



City of Tualatin

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October 23, 2014

SUBDIVISION REVIEW FINDINGS AND DECISION FOR SB 14-02, HEATHER RIDGE

BACKGROUND

This staff report recommends approval of a 16-lot and 2-tract plan for the Heather Ridge Subdivision, as shown on plans submitted September 17, 2014 attached as Exhibit A, with conditions of approval as outlined in the staff report.

The proposed subdivision site is located northwest of the intersection of SW 112th Avenue and SW Helenius Street. The lot is described as Tax Map 2S134AC #200. It is located in the Low Density Residential Planning District (RL) and is approximately 4.44 acres in size.

Attached to this report are:

- Exhibit A: Subdivision Plans
- Exhibit B: Subdivision Application Materials
- Exhibit C: Clean Water Services (CWS) – Memorandum
- Exhibit D: TVF&R Letter
- Exhibit E: Public Comment Response

The requirements for the proposed land division are in *italics*.

STAFF REPORT

1. **General Information:**

On September 17, 2014 AKS Engineering & Forestry, LLC submitted an application to develop a 16-lot and 2-tract subdivision. The application was deemed complete on September 24, 2014 with the public comment period ending on October 8, 2014. One public comment response was received.

TDC 36.080 (1)

(a) The applicant shall comply with the requirements of TDC Chapter 74, Public Improvement Requirements.

(b) The applicant shall comply with the design and construction standards set forth in the Public Works Construction Code.

The subdivision plans generally meet the requirements of this provision as recommended for approval. A more detailed discussion of the specific requirements will occur later in this report.

TDC 74.475 (2) Prior to the creation of any street, the street name shall be approved by the City Engineer.

The proposal completes SW 112th Avenue adjacent to the development, extends and connects SW Helenius Street from the east to SW 112th Avenue, and creates a new street, SW 110th Place, ending in a cul-de-sac. The street name 110th has been approved by the City Engineer. The proposed SW 110th is a north/south cul-de-sac which requires the suffix Place. This requirement is met. The applicant will submit final plans that indicate the proposed north/south cul-de-sac to be named SW 110th Place, for review and approval.

TDC 36.178 states:

- (1) After approval by the Mayor, the City Engineer shall return the subdivision plat and other related materials to the applicant, who shall transmit them to the County Surveyor.**
- (2) After the County Surveyor determines the final subdivision plat and related materials fully conform with State and County requirements, and receives payment of the required fees for such service, the County Surveyor will approve the plat and deliver it to the County Recorder's Office.**
- (3) No building permits shall be issued until the applicant obtains and delivers to the City Engineer a mylar copy of the subdivision plat showing that it has been officially approved by the County Surveyor and recorded.**

Compliance with this requirement will occur following the approval of the preliminary plat pursuant to conditions of approval as outlined in this staff report. Once the conditions of approval have been satisfied, public facilities constructed, or financial assurances provided for the construction of public facilities for this development, the applicant shall have the final plat approved and recorded by the Washington County Surveyor. At the time the final plat is recorded with Washington County, the applicant shall submit a Mylar copy of the recorded plat prior to issuance of a Building Permit; therefore, meeting this requirement.

TDC 36.130 Phasing.

- (1) Subject to the approval by the City pursuant to this section, an applicant may create a subdivision plat or construct the public improvements for a subdivision plat in phases. If the applicant intends to utilize this phasing option the applicant shall submit a phasing plan to the City Engineer for approval with the subdivision application and plan. The City Engineer shall determine the timing of the completion of the public improvements and the conditions of development.**
- (2) The applicant shall construct all public improvements in each phase.**
 - (a) Prior to issuance of building permits in a particular phase, the public improvements necessary to provide adequate public facilities for the particular phase shall be substantially complete.**

- (b) When the City Engineer has determined the public improvements in the particular phase are substantially complete and prior to acceptance of the improvements by the City, the City may issue 50 percent of the building permits prior to acceptance of the improvements by the City as set forth in TDC 36.174.**
- (c) The public improvements shall first be accepted by resolution of the City Council before building permits exceeding 50 percent may be issued in a particular phase.**
- (d) Public improvements may be submitted for City acceptance by phase.**
- (3) The subdivision plan approval for the first phase shall expire 24 months from the date of subdivision plan approval by the City Engineer. Future phases shall expire 24 months after the date of recording of the subdivision plat of the immediately preceding phase.**

The applicant is proposing a 16-lot and 2-tract subdivision. This is acceptable.

Prior to approval of a plat, associated public improvements need to be constructed or financial assurance for completion needs to be provided. Public improvements include streets, utilities, and water quality facilities. Prior to approval of the final plat, the applicant will need to construct the public improvements or provide financial assurance for completion, for review and approval.

Prior to the issuance of building permits, the associated public improvements need to be constructed and plat recorded. The applicant will need to construct the public improvements and deliver a Mylar copy of the recorded plat to the City.

The subdivision needs to be platted within 24 months of the issued decision. The applicant will need to plat the subdivision within 24 months of the issued decision.

Prior to approval of the Final Plat:

- *The applicant shall submit final plans that indicate the proposed north/south cul-de-sac to be named SW 110th Place, for review and approval.*
- *The applicant shall construct all public improvements or provide financial assurance for completion, for review and approval.*
- *The applicant shall plat the subdivision within 24 months of the issued decision.*

Prior to issuance of Building Permits:

- *The applicant shall construct all public improvements.*
- *The applicant shall deliver a Mylar copy of the recorded plat to the City Engineer.*

2. Lot Geometry:

TDC 40.015 Permitted Density. Housing density shall not exceed 6.4 units per net acre, except as set forth below:

- (1) The maximum density for small-lot subdivisions, and partitions and subdivisions affected by TDC 40.055, shall not exceed 7.5 dwelling units per net acre.**

TDC 40.050 Lot Size for Permitted Uses.

Except as otherwise provided, the lot size for a single-family dwelling shall be:

- (1) The minimum lot area shall be an average of 6,500 square feet.**
- (2) The average lot width shall be at least 30 feet.**
- (3) When a lot has frontage on a public street, the minimum lot width shall be 50 feet on a street and 30 feet around a cul-de-sac bulb.**
- (4) The maximum building coverage shall be 45 percent.**
- (5) For flag lots, the minimum lot width at the street shall be sufficient to comply with at least the minimum access requirements contained in TDC 73.400(7) - (12).**

A revised Preliminary Plat dated October 22, 2014 shows that the applicant is proposing 16-lots and 2-tracts. All existing structures are proposed to be demolished. Lot sizes range from 6,186 to 19,330 square feet. The average lot size is 9,867 square feet which is greater than the minimum 6,500 square feet. The proposed average lot widths are not less than 62.5 feet along the streets. The proposed average lot widths for lots adjacent to the SW 110th Place cul-de-sac are greater than the minimum 30 feet on a cul-de-sac. This requirement is met.

Tract A is proposed to be a public water quality facility and Tract B is proposed to be a pedestrian accessway. Both are to be dedicated to the City of Tualatin. This is acceptable. The applicant will submit final plans that show Tract A as a public water quality facility and Tract B as a pedestrian accessway, both to be dedicated to the City of Tualatin, for review and approval.

Prior to approval of the Final Plat:

- *The applicant shall submit final plans that show Tract A as a public water quality facility and Tract B as a pedestrian accessway, both to be dedicated to the City of Tualatin, for review and approval.*

3. Building Setbacks:

TDC 40.070 Setback Requirements for Permitted Uses.

Except as otherwise provided, the setbacks for permitted uses shall be:

- (1) The front yard setback shall be a minimum of 15 feet, except to an unenclosed porch, which shall be 12 feet.**
- (2) The setback to a garage door shall be a minimum of 20 feet.**
- (3) The side yard setback shall be a minimum of five feet.**
- (4) For a corner lot, the following provisions shall apply:**
 - (a) One front yard setback shall be a minimum of 15 feet; it shall be determined by the orientation of the structure based on the location of the front door.**
 - (b) The second front yard setback shall be a minimum of 10 feet.**
- (5) The rear yard setback shall be a minimum of 15 feet.**

TDC 36.420 Existing Structures and Appurtenances.

- (1) Any existing structures proposed to be demolished shall be removed prior to the City approval of the subdivision or partition plat. Any structures determined to be a historic City landmark shall be reviewed in accordance with TDC Chapter 68.**
- (2) Any existing wells shall be abandoned in the manner prescribed by State and County regulations prior to the City approval of the subdivision or partition plat.**
- (3) Any existing underground fuel or oil tanks, septic tanks and similar underground storage tanks shall be removed or filled as required by the Department of Environmental Quality prior to the City's approval of the subdivision or partition plat.**

All existing structures are proposed to be demolished. This is acceptable. This requirement is met.

Note: All future setbacks will be determined with building permits proposing development.

4. Access:

TDC 73.400 Access

- (2) Owners of two or more uses, structures or parcels of land may agree to utilize jointly the same ingress and egress when the combined ingress and egress of both uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use.**
- (11) Minimum Access Requirements for Commercial, Public and Semi-Public Uses. If 1-99 parking spaces are required, only one access is required. If 100-249 parking spaces are required, two accesses are required. Ingress and egress shall not be less than 32 feet wide for the first 50 feet from the right-of-way and 24 feet thereafter.**
- (12) Minimum Access Requirements for Industrial Uses. If 1-250 parking spaces are required, only one access is required. Ingress and egress shall not be less than 36 feet wide for the first 50 feet from the right-of-way and 24 feet thereafter.**
- (14) (a) Unless otherwise herein provided, maximum driveway widths shall not exceed 40 feet.**
- (15) Distance between Driveways and Intersections. Distances listed shall be measured from the stop bar at the intersection. (a) At the intersection of collector or arterial streets, driveways shall be located a minimum of 150 feet from the intersection.**

TDC 73.400 (10) Minimum access requirements for residential uses:

(a) Ingress and egress for single-family residential uses, including townhouses, shall be paved to a minimum width of 10 feet. Maximum driveway widths shall not exceed 26 feet for one and two car garages, and 37 feet for three or more car garages. For the purposes of this section, driveway widths shall be measured at the property line.

TDC 75.140 Collector Streets.

(b) Minor Collectors. Residential, commercial and industrial driveways where the frontage is greater or equal to 70 feet are permitted. Minimum spacing at 100 feet. Uses with less than 50 feet of frontage shall use a common (joint) access where available.

TDC 74.460 Accessways in Residential, Commercial and Industrial Subdivisions and Partitions.

- (1) Accessways shall be constructed by the applicant, dedicated to the City on the final residential, commercial or industrial subdivision or partition plat, and accepted by the City.**
- (2) Accessways shall be located between the proposed subdivision or partition and all of the following locations that apply:
 - (d) adjoining developed sites where an accessway is planned or provided.****
- (4) Accessways shall be as short as possible, but in no case more than 600 feet in length.**
- (5) Accessways shall be as straight as possible to provide visibility from one end to the other.**
- (6) Accessways shall be located and improved within a right-of-way or tract of no less than 8 feet.**
- (9) Curb ramps shall be provided wherever the accessway crosses a curb and shall be constructed in accordance with the Public Works Construction Code.**

The plans show accesses from lots 1-3 to SW 112th Avenue, a shared access for lots 4&5 and a single access for lot 6 to SW Helenius Street, and single accesses for lots 7 & 10-16 to plus a shared access for lots 8 & 9 to SW 110th Place. Both SW 112th Avenue and SW Helenius Street are classified as Minor Collectors with access spacing restrictions. The spacing of accesses on SW 112th Avenue are approximately 55 and 63 feet apart. The spacing of accesses on SW Helenius Street is approximately 75 feet apart. The City Engineer has interpreted this access spacing to be acceptable in this circumstance.

The plans show access widths for single home lots to be between approximately 15 and 28 feet wide and the shared accesses to be between approximately 13 and 37 feet wide. The minimum access width is 10 feet and the maximum widths are 26 feet for a one or two car garage and 37 for a 3 or more car garage. The applicant will need to submit final plans that show accesses for all lots to a public street a minimum of 10-feet wide and a maximum of 26 feet wide for one or two car garages and 37-feet wide for three or more car garages, for review and approval.

The plans show an extension of an existing 8-foot wide concrete accessway identified as Tract B. This is shown between lots 11 and 12 and connect to SW 110th Place. This is acceptable. The applicant will need to submit final plans that show extension of an existing 8-foot wide concrete accessway identified as Tract B between lots 11 and 12 and connect to SW 110th Place, for review and approval.

Prior to issuance of a Public Works Permit:

- *The applicant shall submit final plans that show accesses for all lots to a public street a minimum of 10-feet wide and a maximum of 26 feet wide for one or two car garages and 37-feet wide for three or more car garages, for review and approval.*
- *The applicant shall submit final plans that show extension of an existing 8-foot wide concrete accessway identified as Tract B between lots 11 and 12 and connect to SW 110th Place, for review and approval.*

5. Transportation:

TDC 74.210 (1) For subdivision and partition applications, wherever existing or future streets adjacent to property proposed for development are of inadequate right-of-way width the additional right-of-way necessary to comply with the Transportation Element of the Tualatin Community Plan shall be shown on the final subdivision or partition plat prior to approval of the plat by the City. This right-of-way dedication shall be for the full width of the property abutting the roadway and, if required by the City Engineer, additional dedications shall be provided for slope and utility easements if deemed necessary.

TDC 74.420

(6) All required street improvements shall include curbs, sidewalks, storm drainage, street lights, street signs, street trees, and, where designated, bikeways and transit facilities.

(7) For subdivision and partition applications, the street improvements required by TDC Chapter 74 shall be completed and accepted by the City prior to signing the final subdivision or partition plat, or prior to releasing the security provided by the applicant to assure completion of such improvements or as otherwise specified in the development application approval.

SW 112th Avenue

SW 112th Avenue is a City of Tualatin facility and is designated as a Minor Collector, and to closely match existing adjacent street sections of a previous subdivision, Lake Forest 3, and meet current code it has a 62-foot width. The applicant is proposing to match the existing profile. This is acceptable. The applicant is currently proposing street improvements to SW 112th Avenue. These improvements need to include:

- 20 feet of pavement from the centerline and gutter
- A 6-foot planter strip and curb
- A 5-foot sidewalk
- Streetlights

This is acceptable. The applicant will need to submit final plans that show 31-foot wide dedication and construction for SW 112th Avenue including 20-feet of pavement, a 6-foot planter strip with curb, street trees, and streetlights, and a 5-foot sidewalk, for review and approval. The applicant will need to dedicate sufficient right-of way to assure 31 feet of right-of-way, for SW 112th Avenue, for review and approval.

SW Helenius Street

SW 112th Avenue is a City of Tualatin facility and is designated as a Minor Collector, and to closely match existing adjacent street sections of a previous subdivision, Quail Crossing, and meet current code it has a 62-foot width. The applicant is proposing to match the existing profile. This is acceptable. The applicant is currently proposing street improvements to SW 112th Avenue. These improvements need to include:

- 20 feet of pavement from the centerline and gutter
- A 6-foot planter strip and curb
- A 5-foot sidewalk
- Streetlights

This is acceptable. The applicant will need to submit final plans that show 46-foot wide dedication and construction for SW Helenius Street including 20-feet of pavement, a 6-foot planter strip with curb, street trees, and streetlights, and a 5-foot sidewalk, for review and approval. The applicant will need to dedicate sufficient right-of way to assure 46 feet of right-of-way, for SW Helenius Street, for review and approval.

SW 110th Court

SW 110th Court is a City of Tualatin facility and is designated as a Local street, which has a 50-foot right-of-way width. The ultimate SW 110th Court cross section would include two 16-foot travel lanes, a 4-foot planter strip on each side, and a 5-foot sidewalk on each side.

SW 110th Court ends in a cul-de-sac. This cul-de-sac radius of 45 feet meets the minimum requirements and its length is less than 600 feet, the maximum allowed.

The applicant is currently proposing street improvements to SW 110th Court. These improvements need to include:

- 32 feet of pavement and gutter
- 4-foot planter strips with curb, street trees, and streetlights
- 5-foot sidewalks
- Streetlights

This is acceptable. The applicant will need to submit final plans that show 50-foot wide dedication and construction for SW 110th Place including 32-feet of pavement, a 4-foot planter strip with curb, street trees, and streetlights, and a 5-foot sidewalk, for review and approval. The applicant will need to dedicate sufficient right-of way to assure 50 feet of right-of-way, for SW 110th Place, for review and approval.

TDC 74.485 Street Trees

- (1) Prior to approval of a residential subdivision or partition final plat, the applicant shall pay the City a non-refundable fee equal to the cost of the purchase and installation of street trees. The location, placement, and cost of the trees shall be determined by the City. This sum shall be calculated on the interior and exterior streets as indicated on the final subdivision or partition plat.**
- (2) In nonresidential subdivisions and partitions street trees shall be planted by the owners of the individual lots as development occurs.**
- (3) The Street Tree Ordinance specifies the species of tree which is to be planted and the spacing between trees.**

The applicant is proposing to have street trees installed. As a part of the improvements, street trees are required to improve the livability of the community. The City installs the street trees. City Operations staff have determined that approximately 22 trees will need to be installed. The applicant has not yet paid the fees required to complete these improvements. The applicant will need to pay the City a non-refundable fee equal to the cost of the purchase and installation of street trees. The City will complete the installation.

TDC 74.480 Street Signs.

- (1) Street name signs shall be installed at all street intersections in accordance with standards adopted by the City.**
- (2) Stop signs and other traffic control signs (speed limit, dead-end, etc.) may be required by the City.**
- (3) Prior to approval of the final subdivision or partition plat, the applicant shall pay the City a non-refundable fee equal to the cost of the purchase and installation of street signs, traffic control signs and street name signs. The location, placement, and cost of the signs shall be determined by the City.**

The applicant is proposing to install additional street signs at the intersections of SW 112th Avenue & SW Helenius Street and SW 110th Place and SW Helenius Street. This is acceptable. The applicant will need to pay the City a non-refundable fee equal to the cost of the purchase and installation of street signs at the intersections of SW 112th Avenue & SW Helenius Street and SW 110th Place and SW Helenius Street.

Prior to issuance of a Public Works Permit

- *The applicant shall submit final plans that show 31-foot wide dedication and construction for SW 112th Avenue including 20-feet of pavement, a 6-foot planter strip with curb, street trees, and streetlights, and a 5-foot sidewalk, for review and approval.*
- *The applicant shall submit final plans that show 46-foot wide dedication and construction for SW Helenius Street including 20-feet of pavement, a 6-foot planter strip with curb, street trees, and streetlights, and a 5-foot sidewalk, for review and approval.*
- *The applicant shall submit final plans that show 50-foot wide dedication and construction for SW 110th Place including 32-feet of pavement, a 4-foot planter strip with curb, street trees, and streetlights, and a 5-foot sidewalk, for review and approval.*

Prior to approval of the Final Plat:

- *The applicant shall construct the street improvements on SW 112th Avenue, SW Helenius Street, and SW "A" Court or provide financial assurance for the completion of public improvements.*
- *The applicant shall dedicate sufficient right-of way to assure 31 feet of right-of-way, for SW 112th Avenue, for review and approval.*
- *The applicant shall dedicate sufficient right-of way to assure 46 feet of right-of-way, for SW Helenius Street, for review and approval.*
- *The applicant shall dedicate sufficient right-of way to assure 50 feet of right-of-way, for SW 110th Place, for review and approval.*
- *The applicant shall pay the City a non-refundable fee equal to the cost of the purchase and installation of street trees.*
- *The applicant shall pay the City a non-refundable fee equal to the cost of the purchase and installation of street signs at the intersections of SW 112th Avenue & SW Helenius Street and SW 110th Place and SW Helenius Street.*

6. Domestic Water:

TDC 74.610

- (1) Water lines shall be installed to serve each property in accordance with the Public Works Construction Code. Water line construction plans shall be submitted to the City Engineer for review and approval prior to construction.**
- (2) If there are undeveloped properties adjacent to the subject site, public water lines shall be extended by the applicant to the common boundary line of these properties. The lines shall be sized to provide service to future development, in accordance with the City's Water System Master Plan, TDC Chapter 12.**

The plans show a proposed public water line connecting existing public water lines within SW Helenius Avenue to the east of this development and SW 112th Avenue to the west. Water laterals are shown to serve all lots, and water quality facility Tract A. This is acceptable. Lots 15 and 16's laterals are shown to branch off each other after routing near the north side of lot 15. The laterals serving lots 15 and 16 should directly connect to a public water line in SW 110th Place and be near the south side of lot 15 and the north side of lot 16. The applicant will need to submit revised plans that show a public water line connecting existing public water lines within SW Helenius Avenue to the east of this development and SW 112th Avenue to the west and laterals for lots 15 and 16 to directly connect to the public water line in SW 110th Place and be near the south side of lot 15 and the north side of lot 16, for review and approval.

TDC74.610 (3) As set forth in TDC Chapter 12, Water Service, the City has three water service levels. All development applicants shall be required to connect the proposed development site to the service level in which the development site is located.

TMC 3-3.120 (4) requires all irrigation systems to be installed with a double check valve assembly.

Double check valve assemblies will be required to protect the domestic water system on irrigation systems. Landscape irrigation will need to include the planter strips of the adjacent right-of-way. The plans do not clearly show that irrigation backflow devices will be installed. If needed, the applicant will need to install double check valve assemblies to meet the requirements of TMC 3-3.120(4).

Prior to issuance of a Public Works Permit:

- The applicant shall submit revised plans that show a public water line connecting existing public water lines within SW Helenius Avenue to the east of this development and SW 112th Avenue to the west and laterals for lots 15 and 16 to directly connect to the public water line in SW 110th Place and be near the south side of lot 15 and the north side of lot 16, for review and approval.*
- If needed, the applicant will need to install double check valve assemblies to meet the requirements of TMC 3-3.120(4).*

7. Sanitary Sewer:
TDC 74.620

- (1) Sanitary sewer lines shall be installed to serve each property in accordance with the Public Works Construction Code. Sanitary sewer construction plans and calculations shall be submitted to the City Engineer for review and approval prior to construction.
- (2) If there are undeveloped properties adjacent to the proposed development site which can be served by the gravity sewer system on the proposed development site, the applicant shall extend public sanitary sewer lines to the common boundary line with these properties. The lines shall be sized to convey flows to include all future development from all up stream areas that can be expected to drain through the lines on the site, in accordance with the City's Sanitary Sewer System Master Plan, TDC Chapter 13.

The plans show extension of public sanitary sewer line in SW Helenius street to the east then north in SW 110th Place to serve all adjacent lots 4-16. An existing public sanitary sewer line in SW 112th Avenue is shown to serve lots 1-3. This is acceptable. There appear to be two sanitary sewer laterals serving lot 2. Only one lateral should serve each lot. The applicant will need to submit revised plans that show extension of the public line in SW 112th Avenue east then north in SW 110th Place and all lots served by a single sanitary sewer lateral, for review and approval.

Prior to issuance of a Public Works Permit:

- *The applicant shall submit revised plans that show extension of the public line in SW 112th Avenue east then north in SW 110th Place and all lots served by a single sanitary sewer lateral, for review and approval.*

8. Storm Drainage and Water Quality:
TDC 74.630 Storm Drainage System

- (1) Storm drainage lines shall be installed to serve each property in accordance with City standards. Storm drainage construction plans and calculations shall be submitted to the City Engineer for review and approval prior to construction.
- (2) The storm drainage calculations shall confirm that adequate capacity exists to serve the site. The discharge from the development shall be analyzed in accordance with the City's Storm and Surface Water Regulations (TMC 3-5).

TDC 74.650 Water Quality, Storm Water Detention and Erosion Control

- (2) On all other development applications, prior to issuance of any building permit, the applicant shall arrange to construct a permanent on-site water quality facility and storm water detention facility and submit a design and calculations indicating that the requirements of the Surface Water Management Ordinance will be met and obtain a Stormwater Connection Permit from Clean Water Services.

- (3) For on-site private and regional non-residential public facilities, the applicant shall submit a stormwater facility agreement, which will include an operation and maintenance plan provided by the City, for the water quality facility for the City's review and approval. The applicant shall submit an erosion control plan prior to issuance of a Public Works Permit. No construction or disturbing of the site shall occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.**

TMC 3-5-220 Criteria for Requiring On-Site Detention to be Constructed.

- (1) There is an identified downstream deficiency, as defined in TMC 3-5.210, and detention rather than conveyance system enlargement is determined to be the more effective solution.**
- (2) There is an identified regional detention site within the boundary of the development.**

TMC 3-5-330 Permit Required. Except as provided in TMC 3-5.310, no person shall cause any change to improved or unimproved real property that will, or is likely to, increase the rate or quantity of run-off or pollution from the site without first obtaining a permit from the City and following the conditions of the permit.

TMC 3-5-380 Criteria for Granting Exemptions to Construction of On-Site Water Quality Facilities. A regional public facility may be constructed to serve private non-residential development provided:

- (1) The facility serves more than one lot; and**
- (2) All owners sign a stormwater facility agreement; and**
- (3) Treatment accommodates reasonable worst case impervious area for full build-out, stormwater equivalent to existing or proposed roof area is privately treated in LIDA facilities, and any detention occurs on each lot.**

The plans show stormwater from all proposed lots and public right-of-way to flow to a proposed public water quality facility in a tract. The public extended dry pond provides detention and treatment. Stormwater from lots 1-3 drains to weepholes, and then to the street, which is then captured by catch basins. This is acceptable. The applicant will need to submit final stormwater plans, for review and approval.

The applicant has submitted stormwater calculations that show the facility has adequate treatment and detention capability for this development. This is acceptable. The applicant will need to submit final conveyance calculations, for review and approval.

The plans show a 15-foot wide driveway approach without a fence or gate for the public water quality facility. The tract will need to be fenced with 16-foot wide gate for City maintenance sufficient for a 50,000 pound vehicle. The applicant will need to submit revised plans that show a 15-foot wide driveway approach, fence, and 16-foot wide gate for the public water quality facility, for review and approval.

Prior to issuance of a Water Quality Permit:

- *The applicant shall submit final stormwater plans, for review and approval.*
- *The applicant shall submit final conveyance calculations, for review and approval.*
- *The applicant shall submit revised plans that show a 15-foot wide driveway approach, fence, and 16-foot wide gate for the public water quality facility, for review and approval.*

9. Stormwater Connection Permit Authorization Letter:

TDC 74.650 Water Quality, Storm Water Detention and Erosion Control (2)
On all other development applications, prior to issuance of any building permit, the applicant shall arrange to construct a permanent on-site water quality facility and storm water detention facility and submit a design and calculations indicating that the requirements of the Surface Water Management Ordinance will be met and obtain a Stormwater Connection Permit from Clean Water Services.

The applicant has submitted a Service Provider Letter from Clean Water Services dated March 3, 2014 indicating that Sensitive Areas do not exist on-site. A CWS Memorandum was received dated October 3, 2014 for development on this site. The applicant will need to submit plans that are sufficient to obtain a Stormwater Connection Permit Authorization Letter that complies with the submitted Service Provider Letter conditions, for review and approval.

Prior to issuance of a Water Quality and Public Works Permit:

- *The applicant shall submit plans that are sufficient to obtain a Stormwater Connection Permit Authorization Letter that complies with the submitted Service Provider Letter conditions, for review and approval.*

10. Grading:

TDC 74.640

- (1) Development sites shall be graded to minimize the impact of storm water runoff onto adjacent properties and to allow adjacent properties to drain as they did before the new development.**
- (2) A development applicant shall submit a grading plan showing that all lots in all portions of the development will be served by gravity drainage from the building crawl spaces; and that this development will not affect the drainage on adjacent properties. The City Engineer may require the applicant to remove all excess materials from the development site.**

The plans show lots on the east on northeast of the site graded with an increased slope to adjacent properties. A plan is needed that would minimize the impact of stormwater runoff to adjacent properties. The applicant will need to submit a revised plan that minimizes the impact of stormwater from their development to adjacent properties to the east and northeast, for review and approval.

Prior to issuance of a Public Works Permit:

- *The applicant shall submit a revised plan that minimizes the impact of stormwater from their development to adjacent properties to the east and northeast, for review and approval.*

11. Erosion Control and Tree Protection:

TDC 74.650 (3) The applicant shall submit an erosion control plan prior to issuance of a Public Works Permit. No construction or disturbing of the site shall occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.

If the site is between 1 and 5 acres in size, a 1200CN NPDES Erosion Control Permit is required. If it is over 5 acres, a 1200C NPDES Erosion Control Permit is required. The proposed development site is a total of approximately 4.44 acres. A NPDES Erosion Control Permit is required. The applicant has not obtained a NPDES Erosion Control Permit. The applicant will need to obtain a NPDES Erosion Control Permit.

A City of Tualatin erosion control permit is required if there is construction or disturbing of the site. The applicant has not obtained a City of Tualatin erosion control permit. The applicant will need to obtain a City of Tualatin erosion control permit.

TDC 34.200 Tree Removal on Private Property without Architectural Review, Subdivision or Partition Approval, or Tree Removal Permit Prohibited.

(1) Architectural Review, Subdivision, or Partition. When a property owner wishes to remove trees, other than the exemptions permitted under TDC 34.200(3), to develop property, and the development is subject to Architectural Review, Subdivision Review, or Partition Review approval, the property owner shall apply for approval to remove trees as part of the Architectural Review, Subdivision Review, or Partition Review application process.

(a) The application for tree removal shall include:

- (ii) A tree assessment prepared by a qualified arborist, including the following information: an analysis as to whether trees proposed for preservation can in fact be preserved in light of the development proposed, are healthy specimens, and do not pose an imminent hazard to persons or property if preserved; an analysis as to whether any trees proposed for removal could be reasonably preserved in light of the development proposed and health of the tree; a statement addressing the approval criteria set forth in TDC 34.230; and arborist's signature and contact information.**

(3) The following exemptions apply to tree removal:

- (a) General Exemption. Four or fewer trees may be removed within a single calendar year from a single parcel of property or contiguous parcels of property under the same ownership without a permit, except when the tree to be removed:**
- (iii) Is a Heritage Tree;**

TDC 36.120 (4) The following general information shall be shown on the subdivision plan: (n) states that natural resources, including the location of natural features, such as rock outcroppings, wetlands, water courses, creeks, wooded areas and trees having a trunk diameter of eight inches or greater, as measured at a point four feet above ground level, proposed to be removed and to be retained on site.

TDC 73.250

- (1) Trees and other plant materials to be retained shall be identified on the landscape plan and grading plan.**
- (2) During the construction process:**
- (a) The owner or the owner's agents shall provide above and below ground protection for existing trees and plant materials identified to remain.**
- (b) Trees and plant materials identified for preservation shall be protected by chain link or other sturdy fencing placed around the tree at the drip line.**

The plans include an arborist report that recommends no trees to be preserved onsite due to tree condition, safety, and development activity. This is acceptable. During construction of the subdivision trees shall be preserved in a manner that conforms with TDC 73.250 Tree Preservation. The applicant will need to submit final plans that show preservation of off-site trees to be retained in conformance with TDC 34.210(1), for review and approval.

Note: Any additional trees proposed for removal other than those approved in this subdivision decision or during building permits for construction of homes will need to follow code requirements for a tree removal. The applicant will need to obtain permission from lot owners for removal of any offsite trees and from owners of lots with any portion of a tree trunk on their lot. It is recommended that the developer notify all adjacent property owners near any tree to be removed.

Prior to issuance of a Public Works Permit:

- *The applicant shall obtain a NPDES Erosion Control Permit.*
- *The applicant shall obtain a City of Tualatin erosion control permit.*
- *The applicant shall submit final plans that show preservation of off-site trees to be retained in conformance with TDC 34.210(1), for review and approval.*

12. Fire and Life Safety:

TMC 4-2.010 Hydrants and Water Supply for Fire Protection.

- (1) Every application for a building permit and accompanying plans shall be submitted to the Building Division for review of water used for fire protection, the approximate location and size of hydrants to be connected, and the provisions for access and egress for firefighting equipment. If upon such review it is determined that the fire protection facilities are not required or that they are adequately provided for in the plans, the Fire and Life Safety Reviewer shall recommend approval to the City Building Official.**
- (2) If adequate provisions for such facilities are not made, the Fire and Life Safety Reviewer shall either recommend against approval of the plans or indicate to the applicant in writing where the plans are deficient or recommend approval of plans subject to conditions.**

The plans show a proposed public fire hydrant at the northwest corner of SW 110th Place and SW Helenius Street. This is acceptable. The applicant will need to submit final plans that show a new public fire hydrant at the northwest corner of SW 110th Place and SW Helenius Street, for review and approval.

Note: The Building Official may determine, upon recommendation of Tualatin Valley Fire & Rescue (TVF&R), during the review of the Building Permits, that additional fire protection devices may be necessary.

Prior to issuance of a Public Works Permit:

- *The applicant shall submit final plans that show a new public fire hydrant at the northwest corner of SW 110th Place and SW Helenius Street, for review and approval.*

14. Public Comment:

During the comment period between September 24 and October 28, 2014 one public comments was submitted. The concerns are noted and responded to below. The developer has received all comments and is encouraged to work with commentators. Please contact and work with the developer directly if you have any concerns and for topics that are not under City jurisdiction.

Citizen Concern:

The biggest problem with this proposed subdivision is the proposed SW Helenius Street and its direct straight route. This straight away will appeal to hundreds of cars from the neighborhood to no longer take the other routes through the neighborhood streets but rather speed directly though SW Helenius Street to get to their homes quicker. SW Helenius Street should be designed differently and possibly for it to curve though the new proposed subdivision in order to force speeders to slow down while making SW Helenius Street less appealing as a speed strip or to not continue the street through at all.

Developer's Response:

With respect to the neighbor comments on the SW Helenius Street connection, here are a few of our thoughts:

- The road alignment included in the application falls in the existing City right-of-way for SW Helenius Street.
- The road alignment included in the application matches the alignment of SW Helenius Street (Collector) in the City Transportation System Plan Update.
- The road alignment included in the application provides a public benefit to the entire community. Street connections like this enhance overall neighborhood circulation for multi-modal travel including motor vehicles, pedestrians, and bicyclists by providing a variety of options for local residents. A well connected street system consisting of multiple options shortens trips for local residents and spreads these trips amongst many streets as opposed to concentrating them on a few other streets, which in this case would be SW Brown Street and SW Marilyn Street, among others. This is illustrated to some degree in the Preliminary Circulation Plan included in the application materials.
- The applicant's property is impacted by an existing 125' foot wide PGE electric transmission line corridor including a large supporting tower. This feature occupies a significant portion of the property and as such substantially limits the amount of developable land is available for homes. Use of the existing City right-of-way to build this City collector street facility is an efficient use of land and is critical to the viability of the project.

RECOMMENDATION

Based on the findings presented, the City Engineer approves the preliminary plat of SB 14-02, Heather Ridge with the following conditions:

PRIOR TO ISSUANCE OF A WATER QUALITY PERMIT:

- PFR-1 The applicant shall submit final stormwater plans, for review and approval.
- PFR-2 The applicant shall submit final conveyance calculations, for review and approval.
- PFR-3 The applicant shall submit revised plans that show a 15-foot wide driveway approach, fence, and 16-foot wide gate for the public water quality facility, for review and approval.
- PFR-4 The applicant shall submit plans that are sufficient to obtain a Stormwater Connection Permit Authorization Letter that complies with the submitted Service Provider Letter conditions, for review and approval.

PRIOR TO ISSUANCE OF A PUBLIC WORKS PERMIT:

- PFR-5 The applicant shall submit final plans that show accesses for all lots to a public street a minimum of 10-feet wide and a maximum of 26 feet wide for one or two car garages and 37-feet wide for three or more car garages, for review and approval.
- PFR-6 The applicant shall submit final plans that show extension of an existing 8-foot wide concrete accessway identified as Tract B between lots 11 and 12 and connect to SW 110th Place, for review and approval.
- PFR-7 The applicant shall submit final plans that show 31-foot wide dedication and construction for SW 112th Avenue including 20-feet of pavement, a 6-foot planter strip with curb, street trees, and streetlights, and a 5-foot sidewalk, for review and approval.
- PFR-8 The applicant shall submit final plans that show 46-foot wide dedication and construction for SW Helenius Street including 20-feet of pavement, a 6-foot planter strip with curb, street trees, and streetlights, and a 5-foot sidewalk, for review and approval.
- PFR-9 The applicant shall submit final plans that show 50-foot wide dedication and construction for SW 110th Place including 32-feet of pavement, a 4-foot planter strip with curb, street trees, and streetlights, and a 5-foot sidewalk, for review and approval.

- PFR-10 The applicant shall submit revised plans that show a public water line connecting existing public water lines within SW Helenius Avenue to the east of this development and SW 112th Avenue to the west and laterals for lots 15 and 16 to directly connect to the public water line in SW 110th Place and be near the south side of lot 15 and the north side of lot 16, for review and approval.
- PFR-11 If needed, the applicant will need to install double check valve assemblies to meet the requirements of TMC 3-3.120(4).
- PFR-12 The applicant shall submit revised plans that show extension of the public line in SW 112th Avenue east then north in SW 110th Place and all lots served by a single sanitary sewer lateral, for review and approval.
- PFR-13 The applicant shall submit a revised plan that minimizes the impact of stormwater from their development to adjacent properties to the east and northeast, for review and approval.
- PFR-14 The applicant shall obtain a NPDES Erosion Control Permit.
- PFR-15 The applicant shall obtain a City of Tualatin erosion control permit.
- PFR-16 The applicant shall submit final plans that show preservation of off-site trees to be retained in conformance with TDC 34.210(1), for review and approval.
- PFR-17 The applicant shall submit final plans that show a new public fire hydrant at the northwest corner of SW 110th Place and SW Helenius Street, for review and approval.

PRIOR TO APPROVAL OF THE FINAL PLAT:

- PFR-18 The applicant shall submit final plans that indicate the proposed north/south cul-de-sac to be named SW 110th Place, for review and approval.
- PFR-19 The applicant shall construct all public improvements or provide financial assurance for completion, for review and approval.
- PFR-20 The applicant shall plat the subdivision within 24 months of the issued decision.
- PFR-21 The applicant shall submit final plans that show Tract A as a public water quality facility and Tract B as a pedestrian accessway, both to be dedicated to the City of Tualatin, for review and approval.
- PFR-22 The applicant shall construct the street improvements on SW 112th Avenue, SW Helenius Street, and SW "A" Court or provide financial assurance for the completion of public improvements.

- PFR-23 The applicant shall dedicate sufficient right-of way to assure 31 feet of right-of-way, for SW 112th Avenue, for review and approval.
- PFR-24 The applicant shall dedicate sufficient right-of way to assure 46 feet of right-of-way, for SW Helenius Street, for review and approval.
- PFR-25 The applicant shall dedicate sufficient right-of way to assure 50 feet of right-of-way, for SW 110th Place, for review and approval.
- PFR-26 The applicant shall pay the City a non-refundable fee equal to the cost of the purchase and installation of street trees.
- PFR-27 The applicant shall pay the City a non-refundable fee equal to the cost of the purchase and installation of street signs at the intersections of SW 112th Avenue & SW Helenius Street and SW 110th Place and SW Helenius Street.

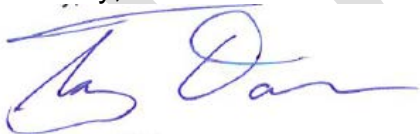
PRIOR TO ISSUANCE OF A BUILDING PERMIT:

- PFR-28 The applicant shall construct any public improvements.
- PFR-29 The applicant shall deliver a Mylar copy of the recorded plat to the City Engineer.

APPEAL

Requests for review of this decision must be received by the Engineering Division within the 14-day appeal period ending on **November 6, 2014 at 5 PM**. Issues must have been described with adequate clarity and detail to afford a decision maker an opportunity to respond to the issue. A request for review must be submitted on the form provided by the City, as detailed in TDC 36.161, and signed by the appellant.

Sincerely,



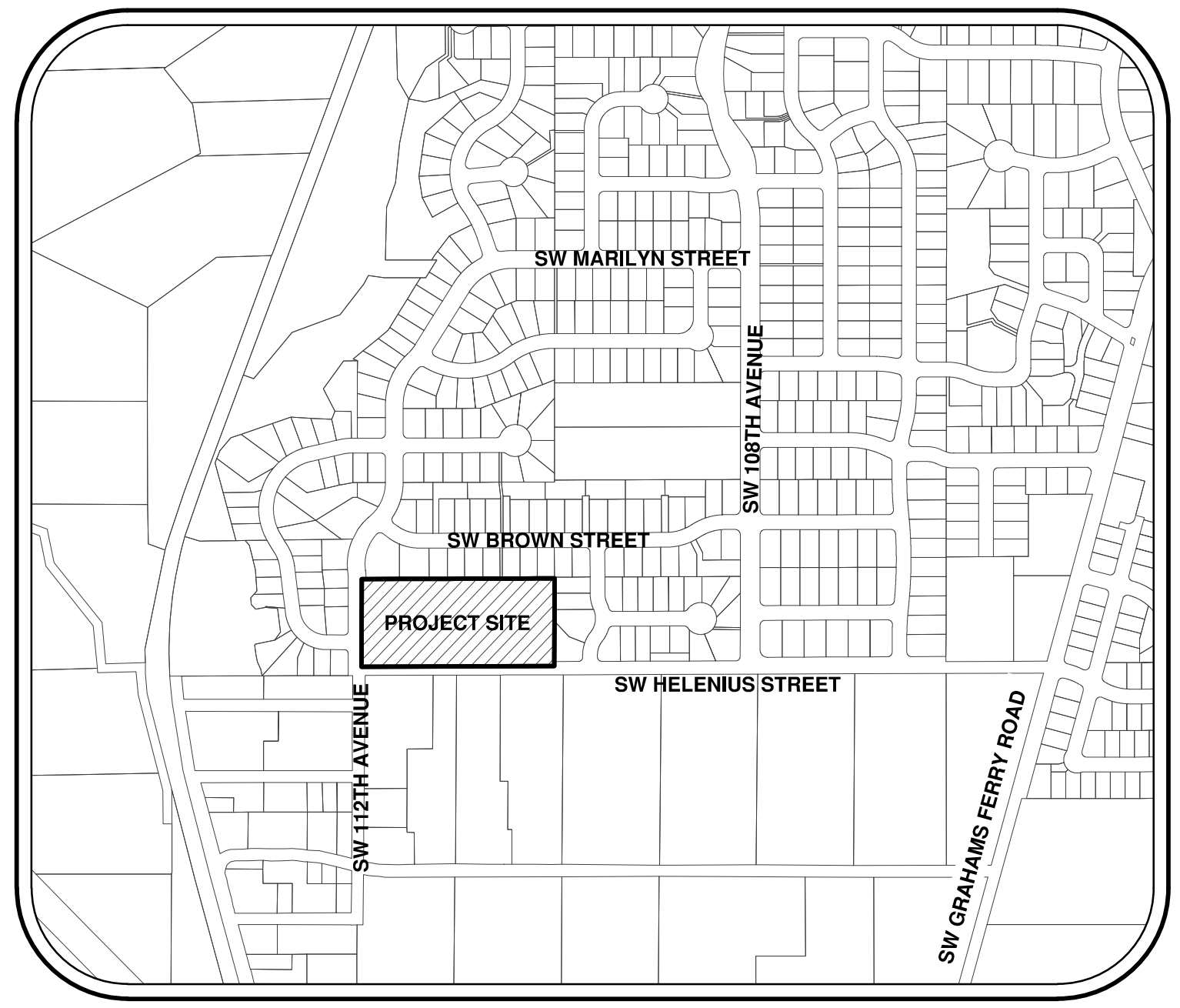
Tony Doran, EIT
Engineering Associate

C: Alex Hurley & Matt Scheidegger, AKS Engineering & Forestry, LLC, 12965 SW Herman Road, Suite 100, Tualatin, OR 97062
Heather Ridge Subdivision, LLC, 9185 SW Burnham Street, Tigard, Oregon, 97223
Mario Ponti

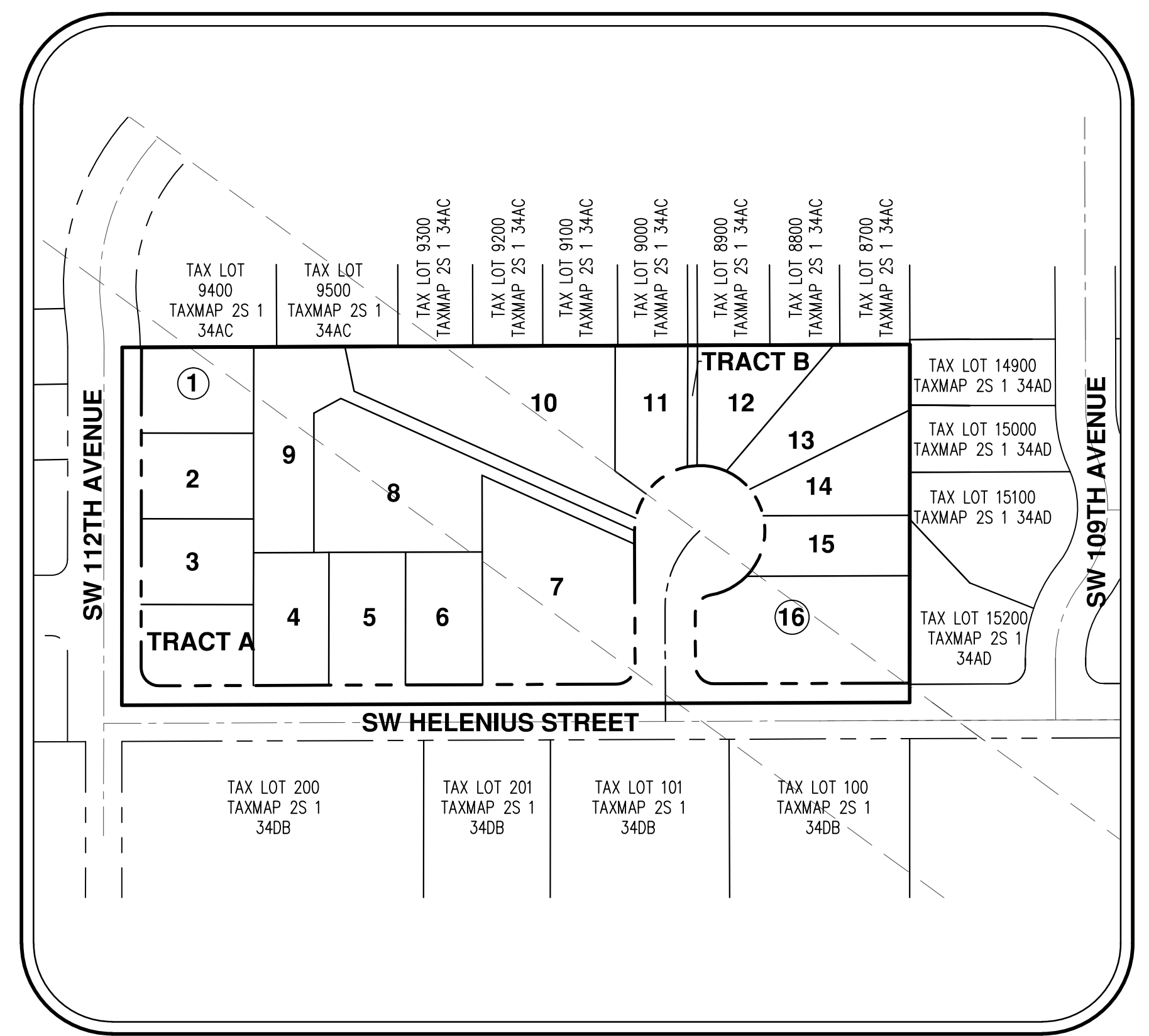
File: SB 14-02, Heather Ridge

HEATHER RIDGE

PRELIMINARY SUBDIVISION APPLICATION



VICINITY MAP
 1" = 500'



SITE MAP
 1"=100'

OWNER/APPLICANT

HEATHER RIDGE SUBDIVISION, LLC
 9185 SW BURNHAM STREET
 TIGARD, OR 97223

ENGINEERING/SURVEYING FIRM

AKS ENGINEERING & FORESTRY, LLC.
 CONTACT: ALEX HURLEY
 12965 SW HERMAN ROAD, SUITE 100
 TUALATIN, OR 97062
 PH: 503-563-6151
 FAX: 503-563-6152

LEGEND			
	EXISTING	PROPOSED	
DECIDUOUS TREE			STORM SEWER CLEAN OUT
CONIFEROUS TREE			STORM SEWER CATCH BASIN
FIRE HYDRANT			STORM SEWER AREA DRAIN
WATER BLOWOFF			STORM SEWER MANHOLE
WATER METER			GAS METER
WATER VALVE			GAS VALVE
DOUBLE CHECK VALVE			GUY WIRE ANCHOR
AIR RELEASE VALVE			POWER POLE
SANITARY SEWER CLEAN OUT			POWER VAULT
SANITARY SEWER MANHOLE			POWER JUNCTION BOX
SIGN			POWER PEDESTAL
STREET LIGHT			COMMUNICATIONS VAULT
MAILBOX			COMMUNICATIONS JUNCTION BOX
			COMMUNICATIONS RISER
	EXISTING	PROPOSED	
RIGHT-OF-WAY LINE			
BOUNDARY LINE			
PROPERTY LINE			
CENTERLINE			
DITCH			
CURB			
EDGE OF PAVEMENT			
EASEMENT			
FENCE LINE			
GRAVEL EDGE			
POWER LINE			
OVERHEAD WIRE			
COMMUNICATIONS LINE			
FIBER OPTIC LINE			
GAS LINE			
STORM SEWER LINE			
SANITARY SEWER LINE			
WATER LINE			

SHEET INDEX

- 01 - COVER SHEET WITH VICINITY AND SITE MAPS
- 02 - EXISTING CONDITIONS
- 03 - PRELIMINARY PLAT
- 04 - PRELIMINARY DEMOLITION PLAN
- 05 - PRELIMINARY GRADING, EROSION CONTROL, AND TREE REMOVAL PLAN
- 06 - TREE PRESERVATION AND REMOVAL TABLE AND NOTES
- 07 - PRELIMINARY STREET PLAN
- 08 - PRELIMINARY STREET PROFILES
- 09 - PRELIMINARY STREET PROFILES
- 10 - PRELIMINARY UTILITY PLAN
- 11 - PRELIMINARY CIRCULATION PLAN

PROPERTY DESCRIPTION:

TAX LOT 200 (TAX MAP 2S 1 34AC)
 CITY OF TUALATIN, WASHINGTON COUNTY, OREGON
 NE 1/4 OF SECTION 34, TOWNSHIP 2 SOUTH, RANGE 1 WEST, W.M.

EXISTING LAND USE:

RESIDENTIAL

PROJECT PURPOSE:

16 LOT RESIDENTIAL SUBDIVISION

TOTAL AREA:

±4.44 ACRES

ZONING:

RESIDENTIAL LOW DENSITY (RL)

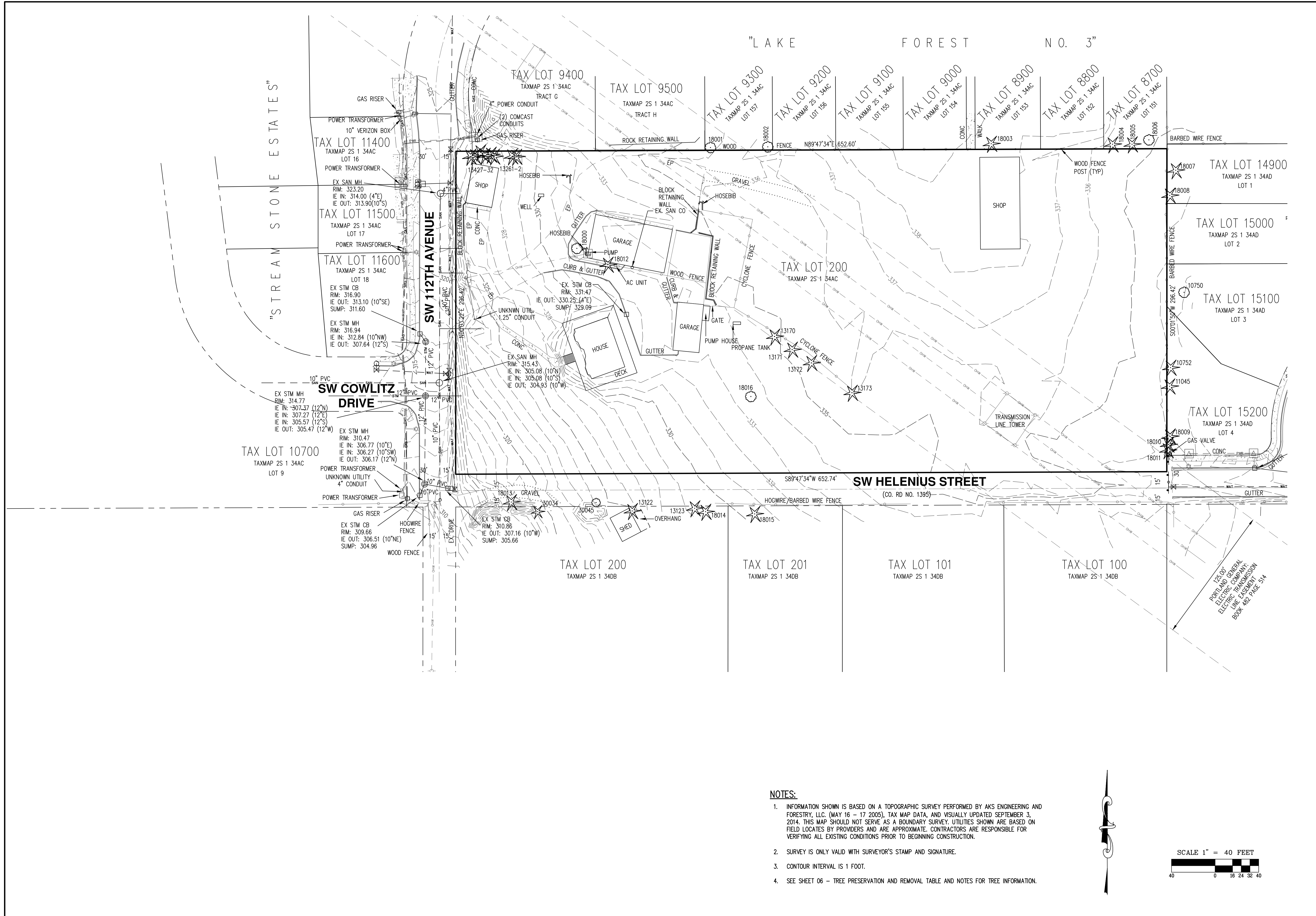
PROJECT LOCATION:

NORTHEAST OF SW 112TH AVENUE AND SW HELENIUS STREET INTERSECTION

BENCHMARK:

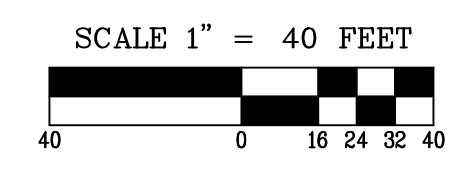
WASHINGTON COUNTY BENCHMARK NO. 91. FOUND BRASS DISK SET IN CONCRETE FILLED METAL CASE NEAR THE INTERSECTION OF GRAHAMS FERRY ROAD AND HELENIUS STREET, LOCATED ON THE EXTENDED CENTERLINE OF HELENIUS STREET, 25 FEET EAST OF THE CENTERLINE OF GRAHAMS FERRY ROAD, AND 69 FEET WEST OF PGE POLE 6122. ELEVATION = 291.709

AKS DRAWING FILE: 3895_P02_EX_COND.DWG | LAYOUT: LAYOUT1



NOTES:

1. INFORMATION SHOWN IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY AKS ENGINEERING AND FORESTRY, LLC. (MAY 16 - 17 2005), TAX MAP DATA, AND VISUALLY UPDATED SEPTEMBER 3, 2014. THIS MAP SHOULD NOT SERVE AS A BOUNDARY SURVEY. UTILITIES SHOWN ARE BASED ON FIELD LOCATES BY PROVIDERS AND ARE APPROXIMATE. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
2. SURVEY IS ONLY VALID WITH SURVEYOR'S STAMP AND SIGNATURE.
3. CONTOUR INTERVAL IS 1 FOOT.
4. SEE SHEET 06 - TREE PRESERVATION AND REMOVAL TABLE AND NOTES FOR TREE INFORMATION.



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

**HEATHER RIDGE
 SUBDIVISION**
 TUALATIN OREGON
 WASHINGTON COUNTY ASSESSOR'S MAP 2S 1 34AC
 TAX LOT 200

EXISTING CONDITIONS

DESIGNED BY: MTS
 DRAWN BY: MTS/SDL
 CHECKED BY: AHH
 SCALE: AS NOTED
 DATE: 09/17/2014

REGISTERED PROFESSIONAL LAND SURVEYOR
ALEXANDER H. HURLEY
 LICENSE NO. 125307
 EXPIRES: JULY 16, 2003
 RENEWS: 6/30/15

REVISIONS

JOB NUMBER
3895

SHEET
02

CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	15.00'	90°15'48"	23.63'	S45°04'32"E 21.26'
C2	15.50'	90°00'00"	24.35'	N44°47'34"E 21.92'
C3	54.00'	3°09'10"	2.97'	N1°09'42"E 2.97'
C4	54.00'	31°50'11"	30.00'	N18°39'23"E 29.62'
C5	54.00'	44°31'50"	41.97'	N56°50'23"E 40.92'
C6	54.00'	8°33'20"	8.06'	N83°22'58"E 8.06'
C7	54.00'	31°54'15"	30.07'	S76°23'14"E 29.68'
C8	54.00'	31°50'28"	30.01'	S44°30'53"E 29.62'
C9	54.00'	34°39'49"	32.67'	S11°15'44"E 32.17'
C10	54.00'	38°15'26"	36.06'	S25°11'53"W 35.39'
C11	54.00'	36°17'33"	34.20'	S62°28'22"W 33.64'
C12	15.00'	80°49'35"	21.16'	S40°12'21"W 19.45'
C13	15.50'	90°00'00"	24.35'	S45°12'26"E 21.92'
C14	85.00'	48°47'23"	72.38'	N24°11'13"E 70.21'

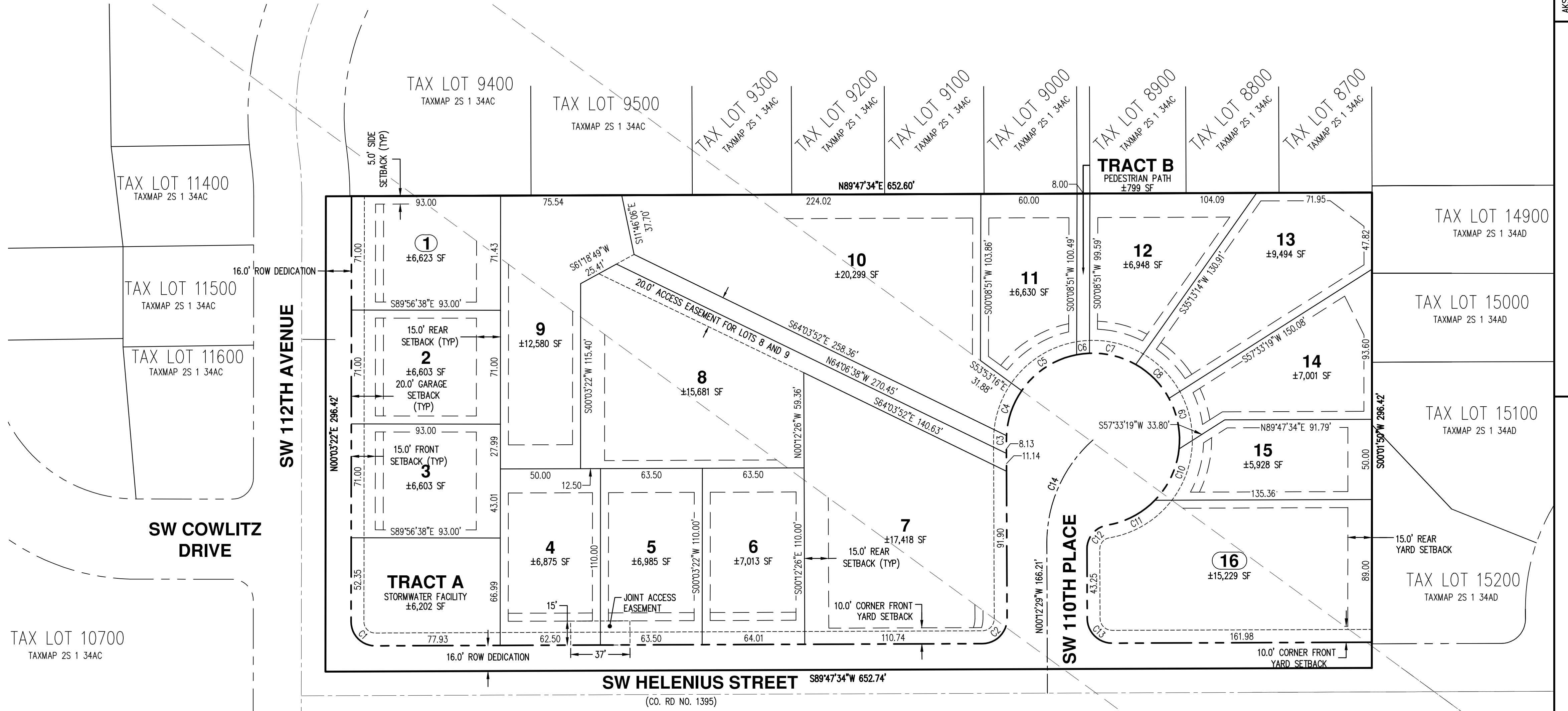
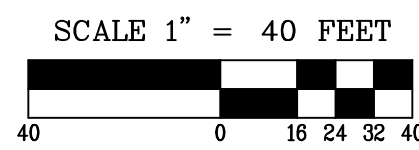
SITE ZONING: RL (LOW DENSITY RESIDENTIAL)
 GROSS SITE AREA: 193,464 SF = 4.44 AC

UNDEVELOPABLE AREAS:
 R.O.W.: 28,552 SF = 0.66 AC
 USABLE OPEN SPACE: 799 SF = 0.02 AC
 STORMWATER TRACT: 6,202 SF = 0.14 AC

NET SITE AREA: 157,911 SF = 3.63 AC
 MAX DENSITY (6.4 LOTS/AC): 23 LOTS

PROPOSED RESIDENTIAL UNITS: 16 LOTS
 NET RESIDENTIAL DENSITY: 4.4 LOTS/AC
 AVERAGE LOT SIZE: 9,699 SF

- NOTES:**
- THE PURPOSE OF THIS PRELIMINARY PLAT IS TO SHOW THE PROPOSED LOT DIMENSIONS FOR PLANNING PURPOSES. THIS IS NOT AN OFFICIAL PLAT AND IS NOT TO BE USED FOR SURVEY PURPOSES.
 - TRACT "A" AND TRACT "B" TO BE DEDICATED TO THE CITY OF TUALATIN.



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HEATHER RIDGE SUBDIVISION
 TUALATIN OREGON
 WASHINGTON COUNTY ASSESSOR'S MAP 2S 1 34AC

PRELIMINARY PLAT

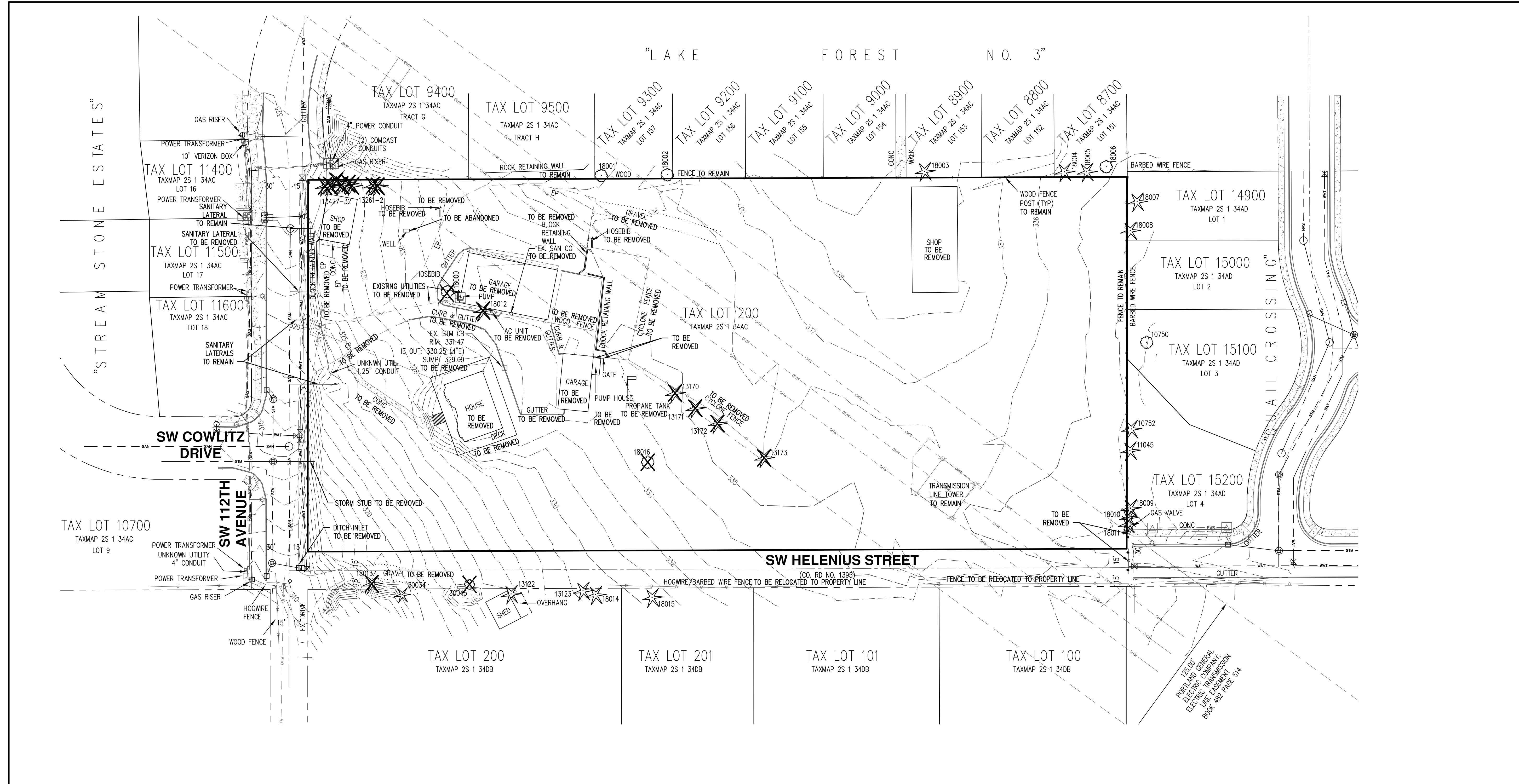
DESIGNED BY: MTS
 DRAWN BY: MTS/SDL
 CHECKED BY: AHH
 SCALE: AS NOTED
 DATE: 10/22/2014

REGISTERED PROFESSIONAL LAND SURVEYOR
 ALEXANDER H. HURLEY
 LICENSE NO. 12591
 RENEWS: 6/30/15

REVISIONS:

JOB NUMBER: 3895
 SHEET: 03

AKS DRAWING FILE: 3895_P03_PLAT.DWG | LAYOUT: LAYOUT1



LEGEND

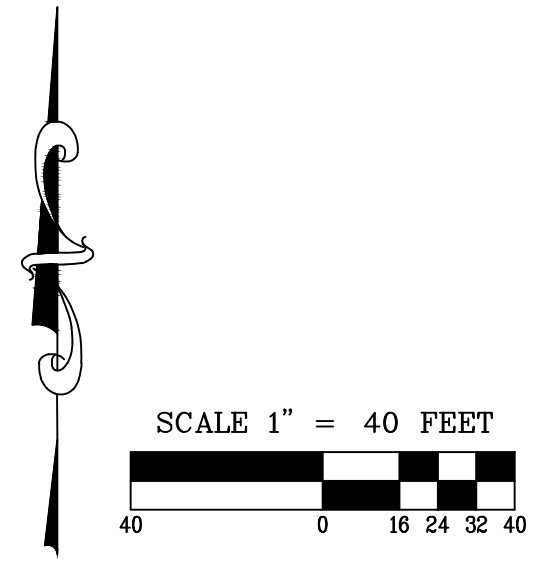
EXISTING GROUND CONTOUR (1 FT) - - - - -

EXISTING GROUND CONTOUR (5 FT) - - - - -

EXISTING TREE TO BE REMOVED X

EXISTING TREE TO REMAIN *

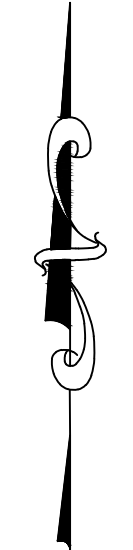
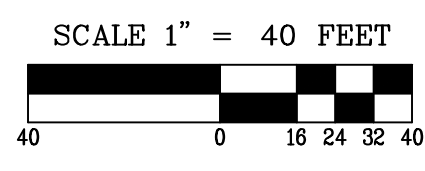
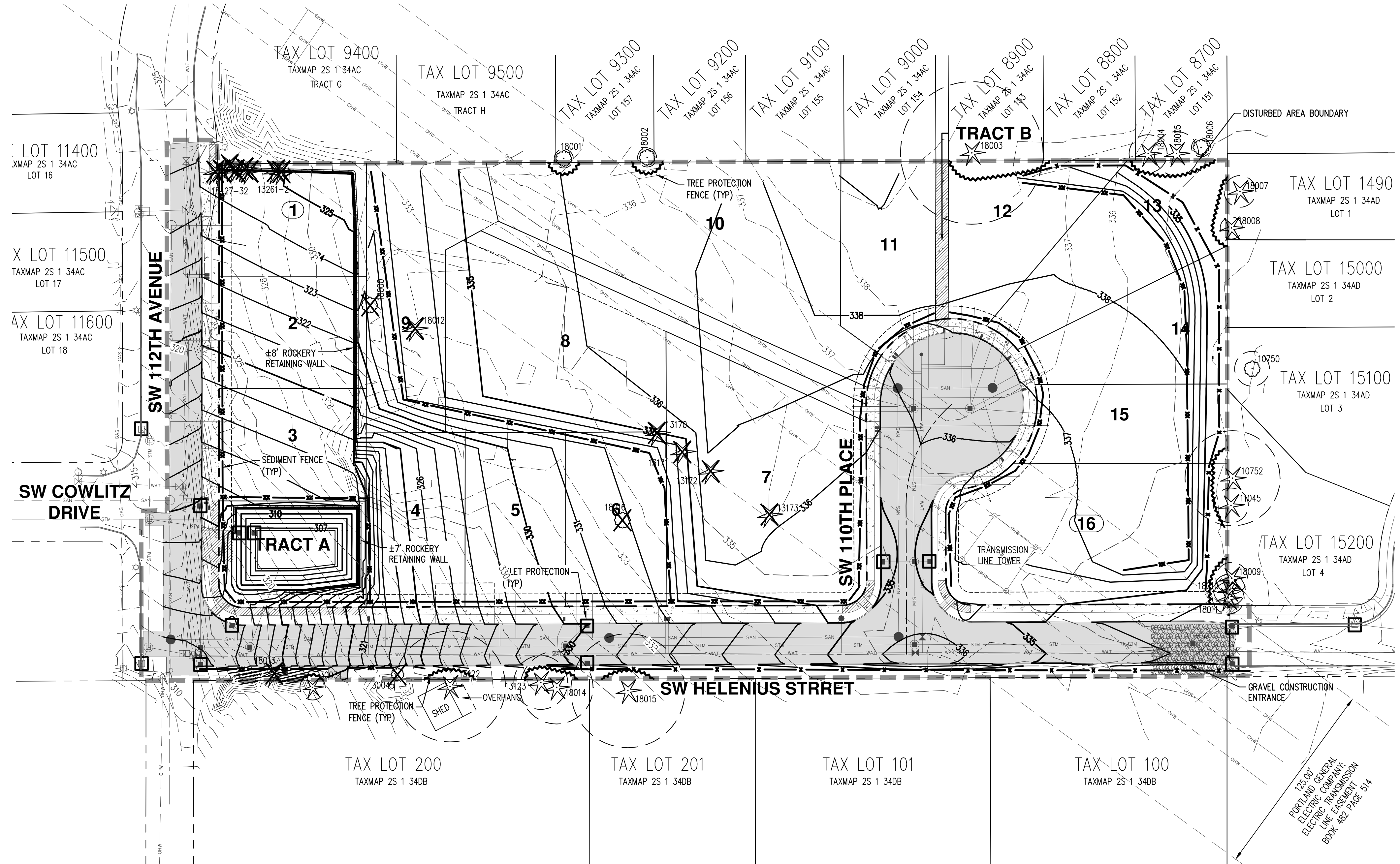
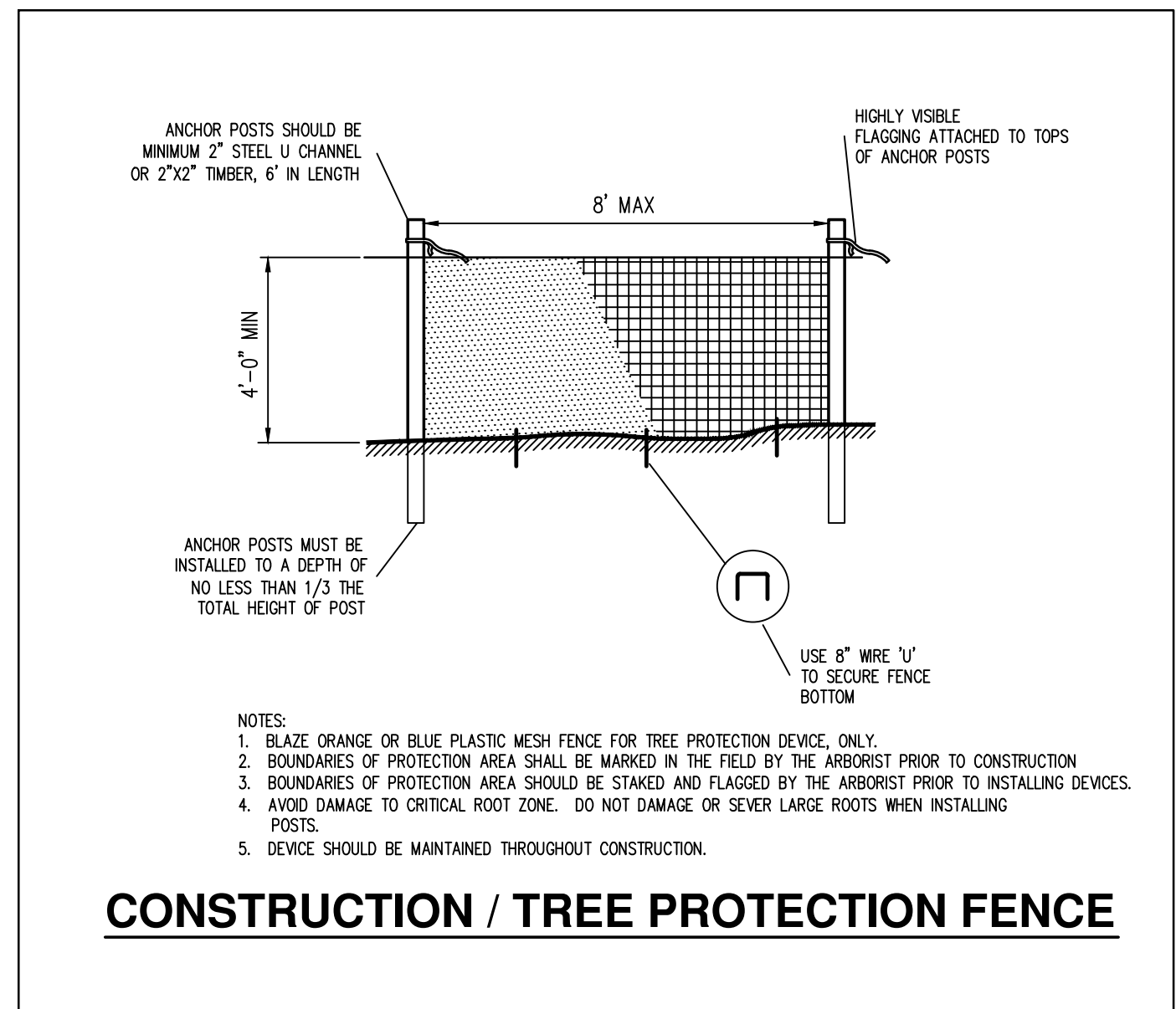
- NOTE:**
- EXISTING WELLS AND SEPTIC TANKS TO BE ABANDONED PER DEQ, OREGON WATER RESOURCES DEPARTMENT, AND CITY OF TUALATIN REQUIREMENTS.
 - SEE SHEET 05 - PRELIMINARY GRADING, EROSION CONTROL, AND TREE REMOVAL PLAN AND 06 - TREE PRESERVATION AND REMOVAL TABLE AND NOTES FOR TREE REMOVAL INFORMATION.



AKS DRAWING FILE: 3895-P04-PRE-DEMO-PLANNING | LAYOUT: LAYOUT1

LEGEND

EXISTING GROUND CONTOUR (1 FT)	---102---
EXISTING GROUND CONTOUR (5 FT)	---100---
FINISHED GRADE CONTOUR (1 FT)	---102---
FINISHED GRADE CONTOUR (5 FT)	---100---
DISTURBED AREA	-----
TREE PROTECTION FENCE	-----
SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING)	-----
SEDIMENT FENCE (TO BE INSTALLED AFTER GRADING)	-----
INLET PROTECTION	□
GRAVEL CONSTRUCTION ENTRANCE	▨
NEW IMPERVIOUS AREA	■
DECIDUOUS / CONIFEROUS	○ / *
EXISTING TREE TO REMAIN	○ / *
EXISTING TREE TO BE REMOVED	⊗ / ⊗
TREE ROOT PROTECTION ZONE. (1 FOOT RADIUS PER INCH DBH)	⊗
TREE PROTECTION FENCE	-----



Tree #	DBH (in.)	Common Name (Scientific name)	Condition/Comments	Hazard Rating 4*	Windthrow Rating**	Reason for Removal
10750	11	Norway Maple (Acer platanoides)	Off site, not fully evaluated, healthy	1	A	Preserve
10752	30	Douglas-fir (Pseudotsuga menziesii)	Off site, not fully evaluated, slight lean to the southwest, deformed top, healthy	2	B	Preserve
11045	11	Douglas-fir (Pseudotsuga menziesii)	Off site, not fully evaluated, healthy	1	A	Preserve
13122	35	Douglas-fir (Pseudotsuga menziesii)	Off site, building encroachment, appears all roots to the west were destroyed for building construction	3	C	Preserve
13123	17	Douglas-fir (Pseudotsuga menziesii)	Off site, deformed top, healthy	2	B	Preserve
13170	17	Western redcedar (Thuja plicata)	Some dead and broken branches, ok	1	A	Construction
13171	15	Western redcedar (Thuja plicata)	Lightly pruned, healthy	1	A	Construction
13172	8, 20	Western redcedar (Thuja plicata)	Codominant, healthy	1	A	Construction
13173	16	Western redcedar (Thuja plicata)	Healthy	1	A	Construction
13261	8	Western redcedar (Thuja plicata)	Dead, hazard	4	C	Dead / Hazard
13262	17	Western redcedar (Thuja plicata)	Dead, hazard	4	C	Dead / Hazard
13427	13	Western redcedar (Thuja plicata)	Heavy sap flow, cracked/loose bark with decay, possible insect infestation	3	C	Construction
13428	15	Western redcedar (Thuja plicata)	Heavy sap flow, possible insect infestation	2	B	Construction
13429	8	Western redcedar (Thuja plicata)	Split bole bottom 8 feet, old scars at base, heavy decay, hazard	4	C	Hazard
13430	13	Western redcedar (Thuja plicata)	Heavy sap flow, possible insect infestation	2	B	Construction
13431	17	Western redcedar (Thuja plicata)	Heavy sap flow, possible insect infestation	2	B	Construction
13432	8	Western redcedar (Thuja plicata)	Dead, hazard	4	C	Dead / Hazard
18000	6, 8, 10	Bitter cherry (Prunus emarginata)	Codominant, bulge at base, some decay in some limbs, recent minor pruning	2	B	Construction
18001	6	Norway Maple (Acer platanoides)	Off site, not fully evaluated, healthy	1	A	Preserve
18002	8	Ash (Fraxinus spp.)	Off site, not fully evaluated, healthy	1	A	Preserve
18003	45	Douglas-fir (Pseudotsuga menziesii)	Off site, not fully evaluated, healthy	2	B	Preserve
18004	12	Leyland cypress (Cupressus leylandii)	Off site, not fully evaluated, healthy	1	A	Preserve
18005	14	Leyland cypress (Cupressus leylandii)	Off site, not fully evaluated, healthy	1	A	Preserve
18006	6	Red Maple (Acer rubrum)	Off site, not fully evaluated, healthy	1	A	Preserve
18007	10	Red Maple (Acer rubrum)	Off site, not fully evaluated, healthy	1	A	Preserve
18008	7	Bitter cherry (Prunus emarginata)	Off site, not fully evaluated, healthy	1	A	Preserve
18009	10	Leyland cypress (Cupressus leylandii)	Off site, not fully evaluated, healthy	1	A	Preserve
18010	10	Leyland cypress (Cupressus leylandii)	Off site, not fully evaluated, healthy	1	A	Preserve
18011	10	Leyland cypress (Cupressus leylandii)	Off site, not fully evaluated, healthy	1	A	Preserve
18012	9	Japanese cypress (Chamaecyparis obtusa)	Pruned, bore holes	2	B	Construction
18013	12	Douglas-fir (Pseudotsuga menziesii)	Within SW Helenius Road ROW, self corrected lean, pruned, healthy	1	A	Construction
18014	23	Douglas-fir (Pseudotsuga menziesii)	Off site, not fully evaluated, high crown, low taper, healthy	2	B	Preserve
18015	36	Douglas-fir (Pseudotsuga menziesii)	Off site, not fully evaluated, self corrected lean, healthy	2	B	Preserve
18016	11	Pacific madrone (Arbutus menziesii)	Dead, hazard	4	C	Dead / Hazard
30034	8	Lodgepole pine (Pinus contorta)	Off site, some broken limbs, deformed top, healthy	1	A	Preserve
30045	9	English laurel (Prunus laurocerasus)	Within SW Helenius Road ROW, healthy	1	A	Construction

Total Number of On Site Trees: 15
 Total Number of Trees within adjacent ROW: 2
 Number of Trees to be Removed for Construction: 12 (includes removal of trees within SW Helenius Road ROW)
 Number of Hazard Trees to be Removed: 5
 Total Number of Trees to be Removed: 17

***Hazard Rating**
 1=LOW RISK
 2=MODERATE RISK
 3=HIGH RISK
 4=EXTREME RISK

****Windthrow Rating:**
 A=Most Windthrow Resistant
 B=Moderate Windthrow Resistance
 C=Least Windthrow Resistant

Trees associated with this development have been evaluated and assessed. Trees shown to be preserved should reasonably be able to be preserved in light of the development proposed, appear healthy, and do not appear to pose an imminent hazard to persons or property. Trees proposed for removal cannot be reasonably preserved in light of the development proposed and/or health/condition of the tree. Proposed tree removal is in accordance with TDC 34.230.

Arborist Disclosure Statement:

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the health of trees, and attempt to reduce the risk of living near trees. The Client and Jurisdiction may choose to accept or disregard the recommendations of the arborist, or seek additional advice. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed. Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

At the completion of construction, all trees should once again be reviewed to evaluate their hazard rating. Land clearing and removal of adjacent trees can expose previously unseen defects and otherwise healthy trees can be damaged during construction.

TREE PROTECTION NOTES:

A. TIMELINE FOR CLEARING, GRADING, AND INSTALLATION OF TREE PROTECTION MEASURES: TREE PROTECTION MEASURES WILL BE DONE DURING CLEARING AND ANY GRADING WILL FOLLOW.

B. PLACING MATERIALS NEAR TREES. NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE PROTECTED AREA OF ANY TREE DESIGNATED TO REMAIN, INCLUDING, BUT NOT LIMITED TO, PARKING EQUIPMENT, PLACING SOLVENTS, STORING BUILDING MATERIAL AND SOIL DEPOSITS, DUMPING CONCRETE WASHOUT AND LOCATING BURN HOLES.

C. ATTACHMENTS TO TREES DURING CONSTRUCTION – NO PERSON SHALL ATTACH ANY OBJECT TO ANY TREE DESIGNATED FOR PROTECTION.

D. PROTECTIVE BARRIER. BEFORE DEVELOPMENT, LAND CLEARING, FILLING OR ANY LAND ALTERATION FOR WHICH A TREE REMOVAL IS REQUIRED, THE CONTRACTOR:

- SHALL ERECT AND MAINTAIN READILY VISIBLE PROTECTIVE TREE FENCING ALONG THE OUTER EDGE AND COMPLETELY SURROUNDING THE PROTECTED AREA OF ALL PROTECTED TREES OR GROUPS OF TREES. FENCES SHALL BE CONSTRUCTED OF 4 FOOT TALL ORANGE PLASTIC OR SNOW FENCE, SECURED TO SIX FOOT TALL METAL POSTS, DRIVEN TWO FEET INTO THE GROUND. HEAVY 12 GAUGE WIRE SHALL BE ATTACHED TO THE TOP AND MIDPOINT OF EACH POST. POSTS SHALL NOT BE PLACED FURTHER THAN 10 FEET APART.
- MAY BE REQUIRED TO COVER WITH MULCH TO A DEPTH OF AT LEAST SIX (6) INCHES OR WITH PLYWOOD OR SIMILAR MATERIAL THE AREAS ADJOINING THE CRITICAL ROOT ZONE OF A TREE IN ORDER TO PROTECT ROOTS FROM DAMAGE CAUSED BY HEAVY EQUIPMENT.
- SHALL PROHIBIT EXCAVATION OR COMPACTING OF EARTH OR OTHER POTENTIALLY DAMAGING ACTIVITIES WITHIN THE BARRIERS.
- MAY BE REQUIRED TO MINIMIZE ROOT DAMAGE BY EXCAVATION OF A TWO (2) FEET DEEP TRENCH, AT THE EDGE OF CRITICAL ROOT ZONES, TO CLEANLY SEVER THE ROOTS OF TREES TO BE RETAINED.
- MAY BE REQUIRED TO HAVE CORRECTIVE PRUNING PERFORMED ON PROTECTED TREES IN ORDER TO AVOID DAMAGE FROM MACHINERY OR BUILDING ACTIVITY. MAY BE REQUIRED TO MAINTAIN TREES THROUGHOUT CONSTRUCTION PERIOD BY WATERING AND FERTILIZING.
- SHALL MAINTAIN THE PROTECTIVE BARRIERS IN PLACE UNTIL THE PROJECT ARBORIST AUTHORIZES THEIR REMOVAL.
- SHALL ENSURE THAT ANY LANDSCAPING DONE IN THE PROTECTED ZONE SUBSEQUENT TO THE REMOVAL OF THE BARRIERS SHALL BE ACCOMPLISHED WITH LIGHT MACHINERY OR HAND LABOR.

E. THE GRADE SHALL NOT BE ELEVATED OR REDUCED WITHIN THE CRITICAL ROOT ZONE OF TREES TO BE PRESERVED WITHOUT THE PROJECT ARBORIST'S AUTHORIZATION. THE PROJECT ARBORIST MAY ALLOW COVERAGE OF UP TO ONE HALF OF THE AREA OF THE TREE'S CRITICAL ROOT ZONE WITH LIGHT SOILS (NO CLAY) TO THE MINIMUM DEPTH NECESSARY TO CARRY OUT GRADING OR LANDSCAPING PLANS, IF IT WILL NOT IMPERIL THE SURVIVAL OF THE TREE.

F. IF THE GRADE ADJACENT TO A PRESERVED TREE IS RAISED SUCH THAT IT COULD SLOUGH OR ERODE INTO THE TREE'S CRITICAL ROOT ZONE, IT SHALL BE PERMANENTLY STABILIZED TO PREVENT SUFFOCATION OF THE ROOTS.

G. THE APPLICANT SHALL NOT INSTALL AN IMPERVIOUS SURFACE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE TO BE RETAINED WITHOUT THE AUTHORIZATION OF THE PROJECT ARBORIST. THE PROJECT ARBORIST MAY REQUIRE SPECIFIC CONSTRUCTION METHODS TO ENSURE THE TREE'S SURVIVAL AND TO MINIMIZE THE POTENTIAL FOR ROOT INDUCED DAMAGE TO THE IMPERVIOUS SURFACE.

H. TO THE GREATEST EXTENT PRACTICAL, UTILITY TRENCHES SHALL BE LOCATED OUTSIDE OF THE CRITICAL ROOT ZONE OF TREES TO BE RETAINED. THE PROJECT ARBORIST MAY REQUIRE THAT UTILITIES BE TUNNELED UNDER THE ROOTS OF TREES TO BE RETAINED IF THE PROJECT ARBORIST DETERMINES THAT TRENCHING WOULD SIGNIFICANTLY REDUCE THE CHANCES OF THE TREES SURVIVAL.

I. TREES AND OTHER VEGETATION TO BE RETAINED SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. CLEARING OPERATIONS SHALL BE CONDUCTED SO AS TO EXPOSE THE SMALLEST PRACTICAL AREA OF SOIL TO EROSION FOR THE LEAST POSSIBLE TIME. TO CONTROL EROSION, SHRUBS, GROUND COVER AND STUMPS SHALL BE MAINTAINED WHERE FEASIBLE. WHERE NOT FEASIBLE APPROPRIATE EROSION CONTROL PRACTICES SHALL BE IMPLEMENTED.

J. DIRECTIONAL FELLING OF TREES SHALL BE USED TO AVOID DAMAGE TO TREES DESIGNATED FOR RETENTION.

K. THE PROJECT ARBORIST MAY REQUIRE ADDITIONAL TREE PROTECTION MEASURES WHICH ARE CONSISTENT WITH ACCEPTED URBAN FORESTRY PRACTICES.

L. NO STORAGE OF MATERIALS SHALL BE LOCATED WITHIN THE DRIP LINE OF PRESERVED TREES.

ADDITIONAL NOTES:

NO EXCAVATION, TRENCHING, GRADING, ROOT PRUNING OR OTHER ACTIVITY SHALL OCCUR WITHIN THE TREE PROTECTION ZONE UNLESS DIRECTED BY AN ARBORIST PRESENT ON SITE AND APPROVED BY THE PROJECT ARBORIST. THE PROJECT ARBORIST SHALL BE BRUCE BALDWIN WITH AKS ENGINEERING AND FORESTRY, LLC.

SOME TREES SHOWN TO BE SAVED MAY NEED TO BE REMOVED DURING / AFTER CONSTRUCTION DUE TO CONSTRUCTION DAMAGE, PREVIOUSLY UNDETECTED STRUCTURAL WEAKNESSES, ETC.

TREES SHOWN TO BE SAVED SHOULD BE EVALUATED BY THE PROJECT ARBORIST AFTER CONSTRUCTION. TREES ADVERSELY AFFECTED BY CONSTRUCTION AND/OR DETERMINED TO BE A SAFETY HAZARD SHOULD BE REMOVED.

ARBORIST DISCLOSURE STATEMENT

ARBORISTS ARE TREE SPECIALISTS WHO USE THEIR EDUCATION, KNOWLEDGE, TRAINING, AND EXPERIENCE TO EXAMINE TREES, RECOMMEND MEASURES TO ENHANCE THE HEALTH OF TREES, AND ATTEMPT TO REDUCE THE RISK OF LIVING NEAR TREES. THE CLIENT AND JURISDICTION MAY CHOOSE TO ACCEPT OR DISREGARD THE RECOMMENDATIONS OF THE ARBORIST, OR SEEK ADDITIONAL ADVICE.

ARBORISTS CANNOT DETECT EVERY CONDITION THAT COULD POSSIBLY LEAD TO THE STRUCTURAL FAILURE OF A TREE. TREES ARE LIVING ORGANISMS THAT FAIL IN WAYS WE DO NOT FULLY UNDERSTAND. CONDITIONS ARE OFTEN HIDDEN WITHIN TREES AND BELOW GROUND. ARBORISTS CANNOT GUARANTEE THAT A TREE WILL BE HEALTHY OR SAFE UNDER ALL CIRCUMSTANCES, OR FOR A SPECIFIED PERIOD OF TIME. LIKEWISE, REMEDIAL TREATMENTS, LIKE MEDICINE, CANNOT BE GUARANTEED.

TREES CAN BE MANAGED, BUT THEY CANNOT BE CONTROLLED. TO LIVE NEAR TREES IS TO ACCEPT SOME DEGREE OF RISK. THE ONLY WAY TO ELIMINATE ALL RISK ASSOCIATED WITH TREES IS TO ELIMINATE ALL TREES.

TREE REMOVAL NOTES:

1. SPOIL SITE PERMIT: WHEN THE MATERIAL AND DEBRIS RESULTING FROM THE CLEARING AND GRUBBING OPERATIONS ARE DISPOSED OF AT LOCATIONS OFF THE PROJECT, THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE OWNER OF THE PROPERTY UPON WHICH THE MATERIAL AND DEBRIS IS TO BE PLACED. CONTRACTOR SHALL ALSO OBTAIN ANY REQUIRED PERMITS TO DISPOSE OF WASTE MATERIALS AS REQUIRED BY APPROPRIATE JURISDICTIONS. UPON REQUEST BY THE OWNER, THE CONTRACTOR SHALL SUBMIT COPIES OF THE WRITTEN PERMISSION AND PERMITS.

2. CONTRACTOR SHALL ONLY REMOVE THOSE TREES DESIGNATED FOR REMOVAL AS PART OF THE UPPER TUALATIN PROJECT AND APPROVED BY THE CITY OF TUALATIN. ALL OTHER TREES SHALL BE PRESERVED.

3. ALL TREES, STUMPS, VEGETATION AND DEBRIS NOT DESIGNATED TO REMAIN SHALL BE CLEARED, REMOVED AND/OR GRUBBED.

4. ALL TIMBER SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.

5. DEBRIS RESULTING FROM THE CLEARING AND GRUBBING OPERATIONS SHALL BE DISPOSED OF AT SPOIL SITES IN A LEGAL MANNER OR CHIPPED AND USED ON-SITE FOR EROSION CONTROL, IN COMPLIANCE WITH APPLICABLE CODES AND ORDINANCES. STUMPS, BRANCHES, TRUNKS, ROOTS, ETC, SHALL NOT BE BURIED OR LEFT ON THE PROJECT SITE.

6. ALL STUMPS LOCATED WITHIN TREE ROOT PROTECTION ZONES OF TREES TO BE PRESERVED ARE TO BE GROUND TO 18 INCHES BELOW THE GROUND SURFACE.

7. THE WORK TO BE COMPLETED UNDER THIS PROJECT SHALL CONSIST OF TREE REMOVAL AND TREE TRIMMING AS LISTED.

- THE CONTRACTOR SHALL PROVIDE ADEQUATE CREW OF MEN, EQUIPMENT AND MATERIALS TO SAFELY AND EFFICIENTLY COMPLETE THE ASSIGNED WORK. EACH SUCH CREW SHALL INCLUDE AN INDIVIDUAL WHO SHALL BE DESIGNATED AS THE CREW SUPERVISOR AND WHO SHALL BE RESPONSIBLE FOR THE CREW'S ACTIVITIES AND WHO SHALL RECEIVE INSTRUCTION FROM THE OWNER OR THE OWNER'S REPRESENTATIVE AND DIRECT THE CREW TO ACCOMPLISH SUCH WORK.
- WHENEVER A TREE, WHICH IS NOT SCHEDULED TO BE REMOVED, MUST BE TRIMMED OR PRUNED, THE CONTRACTOR SHALL INSURE THAT SUCH TRIMMING AND PRUNING IS CARRIED OUT UNDER THE DIRECT SUPERVISION OF A LICENSED ARBORIST. ALL PRUNING AND TRIMMING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF ANSI A 300 'STANDARD PRACTICES FOR TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE'.
- THE CONTRACTOR SHALL BE REQUIRED TO CUT TREES TO A HEIGHT OF APPROXIMATELY 12' THE STUMPS AND ROOTS SHALL BE GROUND DOWN A MINIMUM OF TWELVE (12) INCHES BELOW NORMAL GROUND LEVEL.
- THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST GOVERNMENTAL SAFETY REGULATIONS. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ANSI Z133.1 'PRUNING, TRIMMING, REPAIRING, MAINTAINING AND REMOVING TREES AND CUTTING BRUSH-SAFETY REQUIREMENTS' WITH SPECIAL EMPHASIS GIVEN TO THE REQUIREMENT THAT ONLY QUALIFIED LINE-CLEARANCE TREE TRIMMERS BE ASSIGNED TO WORK WHERE A POTENTIAL ELECTRICAL HAZARD EXISTS.
- THE CONTRACTOR SHALL MAKE ALL THE NECESSARY ARRANGEMENTS WITH ANY UTILITY THAT MUST BE PROTECTED OR RELOCATED IN ORDER TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF THE OPERATING CONDITION OF ALL ACTIVE UTILITIES WITHIN THE AREA OF CONSTRUCTION AND HE SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES.
- ANY MATERIAL RESULTING FROM THE TRIMMING OR REMOVAL OF ANY TREES SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR.
- HAZARDOUS TREES-REPORTING – ANY PERSON ENGAGED IN TRIMMING OR PRUNING WHO BECOMES AWARE OF A TREE OF DOUBTFUL STRENGTH, THAT COULD BE DANGEROUS TO PERSONS AND PROPERTY, SHALL REPORT SUCH TREE(S) TO THE OWNER OR THE OWNERS REPRESENTATIVE. SUCH TREES SHALL INCLUDE THOSE THAT ARE OVER MATURE, DISEASED, OR SHOWING SIGNS OF DECAY OR OTHER STRUCTURAL WEAKNESS.
- DAMAGES-ANY DAMAGE CAUSED BY THE CONTRACTOR, INCLUDING, BUT NOT LIMITED TO, BROKEN SIDEWALK, CURB, RUTTED LAWN, BROKEN WATER SHUT-OFFS, WIRE DAMAGE, BUILDING DAMAGE, STREET DAMAGE, ETC., WILL BE REPAIRED OR REPLACED IN A TIMELY MANNER, TO THE OWNER'S SATISFACTION, AND ALL COSTS PAID BY THE CONTRACTOR.
- ANY BRUSH CLEARING REQUIRED WITHIN THE TREE PROTECTION ZONE SHALL BE ACCOMPLISHED WITH HAND OPERATED EQUIPMENT.
- TREES TO BE REMOVED SHALL BE FELLED SO AS TO FALL AWAY FROM TREE ROOT PROTECTION ZONES AND TO AVOID PULLING AND BREAKING OF ROOTS TO REMAIN.
- ALL DOWNED BRUSH AND TREES SHALL BE REMOVED FROM THE TREE PROTECTION ZONE EITHER BY HAND OR WITH EQUIPMENT SITTING OUTSIDE THE TREE ROOT PROTECTION ZONE. EXTRACTION SHALL OCCUR BY LIFTING THE MATERIAL OUT, NOT BY SKIDDING IT ACROSS THE GROUND.
- IF TEMPORARY HAUL OR ACCESS ROADS MUST PASS OVER THE ROOT AREA OF TREES TO BE RETAINED A ROADBED OF 6 INCHES OF MULCH OR GRAVEL SHALL BE CREATED TO PROTECT THE SOIL. THE ROADBED MATERIAL SHALL BE REPLENISHED AS NECESSARY TO MAINTAIN A 6-INCH DEPTH.
- PRUNING TREES SHALL BE PRUNED PRIOR TO THE START OF CONSTRUCTION. TREES SHALL BE CROWN CLEANED TO REMOVE THE DEADWOOD 2 INCHES IN DIAMETER AND OVER. TREES SHALL BE CROWN THINNED BY 10-20%. CROWNS MAY BE RAISED BY REMOVING BOTTOM BRANCHES AS NECESSARY UP TO 14 FEET HIGH TO GIVE CLEARANCE FOR ANY CONSTRUCTION TRAFFIC, ACTIVITIES, ETC. ALL WORK TO BE DONE IN ACCORDANCE WITH ANSI A300 PRUNING STANDARDS. REMOVE ANY LIMBS OF DOUBTFUL STRENGTH THAT COULD BE DANGEROUS TO PERSONS AND PROPERTY.



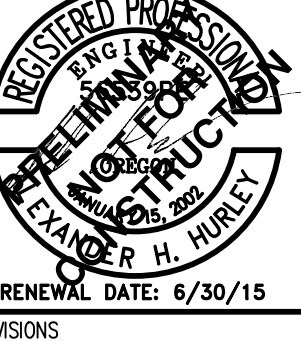
AKS ENGINEERING AND FORESTRY, LLC
 12965 SW HERMAN RD
 SUITE 100
 TUALATIN, OR 97062
 PHONE: 503.563.6151
 FAX: 503.563.6152
 WWW.AKS-ENG.COM

ENGINEERING • PLANNING • SURVEYING
 FORESTRY • LANDSCAPE ARCHITECTURE

HEATHER RIDGE
 SUBDIVISION
 TUALATIN
 OREGON
 WASHINGTON COUNTY ASSESSOR'S MAP 2S 1 34AC
 TAX LOT 200

DESIGNED BY: MTS
 DRAWN BY: MTS/SDL
 CHECKED BY: AHH
 SCALE: AS NOTED

DATE: 09/17/2014



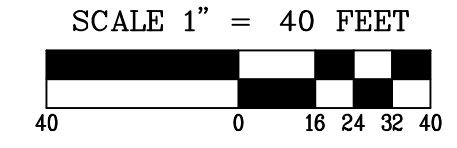
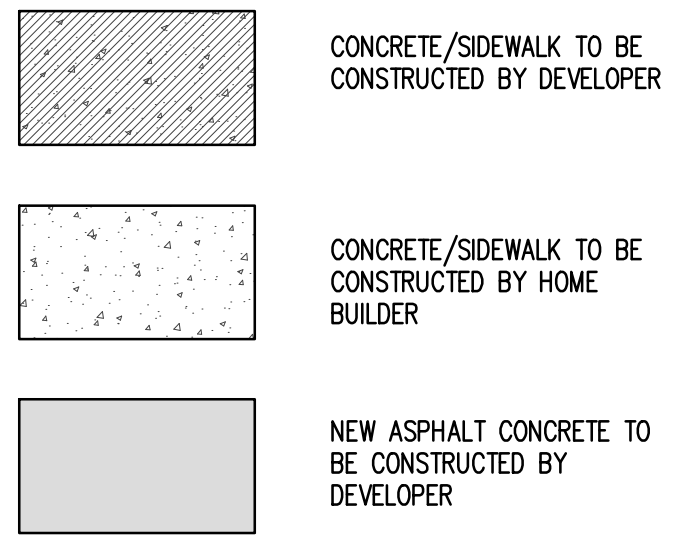
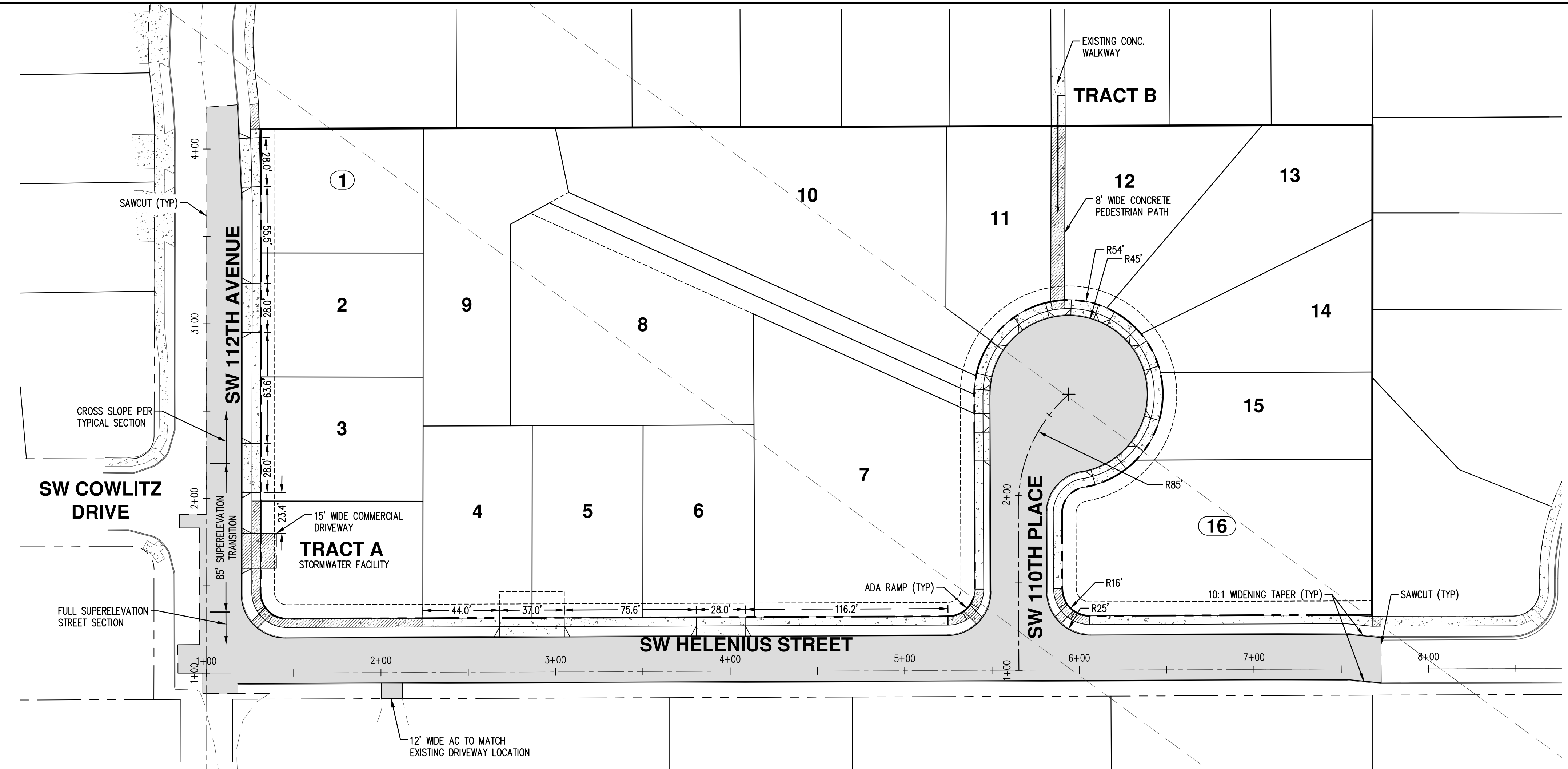
RENEWAL DATE: 6/30/15

JOB NUMBER
 3895

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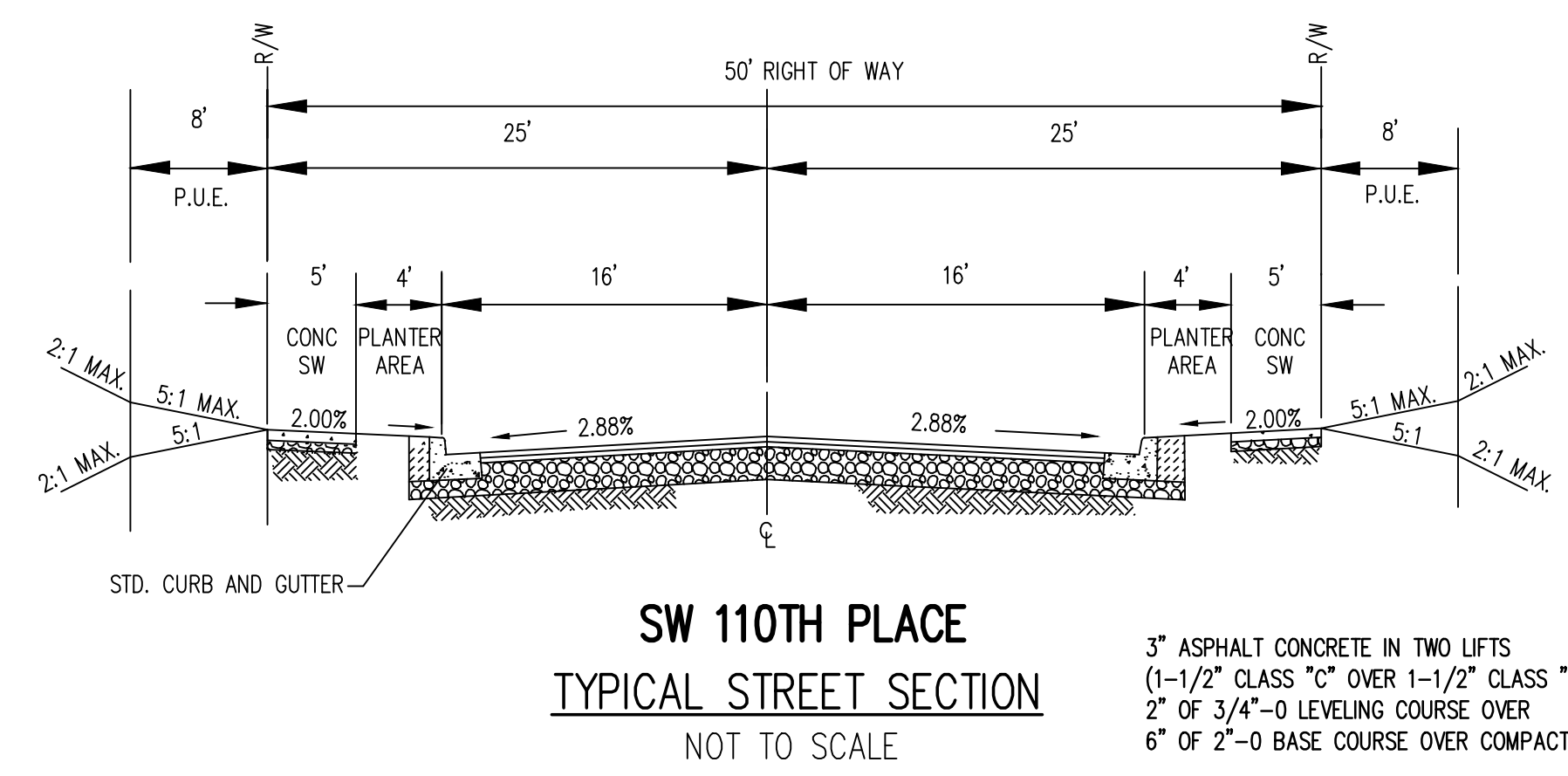
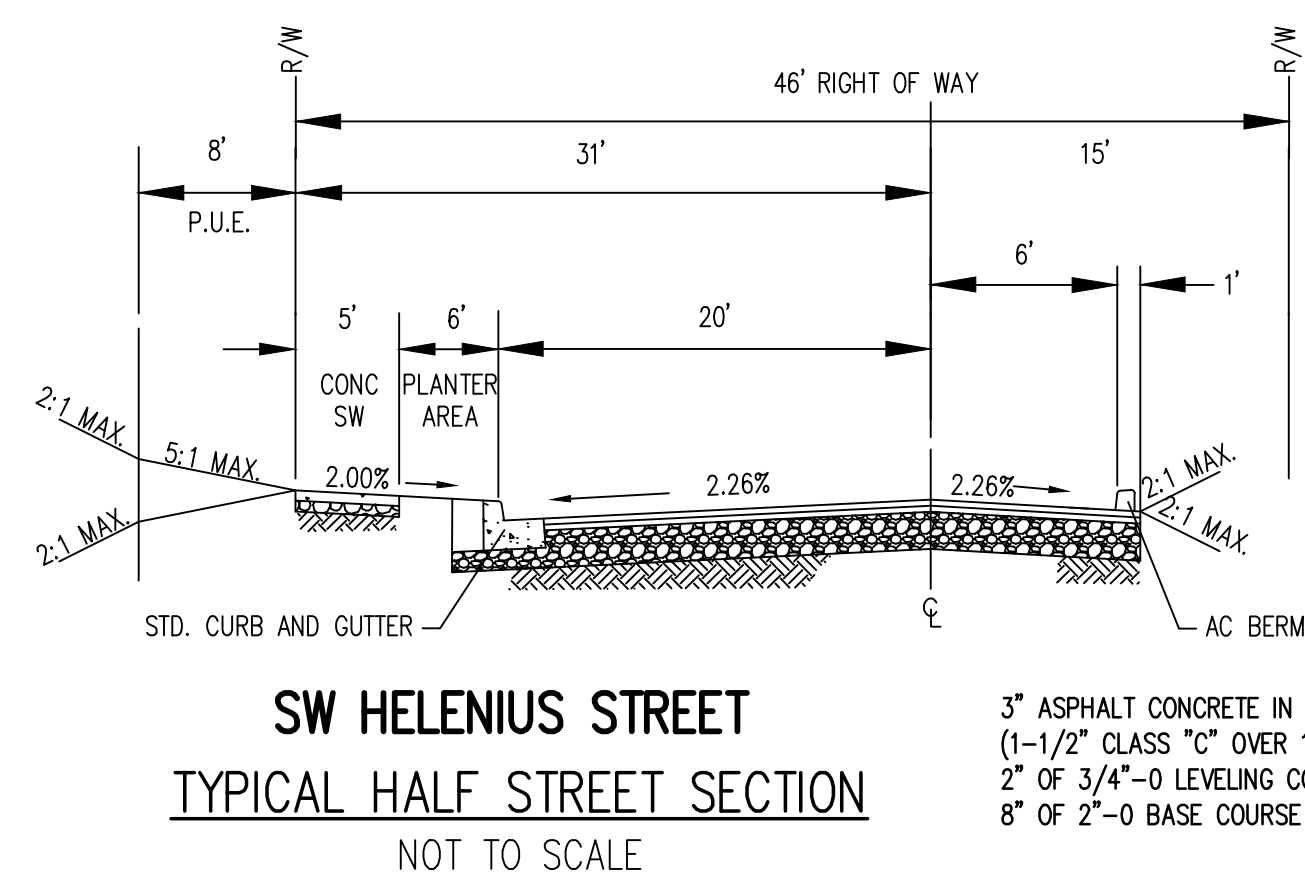
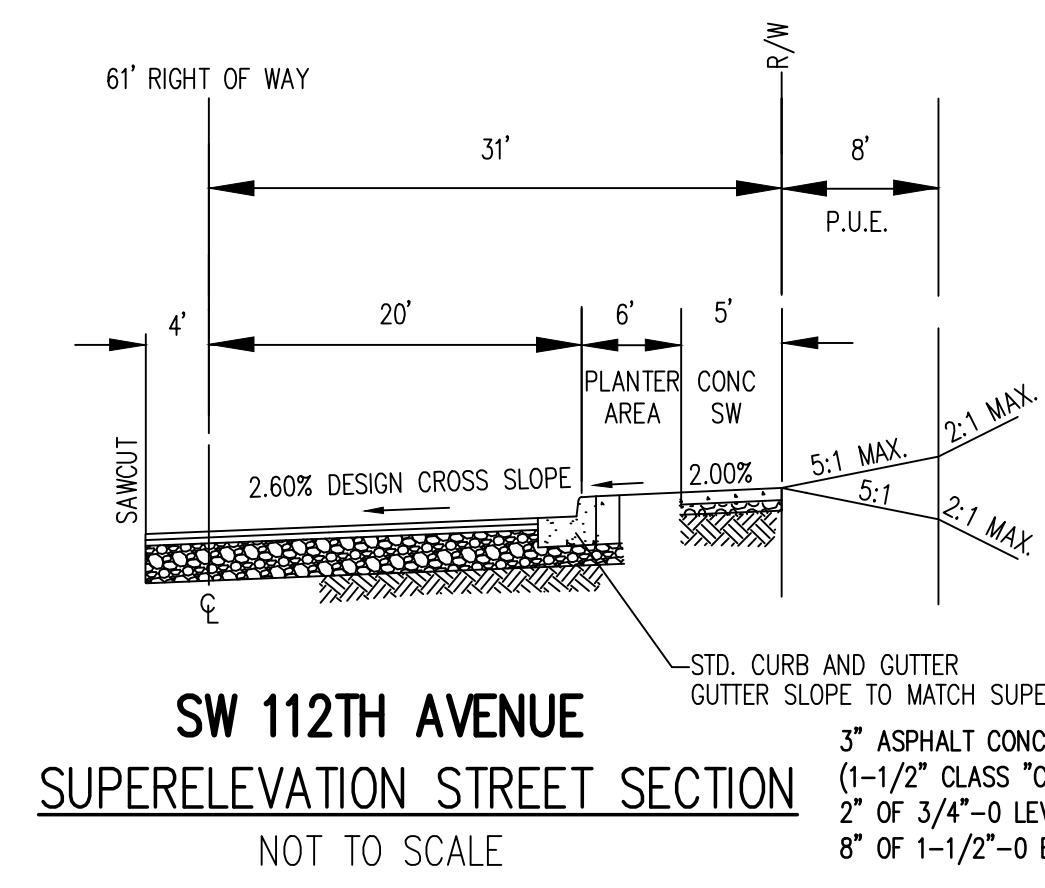
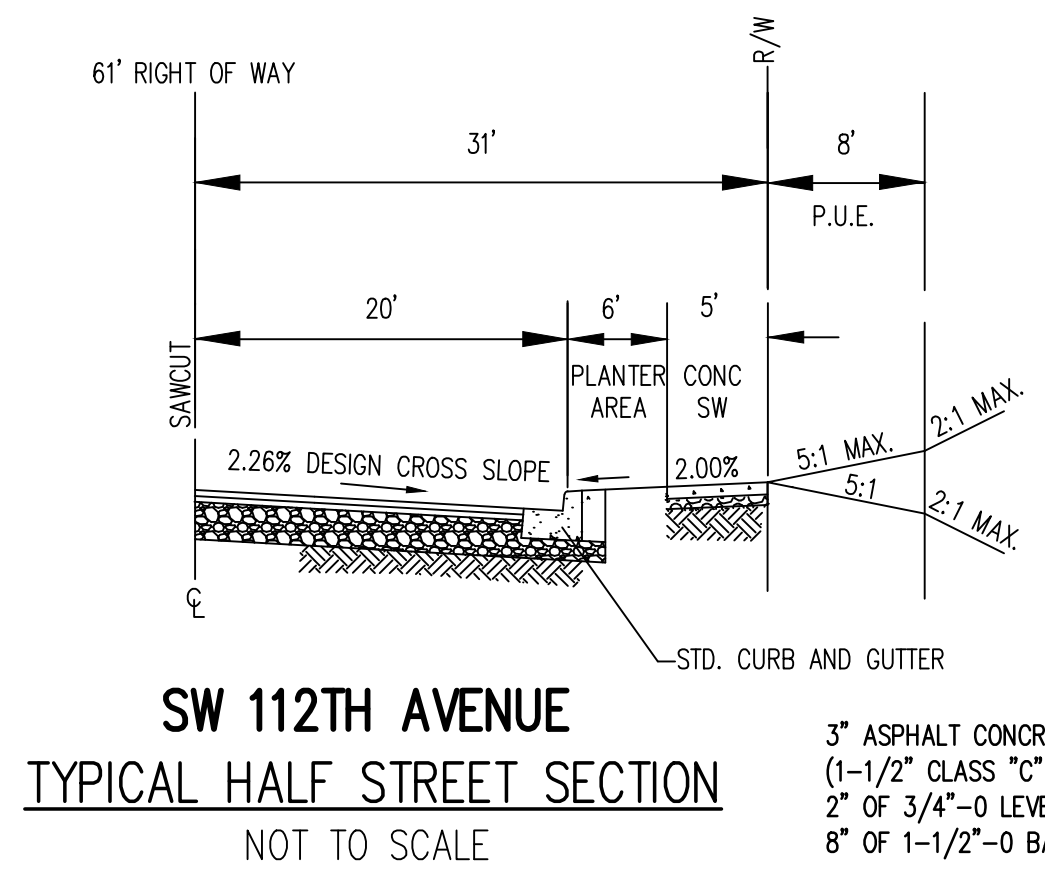


BRUCE R. BALDWIN
 CERTIFICATE NUMBER: 79-4664
 EXPIRATION DATE: 12/31/14



NOTE:

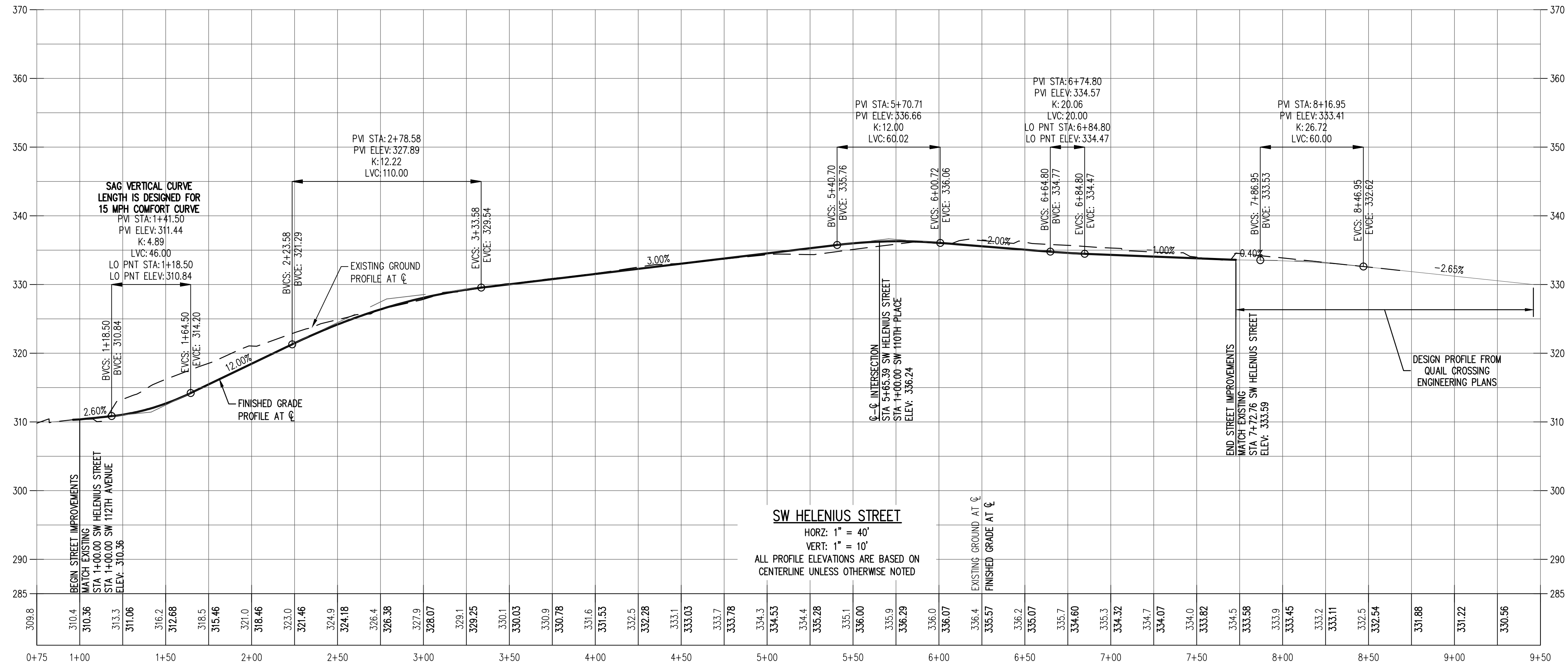
1. DRIVEWAY SPACING AND WIDTHS AS SHOWN HAVE BEEN PRE-APPROVED BY CITY OF TUALATIN STAFF.
2. FRONTAGE FENCES PER SECTION 34.330.1 OF THE CITY OF TUALATIN DEVELOPMENT CODE ARE NOT PROVIDED PER CORRESPONDENCE WITH CITY OF TUALATIN STAFF.



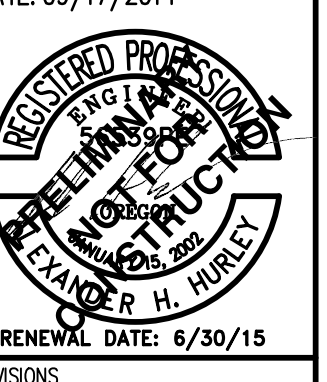
3" ASPHALT CONCRETE IN TWO LIFTS
 (1-1/2" CLASS "C" OVER 1-1/2" CLASS "B")
 2" OF 3/4"-0 LEVELING COURSE OVER
 8" OF 1-1/2"-0 BASE COURSE OVER COMPACTED SUBGRADE

3" ASPHALT CONCRETE IN TWO LIFTS
 (1-1/2" CLASS "C" OVER 1-1/2" CLASS "B")
 2" OF 3/4"-0 LEVELING COURSE OVER
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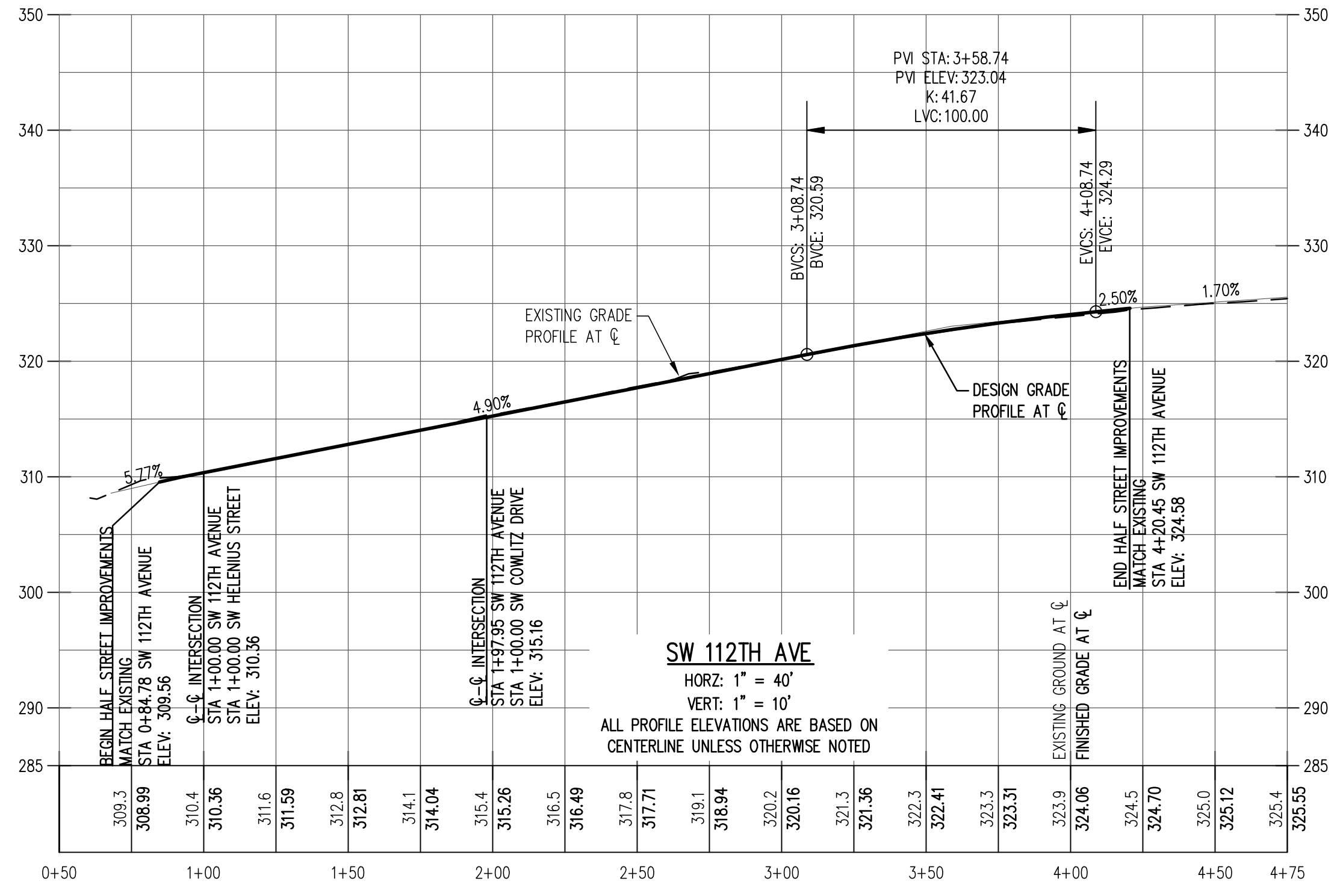
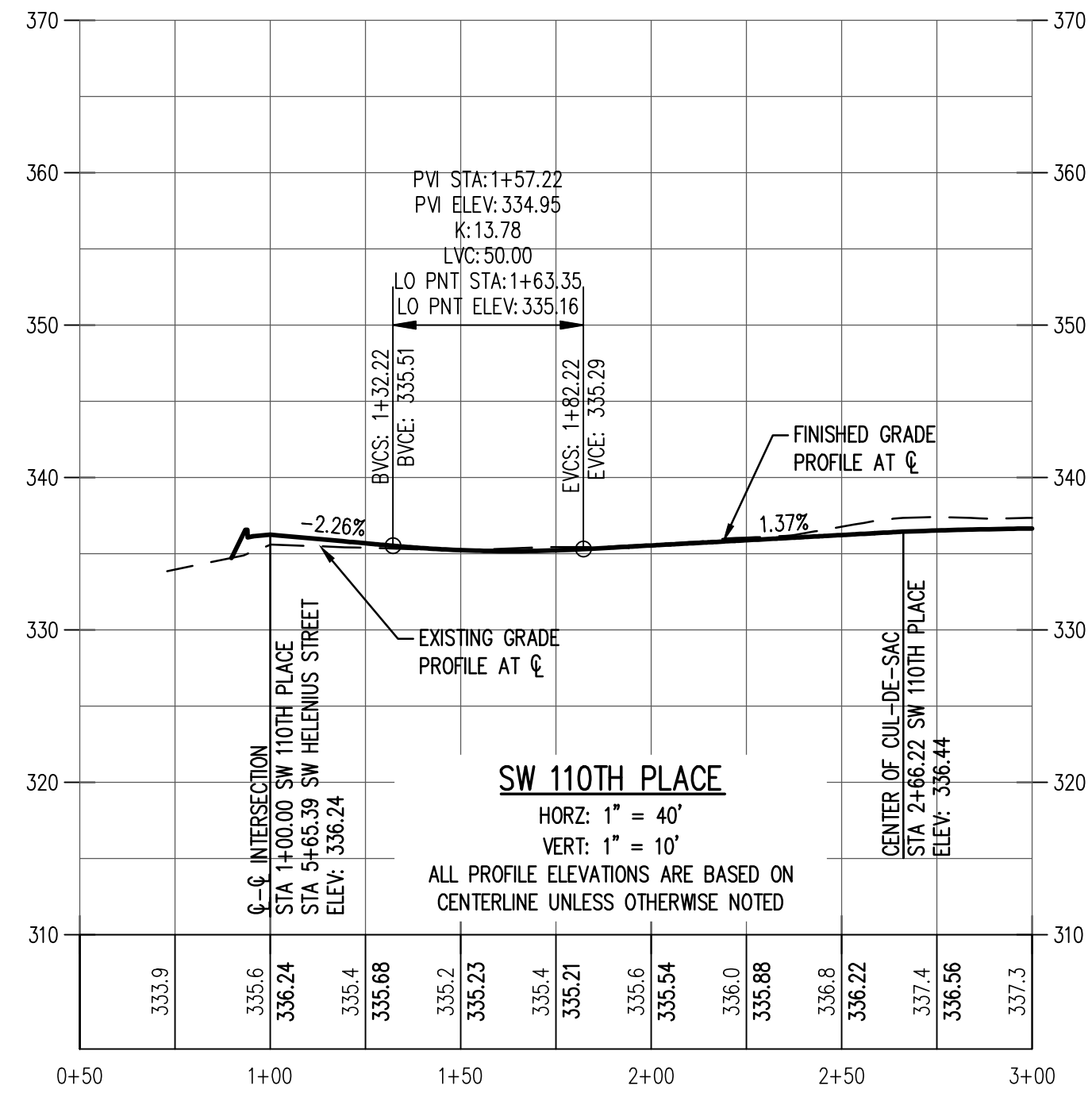


DESIGNED BY: MTS
 DRAWN BY: MTS/SDL
 CHECKED BY: AHH
 SCALE: AS NOTED

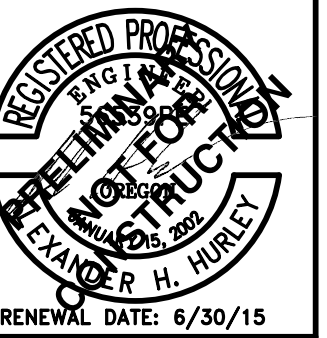


REVISIONS

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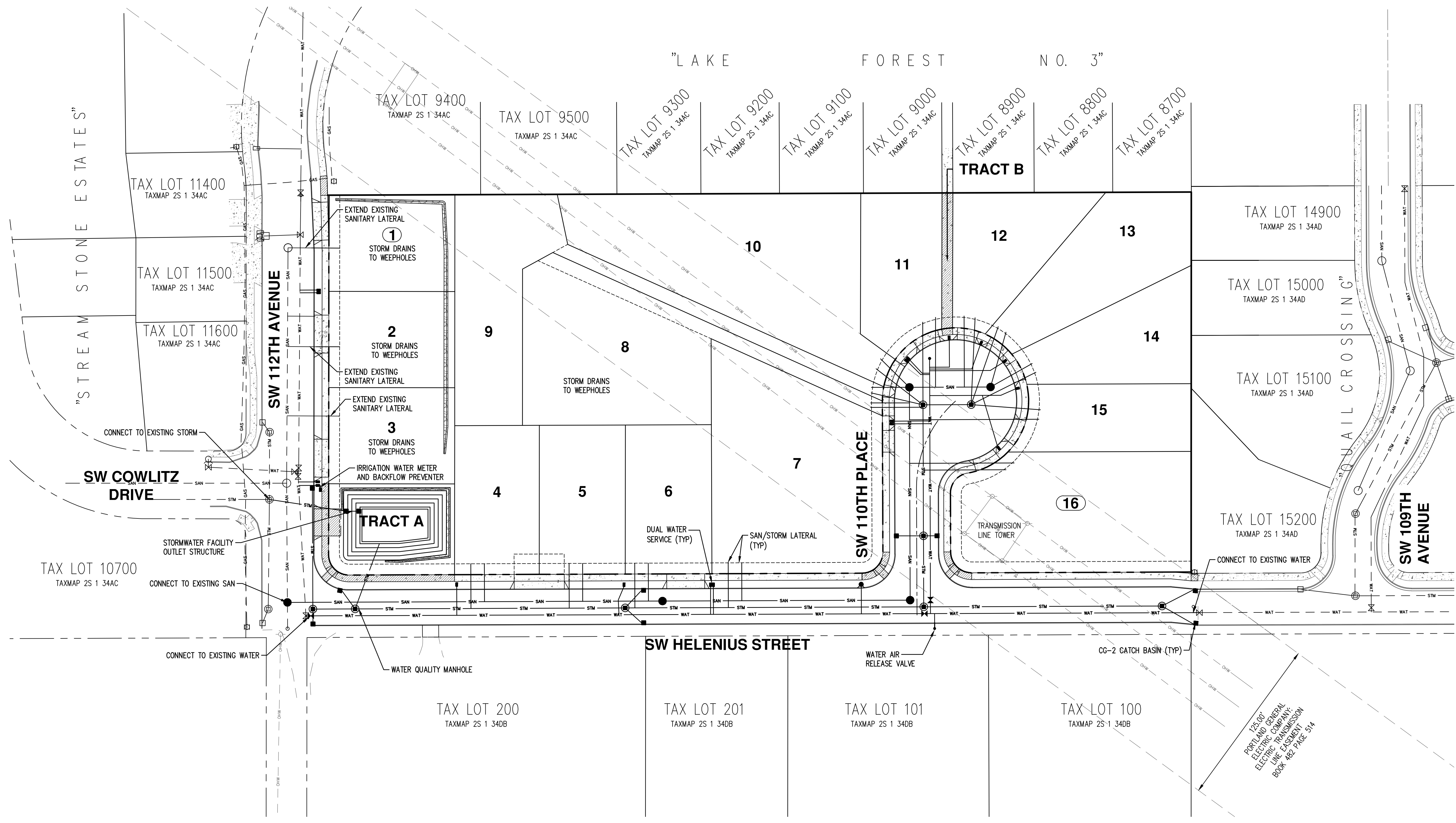


DESIGNED BY: MTS
 DRAWN BY: MTS/SDL
 CHECKED BY: AHH
 SCALE: AS NOTED
 DATE: 09/17/2014

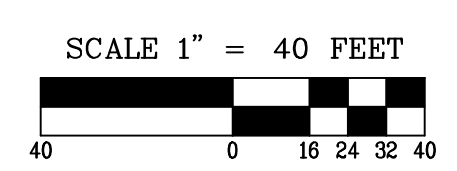


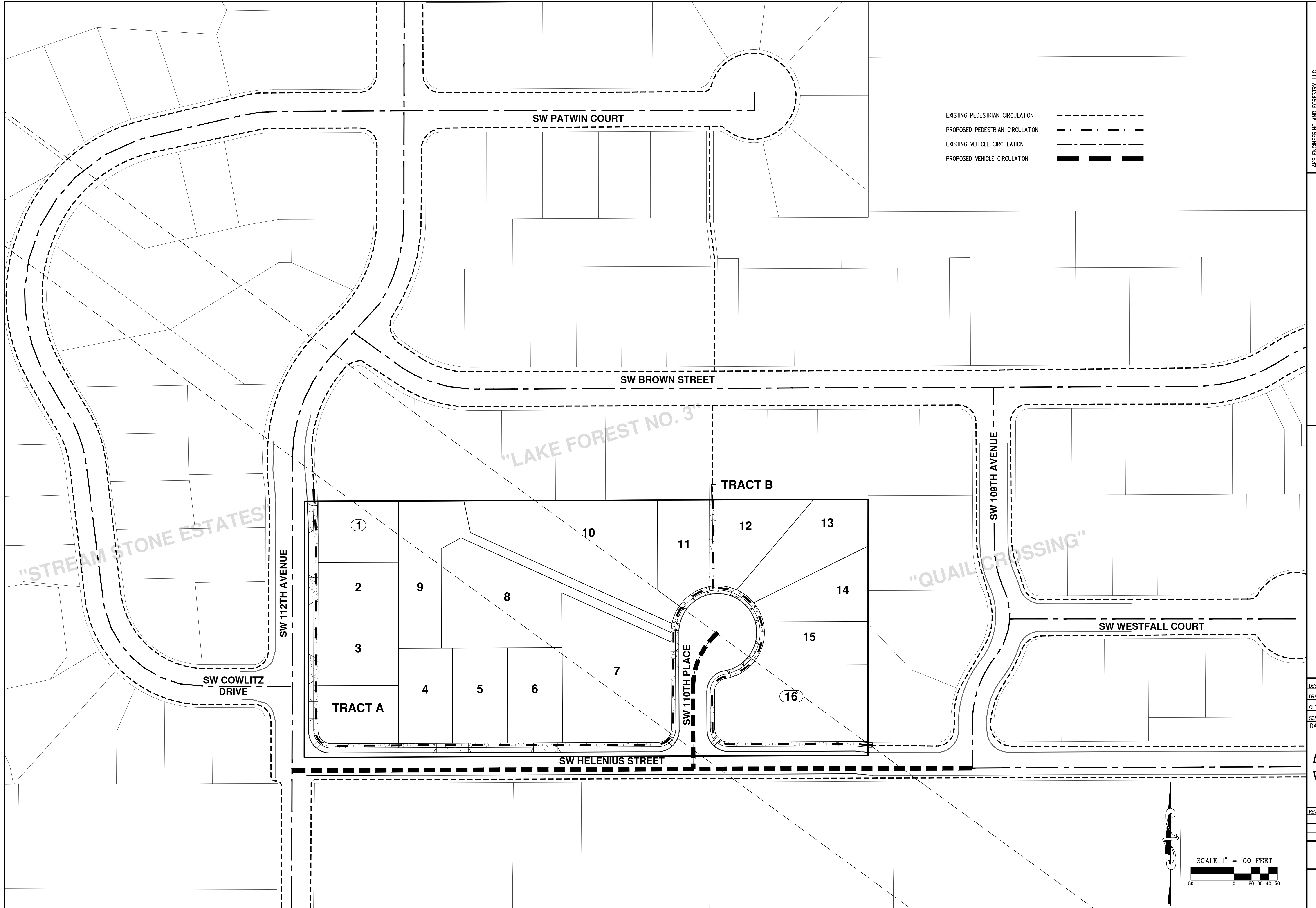
REVISIONS

JOB NUMBER
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NOTES:
 1. LOTS 1, 2, AND 3 SHALL DRAIN TO CURB WEEP HOLES





AKS
 AKS ENGINEERING AND FORESTRY, LLC
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**HEATHER RIDGE
 SUBDIVISION**
 TUALATIN OREGON
 WASHINGTON COUNTY ASSESSOR'S MAP 2S 1.34AC
 TAX LOT 200

**PRELIMINARY
 CIRCULATION PLAN**

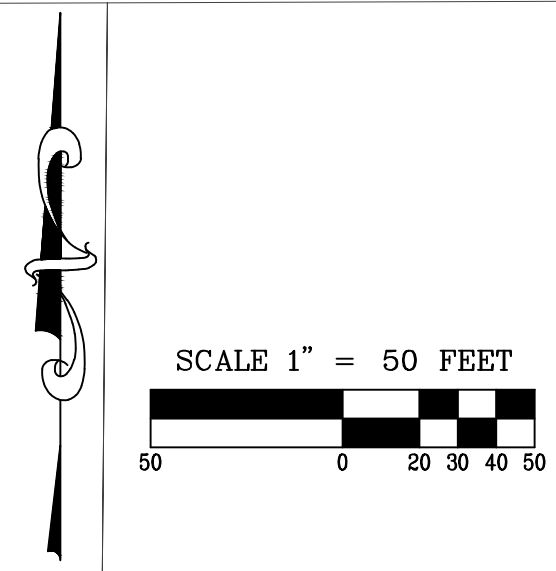
DESIGNED BY: MTS
 DRAWN BY: MTS/SDL
 CHECKED BY: AHH
 SCALE: AS NOTED
 DATE: 09/17/2014

REGISTERED PROFESSIONAL
 ENGINEER
 IN THE STATE OF OREGON
 EX-10000
 R. H. HURLEY
 RENEWAL DATE: 6/30/15

REVISIONS

JOB NUMBER
3895

SHEET
11



MEMORANDUM

Date: October 3, 2014
To: Tony Doran, Engineering Associate, City of Tualatin
From: Jackie Sue Humphreys, Clean Water Services (the District)
Subject: Heather Ridge Subdivision, SB-14-02, 2S134AC00200

Please include the following comments when writing your conditions of approval:

PRIOR TO ANY WORK ON THE SITE AND PLAT RECORDING

A Clean Water Services (the District) Storm Water Connection Permit Authorization must be obtained prior to plat approval and recordation. Application for the District's Permit Authorization must be in accordance with the requirements of the Design and Construction Standards, Resolution and Order No. 07-20, (or current R&O in effect at time of Engineering plan submittal), and is to include:

- a. Detailed plans prepared in accordance with Chapter 2, Section 2.04.2.b-1.
- b. Detailed grading and erosion control plan. An Erosion Control Permit will be required. Area of Disturbance must be clearly identified on submitted construction plans. If site area and any offsite improvements required for this development exceed one-acre of disturbance, project will require a 1200-CN Erosion Control Permit. If site area and any offsite improvements required for this development exceed five-acres of disturbance, project will require a 1200-C Erosion Control Permit.
- c. Detailed plans showing each lot within the development having direct access by gravity to public storm and sanitary sewer.
- d. Provisions for water quality in accordance with the requirements of the above named design standards. Water Quality is required for all new development and redevelopment areas per R&O 07-20, Section 4.05.5, Table 4-1. Access shall be provided for maintenance of facility per R&O 07-20, Section 4.02.4.

- e. If use of an existing offsite or regional Water Quality Facility is proposed, it must be clearly identified on plans, showing its location, condition, capacity to treat this site and, any additional improvements and/or upgrades that may be needed to utilize that facility.
- f. If private lot LIDA systems proposed, must comply with the current CWS Design and Construction Standards. A private maintenance agreement, for the proposed private lot LIDA systems, needs to be provided to the City for review and acceptance.
- g. Show all existing and proposed easements on plans. Any required storm sewer, sanitary sewer, and water quality related easements must be granted to the City.
- h. Any proposed offsite construction activities will require an update or amendment to the current Service Provider Letter for this project.

CONCLUSION

This Land Use Review does not constitute the District's approval of storm or sanitary sewer compliance to the NPDES permit held by the District. The District, prior to issuance of any connection permits, must approve final construction plans and drainage calculations.



October 2, 2014

Tony Doran – Engineering Associate
City of Tualatin
18800 SW Martinazzi Ave
Tualatin, OR 97062

Re: SB-14-02, Heather Ridge

Dear Tony,

Thank you for the opportunity to review the proposed site plan surrounding the above named development project. Tualatin Valley Fire & Rescue endorses this proposal predicated on the following criteria and conditions of approval:

1. **FIRE APPARATUS ACCESS ROAD DISTANCE FROM BUILDING AND TURNAROUNDS:** Access roads shall be within 150 feet of all portions of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building or facility. An approved turnaround is required if the remaining distance to an approved intersecting roadway, as measured along the fire apparatus access road, is greater than 150 feet. (OFC 503.1.1)
2. **SINGLE FAMILY DWELLINGS - REQUIRED FIRE FLOW:** The minimum available fire flow for one and two-family dwellings served by a municipal water supply shall be 1,000 gallons per minute. If the structure(s) is (are) 3,600 square feet or larger, the required fire flow shall be determined according to OFC Appendix B. (OFC B105.2)
3. **FIRE FLOW WATER AVAILABILITY:** Applicants shall provide documentation of a fire hydrant flow test or flow test modeling of water availability from the local water purveyor if the project includes a new structure or increase in the floor area of an existing structure. Tests shall be conducted from a fire hydrant within 600 ft. of the proposed residential development. Flow tests will be accepted if they were performed within 5 years as long as no adverse modifications have been made to the supply system. (OFC Appendix B)
4. **FIRE HYDRANTS – ONE- AND TWO-FAMILY DWELLINGS:** Where a portion of a structure is more than 600 feet from a hydrant on a fire apparatus access road, as measured in an approved route around the exterior of the structure(s), on-site fire hydrants and mains shall be provided. Public Fire Hydrant spacing may also be subject to City of Tualatin Engineering Standards. (OFC 507.5.1)

If you have questions or need further clarification, please feel free to contact me at (503) 649-8577.

Sincerely,

Ty Darby
Deputy Fire Marshal

CITY OF TUALATIN
RECEIVED
OCT 08 2014
ENGINEERING &
BUILDING DEPARTMENT

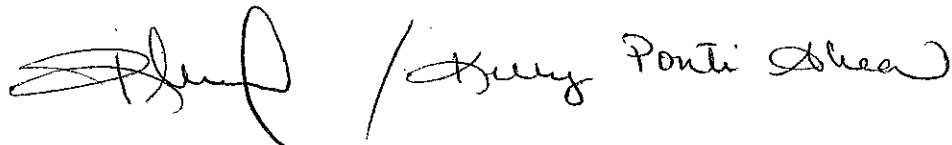
October 6, 2014

TO: TUALATIN CITY ENGINEER, TONY DORAN; ENGINEERING ASSOCIATE,

In response to the notice of application submittal for SB 14-02, Heather Ridge, We hereby submit comment. [REDACTED] We have lived in this home for the past Eight and a half years. [REDACTED]

[REDACTED] and this is where Helenius Street dead ends directly in front of our home. This dead end is the spot where the proposed plans are submitted to continue the street and build the new subdivision behind our home. Helenius Street is a straight away which has no other forward facing homes within the 2 blocks before us. All other homes have a fence and backyard backing up onto the Helenius Street side. Because of this fact, there is a lot of speeding down our street (Helenius), but cars usually slow down when they reach our home due to our dead end where they turn on 109th Terrace to go into the neighborhood. There are no stop signs or speed bumps on the Helenius street strip. The biggest problem with this proposed subdivision is the proposed street and its direct straight route. This straight away will appeal to hundreds of cars from the neighborhood to no longer take the other routes through the neighborhood streets but rather speed directly through Helenius street to get to their homes quicker. Whether they live here in the new subdivision or for those people living on Cowlitz and every home in between Helenius and the end of Marilyn St. and even further down the hill, this direct route will appeal to everyone looking to speed up their travel through the neighborhood. We think that instead, the continuation of Helenius Street should be designed differently and possibly for it to curve through the new proposed subdivision in order to force speeders to slow down while also making Helenius street less appealing as a speed strip. By driving through the new neighborhood instead of using our street as the "neighborhood direct highway," it would alleviate these "would be speeders," and the higher use of this route would be less appealing. Otherwise, the only other option we can see would be to not continue the street through at all. You see, of all the homes in the whole neighborhood, our home will be affected by this street and subdivision plan the most and only in an adverse way. Not only will the safety of our three children be at risk with a street that promotes more traffic and higher speed, it will increase vehicle noise at my front doorstep. This subdivision and street plan will also diminish the value of our home significantly. Who would want to buy a home facing a main straight away? We would not, and we did not. Just when the market is finally turning around, this new plan will bury us back down again. It is completely unfair to our family, and we can't see how it is Legal. Our home faces Ron's farm directly in front of us. One of the main reasons we purchased this home was the fact that we could enjoy some country atmosphere and nature but still be in the city limits. The idea that our country view will become a view of neighborhood cars, or that the sounds of the nesting hawks in the trees adjoining the field in front of our home, will be replaced by the sounds of neighborhood cars all day and night is unimaginable. We will also surely miss the deer who year after year like clockwork bring their fawn and those fawn turn into Doe and bring their fawn to frequent the blackberry bushes that will be plowed down for the new street. Please try to understand our dilemma. We hope you can figure out a solution to these issues.

Best Regards, Mario Ponti and Kelly Ponti Shea (Helenius Street homeowners)



Second copy - we have already faxed you also.