

# Preliminary Drainage Report Skyline Partition

Address: 6123 Skyline, West Linn, Oregon

Date: November 19, 2018

#### NARRATIVE:

This is a vacant property that is proposed to be divided into 3-lots by partition. This tract that slopes easterly away from Skyline Drive. There isn't a storm sewer system in Skyline Drive and no access to a public storm to the North. The USDA Web Soil Survey reports the soils as being 13B Cascade silt loam and 92F Xerochrepts and Haploxerools. Cascade has is a hydrologic group C and Xerochrepts is hydrologic group B.

An infiltration test was completed on the adjacent property (6175 Skyline Drive) using the criteria of the City of Portland in August 2018. No seeps or perched ground water was found and after three one hour tests the observed rate was 2.5 inches per hour. It is recommended that a safety factor of 2 be applied for design purposes. The purpose of this report is to demonstrate feasibility.

#### ASSUMPTION:

Assume a maximum of 4000 sf of impervious area per new lot with each property having a separate infiltration system.

5 SC- 740 chambers with 24 inches of additional drain rock below the chambers for a total depth of 5.5 feet.

The overall size of the facility is 10.45 feet X 25.75 feet = 269.1SF

#### REFERENCE:

The King County Department of Public Works, Hydrographic Program, ver 4.21B and using a 10year event of 3.2 inches/hour.

#### **CALCULATIONS:**

depth	rock	SC unit	total	area
2.0	215.3	0.00	215.3	269.1
2.5	231.5	33.8	265.3	269.1
3.0	247.6	106.6	354.2	269.1
3.5	263.7	176.2	439.9	269.1
4.0	279.8	241.0	520.8	269.1
4.5	296.0	298.3	594.3	269.1
5.0	312.1	340.7	652.8	269.1
5.5	328.2	374.5	702.7	269.1

#### STORM OPTIONS:

1 - S.C.S. TYPE -1A

2- 7-DAY DESIGN STPRM

3 - STORM DATA FILE

SPECIFY STORM OPTION:

1

S.C.S. TYPE 1-A RAINFALL DISTRIBUTION

ENTER:

FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)

10,24.3.2

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1

0.0,86,0.092,98,5

DATA PRINT OUT:

AREA(ACRES)

**PERVIOUS** 

**IMPERVIOUS** 

TC(MINUTES)

CN

A CN

.1

.0 86.0 T-PEAK(HRS) .1 98.0

5.0

PEAK-Q(CFS)

7.67

VOL(CU-FT) 1224

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:

C:rd

ENTER OPTION

RESERVOIR ROUTING INFLOW/OUTFLOW ROUTINE

SPECIFY [d:][path]filename[.ext] OF ROUTINE DATA)

C:vdata

DISPLAY ROUTING DATA (Y or N)

#### ROUTING DATA:

STAGE (FT)	DISCHARGE (CFS)	STORAGE (CU-FT)	PERN-AREA(SQ-FT)
.00	.00	.0	.0
2.00	.00	215.3	269.1
2.50	.00	265.3	269.1
3.00	.00	354.2	269.1
3.50	.00	439.9	269.1
4.00	.00	520.8	269.1
4.50	.00	594.3	269.1
5.00	.00	652.8	269.1
5.50	.00	702.7	269.1

AVERAGE PERM-RATE: 48.0 MINUTES/INCH

SATURATED PERM-RATE:

48.0 MINUTES/INCH

GROUND STORAGE BEFORE SATURATION:

.00 CU-FT/SQ-FT

ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:

C:rd

INFLOW/OUTFLOW ANALYSIS:

PEAK-INFLOW(CFS) PEAK-OUTFLOW(CFS) OUTFLOW-VOL (CU-FT)

.09

.00

INITIAL-STAGE (FT) TIME-OF-PEAK(HRS)

PEAK-STAGE-ELEV(FT)

.00

23.83

4.99

PEAK STORAGE:

650 CU-FT

INFILTRATED VOLUME:

1253 CU-FT

ENTER [d] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH

#### CONCLUSION:

Calculations show that more than 4000 square feet of impervious area can infiltrate into the proposed facility exceeding the 25-year event, using a safety factor of 2. The infiltration system needs to be at least 10-feet from foundations and 5-feet from property lines. With the safety factor it is not anticipated that there will be any overflow condition, but if they did occur there is a significant distance from the facility to any structures.

Prepared by:

Bruce D. Goldson, PE

Theta,LLC

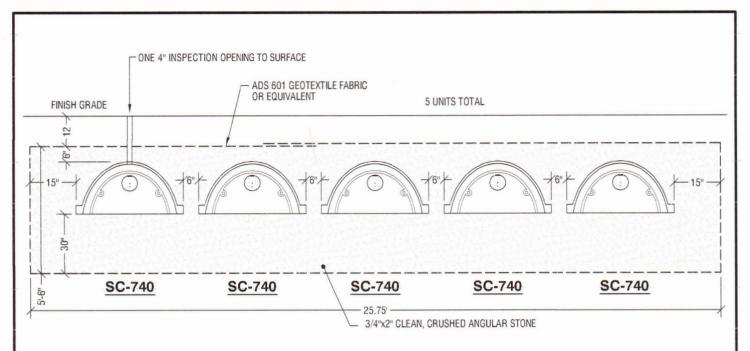
PO Box 1345

Lake Oswego, Oregon 97035

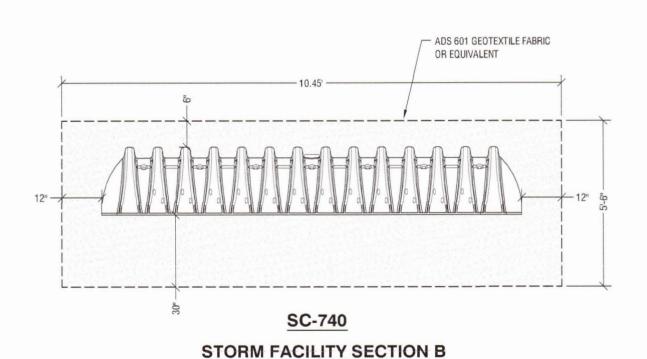
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EXPIRES: 06/30/2019

SIGNATURE DATE:



#### STORM FACILITY SECTION A



### 2014-129U November, 2018

#### STORM DRAINAGE FEASIBILITY

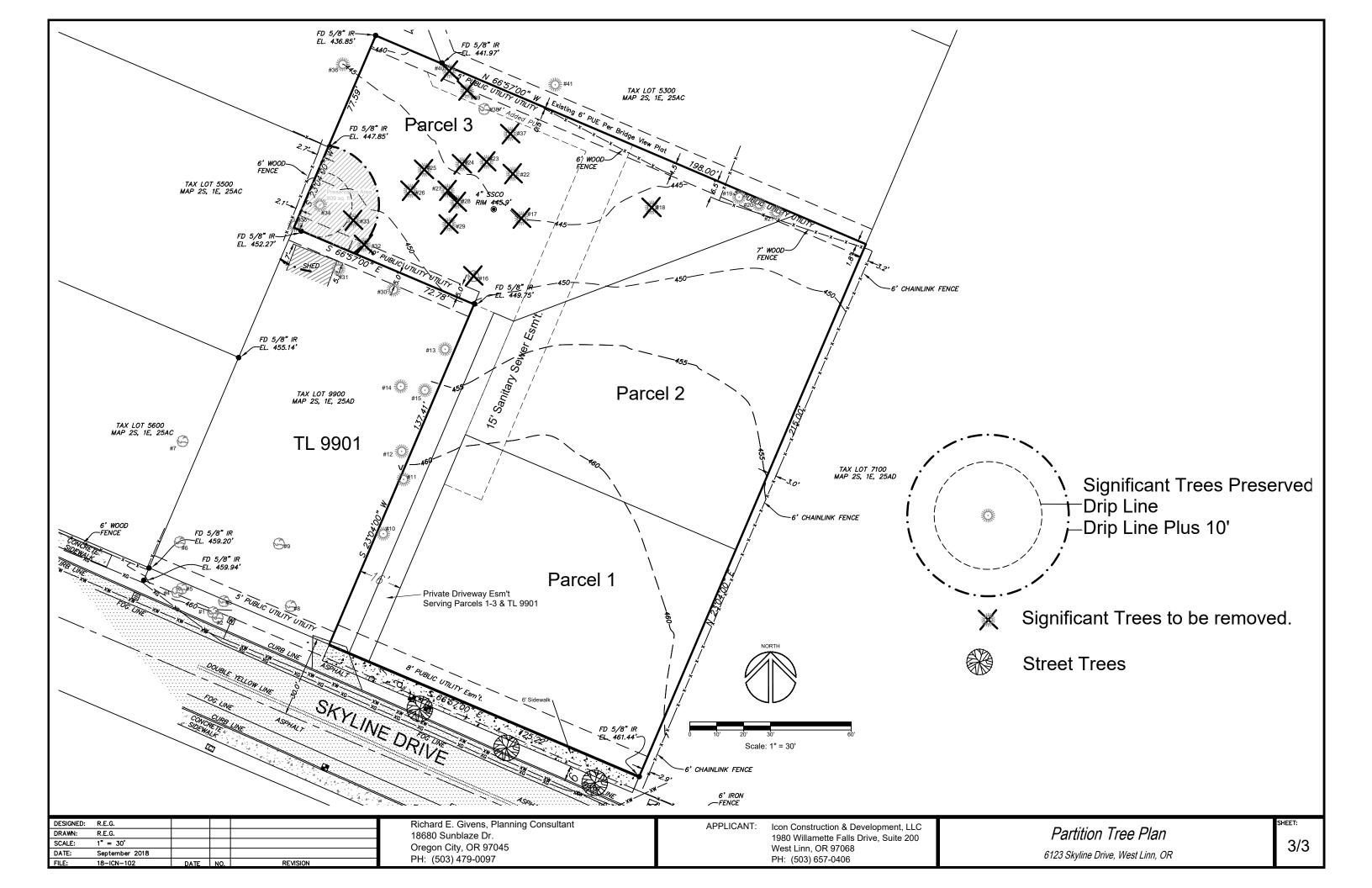
Theta,llc

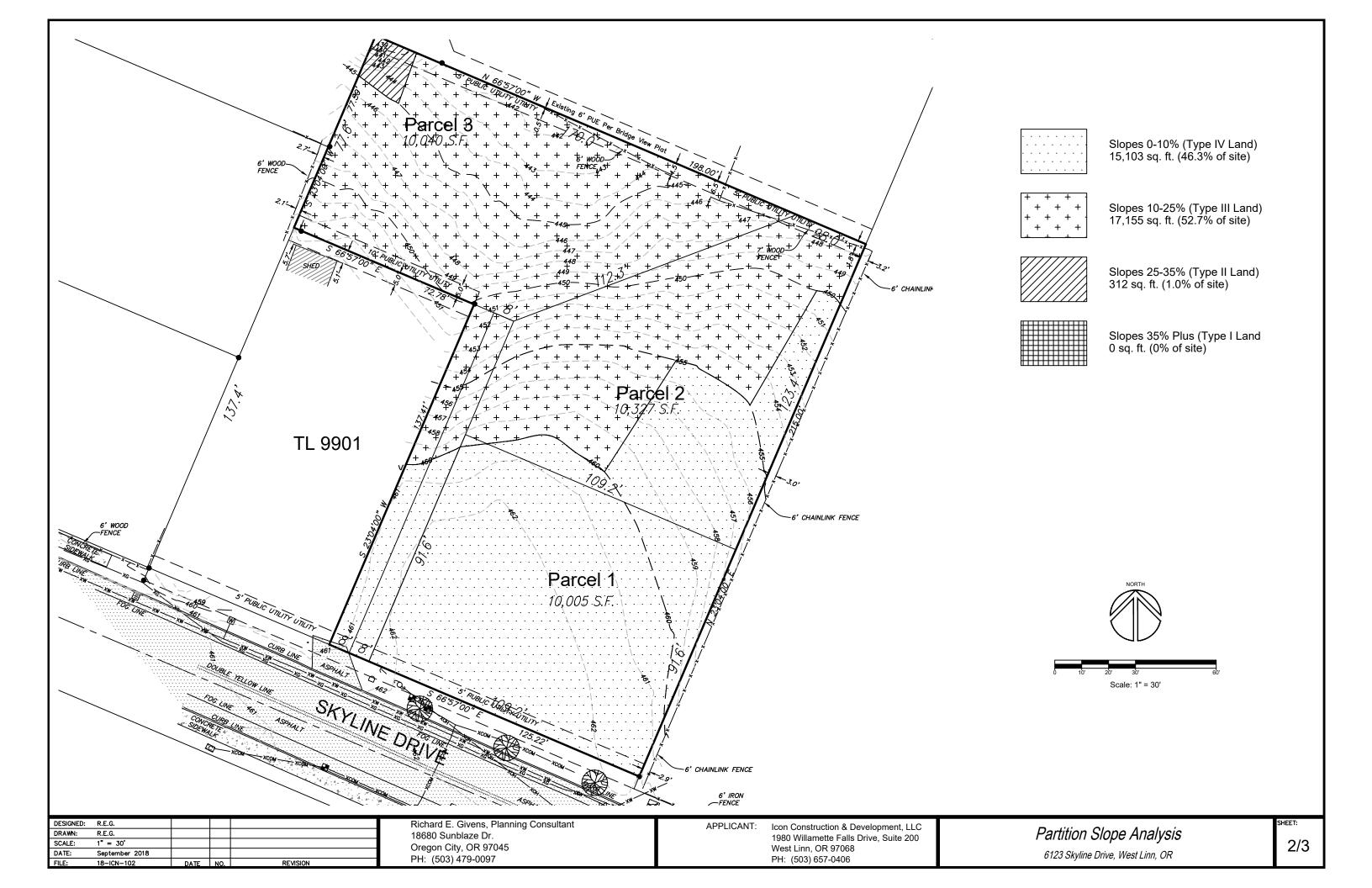
ENGINEERING

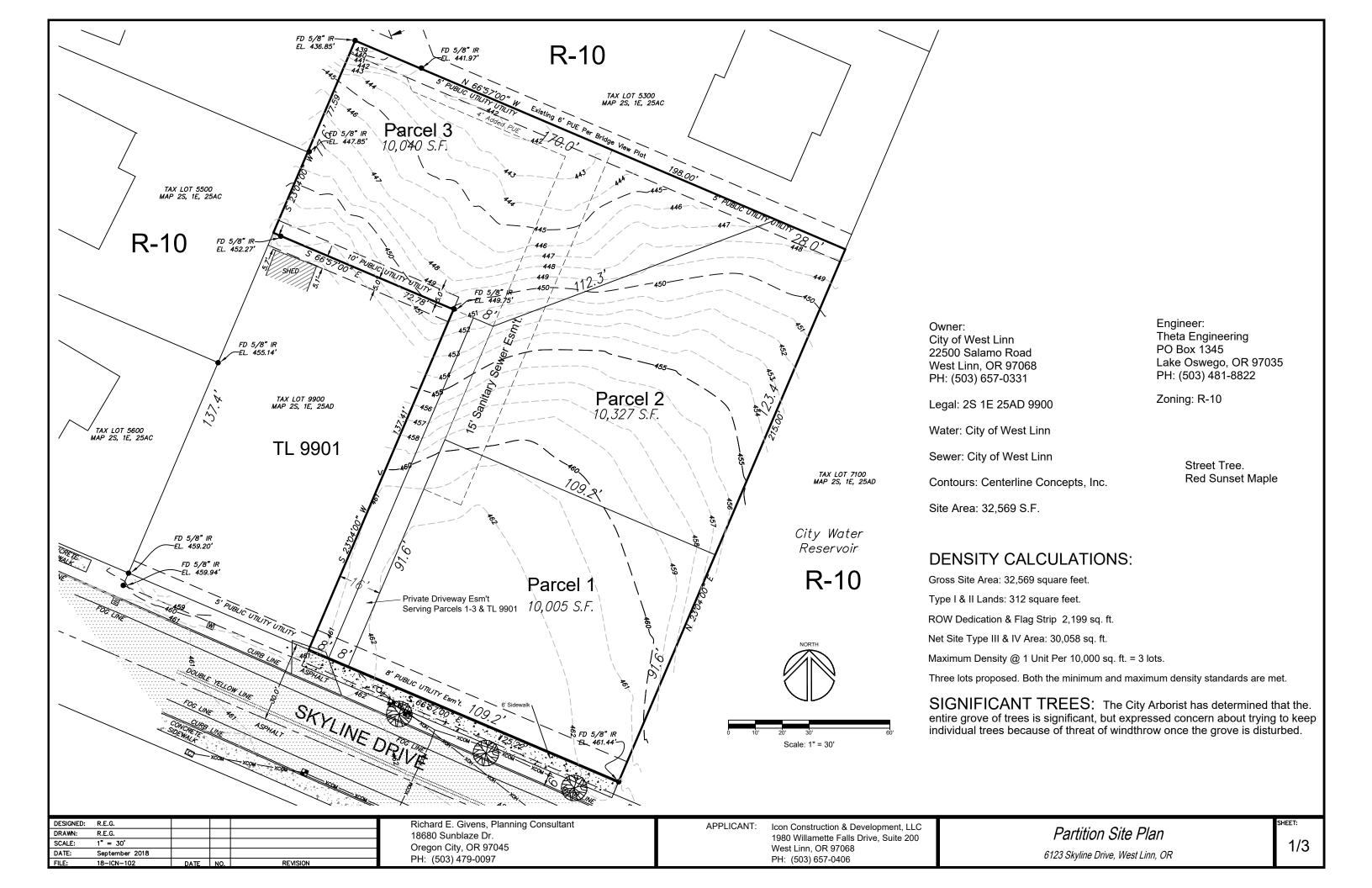
PO Box 1345 Lake Oswego, Oregon 97035 SURVEYING

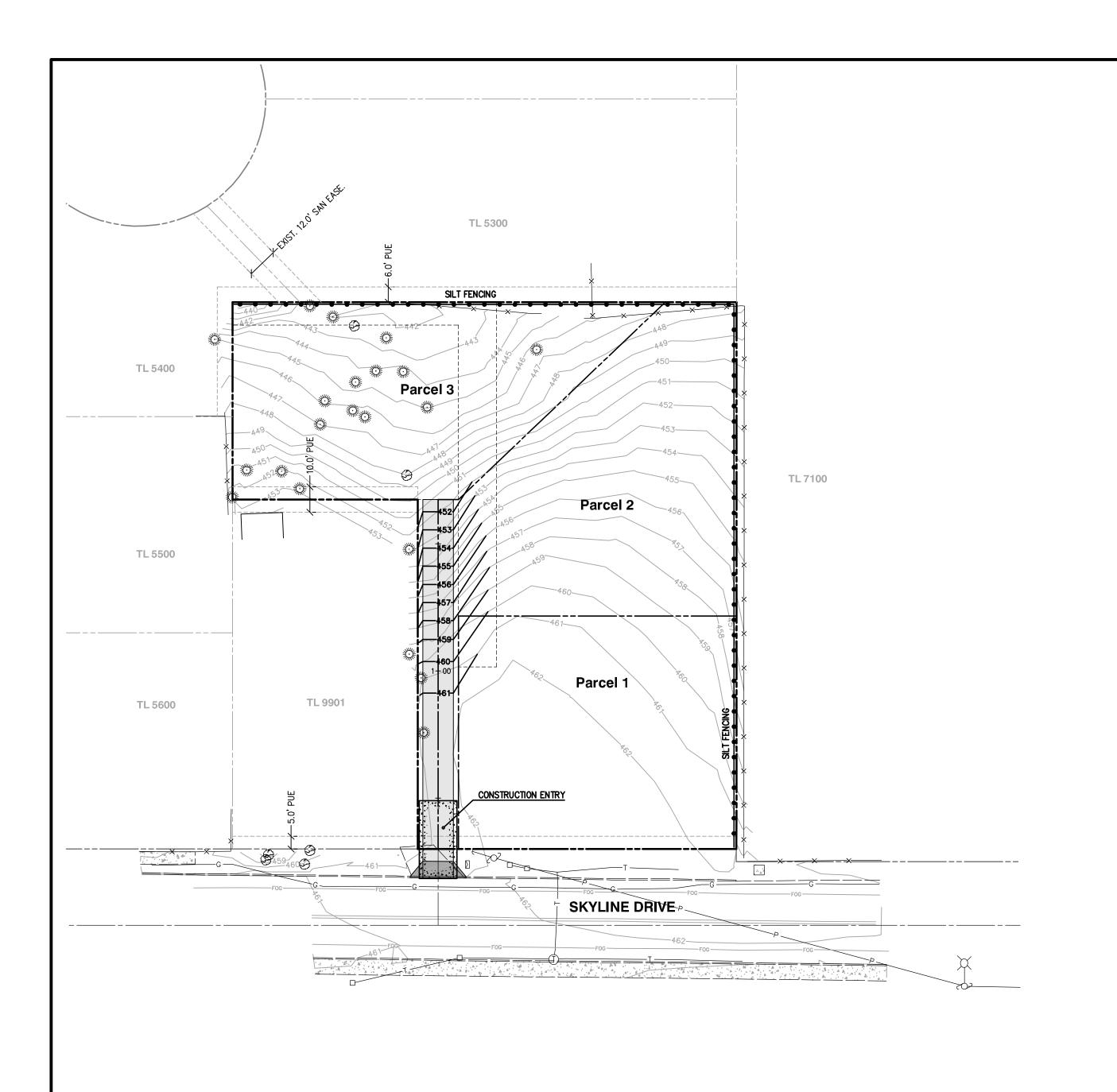
**PLANNING** 

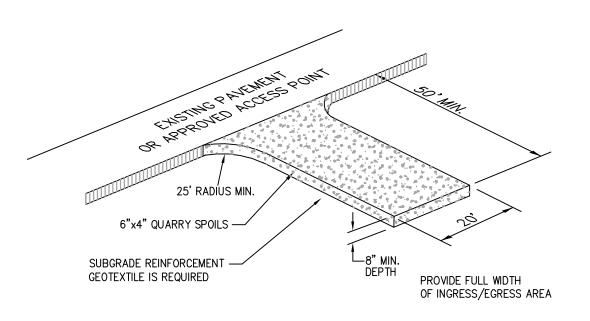
503-481-8822 email: thetaeng@comcast.net Skyline Partition 6123 Skyline Drive West Linn, Oregon 97068





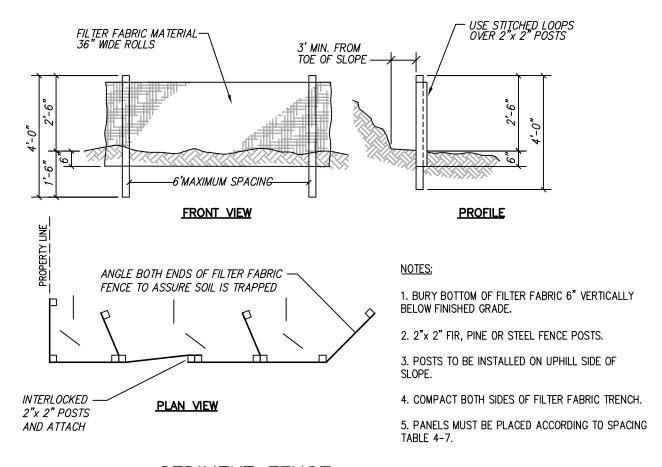






## GRAVEL CONSTRUCTION ENTRANCE

SCALE: NTS



## SEDIMENT FENCE

SCALE: NTS

## 2014-129U

DESIGNED:	BDG						
DRAWN:	BJS				Theta,llc		
SCALE:	As Noted				ENGINEERING - SURVEYING - PLANNING		
DATE:	September, 2018				PO Box 1345 503/481-8822		
FII F	Skyline Partition Prelim1	DATE	NO.	REVISION	Lake Oswego, Oregon 97035 email: thetaeng@comcast.ne		

## PRELIMINARY GRADING AND EROSION CONTROL PLAN

West Linn, Oregon 97068

Partition Site Plan 6123 Skyline Drive West Linn, Oregon Icon Construction and Developement 1380 Willamette Falls Drive, No. 200

SHEET:

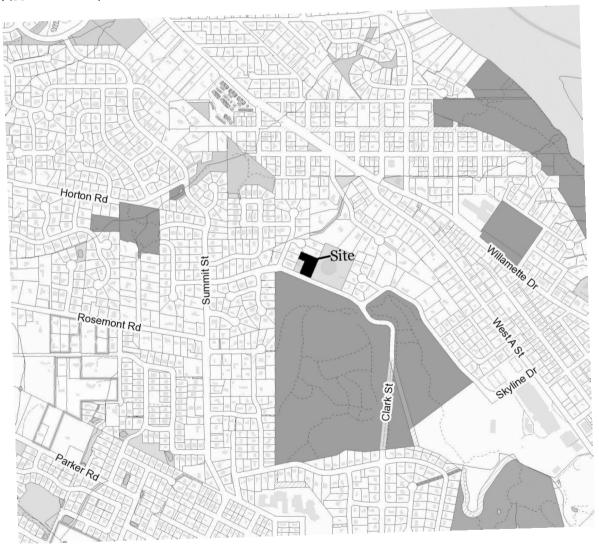
4/4

#### **Partition Narrative**

## 6123 Skyline Dr., West Linn

## Icon Construction & Development, LLC

**Proposal:** This application requests approval of a three-lot partition for property located at 6123 Skyline Dr. in West Linn. The property is situated on the north side of the street, Firwood Drive and Clark Street. The subject property is 0.75 acres in area and is vacant. The City of West Linn's water reservoir is located immediately to the east of the subject property. The proposed partition will divide the property into 3 parcels, with two of the lots being flag lots situated behind the lot fronting directly onto Skyline Dr. The subject property is zoned R-10. The property is described as Tax Lot 9900 of Clackamas County Assessor's Map 2-1E-25AD.



Vicinity Map

The proposed development conforms to the applicable provisions of the CDC as follows:

#### CHAPTER 11 SINGLE-FAMILY RESIDENTIAL DETACHED, R-10

#### 11.030 PERMITTED USES

The following are uses permitted outright in this zoning district

1. Single-family detached residential unit. (....)

Comment: The application is for the creation of three parcels to accommodate three new single-family detached residences. This use is permitted use by this section. The criterion is met.

## 11.070 DIMENSIONAL REQUIREMENTS, USES PERMITTED OUTRIGHT AND USES PERMITTED UNDER PRESCRIBED CONDITIONS

Except as may be otherwise provided by the provisions of this code, the following are the requirements for uses within this zone:

1. The minimum lot size shall be 10,000 square feet for a single-family detached unit.

Comment: As shown on the site plan, all three parcels exceed the 10,000 sq. ft. minimum lot size. This criterion is met.

2. The minimum front lot line length or the minimum lot width at the front lot line shall be 35 feet.

Comment: Parcel 1 has a front lot line length of 110 feet, which exceeds the minimum standard of 35 feet. Parcels 2 and 3 meet the minimum flag lot stem width per CDC 85.200 (B) (7) and comply with the 35' width requirement at the building line.

3. The average minimum lot width shall be 50 feet.

Comment: All three parcels exceed the minimum lot width standard. This standard is met.

4. Repealed by Ord. 1622.

- 5. Except as specified in CDC 25.070(C)(1) through (4) for the Willamette Historic District, the minimum yard dimensions or minimum building setback area from the lot line shall be:
  - a. For the front yard, 20 feet; except for steeply sloped lots where the provisions of CDC 41.010 shall apply.
  - b. For an interior side yard, seven and one-half feet.
  - c. For a side yard abutting a street, 15 feet.
  - d. For a rear yard, 20 feet.

Comment: The property is not in the Willamette Historic District. Setbacks for the homes to be constructed on these lots will conform to these standards and will be reviewed for compliance at the time of building permit application.

6. The maximum building height shall be 35 feet, except for steeply sloped lots in which case the provisions of Chapter 41 CDC shall apply.

Comment: Building height for the new home will comply with the height standard and will be reviewed for compliance with the building permit application.

7. The maximum lot coverage shall be 35 percent.

Comment: Lot coverage for the homes to be built on these parcels will comply with this standard, as will be demonstrated at the time of building permit application.

8. The minimum width of an accessway to a lot which does not abut a street or a flag lot shall be 15 feet.

Comment: The accessway to Parcels 2 and 3 measures 16 feet in width.

9. The floor area ratio shall be 0.45. Type I and II lands shall not be counted toward lot area when determining allowable floor area ratio, except that a minimum floor area ratio of 0.30 shall be allowed regardless of the classification of lands within the property. That 30 percent shall be based upon the entire property including Type I and II lands. Existing residences in excess of this standard may be replaced to their prior dimensions when damaged without the requirement that the homeowner obtain a non-conforming structures permit under Chapter 66 CDC.

Comment: The floor area for the new homes to be built on these parcels will comply with this standard. Compliance will be reviewed with the building permit.

10. The sidewall provisions of Chapter 43 CDC shall apply.

Comment: Compliance of the new home with the provisions of Chapter 43 will be reviewed with the building permit.

#### **Chapter 85 GENERAL PROVISIONS (Land Division)**

#### 85.200 APPROVAL CRITERIA

No tentative subdivision or partition plan shall be approved unless adequate public facilities will be available to provide service to the partition or subdivision area prior to final plat approval and the Planning Commission or Planning Director, as applicable, finds that the following standards have been satisfied, or can be satisfied by condition of approval.

#### A. Streets.

1. <u>General</u>. The location, width and grade of streets shall be considered in their relation to existing and planned streets, to the generalized or reasonable layout of streets on adjacent undeveloped lots or parcels, to topographical conditions, to public convenience and safety, to accommodate various types of transportation (automobile, bus, pedestrian, bicycle), and to the proposed use of land to be served by the streets. The functional class of a street aids in defining the primary function and associated design standards for the facility. The hierarchy of the facilities within the network in regard to the type of traffic served (through or local trips), balance of function (providing access and/or capacity), and the level of use (generally measured in vehicles per day) are generally dictated by the functional class. The street system shall assure an adequate traffic or circulation system with intersection angles, grades, tangents, and curves appropriate for the traffic to be carried. Streets should provide for the continuation, or the appropriate projection, of existing principal streets in surrounding areas and should not impede or adversely affect development of adjoining lands or access thereto.

To accomplish this, the emphasis should be upon a connected continuous pattern of local, collector, and arterial streets rather than discontinuous curvilinear streets and cul-de-sacs. Deviation from this pattern of connected streets should only be permitted in cases of extreme topographical challenges including excessive slopes (35 percent-plus), hazard areas, steep drainageways, wetlands, etc. In such cases, deviations may be allowed but the connected continuous pattern must be reestablished once the topographic challenge is passed. Streets should be oriented with consideration of the sun, as site conditions allow, so that over 50 percent of the front building lines of homes are oriented within 30 degrees of an east-west axis.

Internal streets are the responsibility of the developer. All streets bordering the development site are to be developed by the developer with, typically, half-street improvements or to City standards prescribed by the City Engineer. Additional travel lanes may be required to be consistent with adjacent road widths or to be consistent with the adopted Transportation System Plan (TSP) and any adopted updated plans.

An applicant may submit a written request for a waiver of abutting street improvements if the TSP prohibits the street improvement for which the waiver is requested. Those areas with numerous (particularly contiguous) underdeveloped or undeveloped tracts will be required to install street improvements. When an applicant requests a waiver of street improvements and the waiver is granted, the applicant shall pay an in-lieu fee equal to the estimated cost, accepted by the City Engineer, of the otherwise required street improvements. As a basis for this determination, the City Engineer shall consider the cost of similar improvements in recent development projects and may require up to three estimates from the applicant. The amount of the fee shall be established prior to the Planning Commission's decision on the associated application. The in-lieu fee shall be used for in kind or related improvements.

Streets shall also be laid out to avoid and protect tree clusters and significant trees, but not to the extent that it would compromise connectivity requirements per this subsection (A)(1), or bring the density below 70 percent of the maximum density for the developable net area. The developable net area is calculated by taking the total site acreage and deducting Type I and II lands; then up to 20 percent of the remaining land may be excluded as necessary for the purpose of protecting significant tree clusters or stands as defined in CDC 55.100(B)(2).

Comment: The subject property is an infill property, with properties to the north, east and west being fully developed without any street stubs provided to this site. To the west and north, R-10 lots abut the site within the Bridge View Estates plat and are developed with single-family homes. The City water reservoir is adjacent to the site along its east boundary. Skyline Drive forms the south boundary. As a result of this preexisting development pattern, it is not feasible to provide for greater street connectivity from this site. The proposed shared private driveway from Skyline Drive provides for access to all three parcels. Skyline Drive is fully improved to collector street standards along the project's frontage, except for sidewalks. Sidewalks will be provided in conjunction with the construction of a home on Parcel 1.

2. Right-of-way widths shall depend upon which classification of street is proposed. The right-of-way widths are established in the adopted TSP.

Comment: Skyline Drive is listed as a collector street in the West Linn TSP. The existing 60' right-of-way along the site's frontage is consistent with collector street standards.

 Street widths. Street widths shall depend upon which classification of street is proposed. The classifications and required cross sections are established in the adopted TSP.

The following table identifies appropriate street width (curb to curb) in feet for various street classifications. The desirable width shall be required unless the applicant or his or her engineer can demonstrate that site conditions, topography, or site design require the reduced minimum width. For local streets, a 12-foot travel lane may only be used as a shared local street when the available right-of-way is too narrow to accommodate bike lanes and sidewalks.

Comment: The existing street section along Skyline Drive provides for 30 feet of right-of-way and 18' of paving from centerline, allowing for a 13' travel lane and 5' bike lane, plus the proposed 6' sidewalk, consistent with the collector street improvements specified in this section's table. No parking is provided on Skyline Drive.

- 4. The decision-making body shall consider the City Engineer's recommendations on the desired right-of-way width, pavement width and street geometry of the various street types within the subdivision after consideration by the City Engineer of the following criteria:
  - a. The type of road as set forth in the Transportation Master Plan.
  - b. The anticipated traffic generation.
  - c. On-street parking requirements.
  - d. Sidewalk and bikeway requirements.
  - e. Requirements for placement of utilities.
  - f. Street lighting.
  - g. Drainage and slope impacts.
  - h. Street trees.
  - i. Planting and landscape areas.
  - j. Existing and future driveway grades.
  - k. Street geometry.
  - I. Street furniture needs, hydrants.

Comment: The applicant will work with the City Engineer in developing final construction plans consistent with his recommendations on these improvements.

- 5. Additionally, when determining appropriate street width, the decision-making body shall consider the following criteria:
  - a. When a local street is the only street serving a residential area and is expected to carry more than the normal local street traffic load, the designs with two travel and one parking lane are appropriate.
  - b. Streets intended to serve as signed but unstriped bike routes should have the travel lane widened by two feet.
  - c. Collectors should have two travel lanes and may accommodate some parking. Bike routes are appropriate.
  - d. Arterials should have two travel lanes. On-street parking is not allowed unless part of a Street Master Plan. Bike lanes are required as directed by the Parks Master Plan and Transportation Master Plan.

Comment: Skyline Dr. is a collector so a) does not apply. The bike lanes on Skyline Drive are striped, so b) does not apply. Skyline Drive is developed with two travel lanes and has bicycle lanes. No parking is provided on this street. Skyline Drive is not an arterial street so d) is not applicable.

6. Reserve strips. Reserve strips or street plugs controlling the access to streets are not permitted unless owned by the City.

Comment: No dead end streets are proposed so reserve strips or street plugs are not needed.

7. Alignment. All streets other than local streets or cul-de-sacs, as far as practical, shall be in alignment with existing streets by continuations of the centerlines thereof. The staggering of street alignments resulting in "T" intersections shall, wherever practical, leave a minimum distance of 200 feet between the centerlines of streets having approximately the same direction and otherwise shall not be less than 100 feet.

Comment: No new public streets are proposed so this subsection does not apply.

8. Future extension of streets. Where necessary to give access to or permit a satisfactory future subdivision of adjoining land, streets shall be extended to the boundary of the subdivision and the resulting dead-end streets may be approved without turnarounds. (Temporary turnarounds built to Fire Department standards are required when the dead-end street is over 100 feet long.)

Comment: Not applicable. Adjacent properties are fully developed and no future extensions of streets are practicable.

9. Intersection angles. Streets shall be laid out to intersect angles as near to right angles as practical, except where topography requires lesser angles, but in no case less than 60 degrees unless a special intersection design is approved. Intersections which are not at right angles shall have minimum corner radii of 15 feet along right-of-way lines which form acute angles. Right-of-way lines at intersections with arterial streets shall have minimum curb radii of not less than 35 feet. Other street intersections shall have curb radii of not less than 25 feet. All radii shall maintain a uniform width between the roadway and the right-of-way lines. The intersection of more than two streets at any one point will not be allowed unless no alternative design exists.

Comment: No new public street intersections are proposed. The private drive serving Parcels 1 through 3 intersects Skyline Drive at a 90 degree angle.

10. Additional right-of-way for existing streets. Wherever existing street rights-of-way adjacent to or within a tract are of inadequate widths based upon the standards of this chapter, additional right-of-way shall be provided at the time of subdivision or partition.

Comment: The existing right-of-way of Skyline Drive measures 60 feet in width (30' on each side of the centerline) and is consistent with TSP requirements for this collector street. No additional right-of-way is needed.

11. Cul-de-sacs.

Comment: No new public cul-de-sac streets are proposed so 11) does not apply.

12. Street names. No street names shall be used which will duplicate or be confused with the names of existing streets within the City. Street names that involve difficult or unusual spellings are discouraged. Street names shall be subject to the approval of the Planning Commission or Planning Director, as applicable. Continuations of existing streets shall have the name of the existing street. Streets, drives, avenues, ways, boulevards, and lanes shall describe through streets. Place and court shall describe cul-de-sacs. Crescent, terrace, and circle shall describe loop or arcing roads.

Comment: Not applicable. No new streets are proposed.

13. Grades and curves. Grades and horizontal/vertical curves shall meet the West Linn Public Works Design Standards.

Comment: Skyline Drive is existing along the project frontage. The street grade is approximately one percent and the road is straight in the section fronting this site. Therefore, the existing condition satisfies Public Works Design Standards.

14. Access to local streets. Intersection of a local residential street with an arterial street may be prohibited by the decision-making authority if suitable alternatives exist for providing interconnection of proposed local residential streets with other local streets. Where a subdivision or partition abuts or contains an existing or proposed major arterial street, the decision-making authority may require marginal access streets, reverse-frontage lots with suitable depth, visual barriers, noise barriers, berms, no-access reservations along side and rear property lines, and/or other measures necessary for adequate protection of residential properties from incompatible land uses, and to ensure separation of through traffic and local traffic.

Comment: Not applicable. The subdivision does not abut or contain an existing or proposed arterial street.

- 15. Alleys. Alleys shall be provided in commercial and industrial districts unless other permanent provisions for access to off-street parking and loading facilities are made as approved by the decision-making authority. While alley intersections and sharp changes in alignment should be avoided, the corners of necessary alley intersections shall have radii of not less than 10 feet. Alleys may be provided in residential subdivisions or multi-family projects. The decision to locate alleys shall consider the relationship and impact of the alley to adjacent land uses. In determining whether it is appropriate to require alleys in a subdivision or partition, the following factors and design criteria should be considered:
  - a. The alley shall be self-contained within the subdivision. The alley shall not abut undeveloped lots or parcels which are not part of the project proposal. The alley will not stub out to abutting undeveloped parcels which are not part of the project proposal.
  - b. The alley will be designed to allow unobstructed and easy surveillance by residents and police.

- c. The alley should be illuminated. Lighting shall meet the West Linn Public Works Design Standards.
- d. The alley should be a semi-private space where strangers are tacitly discouraged.
- e. Speed bumps may be installed in sufficient number to provide a safer environment for children at play and to discourage through or speeding traffic.
- f. Alleys should be a minimum of 14 feet wide, paved with no curbs.

Comment: Not applicable. The proposed land use is single-family residential and no alleys are proposed.

16. Sidewalks. Sidewalks shall be installed per CDC 92.010(H), Sidewalks. The residential sidewalk width is six feet plus planter strip as specified below. Sidewalks in commercial zones shall be constructed per subsection (A)(3) of this section. See also subsection C of this section. Sidewalk width may be reduced with City Engineer approval to the minimum amount (e.g., four feet wide) necessary to respond to site constraints such as grades, mature trees, rock outcroppings, etc., or to match existing sidewalks or right-of-way limitations.

Comment: A 6' Sidewalk will be provided along the site's frontage at the time of construction of the home on Parcel 1, as shown on the Tentative Plan.

17. Planter strip. The planter strip is between the curb and sidewalk providing space for a grassed or landscaped area and street trees. The planter strip shall be at least 6 feet wide to accommodate a fully matured tree without the boughs interfering with pedestrians on the sidewalk or vehicles along the curbline. Planter strip width may be reduced or eliminated, with City Engineer approval, when it cannot be corrected by site plan, to the minimum amount necessary to respond to site constraints such as grades, mature trees, rock outcroppings, etc., or in response to right-of-way limitations.

Comment: A planter strip will be provided, as shown on the Tentative Plan.

18. Streets and roads shall be dedicated without any reservations or restrictions.

Comment: No street or road right-of-way is proposed to be dedicated with this project so this criterion does not apply.

19. All lots in a subdivision shall have access to a public street. Lots created by partition may have access to a public street via an access easement pursuant to the standards and limitations set forth for such accessways in Chapter 48 CDC.

Comment: All lots in the proposed partition will have access to Skyline Drive, a public street, via an access easement per the standards of Chapter 48.

20. Gated streets. Gated streets are prohibited in all residential areas on both public and private streets. A driveway to an individual home may be gated.

Comment: No gated streets are proposed.

- 21. Entryway treatments and street isle design. When the applicant desires to construct certain walls, planters, and other architectural entryway treatments within a subdivision, the following standards shall apply:
  - a. All entryway treatments except islands shall be located on private property and not in the public right-of-way.
  - b. Planter islands may be allowed provided there is no structure (i.e., brick, signs, etc.) above the curbline, except for landscaping. Landscaped islands shall be set back a minimum of 24 feet from the curbline of the street to which they are perpendicular.
  - c. All islands shall be in public ownership. The minimum aisle width between the curb and center island curbs shall be 14 feet. Additional width may be required as determined by the City Engineer.
  - d. Brick or special material treatments are acceptable at intersections with the understanding that the City will not maintain these sections except with asphalt overlay, and that they must meet the Americans with Disabilities Act (ADA) standards. They shall be laid out to tie into existing sidewalks at intersections.
  - e. Maintenance for any common areas and entryway treatments (including islands) shall be guaranteed through homeowners association agreements, CC&Rs. etc.
  - f. Under Chapter 52 CDC, subdivision monument signs shall not exceed 32 square feet in area.

Comment: Not applicable. No special entry treatments are proposed.

22. Based upon the determination of the City Manager or the Manager's designee, the applicant shall construct or cause to be constructed, or contribute a proportionate share of the costs, for all necessary off-site improvements identified by the transportation analysis commissioned to address CDC 85.170(B)(2) that are required to mitigate impacts from the proposed subdivision. The proportionate share of the costs shall be determined by the City Manager or Manager's designee, who shall assume that the proposed subdivision provides improvements in rough proportion to identified impacts of the subdivision. Off-site transportation improvements will include bicycle and pedestrian improvements as identified in the adopted City of West Linn TSP.

Comment: Not applicable. No off-site improvements are anticipated

#### B. Blocks and lots.

1. <u>General</u>. The length, width, and shape of blocks shall be designed with due regard for the provision of adequate building sites for the use contemplated; consideration of the need for traffic safety, convenience, access, circulation, and control; and recognition of limitations and opportunities of topography and solar access.

Comment: As previously mentioned, the development pattern in this area is already established. There is no opportunity for additional local street connections. No new blocks are proposed.

2. <u>Sizes</u>. The recommended block size is 400 feet in length to encourage greater connectivity within the subdivision. Blocks shall not exceed 800 feet in length between street lines, except for blocks adjacent to arterial streets or unless topographical conditions or the layout of adjacent streets justifies a variation. Designs of proposed intersections shall demonstrate adequate sight distances to the City Engineer's specifications. Block sizes and proposed accesses must be consistent with the adopted TSP.

Comment: Same as for B1, above.

3. <u>Lot size and shape</u>. Lot or parcel size, width, shape, and orientation shall be appropriate for the location of the subdivision or partition, for the type of use contemplated, for potential utilization of solar access, and for the protection of drainageways, trees, and other natural features. No lot or parcel shall be dimensioned to contain part of an existing or proposed street. All lots or parcels shall be buildable. "Buildable" describes lots that are free of constraints such as wetlands, drainageways, etc., that would make home construction impossible. Lot or parcel sizes shall not be less than the size required by the zoning code unless as allowed by planned unit development (PUD).

Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street parking and service facilities required by the type of use proposed.

Comment: The proposed lots are consistent with the dimensional standards of the R-10 zone and provide reasonable building sites for single-family detached homes. The lots are deep enough on their north-south axes to provide for the opportunity to orient the homes for solar access. The lots do not include portions of existing streets. The flagstrip area for the access drive has not been included in the computation of lot size for purposes of meeting R-10 standards.

4. <u>Access</u>. Access to subdivisions, partitions, and lots shall conform to the provisions of Chapter 48 CDC, Access, Egress and Circulation.

Comment: See discussion of Chapter 48, below.

5. <u>Double frontage lots and parcels</u>. Double frontage lots and parcels have frontage on a street at the front and rear property lines. Double frontage lots and

parcels shall be avoided except where they are essential to provide separation of residential development from arterial streets or adjacent non-residential activities, or to overcome specific disadvantages of topography and orientation. A planting screen or impact mitigation easement at least 10 feet wide, and across which there shall be no right of access, may be required along the line of building sites abutting such a traffic artery or other incompatible use.

Comment: No double frontage lots or parcels are proposed.

6. <u>Lot and parcel side lines</u>. The lines of lots and parcels, as far as is practicable, should run at right angles to the street upon which they face, except that on curved streets they should be radial to the curve.

Comment: The proposed side lot lines are roughly perpendicular to the street rightof-way.

- 7. <u>Flag lots</u>. Flag lots can be created where it can be shown that no other reasonable street access is possible to achieve the requested land division. A single flag lot shall have a minimum street frontage of 15 feet for its accessway. Where two to four flag lots share a common accessway, the minimum street frontage and accessway shall be eight feet in width per lot. Common accessways shall have mutual maintenance agreements and reciprocal access and utility easements. The following dimensional requirements shall apply to flag lots:
  - a. Setbacks applicable to the underlying zone shall apply to the flag lot.
  - b. Front yard setbacks may be based on the rear property line of the lot or parcel which substantially separates the flag lot from the street from which the flag lot gains access. Alternately, the house and its front yard may be oriented in other directions so long as some measure of privacy is ensured, or it is part of a pattern of development, or it better fits the topography of the site.
  - c. The lot size shall be calculated exclusive of the accessway; the access strip may not be counted towards the area requirements.
  - d. The lot depth requirement contained elsewhere in this code shall be measured from the rear property line of the lot or parcel which substantially separates the flag lot from the street from which the flag lot gains access.
  - e. As per CDC 48.030, the accessway shall have a minimum paved width of 12 feet.
  - f. If the use of a flag lot stem to access a lot is infeasible because of a lack of adequate existing road frontage, or location of existing structures, the proposed lot(s) may be accessed from the public street by an access easement of a minimum 15-foot width across intervening property.

Comment: Due to the lack of street frontage or streets that are stubbed to the property line, access to the rear portion of the subject property may only feasibly be provided via the use of a flag lot development pattern. The property to the north and west is platted and developed as a part of the Bridge

View subdivision plat. Property to the east is developed as a City water reservoir. The subject property has only 125 feet of road frontage, which is not sufficient to develop a City-standard street with a circular cul-de-sac. Flag lots with a shared accessway are the only feasible development option for this site. Setbacks will be reviewed at the time of building permit application. All parcels exceed the minimum 10,000 sq. ft. lot size standard of the R-10 district, exclusive of area within the access strip. All lots proposed exceed the minimum lot depth standard of the R-10 zone. The proposed access drive serving Parcels 2 and 3 will be 12 feet in width and is located in the 16 foot access easement.

- 8. <u>Large lots or parcels</u>. In dividing tracts into large lots or parcels which, at some future time, are likely to be redivided, the approval authority may:
  - a. Require that the blocks be of such size and shape, and be so divided into building sites, and contain such easements and site restrictions as will provide for extension and opening of streets at intervals which will permit a subsequent division of any tract into lots or parcels of smaller size; or
  - b. Alternately, in order to prevent further subdivision or partition of oversized and constrained lots or parcels, restrictions may be imposed on the subdivision or partition plat.

Comment: Not applicable. None of the parcels proposed are large enough to be capable of being redivided.

#### C. Pedestrian and bicycle trails.

Comment: Not applicable. No pedestrian or bicycle trails exist or are planned in this area.

#### D. Transit facilities.

Comment: Not applicable. There are no Tri-Met bus services in this area so there is no need for transit facilities.

E. <u>Grading</u>. Grading of building sites shall conform to the following standards unless physical conditions demonstrate the propriety of other standards:

Comment: No grading of building sites is planned at this time. Grading plans will be reviewed at the time of building permit application.

#### F. Water.

Comment: Water service will be provided from the existing water line in Skyline Dr. No new public water lines are proposed. Water meters for Parcels 2 and 3 will be provided in the public right-of-way, with private water service lines extending to the parcels via the access strip.

#### G. Sewer.

Comment: Sewer service will be provided from the existing sewer line in Firwood Ct., to the north of the subject property. A new sewer line will be extended via an existing easement along the common lot line of Tax Lots 5300 and 5400 of Assessor's Map 21E25AC. This line will be extended to serve the new parcels, as shown on the Preliminary Utility Plan.

#### H. Storm detention and treatment.

All proposed storm detention and treatment facilities comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards, there will be no adverse off-site impacts caused by the development (including impacts from increased intensity of runoff downstream or constrictions causing ponding upstream), and there is sufficient factual data to support the conclusions of the submitted plan.

Comment: A storm water report has been prepared by Theta Engineering and is included with this application submittal. As shown the Preliminary Utility Plan, water from the shared private driveway will be collected and directed to an underground infiltration system so that there will be no surface runoff from the driveway to other downstream properties. Rain gardens are proposed to be provided on each lot to handle runoff from roofs of new homes.

#### I. Utility easements.

Comment: Easements for public utilities will be provided as shown on the Preliminary Utility Plan.

#### J. Supplemental provisions.

#### 1. Wetland and natural drainageways.

Comment: There are no wetlands or drainageways on the subject property or on adjacent parcels.

#### 2. Willamette and Tualatin Greenways.

Comment: The subject property is not located within the Willamette or Tualatin Greenway areas. There are no Habitat Conservation Areas on the property.

3. <u>Street trees</u>. Street trees are required as identified in the appropriate section of the municipal code and Chapter 54 CDC.

Comment: Street trees will be provided along the frontage of Parcel 1, as shown on the Tentative Plan.

#### 4. <u>Lighting</u>.

Comment: There is existing street lighting on Skyline Dr.

#### 5. Dedications and exactions.

Comment: Five feet of right-of-way was dedicated along the Skyline Drive frontage of the subject property when the land was partitioned in 1996. This dedication provides for a half-street width from centerline of 30 feet along the property's frontage, consistent with what was discussed at the pre-application conference. A public utility easement will be provided as required along the street frontage. No other exactions are warranted.

#### 6. <u>Underground utilities</u>.

Comment: All new utilities will be place underground.

#### 7. Density requirement.

Comment: The subject property measures 32,569 square feet in site area. The access strip accounts for 2,199 sq. ft. and does not count towards density. Deducting this area from the site area leaves a net area of 30,058 sq. ft. Dividing by the minimum 10,000 sq. ft. lot size of the R-10 zone yields a maximum density of 3 lots. Three lots are proposed so both the minimum and maximum density standards are met.

8. <u>Mix requirement</u>. The "mix" rule means that developers shall have no more than 15 percent of the R-2.1 and R-3 development as single-family residential. The intent is that the majority of the site shall be developed as medium high density multi-family housing.

Comment: The subject property is not in the R-2.1 or R-3 zones so this provision does not apply.

9. Heritage trees/significant tree and tree cluster protection.

Comment: There are no heritage trees on the site. There is a cluster of trees on Parcel 3 that the City Arborist has determined to be significant. See discussion of Chapter 55, below.

#### Chapter 48 - ACCESS, EGRESS AND CIRCULATION

#### 48.025 ACCESS CONTROL

#### B. <u>Access control standards</u>.

1. <u>Traffic impact analysis requirements</u>. The City or other agency with access jurisdiction may require a traffic study prepared by a qualified professional to determine access, circulation and other transportation requirements. (See also CDC 55.125, Traffic Impact Analysis.)

Comment: Because of the small size of this project, the City did not require a traffic impact analysis. The project will result in less than 30 new vehicle trips per day based on ITE data.

2. The City or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points,

recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure the safe and efficient operation of the street and highway system. Access to and from off-street parking areas shall not permit backing onto a public street.

Comment: There are no existing curb cuts that need to be closed. All lots will access onto the proposed shared private drive.

- 3. <u>Access options</u>. When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided by one of the following methods (planned access shall be consistent with adopted public works standards and TSP). These methods are "options" to the developer/subdivider.
  - a) Option 1. Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted.
  - b) Option 2. Access is from a private street or driveway connected to an adjoining property that has direct access to a public street (i.e., "shared driveway"). A public access easement covering the driveway shall be recorded in this case to assure access to the closest public street for all users of the private street/drive.
  - c) Option 3. Access is from a public street adjacent to the development lot or parcel. If practicable, the owner/developer may be required to close or consolidate an existing access point as a condition of approving a new access. Street accesses shall comply with the access spacing standards in subsection (B)(6) of this section.

Comment: Access will be via the shared private driveway.

4. <u>Subdivisions fronting onto an arterial street</u>. New residential land divisions fronting onto an arterial street shall be required to provide alleys or secondary (local or collector) streets for access to individual lots. When alleys or secondary streets cannot be constructed due to topographic or other physical constraints, access may be provided by consolidating driveways for clusters of two or more lots (e.g., includes flag lots and mid-block lanes).

Comment: Not applicable. The site does not front onto an arterial street. Skyline Drive is classified as a collector street in the West Linn Transportation Systems Plan.

5. <u>Double-frontage lots</u>. When a lot or parcel has frontage onto two or more streets, access shall be provided first from the street with the lowest classification. For example, access shall be provided from a local street before a collector or arterial street. When a lot or parcel has frontage opposite that of the adjacent lots or parcels, access shall be provided from the street with the lowest classification.

Comment: Not applicable. No double-frontage lots are proposed.

#### 6. Access spacing.

- a. The access spacing standards found in Chapter 8 of the adopted Transportation System Plan (TSP) shall be applicable to all newly established public street intersections and non-traversable medians.
- b. Private drives and other access ways are subject to the requirements of CDC.

Comment: All parcels will be accessed via the proposed private drive, which conforms to City access spacing requirements.

7. <u>Number of access points</u>. For single-family (detached and attached), two-family, and duplex housing types, one street access point is permitted per lot or parcel, when alley access cannot otherwise be provided; except that two access points may be permitted corner lots (i.e., no more than one access per street), subject to the access spacing standards in subsection (B)(6) of this section. The number of street access points for multiple family, commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with subsection (B)(8) of this section, in order to maintain the required access spacing, and minimize the number of access points.

Comment: All lots will make use of the private drive, which will satisfy this standard.

- 8. <u>Shared driveways</u>. The number of driveway and private street intersections with public streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The City shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes in accordance with the following standards:
  - a. Shared driveways and frontage streets may be required to consolidate access onto a collector or arterial street. When shared driveways or frontage streets are required, they shall be stubbed to adjacent developable parcels to indicate future extension. "Stub" means that a driveway or street temporarily ends at the property line, but may be extended in the future as the adjacent lot or parcel develops. "Developable" means that a lot or parcel is either vacant or it is likely to receive additional development (i.e., due to infill or redevelopment potential).
  - b. Access easements (i.e., for the benefit of affected properties) shall be recorded for all shared driveways, including pathways, at the time of final plat approval or as a condition of site development approval.
  - c. <u>Exception</u>. Shared driveways are not required when existing development patterns or physical constraints (e.g., topography, lot or parcel configuration, and similar conditions) prevent extending the street/driveway in the future.

Comment: The proposed shared driveway will have an easement shown on the partition plat.

- C. <u>Street connectivity and formation of blocks required</u>. In order to promote efficient vehicular and pedestrian circulation throughout the City, land divisions and large site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:
  - 1. <u>Block length and perimeter</u>. The maximum block length shall not exceed 800 feet or 1,800 feet along an arterial.
  - 2. <u>Street standards</u>. Public and private streets shall also conform to Chapter 92 CDC, Required Improvements, and to any other applicable sections of the West Linn Community Development Code and approved TSP.
  - 3. <u>Exception</u>. Exceptions to the above standards may be granted when blocks are divided by one or more pathway(s), in conformance with the provisions of CDC 85.200(C), Pedestrian and Bicycle Trails, or cases where extreme topographic (e.g., slope, creek, wetlands, etc.) conditions or compelling functional limitations preclude implementation, not just inconveniences or design challenges. (Ord. 1635 § 25, 2014; Ord. 1636 § 33, 2014)

Comment: Adjacent property is fully developed and no street stubs are provided to the subject property. Because of this, it is not possible to extend a local street through the site to create a new block.

#### 48.030 MINIMUM VEHICULAR REQUIREMENTS FOR RESIDENTIAL USES

A. Direct individual access from single-family dwellings and duplex lots to an arterial street, as designated in the transportation element of the Comprehensive Plan, is prohibited for lots or parcels created after the effective date of this code where an alternate access is either available or is expected to be available by imminent development application. Evidence of alternate or future access may include temporary cul-de-sacs, dedications or stubouts on adjacent lots or parcels, or tentative street layout plans submitted at one time by adjacent property owner/developer or by the owner/developer, or previous owner/developer, of the property in question.

In the event that alternate access is not available as determined by the Planning Director and City Engineer, access may be permitted after review of the following criteria:

- 1. Topography.
- 2. Traffic volume to be generated by development (i.e., trips per day).
- 3. Traffic volume presently carried by the street to be accessed.
- 4. Projected traffic volumes.

- 5. Safety considerations such as line of sight, number of accidents at that location, emergency vehicle access, and ability of vehicles to exit the site without backing into traffic.
- 6. The ability to consolidate access through the use of a joint driveway.
- 7. Additional review and access permits may be required by State or County agencies.

Comment: Figure 17 in the TSP designates Skyline Drive as a collector street. This section does not apply.

- B. When any portion of any house is less than 150 feet from the adjacent right-of-way, access to the home is as follows:
  - One single-family residence, including residences with an accessory dwelling unit as defined in CDC 02.030, shall provide 10 feet of unobstructed horizontal clearance. Dual-track or other driveway designs that minimize the total area of impervious driveway surface are encouraged.
  - 2. Two to four single-family residential homes equals a 14- to 20-foot-wide paved or all-weather surface. Width shall depend upon adequacy of line of sight and number of homes.
  - 3. Maximum driveway grade shall be 15 percent. The 15 percent shall be measured along the centerline of the driveway only. Variations require approval of a Class II variance by the Planning Commission pursuant to Chapter 75 CDC. Regardless, the last 18 feet in front of the garage shall be under 12 percent grade as measured along the centerline of the driveway only. Grades elsewhere along the driveway shall not apply.
  - 4. The driveway shall include a minimum of 20 feet in length between the garage door and the back of sidewalk, or, if no sidewalk is proposed, to the paved portion of the right-of-way.

Comment: The homes on Parcels 2 and 3 will exceed 150 feet in distance from Skyline Drive. The minimum 10 foot unobstructed horizontal clearance standard will be met. The grade of the private drive will be under 15 percent. The driveways comply with the 20 foot minimum length between the garage and the sidewalk.

- C. When any portion of one or more homes is more than 150 feet from the adjacent right-of-way, the provisions of subsection B of this section shall apply in addition to the following provisions.
  - 1. A turnaround may be required as prescribed by the Fire Chief.
  - 2. Minimum vertical clearance for the driveway shall be 13 feet, six inches.
  - 3. A minimum centerline turning radius of 45 feet is required unless waived by the Fire Chief.

4. There shall be sufficient horizontal clearance on either side of the driveway so that the total horizontal clearance is 20 feet.

Comment: The applicant will coordinate with the Fire Chief to determine whether a turnaround or other mitigating measures, such as sprinklers, are warranted for Parcels 2 and 3. Compliance with other requirements of this section will be demonstrated at the time of building permit application.

D. Access to five or more single-family homes shall be by a street built to full construction code standards. All streets shall be public. This full street provision may only be waived by variance.

Comment: Not applicable. The proposed access will not serve five or more vehicles.

E. Access and/or service drives for multi-family dwellings shall be fully improved with hard surface pavement:

Comment: Not applicable. No multi-family development is proposed.

F. Where on-site maneuvering and/or access drives are necessary to accommodate required parking, in no case shall said maneuvering and/or access drives be less than that required in Chapters 46 and 48 CDC.

Comment: The proposed access drive complies with these standards

G. The number of driveways or curb cuts shall be minimized on arterials or collectors. Consolidation or joint use of existing driveways shall be required when feasible.

Comment: Not applicable. The access to all three parcels will be via the shared private driveway, thereby minimizing the number of driveways onto Skyline Drive.

H. In order to facilitate through traffic and improve neighborhood connections, it may be necessary to construct a public street through a multi-family site.

Comment: Not applicable. The site is not a multi-family site and there is no opportunity for a street connection due to development patterns to the north.

 Gated accessways to residential development other than a single-family home are prohibited. (Ord. 1408, 1998; Ord. 1463, 2000; Ord. 1513, 2005; Ord. 1584, 2008; Ord. 1590 § 1, 2009; Ord. 1636 § 34, 2014)

Comment: No gated accessways are proposed.

#### 48.040 MINIMUM VEHICLE REQUIREMENTS FOR NON-RESIDENTIAL USES

Comment: No non-residential uses are proposed so this section does not apply.

48.050 ONE-WAY VEHICULAR ACCESS POINTS

Where a proposed parking facility plan indicates only one-way traffic flow on the site, it shall be accommodated by a specific driveway serving the facility, and the entrance drive shall be situated closest to oncoming traffic, and the exit drive shall be situated farthest from oncoming traffic.

Comment: No one-way traffic flow patterns are proposed.

## 48.060 WIDTH AND LOCATION OF CURB CUTS AND ACCESS SEPARATION REQUIREMENTS

A. Minimum curb cut width shall be 16 feet.

Comment: The curb cut for the proposed access drive will comply with this minimum.

B. Maximum curb cut width shall be 36 feet, except along Highway 43 in which case the maximum curb cut shall be 40 feet. For emergency service providers, including fire stations, the maximum shall be 50 feet.

Comment: The proposed curb cut will not exceed 36 feet, as shown on the site plan.

- C. No curb cuts shall be allowed any closer to an intersecting street right-of-way line than the following:
  - 1. On an arterial when intersected by another arterial, 150 feet.
  - 2. On an arterial when intersected by a collector, 100 feet.
  - 3. On an arterial when intersected by a local street, 100 feet.
  - 4. On a collector when intersecting an arterial street, 100 feet.
  - 5. On a collector when intersected by another collector or local street, 35 feet.
  - 6. On a local street when intersecting any other street, 35 feet.

Comment: Figure 17 in the Transportation System Plan designates Skyline Dr. as a collector street. The closest intersection is Firwood Drive, a local street, approximately 240 feet to the west. This standard is met.

- D. There shall be a minimum distance between any two adjacent curb cuts on the same side of a public street, except for one-way entrances and exits, as follows:
  - 1. On an arterial street, 150 feet.
  - 2. On a collector street, 75 feet.
  - Between any two curb cuts on the same lot or parcel on a local street, 30 feet.

Comment: The applicant has a new home that will be commencing on the adjacent Tax Lot 9901 to the west of the subject property. It has a temporary curb cut off of Skyline

that is closer than 75 feet from the subject property. That driveway will be changed to come off of the shared private drive upon construction of the new access.

E. A rolled curb may be installed in lieu of curb cuts and access separation requirements.

Comment: Not proposed.

F. Curb cuts shall be kept to the minimum, particularly on Highway 43. Consolidation of driveways is preferred. The standard on Highway 43 is one curb cut per business if consolidation of driveways is not possible.

Comment: The proposed plan makes use of the single accessway and curb cut to service the three parcels within this partition as well as TL 9901, consistent with this provision.

G. Adequate line of sight pursuant to engineering standards should be afforded at each driveway or accessway.

Comment: There are no obstructions to sight distance at the driveway location.

#### **CHAPTER 55 DESIGN REVIEW**

#### 55.100 APPROVAL STANDARDS - CLASS II DESIGN REVIEW

Design Review is only applicable to significant trees as cross referenced by CDC 85.200(J) (9).

- B. Relationship to the natural and physical environment.
  - 1 The buildings and other site elements shall be designed and located so that all heritage trees, as defined in the municipal code, shall be saved. Diseased heritage trees, as determined by the City Arborist, may be removed at his/her direction.
  - 2. All heritage trees, as defined in the municipal code, all trees and clusters of trees ("cluster" is defined as three or more trees with overlapping driplines; however, native oaks need not have an overlapping dripline) that are considered significant by the City Arborist, either individually or in consultation with certified arborists or similarly qualified professionals, based on accepted arboricultural standards including consideration of their size, type, location, health, long term survivability, and/or numbers, shall be protected pursuant to the criteria of subsections (B)(2)(a) through (f) of this section. (....)

Comment: The tree survey information was reviewed by the City's Arborist. He determined that the entire stand of trees is significant. There are no heritage trees on the subject property. Please refer to the Tree Plan and Tree Inventory submitted with this application.

a. Non-residential and residential projects on Type I and II lands shall protect all heritage trees and all significant trees and tree clusters by limiting development in the protected area. The protected area includes the protected tree, its dripline, and an additional 10 feet beyond the dripline, as depicted in the figure below. Development of Type I and II lands shall require the careful layout of streets, driveways, building pads, lots, and utilities to avoid heritage trees and significant trees and tree clusters, and other natural resources pursuant to this code. The method for delineating the protected trees or tree clusters ("dripline plus 10 feet") is explained in subsection (B)(2)(b) of this section. Exemptions of subsections (B)(2)(c), (e), and (f) of this section shall apply.

Comment: Only a small area in the northwest corner of Parcel 3 contains Type II lands. No trees are located in that area so this section does not apply.

b. Non-residential and residential projects on non-Type I and II lands shall set aside up to 20 percent of the protected areas for significant trees and tree clusters, plus any heritage trees. Therefore, in the event that the City Arborist determines that a significant tree cluster exists at a development site, then up to 20 percent of the non-Type I and II lands shall be devoted to the protection of those trees by limiting development in the protected areas. The exact percentage is determined by establishing the driplines of the trees or tree clusters that are to be protected. In order to protect the roots which typically extend further, an additional 10-foot measurement beyond the dripline shall be added. The square footage of the area inside this "dripline plus 10 feet" measurement shall be the basis for calculating the percentage (see figure below). The City Arborist will identify which tree(s) are to be protected. Development of non-Type I and II lands shall also require the careful layout of streets, driveways, building pads, lots, and utilities to avoid significant trees, tree clusters, heritage trees, and other natural resources pursuant to this code. Exemptions of subsections (B)(2)(c), (e), and (f) of this section shall apply. Please note that in the event that more than 20 percent of the non-Type I and II lands comprise significant trees or tree clusters, the developer shall not be required to save the excess trees, but is encouraged to do so.

Comment: The grove of trees takes up nearly all of Parcel 3. In order to develop a home on that parcel, plus the sewer line needed to service all three Parcels, nearly all of the trees will need to be removed, as shown on the Tree Plan submitted with this application. An area in the southwest corner of Parcel 3 will be preserved out to the dripline plus 10 feet. This area measures 809 sq. ft. in area (2.4% of the total 32,569 sq. ft. site area). This falls within the allowable 1 to 20% set aside requirement.

Chapter 92, required improvements

The following improvements shall be installed at the expense of the developer and meet all City codes and standards:

E. Surface drainage and storm sewer system. A registered civil engineer shall prepare a plan and statement which shall be supported by factual data and comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards. (....)

Comment: The applicant proposes to provide a rain garden on all parcels to accommodate runoff from the new home. Skyline Drive is fully improved to City standards so no new impervious surface will be added there. A drainage report prepared by Theta Engineering for the adjacent Tax Lot 9901 is attached and demonstrates that the soils in this area are suitable for rain gardens.