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MANAGEMENT
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EXHIBIT

6

**SW 155th Ave. Partition
Application for 3-Lot Partition**

Revised August 15th, 2016
EMS Project# 15-0057

RECEIVED

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City of Beaverton
Planning Services

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Project Data

Subject Property:

T:1S, R:1W, SEC:32BD, TL:100
10510 SW 155th Ave.
Beaverton OR, 97007

Proposal:

3-Lot Partition

Site Size:

Tax Lot 100: 0.75 acres (32,881 sf)

Zoning:

R-5 (Residential 5,000 sf Lot Area)

Applicant:

ADTM Development, LLC
c/o Mike Safstrom
32070 SW Willamette Way East
Willamette, OR 97070
Phone: 503-890-6884
Email: mikesafstrom@gmail.com

Owner:

M & T Development, LLC
c/o Mike Safstrom
6729 SW Childs Rd.
Lake Oswego, OR 97035

Project Overview

The proposed development is a 3-lot partition of tax lot 100 located at 10510 SW 155th Ave. The lot has an area of 0.75 acres (32,808 square feet). Frontage for the subject property is on the south end of SW 155th and is to remain unchanged

The subject property is zoned R-5 meaning that lots must have a minimum area of 5,000 sf, resulting in a 3-lot partition requiring a net area of 15,000 sf. The proposed partition meets this requirement.

There are 2,020 sf of vegetated corridor on the southwestern end of the property adjacent to the stormwater ditch. The ditch is a tributary to Summer Creek and a vegetated corridor in accordance with the Clean Water Services Design and Construction Standards is hereby being established. A Vegetated Corridor Enhancement Planting Plan is included as part of the design drawings.

No Significant Natural Resources exist onsite as indicated by the EMS, Inc. wetland report dated December 18th, 2015 (included). No Oregon Department of State Lands (DSL) removal/fill permit is required as less than 50 cubic feet of removal and fill is proposed in the identified wetlands. See correspondence from DSL supporting this statement. Removal from a 7 foot-diameter by 10-foot deep excavation will be under 15 cubic yards; backfill for a 5-foot diameter manhole structure will be under 8 cubic yards, for total removal fill of under 23 cubic yards.

All proposed residences will connect to utilities along SW 155th Ave, however, storm and sanitary sewer connections are proposed along the southeastern property line. Stormwater planters will be incorporated for stormwater quantity/quality management. Stormwater plant excavation will not impact neighboring trees within 25 feet of the property. See included arborist report.

Due to the site slope gradient, which makes an approximately 45-degree angle with the neighboring properties, grading for the residences on Lots 2 and 3 will have minimal impact on neighboring trees within 25 feet of the property (a majority of excavation will occur on the NW side of the housing, away from neighboring lots labeled Lot 27 and Lot 28). See drawing sheet 5, Grading Profile – Lot 2, and arborist report.

No portion of the proposed development is impacted by the 100-year flood plain.

Section 20.05.15-Site Development Requirements

A. Minimum Land Area: 5,000 square feet.

Comments: Land areas for the proposed development are as follows:

Lot	Area
1	11,840
2	6,460
3	9,565

Lot areas for the proposed development are ok since all lots have an area greater than 5,000 square feet.

B. Minimum and Maximum Residential Density: Refer to 20.05.20 & 20.05.60

Comments:

Total Lot Area: 32,881 square feet

Tract "A": 3,520 square feet

Tract "B": 2,477 square feet

Southern Pacific Pipeline Easement: 6,582 square feet

Proposed Storm & Sanitary Sewer Easement: 4,974 square feet

Net acreage: 21,235 square feet

Net acreage x 0.8: 16,988 square feet

Min. Number of dwellings $((\text{Net Acreage} \times 0.8)/5,000)$: 3.4 dwellings

The minimum number of dwellings is rounded 3 units per 20.05.60. 3 units are proposed for this partition.

C. Lot Dimensions

1. Minimum Width

a. Interior: 0

b. Corner: 0

Comments: Net acreage less than two acres, lot width discussed below.

2. Minimum Depth

a. Interior: 0

b. Corner: 0

Comments: Net acreage less than two acres, lot depth discussed below.

D. Minimum Land Area for Land Division Sites Less than 2 acres: 4,500 sf

Comments: Lot averaging not implemented.

E. Lot Dimensions for Land Divisions Less than 2 acres

1. Minimum Width

a. Interior: 0

b. Corner: 0

Comments: Lot Widths for the proposed development are as follows:

Lot	Width
1	130.67
2	96.59
3	62.25

Lot widths for proposed development are ok since there is no minimum established for R-5 zoning.

2. Minimum Depth

- a. Interior: 0
- b. Corner: 0

Comments: Lot Depths for the proposed development are as follows:

Lot	Depth
1	125.38
2	78.68
3	207.87

Lot depths for proposed development are ok since there is no minimum established for R-5 zoning.

F. Minimum Yard Setbacks

1. Front: 15 feet

Comments: Front setbacks for the proposed development are as follows:

Lot	Front
1	20
2	19.9
3	57

All lots meet the minimum front yard setback of 15 feet.

2. Side: 5 feet

Comments: Side setbacks for the proposed development are as follows:

Lot	Side A	Side B
1	26.3	5.2
2	8.7	7.3
3	5	20

All lots meet the minimum side yard setback of 5 feet.

3. Rear: 20 feet

Comments: Rear setbacks for the proposed development are as follows:

Lot	Rear
1	40.4
2	20
3	10

Lot 3 will require a flexible setback.

- Garage: 20 feet

Comments: Garage setbacks for the proposed development are as follows.

Lot	Garage
1	20
2	20
3	20

All lots meet the minimum garage setback of 20 feet.

- Garage Door to Rear: 24 feet

Comments: No rear facing garage doors planned at this time.

- Minimum Between Buildings: 6 feet

Comments: All proposed building envelopes will have a greater separation than 6 feet.

G. Reduced Yard Setbacks

- Front: 10 feet

Comments: As previously stated, all lots meet the front yard setback.

- Rear: 5 feet

Comments: As indicated above, lot 3 will require a rear yard flexible setback.

- Side: 5 feet

Comments: No side yard flexible setback applications necessary for any of the proposed lots.

- Garage: 20 feet

Comments: No flexible setback application necessary for reduced garage setbacks

H. Building Height: 35 feet

Comments: All proposed structures will be less than 35 feet in height, this will be reflected in the architectural plans the applicant will submit for building permits.

Section 20.05.20-R5 Urban Density

2. Dwellings

C. Detached: Permitted

Comments: Development proposes the construction of detached dwellings, which are allowed.

Section 40.03-Facilities Review

Consistent with Section 10.95.4 (Facilities Review Committee) of this Code, the Facilities Review Committee shall review the following Type 2 and Type 3 land use applications: all Conditional Use, Design Review Two, Design Review Three, Public Transportation Facility Reviews, Street Vacations, and applicable Land Divisions. Applicable land division applications are Replats, Partitions, Subdivisions, Fee Ownership Partitions, and Fee Ownership Subdivisions. In making a recommendation on an application to the decision making authority, the Facilities Review Committee shall base its recommendation on a determination of whether the application satisfies all the following criteria. The applicant for the development must establish that the application complies with all relevant standards in conformance with Section 50.25.1.B, and all the following criteria have been met, as applicable: [ORD 4265; October 2003] [ORD 4404; October 2006] [ORD 4487; August 2008]

1. All Conditional Use, Design Review Two, Design Review Three, and applicable Land Division applications:
 - A. All critical facilities and services related to the proposed development have or can be improved to have, adequate capacity to serve the proposed development at the time of its completion.

Comments: Critical facilities for the proposed partition currently exist along SW155th and along the Bonneville Power Administration (BPA) Right-of-Way and are adequate to serve the proposed 3-lot partition. The proposed development will result in a net addition of 2-single family residences to existing critical facilities. The existing residence is currently connected to the sanitary sewer along the BPA Right-of-Way. The sanitary line coming from the existing residence will be re-routed so it does not cross through proposed lot lines. Water lines will be extended along proposed Tract "A" to provide water service to the proposed lots. SW 155th is fully improved; sidewalks, curbing, gutters, and street are in good repair. Additional impervious-surface runoff will be attenuate per the City of Portland Presumptive Approach Calculator for 10-year rain events with flow-through planters sized for no calculated overflow. The impervious driveway and sidewalk will be adjoined by a LIDA Swale with 0.5'

freeboard above peak runoff elevation exceeding standards for a 25-year storm event per City and ODOT information.

- B. Essential Facilities and services are available or can be made available prior to occupancy of the development. In lieu of providing essential facilities and services, a specific plan strategy may be submitted that demonstrates how these facilities, services, or both will be provided within five years of occupancy.

Comments: Essential facilities and services such as schools, police protection, and pedestrian and bicycle infrastructure are currently available for the proposed development. SW 155th has been designed with an on-site driveway and sidewalk to accommodate additional vehicular and pedestrian traffic generated from the addition of 2 single family residences.

- Schools: Beaverton School District (BSD) manages Nancy Ryles ES, Highland Park MS, and Southridge HS, school serving this location. A statement from BSD indicates the increase in two dwellings would increase elementary-level school attendance by one student, and middle- and high school-level attendance by no students. The projected utilization of capacity as of Sept. 30, 2016 is 79%, 87%, and 87% for the ES, MS, and HS, respectively. Regarding new schools, BSD stated:
 - A new elementary school is in the design stage in the North Bethany community, expected opening in Fall 2017, and a process to adjust the elementary school boundaries is expected to begin in 2016;
 - A new high school is under construction, expected opening in Fall 2017 and new high school boundaries are expected to be finalized in Summer or Fall of 2016;
 - A new middle school in the Timberland community is currently under construction. This school will serve as a temporary elementary school for students displaced by three reconstruction projects until 2020, when it will officially open as a middle school.
 - A process to adjust the middle school boundaries is expected to begin in 2018 or 2019, in anticipation of the opening of the new middle school.
- Police: Beaverton Police serves this location. No statement from Beaverton Police was received.
- Fire: Tualatin Valley Fire & Rescue First Due Station #66 serves this location. TVFR representative Jeremy Foster attended the pre-application conference meeting on April 1st, 2015 and did not

have comments. A statement on July 5th, 2016 from Jeremy Foster at TVFR indicates that no impact is expected to services.

- Transit: A review of the public transit system indicates that the nearest (walk-able) bus stop is 0.2 miles from the site, and nearest major bus line (service directly to downtown Beaverton) is 0.5 miles.
- Pedestrian and bicycle: The site design features uninterrupted sidewalks extending from front doors down the common driveway and to the adjacent street (SW 155th Ave). On-site sidewalks meet minimum 4' width requirements. The neighborhood is listed as car-dependent, and has a walk-ability rating of 49%. Per City of Beaverton Transportation Engineering, SW 155th Ave is a neighborhood route at the subject site, and becomes a collector west of 160th and north of Weir Rd. Nearby Teal Blvd. is a collector. Collectors typically feature bicycle lanes. Nearby roads in the local area are otherwise neighborhood routes or local roads and are bike-able due to lower traffic volumes and speeds. SW 155th Ave and nearby roads include pedestrian-traversable sidewalks.

- C. The proposed development is consistent with all applicable provisions of Chapter 20 (Land Uses) unless the applicable provisions are modified by means of one or more applications which shall be already approved or which shall be considered concurrently with the subject application; provided, however, if the approval of the proposed development is contingent upon one or more additional applications, and the same is not approved, then the proposed development must comply with all applicable provisions of Chapter 20 (Land Uses).

Comments: As previously addressed, the proposed development is compliant with the requirements of Chapter 20. However, a rear yard Flexible Setback application will be required for Lot 3. A Flexible Setback application will be submitted concurrently with the Land Division application.

- D. The proposed development is consistent with all applicable provisions of Chapter 60 (Special requirements) and all Improvements, dedications, or both, as required by the applicable provisions of Chapter 60 (Special Requirements), are provided or can be provided in rough proportion to the identified impact(s) of the proposed development.

Comments: As addressed in the narrative introduction, the proposed development contains a vegetated corridor and wetlands identified in the site plan approved by Clean Water Services (CWS). The vegetated corridor will be improved per CWS Design and Construction Standards. The project will have no impact to the Significant Natural Resource Area (SNRA 85) neighboring the site.

- E. Adequate means are provided or can be provided to ensure continued periodic maintenance and necessary normal replacement of the following private common facilities and areas as applicable: drainage facilities, roads and other improved rights of way, structures, recreational facilities, landscaping, fill and excavation areas, screening and fencing, and other facilities not subject to maintenance by the City of other public agency.

Comments: A maintenance agreement will be in place binding Lot 2 and Lot 3 to secure continued maintenance of the common driveway, sidewalk and utilities proposed on Tract "A".

- F. There are safe and efficient vehicular and pedestrian circulation patterns within the boundaries of the development.

Comments: The proposed 16-foot common driveway will have a 4-foot sidewalk on one side. Sidewalks are to be constructed from concrete and the private road will consist of asphalt in order to differentiate vehicular and pedestrian access. Vehicles will be able to exit onto SW 155th head on, minimizing the likelihood of accidents.

- G. The development's onsite vehicular and pedestrian circulation systems connect to the surrounding circulation systems in a safe, efficient, and direct manner.

Comments: As mentioned above, the proposed common driveway is designed to allow vehicles to maneuver so they can approach SW 155th head on. Pedestrians from Lots 2 and 3 will be able to access SW 155th via sidewalk on the west side of Tract "A".

- H. Structures and public facilities serving the development site are designed in accordance with adopted City codes and standards and provide adequate fire protection, including but not limited to, fire flow.

Comments: All structures and public facilities serving the site have been designed in accordance to City codes and standards. SW 155th is fully improved with curbs, sidewalk, planter strips, and parking on either side. The Right-of-Way is of adequate width for a Neighborhood Route.

- I. Structures and public facilities serving the development site are designed in accordance with adopted City codes and standards and provide adequate protection from crime and accident, as well as protection from hazardous conditions due to inadequate, substandard or ill-designed development.

Comments: All proposed and existing facilities have been designed in accordance with City codes. Access to SW 155th has been designed to allow future residents the ability to exit onto SW 155th head on thus allowing for safer vehicular and pedestrian circulation. No new fences,

berms, commercial signs, hedge, or structures will be installed within the Sight Clearance areas outlined on the Utilities Plan.

- J. Grading and contouring of the development site is designed to accommodate the proposed use and to mitigate adverse effect(s) on neighboring properties, public right of way, subsurface drainage, water storage facilities, and the public storm drainage system.

Comments: All grading and contouring has been designed in accordance with City codes and closely matches the contours of neighboring properties. Grading design will also facilitate site drainage and will keep stormwater runoff from impacting adjacent properties. Grading will be minimal and should preserve the existing site topography. Grading for building structures is shown though the applicant will not be constructing homes. Detailed grading for homes should be addressed during application for a building construction permit.

- K. Access and facilities for physically handicapped people are incorporated into the development site and building design, with particular attention to providing continuous, uninterrupted access routes.

Comments: Continuous, uninterrupted handicapped access is made available through the proposed 4-foot wide sidewalk on Tract "A".

- L. The application includes all required submittal materials as specified in Section 50.25.1 of the Development Code. [ORD 4265; 2003]

Comments: All of the required materials have been supplied by the applicant. Please see the comments for section 50.25.1 below for additional details.

Section 40.30.15.3-Flexible Setback

- A. Threshold. An application for Flexible Setback for a Proposed Residential Land Division shall be required when the following threshold applies:
 - 1. The property is located within a Residential zoning district and this application is accompanied by a land division application for the subject property.

Comments: The subject property is zoned Residential and the Flexible Setback application is being submitted alongside a Land Division application. The threshold applies.

- B. Procedure Type. The Type 2 procedure, as described in Section 50.40, of this Code, shall apply to an application for Flexible Setback for a Proposed Residential Land Division and shall be considered concurrently with the

proposed land division. The decision making authority is the Director.
[ORD 4473; March 2008]

Comments: The Land Division (Type 2) and Flexible Setback (Type 2) applications were submitted concurrently with the understanding that the Director would review them simultaneously.

C. Approval Criteria. In order to approve a Flexible Setback for a Proposed Residential Land Division application, the decision making authority shall make findings of fact based on evidence provided by the applicant demonstrating that all the following criteria are satisfied:

1. The proposal satisfies the threshold requirements for a Flexible Setback for a proposed Residential Land Division application.

Comments: As previously indicated, Lot 3 will require a flexible setback for the rear yard.

2. All City application fees related to the application under consideration by the decision making authority have been submitted.

Comments: Applicant will furnish appropriate fees for the Flexible Setback application.

3. The proposal is compatible with the surrounding area regarding topography, vegetation, building character, and site design. In determining compatibility, consideration shall be given to harmony in: scale, bulk, lot coverage, density, rooflines, and building materials. [ORD 4473; March 2008]

Comments: All proposed development meets standards outlined in Chapter 20 (Land Use) relating to density, setbacks, and lot dimensions. Grading will be kept to a minimum to preserve topography similar to that of adjacent lots.

4. The proposal is consistent with all applicable provisions of Chapter 20 (Land Uses) unless applicable provisions are modified by means of one or more applications that already have been approved or are considered concurrently with the subject proposal. [ORD 4473; March 2008]

Comments: As mentioned above, proposed development will meet the requirements for Chapter 20. All setback requirements are met with the exception of rear yard setbacks. Proposed development plans a total of three lots and the minimum density exception allows 3 lots. Please refer to the comments above relating to Chapter 20 for more details.

5. The proposal is consistent with all applicable provisions of Chapter 60 (Special Requirements) and that all improvements, dedications, or both required by the applicable provisions of Chapter 60 (Special Requirements) are provided or can be provided in rough proportion to the identified impact(s) of the proposal.

Comments: Subject property contains a vegetated corridor and wetlands as illustrated on the CWS approved site plan. The extents of the vegetated corridor will be protected with construction fencing. No development is proposed within the vegetated corridor. Please see the comment sections pertaining to Chapter 60 below.

6. The proposal contains all applicable application submittal requirements as specified in section 50.25.1. of the Development Code.

Comments: All applicable submittal requirements have been provided by the applicant. Please see the comments section for section 50.25.1 below.

7. Applications and documents related to the request, which will require further City approval, shall be submitted to the City in the proper sequence.

Comments: Any additional documentation and applications will be provided to the City upon request.

Section 40.45.15.4-Preliminary Partition

- A. Threshold. An application for Preliminary Partition shall be required when the following threshold applies:
 1. The creation of up to and including three (3) new parcels from at least one (1) lot of record (parent parcel) in one (1) calendar year. [ORD 4584; June 2012]

Comments: Proposed development plans the creation of three lots from one. Application threshold has been met.

- B. Procedure Type. The Type 2 procedure, as described in Section 50.40. of this Code, shall apply to an application for Preliminary Partition. The decision making authority is the Director.

Comments: Applicant is pursuing a Type 2 procedure.

C. Approval Criteria. In order to approve a Preliminary Partition application, the decision making authority shall make findings of fact based on evidence provided by the applicant demonstrating that all the following criteria are satisfied:

1. The application satisfies the threshold requirements for a Preliminary Partition application. If the parent parcel is subject to a pending Legal Lot Determination under Section 40.47., further division of the parent parcel shall not proceed until all of the provisions of Section 40.47.15.1.C. have been met. [ORD 4584; June 2012]

Comments: As indicated above, the land division will result in the creation of three lots from one, thus meeting the threshold for a Preliminary Partition. Tax Lot 100 is not subject to a pending Legal Lot Determination.

2. All City application fees related to the application under consideration by the decision making authority have been submitted.

Comments: All appropriate fees will be provided by the applicant at time of application submittal.

3. The proposed development does not conflict with any existing City approval, except the City may modify prior approvals through the partition process to comply with current Code standards and requirements.

Comments: Proposed development will not conflict with any existing City approval and is compliant with land use requirements outlined in Chapter 20 as discussed above.

4. Oversized parcels (oversized lots) resulting from the Partition shall have a size and shape that facilitates the future potential partitioning or subdividing of such oversized lots in accordance with the requirements of the Development Code. In addition, streets, driveways, and utilities shall be sufficient to serve the proposed partition and future potential development on oversized lots. Easements and rights-of-way shall either exist or be proposed to be created such that future partitioning or subdividing is not precluded or hindered, for either the oversized lot or any affected adjacent lot. [ORD 4584; June 2012]

Comments: Lot 3 will have an area of 0.26 acres, however, only 0.11 of those acres are buildable due to an existing gas utility easement, proposed sewer easement, and sensitive areas existing onsite.

A shadow plat has been proposed (see included plan sheets) for Lot 1. The existing residence must be demolished and two new SFRs built to accommodate a division of Lot 1 such that both lots meet minimum sizing for R-5 zoning. Lot 1 has been given an appropriate shape to accommodate this potential partition, and no contraindications to the creation of easements,

driveway access, utilities, etc. are proposed in this development to a build-out of the shadow plat.

5. Applications that apply the lot area averaging standards of Section 20.05.15.D. shall demonstrate that the resulting land division facilitates the following: [ORD 4584; June 2012]
 - a. Preserves a designated Historic Resource or Significant Natural Resource (Tree, Grove, Riparian Area, Wetland, or similar resource); or,
 - b. Complies with minimum density requirements of the Development Code, provides appropriate lot size transitions adjacent to differently zoned properties, minimizes grading impacts on adjacent properties, and where a street is proposed provides a standard street cross section with sidewalks. [ORD 4584; June 2012]

Comments: Lot averaging standards were not applied to the proposed development.

6. Applications that apply the lot area averaging standards of Section 20.05.15.D. do not require further Adjustment or Variance approvals for the Land Division. [ORD 4584; June 2012]

Comments: Lot averaging standards were not applied to the proposed development.

7. The proposal does not create a lot which will have more than one (1) zoning designation. [ORD 4584; June 2012]

Comments: All of the proposed lots are to remain zoned R-5.

8. Applications and documents related to the request requiring further City approval shall be submitted to the City in the proper sequence.

Comments: Applicant will submit any additional applications and documents as requested by the City.

D. Submission Requirements.

An application for a Preliminary Partition shall be made by the owner of the subject property, or the owner's authorized agent, on a form provided by the Director and shall be filed with the Director. Provided, however, where the application is made in conjunction with a Legal Lot Determination under Section 40.47., the City may consider the application even if fewer than all the owners of the existing legal lot or parcel have applied for the approval. The application shall be accompanied by the information required by Section 50.25. (Application Completeness), and any other

information identified through a Pre-Application Conference. [ORD 4487; August 2008]

Comments: An application has been provided with the signature of the landowner and the appropriate materials have been provided as outlined in section 50.25 (Application Completeness) as well as a copy of the Pre-Application Conference summary. Please see the comments below for section 50.25.1 for more detail.

Section 40.90-Tree Plan

40.90.15. Application.

2. Tree Plan Two

A. Threshold. An application for Tree Plan Two shall be required when none of the actions listed in Section 40.90.10. apply, none of the thresholds listed in Section 40.90.15.1. apply, and one or more of the following thresholds apply:

1. Removal of five (5) or more Community Trees, or more than 10% of the number of Community Trees on the site, whichever is greater, within a one (1) calendar year period, except as allowed in Section 40.90.10.1. [ORD 4584; June 2012]

Comments: Proposed development will include the removal of seventeen community trees. Threshold is met.

2. Multiple Use Zoning District: Removal of up to and including 85% of the total DBH of non-exempt surveyed tree(s) found on the project site within SNRAs, Significant Groves, or Sensitive Areas as defined by Clean Water Services. [ORD 4584; June 2012]

Comments: Residential district, this section is not applicable.

3. Commercial, Residential, or Industrial zoning district: Removal of up to and including 75% of the total DBH of non-exempt surveyed tree(s) found on the project site within SNRAs, Significant Groves, or Sensitive Areas as defined by Clean Water Services. [ORD 4584; June 2012]

Comments: No removal of trees within the CWS identified SNRA is proposed, section does not apply.

4. Removal of a Significant Individual Tree(s).

Comments: None of the trees proposed for removal are Significant Individual Trees.

B. Procedure Type. The Type 2 procedure, as described in Section 50.40. of this Code, shall apply to an application for Tree Plan Two. The decision making authority is the Director.

Comments: Applicant is pursuing Type 2 Procedure.

C. Approval Criteria. In order to approve a Tree Plan Two application, the decision making authority shall make findings of fact based on evidence provided by the applicant demonstrating that all the following criteria are satisfied:

1. The proposal satisfies the threshold requirements for a Tree Plan Two application.

Comments: Proposal satisfies threshold requirements for a Tree Plan Two applications since more than five community trees are planned for removal within the calendar year.

2. All City application fees related to the application under consideration by the decision making authority have been submitted.

Comments: The applicant will provide the appropriate application fees upon submittal.

3. If applicable, removal of any tree is necessary to observe good forestry practices according to recognized American National Standards Institute (ANSI) A300-1995 standards and International Society of Arborists (ISA) standards on the subject.

Comments: Applicant will comply with ANSI and ISA standards if applicable.

4. If applicable, removal of any tree is necessary to accommodate physical development where no reasonable alternative exists.

Comments: There is no reasonable way to meet density and setback requirements from Chapter 20 for proposed development without removing the specified trees since they are within the proposed building envelopes.

5. If applicable, removal of any tree is necessary because it has become a nuisance by virtue of damage to property or improvements, either public or private, on the subject site or adjacent sites.

Comments: None of the trees proposed for removal would be considered a nuisance through damage of property or improvements. However, damage to proposed improvements could occur if trees area allowed to remain.

6. If applicable, removal is necessary to accomplish public purposes, such as installation of public utilities, street widening, and similar needs, where no reasonable alternative exists without significantly increasing public costs or reducing safety.

Comments: Trees 7, 8, 9, and 10 on the Tree Plan included will need to be removed to allow the construction of a common driveway and utilities to serve the proposed development.

7. If applicable, removal of any tree is necessary to enhance the health of the tree, grove, SNRA, or adjacent trees, or to eliminate conflicts with structures or vehicles. [ORD 4584; June 2012]

Comments: As mentioned before, trees within the proposed building envelope will need to be removed to allow the construction of single family residences in the future.

8. If applicable, removal of a tree(s) within a SNRA or Significant Grove will not result in a reversal of the original determination that the SNRA or Significant Grove is significant based on criteria used in making the original significance determination.

Comments: Removal of trees within the Vegetated Corridor is not proposed at this time. Criterion not applicable.

9. If applicable, removal of a tree(s) within a SNRA or Significant Grove will not result in the remaining trees posing a safety hazard due to the effects of wind throw.

Comments: Removal of trees within the Vegetated Corridor is not proposed at this time. Criterion not applicable.

10. The proposal is consistent with all applicable provisions of Section 60.60. (Trees and Vegetation) and Section 60.67. (Significant Natural Resources).

Comments: The proposal is consistent with the section 60.60. Please refer to the corresponding comments below for more detail. The vegetated corridor will be protected with construction fencing to avoid adverse impacts from construction.

11. Grading and contouring of the site is designed to accommodate the proposed use and to mitigate adverse effects on neighboring properties, public right-of-way, surface drainage, water storage facilities, and the public storm drainage system. [ORD 4584; June 2012]

Comments: Grading and contouring has been planned to minimize the impact to adjacent properties. Minimal grading is proposed for the construction of the common driveway and sidewalk.

12. The proposal contains all applicable application submittal requirements as specified in Section 50.25.1. of the Development Code.

Comments: Applicant has supplied all materials required by the City. Please refer to the section 50.25 comments below for more details.

13. Applications and documents related to the request, which will require further City approval, shall be submitted to the City in the proper sequence.

Comments: Applications and documents have been provided to the City and any additional documents will be submitted upon City's request.

D. Submission Requirements. An application for a Tree Plan Two shall be made by the owner of the subject property, or the owner's authorized agent, on a form provided by the Director and shall be filed with the Director. The Tree Plan Two application shall be accompanied by the information required by the application form, and by Section 50.25. (Application Completeness), and any other information identified through a Pre-Application Conference.

Comments: Application for a Tree Plan Two has been signed by the property owner and submitted to the City. As mentioned above, the Applicant has supplied all materials required by the City. Please refer to the section 50.25 comments below for more details.

E. Conditions of Approval. The decision making authority may impose conditions on the approval of a Tree Plan Two application to ensure compliance with the approval criteria. In addition to the approval criteria, the decision making authority may also impose other conditions of approval to ensure that the proposed tree work meets all requirements listed in Section 60.60. (Trees and Vegetation).

Comments: Applicant will comply with all conditions of approval and any additional requirements to properly meet the requirements of section 60.60.

F. Appeal of a Decision. Refer to Section 50.70.

Comments: Applicant understands the appeal requirements and process.

G. Expiration of a Decision. Refer to Section 50.90.

Comments: Applicant understands that approval of this Tree Plan will expire two (2) years from the effective date of decision.

H. Extension of a Decision. Previous approval of Tree Plan Two proposal shall not be extended.

Comments: Application herein is for a new approval of Tree Plan Two

Section 50.25.1-Application Completeness

1. A complete application is one which contains the information required by the Director to address the relevant criteria, development requirements, and procedures of this Code. Non-Discretionary Annexation Related Zoning Map Amendment and Discretionary Annexation Zoning Map Amendment applications processed by the City shall be determined complete upon submittal of a valid annexation petition or executed annexation agreement. All other complete application shall consist of the requisite number of copies of the following: [ORD 4265; October 2003]

A. A completed original application form provided by the Director and application checklist provided by the Director, signed by:

1. The applicant.

Comments: The completed Preliminary Partition (Type 2), Tree Plan (Type 2), and Flexible Setback (Type 2) applications provided are signed by the applicant.

2. If the applicant is not the owner, the owner of the property, or the authorized agent of the property owner. If an authorized agent, a written statement made by the owner of the property shall be submitted stating that the agent is authorized to sign on the owner's behalf.

Comments: The completed Preliminary Partition (Type 2), Tree Plan (Type 2), and Flexible Setback (Type 2) applications provided are signed by the owner.

3. If the applicant is exercising its statutory authority to condemn property, the representative of the public agency accompanied by written documentation of such condemnation or intent to condemn the property.

Comments: The applicant has no intentions to condemn property.

4. Property owner signatures are not required for City Initiated Type 4 Text Amendment applications and City initiated Type 1, Type 3, and Type 4 Zoning Map Amendments. [ORD 4265; October 2003]

Comments: The completed Preliminary Partition (Type 2), Tree Plan (Type 2), and Flexible Setback (Type 2) applications provided are signed by the owner since they are applicant initiated.

- B. A written statement, supported by substantial evidence, that identifies the criteria and development regulations considered relevant to the application, states the facts alleged to show that the application complies with applicable criteria and development regulations, and explains why the application should be approved based on the criteria and development regulations and facts set forth in the application. In addition to addressing applicable criteria and development regulations relevant to the application type, the written statement shall address all the applicable technical criteria specified in Section 40.03. (Facilities Review Committee) of the Code. [ORD 4265; October 2003] [ORD 4404; October 2006] [ORD 4487; August 2008] [ORD 4584; June 2012]

Comments: The relevant and applicable Development Code criteria for the applications submitted have been identified in this document. Substantial evidence has been presented to illustrate compliance with applicable criteria.

- C. The Director may require an applicant to submit information in addition to that required on the form to aid in deciding whether an application satisfies applicable criteria and development regulations. The Director shall attempt to identify additional necessary information in the pre-application conference.

Comments: The applicant will provide the Director with any additional information to aid in deciding whether the submitted applications satisfy applicable Code criteria.

- D. The information required by Section 50.30.4. regarding Neighborhood Meeting requirements, if applicable.

Comments: Neighborhood meetings are not required for Type 2 procedures. This is a Type 2 submittal; this section is not applicable.

- E. For a Type 2, Type 3, or Type 4 application, a copy of the pre-application conference summary.

Comments: A copy of the Pre-Application Conference summary has been provided.

- F. Documentation from Clean Water Services stating that water quality will not be adversely affected by the proposal.

Comments: A copy of the CWS Service Provider Letter has been provided. The document states that proposed development will not impact the Vegetated Corridor. Vegetated Corridor improvement and maintenance plan per CWS Design and Construction Standards are included with final plans.

G. The applicable fee in effect at the date of submittal.

Comments: The applicable fees have been provided for the partition application, Flexible Setback (Type 2) application for Lot 1, Tree Plan (Type 2), and Land Division Application (Type 2).

2. To enable the Director to determine whether an application is complete, an applicant shall submit the requisite number of copies, as determined by the Director.

Comments: The appropriate number of copies have been provided with the applications mentioned above.

3. The Director may defer collection of application fees during review of the application for completeness; provided, an application shall not be deemed complete until the City has received all required fees.

Comments: All applicable fees have been paid for by the applicant.

4. The Director shall advise the applicant in writing whether an application is complete by sending a completeness notice by first class mail within thirty (30) calendar days after the City receives an application. To comply with this completeness notice requirement, the completeness notice must be postmarked by the thirtieth day.
 - A. If an application is incomplete, the completeness notice shall list what information is missing.
 - B. The completeness notice shall include a form, designed to be returned to the Director by the applicant indicating whether or not the applicant intends to amend or supplement the application, and instructing the applicant to mail, facsimile, or deliver the form or written equivalent to the Director so that the Director receives it before the thirty (30) calendar day completeness review period expires.

Comments: This revised narrative is being submitted with additional revised documents and design plan sets to accommodate items listed in the Completeness Letter dated May 18th, 2016.

5. Incompleteness shall be based solely on failure to pay required fees, failure to address the relevant criteria or development regulations, or failure to supply required information and shall not be based on differences of opinion as to quality or accuracy. Determination that an application is complete

indicates only that the application is ready for review on its merits, not that the City will make a favorable decision on the application.

Comments: Applicant understands that completeness determinations are fact- and not opinion-based, and that completeness does not determine a favorable decision in itself.

6. The Director may waive application requirements that in the Director's opinion are not necessary to show an application complies with relevant criteria and development regulations and may modify application requirements based on the nature of the proposed application, development, site, or other factors. The City shall specifically identify any such waiver in the pre-application conference written summary or other written correspondence.

Comments: No waiver has as-yet been submitted.

7. The application will be deemed complete for the purpose of this section upon receipt by the Community Development Department of:
 - A. All the missing information;
 - B. Some of the missing information and written notice from the applicant that no other information will be provided; or
 - C. Written notice from the applicant that none of the missing information will be provided.[ORD 4282; February 2004]

Comments: The applicant hereby submits all missing information.

8. Pursuant to ORS 227.178, the City will reach a final decision on an application within 120 calendar days from the date that the application was determined to be complete or deemed complete unless the applicant agrees to extend the 120 calendar day time line pursuant to subsection 9 or unless State law provides otherwise. [ORD 4282; February 2004] [ORD 4498; January 2009]

Comments: The applicant understands this timeframe.

9. The 120 calendar day time line specified in Section 50.25.8. may be extended at the written request of the applicant. The total of all extensions may not to exceed 240 calendar days from the date the application was deemed complete. [ORD 4282; February 2004]

Comments: The applicant does not wish to extend the City decision timeframe at this time.

10. The applicant may amend the application up to and including fourteen (14) calendar days after the application has been deemed complete. Amendments to an application submitted more than fourteen (14) calendar days after the

application is deemed complete may be determined by the Director to be so substantial that the application should be treated as having been refiled. In such a case, the Director shall provide the applicant with the following options: provide the City with a waiver of the 120-day timeframe set forth in ORS 227.178 of a minimum of fourteen (14) calendar days from the date the amendment was submitted; treat the application as having been refiled as of the date the amendment was submitted; or, decide the application on the basis of the applicant's materials without the amendment.

Comments: The applicant understands the amendment deadline and the timeframe options for reconsideration.

11. For any application which has been on file with the City for more than 180 calendar days and the applicant has not met the obligations of Section 50.25.7., the application will be deemed withdrawn. [ORD 4397; August 2006]

Comments: The applicant understands this section.

Section 60.15-Land Division Standards

60.15.10 Grading Standards

1. Applicability. The on-site surface contour grading standards specified in Section 60.15.10.3. are applicable to all land use proposals where grading is proposed, including land division proposals and design review proposals, as applicable. This Section does not supersede Section 60.05.25. (Design Review) and the exemptions listed in Section 60.15.10.2. will apply equally to design review proposals.

Comments: Grading is proposed along Tract "A" for the proposed 12-foot wide private road and the 4-foot wide sidewalk. No grading is planned at this time for building structures. Grading for homes should be addressed during application for a building permit.

2. Exemptions. The following improvements will be exempted from the on-site surface contour grading standards specified in Section 60.15.10.3.:

A. Public right-of-way road improvements such as new streets, street widening, sidewalks, and similar or related improvements.

Comments: Proposed improvements are not in the public right of way. Exemption does not apply.

B. Storm water detention facilities subject to review and approval of the City Engineer.

Comments: Proposed grading is for sidewalk and roadway on Tract "A" not for stormwater detention facilities. Exemption does not apply.

C. On-site grading where the grading will take place adjacent to an existing public right-of-way, and will result in a finished grade that is below the elevation of the subject public street right-of-way; provided such grading is subject to the approval of the City Engineer, who may require appropriate erosion and sediment control mitigation measures.

Comments: Proposed grading will not result in a finished grade that is below the elevation of the public street right-of-way. Exemption does not apply.

3. On-site surface contouring. When grading a site within twenty-five (25) feet of a property line within or abutting any residentially zoned property, the on-site surface contours shall observe the following:

A. 0 to 5 feet from property line: Maximum of two (2) foot slope differential from the existing or finished elevation of the abutting property, whichever is applicable. [ORD 4584; June 2012]

Comments: Grading will occur in Tract "A" (within a residentially-zoned property) to accommodate the construction of the common driveway, sidewalk, and swale. A two-foot slope differential will not be exceeded in the first 5 feet from the property line longitudinally from SW 155th Ave, nor within 5 feet of the tract western boundary. Minor grading along the tract eastern boundary in Lot 1 may be needed to maintain a two-foot differential with the swale eastern shelf. However, this is an internal property line per 60.15.10.3.G below, and so is not applicable. A 0.8-foot-deep slope grading is proposed near Lot 2's eastern boundary. See Page 5 of the plan-set, cross-section A-A.

B. More than 5 feet and up to and including 10 feet from property line: Maximum of four (4) foot slope differential from the existing or finished elevation of the abutting property, whichever is applicable. [ORD 4584; June 2012]

Comments: Proposed grading will have less than a four-foot differential cut or slope 10 to 15 feet from all abutting property lines.

C. More than 10 feet and up to and including 15 feet from property line: Maximum of six (6) foot slope differential from the existing or finished elevation of the abutting property, whichever is applicable.

Comments: Proposed grading will have less than a six-foot differential cut or slope 10 to 15 feet from abutting property lines.

D. More than 15 feet and up to and including 20 feet from property line: Maximum of eight (8) foot slope differential from the existing or finished

elevation of the abutting property, whichever is applicable. [ORD 4584; June 2012]

Comments: Grading will not be in excess of 8-foot cut or slope differential 15 to 20 feet from an abutting property line.

E. More than 20 feet and up to and including 25 feet from property line: Maximum of ten (10) foot slope differential from the existing or finished elevation of the abutting property, whichever is applicable. [ORD 4584; June 2012]

Comments: As mentioned above, no grading over 4 feet is proposed.

F. Where an existing (pre-development) slope exceeds one or more of the standards in subsections 60.15.10.3.A-E, above, the slope after grading (post-development) shall not exceed the pre-development slope.

Comments: No conditions as described above exist on the subject property.

G. The on-site grading contours standards above apply only to the property lines of the parent parcel of a development. They do not apply to internal property lines within a development. [ORD 4584; June 2012]

Comments: Minor (under 2 feet) grading is proposed along the lot lines of the parent parcels near the eastern side of Lot 2, and along Tract "A". See Page 4 of the plan-set.

4. Significant Trees and Groves. Notwithstanding the requirements of Section 60.15.10.3, above, grading within 25 feet of a significant tree or grove, where the tree is located on- or off-site, shall observe the following:

Comments: No Significant Trees or groves exist on the subject property. Criterion does not apply. Section details omitted for brevity.

60.15.15 Final Plat Standards

1. Easements and rights-of-way. Refer to Chapter 9.05 of the Beaverton Municipal Code and Chapter 1, Section 120 of the *Beaverton Engineering Design Manual*. [ORD 4584; June 2012]

Comments: SW 155th is fully improved and has an appropriate Right-of-Way width for a Neighborhood Route, no ROW dedication required.

2. Building lines. The Director may approve special setbacks based upon the consideration for safety, topography, geology, solar access or other such reasons. If special building setback lines are to be established in the land division that are greater than required by this Code, they shall be shown on the final land division and included in the deed restriction.

Comments: Increased setbacks are not proposed at this time.

3. Dedications. Infrastructure or public improvements such as public streets, sidewalks, pedestrian ways, bikeways, multi-use paths, sanitary sewer, storm water system, water system, traffic control devices, parks, open space, and other public rights-of-way required as needed to serve the development, shall be installed at the expense of the developer and dedicated or otherwise conveyed to the City or the appropriate jurisdiction for maintenance. Dedication of any land for park or open space purposes must be approved by the jurisdiction to which the park or open space is being dedicated prior to Final Land Division approval.

Comments: Land division proposes conveyance of a 20-foot easement to the City for the sanitary and storm sewers serving the proposed development.

4. Homeowners' Associations and declarations. When a Homeowners' Association Agreement or other restrictive covenants are to be recorded with the development, a copy of the appropriate documents shall be submitted with the final plat. The City shall review such documents to ensure that common areas are properly maintained and that other restrictions required by the City are included.

Comments: As indicated above, a maintenance agreement will accompany Tract "A" to secure continued maintenance of transportation, utility, and pedestrian facilities.

5. Monuments and bench marks. The developer shall establish and designate monuments and bench marks on the Final Plat.

Comments: Benchmarks will be placed upon the approval of the Preliminary Plat by the City and they will be designated on the Final Plat.

6. Street trees. Prior to City approval of the Final Plat, street trees shall be planted along street frontages in accordance with the following:

- A. For detached dwelling land divisions, the Developer shall pay a fee to the City. The City shall be responsible for tree purchase and planting, and maintenance for one year, consisting of pruning, disease control and watering. The fee shall be based upon a standard of one tree per thirty (30) lineal feet of street frontage, with standard rounding methods applied for fractions thereof. The fee to be charged and collected shall be established and from time to time amended by Resolution of the City Council.

Comments: Developer will pay the appropriate fees to the City for the installation of the required quantity of street trees. However, street trees are already planted according to City specifications and no additional space for additional street trees exists along frontage of the subject property.

B. For all other land divisions, trees shall be planted in accordance with an approved street tree plan.

Comments: Street trees are already established to City Spacing requirements.

C. Trees shall be planted in accordance with the City's Tree Planting and Maintenance Policy.

Comments: Additional Street Trees, if any, are to be planted by the City in accordance to City Tree and Planting maintenance policy.

Section 60.30.10.5.A-Off Street Parking

Parking Ratio Requirements for detached dwellings: 1 per unit

Comments: Each lot will allow off-street parking for at least two vehicles.

Section 60.55-Transportation Facilities

60.50.10 General Provisions [ORD 4302; June 2004]

1. All transportation facilities shall be designed and improved in accordance with the standards of this code and the Engineering Design Manual and Standard Drawings. In addition, when development abuts or impacts a transportation facility under the jurisdiction of one or more other governmental agencies, the City shall condition the development to obtain permits required by the other agencies.

Comments: Existing facilities have been designed to appropriately serve the neighboring property. SW 155th is currently a two-way street with parking on either side. Sidewalks, curbing and planter strips are installed in accordance to the City's EDM and are in good condition.

2. In order to protect the public from potentially adverse impacts of the proposal, to fulfill an identified need for public services related to the development, or both, development shall provide traffic capacity, traffic safety, and transportation improvements in rough proportion to the identified impacts of the development. [ORD 4103; May 2000]

Comments: The proposed development will result in a net addition of two single family residences. Such an addition will not create a significant increase in the average amount of daily trips or the amount of pedestrian circulation.

3. For applications that meet the threshold criteria of section 60.55.15. (Traffic Management Plan) or of section 60.55.20. (Traffic Impact Analysis), these analyses or limited elements thereof may be required.

Comments: Sections 60.55.15 and 60.55.20 will be discussed below.

4. The decision-making authority may impose development conditions of approval per Section 10.65.1. of this code. Conditions of approval may be based on the Traffic Management Plan and Traffic Impact Analysis. Additional street, bicycle, and pedestrian connections may also be required per 60.55.25. (Street and Bicycle and Pedestrian Connection Requirements).

Comments: Developer will comply with conditions of approval as outlined by the City.

5. Dedication of right-of-way shall be determined by the decision-making authority.

Comments: As previously stated, SW 155th is fully improved and currently does not require additional Right-of-Way.

6. Traffic calming may be approved or required by the decision-making authority in a design of the proposed and/or existing streets within the Area of Influence or any additional locations identified by the City Engineer. Traffic calming measures shall be designed to City standards.

Comments: Additional traffic calming devices are not anticipated to be required since the proposed development will not significantly impact the capacity of the existing transportation facilities on SW 155th Ave. An asphalt speed hump exists to the west of the subject property intended to slow traffic flow for pedestrians traveling along the Murrayhill Park walking path.

7. Intersection performance shall be determined using the Highway Capacity Manual 2000 published by the Transportation Research Board. The City Engineer may approve a different intersection analysis method prior to use when the different method can be justified. Terms used in this subsection are defined in the Highway Capacity Manual 2000.

At a minimum, the impacts of development on a signalized intersection shall be mitigated to peak hour average control delay no greater than 65 seconds per vehicle using a signal cycle length not to exceed 120 seconds. The volume-to-capacity ratio for each lane group for each movement shall be identified and considered in the determination of intersection performance. The peak hour volume-to-capacity ratio for each lane group shall be no greater than 0.98. Signal progression shall also be considered.

At a minimum, the impacts of development on a two-way or an all-way stop-controlled intersection shall be mitigated to a peak hour average control delay of no greater than 45 seconds per vehicle.

If the existing control delay or volume-to-capacity ratio of an intersection is greater than the standards of this subsection, the impacts of development shall be mitigated to maintain or reduce the respective control delay or volume-to-capacity ratio.

Comments: No traffic control mechanisms besides an asphalt speed bump exist on SW 155th. The proposed development will not generate sufficient additional traffic to warrant the installation of traffic flow management facilities.

60.55.15 Traffic Management Plan [ORD 4302; June 2004] Where development will add 20 or more trips in any hour on a residential street, a Traffic Management Plan acceptable to the City Engineer shall be submitted in order to complete the application. A residential street is any portion of a street classified as a Local Street or Neighborhood Route and having abutting property zoned R2, R4, R5, R7, or R10. [ORD 4584; June 2012]

Comments: The proposed development will not add more than 20 trips per hour to SW 155th Ave. Traffic Management Plan not required.

60.55.20 Traffic Impact Analysis [ORD 4103; May 2000] [ORD 4302; June 2004] For each development proposal that exceeds the Analysis Threshold of 60.55.20.2, the application for land use or design review approval shall include a Traffic Impact Analysis as required by this code. The Traffic Impact Analysis shall be based on the type and intensity of the proposed land use change or development and its estimated level of impact to the existing and future local and regional transportation systems.

1. **Engineer Certification.** The Traffic Impact Analysis shall be prepared and certified by a traffic engineer or civil engineer licensed in the State of Oregon.
2. **Analysis Threshold.**
 - A. A Traffic Impact Analysis is required when the proposed land use change or development will generate 200 vehicles or more per day (vpd) in average weekday trips as determined by the City Engineer.

Comments: The proposed development will not generate 200 or more vehicles per day, thus a traffic impact analysis is not required.

B. A Traffic Impact Analysis or some elements of a Traffic Impact Analysis may be required when the volume threshold under subsection A. of this section is not met but the City Engineer finds that the traffic impacts attributable to the development have the potential to significantly impact the safe and efficient operation of the existing public transportation system.

Comments: The quantity of additional vehicles generated by the proposed development is not likely to impact the safe and effective function of existing transportation facilities.

60.55.25 Street and Bicycle and Pedestrian Connection Requirements [ORD 4302; June 2004]

1. All streets shall provide for safe and efficient circulation and access for motor vehicles, bicycles, pedestrians, and transit. Bicycle and pedestrian

connections shall provide for safe and efficient circulation and access for bicycles and pedestrians.

Comments: SW 155th is a single lane two way-street which accommodates bicycle traffic, bicycle lanes are not painted. The proposed common driveway and sidewalk will connect to SW 155th and adequate vision clearance will be provided to secure the safe and effective conveyance of pedestrian and vehicular traffic.

2. The Comprehensive Plan Transportation Element Figures 6.1 through 6.23 and Tables 6.1 through 6.6 shall be used to identify ultimate right-of-way width and future potential street, bicycle, and pedestrian connections in order to provide adequate multi-modal access to land uses, improve area circulation, and reduce out-of-direction travel.

Comments: SW 155th complies with the Comprehensive Plan Transportation Element Figures, no Right-of-Way dedication is required at this time.

3. Where a future street or bicycle and pedestrian connection location is not identified in the Comprehensive Plan Transportation Element, where abutting properties are undeveloped or can be expected to be redeveloped in the near term, and where a street or bicycle and pedestrian connection is necessary to enable reasonably direct access between and among neighboring properties, the applicant shall submit as part of a complete application, a future connections plan showing the potential arrangement of streets and bicycle and pedestrian connections that shall provide for the continuation or appropriate projection of these connections into surrounding areas.

Comments: Surrounding properties to the subject lot are already developed and sufficient connectivity exists to facilitate pedestrian and vehicular access.

4. Streets and bicycle and pedestrian connections shall extend to the boundary of the parcel under development and shall be designed to connect the proposed development's streets, bicycle connections, and pedestrian connections to existing and future streets, bicycle connections, and pedestrian connections. A closed-end street, bicycle connection, or pedestrian connection may be approved with a temporary design.

Comments: Street and sidewalk connections shall be made to the existing facilities on SW 155th. Public closed-end pedestrian or bicycle connections are not proposed for this development.

5. Whenever existing streets and bicycle and pedestrian connections adjacent to or within a parcel of land are of inadequate width, additional right-of-way may be required by the decision-making authority.

Comments: As stated above, SW 155th complies with the City's Comprehensive Transportation plan and no additional Right-of-Way is required at this time.

6. Where possible, bicycle and pedestrian connections shall converge with streets at traffic-controlled intersections for safe crossing.

Comments: An asphalt speed hump provides traffic flow control to allow safe crossing for pedestrians walking along the Murrayhill Park path.

7. Bicycle and pedestrian connections shall connect the on-site circulation system to existing or proposed streets, to adjacent bicycle and pedestrian connections, and to driveways open to the public that abut the property. Connections may approach parking lots on adjoining properties if the adjoining property used for such connection is open to public pedestrian and bicycle use, is paved, and is unobstructed.

Comments: Bicycle connections are not proposed at this time. Adequate pedestrian connectivity is provided via the 4-foot sidewalk on Tract "A".

8. To preserve the ability to provide transportation capacity, safety, and improvements, a special setback line may be established by the City for existing and future streets, street widths, and bicycle and pedestrian connections for which an alignment, improvement, or standard has been defined by the City. The special setback area shall be recorded on the plat.

Comments: Applicant understands that a special setback may be required to accommodate the future expansion of transportation facilities and will comply with the required inclusion of such setbacks on the plat.

9. Accessways are one or more connections that provide bicycle and pedestrian passage between streets or a street and a destination. Accessways shall be provided as required by this code and where full street connections are not possible due to the conditions described in Section 60.55.25.13. [ORD 4397; August 2006]

Comments: Accessways are not required for the proposed development. Adequate circulation is provided by the existing sidewalk five-foot wide sidewalk and the proposed 4-foot sidewalk along Tract "A".

10. Pedestrian Circulation. [ORD 4487; August 2008]

- A. Walkways are required between parts of a development where the public is invited or allowed to walk.

Comments: The proposed 4-foot sidewalk will generally be utilized by the future occupants of the proposed development and their guests.

- B. A walkway into the development shall be provided for every 300 feet of street frontage. A walkway shall also be provided to any access-way abutting the development.

Comments: Currently, no access-ways abut the development. A single walkway is adequate to serve the proposed development considering the frontage of the parent parcel.

- C. Walkways shall connect building entrances to one another and from building entrances to adjacent public streets and existing or planned transit stops. Walkways shall connect the development to walkways, sidewalks, bicycle facilities, alleyways and other bicycle or pedestrian connections on adjacent properties used or planned for commercial, multifamily, institution or park use. The City may require connections to be constructed and extended to the property line at the time of development.

Comments: The proposed 4-foot sidewalk will connect single family residences to existing sidewalk on SW 155th Ave.

- D. Walkways shall be reasonably direct between pedestrian destinations and minimize crossings where vehicles operate.

Comments: The 4-foot sidewalk on Tract "A" is designed is the most direct connection to existing sidewalk on SW 155th.

- E. Walkways shall be paved and shall maintain at least four feet of unobstructed width. Walkways bordering parking spaces shall be at least seven feet wide unless concrete wheel stops, bollards, curbing, landscaping, or other similar improvements are provided which prevent parked vehicles from obstructing the walkway. Stairs or ramps shall be provided where necessary to provide a reasonably direct route. The slope of walkways without stairs shall conform to City standards.

Comments: Tract "A" will have an unobstructed width of 4-feet. No parking spaces are proposed near the walkways.

- F. The Americans with Disabilities Act (ADA) contains different and stricter standards for some walkways. The ADA applies to the walkway that is the principal building entrance and walkways that connect transit stops and parking areas to building entrances. Where the ADA applies to a walkway, the stricter standards of ADA shall apply.

Comments: Natural topography on the subject property is sloped at 9%. Minor grading will allow building access compliance with the ADA standard of 12:1 (H:V) or 8.333%.

- G. On-site walkways shall be lighted to 0.5 foot-candle level at initial luminance. Lighting shall have cut-off fixtures so that illumination does not exceed 0.5 foot-candle more than five (5) feet beyond the property line.

Comments: Lighting will be provided along the walkway, illumination not to exceed 5-feet beyond the property line.

11. Pedestrian Connections at Major Transit Stops. Commercial and Institution buildings at or near major transit stops shall provide for pedestrian access to transit through the following measures:

Comments: No transit stops about the proposed development.

12. Assessment, review, and mitigation measures (including best management practices adopted by local agencies) shall be completed for bicycle and pedestrian connections located within the following areas: wetlands, streams, areas noted as Significant Natural Resources Overlay Zones, Significant Wetlands and Wetlands of Special Protection, and Significant Riparian Corridors within Volume III of the Comprehensive Plan Statewide Planning Goal 5 Resource Inventory Documents and Significant Natural Resources Map, and areas identified in regional and/or intergovernmental resource protection programs.

"Assessment" for the purposes of this section means to assess the site-specific development compatibility issues. Site-specific compatibility issues include but are not limited to lighting, construction methods, design elements, rare plants, and human/pet impacts on the resource. "Review" for the purposes of this section includes but is not limited to obtaining appropriate permits from appropriate resource agencies. Mitigation measures, including appropriate use restrictions, required by local, state, and federal agencies shall be completed as part of the construction project. If the project will irreparably destroy the resource, then the resource will take precedence over the proposed bicycle and pedestrian connection.

Comments: Transportation facilities or other aspects of the proposed development will not impact the Vegetated Corridor or Wetlands area identified on the CWS approved site plan.

13. New construction of bicycle and pedestrian connections along residential rear lot lines is discouraged unless no comparable substitute alignment is possible in the effort to connect common trip origins and destinations or existing segment links.

Comments: No transportation facilities are proposed to be built along residential rear lot lines.

14. Street and Bicycle and Pedestrian Connection Hindrances. Street, bicycle, and/or pedestrian connections are not required where one or more of the following conditions exist:

A. Physical or topographic conditions make a general street, bicycle, or pedestrian connection impracticable. Such conditions include but are not

limited to the alignments of existing connecting streets, freeways, railroads, slopes in excess of City standards for maximum slopes, wetlands or other bodies of water where a connection could not reasonably be provided;

Comments: Maximum slope for driveways will be exceeded due to natural land topography. Grading will reduce the land slope of the driveway approach to SW 155th. Despite this, 4-foot wide sidewalks are proposed as part of the development.

B. Existing buildings or other development on adjacent lands physically preclude a connection now and in the future, considering the potential for redevelopment; or,

Comments: None of the criteria above are met, exemption does not apply.

C. Where streets, bicycle, or pedestrian connections would violate provisions of leases, easements, covenants, or restrictions written and recorded as of May 1, 1995, which preclude a required street, bicycle, or pedestrian connection.

Comments: None of the criteria above are met, exemption does not apply.

60.55.30 Minimum Street Widths [ORD 4302; June 2004] Minimum street widths are depicted in the Engineering Design Manual. [ORD 4418; February 2007]

1. Any project-specific modifications of the standards contained in the Engineering Design Manual regarding the widths of features relating to the movement of vehicles, including but not limited to rights of way, travel lanes, parking lanes, bike lanes, driveway aprons, curb radii, or other such features shall be processed in accordance with the provisions contained in the Section 145 Design Modifications of the *Engineering Design Manual*. [ORD 4418; February 2007]

Comments: Proposed common driveway and sidewalk on Tract "A" has been designed with vision clearance and stormwater drainage in mind. An inverted crown running along the centerline of proposed Tract "A" was chosen due to geometric constraints of the existing single family residence and existing gas line easement.

2. Any project-specific modifications of the standards of the Engineering Design Manual relating to the location and dimensions of required street landscaping and pedestrian features including, but not limited to, sidewalks, planter strips, street trees, street tree wells, street tree easements, or street furniture are subject to the procedures contained in Chapter 40 (Applications). The required application will depend on the scope of the

proposed project and the type of application filed with the City. [ORD 4418; February 2007]

Comments: SW 155th complies with the City EDM. Planter strips, sidewalks, parking lanes, and travel lanes are of the appropriate dimensions. All transportation facilities are in good condition and working order.

60.55.35 Access Standards [ORD 4302; June 2004]

1. The development plan shall include street plans that demonstrate how safe access to and from the proposed development and the street system will be provided. The applicant shall also show how public and private access to, from, and within the proposed development will be preserved

Comments: The Utilities Plan included with the Land Division application demonstrates safe access to the proposed development from SW 155th Ave. The common driveway and paved areas for Lot 1, 2, and 3 will allow vehicles to maneuver so they can safely exit onto SW 155th.

2. No more than 25 dwelling units may have access onto a closed-end street system unless the decision-making authority finds that identified physical constraints preclude compliance with the standard and the proposed development is still found to be in compliance with the Facilities Review criteria of Section 40.03. [ORD 4584; June 2012]

Comments: The proposed development plans access for 2 dwelling units to access SW 155th via a common driveway on Tract "A".

3. Intersection Standards.

- A. Visibility at Intersections. All work adjacent to public streets and access-ways shall comply with the standards of the Engineering Design Manual except in Regional and Town Centers. [ORD 4462; January 2008]

1. The sight clearance area requirements for Town Centers and Regional Centers shall be determined on a case-by-case basis by the decision-making authority. In making its determination, the decision-making authority shall consider the safety of the users of the intersection (including pedestrians, bicyclists, and motorists), design speeds, the intersection sight distance standards of the Engineering Design Manual and Standard Drawings, and other applicable criteria. [ORD 4111; July 2000]

Comments: Proposed development is not located in Town Center, not applicable.

2. The requirements specified in 60.55.35.3.A. may be lessened or waived by the decision-making authority if the project will not result in an unsafe traffic situation. In making its determination, the decision-making authority shall consider the safety of the

users of the intersection (including pedestrians, bicyclists and motorists), design speeds, the intersection sight distance standards of the Engineering Design Manual, and other applicable criteria.

Comments: The common driveway on Tract "A" has been designed with low vehicular speeds in mind. It is intended to provide access to Lots 1, 2 and 3, and allow vehicles to exit onto SW 155th.

- B. Intersection angles and alignment and intersection spacing along streets shall meet the standards of the Engineering Design Manual and Standard Drawings.
1. Local street connections at intervals of no more than 330 feet should apply in areas planned for the highest density multiple use development. [ORD 4584; June 2012]

Comments: Adequate street connection intervals exist along SW 155th Ave. Driveway approach angles are consistent with Chapter 2 of the EDM.

2. When a highway interchange within the City is constructed or reconstructed, a park and ride lot shall be considered.

Comments: Section not applicable, no highway interchanges are planned for this development.

C. Driveways.

1. Corner Clearance for Driveways. Corner clearance at signalized intersections and stop-controlled intersections, and spacing between driveways shall meet the standards of the Engineering Design Manual and Standard Drawings.

Comments: As previously stated, the common driveway is designed for very low speeds. Corner Clearance for Driveways table not applicable.

2. Shared Driveway Access. Whenever practical, access to Arterials and Collectors shall serve more than one site through the use of driveways common to more than one development or to an on-site private circulation design that furthers this requirement.

Consideration of shared access shall take into account at a minimum property ownership, surrounding land uses, and physical characteristics of the area.

Where two or more lots share a common driveway, reciprocal access easements between adjacent lots may be required.

Comments: SW 155th is a Neighborhood street, however, a common driveway for Lots 1, 2, and 3 is proposed to allow safe pedestrian, bicycle, and vehicular circulation.

3. No new driveways for detached dwellings shall be permitted to have direct access onto an Arterial or Collector street except in unusual circumstances where emergency access or an alternative access does not exist. Where detached dwelling access to a local residential street or Neighborhood Route is not practicable, the decision-making authority may approve access from a detached dwelling to an Arterial or Collector.

Comments: SW 155th is a Neighborhood Route direct access is allowed.

60.55.40 Transit Facilities [ORD 4302; June 2004] Transit routes and transit facilities shall be designed to support transit use through provision of transit improvements. These improvements shall include passenger landing pads, accessways to the transit stop location, or some combination thereof, as required by TriMet and the City, and may also include shelters or a pad for a shelter. In addition, when required by TriMet and the City, major industrial, institution, retail, and office developments shall provide either a transit stop on site or a pedestrian connection to a transit stop adjacent to the site.

Comments: As previously stated, there are no transit facilities located adjacent to the proposed development. Section does not apply.

Section 60.60-Trees and Vegetation

60.60.07 Enforcement

A person found responsible for causing the removal or pruning of a protected tree in violation of the standards set forth in Section 60.60., unless exempt, shall be subject to monetary penalties. In cases of unlawful removal, the person must also mitigate the removal as set forth in the mitigation requirements of Section 60.60.25.

Monetary penalties imposed by a court of competent jurisdiction upon conviction for violating any provision of Chapter 60 Section 60 of this Ordinance, shall be deposited into the City's Tree Mitigation Fund.

60.60.10 Types of Trees and Vegetation Regulated

Actions regarding trees and vegetation addressed by this section shall be performed in accordance with the regulations established herein and in Section 40.90. of this Code. The City finds that the following types of trees and vegetation are worthy of special protection:

1. Significant Individual Trees.

Comments: No significant individual trees present on subject property.

2. Historic Tree.

Comments: No historic trees present on subject properties.

3. Trees within Significant Natural Resource Areas.

Comments: Removal of trees within the CWS identified Vegetated Corridor not proposed at this time.

4. Trees within Significant Groves.

Comments: Subject property not within a Significant Grove.

5. Landscape Trees.

Comments: No trees approved as part of a landscape plan present on subject properties.

6. Community Trees.

Comments: Community trees are identified in the Tree Plan included with the Tree Plan Type 2 application.

7. Mitigation Trees.

Comments: No mitigation trees exist or are proposed on the subject properties.

60.60.15 Pruning, Removal, and Preservation Standards

1. Pruning Standards.

- A. It shall be unlawful for any person to remove or prune to remove a tree's canopy or disturb the root zone of any Protected Tree, except in accordance with the provisions of this Code. Removal of Landscape Trees and Protected Trees shall be mitigated, as set forth in section 60.60.25.

Comments: No removal or pruning of any Protected or Landscape Trees is proposed.

- B. All pruning of Protected trees shall be done in accordance with the standards set forth in this section and the City's adopted tree Planting and Maintenance Policy, also known as Resolution 3391.

Comments: As indicated above, there are no Protected trees on the subject property.

2. Removal and Preservation Standards.

- A. All removal of Protected Trees shall be done in accordance with the standards set forth in this section.

Comments: No Protected trees present on the subject property.

- B. Removal of Landscape Trees and Protected Trees shall be mitigated, as set forth in section 60.60.25.

Comments: No Protected Trees or Landscape Trees from an approved landscaping plan exist on the subject property.

- C. For SNRAs and Significant Groves, the following additional standards shall apply:

Comments: Tree removal within the Vegetated corridor is not proposed at this time.

3. Native understory vegetation and trees shall be preserved in Preservation Areas.

Comments: Trees identified in the tree plan to be preserved will be protected with construction fencing.

4. Preservation Areas, conditioned for protection through the Development Review process, shall be preserved in clusters that are natural in appearance rather than in linear strips. Preservation Areas should connect with adjoining portions of the Significant Grove or SNRA on other sites.

Comments: No Preservation Areas were identified by CWS, however, clustered areas will be preserved if the Development Review process deems it necessary.

5. Preservation Areas, conditioned for protection through the Design Review process, shall be set aside in conservation easements and recorded with a deed restriction with Washington County, unless otherwise approved by the City. The deed restriction shall prohibit future development and specify the conditions for maintenance if the property is not dedicated to a public agency.

Comments: As mentioned above, Preservation Areas were not identified by CWS.

6. Preservation Areas, conditioned for protection through the Land Division process, shall be set aside in tracts and recorded with a deed restriction with Washington County, unless otherwise approved by the City. The deed restriction shall prohibit future development and specify the conditions for maintenance if the property is not dedicated to a public agency.

Comments: No Preservation Areas were identified by CWS.

7. Within the development review process, where a person is presented with a particular decision whether to retain a native or non-native tree, the native species shall be retained provided all other considerations between the two categories of trees remain equal.

Non-native tree species may also be retained for aesthetic, unique condition, size, and wildlife habitat purposes.

Comments: Trees identified in the tree plan to be preserved will be protected with construction fencing.

8. Hazardous and dead trees within Significant Groves and SNRAs should be fallen only for safety and left at the resource site to serve as habitat for wildlife, unless the tree has been diagnosed with a disease and must be removed from the area to protect the remaining trees.

Comments: Tree removal within the Vegetated Corridor is not proposed at this time.

60.60.25 Mitigation Requirements (Section Foreshortened for Brevity)

7. In-Lieu Fee. If the total caliper inch on-site- or off-site tree planting mitigation does not equal the DBH inch removal or if no tree planting mitigation is proposed, the remaining or total caliper inch tree planting mitigation shall be provided as a fee in-lieu payment. The in-lieu fee shall be specified in the Community Development In-Lieu Fee schedule. Fee revenues shall be deposited in the City's Tree Mitigation Fund.

Comments: Applicant chooses to pay in-lieu mitigation fee, quoted by City of Beaverton at \$90 per caliper inch of removed tree. Removed tree DBH is approximately 33".

Section 60.65-Utility Undergrounding

60.65.10

Authority. The provisions of private utility undergrounding shall pertain to all activities subject to Design Review (Section 40.20.), as well as Land Divisions (Section 40.45.).

60.65.15

Regulation. All existing and proposed utility lines within and contiguous to the subject property, including, but not limited to, those required for electric, communication, and cable television services and related facilities shall be placed underground as specified herein. The utilities required to be placed underground shall be those existing overhead utilities which are impacted by the proposed development and those utilities that are required to be installed as a result of the proposed development.

1. At the option of the applicant and subject to rules promulgated by the Oregon Public Utility Commission (PUC), this requirement does not apply to surface mounted transformers, surface mounted connection boxes and meter cabinets, which may be placed above ground, temporary utility service facilities during construction, high capacity electric lines operating at 50,000 volts or above, and that portion of a project where undergrounding will require boring under a Collector or Arterial roadway, and City funded roadway projects which the City Council has specifically considered and declined to fund utility undergrounding as a component of the roadway project, Washington County funded roadway projects, such as MSTIP projects, and Oregon Department of Transportation funded roadway projects. [ORD 4343; April 2005] [ORD 4363; September 2005]

Comments: Utilities for existing residence are already installed underground and utilities for the proposed development will also be installed underground as illustrated on the Utilities Plan included with the Land Division application.

2. The developer shall make all necessary arrangements with the serving private utility to cause the utility service(s) to be placed underground;

Comments: The subject property is not served by overhead utilities.

3. The City reserves the right to approve surface mounted facilities;

Comments: No existing utilities are overhead.

4. All underground public and private utilities shall be constructed or installed prior to the final surfacing of the streets; and

Comments: The Developer will organize the installation of public and private utilities prior to road surfacing.

5. Stubs for service connections and other anticipated private extensions at street intersections shall be long enough to avoid disturbing street surfaces and right-of-way improvements such as sidewalks and landscaping areas when service connections are made.

Comments: Lengths and depths for sanitary sewer stubs are identified in the Sanitary Sewer and Water Plan. Adequate access to for future connections of other utilities will be secured.

6. Unless otherwise specifically required in an existing franchise between the City and the particular private utility, or PUC rule, the applicant or developer responsible for initiating the requirement for placing overhead utilities underground is responsible for the cost of converting all existing customer equipment and private utilities on private or public property, or both to meet utility undergrounding requirements.

Comments: Subject property is not served by overhead utilities.

7. If the private utility service provider requires an applicant, as a component of the applicant's placing private utilities underground, to install facilities to accommodate extra capacity beyond those necessitated by the proposed development, the private utility service provider shall be financially responsible for providing the means to provide such extra capacity.

Comments: Additional capacity for utilities not likely to be required since partition will result in no further land divisions within the subject properties.

60.65.15

Information on Plans. The applicant for a development subject to design review, subdivision, partition, or site development permit approval shall show, on the proposed plan or in the explanatory information, the following:

1. Easements for all public and private utility facilities;

Comments: Utility locations are identified in the Utilities Plan included with the Land Division application.

2. The location of all existing above ground and underground public and private utilities within 100 feet of the site;

Comments: No overhead utilities exist within 100 feet of the subject property.

3. The proposed relocation of existing above ground utilities to underground;
and

Comments: As previously stated, no above ground utilities exist on the subject property.

4. That above ground public or private utility facilities do not obstruct vision clearance areas pursuant to Section 60.55.50. of this Code.

Comments: No structures are planned to be built in the area identified on the Street and Utilities Plan as a Vision Clearance Area. However, power utility vaults currently exist to the west of the proposed common driveway. They are not sufficiently tall to impact vision clearance of vehicles approaching SW 155th.

Section 60.67-Significant Natural Resources

60.67.05

Local Wetland Inventory. Prior to issuing a development permit, the Local Wetland Inventory map shall be reviewed to determine if the site proposed for development is identified as the location of a significant wetland.

1. Development activities and uses permitted on a proposed development site identified as the possible location of a significant natural resource, including significant wetlands shall be subject to relevant procedures and requirements specified in Chapter 50, of this ordinance.

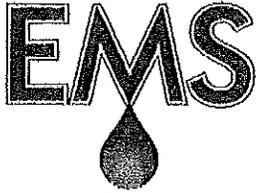
Comments: The subject property is near a stormwater ditch designated as a channel draining to Summer Creek. The area surrounding the channel is not designated wetlands on the City's Local Wetland Inventory (LWI). However, CWS has deemed it necessary to provide a vegetated corridor along the length of the ditch and portions of the ditch which or not well defined. The Vegetated Corridor identified on the CWS approved site plan will be improved according to CWS Construction and Design Standards.

2. Upon City's determination that a site contains wetland as identified on the Local Wetland Inventory map, notice of the proposed development shall be provided to the Division of State Lands (DSL) in a manner and form prescribed by DSL pursuant to ORS requirements.

Comments: The applicant understands the City will make a determination regarding the conditions surrounding the stormwater ditch which may lead to involvement of DSL. Applicant will comply with the requirements outlined by the City and other regulatory agencies as part of the conditional approval.

Conclusion

Proposed development is compliant with the requirements of the City of Beaverton Development Code and Engineering Design Manual and the necessary information to evaluate the proposal has been furnished. The applicant respectfully requests proposal approval.



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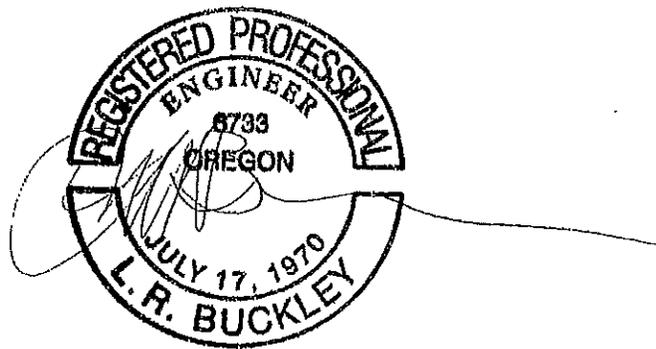
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SW 155th Ave. Partition Stormwater Report

April 14th, 2016
EMS Project# 15-0057

Prepared By:
Environmental Management Systems, INC
Lee R. Buckley, PE, Luis Giron, EIT, and Aaron Parker, EIT
4080 SE International Way, Suite B112
Milwaukie, OR 97222

Prepared for:
M&T Development, LLC
Mike Safstrom
6729 SW Childs Rd.
Lake Oswego, OR 97035



EXPIRES: DEC. 31, 2017

Project Data

Subject Property:

T:1S, R:1W, SEC:32BD, TL:100
10510 SW 155th Ave.
Beaverton OR, 97007

Proposal:

3-Lot Partition

Site Size:

Tax Lot 100: 0.75 acres (32,881 sf)

Zoning:

R-5 (Residential 5,000 sf Lot Area)

Purpose

This report was prepared to describe the proposed Low Impact Development Approaches (LIDA) and Contech Storm Filter Catch Basins for a 3-lot partition.

Project Description

The proposed development is a 3-lot partition of tax lot 100 located at 10510 SW 155th Ave. with an area of 32,881 sf (0.75 ac.). Buildable area is 18,000 sf (0.42 ac.) accounting for proposed Tract "A", vegetated corridor area, wetlands area, existing Southern Pacific Pipeline easement, and the proposed storm and sanitary sewer easement. The subject properties are zoned R-5 along with surrounding properties. Proposed Lot 2 and Lot 3 will be served by a shared 4-foot sidewalk and a 16-foot road located on Tract "A".

Stormwater planters are proposed for stormwater quantity/quality management of runoff generated from the proposed single family residences and their respective driveways. Runoff from the proposed common driveway and sidewalk will be managed using a Clean Water Services (CWS) LIDA swale. The common driveway profile including LIDA swale - and the LIDA swale details - are shown on the Grading Plan and Construction Details (Sheets 4 and 12), respectively, submitted as part of the Partition application.

No portion of the proposed development will be impacted by the 100-year flood plain. Significant Natural Resources consisting of a vegetated corridor and wetlands are present on the subject property and their extents are indicated on the site plan approved by Clean Water Services (CWS). The current condition of the vegetated corridor is poor, and will be improved to good condition as part of the development plan.

Stormwater Design Parameters

Rainfall

The Santa Barbara Urban Hydrograph (SBUH) was used in conjunction with the precipitation depths for 24-hour storms shown below. Values were gathered from Section 330 of the Beaverton Engineering Design Manual.

Event	Intensity
100 year, 24-hour	4.5 inches/hr
25 year, 24-hour	4.0 inches/hr
10 year, 24-hour	3.5 inches/hr
2 year, 24-hour	2.5 inches/hr

Soils

Soil data for the subject properties was gathered from the United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) Soil Survey website.

Soil Type 11C, Cornelius and Kinton silt loams. Hydrologic Group "C" CN = 80

The site consists of 10-12% slopes. Steep slopes coupled with slow Infiltration rates would highly reduce the efficacy of an Infiltration facility and may affect soil stability, thus flow through facilities are proposed for this development.

Pre-Development Runoff Calculations

Time of Concentration was taken to be 5 minutes. The subject property currently has 0.75 acres (32,881 sf) of total catchment area. Peak runoff values for the 100, 25, 10, and 2 year-24 hour storms are outlined below.

Event	Peak Flow
100 year, 24-hour	0.504 cfs
25 year, 24-hour	0.382 cfs
10 year, 24-hour	0.290 cfs
2 year, 24-hour	0.132 cfs

Runoff Calculations for Proposed Sidewalk and Common Drive

Time of Concentration was taken to be 5 minutes and a Curve Number of 98 was used. The drainage basin for runoff calculations was assumed to include the proposed common access drive and sidewalk along Tract "A". The drainage basin area is 0.07 acres (3,098 sf). Peak runoff values for the 100, 25, 10, and 2 year-24 hour storms are outlined below.

Event	Peak Flow
100 year, 24-hour	0.067 cfs
25 year, 24-hour	0.051 cfs
10 year, 24-hour	0.038 cfs
2 year, 24-hour	0.031 cfs

The LIDA swale was designed using the 100-year, 24-hour flow of 0.067 cfs. The CWS Manual, in Chapter 5 Section 07 - Conveyance Structure Design (Table 5-4), states that 0.5' freeboard is required above high water level. The table states that for flows less than 5 fps, a vegetated lining is adequate. An 8.5'-wide, 0.75' tall LIDA swale was designed with an effective cross section of 2.38 ft² under the 0.5' freeboard. At 0.067 cfs, 0.028 fps would pass through the swale, well under the 5 fps threshold. The swale will outfall to PVC pipe that joins the site's stormwater system.

Runoff Calculations for Developed Partition Lots

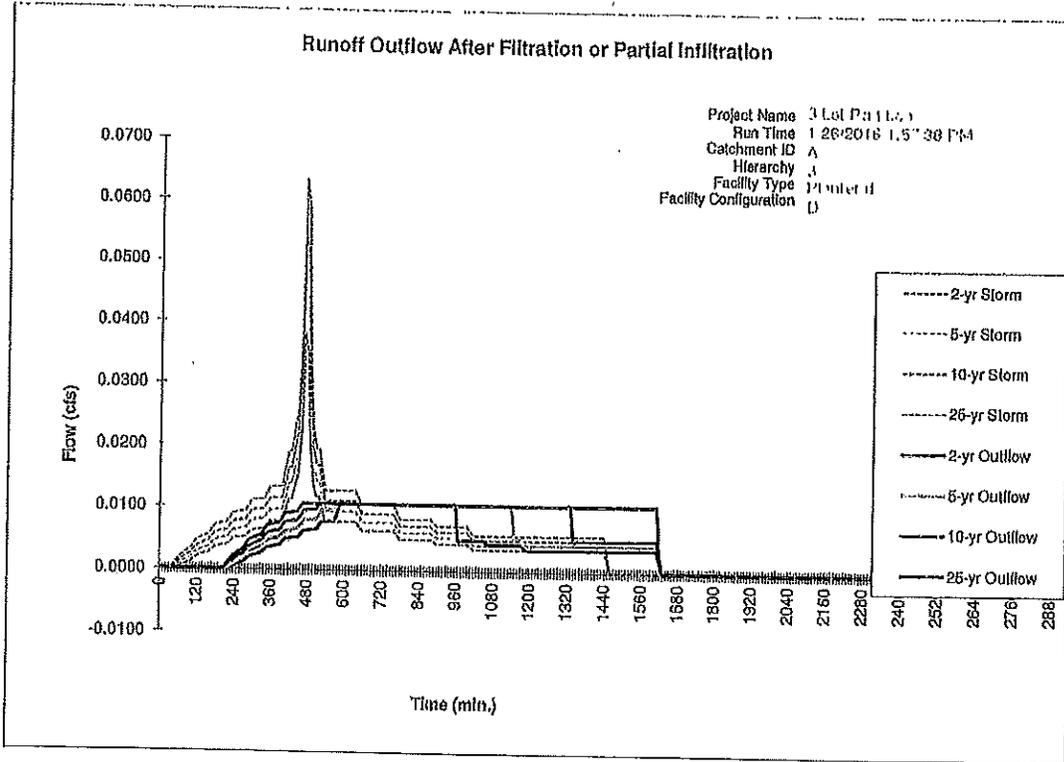
Time of Concentration was taken to be 5 minutes and a Curve Number of 80 was used to model portions of the property that would be left unaltered. A Curve Number of 98 was used to model roof and driveway areas. The original basin area for the subject property is 0.75 acres (32,881 sf). According to Section 4.05.5a of the Clean Water Services Design and Construction Standards, individual lots should be sized at 2,640 sf of impervious surface area per dwelling unit. Additional runoff will be generated from a net addition of two single family residences totaling 5,280 sf. This results in an unaltered area of 25,466 sf (32,881-2,135-5,280). Peak runoff values for the 100, 25, 10, and 2 year-24 hour storms for the land area to remain unmodified are outlined below.

Event	Peak Flow
100 year, 24-hour	0.391 cfs
25 year, 24-hour	0.296 cfs
10 year, 24-hour	0.225 cfs
2 year, 24-hour	0.103 cfs

Flow-through planters were designed using the Presumptive Approach Calculator (PAC) from the City of Portland Stormwater Management Manual. Rain intensity values vary slightly from the values presented in the Beaverton Engineering Design Manual as shown below.

Event	Intensity (Beaverton)	Intensity (Portland)
100 year, 24-hour	4.5 inches	4.4
25 year, 24-hour	4.0 inches	3.9
10 year, 24-hour	3.5 inches	3.4
2 year, 24-hour	2.5 inches	2.4

Intensity values vary by 2.27% so the 2,640 sf impervious surface area per dwelling unit was factored by 1.0227 to account for this discrepancy. An impervious area of 2700 sf was used for design. One 230 square foot flow-through planter per lot is proposed to manage the 25 year, 24-hour design storm. Each planter is to have 2-inches of freeboard, a 9-inch ponding depth, 18-inch deep growing medium, and a minimum 12-inch thick rock layer. Peak flows for this system are illustrated in the output plot from the Portland Stormwater Management Manual PAC.

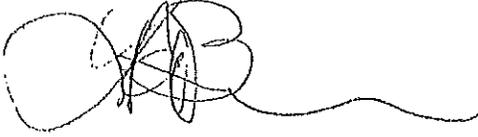


Results indicate that peak flow for the proposed flow-through planters for this development will achieve a maximum of 0.011 cfs for all 24-hour storms up to the 25-year design storm. Flow-through planters are typically sized at 0.06 sf of planter area per sf of impervious area being treated. This design specifies 230 sf versus the 160 sf resulting from standard sizing in order to minimize the impact to the downstream stormwater facilities. Section 330 of the Beaverton Engineering Design Manual specifies a maximum allowable release rate of 0.5 cfs/acre for the 25 year, 24-hour event. Maximum allowable release rate for this development is 0.375 cfs (0.75-acres x 0.5 cfs/acre). Actual release rate for the proposed development is 0.1 cfs (3 x 0.011 cfs + 0.067 cfs).

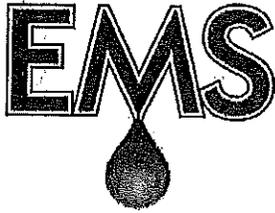
Conclusions/Recommendations

Considering the analysis results, the proposed flow-through planters are more than adequate to detain the 25-year, 24-hour storm event. The combined release rate for the flow-through planters and LIDA swale is less than 27% of the maximum allowable release rate as per Section 330.

Respectively submitted,

A handwritten signature in black ink, appearing to be 'Lee R. Buckley', with a long horizontal flourish extending to the right.

Lee R. Buckley, PE



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Wetland Delineation Report

BPA Right-Of-Way Adjacent to
10510 SW 155th Avenue
Beaverton, Oregon 97007

TWN: 01S, RNG: 01W, Section: 32, Tax Lot: 1200

As it effects

TWN: 01S, RNG: 01W, Section: 32BD, Tax Lot: 100

December 18, 2015

Prepared for:
ADTM Development, LLC
Mike Safstrom
6729 Childs Road
Lake Oswego, OR 97035

Prepared By:
Environmental Management Systems, Inc.
4080 SE International Way, Suite B112
Milwaukie, Oregon 97222

A: LANDSCAPE SETTING AND LAND USE

Environmental Management Systems, Inc. has prepared the following wetland delineation report at the request of ADTM Development for the Bonneville Power Administration (BPA) right-of-way adjacent to 10510 SW 155th Avenue in Beaverton, Oregon. The purpose of this investigation was to determine if regulatory setbacks to the wetland were necessary for the development of the property at 10510 SW 155th. This report identifies wetlands and other waters of the State/U.S. in accordance with county, state and federal laws.

The subject property is located in the Neighbors Southwest neighborhood of Beaverton, Tax Lot 100 on the Washington County Assessor's maps no. TWN: 01S, RNG: 01W, Section: 32BD. The study area is not located on the subject property, but was located in the adjacent BPA right-of-way that comprises Murrayhill Powerline Park, Tax Lot 1200 on the Washington County Assessor's maps no. TWN: 01S, RNG: 01W, Section: 32.

The study area has been used exclusively as a right-of-way for BPA since at least 1994, according to historical aerials for the surrounding area (Appendix A, Figure 5). The study area was a historically rural forested area until its development into neighborhood subdivisions in the 1980's and 1990's. Around this time the walking path was created creating the Murrayhill Powerline Park in the BPA right-of-way easement area.

Stormwater from the neighboring developments is piped to 155th Avenue, where it is discharged to a stormwater ditch in the study area via a culvert. The stormwater flows to the southeast direction from the study area and eventually is discharged to Summer Creek approximately 0.3 miles away from 155th Avenue. The study area is located on a hillslope, with the highest elevation in the study area located adjacent to 155th Avenue. The study area slopes in a southeastern direction towards SW Teal Boulevard and Summer Creek. The subject property is within the Tualatin (17090010).

The subject property is zoned as Single Family Residential (R-5) as of February 2014 according to Washington County's Zoning and Land Use Planning/Building Information website.¹ This designation specifies a 4 units/acre minimum density, and 5 units/acre maximum density, with 5500 square foot minimum lot size for a single family detached residence. The BPA right-of-way, where the study area was located, did not have a zone designation listed on the Zoning and Land Use Planning/Building Information website.

The National Wetland Inventory (NWI) did not identify any wetland or riparian areas in or near the subject property or study area. Local Wetlands Inventories (LWIs) are comprehensive maps and information about wetlands throughout a city, and supersede the NWI in urban area. These inventories are completed for the city by consultants under the guidance of the Oregon Department of State Lands (DSL). The City of Beaverton Local Wetland Inventory (Appendix A, Figure 3) mapped the stormwater ditch located in the BPA right-of-way as a channel. The area was not recognized as a wetland, DSL wetland, or riparian area by the LWI map.

¹ <http://www.co.washington.or.us/LUT/Divisions/LongRangePlanning/land-use-planning-information.cfm>

A site visit to conduct wetland delineation activities occurred on December 9, 2015. A second site visit was conducted on December 14, 2015 to complete survey data collection for wetland sample points. Staff involved in the project included Robert Sweeney, Caitlin Bradach, Steve Greenslate, and Luis Giron.

B: SITE ALTERATIONS

The study area has been used exclusively as a BPA right-of-way since at least 1994. The course of the walking path through the property has not changed course since the 1994 aerial, but does appear that it was paved sometime between the 1994 and 2001 aerial photographs. It is assumed, due to topography, that stormwater naturally collected in the area where the stormwater ditch is now located before the neighborhood subdivisions were constructed. Stormwater from the developments is piped underground to the ditch via a culvert on 155th Avenue.

The area adjacent to the ditch appeared to have been intentionally planted with native wetland vegetation at some point in the past 10 to 15 years.

C: PRECIPITATION DATA AND ANALYSIS

The City of Beaverton climate is characterized by warm, dry summers and cool, rainy winters. Typically rainfall averages are 39 inches of rain per year, with the majority occurring between October and March. Snow events are uncommon with an average snow fall of 2 inches per year with little to no accumulation.

The Nature Park-Beaverton weather station (OR5945) was used for analysis due to its proximity to the subject property. This weather station began collection data in July 2007, and the NCRS' WETS table did not specify a length of the growing season for the station because it does not have 20 years or more of data. The Beaverton 2 SSW (350595) weather station was used in addition to the Nature Park-Beaverton station to provide a robust history of recorded precipitation in the area. The Beaverton 2 SSW weather station began collecting data in October 1972 and stopped collecting data in March 2007. A WETS table was available for this weather station and is included in Appendix D.

The monthly observed rainfall for the 2014/15 year, as collected at the Nature Park-Beaverton weather station, compared to the average is presented in Table 1. Average rainfall in Table 1 was calculated by taking the average of the average monthly rainfall measurements from the Nature Park-Beaverton and Beaverton 2 SSW weather stations.

TABLE 1: MONTHLY RAINFALL SUMMARY FOR NOVEMBER 2014 TO NOVEMBER 2015 FOR BEAVERTON, OREGON. (USDA FIELD OFFICE CLIMATE DATA, NATURE-PARK WEATHER STATION, BEAVERTON 2 SSW WEATHER STATION.)

	Nov. 2014	Dec. 2014	Jan. 2015	Feb. 2015	Mar. 2015	Apr. 2015	May 2015	June 2015	July 2015	Aug. 2015	Sep. 2015	Oct. 2015	Nov. 2015
Observed													
Precipitation (Inches)	3.97	5.56	3.52	4.03	4.48	1.85	0.70	0.33	0.26	1.17	1.34	4.23	5.32
1971-2010													
Average Precipitation (Inches)	6.06	6.49	5.62	3.72	3.86	2.74	2.22	1.73	0.63	0.58	1.48	3.26	6.06
Percent of Average	56%	86%	63%	108%	116%	68%	32%	19%	42%	202%	91%	130%	88%

D: METHODS

Prior to fieldwork, the field team analyzed aerial photographs, and the City of Beaverton's Local Wetland Inventory (LWI) maps, Soil Conservation Service/Natural Resource Conservation Service soils maps, and existing topographical conditions of the study area.

The investigation focused primarily on the eastern area of the stormwater ditch on Tax Lot 1200, adjacent to the subject property. The western area of the stormwater ditch was not investigated for this report. The objective of this investigation was to delineate the wetland boundary of the stormwater ditch to ensure that any development on Tax Lot 100 would not encroach on any wetland buffer zones.

The field investigation was conducted on December 9, 2015 by Caitlin Bradach to observe geomorphic settings, identify vegetation communities, and to document existing soil and hydrological conditions within study area. A second field visit was completed on December 14, 2015 to complete geographical data collection using a total station unit. The study area was evaluated using the methodology outlined in the 1987 Corps of Engineers Wetlands Delineation Manual, State Wetlands Delineation Manual, and Western Mountains, Valleys and Coast Interim Regional Supplement (U.S. Army Corps of Engineers, 2008) for routine determinations on areas equal to or less than 5 acres. The field data was compiled on the Western Mountains, Valleys and Coast Interim Regional Supplement data sheets.

The 50/20 dominance test was used to identify dominant hydrophytic species. Radius of 30 feet was used for tree stratum, 10 feet for sapling/shrub stratum, and 10 feet for the herb stratum. Field observations were recorded on data sheets and then transcribed for this report (Appendix B).

Paired-plot sampling approach was used to define the wetland/upland boundary for all study areas. Observation points were chosen based on aerial photographs, topography changes and plant communities. Soil observation pits were dug by hand using a shovel. All plots were dug to at least 16 inches deep and observations were recorded to 16 inches on the wetland data forms (Appendix B).

E: ALL WETLAND AND NON-WETLAND WATERS

Tax Lot 1200 contained one stormwater ditch within the study area; south of 155th Avenue along the parcel's western property line. This ditch was mapped by the City of Beaverton's Local Wetland Inventory (LWI) as a Channel (Appendix, Figure 3). The LWI map did not categorize the channel as a wetland, DSL wetland, or riparian area. The map also did not specify whether the stormwater ditch was perennial or intermittent. The stormwater ditch is assumed to be intermittent, due to the nature of rain events. A large amount of water was flowing through the ditch at the time of the site visit due to recent heavy rain events. These rain events lead to saturated soils throughout the study area. The soils observed during field investigation were generally consistent with Cornelius and Kinton silt loams mapped by NRCS for this area.

The plant communities of this wetland area exist in well-ordered bands adjacent to the stormwater ditch, and appeared to have been intentionally planted with native wetland vegetation at some point in the past 10 to 15 years. The tree stratum was non-existent in the study area. The ditch is lined for a majority of its length south of 155th Avenue and north of the walking path with *Salix* (Willow Family). The no leaves were present on the *Salix* in the study area due to the time of year the investigation took place, and a genus could not be determined. The area near the ditch considered to be wetland was dominated in the herb stratum by *Phalaris arundinacea* (Reed Canary Grass) at most of the sample points. Communities of *Rosa pisocarpa* (Clustered Wild Rose) and *Spiraea douglasii* (Douglas' Spirea) were also noted at many wetland sample points.

The upland areas of this wetland were dominated in the herb stratum by a large community of *Cirsium vulgare* (Bull Thistle). These areas also had communities of *Rubus armeniacus* (Himalayan Blackberry) and *Spiraea douglasii* (Douglas' Spirea). The *Rubus armeniacus* (Himalayan Blackberry) in the area appeared to have died back quite a bit. No sapling/shrub stratum existed in the upland areas.

TABLE 2: LIST OF VEGETATION FOUND AT OBSERVATION POINTS IN THE STUDY AREA, INCLUDING COMMON NAME AND INDICATOR STATUS.

Scientific Name	Common Name	Indicator Status (USDA)
Cirsium arvense	Bull Thistle	FACU
Daucus carota	Queen's Anne Lace	FACU
Mahonia aquifolium	Oregon Grape	FACU
Phalaris arundinacea	Reed Canary Grass	FACW
Rosa Pisocarpa	Clustered Wild Rose	FAC
Rubus procerus	Himalayan Blackberry	FACU
Salix – Genus Unidentified ²	Willow Family	FACW
Spiraea douglasii	Douglas' Spirea	FACW

All test pits with mapped with in the wetland boundary passed the hydrophytic dominance test.

The mapped soils for the subject property are available as Figure 4 in Appendix A. One soil series was mapped in the study area. Soils in the study area were found to generally adhere to the NRCS soils classification. See the data sheets in Appendix B for more information on soils encountered in the study area. Soils sampled with in the study area that were determined to be wetland were found to have depleted matrices and fit the F3 hydric soil field indicator. These soils displayed a high value with a low chroma matrix and redoximorphic features that began with in the first 10 inches of the surface. Redoximorphic concentrations ranged from 1-10%. This suggests that the soils had sufficient saturation during growing season to promote the anaerobic conditions that are characteristic of wetland soils.

² The willow trees at this observation point had no leaves due to the time of year the investigation took place. Genus could not be determined.

TABLE 3: SOIL DESCRIPTION OF MAPPED SOILS WITHIN THE STUDY AREA, AS REPORTED BY THE USDA WEB SOIL SURVEY. DESCRIPTION SUMMARIZED FROM THE NRCS OFFICIAL SOIL SERIES DESCRIPTIONS WEBSITE.³

Study Area Location	Soil Type	Description
Tax Lot 1200	Cornellus and Kinton silt loams 3 to 12 percent slopes	<p>The Cornellus series consists of moderately deep to a fragipan, moderately well drained soils that formed in silty loess-like materials. Cornellus soils are on uplands and have slopes of 2 to 60 percent. The Cornellus soils are on gently sloping to rolling low hills and steep hill slopes with convex, long slopes and ridgetops at elevations of 350 to 800 feet. The soils formed in loess-like material over mixed, fine-silty old alluvium of mixed origin. The soils formed in a cool moist winter and a warm dry summer climate. Average July temperature is 66 degrees F., average January temperature is 39 degrees F., average annual temperature is 52 degrees to 54 degrees F., and average annual precipitation is 40 to 60 inches. Frost-free period is 165 to 210 days. Used to produce berries, orchards, small grain and seed crops, hay, pasture, and for woodland. Native vegetation is mainly Douglas-fir, big leaf maple, western red cedar, hazelbrush and grasses.</p> <p>The Kinton series consists of deep, moderately well drained soils that formed in stratified lacustrine deposits. Kinton soils are on long convex upland slopes and ridgetops and have slopes of 2 to 60 percent. The mean annual precipitation is about 44 inches and the mean annual air temperature is about 53 degrees F. The soils formed in loess like material over fine, silty old alluvium of mixed origin. The soils are at 250 to 400 feet elevation and formed under cool moist winter and a warm dry summer climate. The average July temperature is 66 degrees F.; the average January temperature is 39 degrees F.; and the average annual temperature is 52 to 54 degrees F. The average annual precipitation is 40 to 50 inches. The frost free period is 165 to 210 days. Soils are used for berries, orchards, small grain and seed crops, hay, pasture and woodland. Native vegetation consists of Douglas fir, bigleaf maple, western red cedar, hazelbrush, poison oak and other shrubs and grasses</p>

³ Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions [Online WWW]. Available URL: "https://soilseries.sc.egov.usda.gov/osdname.asp" USDA-NRCS, Lincoln, NE.

F: DEVIATION FROM LWI OR NWI

The area mapped as a channel in the LWI map on Tax Lot 1200 was determined to be a channel. A small wetland area was determined to exist in the area adjacent to the ditch, which was not mapped by the LWI.

G: MAPPING METHOD

Delineated wetlands were field-mapped by Environmental Management Systems, Inc. (EMS) using blue flagging for wetland plots and yellow flagging for upland plots. The locations of these flags were recorded to 0.3-ft accuracy using a LIETZ/SOKKISHA SET10 total station. This information was then applied to a map that was created from a partial survey of the property completed by CMT. All delineated wetland dimensions and acreages were calculated using AutoCAD LT computer aided drafting software utilizing the field survey data and study area boundary information provided by the property owner. As depicted on Figure 6 of Appendix A, delineated wetland boundaries are accurate +/- 10 feet.

I: RESULTS AND CONCLUSIONS

Environmental Management Systems, Inc. has prepared the following wetland delineation report at the request of ADTM Development for the Bonneville Power Administration (BPA) right-of-way adjacent to 10510 SW 155th Avenue in Beaverton, Oregon. The purpose of this investigation was to determine if regulatory setbacks to the wetland were necessary for the development of the property at 10510 SW 155th. This report identifies wetlands and other waters of the State/U.S. in accordance with county, state and federal laws.

The study area was found to have a small scrub-shrub wetland area associated with the stormwater ditch. The focus of these wetland delineation activities was to determine the location of the eastern boundary of the wetland. The total area of the wetland was not determined. The boundary was flagged out based on the aerial photographs, the LWI mapped wetland, topography, plant community, and hydrology. The boundary of this wetland was clearly discernable based on plant community.

The wetland areas were dominated in the herb stratum by *Phalaris arundinacea* (Reed Canary Grass) at most of the sample points. The upland areas were characterized by the large communities of *Cirsium vulgare* (Bull Thistle) and *Rubus armeniacus* (Himalayan Blackberry). Eight (8) sample points were observed in this study area; four (4) in wetland areas paired with four (4) in upland areas. Pits in the wetland area passed the 50/20 dominance test for hydrophytic vegetation, had hydric soil indicators of depleted matrix (F3), and had visible hydrology indicators. The upland adjacent to the wetland was distinguished by its plant communities and slightly higher topographic setting.

J: DISCLAIMER

This report documents the investigation, best professional judgment and conclusions of the investigators. It is correct and complete to the best of my knowledge. It should be considered a preliminary determination of wetland and waters jurisdiction. The report and its findings should be used at your own risk unless it has been reviewed and approved in writing by NRCS, Oregon Department of State Lands, and/or U. S. Army Corps of Engineers.

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

Project/Site: BPA Right-of-Way Adjacent to 15010 SW 155th Avenue City/County: Beaverton/Washington Sampling Date: 12/09/2015

Applicant/Owner: ADTM Development State: Oregon Sampling Point: 1

Investigator(s): Caiflin Bradach Section, Township, Range: 01S 01W 32 1200

Landform (hillslope, terrace, etc.): Hillslope/Footslope Local relief (concave, convex, none): Concave Slope (%): 7-12%

Subregion (LRR): A2 Lat: 45.443979 Long: -122.836660 Datum: _____

Soil Map Unit Name: Cornellus & Kinton Silt Loams NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: Local area experienced a large storm event with larger than average rainfall for multiple days prior to the site visit.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None Noted</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)				OBL species _____ x 1 = _____
1. <u>None Noted</u>				FACW species _____ x 2 = _____
2. _____				FAC species _____ x 3 = _____
3. _____				FACU species _____ x 4 = _____
4. _____				UPL species _____ x 5 = _____
5. _____				Column Totals: _____ (A) _____ (B)
= Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>10'</u>)				Hydrophytic Vegetation indicators:
1. <u>Phalaris arundinacea (Reed Canary Grass)</u>	<u>70</u>	<u>X</u>	<u>FACU</u>	<u>1</u> - Rapid Test for Hydrophytic Vegetation
2. <u>Rubus armeniacus (Himalayan Blackberry)</u>	<u>20</u>	<u>X</u>	<u>FACW</u>	<u>X</u> 2 - Dominance Test is >50%
3. <u>Spiraea douglasii (Douglas' Spirea)</u>	<u>15</u>		<u>FACW</u>	<u>3</u> - Prevalence Index is ≤3.0 ¹
4. _____				<u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____				<u>5</u> - Wetland Non-Vascular Plants ¹
6. _____				<u>Problematic Hydrophytic Vegetation¹ (Explain)</u>
7. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
9. _____				
10. _____				Remarks:
11. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 6"	10 YR 3/2	97	10 YR 3/6	3			Silt Loam	Hair-like Roots
6 - 10"	10 YR 3/2	98	10 YR 4/6	2			Silty Clay Loam	
10 - 16"	7.5 YR 3/2	100					Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)
- | | | |
|--|---|---|
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) | Indicators for Problematic Hydric Soils ³ : |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Depleted Dark Surface (F7) | ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| | <input type="checkbox"/> Redox Depressions (F8) | |

Restrictive Layer (if present):
 Type: _____
 Depth (Inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
 Sample point was upslope from paired sample point.

HYDROLOGY

- Wetland Hydrology Indicators:
- | | | |
|---|---|--|
| <u>Primary Indicators (minimum of one required; check all that apply)</u> | | <u>Secondary Indicators (2 or more required)</u> |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |

Field Observations:

Surface Water Present? Yes _____ No _____	Depth (Inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No _____	Depth (Inches): _____	
Saturation Present? (Includes capillary fringe) Yes _____ No _____	Depth (Inches): _____	

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

Remarks:
 Saturation at this location was most likely due to the heavy rainfall in the days before the site visit.

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

Project/Site: BPA Right-of-Way Adjacent to 15010 SW 155th Avenue City/County: Beaverton/Washington Sampling Date: 12/09/2015

Applicant/Owner: ADTM Development State: Oregon Sampling Point: 2

Investigator(s): Caitlin Bradach Section, Township, Range: 01S 01W 32 1200

Landform (hillslope, terrace, etc.): Hillslope/Footslope Local relief (concave, convex, none): Concave Slope (%): 7-12%

Subregion (LRR): A2 Lat: 45.443979 Long: -122.836660 Datum: _____

Soil Map Unit Name: Cornellus & Kinton Silt Loams NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Local area experienced a large storm event with larger than average rainfall for multiple days prior to the site visit.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None Noted</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)				
1. <u>Salix - Genus Unidentified (Willow family)</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				
= Total Cover				
Herb Stratum (Plot size: <u>10'</u>)				
1. <u>Phalaris arundinacea (Reed Canary Grass)</u>	<u>90</u>	<u>X</u>	<u>FACW</u>	
2. <u>Rosa pisocarpa (Clustered Wild Rose)</u>	<u>15</u>		<u>FACU</u>	
3. <u>Mahonia aquifolium (Oregon grape)</u>	<u>5</u>		<u>FACU</u>	
4. <u>Rubus armeniacus (Himalayan Blackberry)</u>	<u>5</u>		<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: The willow trees at this observation point had no leaves due to the time of year the investigation took place. Genus could not be determined.				

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 - 5"	7.5 YR 4/2	95	10 YR 4/6	5			Silty Clay	Saturated soils, not roots, Worms.
5 - 16"	10 YR 4/2	90	10 YR 4/6	10			Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (except MLRA 1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (Inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)

Secondary indicators (2 or more required)

- Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (LRR A)
- Other (Explain in Remarks)
- Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (LRR A)
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes No Depth (Inches): _____
 Water Table Present? Yes No Depth (Inches): _____
 Saturation Present? Yes No Depth (Inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

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

Project/Site: BPA Right-of-Way Adjacent to 15010 SW 155th Avenue City/County: Beaverton/Washington Sampling Date: 12/09/2015
 Applicant/Owner: ADTM Development State: Oregon Sampling Point: 3
 Investigator(s): Caillin Bradach Section, Township, Range: 01S 01W 32 1200
 Landform (hillslope, terrace, etc.): Hillslope/Footslope Local relief (concave, convex, none): Concave Slope (%): 7-12%
 Subregion (LRR): A2 Lat: 45.443979 Long: -122.836660 Datum: _____
 Soil Map Unit Name: Cornellus & Kinton Silt Loams NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>		
Wetland Hydrology Present?	Yes _____ No _____		
Remarks: Local area experienced a large storm event with larger than average rainfall for multiple days prior to the site visit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None Noted</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)				
1. <u>None Noted</u>				
2. _____				
3. _____				
4. _____				
5. _____				
= Total Cover				
Herb Stratum (Plot size: <u>10'</u>)				
1. <u>Rubus armeniacus (Himalayan Blackberry)</u>	<u>30</u>	<u>X</u>	<u>FACU</u>	
2. <u>Cirsium vulgare (Bull Thistle)</u>	<u>60</u>	<u>X</u>	<u>FACU</u>	
3. <u>Spiraea douglasii (Douglas' Spirea)</u>	<u>20</u>		<u>FACW</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
= Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks:				

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 16"	10 YR 3/2	100					Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histc Epipedon (A2)
- Black Histc (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (except MLRA 1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

- Indicators for Problematic Hydric Soils³:
- 2 cm Muck (A10)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (Inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)

Secondary Indicators (2 or more required)

- Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (LRR A)
- Other (Explain in Remarks)
- Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (LRR A)
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (Inches): _____
 Water Table Present? Yes _____ No _____ Depth (Inches): _____
 Saturation Present? Yes _____ No _____ Depth (Inches): _____
 (Includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

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

Remarks: Saturation at this location was most likely due to the heavy rainfall in the days before the site visit.

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

Project/Site: BPA Right-of-Way Adjacent to 15010 SW 155th Avenue City/County: Beaverton/Washington Sampling Date: 12/09/2015

Applicant/Owner: ADTM Development State: Oregon Sampling Point: 4

Investigator(s): Caitlin Bradach Section, Township, Range: 01S 01W 32 1200

Landform (hillslope, terrace, etc.): Hillslope/Footslope Local relief (concave, convex, none): Concave Slope (%): 7-12%

Subregion (LRR): A2 Lat: 45.443979 Long: -122.836660 Datum: _____

Soil Map Unit Name: Cornelius & Kinton Silt Loams NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Local area experienced a large storm event with larger than average rainfall for multiple days prior to the site visit.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None Noted</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				Prevalence Index worksheet:
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)				OBL species _____ x 1 = _____
1. <u>Salix - Genus Unidentified (Willow family)</u>	<u>60</u>	<u>X</u>	<u>FACW</u>	FACW species _____ x 2 = _____
2. _____				FAC species _____ x 3 = _____
3. _____				FACU species _____ x 4 = _____
4. _____				UPL species _____ x 5 = _____
5. _____				Column Totals: _____ (A) _____ (B)
= Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>10'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Cirsium vulgare (Bull Thistle)</u>	<u>30</u>	<u>X</u>	<u>FACU</u>	
2. <u>Spiraea douglasii (Douglas' Spiraea)</u>	<u>20</u>		<u>FACW</u>	
3. <u>Phalaris arundinacea (Reed Canary Grass)</u>	<u>40</u>	<u>X</u>	<u>FACW</u>	
4. <u>Rubus armeniacus (Himalayan Blackberry)</u>	<u>15</u>		<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
= Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: The willow trees at this observation point had no leaves due to the time of year the investigation took place. Genus could not be determined.				

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 - 7"	10 YR 4/2	99	10 YR 4/6	1			Silty Clay	Saturated soils
7 - 16"	10 YR 4/2	90	7.5 YR 4/6	10			Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Histc Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Black Histc (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Other (Explain In Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (Inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain In Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |

Field Observations:

Surface Water Present? Yes No Depth (Inches): _____
Water Table Present? Yes No Depth (Inches): _____
Saturation Present? Yes No Depth (Inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

Observation point was less than 5' from the drainage ditch

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

Project/Site: BPA Right-of-Way Adjacent to 15010 SW 155th Avenue City/County: Beaverton/Washington Sampling Date: 12/09/2015
 Applicant/Owner: ADTM Development State: Oregon Sampling Point: 5
 Investigator(s): Callin Bradach Section, Township, Range: 01S 01W 32 1200
 Landform (hillslope, terrace, etc.): Hillslope/Footslope Local relief (concave, convex, none): Concave Slope (%): 7-12%
 Subregion (LRR): A2 Lat: 45.443979 Long: -122.836660 Datum: _____
 Soil Map Unit Name: Cornelius & Kinton Silt Loams NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: Local area experienced a large storm event with higher than average rainfall for multiple days prior to the site visit.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None Noted</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>None Noted</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Cirsium vulgare (Bull Thistle)</u>	<u>20</u>		<u>FACU</u>	___ 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Phalaris arundinacea (Reed Canary Grass)</u>	<u>5</u>		<u>FACW</u>	<u>X</u> 2 - Dominance Test is >50%
3. <u>Rubus armeniacus (Himalayan Blackberry)</u>	<u>10</u>		<u>FACU</u>	___ 3 - Prevalence Index is ≤3.0 ¹
4. <u>Spiraea douglasii (Douglas' Spiraea)</u>	<u>90</u>		<u>FACW</u>	___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____				___ 5 - Wetland Non-Vascular Plants ¹
6. _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <u>X</u> No _____
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 16"	10 YR 3/2	98	7.5 YR 4/4	2			Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (Inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (Inches): _____

Water Table Present? Yes _____ No _____ Depth (Inches): _____

Saturation Present? Yes _____ No _____ Depth (Inches): _____
(Includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

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

Remarks: Saturation at this location was most likely due to the heavy rainfall in the days before the site visit.

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

Project/Site: BPA Right-of-Way Adjacent to 15010 SW 155th Avenue City/County: Beaverton/Washington Sampling Date: 12/09/2015

Applicant/Owner: ADTM Developement State: Oregon Sampling Point: 6

Investigator(s): Caitlin Bradach Section, Township, Range: 01S 01W 32 1200

Landform (hillslope, terrace, etc.): Hillslope/Footslope Local relief (concave, convex, none): Concave Slope (%): 7-12%

Subregion (LRR): A2 Lat: 45.443979 Long: -122.836660 Datum: _____

Soil Map Unit Name: Cornelius & Kinton Silt Loams NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes _____ No _____	

Remarks:

Local area experienced a large storm event with higher than average rainfall for multiple days prior to the site visit.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>None Noted</u>				
2. _____				
3. _____				
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)				
1. <u>Salix - Genus Unidentified (Willow family)</u>	<u>25</u>	<u>X</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
= Total Cover				
Herb Stratum (Plot size: <u>10'</u>)				
1. <u>Cirsium vulgare (Bull Thistle)</u>	<u>10</u>		<u>FACU</u>	
2. <u>Spiraea douglasii (Douglas' Spiraea)</u>	<u>40</u>	<u>X</u>	<u>FACW</u>	
3. <u>Phalaris arundinacea (Reed Canary Grass)</u>	<u>50</u>	<u>X</u>	<u>FACW</u>	
4. <u>Rubus armeniacus (Himalayan Blackberry)</u>	<u>15</u>		<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____				
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				

Remarks:

The willow trees at this observation point had no leaves due to the time of year the investigation took place. Genus could not be determined.

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 - 16"	10 YR 4/2	95	10 YR 4/4	5			Silty Clay	Saturated soils

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: _____

Depth (Inches): _____

Hydric Soil Present? Yes No

Remarks:

Soils very saturated from recent storm event. Water pooled at this sample point at 6"

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (Inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (Inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (Inches): _____ (Includes capillary fringe)	

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

Remarks:

Observation point was less than 3' from the drainage ditch

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

Project/Site: BPA Right-of-Way Adjacent to 15010 SW 155th Avenue City/County: Beaverton/Washington Sampling Date: 12/09/2015

Applicant/Owner: ADTM Development State: Oregon Sampling Point: 7

Investigator(s): Caitlin Bradach Section, Township, Range: 01S 01W 32 1200

Landform (hillslope, terrace, etc.): Hillslope/Footslope Local relief (concave, convex, none): Concave Slope (%): 7-12%

Subregion (LRR): A2 Lat: 45.443979 Long: -122.836660 Datum: _____

Soil Map Unit Name: Cornellus & Kinton Silt Loams NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Local area experienced a large storm event with higher than average rainfall for multiple days prior to the site visit.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None Noted</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> (A/B)
2. _____				
3. _____				
4. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>10'</u>)				
1. <u>None Noted</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>10'</u>)				
1. <u>Cirsium vulgare (Bull Thistle)</u>	<u>5</u>		<u>FACU</u>	
2. <u>Daucus carota (Queen Anne's Lace)</u>	<u>25</u>		<u>FACU</u>	
3. <u>Rosa pisocarpa (Clustered Wild Rose)</u>	<u>20</u>		<u>FAC</u>	
4. <u>Phalaris arundinacea (Reed Canary Grass)</u>	<u>15</u>		<u>FACW</u>	
5. <u>Pteridium aquilinum (Bracken Fern)</u>	<u>15</u>		<u>FACU</u>	
6. <u>Spiraea douglasii (Douglas' Spirea)</u>	<u>20</u>		<u>FACW</u>	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
_____ = Total Cover				
Remarks:				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 16"	10 YR 5/4	100					Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (Inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
 This sampling location was located up slope from its paired sample plot.

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes _____ No _____	Depth (Inches): _____	Wetland Hydrology Present? Yes _____ No _____
Water Table Present?	Yes _____ No _____	Depth (Inches): _____	
Saturation Present? (Includes capillary fringe)	Yes _____ No _____	Depth (Inches): _____	

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

Remarks:
 Saturation at this location was most likely due to the heavy rainfall in the days before the site visit.

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

Project/Site: BPA Right-of-Way Adjacent to 15010 SW 155th Avenue City/County: Beaverton/Washington Sampling Date: 12/09/2015

Applicant/Owner: ADTM Development State: Oregon Sampling Point: 8

Investigator(s): Caitlin Bradach Section, Township, Range: 01S 01W 32 1200

Landform (hillslope, terrace, etc.): Hillslope/Footslope Local relief (concave, convex, none): Concave Slope (%): 7-12%

Subregion (LRR): A2 Lat: 45.443979 Long: -122.836660 Datum: _____

Soil Map Unit Name: Cornelius & Kinton Silt Loams NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks: Local area experienced a large storm event with higher than average rainfall for multiple days prior to the site visit.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None Noted</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)				
1. <u>None Noted</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>10'</u>)				
1. <u>Cirsium vulgare (Bull Thistle)</u>	<u>5</u>		<u>FACU</u>	
2. <u>Phalaris arundinacea (Reed Canary Grass)</u>	<u>60</u>		<u>FACW</u>	
3. <u>Pteridium aquilinum (Bracken Fern)</u>	<u>15</u>		<u>FACU</u>	
4. <u>Rosa pisocarpa (Clustered Wild Rose)</u>	<u>10</u>		<u>FAC</u>	
5. <u>Rubus armeniacus (Himalayan Blackberry)</u>	<u>10</u>		<u>FACU</u>	
6. <u>Spiraea douglasii (Douglas' Spirea)</u>	<u>15</u>		<u>FAC</u>	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: The willow trees at this observation point had no leaves due to the time of year the investigation took place. Genus could not be determined.				

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 - 7"	7.5 YR 4/2	98	7.5 YR 5/6	2			Silty Clay	Saturated soils
7-16"	7.5 YR 4/2	90	7.5 YR 5/6	10			Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (Inches): _____

Hydric Soil Present? Yes No

Remarks:
 Saturated soils due to recent storm. Water pooled in the sampling hole at 8". Surface water was less than 3' from sampling point. Worms were present through out the soil.

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (Inches): _____

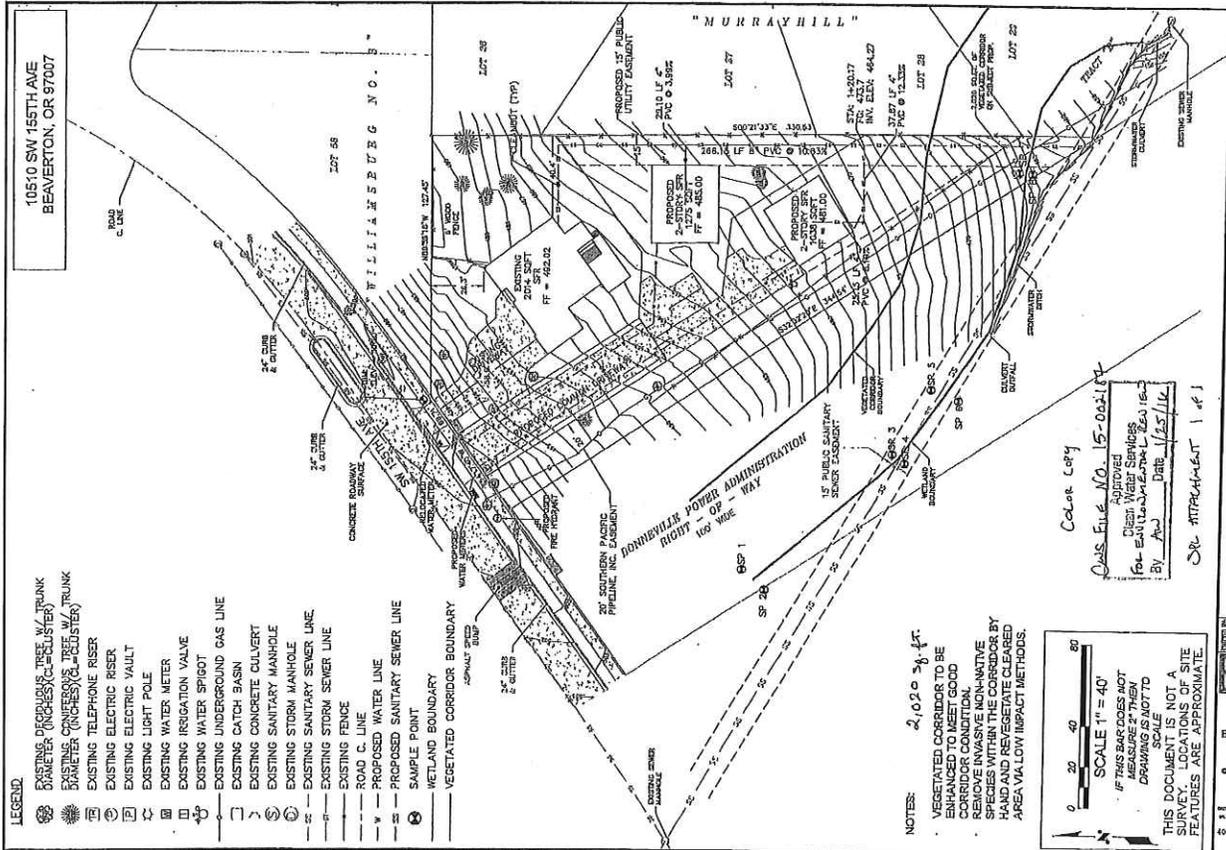
Water Table Present? Yes No Depth (Inches): _____

Saturation Present? Yes No Depth (Inches): _____
 (Includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:
 Observation point was less than 3' from surface water.



- LEGEND**
- EXISTING OVERHUNG TREE W/ TRUNK
 - EXISTING OVERHUNG TREE W/ TRUNK
 - EXISTING TELEPHONE RISER
 - EXISTING ELECTRIC RISER
 - EXISTING ELECTRIC VAULT
 - EXISTING LIGHT POLE
 - EXISTING WATER METER
 - EXISTING IRRIGATION VALVE
 - EXISTING WATER SPIGOT
 - EXISTING UNDERGROUND GAS LINE
 - EXISTING CATCH BASIN
 - EXISTING CONCRETE CULVERT
 - EXISTING SANITARY MANHOLE
 - EXISTING STORM MANHOLE
 - EXISTING SANITARY SEWER LINE
 - EXISTING STORM SEWER LINE
 - EXISTING FENCE
 - ROAD C. LINE
 - PROPOSED WATER LINE
 - PROPOSED SANITARY SEWER LINE
 - SAMPLE POINT
 - WETLAND BOUNDARY
 - VEGETATED CORRIDOR BOUNDARY

NOTES:

- 2,100 ± sq. ft. VEGETATED CORRIDOR TO BE ENHANCED TO MEET GOOD CORRIDOR CONDITION.
- REPLANT NATIVE SPECIES WITHIN THE CORRIDOR BY HAND AND REVEGETATE CLEARED AREA VIA LOW IMPACT METHODS.

SCALE 1" = 40'

IF THIS BASE CASE NOT MEASURED THEN DRAWING IS NOT TO SCALE

THIS DOCUMENT IS NOT A SURVEY. LOCATIONS OF SITE FEATURES ARE APPROXIMATE.

Color Copy
DWS File No. 15-002187
Checked by: [Signature]
For: [Signature]
By: [Signature] Date: 11/25/16
SIC ATTACHED 1 of 1

FIGURE 6B
Three Lot Partition-10510 SW 155th Ave
T. 1S. R. 1W, Sec. 32BD, TL. 100 (EMS 15-0057)
16 DEC 2015
Wetland Boundary Delineation Map (Rev. 1/15/16)
SCALE: 1"=40'

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC.
ALL RIGHTS RESERVED
4000 SE International Way
Suite 200
Beaverton, OR 97005
503.638.1100
www.emsinc.com

Morgan Holen

— & — ASSOCIATES, LLC



Consulting Arborists and Urban Forest Management

971.409.9354
3 Monroe Parkway, Suite P 220
Lake Oswego, Oregon 97035
morgan.holen@comcast.net

DATE: July 24, 2016
TO: Mike and Tynisha Safstrom
FROM: Morgan Holen, Consulting Arborist
RE: Safstrom Partition – Boring Recommendation

MHA16062

Morgan Holen & Associates, LLC, was contacted by Mike and Tynisha Safstrom to obtain a written arborist recommendation regarding tree protection as it relates to proposed underground utility installation at their three lot partition project located at 10510 SW 155th Avenue in Beaverton, Oregon. I have not been to the site to visually assess existing trees, but have looked at the site boundaries and satellite imagery available on Beaverton Search, reviewed the project plan set drawings, and discussed the proposed work with Mr. Safstrom.

It is my understanding that there is a 20-foot public utility easement along the western property boundary and that the crowns of trees located off-site to the west overhang the subject site by no more than 14-feet. Based on my discussion with Mr. Safstrom, the utility plan will be modified to place the deeper sanitary sewer line closer to the property boundary and the shallow storm water line beyond the dripline of protected off-site trees; the sanitary sewer line is proposed approximately eight feet from the property boundary at a minimum depth of four feet and the storm water line is proposed approximately 18-feet from the property boundary and will daylight at a minimum.

The sanitary sewer is proposed to be installed by boring, which is a good alternative to trenching beneath protected tree driplines in order to avoid potential tree root impacts. Tree roots are typically located within the upper two feet of soil where air and water are more readily available. Boring is recommended at a minimum depth of three feet to stay below the root depth. In this case, boring is proposed at a minimum depth of four feet and will be further than half the dripline distance away from protected trees. The boring machine and bore pits required to allow pipe installation should be set up beyond protected tree driplines.

The storm water line could be installed by trenching with an excavator since it is proposed beyond the dripline of protected trees and will not impact the critical root zone.

The proposed construction is not expected to result in any detrimental tree root impacts and the adjacent trees should be well protected during underground utility installation.

The client may choose to accept or disregard the recommendations contained herein, or seek additional advice. Neither this author nor Morgan Holen & Associates, LLC, have assumed any responsibility for liability associated with the trees on or adjacent to this site.

Please contact us if you have questions or need any additional information.

Thank you,
Morgan Holen & Associates, LLC

A handwritten signature in black ink that reads "Morgan E. Holen". The signature is written in a cursive, flowing style.

Morgan E. Holen, Owner
ISA Board Certified Master Arborist, PN-6145B
ISA Tree Risk Assessment Qualified
Forest Biologist

Sections 4 - 7

Service Provider Letter

This form and the attached conditions will serve as your Service Provider Letter in accordance with Clean Water Services Design and Construction Standards (R&O 07-20).

Jurisdiction: Beaverton Review Type: No Impact
 Site Address: 10510 SW 155th AVE SPL Issue Date: January 25, 2016
 / Location: Beaverton, OR 97007 SPL Expiration Date: January 24, 2018

Applicant Information:

Name: MIKE SURFSTROM
 Company: ADTM DEVELOPMENT LLC
32070 SW WILLAMETTE WAY EAST
 Address: WILLAMETTE, OR 97070
 Phone/Fax: (503) 890-6884
 E-mail: mikesafstrom@gmail.com

Owner Information:

Name: _____
 Company: M&T DEVELOPMENT LLC
6729 CHILDS RD
 Address: LAKE OSWEGO OR 97035
 Phone/Fax: (503) 890-6884
 E-mail: mikesafstrom@gmail.com

Tax lot ID

1S132BD00100

Development Activity

Partition _____

Pre-Development Site Conditions:

Sensitive Area Present: On-Site Off-Site
 Vegetated Corridor Width: _____
 Vegetated Corridor Condition: _____

Post Development Site Conditions:

Sensitive Area Present: On-Site Off-Site
 Vegetated Corridor Width: _____

Enhancement of Remaining Vegetated Corridor Required:

Square Footage to be enhanced: 2,020

Encroachments into Pre-Development Vegetated Corridor:

Type and location of Encroachment: None Square Footage: 0

Mitigation Requirements:

Type/Location: No Mitigation Required Sq. Ft./Ratio/Cost: 0

Conditions Attached Development Figures Attached (1) Planting Plan Attached Geotech Report Required

This Service Provider Letter does NOT eliminate the need to evaluate and protect water quality sensitive areas if they are subsequently discovered on your property.

In order to comply with Clean Water Services water quality protection requirements the project must comply with the following conditions:

1. No structures, development, construction activities, gardens, lawns, application of chemicals, uncontained areas of hazardous materials as defined by Oregon Department of Environmental Quality, pet wastes, dumping of materials of any kind, or other activities shall be permitted within the sensitive area or Vegetated Corridor which may negatively impact water quality, except those allowed in R&O 07-20, Chapter 3.
2. Prior to any site clearing, grading or construction the Vegetated Corridor shall be surveyed, staked, and temporarily fenced per approved plan. During construction the Vegetated Corridor shall remain fenced and undisturbed except as allowed by R&O 07-20, Section 3.06.1 and per approved plans.
3. An approved Oregon Department of Forestry Notification is required for one or more trees harvested for sale, trade, or barter, on any non-federal lands within the State of Oregon.
4. Prior to ground disturbance an erosion control permit is required. Appropriate Best Management Practices (BMP's) for Erosion Control, in accordance with Clean Water Services' Erosion Prevention and Sediment Control Planning and Design Manual, shall be used prior to, during, and following earth disturbing activities.
5. Prior to construction, a Stormwater Connection Permit from Clean Water Services or its designee is required pursuant to Ordinance 27, Section 4.B.
6. Activities located within the 100-year floodplain shall comply with R&O 07-20, Section 5.10.
7. Removal of native, woody vegetation shall be limited to the greatest extent practicable.
8. If applicable, the water quality facility shall be planted with Clean Water Services approved native species, and designed to blend into the natural surroundings.
9. **Should final development plans differ significantly from those submitted for review by Clean Water Services, the applicant shall provide updated drawings, and if necessary, obtain a revised Service Provider Letter.**

SPECIAL CONDITIONS

10. The Vegetated Corridor width for sensitive areas within the project site shall be a minimum of 50 feet wide, as measured horizontally from the delineated boundary of the sensitive area.
11. For Vegetated Corridors up to 50 feet wide, the applicant shall enhance the portion of the Vegetated Corridor that is on-site or 2,020 sf to meet or exceed good corridor condition as defined in R&O 07-20, Section 3.14.2, Table 3-3.
12. Prior to any site clearing, grading or construction, the applicant shall provide Clean Water Services with a Vegetated Corridor enhancement/restoration plan as part of the engineering submittal. Enhancement/restoration of the Vegetated Corridor shall be provided in accordance with R&O 07-20, Appendix A, and shall include planting specifications for all Vegetated Corridor.
13. Prior to installation of plant materials, all invasive vegetation within the Vegetated Corridor shall be removed per methods described in Clean Water Services' Integrated Pest Management Plan.
14. Clean Water Services shall be notified 72 hours prior to the start and completion of enhancement/restoration activities. Enhancement/restoration activities shall comply with the guidelines provided in Landscape Requirements (R&O 07-20, Appendix A).
15. Maintenance and monitoring requirements shall comply with R&O 07-20, Section 2.11.2. If at any time during the warranty period the landscaping falls below the 80% survival level, the owner shall reinstall all deficient planting at the next appropriate planting opportunity and the two-year maintenance period shall begin again from the date of replanting.
16. Performance assurances for the Vegetated Corridor shall comply with R&O 07-20, Section 2.06.2.

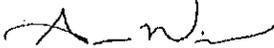
17. For any developments which create multiple parcels or lots intended for separate ownership, Clean Water Services shall require that the sensitive area and Vegetated Corridor be contained in a separate tract and subject to a "STORM SEWER, SURFACE WATER, DRAINAGE AND DETENTION EASEMENT OVER ITS ENTIRETY" to be granted to Clean Water Services.

FINAL PLANS

18. Final plans shall include landscape plans. In the details section of the plans, a description of the methods for removal and control of exotic species, location, distribution, condition and size of plantings, existing plants and trees to be preserved, and installation methods for plant materials is required.
19. A Maintenance Plan shall be included on final plans including methods, responsible party contact information, and dates (minimum two times per year, by June 1 and September 30).
20. Final construction plans shall clearly depict the location and dimensions of the sensitive area and the Vegetated Corridor (indicating good, marginal, or degraded condition). Sensitive area boundaries shall be marked in the field.
21. Protection of the Vegetated Corridors and associated sensitive areas shall be provided by the installation of signage between the development and the outer limits of the Vegetated Corridors. Signage details to be included on final construction plans.

This Service Provider Letter is not valid unless CWS-approved site plan is attached.

Please call (503) 681-3653 with any questions.



**Amber Wierck
Environmental Plan Review**

Attachments (1)

Aaron Parker

From: HUFFMAN Anita <anita.huffman@state.or.us>
Sent: Tuesday, July 05, 2016 8:57 AM
To: Aaron Parker
Subject: Limits of DSL jurisdiction in wetlands

Hi Aaron,

We discussed the need for your project to install a sewer manhole within a wetland. There would be directional drilling to install the sewer pipes, so no impact to wetlands would occur in that situation. If your manhole project involves less than 50 cubic yards total of removal and/or fill, you would not require a permit from the Department. Any soils removed and not replaced would need to be disposed of in an upland location.

The 50 cubic yard limitation applies to all amounts of soil movement-for example, 26 CY of removal and 25 CY yards of fill would require a permit.

The Administrative Rule to cite is OAR 141-085-0520(4)(a)(b).

Let me know if you have any questions

Anita Huffman
Metro Region Aquatic Resource Coordinator
Clackamas and Washington Counties
Department of State Lands
Office 503-986-5250
Cell 503-480-5985
Fax 503-378-4844

PLEASE NOTE: My primary telephone number is now 503-986-5250. Please use this number unless otherwise noted.



Community Development Department
Current Planning Division
12725 SW Millikan Way / PO Box 4755
Beaverton, OR 97005
General Information: (503) 526-2222 V/TDD
www.BeavertonOregon.gov

May 18, 2016

Mike Safstrom
ADTM Development LLC
32070 SW Willamette Way East
Willamette, OR 97070

Mike Safstrom
M&T Development LLC
6729 Childs Road
Lake Oswego, OR 97035

**RE: SW 155th Ave 3-lot Partition FS2016-0001 LD2016-0002 TP2016-0003 --
Completeness Review**

Dear Mr. Safstrom,

With this letter, the City has determined that your plans and written materials for the above project, as re-submitted in response to the first application status letter to be **incomplete**. The purpose of this letter is to inform you of the items necessary to make your application complete. This letter does not identify all the issues regarding the content of the materials that have been submitted. Review of the content of the submitted material and staff's recommendation on the proposal will occur during the project review phase of the application process after your proposal is deemed complete.

A. COMPLETENESS ISSUES: Pursuant to Section 50.25.1 of the Development Code, a complete application is one that contains the information required by the Director to address the relevant criteria, development requirements and procedures of this Code. The following items must be addressed and submitted in order for the application to be deemed complete:

1. Land Division Application: Regarding the Facilities Review Technical Criteria (Section 40.03 of the Development Code) to be included in the written statement, please provide individual findings specifically addressing how and why the proposal satisfies each of the essential facilities. The definition of 'essential facilities' may be found in chapter 90 of the Beaverton Development Code.
2. Tree Plan 3 Application: At this time, staff is researching additional documents to determine the extent to which the Significant Natural Resource Area (SNRA 85) is applied to this property. Staff review of the mapped depiction of SNRA 85 shows the natural

SW 155th Ave 3-Lot Partition FS2016-0001 LD2016-0002 TP2016-0003

Page 1

Completeness Review

resource extending north into upland portions of the subject property encompassing an area that would include the two Western Red Cedar trees but not the Douglas Fir trees. In review of the plan as resubmitted to the city, staff observe only the southernmost triangle of the subject property to contain a wetland. In part, to determine the extent to which SNRA 85 is applied to this property, staff will need to review the natural resource assessment which was not included as part of the resubmittal package. The natural resource assessment should be prepared by a wetland biologist. Contents of this document should include field observations and a plan showing the locations where soil samples were taken to determine the wetland boundary, consistent with the plan. The resource assessment should also be part of the documents subject to further review by the Clean Water Services (CWS). Staff notes that the Service Provider Letter issued by CWS, dated January 25, 2016 identifies wetlands to be located off-site. The Service Provider Letter should be prepared in response to the plan as submitted to the city, which identifies on-site wetlands. See item No. 3 for instructions as to providing a revised CWS letter.

The application for Tree Plan 3 is only required with a proposal that shows the intent to remove trees located within that part of the SNRA or Sensitive Areas found on the project site. Staff observe a stream channel associated with the wetland to be located in the southernmost portion of the site but not near any trees proposed for removal. Staff also observe how the boundary of SNRA 85 is primarily shown to follow the course of this stream channel. Staff also observe how the City's Local Wetland Inventory (LWI) shows the same stream channel to veer away from the subject property and continue northwest within the BPA/PGE powerline tract. In short, the Tree Plan 3 application may not be necessary if the two Western Cedars trees (proposed for removal) are shown outside the SNRA / Sensitive Area. However, Tree Plan 2 application, would be applicable for the removal of five or more "Community Trees" (e.g. healthy trees, non-fruit that are 10 or more inches in diameter DBH). Staff observe the revised plan submittal to remove at least five trees of this type. Accordingly the Tree Plan 2 application is more likely to apply.

3. Please provide a revised Clean Water Services Service Provider Letter which reflects the sensitive area located on-site. With Preliminary Partition approval, conditions will require the applicant to obtain all necessary permits from the Department of State Lands and U.S. Army Corps of Engineers. These permits are typically identified to the Service Provider letter issued by Clean Water Services in early consideration of the project proposal. Staff refer to additional comments received from Site Development on this topic.

Site Development

1. Condition #12 in the CWS SPL requires a corridor enhancement planting plan be prepared.
2. Approval from both the Bonneville Power Administration and Southern Pacific Pipeline Inc., for proposed off-site work and work in the 20 foot easement, respectively, is required.

B. PRELIMINARY STAFF COMMENTS (NOT COMPLETENESS ITEMS):

While not strictly completeness items, the following are matters that will need to be addressed with the partition application. Submittal of this information is necessary prior to the Facilities Review Committee meeting.

Planning Division:

LAND DIVISION APPLICATION – PLANS & GRAPHIC REQUIREMENTS:

1. A-3 (Existing Conditions Plan) it is strongly recommended that a professional land surveyor produce a survey of the subject site.
2. A-14 (Existing Conditions Plan) wetlands must be professionally delineated. See note above.
3. C-3 (Grading Plan) requires that a grading plan include "points of access, interior streets, driveways and parking areas".
4. C-6 (Grading Plan) requires "Topographical information, (maximum 2 ft. contour lines) of existing and proposed grades for every proposed lot of the land division showing that each lot can feasibly accommodate the proposed use. As pointed out in your Pre-Application Conference notes, "this plan is to demonstrate compliance with maximum grade differential standards under 60.15 of the Development Code. Deferral of the preliminary grading plan (per lot) to a builder for subsequent home construction does not demonstrate compliance with maximum grade differential standards under Section 60.15." Pads intended for home construction should be shown as well as grading for the proposed access beyond tract "A" including driveways.
5. C-7 (Grading Plan) requires appropriate spot elevations for features such as walls, retaining walls, catch basins, stairs, sidewalks, and parking areas. In our meeting on May 17th, 2016, you mentioned that retaining walls may be used to accommodate the slope of the site. If retaining walls are part of the proposal please show the spot elevations.
6. F-4 (Lot Information) requires that "the front, rear and side yards of each proposed lot be labeled". Please see definitions of front, rear and side lot line in chapter 90 of the City of Beaverton Development Code:

Lot Line. Any property line bounding a lot.

A. Front Lot Line. For an interior lot, the lot line abutting a street; for a corner lot, a lot line abutting either street, as determined by the Director at the time of initial construction; for flag lots, the line determined by the Director at the time of initial construction which shall then govern the designation of side and rear lot lines. [ORD 3293; November, 1982.]

B. Rear Lot Line. A lot line which is opposite to and most distant from the front lot line. In the case of a corner lot, the Director shall determine the rear lot line. In the case of an irregular or triangular-shaped lot, a lot line ten feet (10') in

length within the lot parallel to and at the maximum distance from the front lot line. In the case of a through lot, each street has a front lot line. [ORD 4071; November 1999]

C. Side Lot Line. Any lot line which is not a front or rear lot line.

7. G (Landscape Plan) please provide a landscape plan.
8. Staff recommend changing the symbols used in the legend to identify original and finished grade which are too similar and are not easily distinguishable. Staff suggests making one line significantly bolder than the other.
9. Please show a pedestrian connection to lot 3.
10. On page 4 out of 15 on the plans submitted, two (2) flow-through planters are shown on lot 3. Please show the correct number and location of flow-through planters.
11. Please clarify which lot(s) will be responsible for "Tract B".
12. Please show the proposed driveways for lots 2 and 3 clearly.

Site Development Division:

1. Please note that a DSL concurrence letter will be required.
2. To accommodate the public utility line, manholes will have to be located on the northern and southern portions of the property.
3. As per the discussion we had on May 17th, 2016 the connection to the public line from lot 2 will have to be revised.

Additional comments and details from Site Development to come.

Planning Division:

TREE PLAN APPLICATION – PLANS & REQUIREMENTS:

1. Tree Plan 2 or 3 Application: Staff recommend explaining further how grading and contouring of the site is designed to mitigate adverse effect(s) on neighboring properties, public right-of-way, surface drainage, water facilities, and public storm drainage system. Specifically, staff recommend focus of this analysis to all grading proposed in proximity to trees shown within lots east of subject property. If boring for utility lines is proposed (for Sanitary Sewer and Storm Sewer) the methods for boring should be explained with respect to the root zones of trees located on neighboring properties. The extent of impact should be identified. Tree protection methods proposed for this area should be described and shown to the site plan.

As discussed at the meeting of May 17, 2016 staff highly recommends a conceptual cross-section detail of a future home constructed to the middle lot as proposed. The cross-section detail should identify a raised foundation, distance from the east property line and

compliance with the city R-5 zone development standards for building height (at two stories). If you would like a visual of how the building height is measured, please see the attached document (Exhibit A).

2. B-11 (Dimensioned Site Plan) please address how the location of storm water quality/detention facilities will or will not impact trees on and abutting the site within 25 feet of the entire boundary.
3. B-13 (Dimensioned Site Plan) please address how site grading will or will not impact trees on and abutting the site within 25 feet of the entire boundary.

C. RESUBMITTAL

Please provide three (3) collated submittal packages that include: copies of the written narrative, reports, and folded complete plan sets bound.

Additional copies will be required later when your project has been scheduled for final review and processing. One set of the original application materials is kept on file at the Planning Services Division. At the time of a future application, we can provide the information on file to assist you in preparing your materials. For information about application requirements, forms, fees and schedules, please contact the Planning Services Counter at (503) 526-2420.

If you have any questions regarding this letter or any other aspect of our process, please don't hesitate to call. I am including a list of the primary members of the Facilities Review Committee who were involved in the completeness review.

LAND USE & DESIGN: Elena Sasin (503) 526-2494
LAND USE & DESIGN: Scott Whyte (503) 526-2652
TRANSPORTATION: Ken Rencher (503) 526-2427
SITE DEVELOPMENT: Jim Duggan (503) 526-2442

We look forward to working with you on this project.

Sincerely,

Elena Sasin
Assistant Planner
cc: Counter; Project file

May 17, 2016

COMPLETENESS – Naomi Patibandla

LD2016-0002 SW 155th Ave, 3 Lot Partition

1. The Clean Water Services District (CWS) Service Provider Letter (SPL) requires that the sensitive area vegetated corridor and enhanced mitigation area be contained in a tract separate from any building tract. Therefore a revised preliminary plat must be prepared that shows the building lots (parcels) and the tract required by Condition #17 in the SPL.
2. Condition #12 in the CWS SPL requires a corridor enhancement planting plan be prepared.
3. An easement approval from Kinder Morgan Fuel and Bonneville Power Administration will be required for the off-site sanitary sewer tie-in.

As discussed at our meeting on May 17, 2017, the following are matters that will need to be addressed with the land division application:

An updated CWS SPL will be required to address the on-site sensitive areas.

A DSL concurrence letter will be required.

DSL/Army Corp permitting will be necessary for any on/off site improvements within the sensitive areas.

The TBM will need to be tied into the City of Beaverton Datum for Site Development permit submittal.

Grading to allow for construction of storm water management facilities, and driveways must be a part of the land division approval.



April 9, 2015

Mike Safstrom
ADTM Development LLC
32070 SW Willamette Way East
Willamette, OR 97070

Subject: Pre-Application Summary Notes for 10510 SW 155th Avenue - 3 Lot Partition

Dear Mr. Safstrom,

Thank you for attending the Pre-Application Conference held on April 1, 2015. We are pleased to provide you with the following notes prepared in response to your proposal.

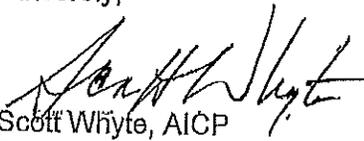
Comments prepared by staff are reflective of the proposal considered at the Pre-App. A copy of your proposal was also sent to other members of staff who did not attend the Pre-App but have provided written comments hereto. Please feel free to contact anyone who provided comments. Contact names, telephone number and e-mail addresses are listed herein.

Following every Pre-App, staff understands that there may be changes to the plan or use considered. If these changes effectively re-design the site plan or involve a change to a use not discussed, please be advised that such change could require different land use application(s) than were identified by staff at the Pre-App. It's also possible that different issues or concerns may arise from such change. In these cases, we highly encourage applicants to request a second Pre-App for staff to consider the change and provide revised comments accordingly.

In part, the Pre-App is intended to assist you in preparing plans and materials for staff to determine your application(s) to be "complete" as described in Section 50.25 of the City Development Code. For your application(s) to be deemed complete on the first review, you must provide everything required as identified on the Application Checklist(s) (provided at the Pre-App) in addition to any materials or special studies identified in the summary notes hereto. If you have questions as to the applicability of any item on the checklist(s) or within this summary, please contact me directly.

On behalf of the staff who attended the Pre-App, we thank you for sharing your proposal with us. If we can be of further assistance, please do not hesitate to call.

Sincerely,


Scott Whyte, AICP
Senior Planner,
(503) 526-2652

PRE-APPLICATION CONFERENCE MEETING SUMMARY NOTES

Prepared for

Three Lot Partition – 10510 SW 155th Avenue
PA 2015-0015, April 1, 2015

The following pre-application notes have been prepared pursuant to Section 50.20 of the Beaverton Development Code. All applicable standards, guidelines and policies from the City Development Code, Comprehensive Plan and Engineering Design Manual and Standard Drawings identified herein are available for review on the City's web site at: www.beavertonoregon.gov. Copies of the Development Code and Comprehensive Plan are also available for review at the City's Customer Service Kiosk located within the Community Development Department. Copies of these documents are also available for purchase.

The following is intended to identify applicable code sections, requirements and key issues for your proposed development application. Items checked are to be considered relevant to your proposed development.

PRE-APPLICATION CONFERENCE DATE: April 1, 2015

PROJECT INFORMATION:

Project Name: Three-Lot Partition – 10510 SW 155th Avenue

Project Description: Develop property for three lots intended for single-family detached. Existing dwelling retained on one lot. Shared access to SW 155th Avenue.

Property/Deed Owner: M&T Development LLC

Site Address: 10510 SW 155th Avenue

Tax Map and Lot: 1S1-32BD, Tax Lot 100

Zoning: City R-5 Urban Standard Density

Comp Plan Designation: Standard Density

Site Size:

APPLICANT INFORMATION:

Applicant's Name: ADTM Development LLC
32070 SW Willamette Way East, Willamette, OR 97070

Applicant's Rep:
Address:

Phone / e-mail: Phone: 503-890-6884 / e-mail: mikesafstrom@gmail.com

PREVIOUS LAND USE HISTORY:

Subject property is a lot created as part of the Murrayhill Planned Unit Development. Copy of recorded plat provided at the Pre-App.

SECTION 50.25 (APPLICATION COMPLETENESS):

The completeness process is governed by Section 50.25 of the Development Code. The applicant is encouraged to contact staff to ask any questions or request clarification of any items found on the application checklists that were provided to the applicant at the time of the pre-application conference. In addition, the applicant should be aware that staff is not obligated to review any material submitted 14 days or later from the time the application has been deemed "complete" that is not accompanied with a continuance to provide staff the necessary time to review the new material.

APPLICATION FEES:

Based on the materials provided, the identified application fees (**land use only**) are as follows:

Preliminary Partition	\$3,440.00
Tree Plan 2	\$1,055.00
<i>possible Flexible Setback for Proposed Residential Subdivision</i>	\$412.00
Final Partition (Type 1 Admin. process, follows Preliminary Partition approval)	\$897.00

See Key Issues/Considerations herein for description of applications. Application fees (above) will be subject change on July 1, 2015. The fees in effect at the time a complete application is received will control.

SECTION 50.15. CLASSIFICATION OF APPLICATIONS:

Applications are subject to the procedure (Type) specified by the City Development Code. Per Section 50.15.2 of the Code, when an applicant submits more than one complete application for a given proposal, where each application addresses separate code requirements and the applications are subject to different procedure types, all of the applications are subject to the procedure type which requires the broadest notice and opportunity to participate. **Preliminary Partition** and **Tree Plan 2** are subject to a **Type 2** process (Flexible Setback the same). Section 50.15.2 further provides for consolidated processing of all applications.

SECTION 50.30 (NEIGHBORHOOD REVIEW MEETING):

A Neighborhood Review Meeting is required for Type 3 process / Optional for Type 2.
A Neighborhood Review Meeting packet was provided at Pre-App meeting.. Name of Neighborhood Advisory Committee Neighbors Southwest. Contact Person & Phone No.: Chair: Alton Harvey (503) 430-5512
Recommend contact with Murrayhill Owners Association Rep: Pam Milzuo (503) 524-4429

CHAPTER 20 (LAND USES):

Zoning: **Urban Standard Density R-5**
Applicable Code Sections: Section 20.05.20 (R-5) and Section 20.05.15 (Site Development Requirements)

Comments: In order for your applications to be deemed complete, a written narrative is to address how the proposal meets all of the applicable regulations listed above.

CHAPTER 30 (NON-CONFORMING USES):

Proposal subject to compliance to this chapter? Yes No

CHAPTER 40 (PERMITS & APPLICATIONS):

Facilities Review Committee review required? Yes No

Please Note: Applicant's written response to Section 40.03 (Facilities Review) should address each criterion. If response to criterion is "Not Applicable", please explain why the criterion is not applicable.

Applicable Application Type(s):

<u>Application Description</u>	<u>Code Reference</u>	<u>Application Type</u>			
1. Preliminary Partition (Threshold #1)	40.45.15.2	<input type="checkbox"/> Type 1	<input checked="" type="checkbox"/> Type 2	<input type="checkbox"/> Type 3	<input type="checkbox"/> Type 4
2. Tree Plan 2 (Significant Resource trees)	40.90.15.2	<input type="checkbox"/> Type 1	<input checked="" type="checkbox"/> Type 2	<input type="checkbox"/> Type 3	<input type="checkbox"/> Type 4
3. Possible Setback with Land Division (Threshold 1 - 40.30.13.6.A)	40.30.15	<input type="checkbox"/> Type 1	<input checked="" type="checkbox"/> Type 2	<input type="checkbox"/> Type 3	<input type="checkbox"/> Type 4
4. Final Partition (Admin. Review)	40.45.15.6	<input checked="" type="checkbox"/> Type 1	<input type="checkbox"/> Type 2	<input type="checkbox"/> Type 3	<input type="checkbox"/> Type 4

Comments: In order for your application to be deemed complete you will need to provide a written statement, supported by substantial evidence for all applicable approval criteria. Your application narrative will need to explain how and why the proposed application meets approval criteria for the land use applications identified above. Approval criteria and development regulations in effect at the time an application is received will control. Approval criteria and development regulations are subject to change.

CHAPTER 60 (SPECIAL REGULATIONS):

The following special requirements when checked are applicable to your development. You should consult these special requirements in the preparation of written and plan information for a formal application:

- | | |
|--|---|
| <input type="checkbox"/> Section 60.05 (Design Review Principles Standards and Guidelines) | <input type="checkbox"/> Section 60.07 (Drive-Up Window Facilities) |
| <input type="checkbox"/> Section 60.10 (Floodplain Regulations) | <input checked="" type="checkbox"/> Section 60.15 (Land Division Standards) |
| <input type="checkbox"/> Section 60.20 (Mobile & Manufactured Home Regulations) | <input type="checkbox"/> Section 60.25 (Off-Street Loading) |
| <input checked="" type="checkbox"/> Section 60.30 (Off-Street Parking) | <input type="checkbox"/> Section 60.33 (Park and Recreation Facilities) |
| <input type="checkbox"/> Section 60.35 (Planned Unit Development) | <input type="checkbox"/> Section 60.40 (Sign Regulations) |
| <input type="checkbox"/> Section 60.45 (Solar Access Protection) | <input type="checkbox"/> Section 60.50 (Special Use Regulations) |
| <input checked="" type="checkbox"/> Section 60.55 (Transportation Facilities) (Standards for Access apply) | <input checked="" type="checkbox"/> Section 60.60 (Trees and Vegetation) |
| <input checked="" type="checkbox"/> Section 60.65 (Utility Undergrounding) | <input type="checkbox"/> Section 60.67 (Significant Natural Resources) |
| <input type="checkbox"/> Section 60.70 (Wireless Communication) | |

Comments: In order for your applications to be deemed complete, written analysis is address how the proposal meets all applicable provisions/requirements as checked above. Land Division standards of 60.15 apply to the creation of new lots via the subdivision (see grade minimum differential standards to abutting properties). Under Section 60.60 (Trees and Vegetation), staff recommends review of subsection 60.60.20 (Tree Protection Standards) if/where trees on-site are to remain. Staff also recommend review of mitigation standards for Significant Trees in 60.60.25. Traffic Impact Study is not required. However, standards for street access should be addressed. See comments provide by Ken Rencher, Transportation (attached) for specific subsections.

OTHER DEPARTMENT/AGENCY CONTACTS:

Your project may require review by other City departments and outside agencies. Please plan to contact the following staff persons at the City of Beaverton or other agencies when their name is checked. In some instances, some or all of these staff persons may submit written comments for the pre-application conference. These comments may be discussed at the pre-application conference and will be attached to this summary:

Recommended
contact for
further
information
if checked



Clean Water Services

(CWS not sent copy of Pre-Application materials)

The Clean Water Services (CWS) is the agency that regulates sanitary sewer, storm and surface water management within Washington County and the City of Beaverton. CWS Design and Construction Standards, adopted by Resolution & Order (R&O) 04-09, effective March 1, 2004, establish new technical requirements for the design and construction of sanitary and surface water management systems built as part of residential or commercial development. Pursuant to City Development Code Section 50.25.1.F, in order for the application to be deemed complete the applicant is required to submit documentation from CWS stating that water quality will not be adversely affected by the proposal. For most development proposals, CWS typically issues a "Service Provider Letter". Alternatively, CWS may issue a statement indicating no water quality sensitive areas exist on or within 200 feet of the subject site. Development activity subject to CWS review is defined in Section 1.02.14 of the CWS Design & Construction Standards. For more information contact: **Laurie Harris at (503) 681-3639**
Environmental Review – Assessment Coordinator for CWS.



Jeremy Foster, Tualatin Valley Fire & Rescue,
503-259-1414 / Jeremy.foster@tvfr.com

Plan reviewed. No comments.



Brad Roast, Building, City of Beaverton
(503) 526-2524 / broast@beavertonoregon.gov

No written comments provided to date.



Steve Brennen, Operations, City of Beaverton
(503) 526-2200 / sbrennen@beavertonoregon.gov

Plans reviewed. No comments.



Zach Marsh, Site Development, City of Beaverton
(503) 526-2492 / zmarsh@beavertonoregon.gov

Written comments attached.



Ken Rencher, Transportation, City of Beaverton
(503) 526-2427 / krencher@beavertonoregon.gov

Written comments attached



Naomi Vogel, Washington County Land Use and Transportation
(503) 846-7639 Naomi_Vogel@co.washington.or.us



Comments: 155th not maintained by Washington County.

KEY ISSUES/CONSIDERATIONS:

Staff has identified the following key development issues, or design consideration or procedural issues that you should be aware of as you prepare your formal application for submittal. The identification of these issues or considerations here does not preclude the future identification of other key issues or considerations:

- 1. Applications.** Staff has identified the **Preliminary Partition** application, together with the **Tree Plan 2** application and *possible* **Flexible Setback with Land Division** application. The Preliminary Partition application is required for the creation of up to three individual lots of record. Tree Plan 2 application is required for removing any tree part of the Significant Natural Resource (portion thereof on-site). At the Pre-App, the applicant was provide a copy of a map (Sheet T1SR1W – Section 32) from the City Local Wetlands Inventory indicating trees part of a significant natural resource located to a portion of the property. Staff notes that subject property is located within a Planned Unit Development – Murrayhill.

Flexible Setback for a Proposed Residential Subdivision would be necessary if proposing to reduce setbacks for lots as created. With this application, the rear yard setback can be reduced to as much as five feet if approval. Final Land Division is submitted after Preliminary Partition approval and following certain improvements to the site recognized in as part of the Site Development Permit (administrative) through the city.
- 2. Preliminary Grading Plan.** A preliminary grading plan is to be submitted for Preliminary Partition, (required). **This plan is to identify proposed building pads and existing grade contours of abutting properties.** Trees on abutting properties, where close to the subject property, are to be identified on the grading plan. This plan is to demonstrate compliance with maximum grade differential standards under 60.15 of the Development Code. **Deferral of the preliminary grading plan (per lot) to a builder for subsequent home construction does not demonstrate compliance with maximum grade differential standards under Section 60.15.**
- 3. Preliminary Utility Plan.** Preliminary Utility Plan is to show proposed connections to all critical facilities (water, sewer and storm drainage). Location of water quality treatment facility/ies on-site to be identified. See attached notes provided by Jim Duggan, Site Development Engineer.
- 4. Shared Access to SW 155th.** See attached comments prepared by Ken Rencher concerning access standards (vision clearance, minimum width). Staff encourages potential utilization of the existing driveway aisle / curb cut to SW 155th Avenue.
- 5. Private sewer line cannot cross property lines.** Please see comments provided by Zach Marsh, Site Development Engineer, attached.
- 6. Stormwater Management approach.** See comments provided by Zach Marsh, Site Development Engineer, attached. If rain garden (on lot-per-lot basis) narrative for Preliminary Partition is to explain how this will be accomplished. Prelim. Utility plan is also to show.
- 7. Plans to show Minimum Setbacks.** On the site plan submitted for Preliminary Subdivision, to each lot proposed, the applicant is to identify minimum building setbacks (R-5 zone) from all proposed property lines.

**PRE-APPLICATION
CONFERENCE
MEETING SUMMARY
Development
Engineering Issues**

SUMMARY: PA 2015-0015

PAGE 1 of 2

CITY OF BEAVERTON
Public Works Department
Site Development Division
12725 SW Millikan Way, 4th Floor
Fax: (503) 526-2550
www.BeavertonOregon.gov



PROJECT SITE OR NAME: ADTM 3-Lot Partition (10510 SW 155th Ave.)

PRE-APPLICATION CONFERENCE NUMBER: PA 2015-0015 **DATE:** 1 April 2015

Prepared by: Zach Marsh, Engineering Associate – Site Development
ph: 503.526.2492 zmarsh@BeavertonOregon.gov fx:503.526.2550

For more detailed information regarding existing utilities, topography, and geographical information, necessary for preparation of various applications call 503.526.2342 or submit a request on line at:
<http://apps.beavertonoregon.gov/forms/ABSubmit.aspx>

REFERENCE CITY OF BEAVERTON ENGINEERING DESIGN MANUAL AND STANDARD DRAWINGS (Ordinance 4417) AND CLEAN WATER SERVICES STANDARDS (CWS R&O 2007-020).

GENERAL NOTES: A professional surveyor or engineer will need to document where all existing utility lines in the vicinity are in relation to the existing property boundaries. The existing home, existing utility connections, and proposed new building pads will also need to be similarly surveyed with dimensions to the existing property lines, and any proposed new lot lines. Fire access is not necessary; however, a hydrant in compliance with TVFR standards is required. Local utility provision issues must be addressed with a land division application to demonstrate service feasibility for the proposed development including a storm water report prepared by a professional civil engineer. The storm water report will need to specifically document how the proposal will achieve compliance with CWS Resolution and Order 2007-020 in regard to storm water treatment (quality) and detention (quantity) per City Ordinance 44.17 Section 880. LIDA (low impact development approaches) for storm water management are encouraged. LIDA is covered in Section 4.07 of the CWS standards and within the CWS LIDA Handbook. Please note that any private sewer plumbing cannot cross property lines nor can a new development be approved where private sewer lines (storm or sanitary) would be located on any lot other than the lot being served. All power and communication service wires to each lot, including the existing home, must be placed underground. The wet utilities and new access construction required must be substantially complete before the final plat can be recorded and the new lot(s) can be sold.

CITY PERMITS required for work as proposed or likely to be needed:	<input checked="" type="checkbox"/> CITY SITE DEVELOPMENT PERMIT Contact: Bonnie at 503.526.2552 <input type="checkbox"/> Floodplain, floodway, or wetland modification	<input type="checkbox"/> CITY RIGHT OF WAY PERMIT Contact: Sandra at 503.350.4073 <input type="checkbox"/> STREET CUT MORATORIUM
	<input type="checkbox"/> CITY SITE EROSION CONTROL PERMIT Contact: Bonnie at 503.526.2552	<input checked="" type="checkbox"/> BUILDING PERMIT w/Erosion Control <input checked="" type="checkbox"/> Site Plumbing Permit for private utilities Contact: Bldg. Counter at 503.526.2401
WATER SERVICE AREA AND ISSUES	<input checked="" type="checkbox"/> CITY OF BEAVERTON SYSTEM Contact: David Winship at 503.526.2434 <input checked="" type="checkbox"/> 410 HGL <input type="checkbox"/> 525 HGL <input type="checkbox"/> Other zone/split zone	<input type="checkbox"/> WEST SLOPE WATER DISTRICT Contact: Jerry Arnold at 503.292.2777
	<input type="checkbox"/> TUALATIN VALLEY WATER DISTRICT Contact: Ryan Smith at 503.848.3057	<input type="checkbox"/> RALEIGH WATER DISTRICT Contact: Matt Steidler at 503.292.4894

SITE ENGINEERING ISSUES

Prepared by Zach Marsh, Engineering Associate

OTHER PERMITS and approvals required for work as proposed or likely to be needed:

WASHINGTON COUNTY

For work within, access, or construction access county road.

NOTE: Storm and sanitary sewers in County roads inside City limits are City-owned and maintained. Some street lights on County roads are City-owned.

Facilities and Access Permits

Contact DLUT Staff: 503.846.8761

Right of Way Permits

Contact Operations Staff: 503.846.7620

Utilities Permits

Contact Operations Staff: 503.846.7623

OREGON D.O.T. (Dist.2B Sylvania Office)

For work within, access, or construction access to _____

Contact: Steve Schalk at (971) 673-1343

OREGON D.O.T. (Salem Office)

Rail / Street Crossings

Contact: Dave Lanning at 503.986.4267

Drainage Contact: Jim Nelson at (971) 673-2942

OREGON DEPARTMENT OF STATE LANDS

Contact: Russ Klassen at 503.986.5244

U.S. ARMY CORPS OF ENGINEERS

Contact: Michael LaDouceur at 503.808.4337

CLEAN WATER SERVICES DISTRICT

Site Assessments/Service Provider Letters Wetlands/Creeks/Springs/Connection Permits

Contact: Laurie Harris at 503.681.3639

SPLReview@cleanwaterservices.org

Connection to CWS Trunk Sewer (>21" dia.)

Contact: Permit Staff 503-681-5100

Source Control Permit (all non-residential)

Contact: Clayton Brown at 503.681.5129

DEQ 1200-CN EROSION CONTROL PERMIT

Contact: Bonnie Collins at 503.526.2552

(Permit application to City for CWS & DEQ) FOR DISTURBANCE OF 1 to 4.99 Acres

DEQ Letter of "No Further Action"(NFA) or

other documentation concerning soil and/or groundwater contamination on this property and clearance allowing new construction.

Contact applicable Oregon DEQ staff.

MUST UNDERGROUND EXISTING OVERHEAD UTILITIES ON-SITE AND NEW SERVICES.

May be eligible for fee-in-lieu of undergrounding – see Dev. Code, Section 60.65.20-25

SITE SOIL, SURFACE & STORM WATER ISSUES:

MAPPED FEMA FLOODPLAIN

Map Number 4102400_---_D (Feb. 18, 2005)

Level of 100 Year Flood in vicinity of the site:

Base Flood Elevation(NGVD-29) Per NEW FEMA Map 40167C_---_E (Dec. 4, 2009)

Cut and fill grading balance required. Must flood proof* non-residential buildings OR

Certified minimum finish floor required: 1 foot 2 feet above base flood elevation.

SEPARATE FLOODPLAIN MODIFICATION PUBLIC NOTICE REQUIRED PRIOR TO SITE DEVELOPMENT PERMIT and BUILDING PERMIT ISSUANCE with a 10-DAY APPEAL PERIOD.

*ASCE/SEI 24-05, 2011 OSSC (2009 IBC) Appendix G (Flood-resistant Construction)

STORM WATER FACILITIES REQUIRED

Winter Storm Detention (quantity)

Summer Storm Treatment (quality)

UNMAPPED FLOOD HAZARD AREA

A flood study is a required part of any development application.

GEOTECHNICAL REPORT REQUIRED

POSSIBLE FEE-IN-LIEU OF:

Detention (quantity)

Treatment (quality) - must justify using CWS criteria in DR/Land Div. application submittals.

REQUIRES IMPERVIOUS SURFACE INVENTORY



MEMORANDUM

Community Development

To: Scott Whyte, Senior Planner
From: Ken Rencher, Associate Transportation Planner
Date: April 8, 2015
Subject: PA2015-0015 ADTM Partition at 10510 SW 155th, Pre-Application Review

This memo includes important transportation-related items that should be addressed in the materials submitted for the proposal noted above. All comments provided here are based solely on the pre-application materials provided. Other issues, applications, or analysis may be identified and/or required upon review of the application(s).

General note: The application should address all applicable transportation related criteria found in *Beaverton Development Code (BDC)* Sections 40.03 Facilities Review, 60.15 Land Division Standards, and 60.55 Transportation Facilities; and standards included in *Beaverton Engineering Design Manual (EDM)* Chapter 2 Streets, Chapter 7 Bicycle and Pedestrian Facilities, and the Standard Drawings. System Development Charges, including the Transportation Development Tax, may apply.

Summary of existing transportation infrastructure

The site is bordered by SW 155th Ave., a Neighborhood Route with parking on both sides. SW 155th Ave. appears to have adequate right-of-way width, and is fully improved with curbs, gutters, planter strips, and sidewalks. Both the curbs and sidewalks appear to be in good condition currently.

There is no transit service directly to the site, but SW Teal Blvd. has limited commuter bus service hours, and is located within walking distance (0.3 - 0.4 miles to the south).

This segment of SW 155th Ave. is a designated low-traffic bike route and is adjacent to the THPRD's Westside Trail in the Murrayhill Powerline Park.

PLEASE NOTE THE FOLLOWING:

In regard to BDC 40.03 Facilities Review Committee:

40.03.1: This section requires transportation facilities related to the proposed development to be installed and available at the time of the development's completion, meaning prior to the approval or signature of the final plat. Transportation facilities are defined as critical facilities. Pedestrian and bicycle facilities, as well as transit facilities are

defined as essential facilities. Essential facilities are expected to be provided prior to occupancy of the new units.

In regard to BDC 60.15 Land Division Standards:

60.15.15.6: Street trees: This subsection requires street trees to be planted along the public street frontages of all land divisions. For this development, the developer will need to pay a fee to the City of \$200 per tree, with trees required every 30 feet. The street tree fee is set by City Council and can be changed or increased by them.

Where existing on-site trees provide shade and storm water flow attenuation benefits for the public right-of-way, they may be counted as street trees. The applicant will receive credit for any existing street trees that can be retained through construction. The City Engineer will determine the number and location of required street trees, if any, that will be required along SW 155th Ave. This determination will happen as part of the review of the Preliminary Partition Land Division application.

In regard to BDC 60.55 Transportation Facilities:

60.55.25 Street and Bicycle and Pedestrian Circulation: Each of the new houses will be expected to have a walkway that connects it to the surrounding public sidewalk system. At a minimum, internal walkways will need 4 feet of unobstructed width. The driveway serving the two new houses proposed will need to be at least 16 feet wide (plus 3-foot wings at the street). Residential driveways are allowed to be up to 30 feet wide (plus 3-foot wings). If the applicant chooses to provide access to the proposed houses using the existing driveway curb cut, the applicant's submittal package shall include plans that show that adequate room is provided for all necessary vehicle turning movements.

60.55.30 Minimum Street Widths: SW 155th Ave. appears to have sufficient right-of-way width to meet current standards. If the proposed development damages or destroys the public sidewalk, the applicant will be responsible for replacing it.

60.55.35 Access Standards: At the intersection of any driveways with SW 155th Ave., the applicant's plans will need to show that the landscaping is designed to keep the Vision Clearance triangle—15 feet along the sidewalk and 15 feet along the driveway—clear of obstacles.

SUPPLEMENTAL INFORMATION & RESOURCES

System Development Charges, including the Transportation Tax, may apply:

The Washington County Transportation Development Tax (TDT) may be due for this development prior to issuance of building permits, in addition to other System Development Charges. The SDC charges are not assessed or evaluated through the land use application review process.

The tax is based on Measure No. 34-164, which was approved by the citizens of Washington County in 2008. The TDT is based on the estimated traffic generated by each type of development. All revenue is dedicated to transportation capital improvements designed to accommodate growth. The TDT is collected prior to the issuance of a building permit; or in cases where no building permit is required (such as for golf courses

or parks), prior to final approval of a development application. Options exist, however, for payment of the tax over time, or in certain cases, deferral of payment until occupancy.

To estimate the tax please use the TDT Self Calculation Form (see web address below). For more information please contact Jabra Khasho, City of Beaverton Transportation Engineer, at (503) 526-2221 or jkhasho@BeavertonOregon.gov. For information regarding sanitary sewer, storm sewer, water, park, Metro construction excise, School District construction excise, and other applicable fees please see the Building Division web address below or contact Brad Roast, City of Beaverton Building Official, at (503) 526-2493 or cddmall@BeavertonOregon.gov.

Online resources:

- A. Beaverton Development Code: www.BeavertonOregon.gov/dc
- B. Beaverton Engineering Design Manual: www.BeavertonOregon.gov/edm
- C. SDC Fee Schedule: www.BeavertonOregon.gov/Building
<http://www.beavertonoregon.gov/DocumentCenter/Home/View/605>
- D. Washington County TDT:
www.co.washington.or.us/LUT/Divisions/LongRangePlanning/PlanningPrograms/TransportationPlanning/transportation-development-tax.cfm
- E. Traffic Impact Analysis Requirements:
<http://www.beavertonoregon.gov/documentcenter/view/1570>

PRE APPLICATION CONFERENCE ATTENDANCE

PRE APP NO: PA2015-0015 DATE: 04/01/2015

PRE APP NAME: ADTM 3 LOT PARTITION AT 10510 SW 155TH AVE.

<u>NAME</u>	<u>REPRESENTING</u>	<u>PHONE</u>
Scott Whyte	City of Beaverton	(503) 526-2652
JEREMY FOSTER	TVP/IR	503 259 1414
Zach Marsh	COB	503 526 2492
Mike Safstrom	ADTM Development	503-890-6884
Ken Rencher	COB - Transportation	503.526.2427
BRAD ROAST	COB	503 526 2524

