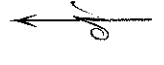
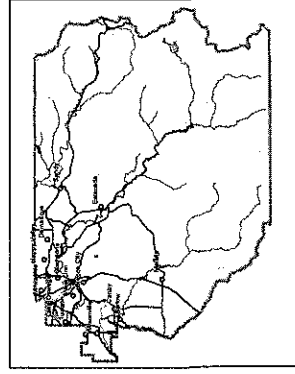


2 1 E 08CA  
LAKE OSWEGO  
N.E. 1/4 S.W. 1/4 SEC. 8 T.2S. R. 1E. W.M.  
CLACKAMAS COUNTY  
1" = 100'

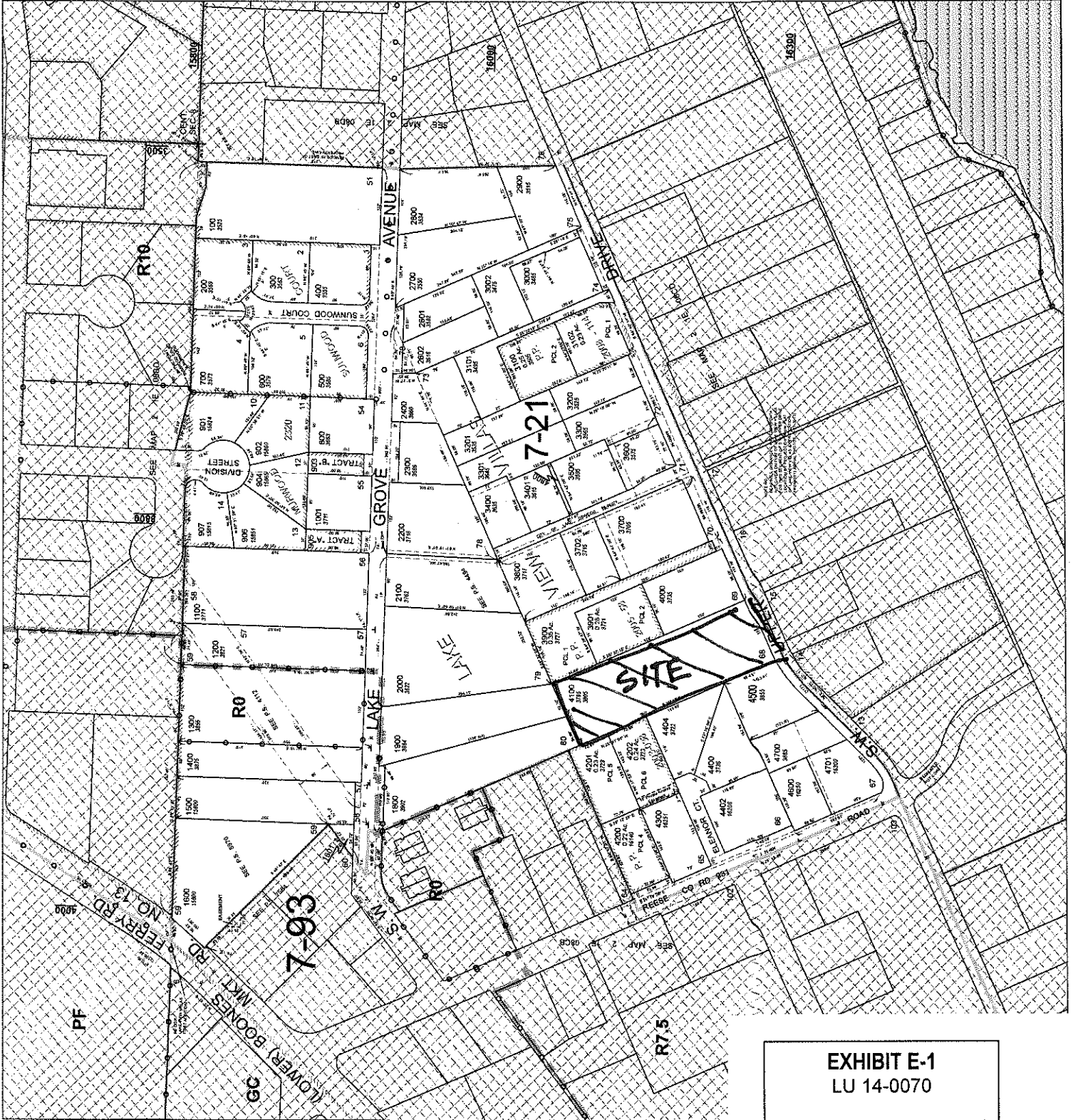
Cancelled Taxlots  
4801  
4803  
2301  
3701  
1700  
500  
3001  
3602  
3001

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- Tax Code Lines
- Map Index
- Water Lines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- D.L.C. Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40
- Historic Corridor 20

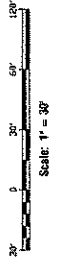
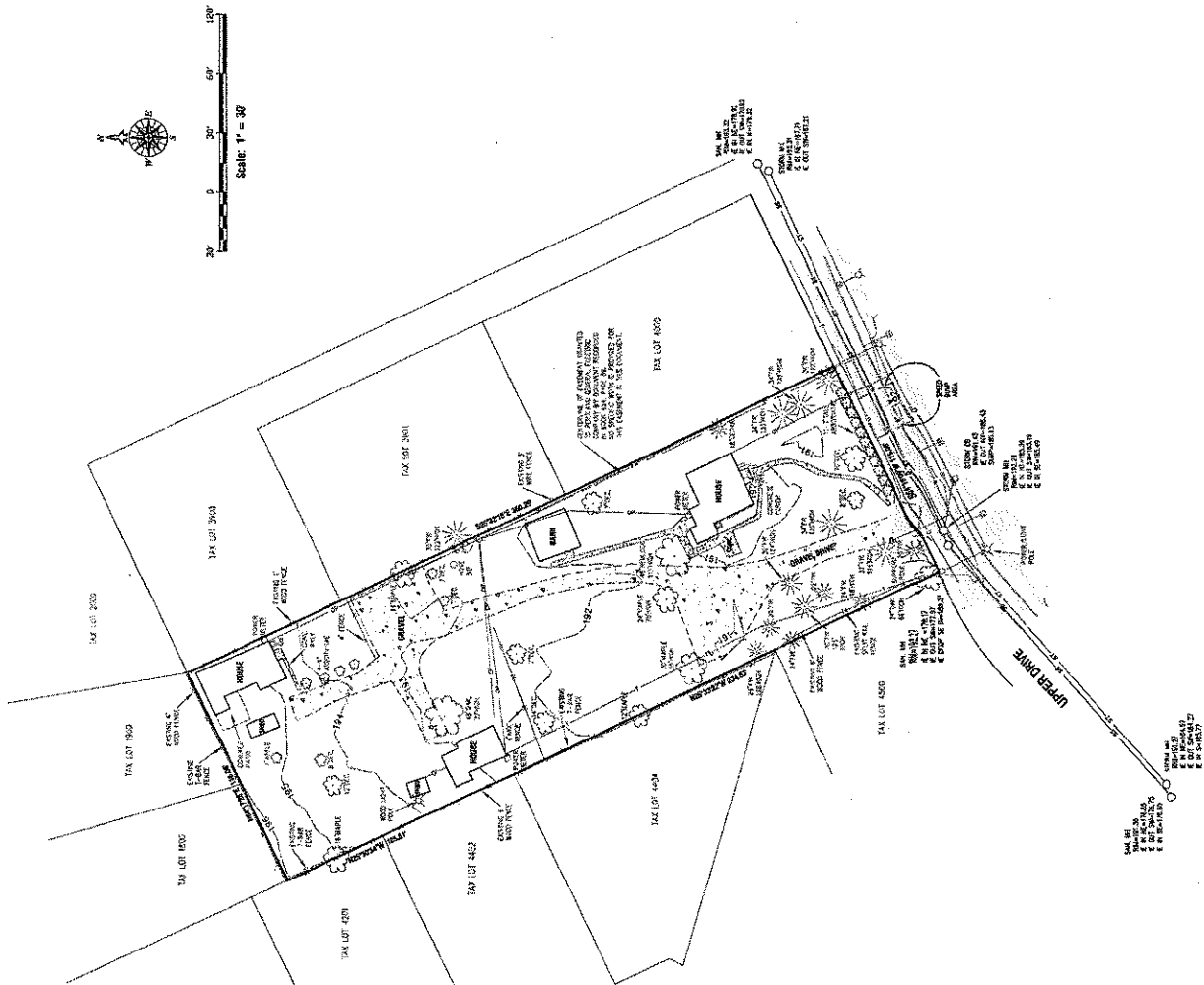


THIS MAP IS FOR ASSESSMENT  
PURPOSES ONLY

2 1 E 08CA  
LAKE OSWEGO



**EXHIBIT E-1**  
LU 14-0070



**LEGEND**

- POSSIBLE POWER LINE
- LAVATORY DRAIN LINE
- GAS LINE
- WATER MAIN
- SEWER MAIN
- SEWER TELEPHONE
- EDGE OF PARCELS
- EDGE
- EDGE OF WATER
- WATER PUMP
- EDGE OF DRIVEWAY
- PERMITS POOL
- EDGE OF PARKS
- FOREVER

**NOTES:**

1. THIS IS A MAP OF THE CITY OF LAKE OSWEGO, OREGON, SHOWING THE BOUNDARIES OF THE CITY AND THE BOUNDARIES OF THE SEVERAL WARDEN DISTRICTS.
2. THIS MAP IS A REPRODUCTION OF THE ORIGINAL MAP AS DRAWN BY THE CITY ENGINEER AND IS NOT TO BE USED AS A BASIS FOR ANY OTHER MAP.
3. THE CITY ENGINEER HAS MADE A CAREFUL CHECK OF THIS MAP AND IS SURE THAT IT IS A TRUE AND CORRECT REPRESENTATION OF THE ORIGINAL MAP.
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STAN KENNEDY  
PROFESSIONAL ENGINEER  
LICENSE NO. 12345  
STATE OF OREGON

**TOPOGRAPHIC MAP**

TAX LOT 4100 2 1E 8 CA S. W. 1/4 SECTION 8, T. 2 S., E. 1 E., W.M. CITY OF LAKE OSWEGO, CLACKAMAS COUNTY, OREGON	
STAN KENNEDY P.O. BOX 2328 LAKE OSWEGO, OREGON 97035	
COMPASS Land Surveyors 4107 SE International Way, Suite 705 Milwaukie, Oregon 97222 503-683-9093	
DATE: 11-29-07	SCALE: 1"=30'
PROJECT: LU 14-0070	DATE: NOVEMBER 2007
BY: GMS/TOP/DWG	CHECKED: DMC

**EXHIBIT E-2**  
**LU 14-0070**





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MAY 04 2015

City of Lake Oswego  
Community Development Dept.

Parcel 1

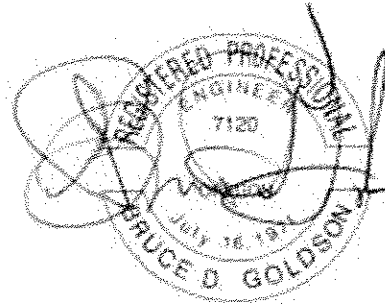
SIGHT DISTANCE  
LIMITED BY FIRM TREE

SIGHT DISTANCE LINE  
230' ±

PROPOSED TO BE REMOVED

FIRM TREE TO BE REMOVED

SIGHT DISTANCE LINE  
320' ±



EXPIRES: 06/30/2015

SCALE: 1" = 20'

SIGNATURE DATE: 03/22/2015

2015-153

**SIGHT DISTANCE CERTIFICATION**

**Theta, llc**

ENGINEERING - SURVEYING - PLANNING

PO Box 1345  
Lake Oswego, Oregon 97035

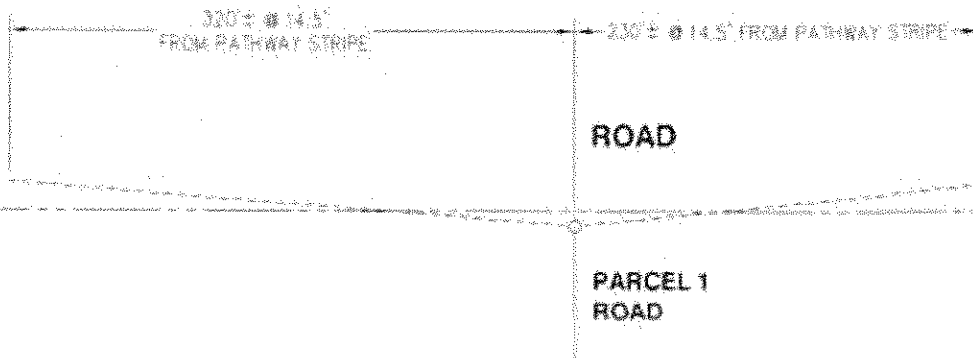
503-641-8622  
email: thetaeng@comcast.net

TL 3805, 3799 & 3795  
Upper Drive, Lake Oswego  
21E

1

EXHIBIT E-5  
LU 14-0070

City of Lake Oswego Community Development Department, 17220 1st Ave., Lake Oswego, OR 97035



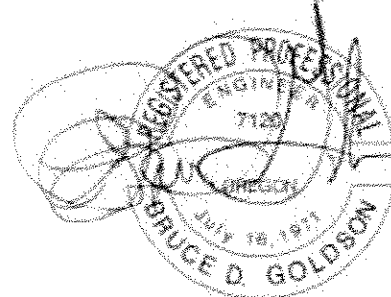
### SIGHT DISTANCE SCHEMATIC

SCALE: 1" = 100'



To the east, the sight distance is limited to 230-feet and the AASHTO's Intersection Sight Distance cannot be achieved even with the removal of the arborvitae due to a large douglas fir. Using AASHTO's stopping sight distance which is 155 feet @ 25 mph as the criteria for acceptance, I measured 14.5-feet back from the edge of pavement and set a target and then measured 230-feet and could still see the target at the existing driveway. At this time I consider this intersection safe. A speed bump just prior to this driveway may limit the speed.

To the west, the available sight distance exceeds 320-feet, achieving AASHTO's Intersection Sight Distance with the removal the the douglas fir.



EXPIRES: 06/30/2015

SIGNATURE DATE: 03/22/2015

2015-153

### SIGHT DISTANCE CERTIFICATION

<h2>Theta, llc</h2>	<p>TL 3805, 3799 &amp; 3795 Upper Drive, Lake Oswego 2 1E 08CA 4100</p>	<p>2 2</p>
<p>ENGINEERING - SURVEYING - PLANNING PO Box 1346 Lake Oswego, Oregon 97035 503/461-8822 email: thetaeng@comcast.net</p>		

Partition Application Narrative

3795 Upper Drive

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MAY 04 2015

City of Lake Oswego  
Community Development Dept.

Introduction

This application proposes partitioning property located at 3795 Upper Drive into three parcels. The subject property is described as Tax Lot 4100 of Clackamas County Assessor's Map 2 1E 08CA. At the present time, there are three detached homes on this property. These homes will be removed to allow for the construction of three new homes on the parcels that will be created in this partition.

The subject property contains a number of well-established coniferous and deciduous trees, as shown on the site plan and existing conditions survey.

**Compliance With Community Development Code**

The proposed partition complies with the applicable sections of the Community Development Code, as discussed below.

**50.02.001 RESIDENTIAL DISTRICTS**

Existing zoning of this property is R-7.5 and the proposed lots have been designed to conform to the R-7.5 dimensional standards.

**50.04.001 DIMENSIONAL TABLE**

Maximum Density: The maximum density allowable for this site is 4 lots. Three lots are proposed.

Minimum Density: Not applicable to partitions.

Maximum Floor Area: Reviewed at time of building permit.

Yard Setbacks: Superseded by 50.05.003, Lake Grove R-7.5/R-10 Overlay Zone.

Maximum Lot Coverage: 25-35%, depending upon height of structure. Reviewed at the time of building permit application. See 50.05.003, Lake Grove R-7.5/R-10 Overlay Zone.

Maximum Height: 28' for flat lots. All lots are flat. The two flag lots are subject to the special height standards of LOC 50.07.007.2, which has been calculated as allowing a 22' maximum height on these two lots. Please see discussion of LOC 50.07.007.2 below.

EXHIBIT F-1  
LU 14-0070

**Table 1: Dimensional Standards**

Parcel #	Lot Area (Exc. Esm't.)	Dimensions	Max Bldg. Height	Setbacks	Max Lot Coverage	Max. Floor Area
1	11,977 sq. ft.	116' W 130' D	28 ft.	Front – 25', Side – 10', (Except garage – 20') Rear – 30'	25 – 35% depending on height.	4,173 sq. ft.
2	10,568 sq. ft.	110' W 116' D	22 ft.	(Flag Lot) Front – 10' Except garage – 20') Side – 10' Rear 25'	35%	3,905 sq. ft.
3	10,572 sq. ft.	110' W 116' D	22 ft.	(Flag Lot) Front – 10' Except garage – 20') Side – 10' Rear 25'	35%	3,906 sq. ft.

**50.05.003 LAKE GROVE R-7.5/R-10 OVERLAY DISTRICT**

Comment: The subject property is located in the R-7.5 section of the Lake Grove Overlay District. The provisions of this chapter establish setbacks that will be applicable to the construction of homes on the proposed lots. The standards applicable to primary structures on the lots are: Front – 25', Side – 10', and Rear – 30'. The lots are adequately sized to allow for the placement of homes in compliance with these standards.

Compliance will be reviewed at the time of building permit application. The overlay district also states, "No more than 50% of a lot shall be covered with any of the following elements: structures, patios, paving or impervious walks. However, pervious decks and natural-appearing constructed ponds shall not be included within this limitation." Again, the lots are adequately sized to allow for construction in compliance with this standard. Compliance will be reviewed at the time of building permit application.

**50.04.002 SPECIAL STREET SETBACKS**

Parcel 1 fronts on Upper Drive, which has a special street setback of 25', as measured from centerline. In this instance, however, an additional right-of-way dedication of 15' (to bring the total width from centerline to 30') is required. Setbacks will be measured from the new right-of-way line.

## **50.06.001 BUILDING DESIGN**

### **2. STRUCTURE DESIGN – RESIDENTIAL ZONES**

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The new homes to be constructed on the three parcels in this partition will be subject to the structure design standards of this section. Compliance will be reviewed at the time of building permit application.

### **4. GARAGE APPEARANCE AND LOCATION**

---

The garages for the new homes to be constructed on the three parcels in this partition will be subject to the structure design standards of this section. Compliance will be reviewed at the time of building permit application.

## **50.06.002 PARKING**

This section requires that each home provide a minimum of 1 off-street parking space. The lots in this partition are more than large enough to comply with this standard. Compliance will be reviewed at the time of building permit application.

## **50.06.003 CIRCULATION AND CONNECTIVITY**

### **1. ACCESS/ACCESS LANES (FLAG LOTS)**

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The minimum easement width for flag lots is 20 feet, with a minimum paved width of 12 feet and 4' gravel shoulders when serving 2-4 units. The proposed access lane has been designed to conform to this standard. The location of the driveway was reviewed by a Bruce Goldson, P.E. of Theta Engineering and has been deemed safe.

A traffic study was not required for this project due to its minimal impact. Three existing homes will be replaced with three new homes.

### **2. ON-SITE CIRCULATION – DRIVEWAYS AND FIRE ACCESS ROADS**

---

These standards require that driveways be located so that vehicles may enter and exit the site safely. The location of the driveway was reviewed by a Bruce Goldson, P.E. of Theta Engineering and has been deemed safe.

The comments from Lake Oswego Fire Department indicate that access lanes in excess of 150' are typically required to provide an approved emergency vehicle turn-around. The notes also indicate that an alternative of sprinkling the homes may be approved. Approval of this option is requested in order to minimize the removal of on-site trees. Preservation of trees was indicated to be a neighborhood priority at the neighborhood meeting on this proposal. The width of the easement and pavement meet fire standards.

The maximum grade standard for the access drive is 15%. The site is very flat and the driveway grade will not exceed 1%.

The driveway will be constructed to City specifications. A water quality swale will be provided along the driveway per discussion with Todd Knepper. The site drains to Upper Drive and there is a city storm sewer line in the street.

#### **50.06.004 SITE DESIGN**

##### **1. LANDSCAPING, SCREENING, AND BUFFERING**

---

A landscape plan is provided on the site depicting proposed buffering along the access driveway. In the section passing through Parcel 1, existing mature trees will provide for the buffering and no irrigation will be needed. In the section passing through Parcels 2 and 3, an irrigation system will be provided for that home to ensure the survival of new plantings.

##### **2. FENCES**

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Existing wood fences along the perimeter of the site satisfy the requirements for fences for flag lots along the east and west property line. No new fences are proposed there. On the north property line, a wire fence exists. The builder on Parcel 3 will provide a 6' wood fence along this parcel line unless the owner of the adjoining lot agrees that no fencing is needed.

##### **3. LIGHTING STANDARDS**

---

There is an existing street light on the utility pole on the opposite side of Upper Drive near the property's southwest corner. Existing lighting is sufficient to meet the requirements of this section.

#### **50.06.006 GEOLOGIC HAZARDS AND DRAINAGE**

No geologic hazards are present on the subject property.

##### **3. DRAINAGE STANDARDS**

---

###### **b. Drainage Standard for Major Developments, Partitions, Subdivisions, and Certain Structures**

On-site water quality/detention is proposed to be provided in the form of rain gardens. A bio-swale will be provided along the private driveway. The site drains towards Upper Drive and city storm sewer is available in this street to accommodate any overflow from these facilities.

#### **50.06.007 SOLAR ACCESS**

All three lots meet the basic requirement of LOC.06.007.1.d.i: they all have a north-south dimension in excess of 90 feet (Parcel 1 – 130', Parcels 2 & 3 – 110'). Additionally, they front on Upper Drive, which is oriented within 26 degrees of an east-west axis. Note: per LOC 50.10.003: "For a flag lot, the front lot line is the lot line that is most parallel to and closest to the street, excluding the pole portion of the flag lot."

#### **50.06.008 UTILITIES**

All necessary public utilities are available to serve this proposed development:

**Sanitary Sewer:** Existing 8" sewer in Upper Drive. There are two existing laterals serving the homes on the property. One additional lateral will be installed, as shown on the utility plan.

**Water:** There is an existing 8" water main in Upper Drive that provides service to the subject property. There is an existing fire hydrant on the south side of Upper Drive, opposite the property's southeast corner.

**Storm Drainage:** There is an existing 18" storm drain in Upper Drive, with a storm manhole near the intersection of the existing driveway to the subject property. It is proposed that individual rain gardens be provided for each lot to accommodate roof and foundation drains for new homes. The storm drainage for the proposed driveway will sheet to landscaped areas.

**Streets:** Upper Drive is a two-lane neighborhood collector. The proposed access drive will serve all three lots in the proposed development. The garage for the new home to be constructed on Parcel 1 will take access from the private driveway and will be set back a minimum of 20' from the easement. All three parcels will be subject to a joint maintenance agreement for future repairs to the private drive.

**Sidewalks:** There are no sidewalks in the vicinity of the subject property. There is an existing asphalt pathway on the south side of Upper Drive.

**Other Utilities:** Gas, telephone, and cable television services are installed underground along the property's frontage. Existing power service is from an overhead cable. All new utilities serving the proposed lots will be installed underground.

#### **50.07.007 LAND DIVISIONS**

##### **2. FLAG LOTS**

- a. Parcelization Plan: The proposed partition for the subject property provides for complete build-out of the site. No further parcelization is proposed or feasible.

- b. Exceptions: No exceptions are requested.
  
- c. Access: As required, the access to Parcels 1, 2 and 3 have been consolidated into a single driveway. The flag lots have access via easement onto a public street (Upper Drive). The access drive serves three lots, which satisfies the maximum standard of eight lots. No other access drive is located within 50 feet of the proposed access. Addressing will be posted at the entrance to the access drive. Tax Lot 1800 to the north is “developable” as it is more than 27,000 sq. ft. in area and is zoned R-7.5. Per the requirements of this section, the access lane will extend through the subject property to the boundary of TL 1800.
  
- d. Lot Configuration Requirements
  - i. Determination of Front Yard: As shown on the Site Plan, the front yard will be measured from the access easement or, in the case of Parcel 3, the extension of the access easement.
  
  - ii. Lot Width: The lot width, as measured from midpoint to midpoint of the lines perpendicular to the access easement, exceeds the minimum standard for the R-7.5 zone.
  
  - iii. Lot Size: The lot area for the parcels within this partition, exclusive of the access easement, exceeds the minimum lot size, as shown on the Site Plan.
  
- e. Building and Site Design Standards
  - i. Building Orientation: As required by this section, the front of the homes on Parcels 2 and 3 will be oriented towards the accessway.
  
  - ii. Garage placement: Compliance of garages with these standards will be reviewed at the time of building permit application.
  
  - iii. Maximum Structure Height

The height of a single-family residential structure and any accessory structures on a flag lot may not exceed the greatest of 22 feet or the average height of all dwellings on properties abutting the development site, as determined prior to the time of creation of the flag lot. There are 11 properties abutting the subject property. The houses on the three parcels to the north of the subject property (TL 1800, 1900 & 2000) are located more than 100 feet from the site. Per LOC 50.07.007.2.e.iii(1)(b), a height of 28 feet is used for these lots. The height of the dwellings on abutting properties, as shown on the Site Plan, averages 22'. The maximum structure height allowed on Parcels 2 and 3 is 22 feet.
  
  - iv. Access Lane Siting: The proposed access lane is not located closer than five feet to any existing dwellings.

v. Setback Requirements:

(1) As stated in this section, the standard front yard setback of the R-7.5 zone is superseded by the following front yard requirement: A minimum ten ft. front yard setback is required from the access lane, except that a 20-ft. setback is required from the access lane to the front of a garage or carport when the garage or carport opening faces the access lane. Compliance will be reviewed at the time of building permit application.

(2) Where a flag lot abuts a lot in a residential district of lower density, the greater setback requirements of the more restrictive district shall apply for those yards which have abutting property lines. Comment: Not applicable.

(3) The side and rear yard setbacks shall be established at the time of flag lot creation, subject to the following requirements:

(a) The sum of the side and rear yard setbacks on flag lots shall be not less than:

(i) Fifty ft. in R-10 and R-15 zones; and

(ii) Forty-five ft. in residential zones other than R-10 and R-15.

Comment: Proposed building envelopes for Parcels 2 and 3 are shown on the site plan. The 10' side yards plus 25' rear yards satisfy the minimum total of forty-five feet.

vi. Lot Width Requirements: As required by this section, the proposed lot width dimension for the flag lots satisfies the minimum lot width standard for the R-7.5 zone.

- f. Screening, Buffering and Landscape Installation: Proposed landscaping for the buffering of the access strip is shown on the Landscape Plan. Existing mature trees are retained and additional plantings will be provided at the time of the construction of the single-family homes on these parcels. Existing cedar fences satisfy fencing requirements on the rear yards of Parcels 2 and 3. A six foot high wood fence will be provided by the builder along perimeter (north) side yard of Parcel 3.

## OTHER ORDINANCES

Utilities (LOC Chapter 38): These standards will be addressed during building permit review.

System Development Charges (LOC Chapter 39): SDCs are assessed at the time of issuance of building permits.

Streets and Sidewalks (LOC Chapter 42): Sidewalks along Upper Drive are not recommended by the City Engineer at this time. The applicant will sign a non-remonstrance agreement for participating in a future Local Improvement District for street improvements per City Engineering memo dated May 21, 2014.

Tree Removal and Protection (LOC Chapter 55):

As required by this Chapter, existing trees exceeding 5" in diameter are mapped on the Site Plan and Existing Conditions Plan. The design of the proposed partition has been careful to preserve as many trees as possible. This was a major area of concern at the neighborhood meeting on this project. The proposed access easement will only require the removal of six existing trees, as indicated on the site plan. Review of any trees required to be removed for construction of homes will take place at the time of building permit application.

Tree removal in conjunction with a proposed land division is reviewed as a part of that application and must comply with the criteria of LOC 55.02.080. The arborist's report attached to this application notes that several of the mature conifers on the property are potentially hazardous. A separate application for removal of these trees may be filed prior to final plat approval.

**55.02.080 Criteria for Issuance of Type II Tree Cutting Permits.**

*An applicant for a Type II tree cutting permit shall demonstrate that the following criteria are satisfied. The City Manager may require an arborist's report to substantiate the criteria for a permit.*

*1. The tree is proposed for removal for landscaping purposes or in order to construct development approved or allowed pursuant to the Lake Oswego Code or other applicable development regulations. The City Manager may require the building footprint of the development to be staked to allow for accurate verification of the permit application;*

Comment: The trees proposed to be removed are listed in the following table along with the reason for the removal.

Tree ID	Size and Species	Condition	Reason for Removal
2	17" Douglas fir	Poor	Blocks line of sight at drive intersection.
3	35.5" Douglas fir	Poor	Too close to drive.

14	39" Douglas fir	Poor	Too close to drive.
30	Cherry	Fair	Too close to drive.
31	No ID	Poor	In driveway alignment.
34	Cherry	Poor	In driveway alignment.

*2. Removal of the tree will not have a significant negative impact on erosion, soil stability, flow of surface waters, protection of adjacent trees, or existing windbreaks; and*

Comment: The trees proposed to be removed are located on flat ground and not near any bank, water resource, or steep slope. Removal, therefore, will not have a significant impact upon erosion, soil stability, or flow of surface waters. The removal of these trees still leave a significant cluster of trees on the property and will not impact an existing windbreak.

*3. Removal of the tree will not have a significant negative impact on the character, aesthetics, or property values of the neighborhood. The City may grant an exception to this criterion when alternatives to the tree removal have been considered and no reasonable alternative exists to allow the property to be used as permitted in the zone. In making this determination, the City may consider alternative site plans or placement of structures or alternate landscaping designs that would lessen the impact on trees, so long as the alternatives continue to comply with other provisions of the Lake Oswego Code.*

Comment: The subject property is wooded and the removal of these trees still leave a significant cluster of trees on the property. This removal will be of minimal impact to the surrounding neighborhood due to the limited nature of the tree removal and the fact that multiple large trees will remain on the property following development. Additional trees are proposed to be planted on the property as shown on the landscape plan and this will help to mitigate for the trees to be removed.

*4. Removal of the tree is not for the sole purpose of providing or enhancing views.*

Comment: The tree removal is necessary in order to construct the access drive and provide safe lines of sight at the driveway intersection with Upper Drive. It is not for the purpose of enhancing or providing views.

*5. The City shall require the applicant to mitigate for the removal of each tree pursuant to LOC 55.02.084. Such mitigation requirements shall be a condition of approval of the permit.*

Comment: Mitigation is proposed, as discussed below.

*Section 55.02.084 Mitigation Required.*

Comment: The applicant proposes to additional trees on the property, as shown on the landscape plan. These trees will be a minimum of 2-inch caliper to mitigate for the trees removed and to provide for buffering of the driveway.

Conclusion: The proposed application for a partition on this site complies with the applicable approval criteria. Approval of this application is hereby requested.

*Robert Mazany and Associates*  
*Tree and Landscape Consulting Service*

RECEIVED

MAY 04 2015

City of Lake Oswego  
Community Development Dept.

**MEMORANDUM**

**TO:** Richard E. Givens  
Planning Consultant

**FROM:** Robert Mazany, ASCA  
Registered Consulting Arborist #133

**DATE:** March 10, 2015

**RE:** Proposed Partition



I have completed a preliminary site and plan review of the proposed 3 parcel partition on Upper Drive in Lake Oswego as requested.

There are 34 trees with diameters of 6 inches and larger within or in close proximity to the site including several not noted on the tree location plan. These have been marked on site and added to a copy of the plan in their approximate location. The attached Field Note Narrative identifies all trees by specie, diameter and condition. Potential construction impacts are not noted in this report. These will be determined following a review of more detailed site improvement plans along with more definitive tree protection requirements.

This report may be amended and additional information submitted following reviews of future, more detailed site development plans.

Please contact me if you have any questions or when I may be of further assistance on this project.

Attachments:

- Numbered Tree Plan
- Field Note Narrative

**Field Note Narrative**  
**S.W. Upper Drive – Lake Oswego**

This narrative has been prepared to document all trees with diameters of 6 inches and larger within the proposed development site. Number tags have been attached to each tree and correspondingly note on a copy of the tree location plan. Diameters have been field verified and are current as measured by industry standards.

<u>Tree No.</u>	<u>Specie</u>	<u>Diameter</u>	<u>Condition/Comment</u>
01	Garry oak	26.0"	Fair – Off site at the southwest corner of the neighbors property.
02	Douglas fir	17.0"	Poor – New terminal leader at 20 feet from old storm or topping wound area. Has trunk eruptions and slight lean to south over roadway.
03	Douglas fir	35.5"	Poor – Multi-stem terminal leaders at 20' from old storm damage or topping wound area.
04	Tulip/Saucer magnolia	10.0" @ 6'	Fair.
05	Persian Walnut	17.0"	Fair.
06	Douglas fir	45.0"	Poor – Exudate on trunk from insect wounds. Broken crown with multiple new terminal leaders at 66 feet. Heavy side pruning on east trunk for utility line clearance.
07	Douglas fir	37.0"	Fair – Heavy pruning on east trunk for utility line clearance.
08	Douglas fir	42.0"	Fair – Heavy pruning on east trunk for utility clearance
09	Western red cedar	16.5"	Poor – Severely topped for utility line clearance with weak stem union at 20 feet with decay.
10	Douglas fir	39.0"	Fair/Poor – New terminal leader at 40 feet from old crown failure or topping.
11	Douglas fir	25.0"	Poor – Trunk fracture at 40 feet.
12	Douglas fir	25.0"	Fair – Suspect interior decay with structural weakness.
13	Douglas fir	37.0"	Fair.

<u>Tree No.</u>	<u>Specie</u>	<u>Diameter</u>	<u>Condition/Comment</u>
14	Douglas fir	39.0"	Poor – Conk at old branch wound with interior decay and structural weakness suspected.
15	Douglas fir	29.0"	Fair.
16	Douglas fir	23.0"	Fair.
17	Douglas fir	37.0"	Fair.
18	Grand fir	45.0"	Fair – Trunk rupture at 3 feet.
19	Bigleaf maple	23.0"	Poor – Trunk decay with separation to 12 feet.
20	Bigleaf maple	29.0" @ 6'	Poor – Serious basal cavity from ground to 6 feet.
21	Bigleaf maple	15.0"	Fair – Property line tree.
22	Cherry sp.	9.0"	Fair.
23	Garry oak	51.0"	Fair – With structural support and other therapeutic care this tree should be considered to be retained and protected.
24	Apple sp.	11.0 @ 3'	Poor – Topped at 4 feet with serious decay.
25	Flowering plum	Multi 3"-6" stem at ground	Fair.
26	Japanese maple	9.0" @ 1'	Fair.
27	Bigleaf maple	19.0"	Poor – Decay area in lower trunk with a weak stem union at 10 feet.
28	Apple sp.	10.0"	Poor.
29	Douglas fir	35.0" est.	Fair – Off site on neighboring property to the east.
30	Cherry sp.	17.0" at ground	Fair – Multi-stem at 1 foot. Not on plan.
31	No ID	Multi-stem	Poor – Partially uprooted. Not on plan.
32	Walnut sp.	8.5"	Fair.

<u>Tree No.</u>	<u>Specie</u>	<u>Diameter</u>	<u>Condition/Comment</u>
33	Bigleaf maple	12.0"	Poor – Barbed wire embedded in lower trunk. Not on plan.
34	Cherry	16.0"	Poor – Not on plan.

Additional Condition Comments

1. The majority of Douglas fir have been topped or suffered serious storm related crown failure in the past forming new terminal leaders. These trees have a high risk/failure potential in the old wound areas.
2. Mallet sounding of the lower trunk areas of the fir also indicates the possibility of serious interior weakening sufficient to compromise the structural integrity. The presence of conk on some trees also gives evidence of decay disease pathogens including *Phellinus pini*.
3. The fir have grown in a fairly dense contiguous stand which has minimized the potential for failure to this point. The removal of any will subject the remainder to added wind thrust and potential failure.
4. Any fir that are considered to be retained should have a more thorough detailed diagnostic inspection at the crown wound areas and stems. This is to determine the extent of decay which maybe present.
5. With few exceptions the current condition of the fir and failure potential, predominantly the upper crowns, dictates removal should be considered. A more detailed diagnostic assessment may allow for some exceptions.
6. Any off-site tree within 15 feet of proposed construction should be included for tree protection.

## **Tree & Plant Preservation/Protection**

### **PART 1 – GENERAL**

#### **1.01 DESCRIPTION:**

- A. General requirements: Preservation, protection, and trimming of existing trees and shrubs, and other vegetation indicated to remain.
  
- B. Definitions:
  - 1. Registered Consulting Arborist (RCA): A Consulting Arborist registered with the American Society of Consulting Arborists (ASCA).
  
  - 2. Project Consulting Arborist (PCA): A Registered Consulting Arborist engaged to be a member of the project team.
  
  - 3. Certified Arborist: Certified by the International Society of Arboriculture (ISA).

#### **1.02 PROJECT CONDITIONS:**

- A. Make every effort to protect all trees, shrubs, ground cover and other vegetation existing on the Project site with the exception of that indicated to be removed.
  
- B. Meet local jurisdiction requirements for protection of existing trees and vegetation.
  
- C. Provide temporary fencing, barricades and guards as required to protect trees and other plants which are to remain from all damage. Erect prior to commencement of clearing and demolition work and remove only after all work potentially injurious to trees and other plants is complete. Fence shall be placed as far from trees as is practical, but in no instance closer than one foot behind required construction limits.

Fence should be semi-permanent six-foot chain link fence on steel posts placed no further than ten feet apart, kept taut and in place throughout the duration of construction or as authorized by the PCA.. Four foot visibility plastic fence may be used, if acceptable to the local jurisdiction, on steel posts six feet apart.

- D. Protect all trees from stockpiling, material storage, vehicle parking and driving within the tree drip line or tree protection fence area.
- E. Protect all plant growth including root systems of trees and plants from:
  - 1. Dumping of refuse.
  - 2. Chemically injurious materials and liquids.
  - 3. Noxious materials in solution caused by run-off and spillage during mixing and placement of construction materials, and drainage from stored materials.
  - 4. Continual puddling of running water.
- F. Restrict vehicular and foot traffic to prevent compaction of soil over root systems.

## **PART 2 – PRODUCTS**

### **2.01 – MATERIALS:**

- A. As indicated and required elsewhere in the Specification Sections, and as may be recommended by the PCA.

## PART 3 – EXECUTION

### 3.01 – GENERAL:

- A. Protect root systems of existing trees, shrubs and ground covers from damage due to noxious materials in solution caused by run-off and spillage during mixing and placement of construction materials, and drainage from stored materials.
- B. Protect root systems from flooding, erosion, excessive wetting and drying resulting from de-watering and other operations.
- C. Protect all existing plant material to remain against unnecessary cutting, breaking and skinning of roots and branches, skinning or bruising of bark.
- D. Do not allow fires under and adjacent to trees or other plants which are to remain.
- E. The PCA should direct removal of branches from trees and large shrubs, which are to remain, if required to clear new construction and where indicated; and to direct tree root pruning and relocation work.
- F. Where directed by the PCA, extend pruning operations to restore natural shape of entire tree.
- G. Cut branches and roots with sharp pruning instruments. Do not break, chop or mutilate.
- H. Water trees and other vegetation, which are to remain, as necessary to maintain their health during the course of the work. Maintain a water schedule and document.

### 3.02 – EXCAVATION AROUND TREES:

- A. Excavate within root zone of trees only where indicated and acceptable to the PCA.
- B. Excavate around tree roots within tree root zone only under the direction of the PCA.
- C. Where trenching for utilities is required within root zones, tunnel under and around roots by hand digging. Do not cut main lateral support roots. Cut smaller roots that interfere with installation of new work; use sharp pruning tools.
- D. Where excavating for new construction is required within root zones of trees, hand excavate to minimize damage to root systems. Use narrow tine spading forks and comb soil to expose roots. Relocate roots in backfill areas whenever possible. If large, main lateral roots are encountered, expose beyond excavation limits as required to bend and relocate without breaking.
- E. If encountered immediately adjacent to location of new construction and relocation is not practical, cut roots approximately 6 inches back from new construction.
- F. Do not allow exposed roots to dry out before permanent backfill is placed; provide temporary earth cover, pack with wet peat moss or 4 layers of wet untreated burlap and temporarily support and protect from damage until permanently relocated and covered with backfill. Water puddle backfill to eliminate voids and air pockets.
- G. All pruning shall be performed to ANSI A-300 pruning standards by Oregon state registered tree care firms employing Certified Arborists. Other therapeutic care work shall be performed to Tree Care Industry Standards.

### 3.03 – GRADING AND FILLING AROUND TREES:

- A. Maintain existing grade within root zones of trees unless otherwise indicated or acceptable to the PCA.
- B. Lowering Grades: Where existing grade is above new finish grade shown around trees, under direction of PCA, carefully hand excavate within root zones to new grade. Cut roots exposed by excavation to approximately 3 inches below elevation of new finish grade.
- C. Raising Grades: Permitted only as acceptable to the PCA.

### 3.04 – REPAIR AND REMOVAL OF TREES:

- A. The PCA should direct tree repair work. Engage a Certified Arborist, acceptable to the PCA, to perform tree repair work. Repair trees damaged by construction operations in a manner acceptable to the PCA. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.
- B. Remove dead and damaged trees that are determined by the PCA to be incapable of restoration to normal growth pattern.

### 3.05 – REPAIR AND REPLACEMENT OF SHRUBS:

- A. Repair shrubs, and other vegetation damaged by construction operations in a manner acceptable to the PCA. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged plants.
- B. Remove and replace dead and damaged plants that are determined by the PCA incapable of restoration to normal growth pattern.

1. Provide new shrubs of same size and specie as those replaced or as otherwise acceptable to the PCA and Landscape Architect.
2. Plant and maintain as acceptable to the PCA and Landscape Architect.

### 3.06 – HARDSCAPE INSTALLATION WITHIN THE PROTECTION ZONES:

- A. Electrical conduit and irrigation main lines should be run under walkways, within stone or concrete sub-base, and should not cut into native soil within the Tree Protection Zone (within the drip line). Drip irrigation shall be installed within the Tree Protection Zone. Lateral electrical lines to individual lights, should be installed as close to the soil surface as possible with short runs from the main conduit.
- B. Electrical fixtures, housing, and irrigation valves must be installed with care to avoid cutting roots. Digging must be minimal with excess dirt removed from the tree preservation area. Do not cut roots greater than 1" in diameter without the approval of the PCA. Roots greater than 1" in diameter exposed during excavation should be cut squarely at the edge of the excavation with a sharp saw or appropriate pruning tool.
- C. Install walkways as close to grade as possible to minimize excavation into the soil where large roots and areas of high root density exist. Backfill with loose dirt to the minimum depth necessary to achieve a natural look. Mulch if appropriate, as directed by the PCA.

### 3.07 – COMPENSATION TO OWNER FOR TREES:

- A. Contractor shall pay the Owner the value of existing trees to remain that died or were damaged and required removal because of the Contractor's failure to provide adequate protection and maintenance.

- B. Value of existing trees will be determined by the PCA in accordance with the evaluation formula set forth in "The Council of Tree and Landscape Evaluation Guide for Plant Appraisal," ninth edition, 2000.
- C. Any wound or damage to a preserved tree constitutes partial injury. These include, but are not limited to:
  - Any cambian tissue damage.
  - Unauthorized cutting, breaking or removing tree branches.
  - Unauthorized cutting or damaging protected root zones.
  - Soil compaction.
  - Toxic run-off into tree preservation area.
- D. Partial injury will be calculated by percentage of the total value of the damaged tree.
- E. The loss value penalty will include cost to the Owner for loss appraisal by the PCA plus the cost for necessary damage repair.

#### **PART 4 – PRE-CONSTRUCTION TREE CARE**

##### **4.01 – PRUNING AND STRUCTURAL SUPPORT:**

- A. All trees designated to be retained within the project limits shall be pruned to ANSI A-300 Pruning standards with selective low limb removal, as directed and approved by the PCA, where required for construction clearance.
- B. Structural support (cabling) may be required on specific trees as identified by the PCA to Tree Care Industry Standards.

- C. All therapeutic care recommended should be directed, inspected, and approved by the PCA.

## **PART 5 – POST-CONSTRUCTION TREE CARE**

### **5.01 – FERTILIZATION/AERATION:**

- A. Aeration as determined by the PCA may be required in areas where construction compaction has occurred.
- B. Deep root liquid injection fertilizing of all trees retained within the project limits may be required following the completion of construction to Tree Care Industry Standards. The timing of this fertilizing will be determined by the PCA.

Prepared by:

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Registered Consulting Arborist #133  
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RECEIVED

MAY 04 2015

# Upper Drive Partition

City of Lake Oswego  
Community Development Dept.

Legal: T2S R1E 08CA, TL 4100

Address: 3805, 3790 & 3975 Upper Drive, Lake Oswego

Date: March 23, 2015



## NARRATIVE:

An on-site infiltration test was conducted using the City of Portland procedure on March 21, 2015. A series of three tests were conducted with the final test indicating an infiltration rate of 3.75 inches/ hour. Using a safety factor of 2 a 1.87inches/hour was used in the sizing calculations.

The City of Portland "Simplified Approach" open pit test procedure was used. A hole approximately 8" in diameter and 37" deep was dug and the soil was found to be moist but no seep or water was noted. The soil was brownish clayey silt with no stones. A series of tests were taken and the last test, per the City of Portland procedure was used as the indicated infiltration rate.

Time	Depth to water	Time	Depth to water
11:25	19"	12:05	22.25"
11:35	20.87"	12:15	22.63"
11:45	21.5"	12:25	22.75"
11:55	22.0"	22.75-19 = 3.75"	SF (2) = 1.87"/hr

A Rain garden or infiltrator (StormTech) chambers could be used for on-site disposal of roof storm water from the proposed new houses. The existing house at 3805 currently has the roof drains spilling directly onto the ground.

## REFERENCE:

The King County Department of Public Works, Hydrographic Program, ver 4.21B and using a 10year event of 3.3 inches/hour.

## ASSUMPTION:

Assuming a tentative foot print of 50X50 = 2500 sq ft = 0.057 A<sub>c</sub>.

The private road can sheet to a soakage trench running along the side of the paved surface and will be sized for per the final layout.

**EXHIBIT F-3**  
LU 14-0070

XXXXXXXXXXXXXXXXXXXXXXXXX S.C.S. TYPE-1A DISTRIBUTION XXX

XXXXXXXXXXXXX 10-YEAR 24-HOUR STORM xxxx 3.30" TOTAL PRECIP. XXX

---

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

0.0,86,0.057,98,5

DATA PRINT OUT:

AREA(ACRES)	PERVIOUS		IMPERVIOUS		TC(MINUTES)
	A	CN	A	CN	
.1	.0	86	.1	98	5.0
PEAK-Q(CFS)	T-PEAK(HRS)		VOL(CU-FT)		
.05	7.67		634		

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

C:\lower-

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP

---

StormTech SC 740 units - Assume 4 with 18-inches rock at ends and 18-inches on sides

System depth	rock	infiltrator	total	per area
0.0	0.0	0.0	0.0	0.0
0.5	12.9	27.0	39.9	206.6
1.0	25.8	85.2	111.0	206.6
1.5	38.6	140.9	179.4	206.6
2.0	51.5	192.8	244.3	206.6
2.5	64.4	238.6	303.0	206.6
3.0	77.3	272.6	349.9	206.6
3.5	90.2	299.6	389.8	206.6

ENTER OPTION

RESERVOIR ROUTING INFLOW/OUTFLOW ROUTINE

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

C: 153DATA

DISPLAY ROUTING DATA (Y or N)

Y

ROUTING DATA:

STAGE (FT)	DISCHARGE (CFS)	STORAGE (CU-FT)	PERN-AREA(SQ-FT)
.00	.00	.0	.0
.50	.00	39.9	206.6
1.00	.00	111.0	206.6
1.50	.00	179.5	206.6
2.00	.00	244.3	206.6
2.50	.00	303.0	206.6
3.00	.00	349.9	206.6
3.50	.00	389.8	206.6

AVERAGE PERM-RATE: 32.0 MINUTES/INCH

SATURATED PERM-RATE: 32.0 MINUTES/INCH

GROUNG STORAGE BEFORE SATURATION: .00 CU-FT/SQ-FT

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

C:UPPER

INFLOW/OUTFLOW ANALYSIS:

PEAK-INFLOW(CFS)	PEAK-OUTFLOW(CFS)	OUTFLOW-VOL (CU-FT)
.05	.00	0
INITIAL-STAGE (FT)	TIME-OF-PEAK(HRS)	PEAK-STAGE-ELEV(FT)
.00	16.67	1.53

PEAK STORAGE: 180 CU-FT

INFILTRATED VOLUME: 604 CU-FT

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

CONCLUSION:

4-SC-740 StormTech chambers would be sufficient for a roof area of 2500 sq feet. The facilities are to be a minimum of 10 feet foundations and 5-feet from property lines.

MAINTENANCE:

It is recommended that a sediment trap be installed ahead of either type of unit to keep leaves and other materials out of the storage areas. .

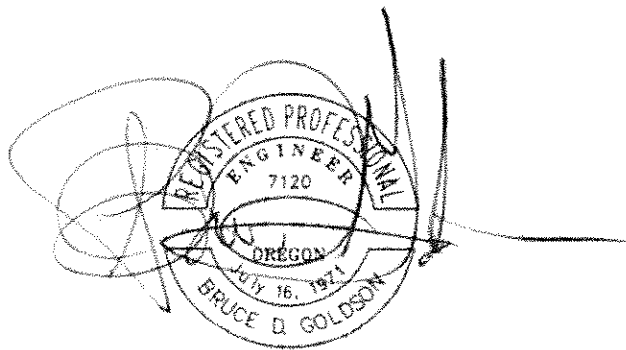
Prepared by:

Bruce D.Goldson, PE

Theta,LLC

PO Box 1345

Lake Oswego, Oregon 97035



EXPIRES: 06-30-15

# 8.0 Incremental Storage Volumes

**Table 5** and **Table 6** provide incremental storage volumes for SC-310 and SC-740 chamber systems. This information may be used to calculate a detention/retention system's stage storage volume. A spreadsheet is available at [www.stormtech.com](http://www.stormtech.com) in which the number of chambers can be input for quick cumulative storage calculations

Product Specifications: 1.1, 2.2, 2.3, 2.4 and 2.6

**TABLE 5 – SC-310 Incremental Storage Volumes Per Chamber**

Assumes 40% Stone Porosity. Calculations are Based Upon a 6" (152 mm) Stone Base Under the Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft <sup>3</sup> (m <sup>3</sup> )	Total System Cumulative Storage ft <sup>3</sup> (m <sup>3</sup> )
28 (711)	↑ 14.70 (0.416)	31.00 (0.878)
27 (686)	↑ 14.70 (0.416)	30.21 (0.855)
26 (680)	Stone 14.70 (0.416)	29.42 (0.833)
25 (610)	Cover 14.70 (0.416)	28.63 (0.811)
24 (609)	↓ 14.70 (0.416)	27.84 (0.788)
23 (584)	↓ 14.70 (0.416)	27.05 (0.766)
22 (559)	14.70 (0.416)	26.26 (0.748)
21 (533)	14.64 (0.415)	25.43 (0.720)
20 (508)	14.49 (0.410)	24.54 (0.695)
19 (483)	14.22 (0.403)	23.58 (0.668)
18 (457)	13.68 (0.387)	22.47 (0.636)
17 (432)	12.99 (0.368)	21.25 (0.602)
16 (406)	12.17 (0.345)	19.97 (0.566)
15 (381)	11.25 (0.319)	18.62 (0.528)
14 (356)	10.23 (0.290)	17.22 (0.488)
13 (330)	9.15 (0.260)	15.78 (0.447)
12 (305)	7.99 (0.227)	14.29 (0.425)
11 (279)	6.78 (0.192)	12.77 (0.362)
10 (254)	5.51 (0.156)	11.22 (0.318)
9 (229)	4.19 (0.119)	9.64 (0.278)
8 (203)	2.83 (0.081)	8.03 (0.227)
7 (178)	1.43 (0.041)	6.40 (0.181)
6 (152)	↑ 0	4.74 (0.134)
5 (127)	0	3.95 (0.112)
4 (102)	Stone 0	3.16 (0.090)
3 (76)	Foundation 0	2.37 (0.067)
2 (51)	↓ 0	1.58 (0.046)
1 (25)	↓ 0	0.79 (0.022)

Note: Add 0.79 cu. ft. (0.022 m<sup>3</sup>) of storage for each additional inch (25 mm) of stone foundation.

**TABLE 6 – SC-740 Incremental Storage Volumes Per Chamber**

Assumes 40% Stone Porosity. Calculations are Based Upon a 6" (152 mm) Stone Base Under the Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft <sup>3</sup> (m <sup>3</sup> )	Total System Cumulative Storage ft <sup>3</sup> (m <sup>3</sup> )
42 (1067)	↑ 45.90 (1.300)	74.90 (2.121)
41 (1041)	↑ 45.90 (1.300)	73.77 (2.089)
40 (1016)	Stone 45.90 (1.300)	72.64 (2.057)
39 (991)	Cover 45.90 (1.300)	71.52 (2.025)
38 (965)	↓ 45.90 (1.300)	70.39 (1.993)
37 (940)	↓ 45.90 (1.300)	69.26 (1.961)
36 (914)	45.90 (1.300)	68.14 (1.929)
35 (889)	45.85 (1.298)	66.98 (1.897)
34 (864)	45.69 (1.294)	65.75 (1.862)
33 (838)	45.41 (1.286)	64.46 (1.825)
32 (813)	44.81 (1.269)	62.97 (1.783)
31 (787)	44.01 (1.246)	61.36 (1.737)
30 (762)	43.06 (1.219)	59.66 (1.689)
29 (737)	41.98 (1.189)	57.89 (1.639)
28 (711)	40.80 (1.155)	56.05 (1.587)
27 (686)	39.54 (1.120)	54.17 (1.534)
26 (660)	38.18 (1.081)	52.23 (1.479)
25 (635)	36.74 (1.040)	50.23 (1.422)
24 (610)	35.22 (0.977)	48.19 (1.365)
23 (584)	33.64 (0.953)	46.11 (1.306)
22 (559)	31.99 (0.906)	44.00 (1.246)
21 (533)	30.29 (0.858)	41.85 (1.185)
20 (508)	28.54 (0.808)	39.67 (1.123)
19 (483)	26.74 (0.757)	37.47 (1.061)
18 (457)	24.89 (0.705)	35.23 (0.997)
17 (432)	23.00 (0.651)	32.96 (0.939)
16 (406)	21.06 (0.596)	30.68 (0.869)
15 (381)	19.09 (0.541)	28.36 (0.803)
14 (356)	17.08 (0.484)	26.03 (0.737)
13 (330)	15.04 (0.426)	23.68 (0.670)
12 (305)	12.97 (0.367)	21.31 (0.608)
11 (279)	10.87 (0.309)	18.92 (0.535)
10 (254)	8.74 (0.247)	16.51 (0.468)
9 (229)	6.58 (0.186)	14.09 (0.399)
8 (203)	4.41 (0.125)	11.66 (0.330)
7 (178)	2.21 (0.063)	9.21 (0.264)
6 (152)	↑ 0	6.76 (0.191)
5 (127)	0	5.63 (0.160)
4 (102)	Stone 0	4.51 (0.125)
3 (76)	Foundation 0	3.38 (0.095)
2 (51)	↓ 0	2.25 (0.064)
1 (25)	↓ 0	1.13 (0.032)

Note: Add 1.13 cu. ft. (0.032 m<sup>3</sup>) of storage for each additional inch (25 mm) of stone foundation.

# Detention-Retention-Recharge

The StormTech SC-740 chamber optimizes storage volumes in relatively small footprints by providing 2.2 ft<sup>3</sup>/ft<sup>2</sup> (0.67 m<sup>3</sup>/m<sup>2</sup>) (minimum) of storage. This can decrease excavation, backfill and associated costs. The StormTech SC-310 chamber is ideal for systems requiring low-rise and wide-span solutions. The chamber allows the storage of large volumes, 1.3 ft<sup>3</sup>/ft<sup>2</sup> (0.4 m<sup>3</sup>/m<sup>2</sup>) (minimum), at minimum depths.

## StormTech SC-740 Chamber

(not to scale)

Nominal Chamber Specifications

**Size (L x W x H)**

85.4" x 51.0" x 30.0"  
(2170 x 1295 x 762 mm)

**Chamber Storage**

45.9 ft<sup>3</sup> (1.30 m<sup>3</sup>)

**Minimum Installed Storage\***

74.9 ft<sup>3</sup> (2.12 m<sup>3</sup>)

**Weight**

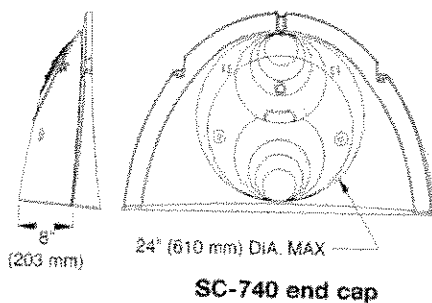
74.0 lbs (33.6 kg)

**Shipping**

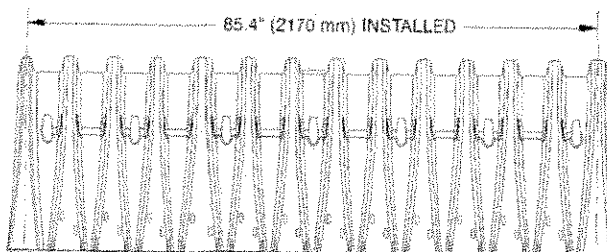
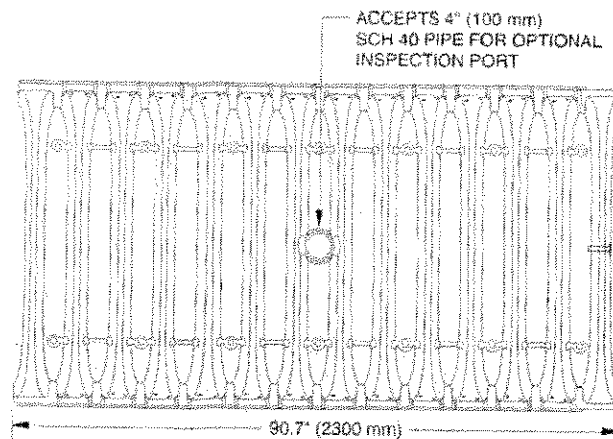
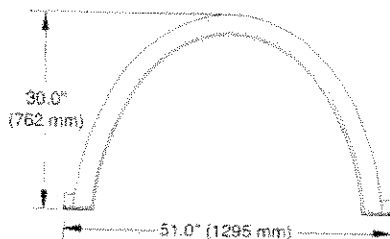
30 chambers/pallet

60 end caps/pallet

12 pallets/truck



SC-740 end cap



SC-740 chamber

## StormTech SC-310 Chamber

(not to scale)

Nominal Chamber Specifications

**Size (L x W x H)**

85.4" x 34.0" x 16.0"  
(2170 x 864 x 406 mm)

**Chamber Storage**

14.7 ft<sup>3</sup> (0.42 m<sup>3</sup>)

**Minimum Installed Storage\***

31.0 ft<sup>3</sup> (0.88 m<sup>3</sup>)

**Weight**

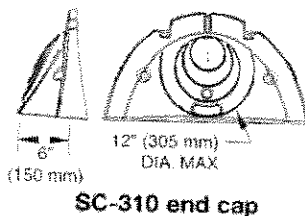
37.0 lbs (16.8 kg)

**Shipping**

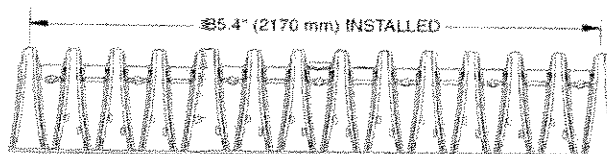
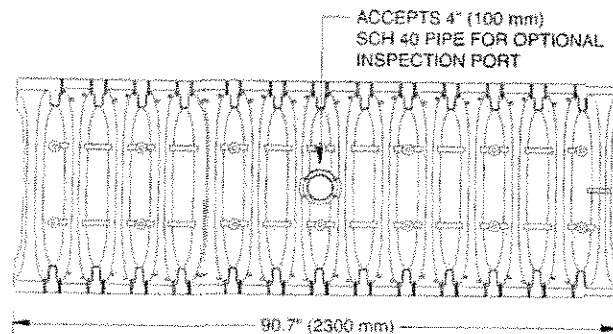
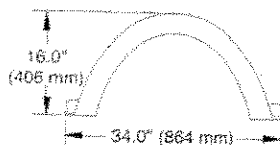
41 chambers/pallet

108 end caps/pallet

18 pallets/truck



SC-310 end cap



SC-310 chamber

\*This assumes a minimum of 6 inches (150 mm) of stone below, above and between chamber rows.

Neighborhood Meeting Minutes

Stan Kennedy Partition Application

3795 Upper Drive

The proposed partition was presented at the regular meeting of the Lake Grove Neighborhood Association on September 18, 2014. Rick Givens, Planning Consultant, spoke on the behalf of the applicant. Mr. Givens introduced the proposal, making use of a copy of the site plan of the partition. Mr. Givens explained that the application proposed to divide the site into three parcels and that three new single family homes would be built on the property to replace the three existing homes on the site. He showed how the access drive had been designed to accommodate the existing trees on the property and that only one tree is proposed to be removed to allow for the construction of the drive. He explained the approval process and that the public would have the opportunity to comment on the proposal before a staff decision is issued. Comments from the public were as follows:

1. Retention of as many existing trees as possible is a priority for the neighborhood. Mr. Givens explained that only one tree would be removed for the proposed driveway and that mitigation trees would be planted.
2. One person expressed concern that the site plan didn't reflect existing conditions on the property accurately. Mr. Givens explained that the site had been surveyed and that the map made use of the survey data. The issue was resolved when it was explained that the proposed access drive is being extended beyond the limits of the existing driveway. She apparently thought that we were saying that the access drive was limited to the existing driveway location.
3. A question was asked about the height of the homes on the flag lots and buffering requirements. Mr. Givens explained the limitation on the height of homes on flag lots being limited to 22 feet or the average of the heights of homes on surrounding properties. He explained that there is existing fencing around the property and that the driveway would be landscaped to provide additional buffering.

**EXHIBIT F-4**  
LU 14-0070





Lake Oswego Fire Department  
300 B AVE - P.O. Box 369  
Lake Oswego, OR 97034  
503-635-0275

Case File/Permit No.  
LU 14-0070

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**Date:** November 25, 2014  
**To:** Johanna Hastay, Associate Planner  
**From:** Gert Zoutendijk/Fire Marshal  
Email: gzoutendijk@ci.oswego.or.us Phone: 503-699-7454

## Fire Department - Plan Review Comments

I have received the information for the project summarized below and completed a review of the submittal on 11/25/2014. A summary of the review has been provided. Please feel free to contact me directly if you have any questions, comments or concerns regarding this information.

**Case File/Permit No.:** LU 14-0070  
**Project Location:** 3795 Upper Drive  
**Scope of Project:** Approval of a 3-parcel minor land partition

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### **FIRE DEPARTMENT ACCESS**

#### LOC 15.06.610 OFC 503.2.1 - Access Dimensions

The Oregon Fire Code is amended by Lake Oswego Municipal Code 15.06.610 to read as follows:

Dimensions. Fire apparatus access roads shall have an unobstructed width and uniform surface of not less than 15 feet one way, 20 feet if two way and a vertical clearance of 13'6", unless an exception is approved by the City Engineer and Fire Chief. Private roads or public streets where landscaping islands are used shall be considered one way each direction at the island.

Exceptions - Single family dwellings on lots:

- a. Driveway serving one lot: a 12 ft. paved driveway surface, with a 1.5 ft. shoulder on each side, is permitted.
- b. Access lane serving 2 - 4 lots: a 12 ft. paved access lane surface, with a 4 ft. shoulder on each side, is permitted if the habitable structures on all lots provide an alternative suitable method of fire suppression, i.e., automatic fire sprinkler systems, approved by the Fire Marshal.

Note: No parking is permitted on fire apparatus access roads that have a width less than 26 feet wide.

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#### 503.2.3 Access Surface

Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

Gravel is not an approved access surface.

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#### 503.2.5 Dead Ends

Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus.

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EXHIBIT F-5 LU 14-0070
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**WATER FLOW FOR FIRE PROTECTION**

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WS-0003 Hydrant Location Approved

Hydrant location with distance and size of the structure is approved.

WS-0007 Fire Flow Approved

Fire flow for fire protection is adequate.

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**GENERAL COMMENTS**

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G-0002 Alternate Method

For any deficiencies in access or water supply applicant could propose an alternate method in accordance with the provisions of ORS 455.610(5) in the form of fire sprinklers as approved by the Fire Marshal.

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**ADDITIONAL ITEMS**

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ADDITIONAL Additional Items

With the proposal of residential fire sprinklers in the homes, the access without a turnaround is approved. However, the gravel is not an approved surface.

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**DATE:** June 8, 2015  
**TO:** Johanna Hastay, Associate Planner  
**FROM:** Morgan Holen, Lake Oswego Contract Arborist  
**RE:** LU 14-0070 (Upper Drive) – Tree Evaluation

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At the City's request, I visited a site on Upper Drive to evaluate trees proposed for removal for driveway construction for LU 14-0070 on June 8, 2015. At staff's request, I specifically evaluated trees 2, 3 and 14, in terms of general condition and the potential for their removal to result in significant negative impacts to the protection of adjacent trees.

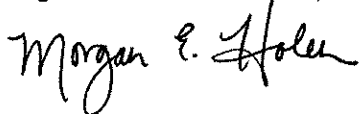
I generally concur with the applicant's arborist report. None of the Douglas-fir (*Pseudotsuga menziesii*) trees in the front of the lot are in good condition. The primary defect is that they have new tops originating from the juncture of old broken tops or old topping cuts. These trees do present an increased risk potential, but advanced assessment is needed to determine whether or not they meet the City's criteria for issuance of a hazardous tree removal permit.

Removal of trees 2, 3 and 14 is necessary for the proposed driveway construction and is not likely to result in impacts to the protection of adjacent trees. Trees 11, 12, 13, and others will remain in a group on the windward side of the stand. Although removal of trees 2, 3 and 14 is not likely to have a direct impact on the risk potential of the remaining trees, an advanced hazard tree risk assessment is recommended for the remaining trees at the time of site clearing, particularly trees 10 and 11.

As a condition of approval, the proposed bioswales should be relocated away from mature Douglas-firs to avoid root zone impacts that are likely to cause detrimental harm to the tree. Mature Douglas-firs are not tolerant of increases in soil moisture—they like what they have grown up adapted to. These trees are likely to decline and die rapidly if bioswales channeling and retaining water are constructed beneath the dripline area.

Please let me know if you have questions or need any additional information.

Thank you,  
Morgan Holen & Associates, LLC



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



**Hastay, Johanna**

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**From:** steverichards3@comcast.net  
**Sent:** Tuesday, June 02, 2015 9:42 AM  
**To:** Hastay, Johanna  
**Subject:** LU 14-0070

In regards to application LU 14-0070, I hope the city approves the 3-parcel partition development application.

My property at 3722 Eleanor Ct. backs up center of this lot. This lot as is has been a nuisance property. In addition to being unsightly due to lack of landscaping or basic yard care, the renters in the homes have compost (or trash) piles that attract raccoon and possums. These animals then leave food waste and feces in our yard. Also, I support the removal of the necessary trees, so long as an equal or greater number of replacement trees are planted.

One this property is developed with new homes, it will be a positive addition to the neighborhood.

Regards,

Steve Richards



## Hastay, Johanna

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**From:** Karen C <karen\_c83@yahoo.com>  
**Sent:** Tuesday, June 09, 2015 8:33 AM  
**To:** Hastay, Johanna  
**Subject:** Re - LU 14-0070 / 3795 Upper Drive

Good morning Johanna,

I hope you will add my remarks on this proposed development to the record;

There has already been too much lot-splitting & tree-cutting along Upper Drive, and we are quickly losing our once-abundant tree canopy.

I first saw this neighborhood 30+ years ago. At that time, houses were largely unseen from the road, they were set-back with one house on a large lot, and many of the owners had left their lots in a mostly natural state.

Today, there is a lot of open-sky seen from our backyard. This has caused us to lose the cooling-effect created by those trees.

We used to have regular sightings of Bald Eagles & Ospreys from our backyard - with so many of the trees disappearing, the wildlife is disappearing as well.

I agree with LGNA's request that, if the 3 houses must be built, the developer should be required to work-around existing trees.

I have a couple of other concerns, about the lot-splitting.

-Our addresses are a jumbled-mess along Upper Dr. because of the infill that has been happening all-along here.

We regularly have various strangers knocking on our door, because they cannot locate an Upper Dr. address. Besides that on-going annoyance for visitors & residents, I fear for what will happen some dark night when emergency-responders cannot locate an address.

I request there be no new development along Upper Dr. until the City has worked this problem out, and has ensured that all existing addresses are can be easily-located.

-Will there be a dedicated space for the 9 garbage cans for these houses?

To most people, that may seem minor, but it's a problem along here. Where I live, there is a driveway next-to ours plus two infill houses behind us. They have nowhere to put their cans, except where they block their own driveway.

It should be required by the City that there is dedicated space at the street for the 3 cans for each house.

I realize our current Council-majority has no interest in preservation, whether it's trees & streams, historic homes or public properties.

But that Council is here temporarily and the rest of us are stuck with the lasting impacts of their decisions, including the negative impact on some of our property values.

There are certain qualities that many in LO originally moved here for, and we expect the City to retain & preserve those qualities.

Thank you so much Johanna,

Karen Crichton

**EXHIBIT G-200**  
LU 14-0070



**Hastay, Johanna**

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**From:** Shadowmanblue51@aol.com  
**Sent:** Tuesday, June 09, 2015 9:06 AM  
**To:** Hastay, Johanna  
**Subject:** ref LU 14--0070

In Reference to NOTICE OF MONOR DEVELOPMENT APPLICATION, File No. LU 14-0070

I oppose any tree cutting related to this notice as stated above

Thank You

Jim Aldrich