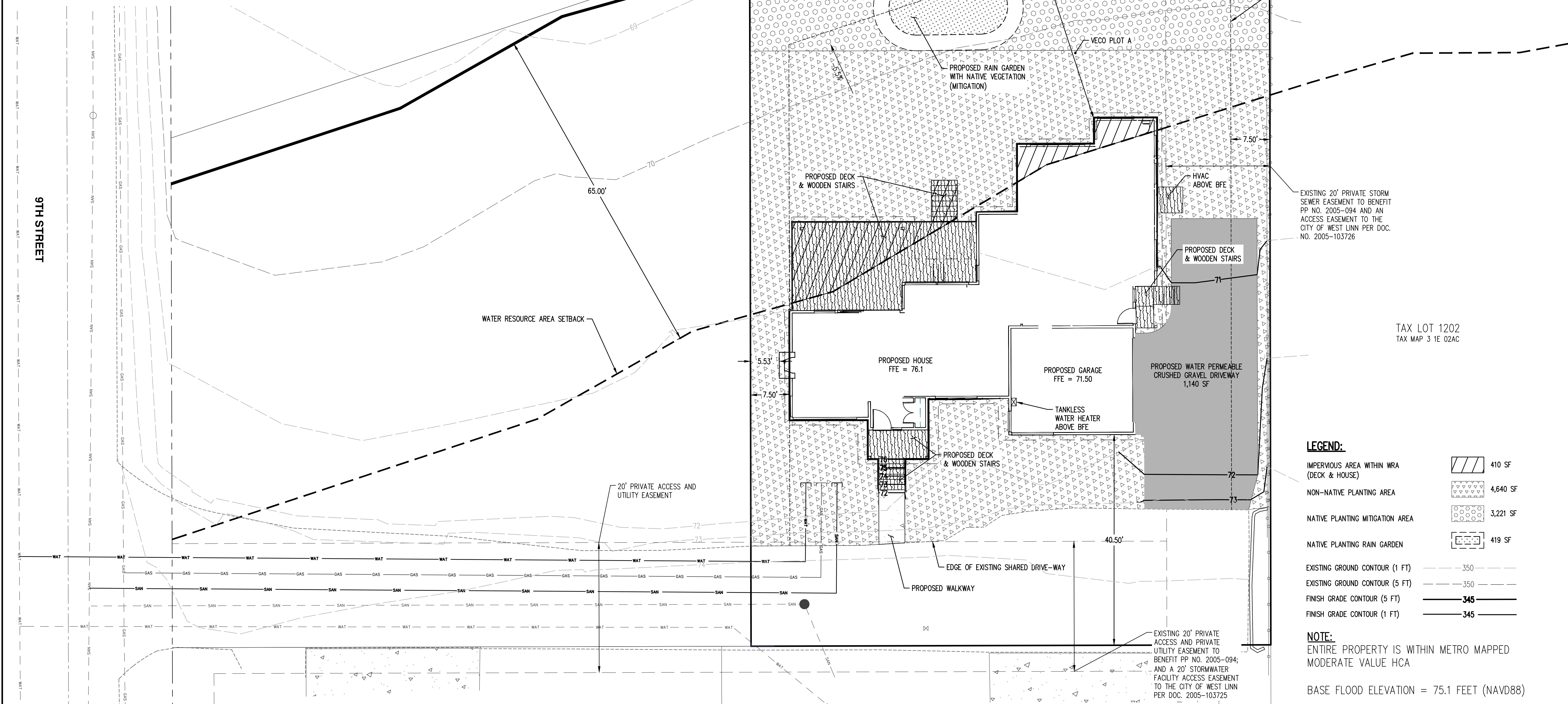
IMPACT AREA WITHIN HCA SUMMARY	
PROPOSED IMPROVEMENT	DISTURBANCE AREA (SF)
HOUSE & GARAGE	2,544
WOODEN DECK & STAIRS	730
SIDEWALK ENTRANCE	52
TOTAL IMPERVIOUS AREA WITHIN MODERATE VALUE HCA	3,326
NON-NATIVE PLANTING AREA	4,640

NATURAL RESOURCE SUMMARY AREA	
NATURAL RESOURCE AREA	AREA (SF)
DEGRADED CONDITION WRA (ON-SITE)	6,467

IMPACT AREA WITHIN WRA SUMMARY	
PROPOSED IMPROVEMENT	DISTURBANCE AREA (SF)
HOUSE	106
WOODEN DECK & STAIRS	304
SIDEWALK ENTRANCE	0
DRIVE-WAY	0
NON-NATIVE PLANTING AREA	2,421
TOTAL MDA WITHIN WRA	2,831

MITIGATION SUMMARY	
PROPOSED IMPROVEMENT	DISTURBANCE AREA (SF)
WRA ENHANCEMENT MITIGATION AREA	3,640

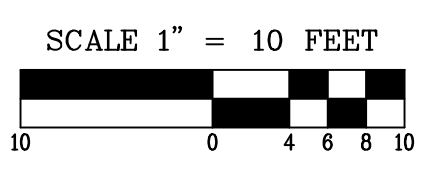
*MITIGATION INCLUDES WATER QUALITY FACILITIES



TAX LOT 1210
 TAX MAP 3 1E 02AC

TAX LOT 1209
 TAX MAP 3 1E 02AC

TAX LOT 1202
 TAX MAP 3 1E 02AC



SCALE 1" = 10 FEET
 IF FIGURE IS PRINTED AT 11"x17"
 USE SCALE 1" = 20 FEET

LEGEND:

- IMPERVIOUS AREA WITHIN WRA (DECK & HOUSE) 410 SF
- NON-NATIVE PLANTING AREA 4,640 SF
- NATIVE PLANTING MITIGATION AREA 3,221 SF
- NATIVE PLANTING RAIN GARDEN 419 SF
- EXISTING GROUND CONTOUR (1 FT) 350
- EXISTING GROUND CONTOUR (5 FT) 350
- FINISH GRADE CONTOUR (5 FT) 345
- FINISH GRADE CONTOUR (1 FT) 345

NOTE:

ENTIRE PROPERTY IS WITHIN METRO MAPPED MODERATE VALUE HCA

BASE FLOOD ELEVATION = 75.1 FEET (NAVD88)

AKS
 AKS ENGINEERING & FORESTRY, LLC
 12065 SW HERMAN RD. STE 100
 TUALATIN, OR 97062
 P: 503.563.6151
 F: 503.563.6152
 aks-eng.com

1041 9TH STREET
WEST LINN OREGON
 CLACKAMAS COUNTY TAX MAP 3 1E 02AC
 TAX LOT 1209

SITE PLAN

DESIGNED BY:
 DRAWN BY: FJS
 CHECKED BY: CEG
 SCALE: AS NOTED
 DATE: 05/17/2017

REVISIONS

JOB NUMBER
5908
 FIGURE
7

AKS DRAWING FILE: 5908 SITE.DWG | LAYOUT: LAYOUT1

Appendix A: DSL Concurrence Letter
WD#2015-0127



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.oregon.gov/dsl

June 23, 2015

State Land Board

Ann Miller
1009 Ninth Street
West Linn, OR 97068

Kate Brown
Governor

Jeanne P. Atkins
Secretary of State

Re: WD #2015-0127 Wetland Delineation Report for a Proposed
Residential Development, Clackamas County;
T 3S R 1E S 2AC Tax Lot 1205
City of West Linn Local Wetlands Inventory, Wetland WI-02

Ted Wheeler
State Treasurer

Dear Ms. Miller:

The Department of State Lands has reviewed the wetland delineation report prepared by AKS Engineering & Forestry, LLC for the site referenced above. Based upon the information presented in the report, we concur with the wetland boundaries as mapped in Figure 5 of the report. Within the study area, one wetland (totaling approximately 1.58 acres) was identified. The wetland is 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.

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.

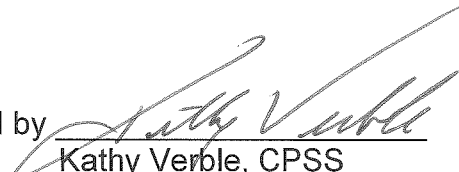
Thank you for having the site evaluated. Please phone me at 503-986-5232 if you have any questions.

Sincerely,



Peter Ryan, PWS
Jurisdiction Coordinator

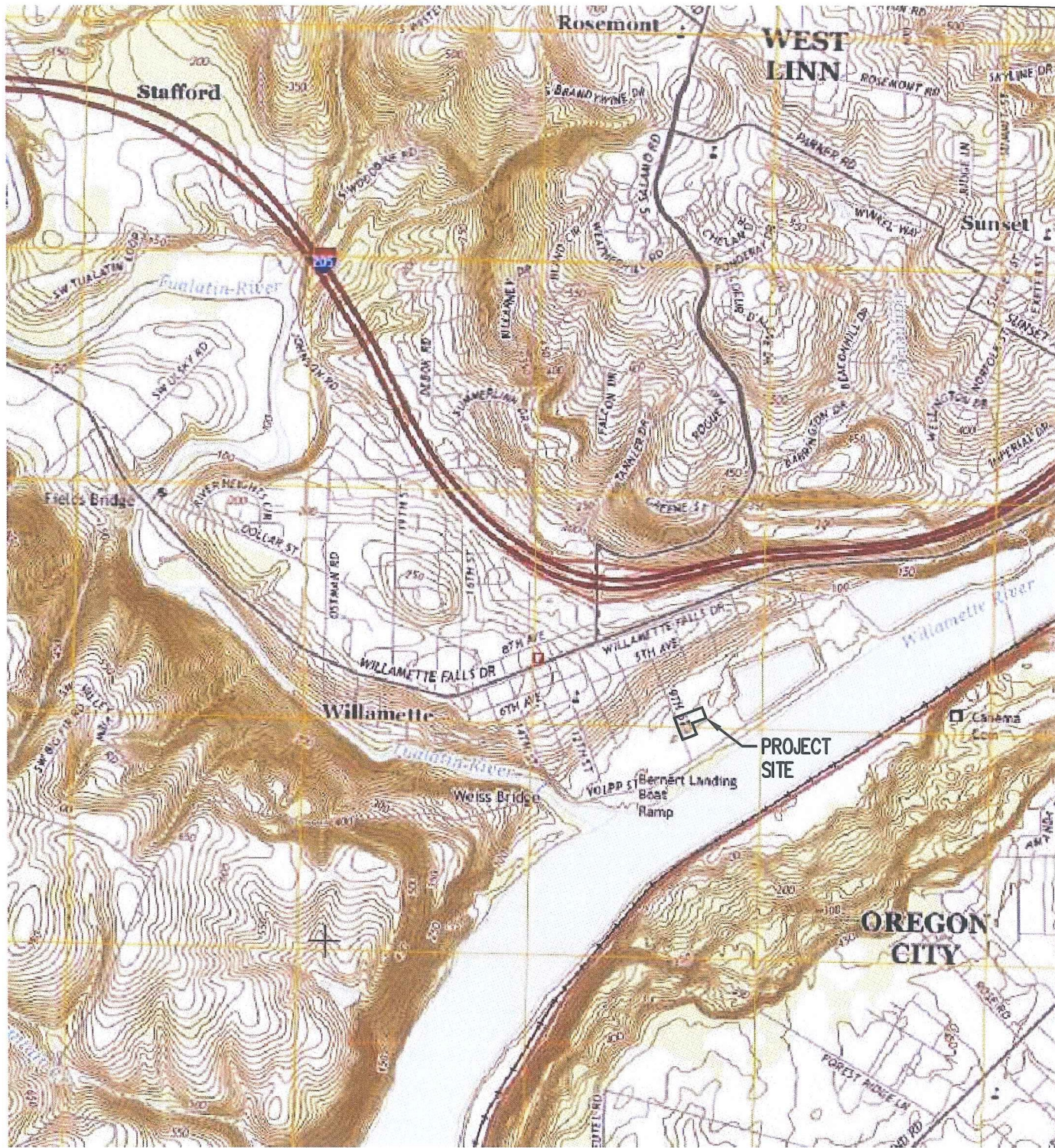
Approved by



Kathy Verble, CPSS
Aquatic Resource Specialist

Enclosures

ec: Stacey Reed, AKS Engineering & Forestry, LLC
City of West Linn Planning Department (Map enclosed for updating LWI)
Dominic Yballe, Corps of Engineers
Anita Huffman, DSL

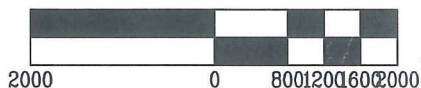


USGS 7.5' TOPOGRAPHIC CANBY
 QUADRANGLE: CANBY, OR (2014)



— PROJECT SITE

SCALE 1" = 2000 FEET



DATE: 3/16/2015

**FIGURE 1: VICINITY MAP
 MILLER PROPERTY WETLAND DELINEATION**

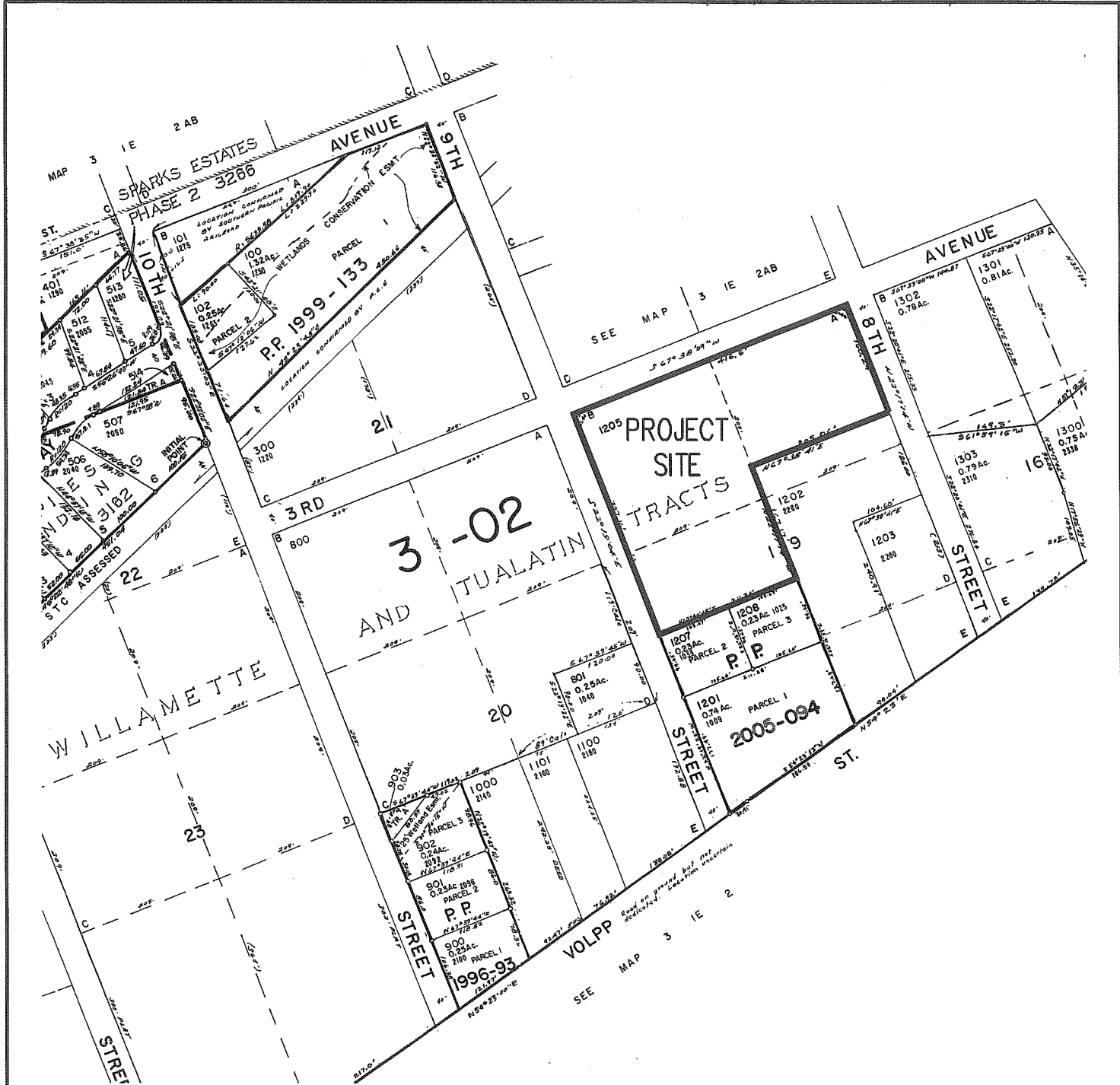
FIGURE
1

AKS ENGINEERING & FORESTRY, LLC
 12965 SW HERMAN RD SUITE 100
 TUALATIN, OR 97062 www.aks-eng.com
 PHONE: 503.563.6151 FAX: 503.563.6152

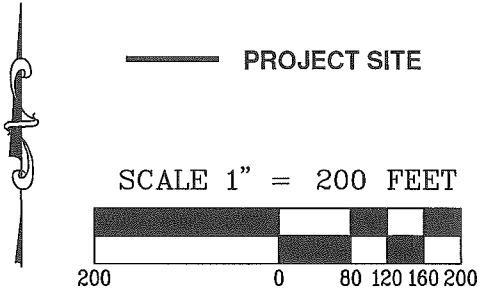


DRWN: SRP
 CHKD: AHH
 AKS JOB:
 4424

WA#2015-0127



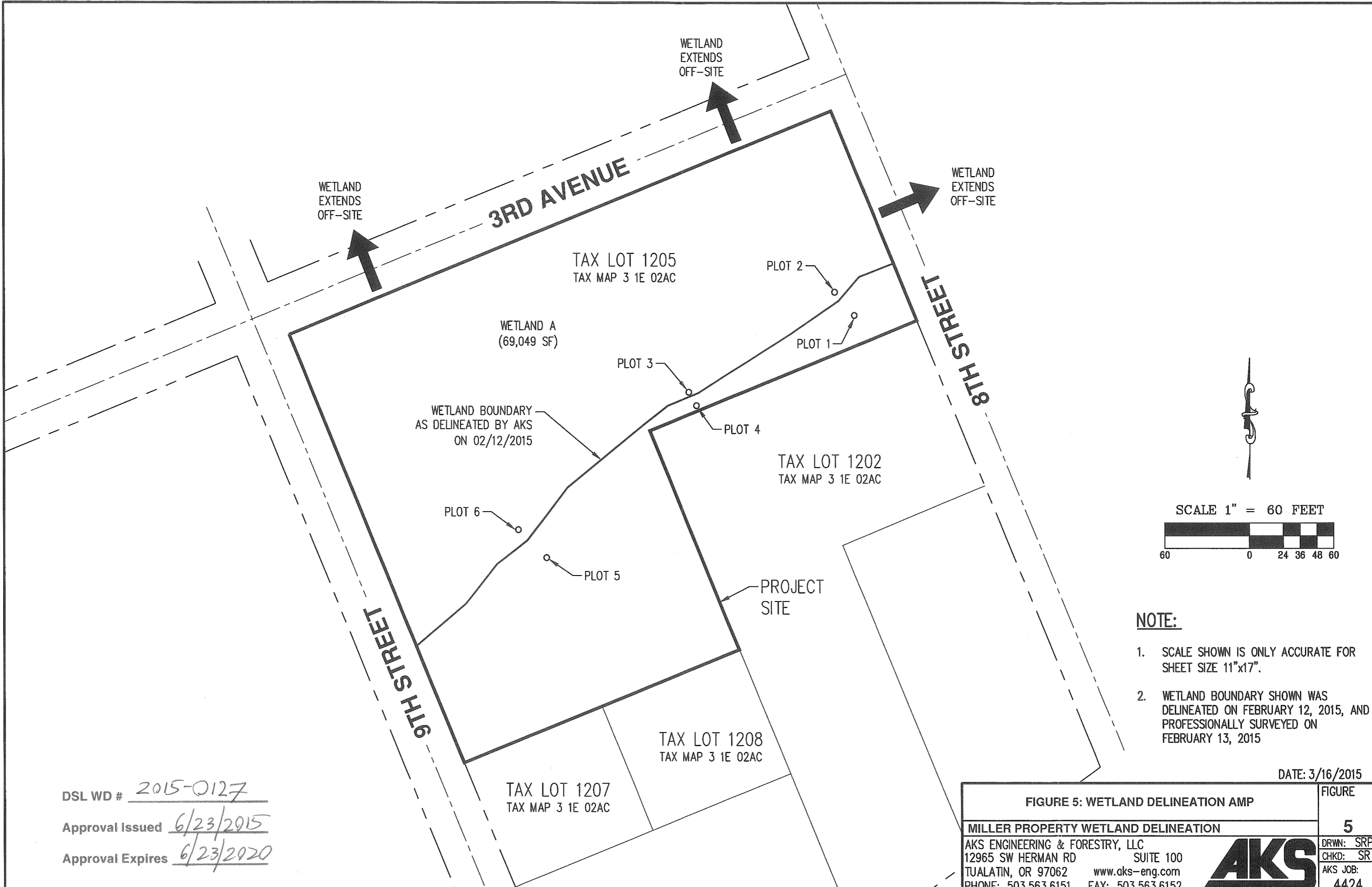
CLACKAMAS COUNTY ASSESSOR'S MAP
TAX LOT 1205 TAX MAP 3 1E 02AC



DATE: 3/16/2015

FIGURE 2: TAX LOT MAP MILLER PROPERTY WETLAND DELINEATION		FIGURE 2
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD SUITE 100 TUALATIN, OR 97062 www.aks-eng.com PHONE: 503.563.6151 FAX: 503.563.6152		DRWN: SRP CHKD: AHH AKS JOB: 4424





WETLAND
EXTENDS
OFF-SITE

WETLAND
EXTENDS
OFF-SITE

WETLAND
EXTENDS
OFF-SITE

3RD AVENUE

8TH STREET

9TH STREET

TAX LOT 1205
TAX MAP 3 1E 02AC

PLOT 2

PLOT 1

WETLAND A
(69,049 SF)

PLOT 3

PLOT 4

TAX LOT 1202
TAX MAP 3 1E 02AC

WETLAND BOUNDARY
AS DELINEATED BY AKS
ON 02/12/2015

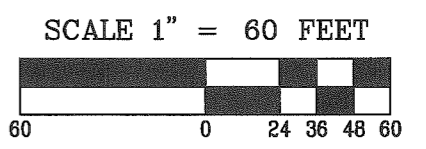
PLOT 6

PLOT 5

PROJECT
SITE

TAX LOT 1208
TAX MAP 3 1E 02AC

TAX LOT 1207
TAX MAP 3 1E 02AC



NOTE:

1. SCALE SHOWN IS ONLY ACCURATE FOR SHEET SIZE 11"x17".
2. WETLAND BOUNDARY SHOWN WAS DELINEATED ON FEBRUARY 12, 2015, AND PROFESSIONALLY SURVEYED ON FEBRUARY 13, 2015

DATE: 3/16/2015

DSL WD # 2015-0127
 Approval Issued 6/23/2015
 Approval Expires 6/23/2020

FIGURE 5: WETLAND DELINEATION AMP		FIGURE
MILLER PROPERTY WETLAND DELINEATION		5
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD SUITE 100 TUALATIN, OR 97062 www.aks-eng.com PHONE: 503.563.6151 FAX: 503.563.6152		DRWN: SRP CHKD: SR AKS JOB: 4424



Appendix B: VECO Data Sheet (VECO Plot A)

WRA Condition Assessment for City of West Linn Natural Resource Assessment

Site:	<u>1041 Ninth Street, West Linn</u>		
Job Number:	<u>5908</u>		
Investigators:	<u>Lindsey Obermiller</u>		
Date:	<u>March 23, 2017</u>		
Community: Non-native grasses and forbs			
Location: North			
Plot ID: VECO Plot A			
Tree species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			0%
Shrub species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			25%
* <i>Rubus armeniacus</i>	Himalayan blackberry	invasive, noxious	15%
* <i>Corylus cornuta</i>	beaked hazelnut	native	10%
Herb Species, % Cover, Native, Invasive - 10 foot radius, >5% cover:			100%
* <i>Schedonorus arundinaceus</i>	tall false rye grass	non-native	40%
* <i>Alopecurus pratensis</i>	field meadow-foxtail	non-native	20%
<i>Agrostis capillaris</i>	colonial bent	non-native	10%
<i>Leucanthemum vulgare</i>	ox-eye daisy	non-native	15%
<i>Daucus carota</i>	Queen Anne's-lace	non-native	5%
<i>Taraxacum officinale</i>	common dandelion	non-native	5%
<i>Leucanthemum vulgare</i>	ox-eye daisy	non-native	5%
* Dominant			
		Total Cover	125%
	Absolute areal cover		
% Tree canopy:	0%		
% Cover by natives:	10%		
% Invasive:	15%		
% Non-native:	100%		

	125%		
Corridor Condition:	Degraded		

Appendix C: Representative Photographs



Photo A. View northeast towards off-site wetland and associated WRA .



Photo B. View northwest adjacent to eastern property boundary (fence and arborvitae) with wetland and associated WRA buffer in the background.



Photo C. View west of *degraded* condition WRA buffer with adjacent property and Ninth Street are shown in the background.



Photo D. View southeast from the edge of wetland, of *degraded* condition WRA (foreground) and paved private drive easement (background).

**Appendix D: WRA/HCA Mitigation
Enhancement
Planting Specifications**

1041 Ninth Street West Linn – WRA/HCA Mitigation Enhancement Planting Specifications

Planting specifications for the enhancement of 3,221 square feet of enhancement area, not including the rain garden.

Scientific Name	Common Name	Size*	Spacing/Seeding Rate	Quantity
Trees (total 36)				
<i>Acer macrophyllum</i>	bigleaf maple	1 gallon	8-12 feet on center	12
<i>Alnus rubra</i>	red alder	1 gallon	8-12 feet on center	12
<i>Prunus emarginata</i>	bitter cherry	1 gallon	8-12 feet on center	12
Shrubs (total 182)				
<i>Holodiscus discolor</i>	oceanspray	1 gallon	4-5 feet on center	36
<i>Mahonia nervosa</i>	Cascade Oregon-grape	1 gallon	4-5 feet on center	36
<i>Ribes sanguineum</i>	red-flowering currant	1 gallon	4-5 feet on center	37
<i>Sambucus racemosa</i>	red elderberry	1 gallon	4-5 feet on center	36
<i>Symphoricarpos albus</i>	snowberry	1 gallon	4-5 feet on center	37
Seed Mix				
<i>Agrostis exarata</i>	spike bent grass	seed	1 lb pls/acre	As needed for bare-soil areas >25 square feet
<i>Deschampsia elongata</i>	slender hair grass	seed	2 lbs pls/acre	

*Bare-root plants may be substituted for container plants based on availability. If bare-root plants are used, they must be planted during the late winter/early spring dormancy period.

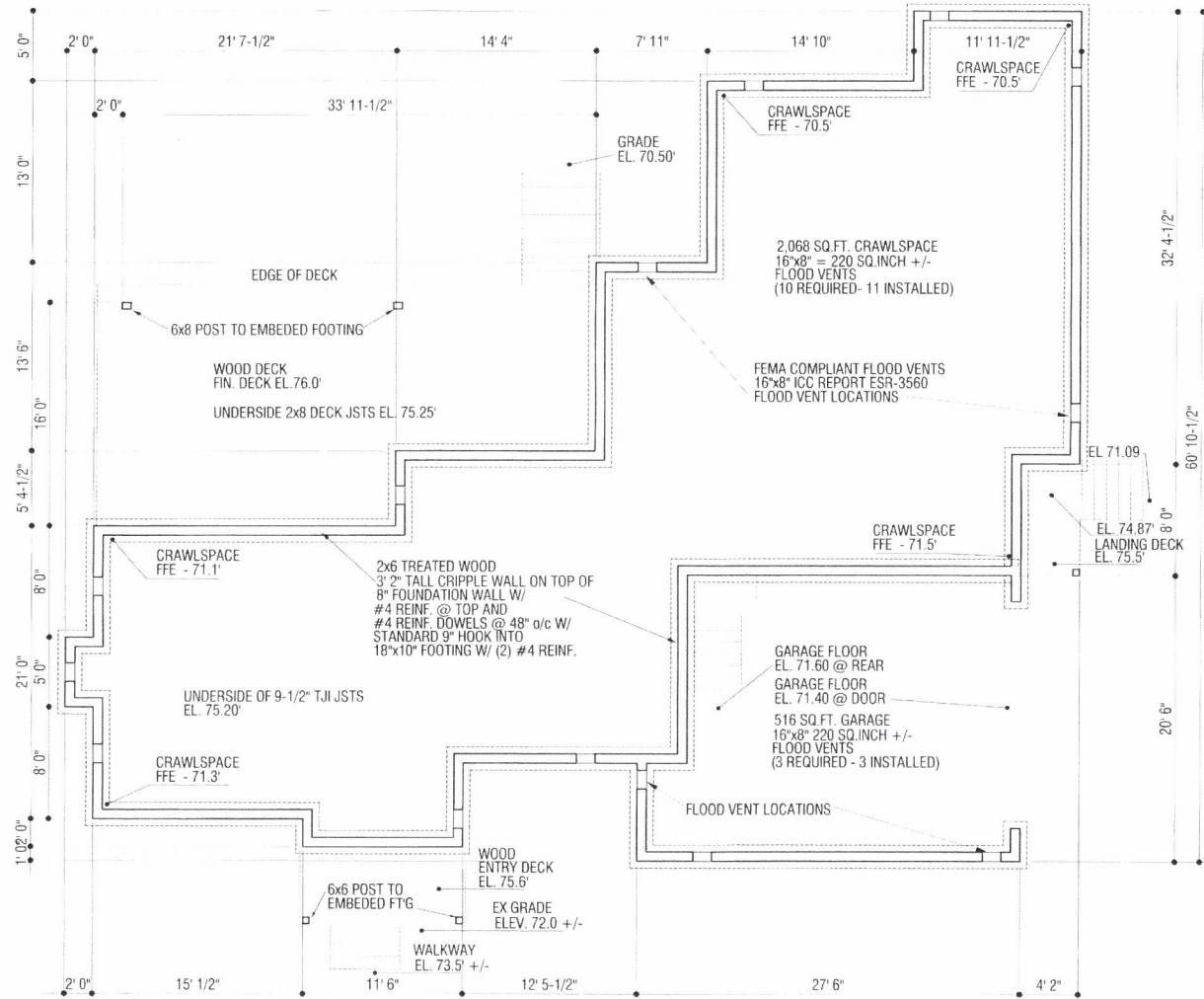
Planting Notes (per City of West Linn Community Development Code (CDC) Chapter 32, Water Resource Area Protection, Section 32.100, Re-Vegetation Plan Requirements):

- 1) Plantings should preferably be installed between December 1 and February 28 for bare roots and seeds and between October 15 and April 30 for containers.
- 2) Tree plantings must be at least 0.5 inches in caliper measured at 6 inches above the ground level or soil line. Shrub plantings must be in at least a 1-gallon container, or the equivalent in ball and burlap, and must be at least 12 inches in height. All plantings must be selected from the Portland Plant List.
- 3) All non-native, invasive, or noxious vegetation shall be removed from mitigation planting area prior to installing native enhancement plantings. Invasive species control shall continue throughout the maintenance period.
- 4) Irrigation may be necessary for the survival of the enhancement plantings. Irrigation or other water practices (i.e., polymer plus watering) are recommended during the three-year monitoring period following planting. Watering shall be provided at a rate of at least 1 inch per week between June 15 and October 15.
- 5) Plantings shall be mulched a minimum of 3 inches in depth and 18 inches in diameter to retain moisture and discourage weed growth around newly installed plant material.

-
- 6) When weather or other conditions prohibit planting according to schedule, the applicant will ensure that disturbed areas are correctly protected with erosion control measures and provide the City with funds in the amount of 125% of a bid from a recognized landscaper or nursery to cover the cost of the plant materials, installation, and any follow-up maintenance. Once the planting conditions are favorable, the applicant will proceed with the plantings and receive the funds back from the City upon completion, or the City will complete the plantings using those funds.

Maintenance and Monitoring Plan

- 1) **Monitoring and Reporting:** The City requires a three-year maintenance period for the WRA mitigation enhancement area. Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die must be replaced in kind.
- 2) **Plant Survival:** The City's success criterion for WRA enhancement is 80% survival of tree and shrub plantings expected by the third anniversary of the date the mitigation planting was installed. If any mortality is noted on the site, the factor likely to have caused mortality of the plantings is to be determined and corrected if possible. If survival falls below 80% at any time during the three-year maintenance period, the plantings shall be replaced and other corrective measures, such as mulching or irrigation, may need to be implemented.



FOUNDATION PLAN
SCALE 1/4" = 1'-0"

MITCHELL INLAY
DESIGNER

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Phone 503.309.9028 Fax 503.352.4335
m.inlaydesign@msr.com

DRAWN	5-2-2017
REVISION	

FRANCIS RESIDENCE
1041 9th St., WEST LINN, OREGON

