

A LAND USE APPLICATION FOR SITE PLAN REVIEW

DATE: December 2013

SUBMITTED TO: City of Sherwood
22560 SW Pine Street
Sherwood, OR 97140

OWNER/APPLICANT: Jim and Patricia Dougherty
PO Box 623
Manzanita, OR 97130

CO-APPLICANT: Ava Joubert
EAN Holdings, LLC
20400 SW Teton
Tualatin, OR 97062



13910 SW Galbreath Drive, Suite 100
Sherwood, OR 97140
P: (503) 925-8799
F: (503) 925-8969
www.aks-eng.com

A LAND USE APPLICATION FOR SITE PLAN REVIEW

TABLE OF CONTENTS

APPLICATION CONTENTS (8 COPIES):

- City Submittal Checklist
- City Land Use Application Form
- Neighborhood Meeting Documentation
- Written Narrative
- County Assessor's Map

INCLUDED SEPARATELY WITH APPLICATION:

- Preliminary Plans – 22" x 34" (8 Sets)
- Reduced Plans – 8½" x 11" (1 Set)
- Reduced Plans – 11" x 17" (8 Set)
- Architectural Exterior Plans (2 Color Copies and 8 B&W Copies)
- Preliminary Stormwater Report (2 Copies)
- Trip CAP Analysis (4 Copies)
- Clean Water Services – Service Provider Letter (4 Copies)
- City of Sherwood PLA Notice of Decision
- Recorded Record of Survey
- Recorded Deeds
- Preliminary Title Report (2 Copies)
- Mailing Address Labels (2 Sets)
- Digital (pdf) Copy of Application (1 Compact Disc)
- City of Sherwood Application Fee (1 check)

CITY SUBMITTAL CHECKLIST



APPLICATION MATERIALS REQUIRED FOR SITE PLAN REVIEW CHECKLIST

Submit the following to the City of Sherwood Planning Department, 22560 SW Pine St., Sherwood, OR 97140: (503) 625-5522.

- ✓ It is strongly suggested that you have a pre-application meeting with the City prior to submitting for Site Plan Review. (See *Pre-application Process* form for information.)

Note: Clean Water Services (CWS) requires a pre-screening to determine if water quality sensitive areas exist on the property. If these sensitive areas exist, a Site Assessment and Service Provider Letter is required prior to submitting for Site Plan Review or undertaking any development. **This application will not be accepted without a completed Pre-Screening Form and if required a Service Provider Letter.** Please contact CWS at (503) 681-3600.

- ✓ If the proposal is next to a Washington County roadway, the applicant must submit an Access Report (Traffic Study) to Washington County Department of Land Use and Transportation (503) 846-8761. **This application will not be accepted until an Access Report (Traffic Study) is submitted to Washington County and the Access Report is deemed complete by the County; or written verification from Washington County that an Access Report is not required is provided.**

✓ **I. Fees**

See City of Sherwood current Fee Schedule, which includes the “Publication/Distribution of Notice” fee, at www.sherwoodoregon.gov Click on Departments/Planning/Fee Schedule.

Note: The above fees are required at the time you submit for site plan review. Additional fees will be charged for building permit, system development charges, impact fees and other fees applicable to the development. These fees will be charged when you make application for building permit. Building permit application will not be accepted until site plan approval is issued.

- ✓ **II. BACKGROUND INFORMATION** (All materials to be collated & folded (not rolled) to create *fifteen (15) sets).

*Note that the *final* application must contain fifteen (15) folded sets of the above, however, upon initial submittal of the application and prior to completeness review, the applicant may submit three (3) complete folded sets with the application in lieu of fifteen (15), with the understanding that fifteen (15) complete sets of the application materials will be required before the application is deemed complete and scheduled for review.

- ✓ **Application Form** – One original and fourteen (14) copies of a completed **City of Sherwood Application for Land Use Action** form. Original signatures from all owners must be on the application form.
- ✓ **Documentation of Neighborhood Meeting** (Type III- Type V) - Affidavits of mailing, sign-in sheets and a summary of the meeting notes shall be included with the application.
- ✓ **Tax Map** - Fifteen (15) copies of the latest Tax Map available from the Washington County Assessors Office showing property within at least 300 feet with scale (1"=100' or 1"= 200') north point, date and legend. **(See also approved PLA, Recorded ROS, and Recorded Deeds)**
- ✓ **Mailing Labels** – Two (2) sets of mailing labels for property owners within 1,000 feet of the subject site, including a map of the area showing the properties to receive notice. Mailing labels can be obtained from a private title insurance company. Ownership records shall be based on the most current available information from the Tax Assessor’s office. *It is the applicant’s responsibility to provide mailing labels that accurately reflect all property owners that reside within 1,000 feet of the subject site.*
- ✓ **Vicinity Map** – Fifteen (15) copies of a vicinity map showing the City limits and the Urban Growth Boundary. **(Provided in the preliminary plan set)**
- ✓ **Narrative** – Fifteen (15) copies and **an electronic copy** of a narrative explaining the proposal in detail and a response to the Required Findings for Site Plan Review, located in Chapter 16 of the Municipal Code/Zoning & Development, Section 16.90.010. The Municipal Code/Zoning & Development is available online at www.sherwoodoregon.gov, City Government/Records.
- ✓ **Electronic Copy** – An electronic copy of the **entire** application packet. This should include all submittal materials (narrative, vicinity map, mailing labels, site plan, preliminary plat, etc.).

III. REQUIRED PLANS

- ✓ Submit fifteen (15) sets of the following folded full-size plans and **an electronic copy in .PDF format.** Plans must have:
 - ✓ 1) The proposed name of the development. If a proposed project name is the same as or similar to other existing projects in the City of Sherwood, the applicant may be required to modify the project name.
 - ✓ 2) The name, address and phone of the owner, developer, applicant and plan producer.
 - ✓ 3) North arrow,
 - ✓ 4) Legend,
 - ✓ 5) Date plans were prepared and date of any revisions
 - ✓ 6) Scale clearly shown. Other than architectural elevations, all plans must be drawn to an engineer scale.
 - ✓ 7) All dimensions clearly shown.
- ✓ **Existing Conditions Plan** - Existing conditions plan drawn to scale showing: property lines and dimensions, existing structures and other improvements such as streets and utilities, existing

vegetation including trees, any floodplains or wetlands and any easements on the property. The existing conditions plan shall also include the slope of the site at 5-foot contour intervals

☑ **Preliminary Development Plans-** Plans must be sufficient for the Hearing Authority to determine compliance with applicable standards. The following information is typically needed for adequate review:

✓ 1. The subject parcel (s), its dimensions and area.

✓ 2. The location and dimensions of proposed development, including the following:

✓ Transportation

N/A a. Public and private streets with proposed frontage improvements including curb, gutters, sidewalks, planter strip, street lighting, distances to street centerline, pavement width, right-of-way width, bike lanes and driveway drops.

✓ b. Public and private access easements, width and location.

✓ c. General circulation plan showing location, widths and direction of existing and proposed streets, bicycle and pedestrian ways, and transit routes and facilities within ½ mile of the subject property.

✓ d. Show the location and distance to neighboring driveways and the width and locations of driveways located across the street.

✓ e. The location and size of accesses, sight distance and any fixed objects on collectors or arterial streets.

✓ f. Emergency accesses.

✓ g. Indicate the location and size of off-street parking spaces including curbing and wheel stop locations.

N/A h. Proposed transit facilities.

✓ i. Indicate loading and maneuvering areas.

✓ j. Delivery truck and bus circulation patterns.

✓ Grading and Erosion Control

✓ k. Indicate the proposed grade at two (2)-foot contour intervals.

✓ l. Indicate the proposed erosion control measures to CWS standards (refer to CWS Resolution and Order 00-7).

✓ m. Show areas of cut and fill with areas of structural fill.

N/A n. Show the location of all retaining walls, the type of material to be used, the height of the retaining wall from the bottom of the footing to the top of the wall and the exposed height of the wall.

✓ Utilities

✓ o. Utilities must be shown after proposed grade with 2-foot contour intervals.

✓ p. Map location, purpose, dimensions and ownership of easements.

✓ q. Fire hydrant locations and fire flows.

✓ r. Water, sewer and stormwater line locations, types and sizes.

✓ s. Clearly indicate the private and public portions of the system.

✓ t. Above-ground utilities and manhole locations.

- ✓ Preliminary Stormwater Plan
 - u. Show location, size and slope of water quality facility.
 - v. Preliminary calculations justifying size of facility.
 - w. The total square footage of the new and existing impervious area.
 - x. The stormwater facility to CWS standards.(refer to CWS Resolution and Order 00-7).

✓ Sensitive Areas

- N/A y. Show any and all streams, ponds, wetlands and drainage ways.
- N/A z. Indicate the vegetative corridor for sensitive areas to CWS standards. (Refer to Resolution and Order 00-7).
- N/A aa. Indicate measures to avoid environmental degradation that meet CWS, DSL and Army Corp requirements.
- N/A bb. Flood elevation.
- N/A cc. Wetland delineation and buffering proposed.
- ✓ dd. Location and size of all trees greater than 5 inches DBH (indicate if trees are proposed for removal).

✓ Land Use

- ✓ ee. The square footage of each building and a breakdown of square footage by use. (i.e. retail, office, industrial, residential, etc.).
- ✓ ff. Net buildable acres. (The land remaining after unbuildable areas are taken out, such as the floodplain and wetland areas).
- N/A gg. Net density calculation for residential use.
- ✓ hh. Landscaping areas including the square footage of the site covered by landscaping and planting types. (refer to Ch. 5 of the Community Development Code).
- ✓ ii. Existing trees proposed to remain and trees to be removed and the drip-lines of trees proposed to remain.
- N/A jj. Street tree location, size and type. (refer to Ch. 8, Section 8.304.06 of the Community Development Code).
- ✓ kk. Bicycle parking areas. (Refer to Ch 5 of the Community Development Code).
- ✓ ll. On-site pathways and sidewalk locations.
- ✓ mm. Structures proposed to be built and structures proposed to remain with their dimensions and the distances to property lines.
- N/A nn. Outdoor storage areas and proposed screening.
- N/A oo. Outdoor sales and merchandise display areas and proposed screening.
- ✓ pp. Truck loading and maneuvering areas.
- ✓ qq. Number of parking spaces and required parking calculations based on Section 5.302 of the Community Development Code.
- ✓ rr. The size and location of solid waste and recycle storage areas and screening.
- N/A ss. Location, size and height of proposed free-standing signs.
- ✓ tt. Location, height and type of fencing and walls.
- N/A uu. For each lot indicated the building envelope.

- ✓ **Reduced - Proposed Development Plans** – One (1) reduced copie of the Proposed Development Plan on 8 1/2” by 11” sheets and fifteen (15) reduced copies on 11” by 17” sheets.

- Lighting Plan** – Photometric lighting plan indicating foot candle power on and along the perimeter of the site. Proposed locations, height and size of lights. (If outdoor lighting is proposed).
- Surrounding Land Uses** – Existing land use including nature, size and location of existing structures within 300 feet.
- Architectural Exterior** – Scaled architectural sketches and elevations of all proposed structures. Include a description of materials, textures and colors. Show the size, placement and dimensions of proposed wall signs on the elevation drawings. These drawings can be done at an architectural or engineering scale. If color is used, two color copies and eight black and white copies is acceptable.

IV. **DOCUMENTS REQUIRED**

- Title Report** – Two (2) copies of a current preliminary title report available from a private title insurance company.
- CWS Service Provider Letter** – Four (4) copies of the CWS service provider letter
- Trip Analysis** - verifying compliance with the Capacity Allocation Program, if required per 16.108.070.

V. **ADDITIONAL DOCUMENTS THAT MAY BE REQUIRED**

- N/A** **Army Corps and DSL wetland applications and/or permits** – Four (4) copies of required Divisions of State Lands and/or Army Corp of Engineers permits and/or permit applications if applicable.
- Traffic Study** – Four (4) copies of a traffic study. (If required by the City Engineer). If the Hwy.99 W. Capacity Allocation Program (Chapter 6, Section 6.307 of Code) applies, a copy of the Trip Allocation Certificate is required (Chapter 6, Section 6.307, # 11).
- Soils Analysis and/or Geotechnical Report** – Four (4) copies completed by a registered Soils Engineer or Geologist including measures to protect natural hazards. (If required by the City Engineer). **(Included in the Preliminary Stormwater Report)**
- Tree Report** – Two (2) copies of a tree report prepared by an arborist, forester, landscape architect, botanist or other qualified professional. (If required trees are on-site). **(See Canopy Plan)**
- N/A** **Natural Resource Assessment** – If required by Clean Water Services (CWS). The CWS Pre-Screening indicates as to whether this report is required or not.
- N/A** **Wetland Delineation Study** – if required by Oregon Division of State Lands (DSL) or the Army Corps of Engineers.

- N/A** **Other Special Studies and/or Reports** – if required by the Planning Director or the City Engineer to address issues identified in the pre-application meeting or during project review.

- N/A** Verification of compliance with other agency standards such as CWS, DSL, Army Corps of Engineers, ODOT, PGE, BPA, Washington County.

CITY LAND USE APPLICATION FORM



Home of the Tualatin River National Wildlife Refuge

Case No. _____
Fee _____
Receipt # _____
Date _____
TYPE _____

City of Sherwood Application for Land Use Action

Type of Land Use Action Requested: (check all that apply)

- Annexation
- Plan Amendment (Proposed Zone _____)
- Variance(list standard(s) to be varied in description)
- Site Plan (Sq. footage of building and parking area)
- Planned Unit Development
- Conditional Use
- Partition (# of lots _____)
- Subdivision (# of lots _____)
- Other: _____

By submitting this form the Owner, or Owner's authorized agent/ representative, acknowledges and agrees that City of Sherwood employees, and appointed or elected City Officials, have authority to enter the project site at all reasonable times for the purpose of inspecting project site conditions and gathering information related specifically to the project site.

Note: See City of Sherwood current Fee Schedule, which includes the "Publication/Distribution of Notice" fee, at www.sherwoodoregon.gov. Click on Departments/Planning/Fee Schedule.

Owner/Applicant Information:

Applicant: Jim and Patricia Dougherty Phone: Contact Representative
 Applicant Address: PO Box 623, Manzanita OR 97130 Email: Contact Representative
 Owner: Jim and Patricia Dougherty Phone: Contact Representative
 Owner Address: PO Box 623, Manzanita OR 97130 Email: Contact Representative
 Contact for Additional Information: AKS Engineering & Forestry, LLC (Chris Goodell) 503-925-8799
 Applicant's Representative: 13910 SW Galbreath Dr, Sherwood, OR 97140 chrisg@aks-eng.com

Property Information:

Street Location: 20765 SW Gerda Lane
 Tax Lot and Map No: Tax Lot 3100 Assessor's Map 2S129A
 Existing Structures/Use: Parking Lot
 Existing Plan/Zone Designation: General Industrial (GI)
 Size of Property(ies) +/- .5 Acres

Proposed Action:

Purpose and Description of Proposed Action: Site Plan Review Application for an office building.

Proposed Use: Office space, parking area, circulation, drainage, landscaping.

Proposed No. of Phases (one year each): One Single Phase

LAND USE APPLICATION FORM

Authorizing Signatures:

I am the owner/authorized agent of the owner empowered to submit this application and affirm that the information submitted with this application is correct to the best of my knowledge.

I further acknowledge that I have read the applicable standards for review of the land use action I am requesting and understand that I must demonstrate to the City review authorities compliance with these standards prior to approval of my request.

Applicant's Signature

Date

Owner's Signature

Date

The following materials must be submitted with your application or it will not be accepted at the counter. Once taken at the counter, the City has up to 30 days to review the materials submitted to determine if we have everything we need to complete the review.

- 3 * copies of Application Form** completely filled out and signed by the property owner (or person with authority to make decisions on the property).
- Copy of Deed** to verify ownership, easements, etc.
- At least 3 * folded** sets of plans
- At least 3 * sets** of narrative addressing application criteria
- Fee** (along with calculations utilized to determine fee if applicable)
- Neighborhood Meeting Verification** including affidavit, sign-in sheet and meeting summary (required for Type III, IV and V projects)
- Signed checklist** verifying submittal includes specific materials necessary for the application process

* **Note** that the required numbers of copies identified on the checklist are required for completeness; however, upon initial submittal applicants are encouraged to submit only 3 copies for completeness review. Prior to completeness, the required number of copies identified on the checklist and one full electronic copy will be required to be submitted.



NEIGHBORHOOD MEETING DOCUMENTATION



PLANNING DEPARTMENT NEIGHBORHOOD MEETING PACKET

(Required for all Type III, IV or V projects)

Submit the following with land use application materials to the City of Sherwood Planning Department, 22560 SW Pine St., Sherwood, OR 97140: (503) 625-5522.

The purpose of the neighborhood meeting is to solicit input and exchange information about the proposed development per Sherwood Zoning and Community Development Code 16.70.020.

The meeting must be held in a public location **prior** to submitting a land use application.

- Affidavits of mailing to adjacent property owners that are within 1,000 feet of the subject application.

- Sign-in sheet(s)

- Summary of the meeting notes

(Projects requiring a neighborhood meeting in which the City or Urban Renewal District is the property owner or applicant shall also provide published and posted notice of the neighborhood meeting consistent with the notice requirements in 16.72.020.)

September 26, 2013

Notice of Neighborhood Meeting

Ref: Design Review for Proposed 3,000 sf Office Building
20756 SW Gerda Lane
Sherwood, OR 97140
Tax Lot: 2S129A003100

Dear Property Owner, Resident, and/or Neighborhood Association Officer:

AKS Engineering and Forestry, LLC is representing the applicant regarding design review for a proposed 3,000 sf office building on a recently partitioned lot at 20756 Gerda Lane (at the northwest corner of SW Tualatin-Sherwood Road). The proposal involves a new office building and associated site improvements, which include parking, landscaping, a stormwater facility, access drive, and other utility work. Per the requirements of Sherwood Municipal Code Chapter 16.70.020, you are invited to attend a meeting to discuss the meeting in more detail on:

Thursday, October 10th, 2013 at 6:00 PM
TVF&R Fire Station 33, **Community Room**
15440 SW Oregon Street
Sherwood, OR 97140

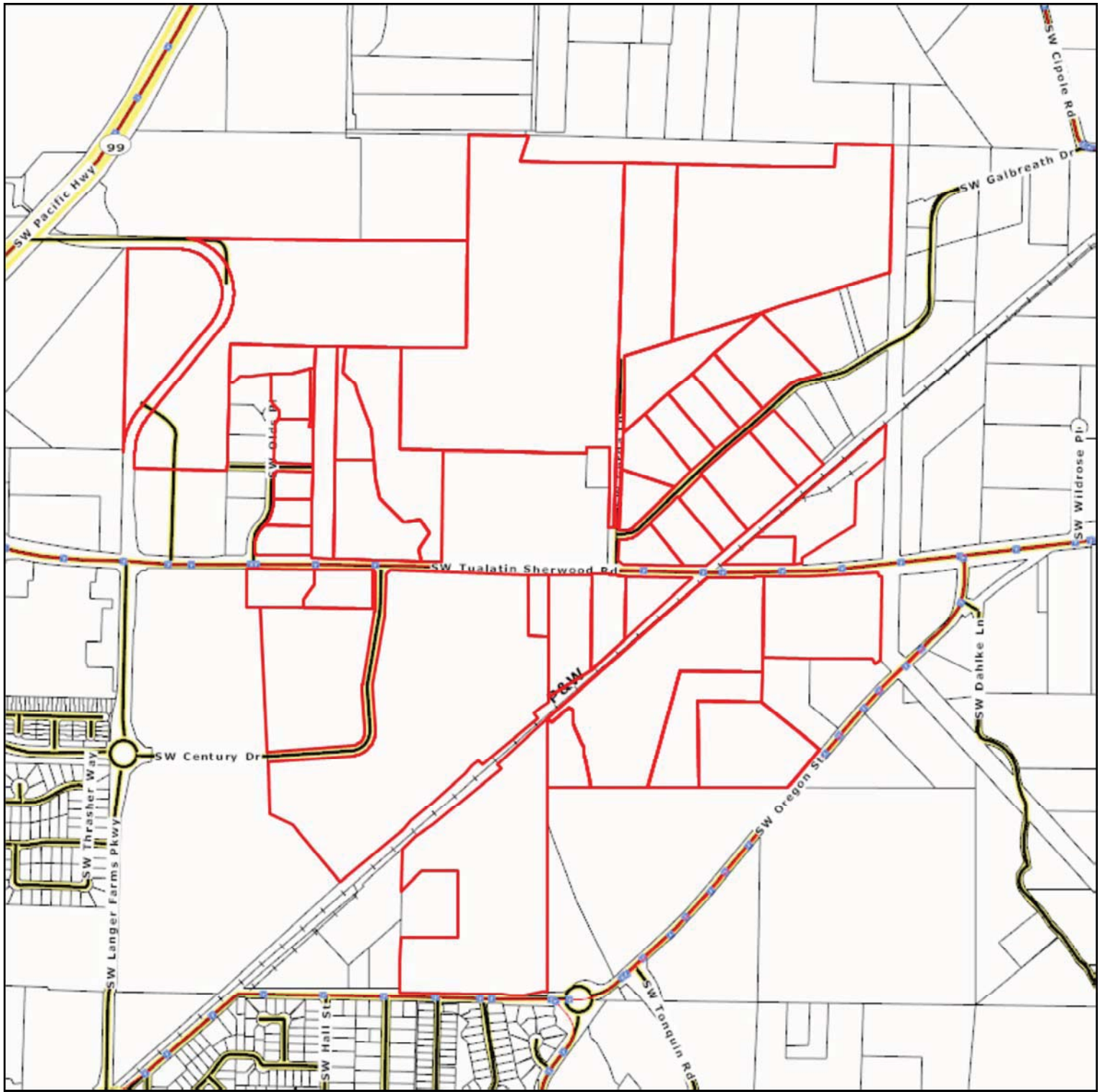
Please note that this will be an informational meeting on preliminary plans. These plans may be modified before the application is submitted to the City. You may also receive an official notice from the City of Sherwood after the application is accepted, advising you of your opportunity to participate in the City process by submitting written comments.

I look forward to discussing this proposal with you. If you have questions but will be unable to attend, please feel free to call me at 503-925-8799.

Sincerely,
AKS Engineering and Forestry, LLC.

A handwritten signature in black ink, appearing to read 'Chris Goodell', is written over a white background.

Chris Goodell - AICP, LEED^{AP}, Associate



Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.

geoAdvantage
www.digitshare.org 208.777.1252

test for a mapping title

R1032055
Brune Investment Co
21433 SW Oregon St
Sherwood, OR 97140

R1032260
Blakeslee Properties LLC
16004 SW Tualatin-Sherwood Rd
Sherwood, OR 97140

R1166222
Glen Wetzell
PO Box 3451
Tualatin, OR 97062

R2024911
Allied Systems Company
21433 SW Oregon St
Sherwood, OR 97140

R2027564
Sherwood, City Of
22560 SW Pine St
Sherwood, OR 97140

R2046572
Sherwood, City Of
22560 SW Pine St
Sherwood, OR 97140

R2051429
Jjb Properties, LLC
21540 SW 110th Pl
Tualatin, OR 97062

R2051430
Cat Adoption Team
14175 SW Galbreath Dr
Sherwood, OR 97140

R2051431
Organization For Educational Tec
14145 SW Galbreath Dr
Sherwood, OR 97140

R2051432
Bond Properties, LLC
14085 SW Galbreath Dr
Sherwood, OR 97140

R2051433
Gamroth Properties LLC
21380 SW Chapman Rd
Sherwood, OR 97140-8608

R2051434
Onni LLC
20643 SW Cooper Ridge Ct
Beaverton, OR 97007

R2051439
La Hirte Properties LLC
PO Box 413
Dundee, OR 97115

R2051441
Winslow Building LLC
PO Box 1339
Clackamas, OR 97015

R2051442
Parr-Franklin LLC
885 Airport Rd SE Bldg X
Salem, OR 97301

R2051443
J & M Properties LLC
14270 SW Galbreath Dr
Sherwood, OR 97140

R2051445
Joseph Galbreath
415 N Main St
Pendleton, OR 97801

R2053318
Firf LLC
1601 NW Expressway Ste #59
Oklahoma City, OK 73118

R2053319
Douglas Mark & Kathleen Seeber
PO Box 965
Newberg, OR 97132

R2077141
Northstar
14200 SW Tual-Sher Rd Bldg B
Sherwood, OR 97140

R2077496
Erna Treske
3860 Rosepark Dr
West Linn, OR 97068

R2118350
Portland General
121 SW Salmon St
Portland, OR 97204

R2118351
Portland General
121 SW Salmon St
Portland, OR 97204

R2119689
Sherwood Venture LLC
633 NW 19th Ave
Portland, OR 97209

R2144296
Tamara Green
415 N Main
Pendleton, OR 97801

R2151077
Sherwood Commercial
6141 SW Orchid Dr
Portland, OR 97219

R2151078
Olds Business Park LLC
1086 SW Tobias Way
Beaverton, OR 97006

R2151079
Sherwood Commercial
6141 SW Orchid Dr
Portland, OR 97219

R2151080
Sherwood Commercial
6141 SW Orchid Dr
Portland, OR 97219

R2151081
Sherwood Commercial
6141 SW Orchid Dr
Portland, OR 97219

R2151082
Sherwood, City Of
22560 SW Pine St
Sherwood, OR 97140

R2151083
Sherwood, City Of
22560 SW Pine St
Sherwood, OR 97140

R2161833
Banc Of America
PO Box 100918
Atlanta, GA 30384

R2165312
Northwest Fourslide Inc
13945 SW Galbreath Dr
Sherwood, OR 97140

R2171245
Salem Equipment Inc
2525 Firestone Ln
Vancouver, WA 98660

R2179743
Northstar
14200 SW Tual-Sher Rd Bldg B
Sherwood, OR 97140

R2180040
Wellons Inc
2525 W Firestone Ln
Vancouver, WA 98660

R2180054
Wellons Inc
2525 W Firestone Ln
Vancouver, WA 98660

R547288
William Galbreath
19915 SW Cipole Rd
Sherwood, OR 97140

R547297
Tamara Green
415 N Main
Pendleton, OR 97801

R547304
Tamara Green
19915 SW Cipole Rd
Sherwood, OR 97140

R547322
William Galbreath
19915 SW Cipole Rd
Sherwood, OR 97140

R547395
Leichner Trust
PO Box 820
Sherwood, OR 97140

R547411
Sherwood Road Industrial LLC
6900 Fox Ave S
Seattle, WA 98108

R547420
Wellons Inc
2525 W Firestone Ln
Vancouver, WA 98660

R547439
Wellons Inc
2525 W Firestone Ln
Vancouver, WA 98660

R547448
Voxvon Properties LLC
14420 SW Tualatin-Sherwood Rd
Sherwood, OR 97140

R547634
United States Of America
911 NE 11th Ave
Portland, OR 97232

R547652
United States Of America
911 NE 11th Ave
Portland, OR 97232

R547689
Tmk Properties LLC
21555 NW Amberwood Dr
Hillsboro, OR 97124

R547698
Sherwood Venture LLC
633 NW 19th Ave
Portland, OR 97209

R547705
Bernardo Bravo
PO Box 754
Sherwood, OR 97140

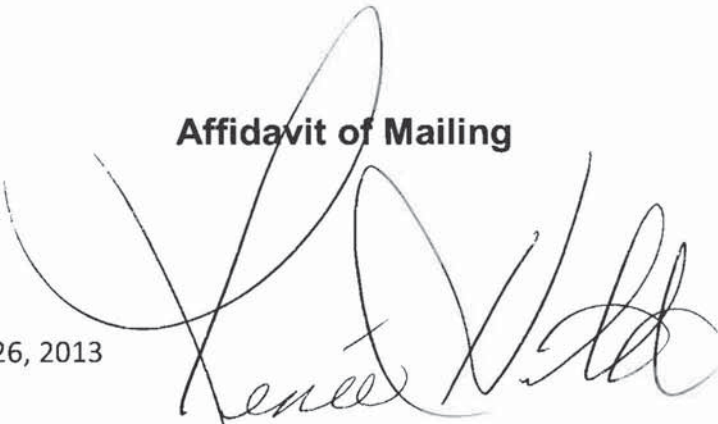
R548090
Orwa Sherwood LLC
8320 NE Highway 99
Vancouver, WA 98665

R548125
Dld LLC
PO Box 926
Sherwood, OR 97140

R548189
Washington County
169 N First Ave #42
Hillsboro, OR 97124

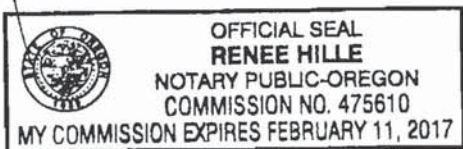
R955862
Brune Investment Co
21433 SW Oregon St
Sherwood, OR 97140

Affidavit of Mailing



DATE: September 26, 2013

STATE OF OREGON)
)
Washington County)



I, David Levitan, representative for the Gerda Lane Office Building proposed development project do hereby certify that the attached notice to adjacent property owners and recognized neighborhood organizations that are within 1,000 feet of the subject project, was placed in a U.S. Postal receptacle on September 26, 2013



Representatives Name: David Levitan, AICP
Name of the Organization: AKS Engineering and Forestry, LLC



Gerda Lane Office Building Proposal
10/10/13
6:00 PM

Sherwood Fire Station
15540 SW Oregon Street
Community Room

NAME

PLEASE PRINT CLEARLY

STREET ADDRESS

PHONE/EMAIL

1. CHRIS GOODELL
13910 SW GALBREATH DRIVE #100
SHERWOOD, OR 97146

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

Neighborhood Meeting Summary

Project: Proposed Gerda Lane Office Building
20765 SW Gerda Lane
City of Sherwood, Oregon 97140

Date: October 10, 2013

Time: 6:00 PM

Location: TVF&R Fire Station 33 – 15440 SW Oregon Street, Sherwood

The following serves as a summary of the primary subjects covered at the Neighborhood Meeting regarding the Gerda Lane office building area.

Attendance: Other than our AKS Representative, no one from the community attended.

WRITTEN NARRATIVE

A LAND USE APPLICATION FOR SITE PLAN REVIEW

DATE: December 2013

SUBMITTED TO: City of Sherwood
22560 SW Pine Street
Sherwood, OR 97140

OWNER/APPLICANT: Jim and Patricia Dougherty
PO Box 623
Manzanita, OR 97130

CO-APPLICANT: Ava Joubert
EAN Holdings, LLC
20400 SW Teton
Tualatin, OR 97062

**APPLICANT'S
REPRESENTATIVE:** AKS Engineering & Forestry, LLC
13910 SW Galbreath Drive, Suite 100
Sherwood, OR 97140
Contact: Monty Hurley (monty@aks-eng.com)
Phone: (503) 925-8799 Fax: (503) 925-8969

OTHER CONSULTANTS: Lancaster Engineering, Inc.
321 SW 4th Ave, Suite 400
Portland, OR 97204

SITE LOCATION: Northwest corner of SW Tualatin-Sherwood
Road and SW Gerda Lane

ASSESSOR'S INFORMATION: Assessor's Map 2S129A Tax Lot 3100

SITE SIZE: +/- 0.5 acres

ZONING: General Industrial (GI)

I. EXECUTIVE SUMMARY

This application involves construction of a new +/- 4,150 square foot office building on a +/- 0.50 acre property that is designated GI (General Industrial) by the City of Sherwood Zoning Map. In addition to the new office building, the project features complementary landscaping, dedicated parking and loading areas, a new stormwater management facility, a pedestrian connection to SW Gerda Lane, and other associated improvements. Recently, the subject site was included in a property line adjustment that was approved by the City (City File No. LLA 13-02) and a Director's Interpretation (City File No. ADM 13-05).

An advertised neighborhood meeting for the application was held on Thursday, October 10 at 6:00 PM in the Community Room at TVF&R Fire Station 33 to discuss the project with the community. The applicant's representative was present; however, no one from the general community attended the meeting.

This written statement includes findings of fact demonstrating that the application complies with all applicable approval criteria. These findings are supported by substantial evidence in the application, which includes preliminary plans and other written documentation. Considered together, this information provides the necessary factual basis for the City of Sherwood to approve the application.

II. SITE DESCRIPTION

The subject site is located at the northwest corner of SW Tualatin-Sherwood Road and SW Gerda Lane. The property currently consists of one parcel approximately 0.5 acres in area (gross) zoned General Industrial (GI). The improved lot (utilities are provided to the parcel) currently is a graveled parking area with a chain link fence and a block wall along SW Tualatin-Sherwood Road.

SURROUNDING AREA / ZONING

North. To the north of the site is a paved parking area used for the storage of vehicles and other materials. This property is designated General Industrial, as is the subject site.

South. The site abuts Tualatin-Sherwood Road. This road is paved with a three lane section, with bicycle lanes, curbs, gutters, and concrete sidewalks on both sides. Industrial development is located across this street to the south.

East. The site abuts SW Gerda Lane. This road is paved with a two/three lane section, curbs, gutters, and concrete sidewalks on both sides. Across SW Gerda Lane there is a commercial business; Stark Street Lawn and Garden.

West. To the west of the site is a paved parking area used for the storage of vehicles. This property is also designated General Industrial.

III. APPLICABLE REVIEW CRITERIA

CITY OF SHERWOOD ZONING AND COMMUNITY DEVELOPMENT CODE

DIVISION II - LAND USE AND DEVELOPMENT

RESPONSE: The applicable provisions of Division II include: 16.31 Industrial. Compliance with the standards in this section is discussed below:

Chapter 16.31 – Industrial Land Use Districts

16.31.010 - Purpose

C. *General Industrial (GI) - The GI zoning district provides for the manufacturing, processing, assembling, packaging and treatment of products from previously prepared or raw materials, providing such activities can meet and maintain minimum environmental quality standards and are situated so as not to create significant adverse effects to residential and commercial areas of the City. The minimum contiguous area of any GI zoning district shall be fifty (50) acres.*

16.31.020 - Uses

- A. *The table below identifies the land uses that are permitted outright (P), permitted conditionally (C), and not permitted (N) in the Commercial Districts. The specific land use categories are described and defined in Chapter 16.88 Use Classifications and Interpretations.*
- B. *Uses listed in other sections of this code, but not within this specific table are prohibited.*
- C. *Any use not otherwise listed that can be shown to be consistent or associated with the uses permitted outright or conditionally in the commercial zones or contribute to the achievement of the objectives of the commercial zones may be permitted outright or conditionally, utilizing the provisions of Chapter 16.88 Use Classifications and Interpretations.*
- D. *Additional limitations for specific uses are identified in the footnotes of this table.*

Uses	GI
------	----

COMMERCIAL

• Business and professional offices. ⁵	P
---	---

⁵ Limited in size to five thousand (5,000) square feet in a single outlet and no more than twenty thousand (20,000) square feet in multiple outlets in the same development project.

RESPONSE: The building falls within the business and professional office category and therefore is a permitted use within the General Industrial designation per 16.31.020.

16.31.030 - Development Standards

B. *Development Standards*

Except as otherwise provided, required minimum lot areas, dimensions and setbacks shall be:

Development Standards by Zone	GI
Front Yard Setback ¹¹	None

Side Yard Setback ¹⁰	None
Rear Yard Setback ¹¹	None
Corner lot street side ¹¹	None
Height ¹¹	

¹⁰ When a yard is abutting a residential zone or public park, there shall be a minimum setback of forty (40) feet provided for properties zoned Employment Industrial and Light Industrial Zones, and a minimum setback of fifty (50) feet provided for properties zoned General Industrial.

¹¹ Structures located within one-hundred (100) feet of a residential zone shall be limited to the height requirements of that residential zone.

Response: The preliminary site plan included herein shows the building is set back 24 feet from the corner street side, this exceeds the minimum standard. The preliminary building elevations show that the office building is less than 50' in height. These standards are met.

DIVISION V – COMMUNITY DESIGN

Chapter 16.90. – Site Planning

Chapter 16.90.020 – Site Plan Review

A. Site Plan Review Required

Site Plan review shall be required prior to any substantial change to a site or use, issuance of building permits for a new building or structure, or for the substantial alteration of an existing structure or use, and prior to the issuance of a sign permit for the erection or construction of a sign.

For the purposes of Section 16.90.020, the term "substantial change" and "substantial alteration" shall mean any development activity as defined by this Code that generally requires a building permit and may exhibit one or more of the following characteristics:

5. *The activity is subject to site plan review by other requirements of this Code.*

Response: The project is subject to Site Plan Review; therefore this application is being filed with the City. This standard is met.

Chapter 16.90.030 – Site Plan Modifications and Revocation

D. Required Findings

No site plan approval shall be granted unless each of the following is found:

1. *The proposed development meets applicable zoning district standards and design standards in Division II, and all provisions of Divisions V, VI, VIII and IX.*

Response: Documentation included in this application, including written findings and supporting preliminary plans, demonstrate compliance with the above listed approval criteria. This standard is met.

2. *The proposed development can be adequately served by services conforming to the Community Development Plan, including but not limited to water, sanitary facilities, storm water, solid waste, parks and open space, public safety, electric power, and communications.*

Response: The preliminary plans demonstrate how the building addresses the required use of water, sanitary facilities, solid waste, parks, open space, electric power, and communications facilities. As demonstrated in this application, applicable storm water and public safety requirements are satisfied by this application. This standard is met.

3. *Covenants, agreements, and other specific documents are adequate, in the City's determination, to assure an acceptable method of ownership, management, and maintenance of structures, landscaping, and other on-site features.*

Response: This application includes titles and deeds that demonstrate the ownership of the subject site and is the same as the adjacent property. This standard is met.

4. *The proposed development preserves significant natural features to the maximum extent feasible, including but not limited to natural drainage ways, wetlands, trees, vegetation (including but not limited to environmentally sensitive lands), scenic views, and topographical features, and conforms to the applicable provisions of Division VIII of this Code and Chapter 5 of the Community Development Code.*

Response: A Service Provider Letter included herein states there that significant natural features were not found to be on the subject property. Compliance with Division VIII of this Code is discussed later in this written narrative. This standard is met.

5. *For a proposed site plan in the Neighborhood Commercial (NC), Office Commercial (OC), Office Retail (OR), Retail Commercial (RC), General Commercial (GC), Light Industrial (LI), and General Industrial (GI) zones, except in the Old Town Overlay Zone, the proposed use shall satisfy the requirements of Section 16.106.070 Highway 99W Capacity Allocation Program, unless excluded herein.*

Response: Compliance with Section 16.106.070 of this Code is discussed later in this written narrative. This standard is met.

6. *For developments that are likely to generate more than 400 average daily trips (ADTs), or at the discretion of the City Engineer, the applicant shall provide adequate information, such as a traffic impact analysis or traffic counts, to demonstrate the level of impact to the surrounding street system. The developer shall be required to mitigate for impacts attributable to the project. The determination of impact or effect and the scope of the impact study shall be coordinated with the provider of the affected transportation facility.*

Response: The project will generate significantly less than 400 ADT. Therefore, a traffic study is not required. However, a Trip CAP Analysis is included in the application.

7. *The proposed commercial, multi-family, institutional or mixed-use development is oriented to the pedestrian and bicycle, and to existing and planned transit facilities. Urban design standards shall include the following:*
 - a. *Primary, front entrances shall be located and oriented to the street, and have significant articulation and treatment, via facades, porticos, arcades, porches, portal, forecourt, or stoop to identify the entrance for pedestrians. Additional entrance/exit points for buildings, such as a postern, are allowed from secondary streets or parking areas.*
 - b. *Buildings shall be located adjacent to and flush to the street, subject to landscape corridor and setback standards of the underlying zone.*
 - c. *The architecture of buildings shall be oriented to the pedestrian and designed for the long term and be adaptable to other uses. Aluminum, vinyl, and T-111 siding shall be prohibited. Street facing*

elevations shall have windows, transparent fenestration, and divisions to break up the mass of any window. Roll up and sliding doors are acceptable. Awnings that provide a minimum 3 feet of shelter from rain shall be installed unless other architectural elements are provided for similar protection, such as an arcade.

- d. *As an alternative to the above standards 7a—7c, the following Commercial Design Review Matrix may be applied to any commercial, multi-family, institutional or mixed use development (this matrix may not be utilized for developments within the Old Town Overlay). A development must propose a minimum of 60 percent of the total possible points to be eligible for exemption from standards 7a—7c above. In addition, a development proposing between 15,001 and 40,000 square feet of floor area, parking or seating capacity and proposing a minimum of 80 percent of the total possible points from the matrix below may be reviewed as a Type II administrative review, per the standards of Section 16.72.010.A.2.*

Response: This property is located in the General Industrial District; therefore, these standards do not apply.

8. *Industrial developments provide employment opportunities for citizens of Sherwood and the region as a whole. The proposed industrial development is designed to enhance areas visible from arterial and collector streets by reducing the "bulk" appearance of large buildings. Industrial design standards shall include the following:*
- a. *Portions of the proposed industrial development within 200 feet of an arterial or collector street and visible to the arterial or collector (i.e. not behind another building) shall meet any four of the following six design criteria:*

Response: As illustrated on the preliminary plans, the project site is located within 200 feet of SW Tualatin-Sherwood Road (a county arterial road) and SW Gerda Lane (a city collector street). However, due to significant existing vegetation, sight-obscuring fencing, and a significant grade change, (between 4 and 7 feet), the future office building will be substantially obscured from view. Therefore, a strong case could be made that the office building is not subject to the following design standards. Nonetheless, the applicant has created a site plan that satisfies the requisite number of design criteria as follows:

- (3) *Maximum thirty-five (35) foot setback for all parts of the building from the property line separating the site from all arterial or collector streets (required visual corridor falls within this maximum setback area).*

Response: The preliminary site plan included herein shows the building is set back 24 feet from the property line on the arterial street and 25 feet on the collector street side. Both of these are less than the 35 foot maximum. This standard is met.

- (4) *Parking is located to the side or rear of the building when viewed from the arterial or collector.*

Response: The preliminary site plan included herein shows the parking lot is located to the side from the arterial and to the rear from the collector. This standard is met.

- (5) *Loading areas are located to the side or rear of the building when viewed from the arterial or collector. If the loading area is visible from an arterial or collector, they must be screened with vegetation or a screen made of materials matching the building materials.*

Response: The preliminary site plan included herein shows the loading area to the side or the rear of the building depending on your vantage point. The site is both below grade of the streets and is screened with vegetation and sight-obscuring fencing that screens the view of the loading area. This standard is met.

- (6) *All roof-mounted equipment is screened with materials complimentary to the building design materials.*

Response: Should the building include roof-mounted equipment, it will be screened with building materials complimenting the building design. This standard is met.

16.92 - Landscaping

16.92.010 - Landscaping Plan Required

All proposed developments for which a site plan is required pursuant to [Section 16.90.020](#) shall submit a landscaping plan that meets the standards of this Chapter. All areas not occupied by structures, paved roadways, walkways, or patios shall be landscaped or maintained according to an approved site plan.

Response: A preliminary landscape plan that meets the requirements of this Chapter is included in the preliminary plans. This standard is met.

16.92.020 - Landscaping Materials

A. Type of Landscaping

Required landscaped areas shall include an appropriate combination of native evergreen or deciduous trees and shrubs, evergreen ground cover, and perennial plantings. Trees to be planted in or adjacent to public rights-of-way shall meet the requirements of this Chapter. Plants may be selected from the City's "Suggested Plant Lists for Required Landscaping Manual" or suitable for the Pacific Northwest climate and verified by a landscape architect or certified landscape professional.

1. *Ground Cover Plants*
 - a. *All of the landscape that is not planted with trees and shrubs must be planted in ground cover plants, which may include grasses. Mulch is not a substitute for ground cover, but is allowed in addition to the ground cover plants.*
 - b. *Ground cover plants other than grasses must be at least the four-inch pot size and spaced at distances appropriate for the plant species. Ground cover plants must be planted at a density that will cover the entire area within three (3) years from the time of planting.*
2. *Shrubs*
 - a. *All shrubs must be of sufficient size and number to be at full growth within three (3) years of planting.*
 - b. *Shrubs must be at least the one-gallon container size at the time of planting.*
3. *Trees*
 - a. *Trees at the time of planting must be fully branched and must be a minimum of two (2) caliper inches and at least six (6) feet in height.*
 - b. *Existing trees may be used to meet the standards of this chapter, as described in C.2. below.*

Response: As shown on the preliminary landscape plan, an appropriate combination of trees, shrubs, and ground cover are proposed to comply with this code as stated above. This standard is met.

C. Existing Vegetation

1. All developments subject to site plan review per Section 16.90.020 and required to submit landscaping plans per this section shall preserve existing trees, woodlands and vegetation on the site to the maximum extent possible, as determined by the Review Authority, in addition to complying with the provisions of Section 16.142 (Parks, Trees and Open Space) and Chapter 16.144 (Wetland, Habitat, and Natural Resources).

Response: The site currently does not have any existing vegetation except in the right of way. As shown on the preliminary landscape plan, the intent is to preserve existing trees whenever possible and in keeping with Sections 16.142 and 16.144. This standard is met.

16.92.030 – Site Area Landscaping and Perimeter Screen Standards

A. Perimeter Screening and Buffering

2. Perimeter Landscaping Buffer

- a. A minimum ten (10) foot wide landscaped strip comprised of trees, shrubs and ground cover shall be provided between off-street parking, loading, or vehicular use areas on separate, abutting, or adjacent properties.

Response: The preliminary landscape plan shows the landscape buffer to be 10' or greater and comprised of the necessary plantings; in addition, all adjacent properties are under common ownership. This standard is met.

B. Parking Area Landscaping

1. Purpose

The standard is a landscape treatment that uses a combination of trees, shrubs, and ground cover to provide shade, storm water management, aesthetic benefits, and screening to soften the impacts of large expanses of pavement and vehicle movement. It is applied to landscaped areas within and around the parking lot and loading areas.

2. Definitions

- a. *Parking Area Landscaping: Any landscaped area on the site that is not required as perimeter landscaping § 16.92.030 (Site Landscaping and Screening).*
- b. *Canopy Factor*
 - (1) *Landscape trees are assigned a canopy factor to determine the specific number of required trees to be planted. The canopy factor is calculated based on the following formula:
Canopy Factor = Mature Height (in feet) × Canopy Spread (in feet) × Growth Rate Factor × .01*
 - (2) *Growth Rate Factor: The growth rate factor is three (3) for fast-growing trees, two (2) for medium growing trees, and one (1) for slow growing trees. The growth rate of a tree is identified in the "Suggested Plant Lists for Required Landscaping Manual."*

3. Required Landscaping

There shall be at least forty-five (45) square feet parking area landscaping for each parking space located on the site. The amount of required plant materials are based on the number of spaces as identified below.

Response: Thirteen parking spaces require 585 square feet of parking landscape area. As shown on the preliminary landscape plan, this standard is met.

4. Amount and Type of Required Parking Area Landscaping

a. Number of Trees required based on Canopy Factor

Small trees have a canopy factor of less than forty (40), medium trees have a canopy factor from forty (40) to ninety (90), and large trees have a canopy factor greater than ninety (90);

-
- (1) Any combination of the following is required:
 - (i) One (1) large tree is required per four (4) parking spaces;
 - (ii) One (1) medium tree is required per three (3) parking spaces; or
 - (iii) One (1) small tree is required per two (2) parking spaces.
 - (iv) At least five (5) percent of the required trees must be evergreen.
 - (2) Street trees may be included in the calculation for the number of required trees in the parking area.
- b. Shrubs:
 - (1) Two (2) shrubs are required per each space.
 - (2) For spaces where the front two (2) feet of parking spaces have been landscaped instead of paved, the standard requires one (1) shrub per space. Shrubs may be evergreen or deciduous.
 - c. Ground cover plants:
 - (1) Any remainder in the parking area must be planted with ground cover plants.
 - (2) The plants selected must be spaced to cover the area within three (3) years. Mulch does not count as ground cover.

Response: As shown on the preliminary landscape plan, an appropriate combination of trees, shrubs, and ground cover are proposed to compliment the parking area improvements. This standard is met.

6. *Landscaping at Points of Access*

When a private access-way intersects a public right-of-way or when a property abuts the intersection of two (2) or more public rights-of-way, landscaping shall be planted and maintained so that minimum sight distances shall be preserved pursuant to Section 16.58.010.

Response: As shown on the preliminary landscape plan, the appropriate selections have been made to preserve the sight distances at the access ways. This standard is met.

C. *Screening of Mechanical Equipment, Outdoor Storage, Service and Delivery Areas*

All mechanical equipment, outdoor storage and manufacturing, and service and delivery areas, shall be screened from view from all public streets and any adjacent residential zones. If unfeasible to fully screen due to policies and standards, the applicant shall make efforts to minimize the visual impact of the mechanical equipment.

Response: As illustrated by the preliminary landscape plan existing and proposed landscaping provide excellent screening of the outdoor areas described above. This standard is met.

D. *Visual Corridors*

Except as allowed by subsection 6. above, new developments shall be required to establish landscaped visual corridors along Highway 99W and other arterial and collector streets, consistent with the Natural Resources and Recreation Plan Map, Appendix C of the Community Development Plan, Part II, and the provisions of Chapter 16.142 (Parks, Trees, and Open Space). Properties within the Old Town Overlay are exempt from this standard.

Response: Compliance with Chapter 16.142 is discussed later in this application. This standard is met.

16.92.040 - Installation and Maintenance Standards

A. *Installation*

All required landscaping must be in-ground, except when in raised planters that is used to meet minimum Clean Water Services storm water management requirements. Plant materials must be installed to current

nursery industry standards. Plant materials must be properly supported to ensure survival. Support devices such as guy wires or stakes must not interfere with vehicular or pedestrian movement.

Response: A preliminary landscape plan that meets the requirements of this Chapter is included in the preliminary plans. This standard is met.

B. Maintenance and Mitigation of Landscaped Areas

1. Maintenance of existing non-invasive native vegetation is encouraged within a development and required for portions of the property not being developed.
2. All landscaping shall be maintained in a manner consistent with the intent of the approved landscaping plan.
3. Any required landscaping trees removed must be replanted consistent with the approved landscaping plan and comply with § 16.142, (Parks, Trees and Open Space).

Response: Landscaping will be maintained as required by this standard as noted on the preliminary landscaping plan. This standard is met.

C. Irrigation

The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All landscaped areas must provide an irrigation system, as stated in Option 1, 2, or 3.

2. Option 2: An irrigation system designed and certified by a licensed landscape architect or other qualified professional as part of the landscape plan, which provides sufficient water to ensure that the plants become established. The system does not have to be permanent if the plants chosen can survive independently once established.

Response: A preliminary landscape plan shows that an irrigation system will be a design build system. This standard is met.

16.94 - Off Street Parking and Loading

16.94.010 - General Requirements

A. Off-Street Parking Required

No site shall be used for the parking of vehicles until plans are approved providing for off-street parking and loading space as required by this Code. Any change in uses or structures that reduces the current off-street parking and loading spaces provided on site, or that increases the need for off-street parking or loading requirements shall be unlawful and a violation of this Code, unless additional off-street parking or loading areas are provided in accordance with Section 16.94.020, or unless a variance from the minimum or maximum parking standards is approved in accordance with Chapter 16.84 Variances.

Response: The preliminary site plan shows off street parking is planned in accordance with Section 16.94.020 as discussed later in this application. This standard is met.

E. Location

2. For other uses, required off-street parking spaces may include adjacent on-street parking spaces, nearby public parking and shared parking located within five hundred (500) feet of the use. The distance from the parking, area to the use shall be measured from the nearest parking space to a building entrance, following a sidewalk or other pedestrian route. The right to use private off-site parking must be evidenced by a recorded deed, lease, easement, or similar written notarized letter or instrument.

Response: On-site parking is planned for this project, as shown in the preliminary site plan. This standard is met.

F. Marking

All parking, loading or maneuvering areas shall be clearly marked and painted. All interior drives and access aisles shall be clearly marked and signed to show the direction of flow and maintain vehicular and pedestrian safety.

RESPONSE: The preliminary site plan shows the use of striped parking spaces in compliance with the criteria above. This standard is met.

G. Surface and Drainage

1. *All parking and loading areas shall be improved with a permanent hard surface such as asphalt, concrete or a durable pervious surface. Use of pervious paving material is encouraged and preferred where appropriate considering soils, location, anticipated vehicle usage and other pertinent factors.*
2. *Parking and loading areas shall include storm water drainage facilities approved by the City Engineer or Building Official.*

RESPONSE: As shown in preliminary plans that accompany this application, the proposed parking area meets the criteria listed above. This standard is met.

I. Parking and Loading Plan

An off-street parking and loading plan, drawn to scale, shall accompany requests for building permits or site plan approvals, except for single and two-family dwellings, and manufactured homes on residential lots. The plan shall show but not be limited to:

1. *Delineation of individual parking and loading spaces and dimensions.*
2. *Circulation areas necessary to serve parking and loading spaces.*
3. *Location of accesses to streets, alleys and properties to be served, and any curb cuts.*
4. *Landscaping as required by Chapter 16.92*
5. *Grading and drainage facilities.*
6. *Signing and bumper guard specifications.*
7. *Bicycle parking facilities as specified in Section 16.94.020.C.*
8. *Parking lots more than one (1) acre in size shall provide street-like features including curbs, sidewalks, and street trees or planting strips.*

RESPONSE: The preliminary plans that accompany this application include the information listed above, as applicable. This standard is met.

16.94.020 - Off-Street Parking Standards

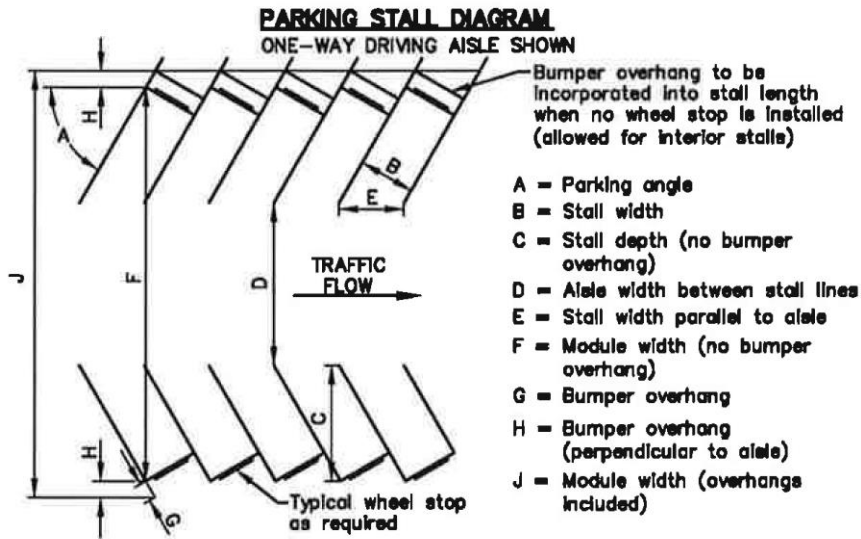
**Minimum and Maximum Parking Standards
(Metro spaces are based on 1 per 1,000 sq ft of gross leasable area)**

	<i>Minimum Parking Standard</i>	<i>Maximum Permitted Parking Zone A¹</i>	<i>Maximum Permitted Parking Zone B²</i>
<i>General office</i>	2.7 (370 sf)	3.4	4.1

Response: As shown on the preliminary site plan the office building is 3,600 square feet and 13 parking spaces are included. Therefore, the application satisfies the minimum (10 spaces) and maximum (13 spaces) parking requirements.

B. Dimensional and General Configuration Standards

1. *Dimensions For the purpose of this Chapter, a "parking space" means a stall nine (9) feet in width and twenty (20) feet in length. Up to twenty five (25) percent of required parking spaces may have a minimum dimension of eight (8) feet in width and eighteen (18) feet in length so long as they are signed as compact car stalls.*



Response: As shown on the preliminary site plan, parking stalls are 9 feet wide and 20 feet deep. This standard is met.

Two-Way Driving Aisle
(Dimensions in Feet)

A	B	C	D	E	F	G	H	J
90°	9.0	17.0	24.0	9.0	58.0	3.0	3.0	64.0

Response: As shown on the preliminary site plan the proposed parking drive aisle (D) is 24 feet wide. This standard is met.

3. Wheel Stops

- a. *Parking spaces along the boundaries of a parking lot or adjacent to interior landscaped areas or sidewalks shall be provided with a wheel stop at least four (4) inches high, located three (3) feet back from the front of the parking stall as shown in the above diagram.*
- b. *Wheel stops adjacent to landscaping, bio-swales or water quality facilities shall be designed to allow storm water runoff.*

Response: The preliminary site plan shows the use of wheel stops that meet the criteria listed above. This standard is met.

C. *Bicycle Parking Facilities*

1. *Location and Design*

- a. *Bicycle parking shall be conveniently located with respect to both the street right-of-way and at least one (1) building entrance (e.g., no farther away than the closest parking space). Bike parking may be located inside the main building or near the main entrance.*

Response: This preliminary plan provides for bicycle parking inside the building. This standard is met.

Minimum Required Bicycle Parking Spaces

<i>Use Categories</i>	<i>Minimum Required Spaces</i>
Commercial Categories	
<i>Retail sales/service office</i>	<i>2 or 1 per 20 auto spaces, whichever is greater</i>

Response: This preliminary plan provides for the required number of bicycle parking spaces inside the building. This standard is met.

16.94.030 - Off-Street Loading Standards

A. *Minimum Standards*

1. *A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading passengers shall be located on the site of any school, or other public meeting place, which is designed to accommodate more than twenty five (25) persons at one time.*
2. *The minimum loading area for non-residential uses shall not be less than ten (10) feet in width by twenty-five (25) feet in length and shall have an unobstructed height of fourteen (14) feet.*

Response: As shown on the preliminary site plan, a loading area is included that is 11 feet wide and 25 feet deep and has an unobstructed height of more than 14 feet. This standard is met.

16.96 - On-Site Circulation

16.96.010 - On-Site Pedestrian and Bicycle Circulation

D. *Connection to Streets*

1. *Except for joint access per this Section, all ingress and egress to a use or parcel shall connect directly to a public street, excepting alleyways with paved sidewalk.*
2. *Required private sidewalks shall extend from the ground floor entrances or the ground floor landing of stairs, ramps or elevators to the public sidewalk or curb of the public street which provides required ingress and egress.*

Response: As shown on the preliminary site plan, a pedestrian connection is planned for ingress and egress that connects directly to SW Gerda Lane. This standard is met.

16.96.030 - Minimum Non-Residential Standards

Minimum standards for private, on-site circulation improvements in non-residential developments:

A. *Driveways*

1. *Commercial: Improved hard surface driveways are required as follows:*

Required		Minimum Width	
Parking Spaces	# Driveways	One-Way Pair	Two-Way
1 - 49	1	15 feet	24 feet

2. *Industrial: Improved hard surfaced driveways are required as follows:*

Required		Minimum Width	
Parking Spaces	# Driveways	One-Way Pair	Two-Way
1 - 249	1	15 feet	24 feet

Response: As shown on the preliminary plans, a 24 foot wide two-way paved driveway aisle has been provided for access to the 13 parking spaces. This standard is met.

B. *Sidewalks and Curbs*

1. *A private pathway/sidewalk system extending throughout the development site shall be required to connect to existing development, to public rights-of-way with or without improvements, to parking and storage areas, and to connect all building entrances to one another. The system shall also connect to transit facilities within five hundred (500) feet of the site, future phases of development, and whenever possible to parks and open spaces.*
3. *Private Pathway/Sidewalk Design. Private pathway surfaces shall be concrete, asphalt, brick/masonry pavers, or other pervious durable surface. Primary pathways connecting front entrances to the right of way shall be at least 6 feet wide and conform to ADA standards. Secondary pathways between buildings and within parking areas shall be a minimum of four (4) feet wide and/or conform to ADA standards. Where the system crosses a parking area, driveway or street, it shall be clearly marked with contrasting paving materials or raised crosswalk (hump). At a minimum all crosswalks shall include painted striping.*

RESPONSE: The preliminary plans include a six foot wide hard surfaced pedestrian way that connects the building entrance and parking area with the adjacent the public right-of-way. This standard is met.

16.96.040 - On-Site Vehicle Circulation

B. *Joint Access [See also Chapter 16.108]*

Two (2) or more uses, structures, or parcels of land are strongly encouraged to utilize jointly the same ingress and egress when the combined ingress and egress of all uses, structures, or parcels of land satisfy the other requirements of this Code, provided that satisfactory legal evidence is presented to the City in the form of deeds, easements, leases, or contracts to clearly establish the joint use. In some cases, the City may require a joint access to improve safety, vision clearance, site distance, and comply with access spacing standards for the applicable street classification.

RESPONSE: The building and parking lot is to be utilized by the employees of the proposed office building which has the same owner as the adjacent parcel. Since there is one owner for both properties, easements, leases, contracts, etc. are unnecessary. This standard is met.

16.98 - On-Site Storage

16.98.020 - Solid Waste and Recycling Storage

All uses shall provide solid waste and recycling storage receptacles which are adequately sized to accommodate all solid waste generated on site. All solid waste and recycling storage areas and receptacles shall be located out of public view. Solid waste and recycling receptacles for multi-family, commercial, industrial and institutional uses shall be screened by six (6) foot high sight-obscuring fence or masonry wall and shall be easily accessible to collection vehicles.

Response: As shown on the preliminary plans the solid waste and recycling receptacle storage area will be screened from view as previously described and will be accessible to collection vehicles. This standard is met.

16.98.030 - Material Storage

- B. *Standards. Except as per Section 16.98.040, all service, repair, storage, and merchandise display activities carried on in connection with any commercial or industrial activity, and not conducted within an enclosed building, shall be screened from the view of all adjacent properties and adjacent streets by a six (6) foot to eight (8) foot high, sight obscuring fence subject to chapter 16.58.020. In addition, unless adjacent parcels to the side and rear of the storage area have existing solid evergreen screening or sight-obscuring fencing in place, new evergreen screening no less than three (3) feet in height shall be planted along side and rear property lines. Where other provisions of this Code require evergreen screening, fencing, or a landscaped berm alongside and rear property lines, the additional screening stipulated by this Section shall not be required.*

Response: Although the office building does not include material storage, the site is heavily screened with thick mature vegetation and sight-obscuring fencing. To the extent this standard is relevant to the application, it is met.

DIVISION VI – PUBLIC INFRASTRUCTURE

16.106 - Transportation Facilities

16.106.020 - Required Improvements

- B. *Existing Streets*
Except as otherwise provided, when a development abuts an existing street, the improvements requirement shall apply to that portion of the street right-of-way located between the centerline of the right-of-way and the property line of the lot proposed for development. In no event shall a required street improvement for an existing street exceed a pavement width of thirty (30) feet.

Response: Existing streets adjacent to the property are fully improved. This standard is met.

16.106.030 – Location

- D. *Additional Setbacks*
Generally additional setbacks apply when the width of a street right-of-way abutting a development is less than the standard width under the functional classifications in Section VI of the Community Development Plan. Additional setbacks are intended to provide unobstructed area for future street right-of-way dedication and improvements, in conformance with Section VI. Additional setbacks shall be measured at right angles from the centerline of the street.

	<i>Classification</i>	<i>Additional Setback</i>
1.	<i>Principal Arterial (99W)</i>	<i>61 feet</i>
2.	<i>Arterial</i>	<i>37 feet</i>
3.	<i>Collector</i>	<i>32 feet</i>
4.	<i>Neighborhood Route</i>	<i>32 feet</i>
5.	<i>Local</i>	<i>26 feet</i>

Response: The subject site is a portion of Parcel 3 from Partition Plat 2013-020. The partition was reviewed and approved by the city of Sherwood through file No. MLP 11-01. Forty-nine feet of right-of-way currently exists from centerline along the subject site’s frontage on SW Tualatin-Sherwood Road. This is an excess of the standard right-of-way width listed above. Approximately 30.5’ of right-of-way exists from centerline along the subject site’s frontage on SW Gerda Lane. This is less than is standard with described above. However, SW Gerda Lane is completely constructed with a +/- 41’ wide paved section with curb, gutters, and 5’ wide curb tight concrete sidewalks on both sides of the street. An additional 1.5’ of right-of-way provides little benefit to the City. Therefore, it should not be required. That said, this additional right-of-way could be dedicated if required by the City.

16.106.040 – Design

M. Vehicular Access Management

All developments shall have legal access to a public road. Access onto public streets shall be permitted upon demonstration of compliance with the provisions of adopted street standards in the Engineering Design Manual.

2. Roadway Access

c. Collectors:

All commercial, industrial and institutional uses with one-hundred-fifty (150) feet or more of frontage will be permitted direct access to a Collector. Uses with less than one-hundred-fifty (150) feet of frontage shall not be permitted direct access to Collectors unless no other alternative exists.

Where joint access is available it shall be used, provided that such use is consistent with Section 16.96.040, Joint Access. No use will be permitted direct access to a Collector within one- hundred (100) feet of any present Point "A." Minimum spacing between driveways (Point "C" to Point "C") shall be one-hundred (100) feet. In all instances, access points near an intersection with a Collector or Arterial shall be located beyond the influence of standing queues of the intersection in accordance with AASHTO standards. This requirement may result in access spacing greater than one hundred (100) feet.

Response: In this case, joint access is available and convenient, and therefore is shown on the preliminary plans.

16.106.060 – Sidewalks

A. Required Improvements

- 1. Except as otherwise provided, sidewalks shall be installed on both sides of a public street and in any special pedestrian way within new development.*
- 2. For Highway 99W, arterials, or in special industrial districts, the City Manager or designee may approve a development without sidewalks if alternative pedestrian routes are available.*

-
3. *In the case of approved cul-de-sacs serving less than fifteen (15) dwelling units, sidewalks on one side only may be approved by the City Manager or designee.*
- B. *Design Standards*
1. *Arterial and Collector Streets*
Arterial and collector streets shall have minimum eight (8) foot wide sidewalks/multi- use path, located as required by this Code.
 2. *Local Streets*
Local streets shall have minimum five (5) foot wide sidewalks, located as required by this Code.
 3. *Handicapped Ramps*
Sidewalk handicapped ramps shall be provided at all intersections.
- C. *Pedestrian and Bicycle Paths*
Provide bike and pedestrian connections on public easements or right-of-way when full street connections are not possible, with spacing between connections of no more than 330 feet except where prevented by topography, barriers such as railroads or highways, or environmental constraints such as rivers and streams.

Response: Existing sidewalks adjacent to the subject site meet these standards.

16.106.070 - Hwy. 99W Capacity Allocation Program (CAP)

- E. *Trip Analysis*
1. *Purpose*
The first step in the process of seeking a Trip Allocation Certificate is preparation of a Trip Analysis by the applicant for the regulated activity. The purpose of the Trip Analysis is to evaluate whether the net trips from a regulated activity exceed the site trip limit.
 3. *Format*
At a minimum, the Trip Analysis shall contain all the following information:
 - a. *The type and location of the regulated activity.*
 - b. *A tax map clearly identifying the parcel(s) involved in the Trip Analysis.*
 - c. *Square footage used to estimate trips, in accordance with methods outlined in the ITE Manual.*
 - d. *Description of the type of activity, especially as it corresponds to activities described in the ITE Manual.*
 - e. *Copy of the ITE Manual page used to estimate trips.*
 - f. *Acreage of the site containing the regulated activity calculated to two (2) decimal points.*
 - g. *Trip distributions and assignments from the regulated activity to all full access intersections impacted by ten (10) or more trips from the regulated activity with identification of the method used to distribute trips from the site.*
 - h. *Copies of any other studies utilized in the Trip Analysis.*
 - i. *Summary of the net trips generated by the regulated activity in comparison to the site trip limit.*
 - j. *Signature and stamp of a professional engineer, registered in the State of Oregon, with expertise in traffic or transportation engineering, who prepared the analysis.*
 4. *Methods*
 - a. *The Trip Analysis and trip generation for an activity shall be based on the ITE Manual.*
 - b. *If a trip generation for the proposed use is not available in the ITE Manual or the applicant wishes to dispute the findings in the ITE Manual, the trip generation calculation may be based on an analysis of trips from five (5) sites with the same type of activity as that proposed.*

Response: Please refer to the trip CAP Analysis, prepared by Lancaster Engineering that is included in the application materials. This standard is met.

16.110 - Sanitary Sewers

16.110.010 - Required Improvements

Sanitary sewers shall be installed to serve all new developments and shall connect to existing sanitary sewer mains. Provided, however, that when impractical to immediately connect to a trunk sewer system, the use of septic tanks may be approved, if sealed sewer laterals are installed for future connection and the temporary system meets all other applicable City, Clean Water Services, Washington County and State sewage disposal standards.

Response: The preliminary plans show sanitary sewer connection to be located on the southeast corner of the proposed site. This standard is met.

16.112 – Water Supply

16.112.010 - Required Improvements

Water lines and fire hydrants conforming to City and Fire District standards shall be installed to serve all building sites in a proposed development. All waterlines shall be connected to existing water mains or shall construct new mains appropriately sized and located in accordance with the Water System Master Plan.

Response: The preliminary plans show a water connection to be located on the northeast corner of the subject site. An existing fire hydrant on the corner of SW Gerda Lane and SW Galbreath Drive is able to serve this project. This standard is met.

16.114 - Storm Water

16.114.010 - Required Improvements

Storm water facilities, including appropriate source control and conveyance facilities, shall be installed in new developments and shall connect to the existing downstream drainage systems consistent with the Comprehensive Plan and the requirements of the Clean Water Services water quality regulations contained in their Design and Construction Standards R&O 04-9, or its replacement.

Response: The preliminary plans show curb breaks, area drains, and drainage paths directed to and infiltrating within a new storm water facility located in the northwest corner of the subject site. This standard is met.

16.114.020 - Design Standards

A. Capacity

Storm water drainage systems shall be sized, constructed, located, and installed at standards consistent with this Code, the Storm Drainage Master Plan Map, attached as Exhibit E, Chapter 7 of the Community Development Plan, other applicable City standards, the Clean Water Services Design and Construction standards R&O 04-9 or its replacement, and hydrologic data and improvement plans submitted by the developer.

B. On-Site Source Control

Storm water detention and groundwater recharge improvements, including but not limited to such facilities as dry wells, detention ponds, and roof top ponds shall be constructed according to Clean Water Services Design and Construction Standards.

C. Conveyance System

The size, capacity and location of storm water sewers and other storm water conveyance improvements shall be adequate to serve the development and accommodate upstream and downstream flow. If an upstream area discharges through the property proposed for development, the drainage system shall provide capacity to the receive storm water discharge from the upstream area. If downstream drainage systems are not sufficient to receive an increase in storm water caused by new development, provisions shall be made by the developer to increase the downstream capacity or to provide detention such that the new development will not increase the storm water caused by the new development.

Response: The preliminary plans show curb breaks, area drains and drainage paths being directed to and infiltrating within a storm water facility located in the northwest corner of the propose project. Also refer to the Preliminary Storm Water Report enclosed with this application. This standard is met.

16.114.030 - Service Availability

Approval of construction plans for new storm water drainage facilities pursuant to Chapter 16.106, and the issuance of building permits for new development to be served by existing storm water drainage systems shall include certification by the City that existing or proposed drainage facilities are adequate to serve the development.

Response: The required certification will be provided prior to issuance of building permits as provided above. This standard will be met.

16.116 – Fire Protection

16.116.010 - Required Improvements

When land is developed so that any commercial or industrial structure is further than two hundred and fifty (250) feet or any residential structure is further than five hundred (500) feet from an adequate water supply for fire protection, as determined by the Fire District, the developer shall provide fire protection facilities necessary to provide adequate water supply and fire safety.

Response: The site abuts SW Tualatin-Sherwood Road and SW Gerda Lane. The proposed office building is within 25 feet of these roads and less than 250 feet from the existing hydrant on Gerda Lane and Galbreath Drive. This standard is met.

16.118 – Public and Private Utilities

16.118.030 - Underground Facilities

Except as otherwise provided, all utility facilities, including but not limited to, electric power, telephone, natural gas, lighting, cable television, and telecommunication cable, shall be placed underground, unless specifically authorized for above ground installation, because the points of connection to existing utilities make underground installation impractical, or for other reasons deemed acceptable by the City.

Response: Installation of new utilities for the office building will be sized, constructed, and located underground, consistent with this Code and applicable utility company standards. This standard is met.

DIVISION VII – LAND DIVISIONS, SUBDIVISIONS, PARTITIONS, LOT LINE ADJUSTMENTS AND MODIFICATIONS

16.124 – Property Line Adjustments and Lot Consolidations

16.124.010 - Approval Process

- A. *The City Manager or his or her designee may approve a property line adjustment by means of a Type I procedure as governed by Chapter 16.72, using approval criteria contained in this Chapter.*
- B. *Time Limit on Approval*
The property line adjustment decision shall be effective for one year from the date of approval.
- C. *Extension of Approval*
If the adjustment is not recorded with the County within one year, the land use approval expires and must be resubmitted. The City Manager or his/her designee may, upon written request by the applicant, grant an extension up to one year upon a written finding that the facts have not changed to an extent sufficient to warrant re-filing of the property line adjustment and that no other development approval would be affected.

16.124.020 - Approval Criteria

- A. *The City Manager or his/her designee shall approve or deny a request for a property line adjustment in writing based on findings that the following criteria are satisfied:*
 - 1. *No new lots are created*
 - 2. *The adjusted lots comply with the applicable zone requirements.*
 - 3. *The adjusted lots continue to comply with other regulatory agency or department requirements.*
- B. *If the property line adjustment is processed with another development application, all applicable standards of the Code shall apply.*

16.124.030 - Filing and Recording Requirements

- A. *Recording Requirements* *If a property line adjustment is approved by the City, it does not become final until reviewed and approved by County in accordance with its property line adjustment recording requirements.*
- B. *Time Limit* *The applicant shall submit the copy of the recorded property line adjustment survey map to the City within 30 days of recording and shall be completed prior to the issuance of any building permits on the re-configured lots.*

Response: A Property line Adjustment was previously approved by the City (File LLA 13-02 Dougherty) and recorded with Washington County. A copy of the recorded PLA survey and deeds are included with this application.

DIVISION VIII - ENVIRONMENTAL RESOURCES

16.132 – General Provisions

16.132.010 – Purpose

This Division is intended to protect, preserve, and otherwise properly manage the City's natural and environmental resources for the benefit of the general public, to regulate land development so as to protect the public from natural and environmental hazards, and to establish performance standards allowing the City to properly and uniformly assess the impact of residential, commercial, industrial, and institutional development and activities on the quality of the City's environment.

RESPONSE: This application includes a Clean Water Services Provider Letter that confirms there are not any environmental resources on or near the site. This standard is met.

16.142 – Parks, Trees and Open Spaces

16.142.040 - Visual Corridors

A. *Corridors Required*

New developments located outside of the Old Town Overlay with frontage on Highway 99W, or arterial or collector streets designated on Figure 8-1 of the Transportation System Plan shall be required to establish a landscaped visual corridor according to the following standards:

	Category	Width
1.	Highway 99W	25 feet
2.	Arterial	15 feet
3.	Collector	10 feet

In residential developments where fences are typically desired adjoining the above described major street the corridor may be placed in the road right-of-way between the property line and the sidewalk. In all other developments, the visual corridor shall be on private property adjacent to the right-of-way.

B. *Landscape Materials*

The required visual corridor areas shall be planted as specified by the review authority to provide a continuous visual and/or acoustical buffer between major streets and developed uses. Except as provided for above, fences and walls shall not be substituted for landscaping within the visual corridor. Uniformly planted, drought resistant street trees and ground cover, as specified in Section 16.142.060, shall be planted in the corridor by the developer. The improvements shall be included in the compliance agreement. In no case shall trees be removed from the required visual corridor.

C. *Establishment and Maintenance*

Designated visual corridors shall be established as a portion of landscaping requirements pursuant to Chapter 16.92. To assure continuous maintenance of the visual corridors, the review authority may require that the development rights to the corridor areas be dedicated to the City or that restrictive covenants be recorded prior to the issuance of a building permit.

RESPONSE: A preliminary landscaping plan included with this application shows a 15 foot visual corridor along SW Tualatin-Sherwood Road (an arterial) and a 10 foot visual corridor along SW Gerda Lane (a collector) the visual corridors are located on site and are made up of existing mature vegetation. This standard is met.

16.142.060 - Street Trees

A. *Installation of Street Trees on New or Redeveloped Property.*

Trees are required to be planted to the following specifications along public streets abutting or within any new development or re-development. Planting of such trees shall be a condition of development approval. The City shall be subject to the same standards for any developments involving City-owned property, or when constructing or reconstructing City streets. After installing street trees, the property

owner shall be responsible for maintaining the street trees on the owner's property or within the right-of-way adjacent to the owner's property.

1. *Location: Trees shall be planted within the planter strip along a newly created or improved streets. In the event that a planter strip is not required or available, the trees shall be planted on private property within the front yard setback area or within public street right-of-way between front property lines and street curb lines or as required by the City.*
2. *Size: Trees shall have a minimum trunk diameter of two (2) caliper inches, which is measured six inches above the soil line, and a minimum height of six (6) feet when planted.*
3. *Types: Developments shall include a variety of street trees. The trees planted shall be chosen from those listed in 16.142.080 of this Code.*
4. *Required Street Trees and Spacing:*
 - a. *The minimum spacing is based on the maximum canopy spread identified in the recommended street tree list in section 16.142.080 with the intent of providing a continuous canopy without openings between the trees. For example, if a tree has a canopy of forty (40) feet, the spacing between trees is forty (40) feet. If the tree is not on the list, the mature canopy width must be provided to the planning department by a certified arborist.*
 - b. *All new developments shall provide adequate tree planting along all public streets. The number and spacing of trees shall be determined based on the type of tree and the spacing standards described in a. above and considering driveways, street light locations and utility connections. Unless exempt per c. below, trees shall not be spaced more than forty (40) feet apart in any development.*
 - c. *A new development may exceed the forty-foot spacing requirement under section b. above, under the following circumstances:*
 - (1) *Installing the tree would interfere with existing utility lines and no substitute tree is appropriate for the site; or*
 - (2) *There is not adequate space in which to plant a street tree due to driveway or street light locations, vision clearance or utility connections, provided the driveways, street light or utilities could not be reasonably located elsewhere so as to accommodate adequate room for street trees; and*
 - (3) *The street trees are spaced as close as possible given the site limitations in (1) and (2) above.*
 - (4) *The location of street trees in an ODOT or Washington County right-of-way may require approval, respectively, by ODOT or Washington County and are subject to the relevant state or county standards.*
 - (5) *For arterial and collector streets, the City may require planted medians in lieu of paved twelve-foot wide center turning lanes, planted with trees to the specifications of this subsection.*

RESPONSE: In this case, there are existing mature trees and other vegetation located along the subject site's frontage on SW Tualatin-Sherwood Road and SW Gerda Lane. Therefore, additional street trees are not proposed. However, additional street trees could be planted if required by the City.

B. Removal and Replacement of Street Trees.

The removal of a street tree shall be limited and in most cases, necessitated by the tree. A person may remove a street tree as provided in this section. The person removing the tree is responsible for all costs of removal and replacement. Street trees less than five (5) inches DBH can be removed by right by the property owner or his or her assigns, provided that they are replaced. A street tree that is removed must be replaced within six (6) months of the removal date.

1. *Criteria for All Street Tree Removal for trees over five (5) inches DBH. No street tree shall be removed unless it can be found that the tree is:*
 - a. *Dying, becoming severely diseased, or infested or diseased so as to threaten the health of other trees, or*
 - b. *Obstructing public ways or sight distance so as to cause a safety hazard, or*
 - c. *Interfering with or damaging public or private utilities, or*

-
- d. *Defined as a nuisance per City nuisance abatement ordinances.*
 2. *Street trees between five (5) and ten (10) inches DBH may be removed if any of the criteria in 1. above are met and a tree removal permit is obtained.*
 - a. *The Tree Removal Permit Process is a Type I land use decision and shall be approved subject to the following criteria:*
 - (1) *The person requesting removal shall submit a Tree Removal Permit application that identifies the location of the tree, the type of tree to be removed, the proposed replacement and how it qualifies for removal per Section 1. above.*
 - (2) *The person shall post a sign, provided by the City, adjacent to the tree for ten (10) calendar days prior to removal that provides notice of the removal application and the process to comment on the application.*
 - (3) *If an objection to the removal is submitted by the City or to the City during the ten (10) calendar day period, an additional evaluation of the tree will be conducted by an arborist to determine whether the tree meets the criteria for street tree removal in Section 1. above. The person requesting the Tree Removal Permit shall be responsible for providing the arborist report and associated costs.*
 - (4) *Upon completion of the additional evaluation substantiating that the tree warrants removal per Section 1. above or if no objections are received within the ten-day period, the tree removal permit shall be approved.*
 - (5) *If additional evaluation indicates the tree does not warrant removal, the Tree Removal Permit will be denied.*

RESPONSE: No non-exempt trees need to be removed with this application. Therefore, this standard is not relevant.

16.142.070 - Trees on Property Subject to Certain Land Use Applications

A. Generally

The purpose of this Section is to establish processes and standards which will minimize cutting or destruction of trees and woodlands within the City. This Section is intended to help protect the scenic beauty of the City; to retain a livable environment through the beneficial effect of trees on air pollution, heat and glare, sound, water quality, and surface water and erosion control; to encourage the retention and planting of tree species native to the Willamette Valley and Western Oregon; to provide an attractive visual contrast to the urban environment, and to sustain a wide variety and distribution of viable trees and woodlands in the community over time.

B. Applicability

All applications including a Type II - IV land use review, shall be required to preserve trees or woodlands, as defined by this Section to the maximum extent feasible within the context of the proposed land use plan and relative to other codes, policies, and standards of the City Comprehensive Plan.

C. Inventory

1. *To assist the City in making its determinations on the retention of trees and woodlands, land use applications including Type II - IV development shall include a tree and woodland inventory and report. The report shall be prepared by a qualified professional and must contain the following information:*
 - a. *Tree size (in DBH and canopy area)*
 - b. *Tree species*
 - c. *The condition of the tree with notes as applicable explaining the assessment*
 - d. *The location of the tree on the site*
 - e. *The location of the tree relative to the planned improvements*
 - f. *Assessment of whether the tree must be removed to accommodate the development*
 - g. *Recommendations on measures that must be taken to preserve trees during the construction that are not proposed to be removed.*

2. In addition to the general requirements of this Section, the tree and woodland inventory's mapping and report shall also include, but is not limited to, the specific information outlined in the appropriate land use application materials packet.
 3. Definitions for the inventory purposes of this Section
 - a. A tree is a living woody plant having a trunk diameter as specified below at Diameter at Breast Height (DBH). Trees planted for commercial agricultural purposes, and/or those subject to farm forest deferral, such as nut and fruit orchards and Christmas tree farms, are excluded from this definition and from regulation under this Section, as are any living woody plants under six (6) inches at DBH. All trees six (6) inches or greater shall be inventoried.
 - b. A woodland is a biological community dominated by trees covering a land area of 20,000 square feet or greater at a density of at least fifty (50) trees per every 20,000 square feet with at least fifty percent (50%) of those trees of any species having a six (6) inches or greater at DBH. Woodlands planted for commercial agricultural purposes and/or subject to farm forest deferral, such as nut and fruit orchards and Christmas tree farms, are excluded from this definition, and from regulation under this Section.
 - c. A large stature tree is over 20 feet tall and wide with a minimum trunk diameter of 30 inches at DBH.
- D. Retention requirements
1. Trees may be considered for removal to accommodate the development including buildings, parking, walkways, grading etc., provided the development satisfies of D.2 or D.3, below.
 2. Required Tree Canopy - Residential Developments (Single Family Attached, Single Family Detached and Two - Family)

Each net development site shall provide a variety of trees to achieve a minimum total tree canopy of 40 percent. The canopy percentage is based on the expected mature canopy of each tree by using the equation πr^2 to calculate the expected square footage of canopy for each tree. The expected mature canopy is counted for each tree regardless of an overlap of multiple tree canopies.

The canopy requirement can be achieved by retaining existing trees or planting new trees. Required street trees can be used toward the total on site canopy required to meet this standard. The expected mature canopy spread of the new trees will be counted toward the needed canopy cover. A certified arborist or other qualified professional shall provide the estimated tree canopy of the proposed trees to the planning department for review.
 3. Required Tree Canopy - Non-Residential and Multi-family Developments

Each net development site shall provide a variety of trees to achieve a minimum total tree canopy of 30 percent. The canopy percentage is based on the expected mature canopy of each tree by using the equation πr^2 to calculate the expected square footage of each tree. The expected mature canopy is counted for each tree even if there is an overlap of multiple tree canopies.

The canopy requirement can be achieved by retaining existing trees or planting new trees. Required landscaping trees can be used toward the total on site canopy required to meet this standard. The expected mature canopy spread of the new trees will be counted toward the required canopy cover. A certified arborist or other qualified professional shall provide an estimated tree canopy for all proposed trees to the planning department for review as a part of the land use review process.

	Residential (single family & two family developments)	Old Town & Infill developments	Commercial, Industrial, Institutional Public and Multi-family
Canopy Requirement	40%	N/A	30%
<i>Counted Toward the Canopy Requirement</i>			
Street trees included in canopy requirement	Yes	N/A	No

Landscaping requirements included in canopy requirement	N/A	N/A	Yes
Existing trees onsite	Yes x2	N/A	Yes x2
Planting new trees onsite	Yes	N/A	Yes

RESPONSE: This application does not include the removal of any non-exempt trees from this site. This project requires 30% tree canopy coverage for the proposed site area. The preliminary landscaping plan included in the application materials show that this standard is exceeded.

Chapter 16.146 – Noise

16.146.010 – Generally

All otherwise permitted commercial, industrial, and institutional uses in the City shall comply with the noise standards contained in OAR 340-35-035. The City may require proof of compliance with OAR 340-35-035 in the form of copies of all applicable State permits or certification by a professional acoustical engineer that the proposed uses will not cause noise in excess of State standards.

RESPONSE: The project will not produce noises that do not comply with the standards contained in OAR 340-35-035. This standard is met.

Chapter 16.148 – Vibrations

16.148.010 – Generally

All otherwise permitted commercial, industrial, and institutional uses shall not cause discernible vibrations that exceed a peak of 0.002 gravity at the property line of the originating use, except for vibrations that last five (5) minutes or less per day, based on a certification by a professional engineer.

16.148.020 – Exceptions

This Chapter does not apply to vibration caused by construction activities including vehicles accessing construction sites, or to vibrations caused by automobiles, trucks, trains, aircraft, and other similar vehicles when said vehicles are properly maintained and operated and are using properly designated rights-of-way, travel ways, flight paths or other routes. Nothing in this Chapter shall preclude the City from abating any vibration problem as per applicable City nuisance and public safety ordinances.

RESPONSE: The project will not produce discernible vibrations that exceed what is generally allowed by the City Code. This standard is met.

Chapter 16.150 – Air Quality

16.150.010 – Generally

All otherwise permitted commercial, industrial, and institutional uses shall comply with applicable State air quality rules and statutes:

- A. *All such uses shall comply with standards for dust emissions as per OAR 340-21-060.*

-
- B. Incinerators, if otherwise permitted by Section 16.140.020, shall comply with the standards set forth in OAR 340-25-850 through 340-25-905.
 - C. Uses for which a State Air Contaminant Discharge Permit is required as per OAR 340-20-140 through 340-20-160 shall comply with the standards of OAR 340-220 through 340-20-276.

RESPONSE: The project will not produce any unusual levels of air emissions that would exceed state or federal established emission levels. This standard is met.

Chapter 16.152 – Odors

16.152.010 – Generally

All otherwise permitted commercial, industrial, and institutional uses shall incorporate the best practicable design and operating measures so that odors produced by the use are not discernible at any point beyond the boundaries of the development site.

RESPONSE: The project will not produce any unusual odors that are discernible at any point beyond the boundaries of the site. This standard is met.

16.154 – Heat and Glare

16.154.010 – Generally

Except for exterior lighting, all otherwise permitted commercial, industrial, and institutional uses shall conduct any operations producing excessive heat or glare entirely within enclosed buildings. Exterior lighting shall be directed away from adjoining properties, and the use shall not cause such glare or lights to shine off site in excess of one-half (0.5) foot candle when adjoining properties are zoned for residential uses.

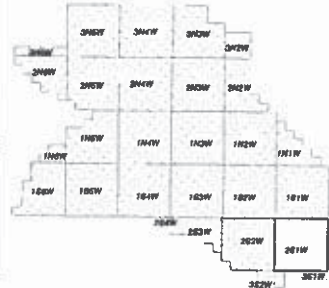
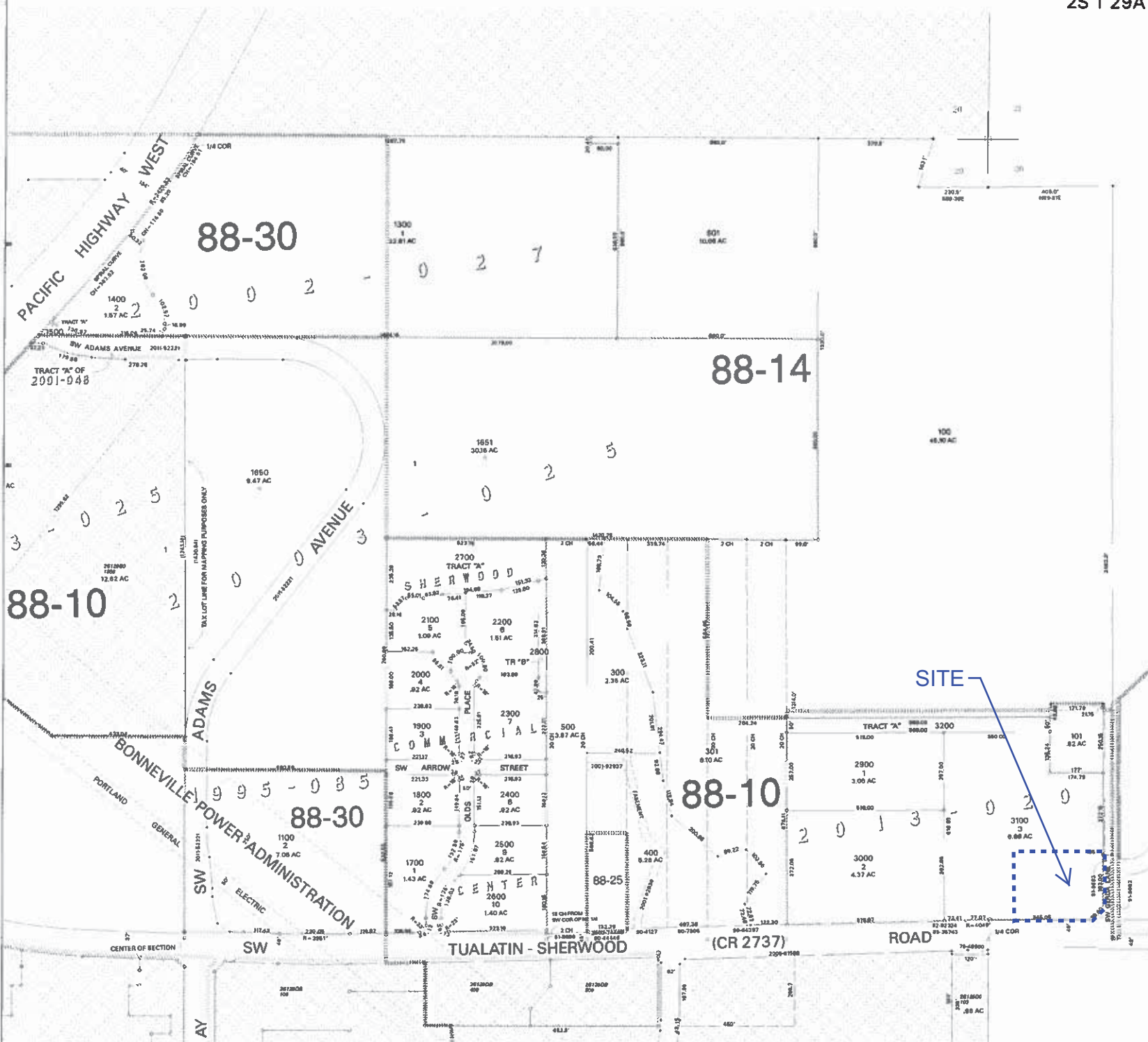
RESPONSE: The project will not produce excessive heat or glare. Photometric values are shown on the preliminary lighting plan included with this application. This standard is met.

IV. CONCLUSION

The required findings have been made and the written narrative and accompanying documentation demonstrate that the application is consistent with the applicable provisions of the City of Sherwood Municipal Code. The evidence in the record is substantial and supports approval of the application. Therefore, the applicant respectfully requests approval of the application.



COUNTY ASSESSOR'S MAP



WASHINGTON COUNTY OREGON
NE1/4 SECTION 29 T2S R1W W.M.
SCALE 1" = 200'

36	31	32	33	34	35	36	31
1	6	5	4	3	2	1	6
12	7	8	9	10	11	12	7
13	18	17	16	15	14	13	18
24	19	20	21	22	23	24	19
25	30	29	28	27	26	25	30
38	31	32	33	34	35	36	31
1	6	5	4	3	2	1	6

FOR ADDITIONAL MAPS VISIT OUR WEBSITE AT
www.co.washington.or.us

BB	BA	AB	AA
B			A
BC	BD	AC	AD
SECTION 29			
CB	CA	DB	DA
C			D
CC	CD	DC	DD

Cancelled Taxlots For: 2S129A
401,103,200,300,1000,800,1200,600,700,102,1000.

SCALE 1" = 200'

PLOT DATE: July 17, 2013
FOR ASSESSMENT PURPOSES ONLY - DO NOT RELY ON FOR OTHER USE
Map areas delineated by either gray shading or a cross-hatched pattern are for reference only and may not indicate the most current property boundaries. Please consult the appropriate map for the most current information.

SW GERDA LANE OFFICE BUILDING

PRELIMINARY STORMWATER REPORT

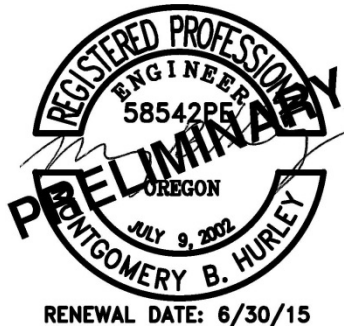
DATE: November 21, 2013

CLIENT: Misty Mountain Enterprises
PO Box 623
Manzanita, OR 97130

ENGINEERING CONTACT: Monty Hurley, PE, PLS

ENGINEERING FIRM: AKS Engineering & Forestry, LLC.

DATE: 11/21/2013



13910 SW Galbreath Drive, Suite 100
Sherwood, OR 97140
P: (503) 925-8799
www.aks-eng.com

TABLE OF CONTENTS

- 1.0 PURPOSE OF REPORT
- 2.0 PROJECT LOCATION/DESCRIPTION
- 3.0 REGULATORY DESIGN CRITERIA
 - 3.1 STORMWATER QUANTITY MANAGEMENT CRITERIA
 - 3.2 STORMWATER QUALITY MANAGEMENT CRITERIA
 - 3.3 FLOOD PLAIN
- 4.0 SUMMARY OF ON-SITE STORMWATER DETENTION RESULTS
- 5.0 SOURCES OF INFORMATION AND DESIGN METHODOLOGY
- 6.0 DESIGN PARAMETERS
 - 6.1 DESIGN STORM
 - 6.1.1 STORMWATER DETENTION FACILITY DESIGN
 - 6.1.2 INLET AND CONDUIT SIZING
 - 6.2 PRE-DEVELOPED SITE TOPOGRAPHY AND LAND USE
 - 6.2.1 SITE TOPOGRAPHY
 - 6.2.2 LAND USE
 - 6.2.3 PRE-DEVELOPED INPUT PARAMETERS
 - 6.3 SOIL TYPE
 - 6.4 POST-DEVELOPED SITE TOPOGRAPHY AND LAND USE
 - 6.4.1 SITE TOPOGRAPHY
 - 6.4.2 LAND USE
 - 6.4.3 POST-DEVELOPED INPUT PARAMETERS
 - 6.5 DESCRIPTION OF OFF-SITE CONTRIBUTORY BASINS
- 7.0 CALCULATION METHODOLOGY
 - 7.1 PROPOSED STORMWATER CONDUIT SIZING AND INLET SPACING
 - 7.2 PROPOSED STORMWATER QUANTITY CONTROL FACILITY DESIGN
 - 7.3 PROPOSED STORMWATER QUALITY CONTROL FACILITY DESIGN
 - 7.4 ENERGY DISSIPATER CALCULATIONS
 - 7.5 DOWNSTREAM ANALYSIS
- 8.0 STORMWATER QUANTITY CONTROL FACILITY OPERATION
- 9.0 STORMWATER QUALITY FACILITY OPERATION
- APPENDIX 1-1 VICINITY MAP
- APPENDIX 1-2 CATCHMENT MAPS
- APPENDIX 2-1 PRE-DEVELOPED 25-YEAR STORM CALCULATIONS (3.90")
- APPENDIX 2-2 POST-DEVELOPED 25-YEAR STORM CALCULATIONS (3.90")
- APPENDIX 3-1 DOWNSTREAM ANALYSIS CALCULATIONS
- APPENDIX 4-1 TR-55 RUNOFF CURVE NUMBERS
- APPENDIX 5-1 USDA SOIL SURVEY OF WASHINGTON COUNTY, OREGON
- APPENDIX 6-1 GEOTECHNICAL ENGINEER'S REPORT

STORMWATER REPORT

PROJECT: SW GERDA LANE OFFICE BUILDING

1.0 PURPOSE OF REPORT

The purpose of this report is to document the criteria for which the stormwater system for this site was designed to meet, the sources of information upon which the analysis is based, the design methodology, and the results of the analysis.

2.0 PROJECT LOCATION/DESCRIPTION

The proposed development is on approximately 0.50 acres in Section 29, Township 2 South, Range 1 West, Willamette Meridian, City of Sherwood, Washington County, Oregon (Tax Lot 3100, Tax Map 2S 1 29A). The site is located southeast of the intersection of SW Cedar Brook Way and SW Handley Street.

Currently, the development site and the adjacent properties are utilized for temporary automobile storage. The subject site is primarily covered with asphaltic concrete and the adjacent downstream property is covered with asphaltic concrete and gravel. This project consists of construction of an operations office, associated parking lot, landscaping, and a vegetated infiltration basin. Overall, this project will reduce the impervious area of the development site by approximately 40%.

3.0 REGULATORY DESIGN CRITERIA

3.1 STORMWATER QUANTITY MANAGEMENT CRITERIA

This project proposes a vegetated infiltration basin which prevents stormwater from leaving the site. Additionally, there are no known downstream stormwater system deficiencies; therefore, on-site stormwater detention is not required.

3.2 STORMWATER QUALITY MANAGEMENT CRITERIA

Stormwater quality management criteria will be addressed with a vegetated infiltration pond. Vegetation plantings will meet *Clean Water Services Design and Construction Standards for Sanitary Sewer and Surface Water Management (R&O 07-20)* planting requirements. Reduction of impervious area and the stormwater infiltration pond will reduce, if not eliminate, stormwater runoff from the development site. With respect to the existing impervious area on the existing site, the reduction of impervious area with the proposed development of this site and the utilization of a vegetated infiltration basin, this is a low impact development; therefore water quality management is addressed.

3.3 FLOOD PLAIN

The Flood Insurance Rate Map (FIRM) produced by the Federal Emergency Management Agency (FEMA) indicates that the project does not lie within any floodplain.

4.0 SUMMARY OF ON-SITE STORMWATER DETENTION RESULTS

This project proposes a vegetated infiltration basin which prevents stormwater from leaving the site. The vegetated infiltration basin will retain and infiltrate the 25 year storm event. Additionally, there are no known downstream stormwater deficiencies; therefore, on-site stormwater detention is not required.

5.0 SOURCES OF INFORMATION AND DESIGN METHODOLOGY

The Santa Barbara Urban Hydrograph (SBUH) Method is utilized for the stormwater analysis. This method utilizes the SCS Type 1A 24-hour storm. Hydrocad software aided in the analysis.

6.0 DESIGN PARAMETERS

6.1 DESIGN STORM

6.1.1 STORMWATER DETENTION FACILITY DESIGN

This project proposes a vegetated infiltration basin which prevents stormwater from leaving the site. Infiltration rates at the infiltration basin location were measured at 4.6” per hour (see attached geotechnical engineer’s report) which correlates with the USDA soil classification of Hydrologic Group B. A factor of safety of 2 was utilized for the infiltration rate in the design.

The basin was designed to retain and infiltrate the 25-year storm event. Additionally, there are no known downstream stormwater deficiencies; therefore, on-site stormwater detention is not required.

6.1.2 INLET AND CONDUIT SIZING

The stormwater runoff from the parking lot will sheet flow into the vegetated infiltration basin through curb cuts and storm drain pipe will be utilized for the office building roof runoff.

The storm drain pipes are sized to adequately handle stormwater runoff from the 25-year storm event.

6.2 PRE-DEVELOPED SITE TOPOGRAPHY AND LAND USE

6.2.1 SITE TOPOGRAPHY

The subject site is primarily covered with asphaltic concrete and the adjacent downstream property is covered with asphaltic concrete and gravel. The site is located adjacent to the intersection of SW Tualatin Sherwood Road and SW Gerda Lane. The subject site elevation is 3 to 5 feet lower than the adjacent roads. To the south of the subject site is a retaining wall, perimeter landscaping, and SW Tualatin Sherwood Road. To the east of the subject site is perimeter landscaping and Gerda Lane. To the North is a paved automobile storage area. To the west is a paved and gravel automobile storage area. The site slopes to the west at approximately 2%.

6.2.2 LAND USE

The subject site is utilized for parking and storage of automobiles.

6.2.3 PRE-DEVELOPED INPUT PARAMETERS

The input parameters are shown for the site on the catchment map and identified as subcatchment 10S. The adjacent downstream site is identified as subcatchment 20S.

6.3 SOIL TYPE

The soil for the site consists of Briedwell Stony Silt Loam, which belongs to hydrologic soil group “B”. This information is identified in the USDA SCS Soil Survey of Washington County, Oregon. The applicable information is provided in this report.

6.4 POST-DEVELOPED SITE TOPOGRAPHY AND LAND USE

6.4.1 SITE TOPOGRAPHY

The topography of the site will not change. Currently, the development site and the adjacent properties are utilized for temporary automobile storage. The subject site is primarily covered with asphaltic concrete and the adjacent downstream property is covered with asphaltic concrete and gravel. Overall, this project will reduce the impervious area of the development site by approximately 40%.

6.4.2 LAND USE

The post-developed land use consists of an operations office, associated parking lot, landscaping, and a vegetated infiltration basin.

6.4.3 POST-DEVELOPED INPUT PARAMETERS

The input parameters are shown for the site on the catchment map and identified as subcatchment 10P.

6.5 DESCRIPTION OF OFF-SITE CONTRIBUTORY BASINS

There are no off-site upstream basins.

7.0 CALCULATION METHODOLOGY

7.1 PROPOSED STORMWATER CONDUIT SIZING AND INLET SPACING

The curb cuts pipes are sized to have adequate capacity to convey stormwater runoff from the 25-year storm event.

7.2 PROPOSED STORMWATER QUANTITY CONTROL (DETENTION) FACILITY DESIGN

The basin was designed to retain and infiltrate the 25-year storm event. Additionally, there are no known downstream stormwater deficiencies; therefore, on-site stormwater detention is not required; therefore, stormwater quantity management is addressed.

7.3 PROPOSED STORMWATER QUALITY CONTROL FACILITY DESIGN

The input parameters for the subcatchment (basin) are shown in this report. They were determined by topographic survey information, design, and analysis. The hydrographs were created with Hydrocad software. The stormwater quality facility is a vegetated infiltration basin.

7.4 ENERGY DISSIPATER CALCULATIONS

Crushed rock splash pads will be placed at the inlets to the vegetated swale, to act as an energy dissipater.

7.5 DOWNSTREAM ANALYSIS

Historically, runoff from the site has flowed to the adjacent site over the paved automobile storage area, which eventually flows into Rock Creek. The adjacent site has a 25 year storm event runoff rate of 9.32 cfs. The pre-developed subject site 25 year storm event runoff rate is 0.40 cfs. The proposed vegetated infiltration basin is designed to retain and infiltrate the 25-year storm event; therefore the post-developed overall runoff rate will be reduced 4.29% with respect to the adjacent downstream site. Downstream analysis calculations are included in the appendix. The downstream drainage has been visually investigated for ¼ mile downstream, and there does not appear to be any potential downstream impacts to structures.

8.0 STORMWATER QUANTITY CONTROL FACILITY OPERATION

Stormwater detention is not required.

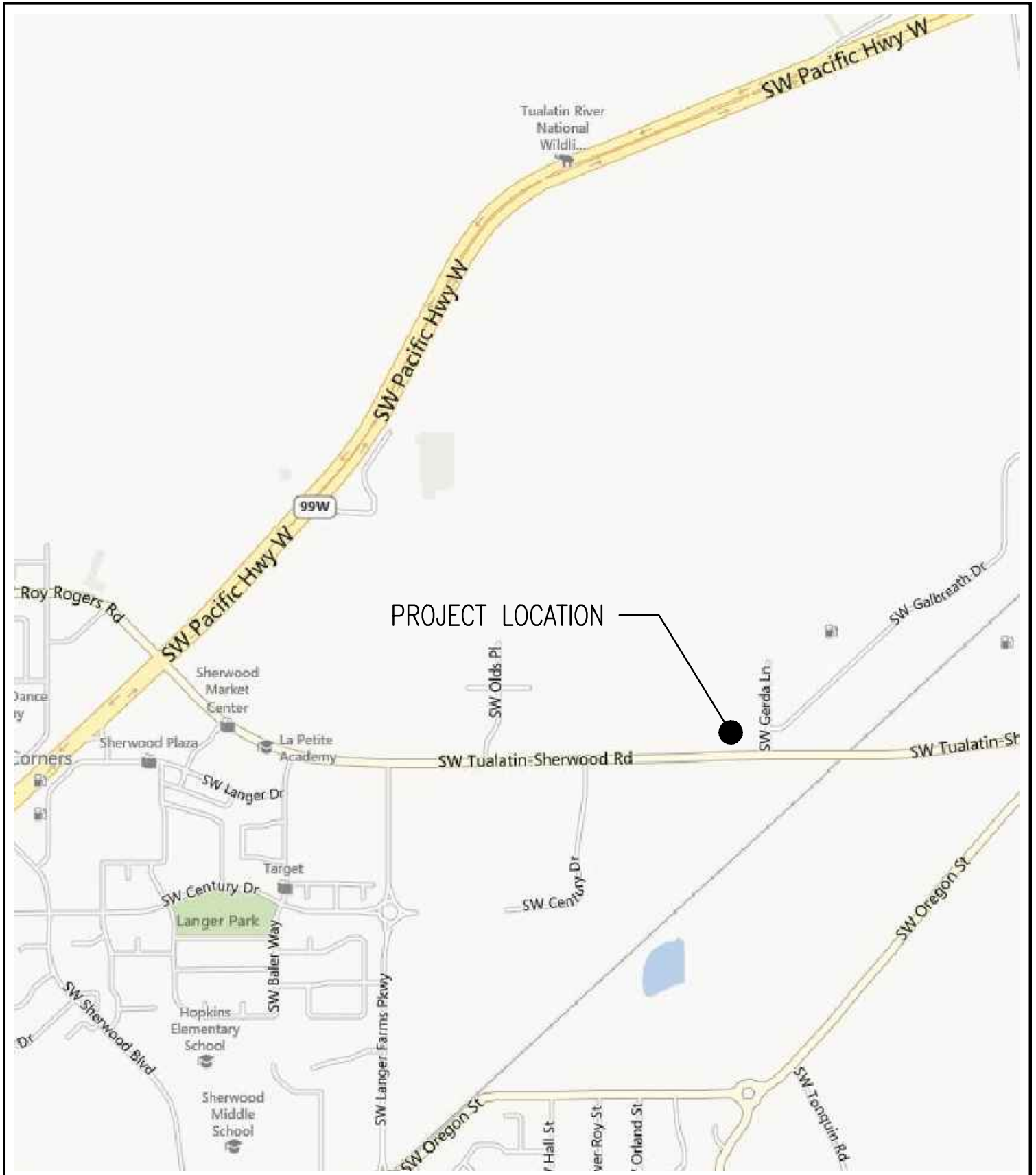
9.0 STORMWATER QUALITY CONTROL FACILITY OPERATION

The stormwater runoff from the parking lot will sheet flow into the vegetated infiltration basin through curb cuts and storm drain pipe will be utilized for the office building roof runoff.

The stormwater facility will be privately owned and maintained by the owner of the site.

APPENDIX 1-1

VICINITY MAP



SW GERDA LANE OFFICE BUILDING



VICINITY MAP

JOB NO.:	3592
DRAWN BY:	RSW
CHECKED BY:	MBH
DRAWING NO.:	3592VICINITY
SCALE:	NOT TO SCALE
DATE:	10-25-13

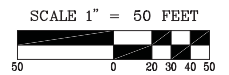
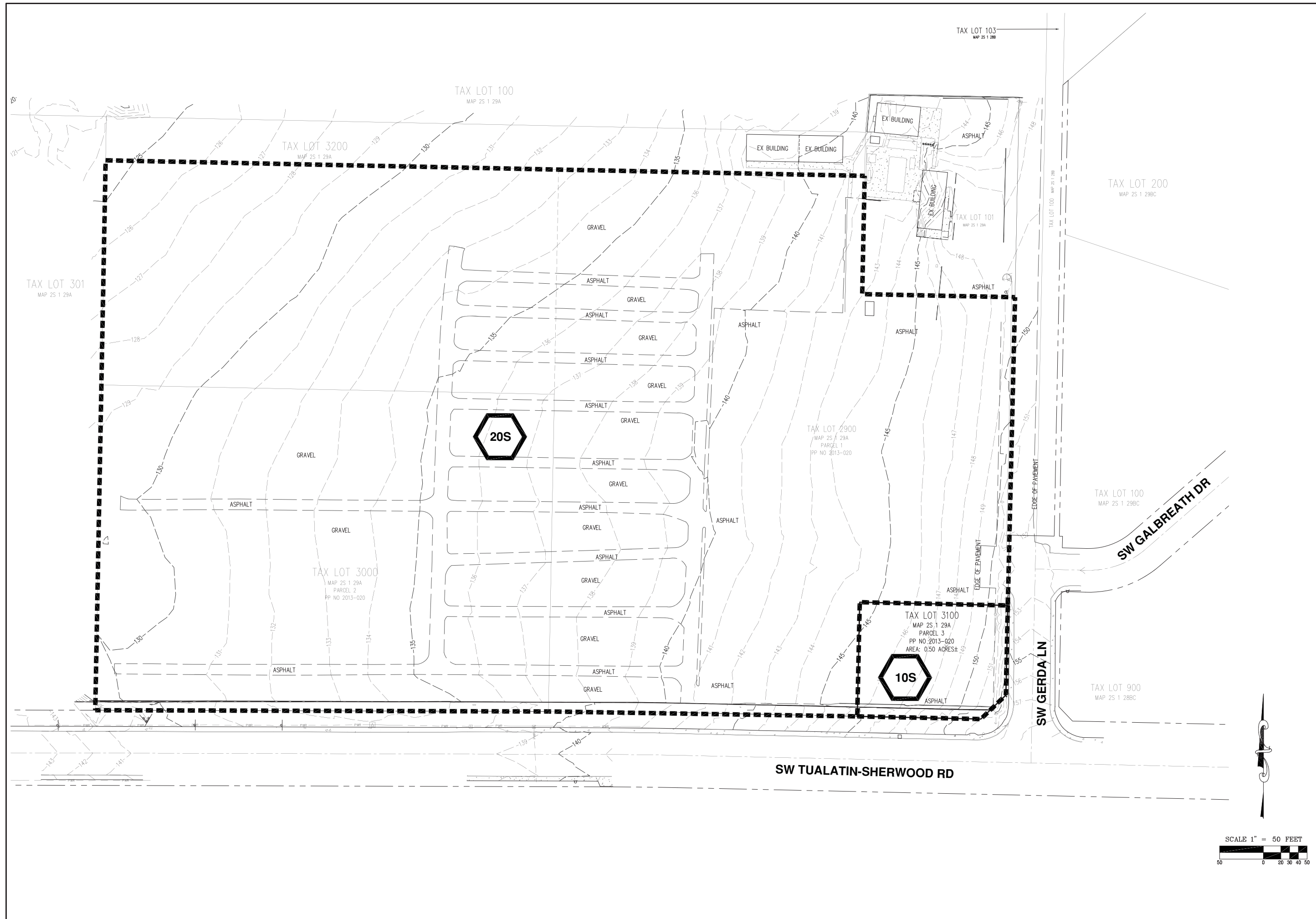
**ENGINEERING • PLANNING
SURVEYING • FORESTRY**

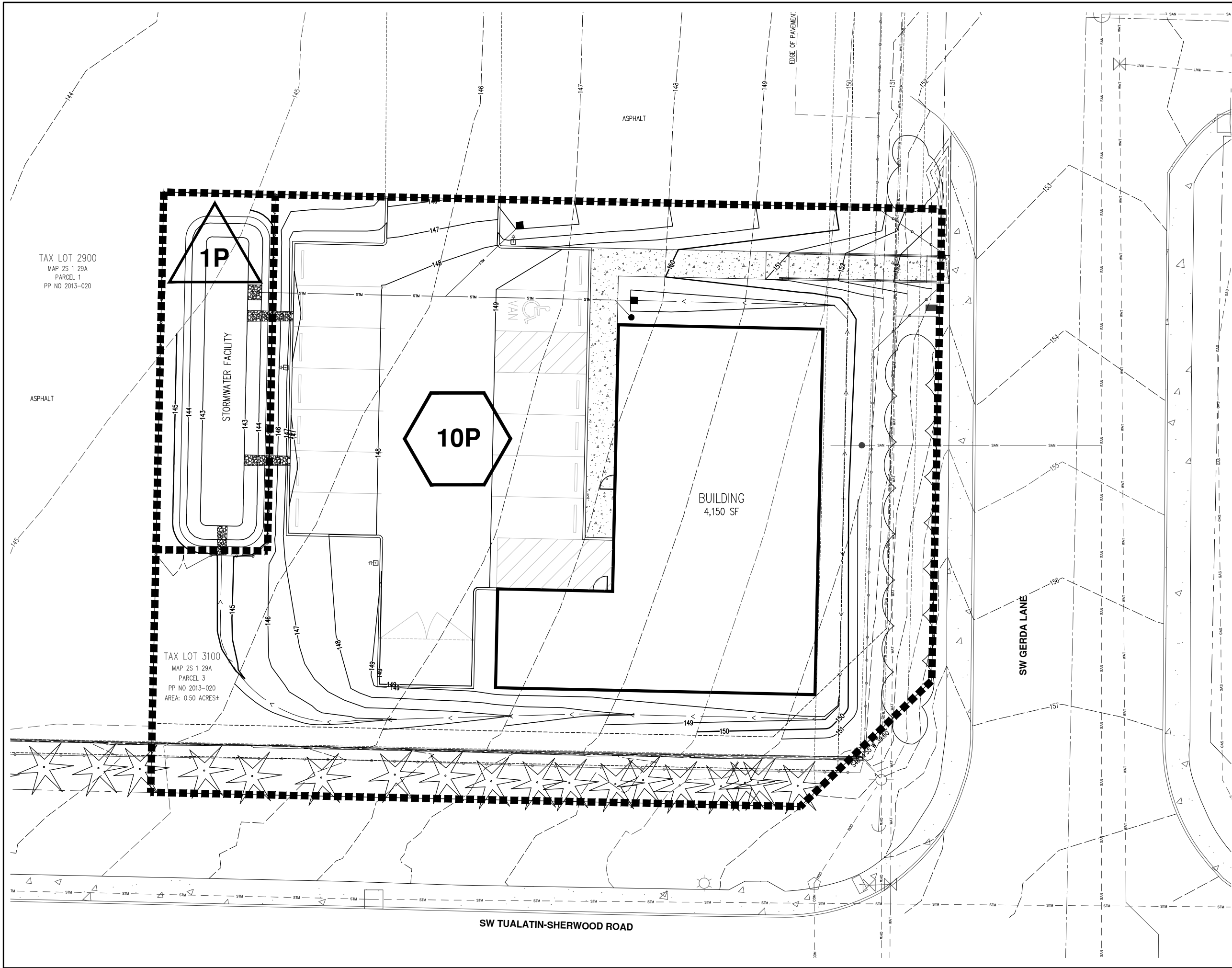
13910 SW GALBREATH DRIVE
SUITE 100
SHERWOOD, OR 97140
PHONE: 503-925-8799



APPENDIX 1-2

CATCHMENT MAPS





AKS
AKS ENGINEERING AND FORESTRY, LLC
13910 SW CALBREATH DR
SUITE 100
SHERWOOD, OR 97140
PHONE: 503.925.8799
FAX: 503.925.8869
www.aks-eng.com

ENGINEERING • PLANNING • SURVEYING
FORESTRY • LANDSCAPE ARCHITECTURE

**SW GERDA LANE
OFFICE BUILDING**

SHERWOOD OREGON
TAX ASSESSOR'S MAP 2S 1 29A

**POST-DEVELOPED
SUBCATCHMENT MAP**

DESIGNED BY: RSW
DRAWN BY: RSW/BLF
CHECKED BY: CG/MBH
SCALE: AS NOTED
DATE: 11/21/2013

REGISTERED PROFESSIONAL
ENGINEER
585422
OREGON
MAY 3 2009
MONTGOMERY B. HUNLEY
RENEWAL DATE: 6/30/15

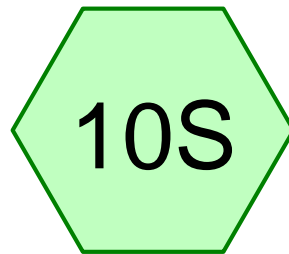
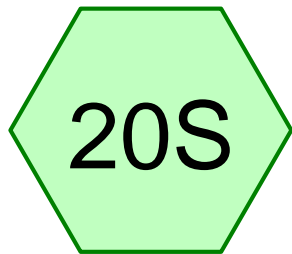
REVISIONS

JOB NUMBER
3592

SHEET
2

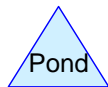
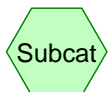
AKS DRAWING FILE: 3592_POSTDEV.DWG | LAYOUT: POST-DEV

APPENDIX 2-1
PRE-DEVELOPED 25-YEAR
STORM CALCULATIONS (3.90")



ADJACENT
DOWNSTREAM

EXISTING SITE



3592-PRE

Prepared by AKS Engineering & Forestry, LLC.

HydroCAD® 8.50 s/n 005096 © 2007 HydroCAD Software Solutions LLC

Printed 10/25/2013

Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
8,017	69	LANDSCAPE - PERVIOUS (10S,20S)
404,741	85	GRAVEL - PERVIOUS (20S)
210,595	98	PAVED - IMPERVIOUS (10S,20S)
623,353		TOTAL AREA

Summary for Subcatchment 10S: EXISTING SITE

Runoff = 0.40 cfs @ 7.92 hrs, Volume= 5,641 cf, Depth> 3.12"

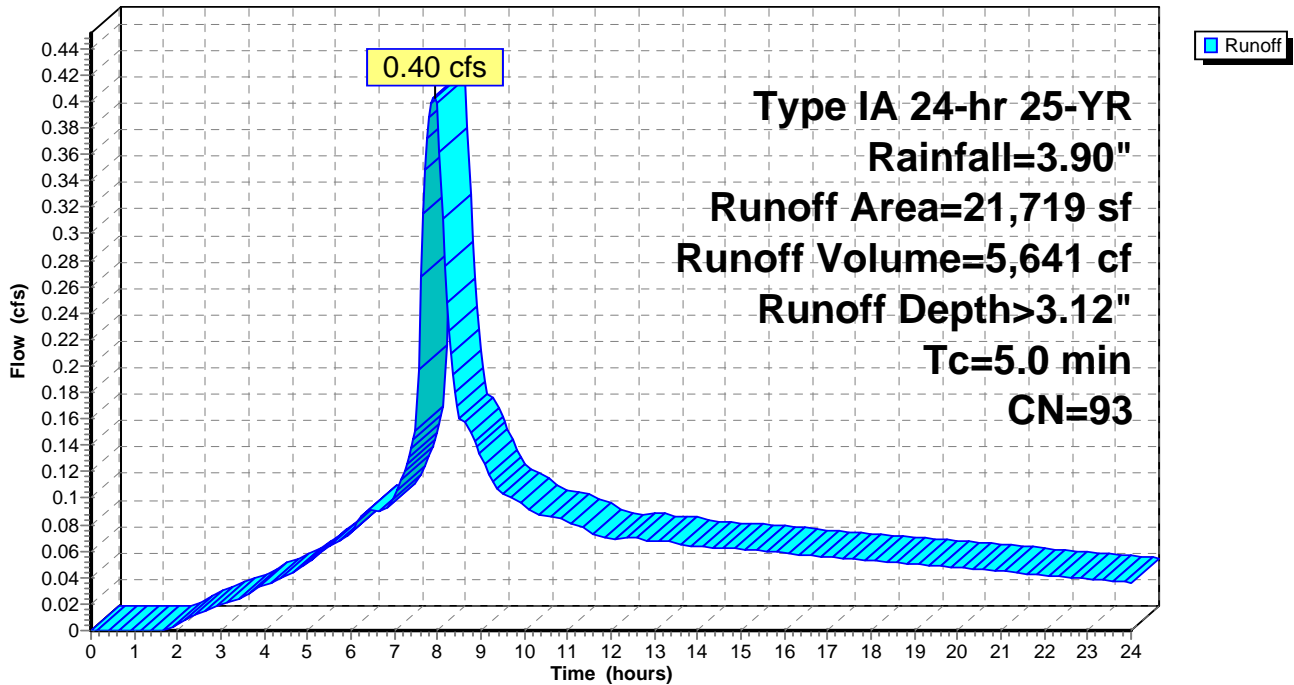
Runoff by SBUH method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 25-YR Rainfall=3.90"

	Area (sf)	CN	Description
*	18,066	98	PAVED - IMPERVIOUS
*	3,653	69	LANDSCAPE - PERVIOUS
	21,719	93	Weighted Average
	3,653		Pervious Area
	18,066		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 10S: EXISTING SITE

Hydrograph



Summary for Subcatchment 20S: ADJACENT DOWNSTREAM

Runoff = 9.32 cfs @ 7.98 hrs, Volume= 136,327 cf, Depth> 2.72"

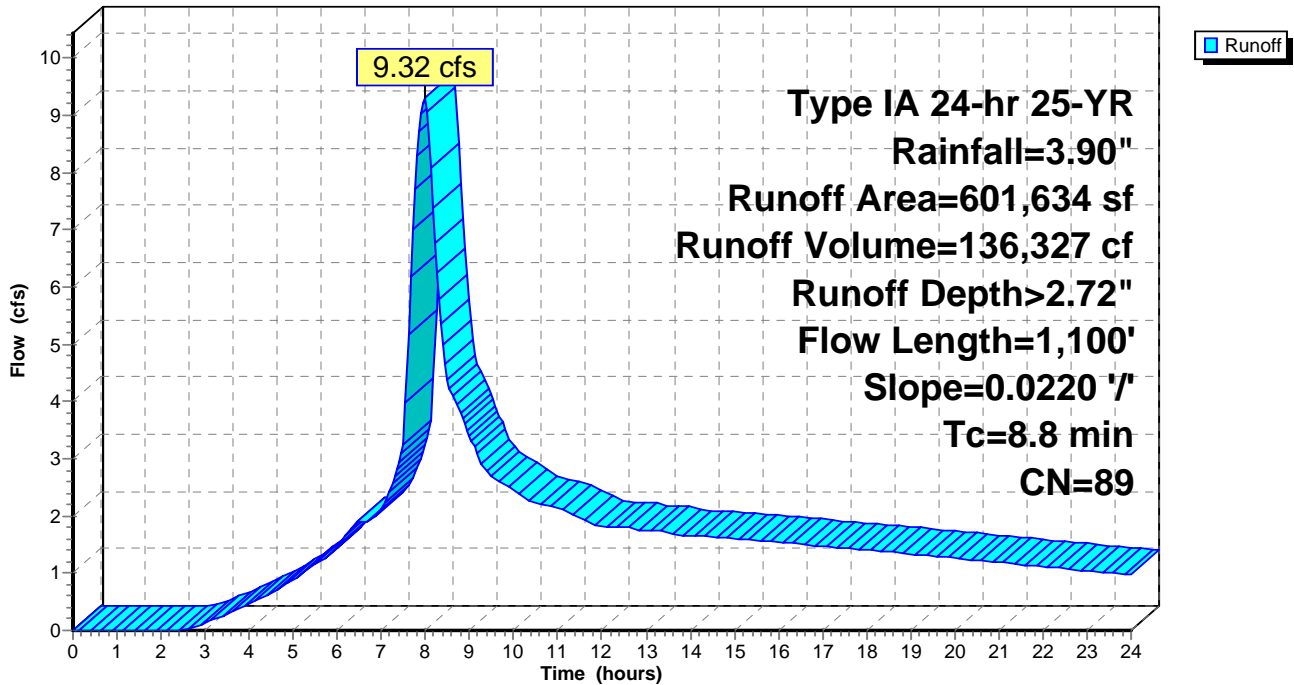
Runoff by SBUH method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 25-YR Rainfall=3.90"

	Area (sf)	CN	Description
*	192,529	98	PAVED - IMPERVIOUS
*	4,364	69	LANDSCAPE - PERVIOUS
*	404,741	85	GRAVEL - PERVIOUS
	601,634	89	Weighted Average
	409,105		Pervious Area
	192,529		Impervious Area

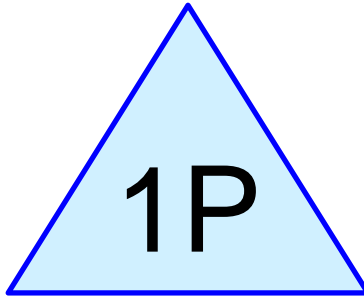
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	300	0.0220	1.57		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.50"
5.6	800	0.0220	2.39		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
8.8	1,100	Total			

Subcatchment 20S: ADJACENT DOWNSTREAM

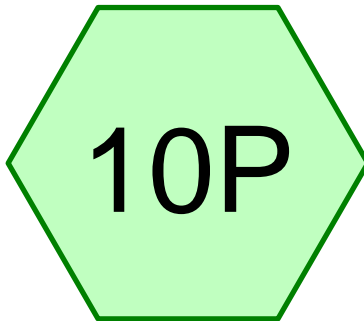
Hydrograph



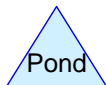
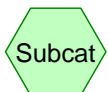
APPENDIX 2-2
POST-DEVELOPED 25-YEAR
STORM CALCULATIONS (3.90")



INFILTRATION POND



DEVELOPED SITE



3592-POST

Prepared by AKS Engineering & Forestry, LLC.

HydroCAD® 8.50 s/n 005096 © 2007 HydroCAD Software Solutions LLC

Printed 11/21/2013

Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
11,353	61	LANDSCAPE - PERVIOUS (10P)
10,366	98	PAVED/ROOF - IMPERVIOUS (10P)
21,719		TOTAL AREA

Summary for Subcatchment 10P: DEVELOPED SITE

Runoff = 0.22 cfs @ 7.98 hrs, Volume= 3,398 cf, Depth> 1.88"

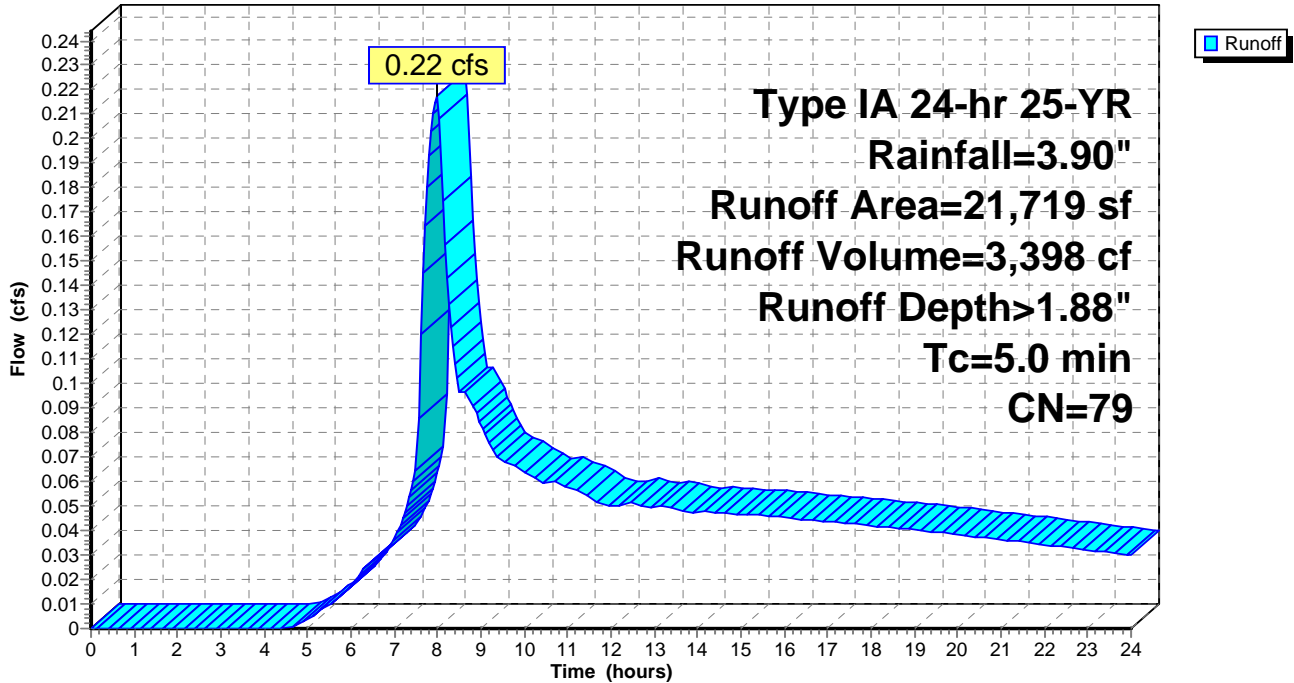
Runoff by SBUH method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type IA 24-hr 25-YR Rainfall=3.90"

	Area (sf)	CN	Description
*	10,366	98	PAVED/ROOF - IMPERVIOUS
*	11,353	61	LANDSCAPE - PERVIOUS
	21,719	79	Weighted Average
	11,353		Pervious Area
	10,366		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 10P: DEVELOPED SITE

Hydrograph



3592-POST

Type IA 24-hr 25-YR Rainfall=3.90"

Prepared by AKS Engineering & Forestry, LLC.

Printed 11/21/2013

HydroCAD® 8.50 s/n 005096 © 2007 HydroCAD Software Solutions LLC

Page 4

Summary for Pond 1P: INFILTRATION POND

Inflow Area = 21,719 sf, 47.73% Impervious, Inflow Depth > 1.88" for 25-YR event
 Inflow = 0.22 cfs @ 7.98 hrs, Volume= 3,398 cf
 Outflow = 0.05 cfs @ 13.59 hrs, Volume= 2,851 cf, Atten= 78%, Lag= 336.9 min
 Discarded = 0.05 cfs @ 13.59 hrs, Volume= 2,851 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 363.72' @ 13.59 hrs Surf.Area= 908 sf Storage= 773 cf

Plug-Flow detention time= 210.3 min calculated for 2,851 cf (84% of inflow)
 Center-of-Mass det. time= 114.7 min (920.3 - 805.6)

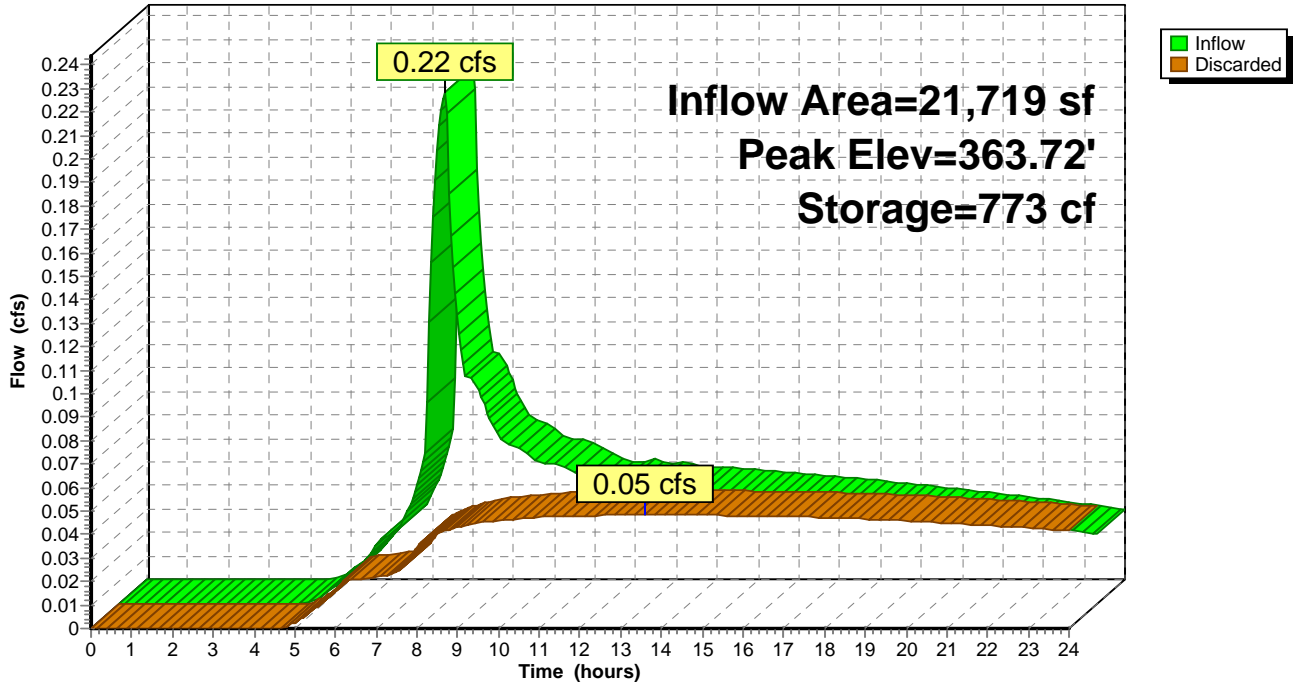
Volume	Invert	Avail.Storage	Storage Description
#1	362.50'	1,635 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
362.50	374	0	0
363.50	803	589	589
364.50	1,289	1,046	1,635

Device	Routing	Invert	Outlet Devices
#1	Discarded	362.50'	2.300 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.05 cfs @ 13.59 hrs HW=363.72' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Pond 1P: INFILTRATION POND

Hydrograph



APPENDIX 3-1
DOWNSTREAM ANALYSIS
CALCULATIONS

SW Gerda Lane Office Building

Downstream Analysis Calculations

25-Year Storm Flow Rates

<u>Catchments</u>	<u>Flow Rate (CFS)</u>
-------------------	------------------------

Catchment 20S =	9.32
-----------------	------

Total Pre-Developed Flows = **9.32 CFS**

On-Site Pre-Developed Flows (10S) = 0.40 CFS

On-Site Post-Developed Flows (10P) = 0.0 CFS

Additional flow created from this project = $(0.0 - 0.40) = \mathbf{-0.40\ CFS}$

Percent of additional flow from development = $\left[\frac{-0.40}{9.32} \right] = -0.0429 = \mathbf{4.29\% \ Reduction}$

4.29% Reduction < 5.00% Increase => Visually investigate for ¼ mile.

=> Visual investigation does not show any downstream impacts to structures.

APPENDIX 4-1
TR-55 RUNOFF CURVE
NUMBERS

Table 2-2a Runoff curve numbers for urban areas ^{1/}

Cover description	Average percent impervious area ^{2/}	Curve numbers for hydrologic soil group			
		A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) ^{3/} :					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ^{4/}		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82

Developing urban areas

Newly graded areas
(pervious areas only, no vegetation) ^{5/}

	77	86	91	94
--	----	----	----	----

Idle lands (CN's are determined using cover types
similar to those in table 2-2c).

^{1/} Average runoff condition, and $I_a = 0.2S$.

^{2/} The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

^{3/} CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

^{4/} Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

^{5/} Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

Table 2-2b Runoff curve numbers for cultivated agricultural lands ^{1/}

Cover description			Curve numbers for hydrologic soil group			
Cover type	Treatment ^{2/}	Hydrologic condition ^{3/}	A	B	C	D
Fallow	Bare soil	—	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
C&T+ CR	Poor	65	73	79	81	
	Good	61	70	77	80	
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
C&T+ CR	Poor	60	71	78	81	
	Good	58	69	77	80	
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

¹ Average runoff condition, and $I_a=0.2S$

² Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.

³ Hydraulic condition is based on combination factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes, (d) percent of residue cover on the land surface (good $\geq 20\%$), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

Table 2-2c Runoff curve numbers for other agricultural lands ^{1/}

Cover description	Hydrologic condition	Curve numbers for hydrologic soil group			
		A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. ^{2/}	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. ^{3/}	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 ^{4/}	48	65	73
Woods—grass combination (orchard or tree farm). ^{5/}	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. ^{6/}	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 ^{4/}	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

¹ Average runoff condition, and $I_a = 0.2S$.

² **Poor:** <50% ground cover or heavily grazed with no mulch.

Fair: 50 to 75% ground cover and not heavily grazed.

Good: > 75% ground cover and lightly or only occasionally grazed.

³ **Poor:** <50% ground cover.

Fair: 50 to 75% ground cover.

Good: >75% ground cover.

⁴ Actual curve number is less than 30; use CN = 30 for runoff computations.

⁵ CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

⁶ **Poor:** Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.

Fair: Woods are grazed but not burned, and some forest litter covers the soil.

Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

Table 2-2d Runoff curve numbers for arid and semiarid rangelands ^{1/}

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition ^{2/}	A ^{3/}	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

¹ Average runoff condition, and $I_a = 0.2S$. For range in humid regions, use table 2-2c.

² Poor: <30% ground cover (litter, grass, and brush overstory).
Fair: 30 to 70% ground cover.
Good: > 70% ground cover.

³ Curve numbers for group A have been developed only for desert shrub.

APPENDIX 5-1
USDA SOIL SURVEY OF
WASHINGTON COUNTY



United States
Department of
Agriculture

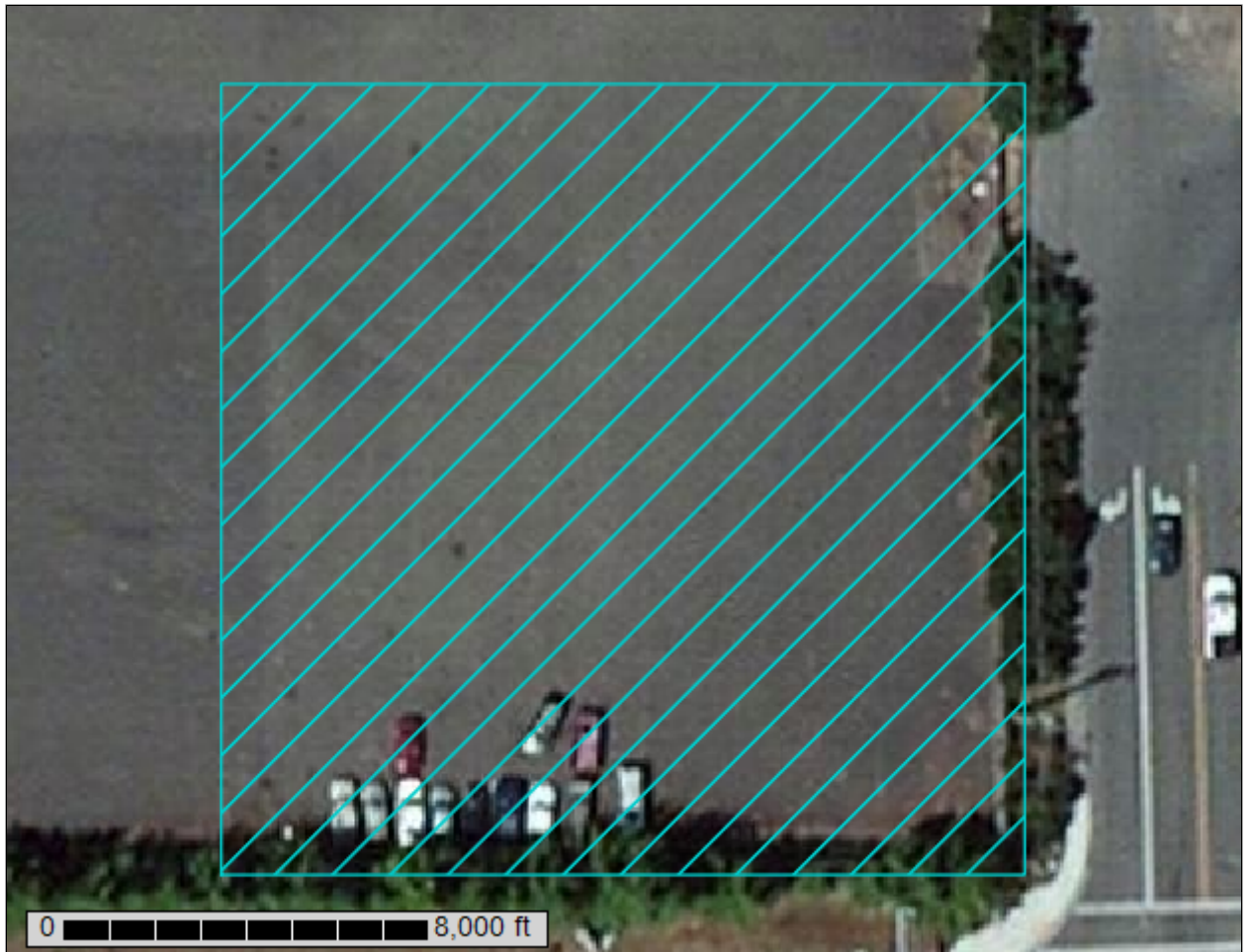


NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Washington County, Oregon



Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:500 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.






































Soil Survey Area: Washington County, Oregon
 Survey Area Data: Version 10, Aug 20, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 8, 2010—Sep 4, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map-unit boundaries may be evident.

MAP LEGEND

 Area of Interest (AOI)	 Spoil Area
 Soil Map Unit Polygons	 Stony Spot
 Soil Map Unit Lines	 Very Stony Spot
 Soil Map Unit Points	 Wet Spot
 Special Point Features	 Other
 Blowout	 Special Line Features
 Borrow Pit	Water Features
 Clay Spot	 Streams and Canals
 Closed Depression	Transportation
 Gravel Pit	 Rails
 Gravelly Spot	 Interstate Highways
 Landfill	 US Routes
 Lava Flow	 Major Roads
 Marsh or swamp	 Local Roads
 Mine or Quarry	Background
 Miscellaneous Water	 Aerial Photography
 Perennial Water	
 Rock Outcrop	
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	

Map Unit Legend

Washington County, Oregon (OR067)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5B	Briedwell stony silt loam, 0 to 7 percent slopes	0.9	100.0%
Totals for Area of Interest		0.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Washington County, Oregon

5B—Briedwell stony silt loam, 0 to 7 percent slopes

Map Unit Setting

Elevation: 200 to 320 feet

Mean annual precipitation: 40 to 60 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 165 to 210 days

Map Unit Composition

Briedwell and similar soils: 85 percent

Description of Briedwell

Setting

Landform: Terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Silty over gravelly alluvium

Properties and qualities

Slope: 0 to 7 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Low (about 5.7 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance

Land capability (nonirrigated): 4e

Hydrologic Soil Group: B

Typical profile

0 to 12 inches: Stony silt loam

12 to 26 inches: Clay loam

26 to 60 inches: Extremely cobbly clay loam

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

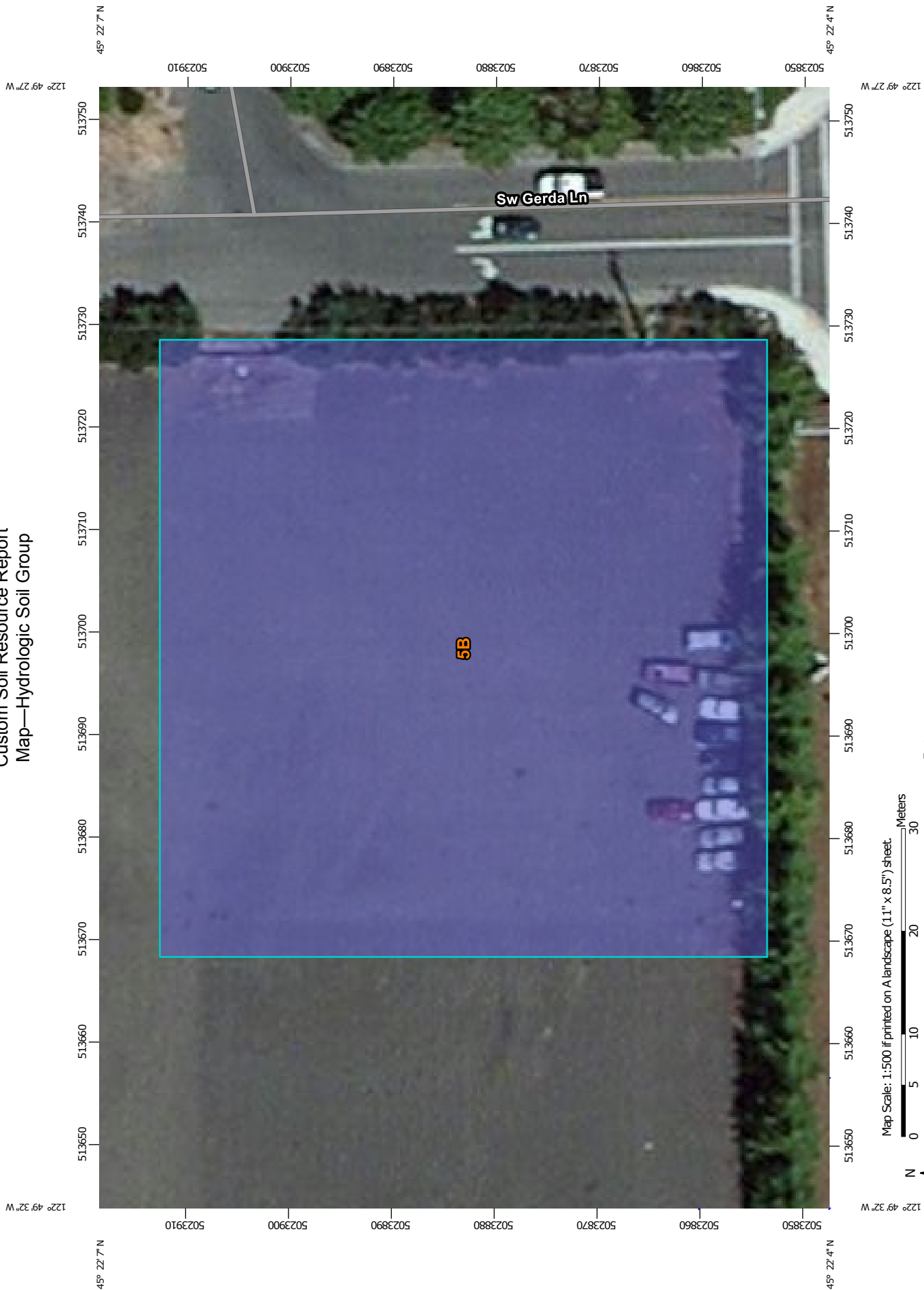
Custom Soil Resource Report

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

































Soil Survey Area: Washington County, Oregon
 Survey Area Data: Version 10, Aug 20, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 8, 2010—Sep 4, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map-unit boundaries may be evident.

MAP LEGEND

Area of Interest (AOI)	 C
 Area of Interest (AOI)	 C/D
Soils	 D
Soil Rating Polygons	 Not rated or not available
 A	Water Features
 A/D	 Streams and Canals
 B	Transportation
 B/D	 Rails
 C	 Interstate Highways
 C/D	 US Routes
 D	 Major Roads
 Not rated or not available	 Local Roads
Soil Rating Lines	Background
 A	 Aerial Photography
 A/D	
 B	
 B/D	
 C	
 C/D	
 D	
 Not rated or not available	
Soil Rating Points	
 A	
 A/D	
 B	
 B/D	

Table—Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Washington County, Oregon (OR067)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5B	Briedwell stony silt loam, 0 to 7 percent slopes	B	0.9	100.0%
Totals for Area of Interest			0.9	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX 6-1
GEOTECHNICAL ENGINEER'S
REPORT



Real-World Geotechnical Solutions
Investigation • Design • Construction Support

October 23, 2013
Project No. 13-3131

Jim Dougherty
Misty Mountain Enterprises
PO Box 623
Manzanita, Oregon 97130

CC: Rand Waltz, AKS Engineering & Forestry Via email: rand@aks-eng.com

**SUBJECT: GEOTECHNICAL ENGINEERING REPORT
NEW OFFICE BUILDING
20765 SW GERDA LANE
SHERWOOD, OREGON**

This report presents the results of a geotechnical engineering study conducted by GeoPacific Engineering, Inc. (GeoPacific) for the above-referenced project. The purpose of our investigation was to evaluate subsurface conditions at the site and to provide geotechnical recommendations for site development. This geotechnical study was performed in accordance with GeoPacific Proposal No. P-4595, dated August 7, 2013, and your subsequent authorization of our proposal and *General Conditions for Geotechnical Services*.

SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The subject site is approximately 0.5 acres in size located northwest of the intersection of SW Gerda Lane and SW Tualatin Sherwood Road in the City of Sherwood, Washington County, Oregon. Topography is flat to gently sloping. The site is currently a paved parking lot.

It is our understanding that development will consist of the construction of one new modular office structure, stormwater disposal tract, parking areas, and associated underground utilities. The building will likely be supported by conventional spread footings. A grading plan has not been provided; however, we anticipate fills will be minimal and cuts and will be on the order of 6 feet or less.

REGIONAL AND LOCAL GEOLOGIC SETTING

Regionally, the subject site lies within the Willamette Valley/Puget Sound lowland, a broad structural depression situated between the Coast Range on the west and the Cascade Range on the east. A series of discontinuous faults subdivide the Willamette Valley into a mosaic of fault-bounded, structural blocks (Yeats et al., 1996). Uplifted structural blocks form bedrock highlands, while down-warped structural blocks form sedimentary basins.

The site is underlain by the Quaternary age (last 1.6 million years) Willamette Formation, a catastrophic flood deposit associated with repeated glacial outburst flooding of the Willamette Valley (Yeats et al., 1996). The last of these outburst floods occurred about 10,000 years ago. These deposits typically consist of horizontally layered, micaceous, silt to coarse sand forming poorly-defined to distinct beds less than 3 feet thick.

The Willamette Formation is underlain by the Columbia River Basalt Formation (Yeats et al., 1996). The Miocene aged (about 14.5 to 16.5 million years ago) Columbia River Basalts are a thick sequence of lava flows which form the crystalline basement of the Tualatin Valley. The basalts are composed of dense, finely crystalline rock that is commonly fractured along blocky and columnar vertical joints. Individual basalt flow units typically range from 25 to 125 feet thick and interflow zones are typically vesicular, scoriaceous, brecciated, and sometimes include sedimentary rocks.

REGIONAL SEISMIC SETTING

At least three major fault zones capable of generating damaging earthquakes are thought to exist in the vicinity of the subject site. These include the Portland Hills Fault Zone, the Gales Creek-Newberg-Mt. Angel Structural Zone, and the Cascadia Subduction Zone.

Portland Hills Fault Zone

The Portland Hills Fault Zone is a series of NW-trending faults that include the central Portland Hills Fault, the western Oatfield Fault, and the eastern East Bank Fault. These faults occur in a northwest-trending zone that varies in width between 3.5 and 5.0 miles. The combined three faults vertically displace the Columbia River Basalt by 1,130 feet and appear to control thickness changes in late Pleistocene (approx. 780,000 years) sediment (Madin, 1990). The Portland Hills Fault occurs along the Willamette River at the base of the Portland Hills, and is about 10.5 miles northeast of the site. The Oatfield Fault occurs along the western side of the Portland Hills, and is about 8.5 miles northeast of the site. The accuracy of the fault mapping is stated to be within 500 meters (Wong, et al., 2000). No historical seismicity is correlated with the mapped portion of the Portland Hills Fault Zone, but in 1991 a M3.5 earthquake occurred on a NW-trending shear plane located 1.3 miles east of the fault (Yelin, 1992). Although there is no definitive evidence of recent activity, the Portland Hills Fault Zone is assumed to be potentially active (Geomatrix Consultants, 1995).

Gales Creek-Newberg-Mt. Angel Structural Zone

The Gales Creek-Newberg-Mt. Angel Structural Zone is a 50-mile-long zone of discontinuous, NW-trending faults that lies about 8.5 miles southwest of the subject site. These faults are recognized in the subsurface by vertical separation of the Columbia River Basalt and offset seismic reflectors in the overlying basin sediment (Yeats et al., 1996; Werner et al., 1992). A geologic reconnaissance and photogeologic analysis study conducted for the Scoggins Dam site in the Tualatin Basin revealed no evidence of deformed geomorphic surfaces along the structural zone (Unruh et al., 1994). No seismicity has been recorded on the Gales Creek Fault or Newberg Fault; however, these faults are considered to be potentially active because they may connect with the seismically active Mount Angel Fault and the rupture plane of the 1993 M5.6 Scotts Mills earthquake (Werner et al. 1992; Geomatrix Consultants, 1995).

Cascadia Subduction Zone

The Cascadia Subduction Zone is a 680-mile-long zone of active tectonic convergence where oceanic crust of the Juan de Fuca Plate is subducting beneath the North American continent at a rate of 4 cm per year (Goldfinger et al., 1996). A growing body of geologic evidence suggests that prehistoric subduction zone earthquakes have occurred (Atwater, 1992; Carver, 1992; Peterson et al., 1993; Geomatrix Consultants, 1995). This evidence includes: (1) buried tidal marshes recording episodic, sudden subsidence along the coast of northern California, Oregon, and Washington, (2) burial of subsided tidal marshes by tsunami wave deposits, (3) paleoliquefaction features, and (4) geodetic uplift patterns on the Oregon coast. Radiocarbon dates on buried tidal marshes indicate a recurrence interval for major subduction zone earthquakes of 250 to 650 years with the last event occurring 300 years ago (Atwater, 1992; Carver, 1992; Peterson et al., 1993; Geomatrix Consultants, 1995). The inferred seismogenic portion of the plate interface lies approximately 50 miles west of the Portland Basin at depths of between 20 and 40 kilometers below the surface.

FIELD EXPLORATION

Our site-specific exploration for this report was conducted on September 6, 2013. A total of 5 exploratory borings were drilled to depths of about 3 to 9.5 feet at the approximate locations indicated on Figure 2. It should be noted that boring locations were located in the field by pacing or taping distances from apparent property corners and other site features shown on the plans provided. As such, the locations of the explorations should be considered approximate.

The boreholes were drilled using a trailer mounted drill rig and solid stem auger methods. At each boring location, SPT (Standard Penetration Test) sampling was performed in general accordance with ASTM D1586 using a 2-inch outside diameter split-spoon sampler and a 140-pound hammer equipped with a rope and cathead mechanism. During the test, a sample is obtained by driving the sampler 18 inches into the soil with the hammer free-falling 30 inches. The number of blows for each 6 inches of penetration is recorded. The Standard Penetration Resistance ("N-value") of the soil is calculated as the number of blows required for the final 12 inches of penetration. If 50 or more blows are recorded within a single 6-inch interval, the test is terminated, and the blow count is recorded as 50 blows for the number of inches driven. This resistance, or N-value, provides a measure of the relative density of granular soils and the relative consistency of cohesive soils. At the completion of the borings, the holes were backfilled with bentonite.

A GeoPacific geologist continuously monitored the field exploration program and logged the borings. Soils observed in the explorations were classified in general accordance with the Unified Soil Classification System. Rock hardness was classified in accordance with Table 1, modified from the ODOT Rock Hardness Classification Chart (presented on the following page). During exploration, our geologist also noted geotechnical conditions such as soil consistency, moisture and groundwater conditions. Logs of test pits are attached to this report. The following report sections are based on the exploration program and summarize subsurface conditions encountered at the site.

Table 1. Rock Hardness Classification Chart

ODOT Rock Hardness Rating	Field Criteria	Unconfined Compressive Strength	Typical Equipment Needed For Excavation
Extremely Soft (R0)	Indented by thumbnail	<100 psi	Small excavator
Very Soft (R1)	Scratched by thumbnail, crumbled by rock hammer	100-1,000 psi	Small excavator
Soft (R2)	Not scratched by thumbnail, indented by rock hammer	1,000-4,000 psi	Medium excavator (slow digging with small excavator)
Medium Hard (R3)	Scratched or fractured by rock hammer	4,000-8,000 psi	Medium to large excavator (slow to very slow digging), typically requires chipping with hydraulic hammer or mass excavation)
Hard (R4)	Scratched or fractured w/ difficulty	8,000-16,000 psi	Slow chipping with hydraulic hammer and/or blasting
Very Hard (R5)	Not scratched or fractured after many blows, hammer rebounds	>16,000 psi	Blasting

Undocumented Fill – Undocumented fill was not encountered in the exploratory borings. It is likely that areas of undocumented fill may exist in the vicinity of SW Gerda Lane or SW Tualatin Sherwood Road.

Existing Pavement – The ground surface in borings was directly underlain by 2 to 3 inches of asphaltic concrete underlain by 6 to 10 inches of crushed rock.

Willamette Formation – Underlying the existing pavement in boring B-4 was silt and sand belonging to the Willamette Formation. These soils generally consisted of stiff, gray silt (ML) underlain by medium dense sand (SP) that extended to a depth of about 4 feet.

Residual Soil – The existing pavement in borings B-1, B-2, B-3, and B-5 and the Willamette Formation in boring B-4 was underlain by light reddish brown residual soil formed by in place decomposition of the underling Columbia River Basalt Formation. These soils were typically stiff to very stiff, clayey silt (ML) to silty clay (CL) with trace weathered basalt fragments. The residual soil encountered extended to a depth of 3.5 to 4.5 feet in borings B-1 through B-3 and beyond the maximum depth of exploration in borings B-4 and B-5 (5 feet).

Columbia River Basalt Formation – Underlying the residual soil in borings B-1 through B-3 was weathered basalt bedrock belonging to the Columbia River Basalt Formation. The basalt encountered was typically highly weathered and was generally very soft (R1) to soft (R2). Practical refusal on medium hard (R3) basalt was reached with a small drill rig at a depth of 5 to 9.5 feet.

Soil Moisture and Groundwater

On September 6, 2013, soils encountered in borings were moist. Groundwater seepage was not encountered in borings to a depth of 9.5 feet. Experience has shown that temporary perched storm-related groundwater conditions often occur within the surface soils over fine-grained native deposits such as those beneath the site, particularly during the wet season. It is anticipated that groundwater conditions will vary depending on the season, local subsurface conditions, changes in site utilization, and other factors.

INFILTRATION TESTING

Soil infiltration testing was performed using the open hole infiltration method in boring B-4. The soil was pre-saturated for a period of over 2.5 hours. The water level was measured to the nearest tenth of an inch every fifteen minutes to half hour with reference to the ground surface. Table 2 presents the results of our falling head infiltration testing.

Table 2. Summary of Infiltration Test Results

Boring	Depth (feet)	Soil Type	Infiltration Rate(in/hr)	Hydraulic Head Range (inches)
B-4	5	Clayey SILT (ML) with weathered rock	4.6	4-11

CONCLUSIONS AND RECOMMENDATIONS

Our investigation indicates that the proposed development is geotechnically feasible, provided that the recommendations of this report are incorporated into the design and construction phases of the project. In our opinion, the greatest geotechnical issue for project completion is the presence of shallow rock at the site. Refusal with a small, trailer mounted drill rig was reached on medium hard (R3) basalt at depths of 5 to 9.5 feet. It is likely the rock consists of boulders with silt and clay seams rather than hard bedrock and that conventional excavation equipment equipped with rock teeth should be able to achieve greater depths. GeoPacific should review the foundation excavation prior to placement.

Site Preparation

Areas of proposed construction and areas to receive fill should be cleared of the existing asphalt and any organic and inorganic debris. Inorganic debris and organic materials from clearing should be removed from the site. If encountered, organic-rich root zones should then be stripped from construction areas of the site or where engineered fill is to be placed. The final depth of soil removal will be determined on the basis of a site inspection after the stripping/ excavation has been performed. Any remaining topsoil should be stockpiled only in designated areas and stripping operations should be observed and documented by the geotechnical engineer or his representative.

Remaining undocumented fills and any subsurface structures (dry wells, basements, driveway and landscaping fill, old utility lines, septic leach fields, etc.) should be removed and the excavations backfilled with engineered fill. We anticipate that some areas of undocumented fill may exist

outside our explorations – especially in the vicinity of SW Tualatin Sherwood Road and SW Gerda Lane.

Engineered Fill

All grading for the proposed construction should be performed as engineered grading in accordance with the applicable building code at time of construction with the exceptions and additions noted herein. Proper test frequency and earthwork documentation usually requires daily observation and testing during stripping, rough grading, and placement of engineered fill. Imported fill material must be approved by the geotechnical engineer prior to being imported to the site. Oversize material greater than 6 inches in size should not be used within 3 feet of foundation footings, and material greater than 12 inches in diameter should not be used in engineered fill.

Engineered fill should be compacted in horizontal lifts not exceeding 8 inches using standard compaction equipment. We recommend that engineered fill be compacted to at least 95% of the maximum dry density determined by ASTM D698 (Standard Proctor) or equivalent. Field density testing should conform to ASTM D2922 and D3017, or D1556. All engineered fill should be observed and tested by the project geotechnical engineer or his representative. Typically, one density test is performed for at least every 2 vertical feet of fill placed or every 500 yd³, whichever requires more testing. Because testing is performed on an on-call basis, we recommend that the earthwork contractor be held contractually responsible for test scheduling and frequency.

Site earthwork will be impacted by soil moisture and shallow groundwater conditions. Earthwork in wet weather would likely require extensive use of cement or lime treatment, or other special measures, at considerable additional cost compared to earthwork performed under dry-weather conditions.

Excavating Conditions and Utility Trenches

We anticipate that on-site soils can be excavated using conventional heavy equipment such as trackhoes to a depth of 9.5 feet. All temporary cuts in excess of 4 feet in height should be sloped in accordance with U.S. Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1926), or be shored. The existing native soil is classified as Type B Soil and temporary excavation side slope inclinations as steep as 1H:1V may be assumed for planning purposes. This cut slope inclination is applicable to excavations above the water table only. Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. Actual slope inclinations at the time of construction should be determined based on safety requirements and actual soil and groundwater conditions.

Saturated soils and groundwater may be encountered in utility trenches, particularly during the wet season. We anticipate that dewatering systems consisting of ditches, sumps and pumps would be adequate for control of perched groundwater. Regardless of the dewatering system used, it should be installed and operated such that in-place soils are prevented from being removed along with the groundwater.

Vibrations created by traffic and construction equipment may cause some caving and raveling of excavation walls. In such an event, lateral support for the excavation walls should be provided by the contractor to prevent loss of ground support and possible distress to existing or previously constructed structural improvements.

PVC pipe should be installed in accordance with the procedures specified in ASTM D2321. We recommend that trench backfill be compacted to at least 95% of the maximum dry density obtained

by Standard Proctor ASTM D698 or equivalent. Initial backfill lift thickness for a $\frac{3}{4}$ "-0 crushed aggregate base may need to be as great as 4 feet to reduce the risk of flattening underlying flexible pipe. Subsequent lift thickness should not exceed 1 foot. If imported granular fill material is used, then the lifts for large vibrating plate-compaction equipment (e.g. hoe compactor attachments) may be up to 2 feet, provided that proper compaction is being achieved and each lift is tested. Use of large vibrating compaction equipment should be carefully monitored near existing structures and improvements due to the potential for vibration-induced damage.

Adequate density testing should be performed during construction to verify that the recommended relative compaction is achieved. Typically, one density test is taken for every 4 vertical feet of backfill on each 200-lineal-foot section of trench.

Erosion Control Considerations

During our field exploration program, we did not observe soil types that would be considered highly susceptible to erosion. In our opinion, the primary concern regarding erosion potential will occur during construction, in areas that have been stripped of vegetation. Erosion at the site during construction can be minimized by implementing the project erosion control plan, which should include judicious use of straw bales and silt fences. If used, these erosion control devices should be in place and remain in place throughout site preparation and construction.

Erosion and sedimentation of exposed soils can also be minimized by quickly re-vegetating exposed areas of soil, and by staging construction such that large areas of the project site are not denuded and exposed at the same time. Areas of exposed soil requiring immediate and/or temporary protection against exposure should be covered with either mulch or erosion control netting/blankets. Areas of exposed soil requiring permanent stabilization should be seeded with an approved grass seed mixture, or hydroseeded with an approved seed-mulch-fertilizer mixture.

Wet Weather Earthwork

Soils underlying the site are likely to be moisture sensitive and may be difficult to handle or traverse with construction equipment during periods of wet weather. Earthwork is typically most economical when performed under dry weather conditions. Earthwork performed during the wet-weather season will probably require expensive measures such as cement treatment or imported granular material to compact fill to the recommended engineering specifications. If earthwork is to be performed or fill is to be placed in wet weather or under wet conditions when soil moisture content is difficult to control, the following recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation or the removal of unsuitable soils should be followed promptly by the placement and compaction of clean engineered fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to excavate soils with a backhoe to minimize subgrade disturbance caused by equipment traffic;
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
- Material used as engineered fill should consist of clean, granular soil containing less than 5 percent fines. The fines should be non-plastic. Alternatively, cement treatment of on-site soils may be performed to facilitate wet weather placement;

- The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left uncompacted and exposed to moisture. Soils which become too wet for compaction should be removed and replaced with clean granular materials;
- Excavation and placement of fill should be observed by the geotechnical engineer to verify that all unsuitable materials are removed and suitable compaction and site drainage is achieved; and
- Bales of straw and/or geotextile silt fences should be strategically located to control erosion.

If cement or lime treatment is used to facilitate wet weather construction, GeoPacific should be contacted to provide additional recommendations and field monitoring.

Foundations

Based on our understanding of the proposed project and the results of our exploration program, and assuming our recommendations for site preparation are followed, native deposits or engineered fill are anticipated to be encountered at or near the foundation level of the proposed structures. These soils are generally medium stiff to very stiff and should provide adequate support of the structural loads.

Shallow, conventional isolated or continuous spread footings may be used to support the proposed structures provided they are founded on competent native soils as indicated above. We recommend a maximum allowable bearing pressure of 2,000 pounds per square foot (psf) for designing the footings. The recommended maximum allowable bearing pressure may be increased by a factor of 1.33 for short term transient conditions such as wind and seismic loading. All footings should be founded at least 24 inches below the lowest adjacent finished grade. Minimum footing widths should be determined by the project engineer/architect in accordance with applicable design codes.

Assuming construction is accomplished as recommended herein, and for the foundation loads anticipated, we estimate total settlement of spread foundations of less than about 1 inch and differential settlement between two adjacent load-bearing components supported on competent soil of less than about $\frac{3}{4}$ inch. We anticipate that the majority of the estimated settlement will occur during construction, as loads are applied.

Wind, earthquakes, and unbalanced earth loads will subject the proposed structure to lateral forces. Lateral forces on a structure will be resisted by a combination of sliding resistance of its base or footing on the underlying soil and passive earth pressure against the buried portions of the structure. For use in design, a coefficient of friction of 0.5 may be assumed along the interface between the base of the footing and subgrade soils. Passive earth pressure for buried portions of structures may be calculated using an equivalent fluid weight of 390 pounds per cubic foot (pcf), assuming footings are cast against dense, natural soils or engineered fill. The recommended coefficient of friction and passive earth pressure values do not include a safety factor. The upper 12 inches of soil should be neglected in passive pressure computations unless it is protected by pavement or slabs on grade.

Footing excavations should be trimmed neat and the bottom of the excavation should be carefully prepared. Loose, wet or otherwise softened soil should be removed from the footing excavation prior to placing reinforcing steel bars. GeoPacific should observe foundation excavations prior to placement of reinforcing steel and formwork, to verify that an appropriate bearing stratum has been reached and that the actual exposed soils are suitable to support the planned foundation loads.

The above foundation recommendations are for dry weather conditions. Due to the high moisture sensitivity of engineered fill and native soils, construction during wet weather is likely to require overexcavation of footings and backfill with compacted, crushed aggregate. As a result of this condition, we recommend foundation excavations be observed to verify subgrade strength.

Pavement Design

For design purposes, we used an estimated resilient modulus of 9,000 for compacted native soil. Table 3 presents our recommended minimum pavement section for dry weather construction.

Table 3 - Recommended Minimum Dry-Weather Pavement Section

Material Layer	Parking Lots	Compaction Standard
Asphaltic Concrete (AC)	2.5 in.	92%/ 92% of Rice Density AASHTO T-209
Crushed Aggregate Base ¾"-0 (leveling course)	2 in.	95% of Modified Proctor AASHTO T-180
Crushed Aggregate Base 1½"-0	6 in.	95% of Modified Proctor AASHTO T-180
Subgrade	12 in.	95% of Standard Proctor AASHTO T-99 or equivalent

Any pockets of organic debris or loose fill encountered during ripping or tilling should be removed and replaced with engineered fill (see *Site Preparation* Section). In order to verify subgrade strength, we recommend proof-rolling directly on subgrade with a loaded dump truck during dry weather and on top of base course in wet weather. Soft areas that pump, rut, or weave should be stabilized prior to paving. If pavement areas are to be constructed during wet weather, the subgrade and construction plan should be reviewed by the project geotechnical engineer at the time of construction so that condition specific recommendations can be provided. The moisture sensitive subgrade soils make the site a difficult wet weather construction project.

During placement of pavement section materials, density testing should be performed to verify compliance with project specifications. Generally, one subgrade, one base course, and one asphalt compaction test is performed for every 100 to 200 linear feet of paving.

Seismic Design

Structures should be designed to resist earthquake loading in accordance with the methodology described in the 2009 International Building Code (IBC) with applicable 2010 Oregon Structural Specialty Code (OSSC) revisions. We recommend Site Class D be used for design per the OSSC, Table 1613.5.2. Design values determined for the site using the USGS (United States Geological Survey) *Earthquake Ground Motion Parameters* utility are summarized in Table 4, presented on the following page.

Table 4. Recommended Earthquake Ground Motion Parameters (2009 IBC / 2010 OSSC)

Parameter	Value
Location (Lat, Long), degrees	45.368, -122.825
Mapped Spectral Acceleration Values (MCE, Site Class D):	
Short Period, S_s	0.888 g
1.0 Sec Period, S_1	0.329 g
Soil Factors for Site Class D:	
F_a	1.145
F_v	1.742
$SD_s = 2/3 \times F_a \times S_s$	0.678 g
$SD_1 = 2/3 \times F_v \times S_1$	0.382 g

Soil liquefaction is a phenomenon wherein saturated soil deposits temporarily lose strength and behave as a liquid in response to earthquake shaking. Soil liquefaction is generally limited to loose, granular soils located below the water table. Following development, on-site soils will consist predominantly of stiff native coarse and fine-grained soils above the water table which are not considered susceptible to liquefaction. Therefore, it is our opinion that special design or construction measures are not required to mitigate the effects of liquefaction.

Drainage

The outside edge of perimeter footings may be provided with a drainage system consisting of 3-inch diameter, slotted, flexible plastic pipe embedded in a minimum of 1 ft³ per lineal foot of clean, free-draining gravel or 1 1/2" - 3/4" drain rock. The drain pipe and surrounding drain rock should be wrapped in non-woven geotextile (Mirafi 140N, or approved equivalent) to minimize the potential for clogging and/or ground loss due to piping. Water collected from the footing drains should be directed into the local storm drain system or other suitable outlet. A minimum 0.5 percent fall should be maintained throughout the drain and non-perforated pipe outlet. Down spouts and roof drains should not be connected to the foundation drains in order to reduce the potential for clogging. The footing drains should include clean-outs to allow periodic maintenance and inspection. Grades around the proposed structure should be sloped such that surface water drains away from the building. Perimeter footing drains are recommended to prevent detrimental effects of groundwater on foundations, and should not be expected to eliminate all potential sources of water entering a crawlspace or beneath a slab-on-grade. An adequate grade to a low point outlet drain in any crawlspace areas is required by code. Underslab drains are sometimes added beneath the slab when placed over soils of low permeability and shallow, perched groundwater.

UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and their consultants for use in design of this project only. This report should be provided in its entirety to prospective contractors for bidding and estimating purposes; however, the conclusions and interpretations presented in this report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, GeoPacific should be notified for review of the recommendations of this report, and revision of such if necessary.

Sufficient geotechnical monitoring, testing and consultation should be provided during construction to confirm that the conditions encountered are consistent with those indicated by explorations. The checklist attached to this report outlines recommended geotechnical observations and testing for the project. Recommendations for design changes will be provided should conditions revealed during construction differ from those anticipated, and to verify that the geotechnical aspects of construction comply with the contract plans and specifications.

Within the limitations of scope, schedule and budget, GeoPacific attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology at the time the report was prepared. No warranty, expressed or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic substances in the soil, surface water, or groundwater at this site.

We appreciate this opportunity to be of service.

Sincerely,

GEOPACIFIC ENGINEERING, INC.



Beth K. Rapp, R.G.
Senior Geologist



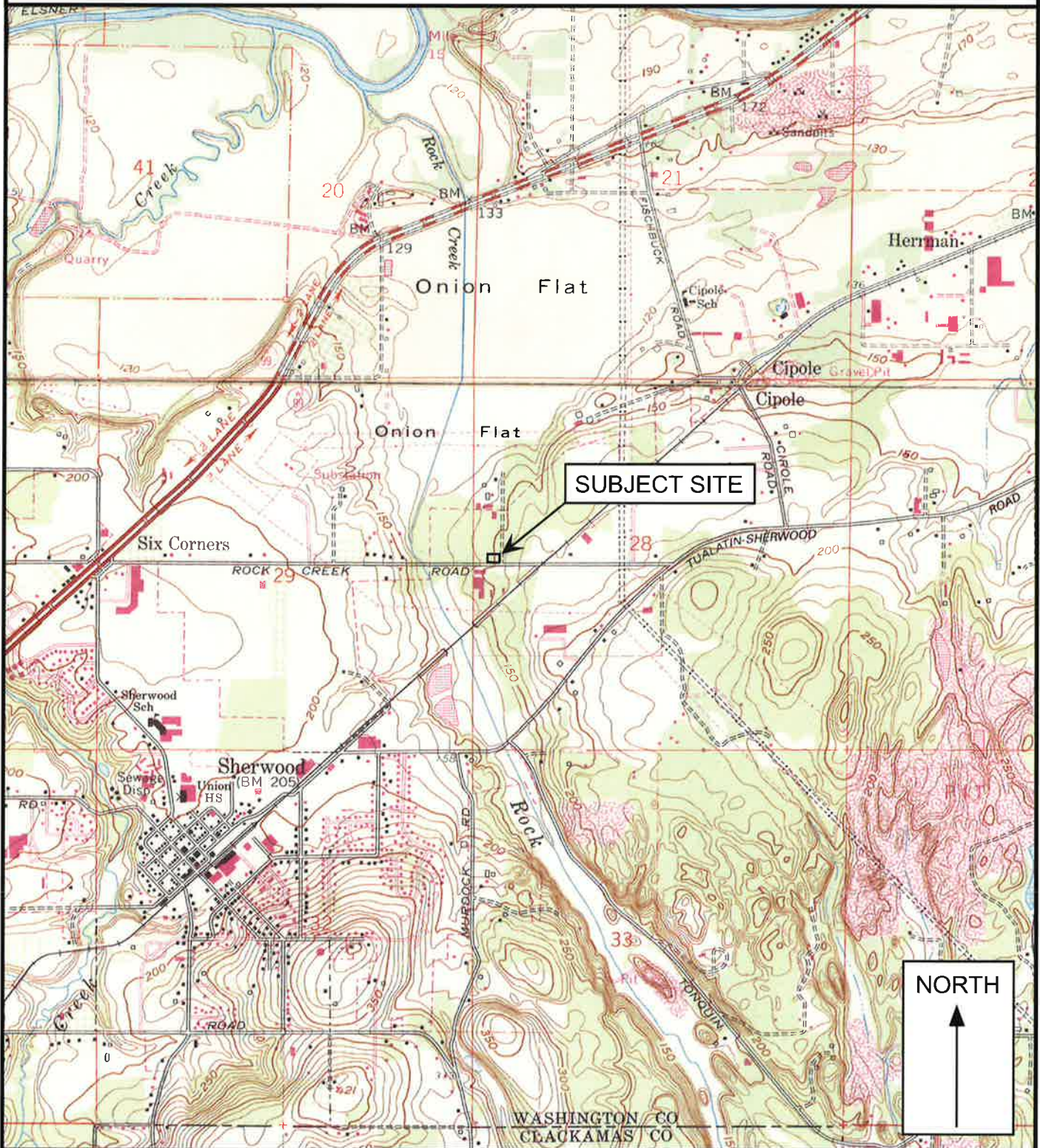
EXPIRES: 06/30/2015

James D. Imbrie, G.E., C.E.G.
Principal Geotechnical Engineer

Attachments: References
Checklist of Recommended Geotechnical Testing and Observation
Figure 1 – Vicinity Map
Figure 2 – Site and Exploration Plan
Boring Logs (B-1 – B-5)

REFERENCES

- Atwater, B.F., 1992, Geologic evidence for earthquakes during the past 2,000 years along the Copalis River, southern coastal Washington: *Journal of Geophysical Research*, v. 97, p. 1901-1919.
- Carver, G.A., 1992, Late Cenozoic tectonics of coastal northern California: American Association of Petroleum Geologists-SEPM Field Trip Guidebook, May, 1992.
- Geomatrix Consultants, 1995, Seismic Design Mapping, State of Oregon: unpublished report prepared for Oregon Department of Transportation, Personal Services Contract 11688, January 1995.
- Goldfinger, C., Kulm, L.D., Yeats, R.S., Appelgate, B., MacKay, M.E., and Cochran, G.R., 1996, Active strike-slip faulting and folding of the Cascadia Subduction-Zone plate boundary and forearc in central and northern Oregon: in *Assessing earthquake hazards and reducing risk in the Pacific Northwest*, v. 1: U.S. Geological Survey Professional Paper 1560, P. 223-256.
- Madin, I.P., 1990, Earthquake hazard geology maps of the Portland metropolitan area, Oregon: Oregon Department of Geology and Mineral Industries Open-File Report 0-90-2, scale 1:24,000, 22 p.
- Peterson, C.D., Darioenzo, M.E., Burns, S.F., and Burris, W.K., 1993, Field trip guide to Cascadia paleoseismic evidence along the northern California coast: evidence of subduction zone seismicity in the central Cascadia margin: *Oregon Geology*, v. 55, p. 99-144.
- Unruh, J.R., Wong, I.G., Bott, J.D., Silva, W.J., and Lettis, W.R., 1994, Seismotectonic evaluation: Scoggins Dam, Tualatin Project, Northwest Oregon: unpublished report by William Lettis and Associates and Woodward Clyde Federal Services, Oakland, CA, for U. S. Bureau of Reclamation, Denver CO (in Geomatrix Consultants, 1995).
- Werner, K.S., Nabelek, J., Yeats, R.S., Malone, S., 1992, The Mount Angel fault: implications of seismic-reflection data and the Woodburn, Oregon, earthquake sequence of August, 1990: *Oregon Geology*, v. 54, p. 112-117.
- Wong, I., Silva, W., Bott, J., Wright, D., Thomas, P., Gregor, N., Li, S., Mabey, M., Sojourner, A., and Wang, Y., 2000, Earthquake Scenario and Probabilistic Ground Shaking Maps for the Portland, Oregon, Metropolitan Area; State of Oregon Department of Geology and Mineral Industries; Interpretative Map Series IMS-16.
- Yeats, R.S., Graven, E.P., Werner, K.S., Goldfinger, C., and Popowski, T., 1996, Tectonics of the Willamette Valley, Oregon: in *Assessing earthquake hazards and reducing risk in the Pacific Northwest*, v. 1: U.S. Geological Survey Professional Paper 1560, P. 183-222, 5 plates, scale 1:100,000.
- Yelin, T.S., 1992, An earthquake swarm in the north Portland Hills (Oregon): More speculations on the seismotectonics of the Portland Basin: *Geological Society of America, Programs with Abstracts*, v. 24, no. 5, p. 92.



Legend

Approximate Scale 1 in = 2,000 ft

Date: 10/23/13

Drawn by: EKR

Base maps: U.S. Geological Survey 7.5 minute Topographic Map Series, Beaverton, Oregon Quadrangle, 1961 (Photorevised 1984) and Sherwood, Oregon Quadrangle, 1961 (Revised 1984).

Project: Gerda Lane Office Building
Sherwood, Oregon

Project No. 13-3131

FIGURE 1



14835 SW 72nd Avenue
 Portland, Oregon 97224
 Tel: (503) 598-8445 Fax: (503) 941-9281

SITE PLAN AND EXPLORATION LOCATIONS

TAX LOT 2900
 TAX MAP 2S 1 29A

TAX LOT 3100
 TAX MAP 2S 1 29A


OFFICE BUILDING

SW GERDA LN

SW TUALATIN-SHERWOOD RD



Legend

B-1
 Boring Designation and Approximate Location

0 40'

APPROXIMATE SCALE 1"=40'

Date: 10/23/13
 Drawn by: EKR

Project: Gerda Lane Office Building
 Sherwood, Oregon

Project No. 13-3131



FIGURE 2









14835 SW 72nd Avenue
 Portland, Oregon 97224
 Tel: (503) 598-8445 Fax: (503) 941-9281

BORING LOG

Project: SW Gerda Lane Office Building Sherwood, Oregon	Project No. 13-3131	Boring No. B-1
--	---------------------	-----------------------

Depth (ft)	Sample Type	N-Value	Well Construction	Moisture Content (%)	Water Bearing Zone	Material Description
						2" AC over 10" Base Rock (Existing Pavement)
		50				Very stiff, clayey SILT (ML) to silty CLAY (CL), trace weathered basalt, light reddish brown, trace black staining, moist (Residual Soil)
5		38				Very soft to soft (R1-R2), weathered BASALT, trace reddish-brown silty clay to clayey silt matrix, gray, vesicular, moist (Columbia River Basalt)
						Practical Refusal on Medium Hard (R3) Basalt at 6.5 feet.
						No Groundwater Encountered.
10						
15						
20						
25						
30						
35						

LEGEND  Bag Sample  Split-Spoon  Shelby Tube Sample  Static Water Table at Drilling  Static Water Table  Water Bearing Zone	Date Drilled: 9/6/2013 Logged By: B. Rapp Surface Elevation:
--	--





14835 SW 72nd Avenue
 Portland, Oregon 97224
 Tel: (503) 598-8445 Fax: (503) 941-9281

BORING LOG

Project: SW Gerda Lane Office Building
 Sherwood, Oregon

Project No. 13-3131

Boring No. **B-2**

Depth (ft)	Sample Type	N-Value	Well Construction	Moisture Content (%)	Water Bearing Zone	Material Description
0						2" AC over 10" Base Rock (Existing Pavement)
5		23 28				Very stiff, clayey SILT (ML) to silty CLAY (CL), trace weathered basalt, light reddish brown, trace black staining, moist (Residual Soil)
10		50 for 5" 26				Very soft to soft (R1-R2), weathered BASALT, trace reddish-brown silty clay to clayey silt matrix, gray, vesicular, moist (Columbia River Basalt)
10						Practical Refusal on Medium Hard (R3) Basalt at 9.5 feet.
15						No Groundwater Encountered.
20						
25						
30						
35						

LEGEND



100 to 1,000 g



Split-Spoon



Shelby Tube Sample



Static Water Table at Drilling



Static Water Table



Water Bearing Zone

Date Drilled: 9/6/2013

Logged By: B. Rapp

Surface Elevation:









14835 SW 72nd Avenue
 Portland, Oregon 97224
 Tel: (503) 598-8445 Fax: (503) 941-9281

BORING LOG

Project: SW Gerda Lane Office Building Sherwood, Oregon	Project No. 13-3131	Boring No. B-3
--	---------------------	-----------------------

Depth (ft)	Sample Type	N-Value	Well Construction	Moisture Content (%)	Water Bearing Zone	Material Description
						3" AC over 6" Base Rock (Existing Pavement)
						Very stiff, clayey SILT (ML) to silty CLAY (CL), trace weathered basalt, light reddish brown, trace black staining, moist (Residual Soil)
5	50 for 5" 50 for 5"					Very soft to soft (R1-R2), weathered BASALT, trace reddish-brown silty clay to clayey silt matrix, gray, vesicular, moist (Columbia River Basalt)
						Practical Refusal on Medium Hard (R3) Basalt at 5 feet.
						No Groundwater Encountered.
10						
15						
20						
25						
30						
35						

LEGEND

 Bag Sample	 Split-Spoon	 Shelby Tube Sample	 Static Water Table at Drilling	 Static Water Table	 Water Bearing Zone
--	---	--	--	--	--

Date Drilled: 9/6/2013
 Logged By: B. Rapp
 Surface Elevation:




14835 SW 72nd Avenue
 Portland, Oregon 97224
 Tel: (503) 598-8445 Fax: (503) 941-9281

BORING LOG

Project: SW Gerda Lane Office Building
 Sherwood, Oregon

Project No. 13-3131

Boring No. **B-4**

Depth (ft)	Sample Type	N-Value	Well Construction	Moisture Content (%)	Water Bearing Zone	Material Description
0 - 2.5						2.5" AC over 9" Base Rock (Existing Pavement)
2.5 - 5		29				Stiff SILT (ML) and medium dense SAND (SP), gray, subtle orange and gray mottling, trace black staining, moist (Willamette Formation)
5 - 5						Very stiff, clayey SILT (ML) to silty CLAY (CL), trace weathered basalt, light reddish brown, trace black staining, moist (Residual Soil)
5 - 35						Boring Terminated at 5 Feet for Infiltration Testing. No Groundwater Encountered.

LEGEND



100 to 1,000 g
Bag Sample



Split-Spoon



Shelby Tube Sample



Static Water Table at Drilling



10-20-99
Static Water Table



Water Bearing Zone

Date Drilled: 9/6/2013

Logged By: B. Rapp


Surface Elevation:









14835 SW 72nd Avenue
 Portland, Oregon 97224
 Tel: (503) 598-8445 Fax: (503) 941-9281

BORING LOG

Project: SW Gerda Lane Office Building Sherwood, Oregon	Project No. 13-3131	Boring No. B-5
--	---------------------	-----------------------

Depth (ft)	Sample Type	N-Value	Well Construction	Moisture Content (%)	Water Bearing Zone	Material Description
						2.5" AC over 6" Base Rock (Existing Pavement)
		6				Very stiff, clayey SILT (ML) to silty CLAY (CL), trace weathered basalt, light reddish brown, trace black staining, moist (Residual Soil)
5						Boring Terminated at 3 Feet.
						No Groundwater Encountered.
10						
15						
20						
25						
30						
35						

LEGEND					
					
Bag Sample	Split-Spoon	Shelby Tube Sample	Static Water Table at Drilling	Static Water Table	Water Bearing Zone

Date Drilled: 9/6/2013
 Logged By: B. Rapp
 Surface Elevation:



**LANCASTER
ENGINEERING**

321 SW 4th Ave., Suite 400
Portland, OR 97204
phone: 503.248.0313
fax: 503.248.9251
lancasterengineering.com

November 21, 2013

Jim Dougherty
Misty Mountain Enterprises
PO Box 623
Manzanita, OR 97230

*RE: Office Building in the NW Corner of SW Tualatin-Sherwood Road & SW Gerda Lane
Trip CAP Analysis*

Dear Mr. Dougherty:

The City of Sherwood's Zoning and Community Development Code section 16.106.070.E requires developments within the City of Sherwood (and thereby directly or indirectly impacting Highway 99W) to obtain a Trip Allocation Certificate before development. This letter discusses the trip generation for the proposed office building. It also serves as a request for the required Trip Allocation Certificate.

The 0.50-acre site was used in the past as an automobile wrecking yard and is adjacent to other properties used for automobile storage and wholesaling. The subject site is proposed to be developed with an office building totaling 4,150 square feet.

To determine the number of trips that were generated by the proposed office, trip rates from land-use code 710, *General Office Building*, from the manual *TRIP GENERATION*, Ninth Edition, were used. The trip rates are based on the square footage and were calculated for a 4,150-square-foot building. Based on these trip rates, the proposed office is expected to generate a total of five trips during the morning peak hour, five trips during the evening peak hour, and a weekday total of 34 trips.

A summary of the proposed trip generation is contained in the table below. A detailed trip generation worksheet is included in the attached technical appendix.

Trip Generation Summary

	<i>AM Peak Hour</i>			<i>PM Peak Hour</i>			<i>Weekday</i>
	<i>In</i>	<i>Out</i>	<i>Total</i>	<i>In</i>	<i>Out</i>	<i>Total</i>	<i>Total</i>
4,150 ft ² Office	5	1	6	1	5	6	46

Based on the trip generation calculations, the subject property is projected to generate a total of 6 trips during the evening peak hour, which for the 0.50-acre site equates to 12 trips per net acre. The City's CAP ordinance requires that developments not generate in excess of 43 trips per acre. Therefore, the proposed office building complies with the CAP ordinance. A CAP Trip Analysis Worksheet is attached.

Je

Jim Dougherty
November 21, 2013
Page 2 of 2

The CAP ordinance also requires trip distribution and assignment from the proposed development to all full-access intersections impacted by ten or more evening peak hour trips. In this case, the development will only generate five evening peak hour trips, all of which will use Gerda Lane to travel to and from the site. Therefore, no further distribution analysis is required.

At the time of a previous partition of the parent parcel (of which tax lot 3100 was then a part) a tract of land labeled "Tract A" was created. This tract is intended to serve as eventual right-of-way to accommodate SW Arrow Road, an east/west roadway that will parallel Tualatin-Sherwood Road. This is shown on the partition plat, which is included in the attached Technical Appendix.

As demonstrated in this Trip Analysis, the proposed development on tax lot 3100 is relatively small and generates very few trips. These trips are readily accommodated by Gerda Lane and the surrounding street system. Construction of SW Arrow Road or the conversion of Tract A to public right-of-way is not necessary to serve the proposed development.

We trust the information and analysis contained here will be sufficient to allow the issuance of a Trip Allocation Certificate. If you have any questions, please don't hesitate to call us.

Sincerely,

Todd E. Mobley
Todd E. Mobley, PE, PTOE
Principal





TECHNICAL APPENDIX

CAP TRIP ANALYSIS WORKSHEET

Trip Analysis conducted by:	Todd E. Mobley, PE PTOE
Project Description:	4,150 sf office building in the NW corner of SW Gerda Lane and SW Tualatin-Sherwood Road
Land Use Application File No: Project Name:	SW Gerdal Lane Office Building

The CAP Trip Analysis Worksheet is meant to summarize the detailed information contained in the Traffic Study prepared by a professional engineer registered in the State of Oregon with expertise in traffic or transportation engineering and attached with the CAP Trip Analysis.

Net Trips means the number of trips generated by a regulated activity during the p.m. peak hour. Net trips equal new trips, diverted trips, and trips from existing activities on a site that will remain. Net trips do not include: pass-by trips, internal trips, trips from existing facilities that will be removed, and trips reduced due to implementation of transportation demand strategies.

The following types of projects and activities are specifically excluded from the provisions of the CAP: (1) churches; (2) elementary, middle, and high schools; (3) residential; and (4) changes in use that do not increase the number of trips generated by the current use.

1. Net Trips

- a 0 Existing Site Net Trips
- b 6 Proposed Development Net Trips (proposed development includes existing sites that will remain)
- c 0 Future (Full-Build-Out) Development Net Trips
- d 6 Proposed and Future Development Net Trips (1b+1c)*

2. Acreage

Tax Lot Number	Total Acreage	Net Acreage (Total Minus 100-Year Flood plain)	Proposed Development Net Acreage	Future Development Net Acreage (2b-2c)
3100	0.50	0.50	0.50	0
TOTAL	a 0.50	b 0.50	c 0.50	d 0

3. **Net Trips Per Acre**

- a 0 Existing Net Trips per Net Acre (1a/2b)
- b 12 Proposed Development Net Trips per Net Acre (1b/2c)
- c 12 Proposed & Future Development Net Trips per Net Acre (1d/2b)
- d 43 Net Trips per Net Acre Allowed (**City of Sherwood Trip Limit**)

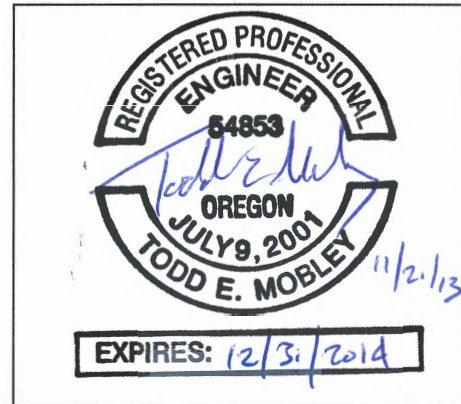
4. Proposed Mitigation:

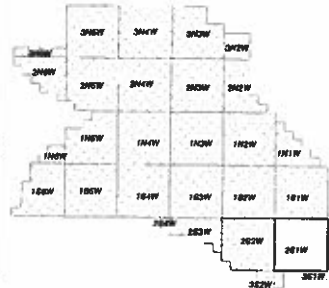
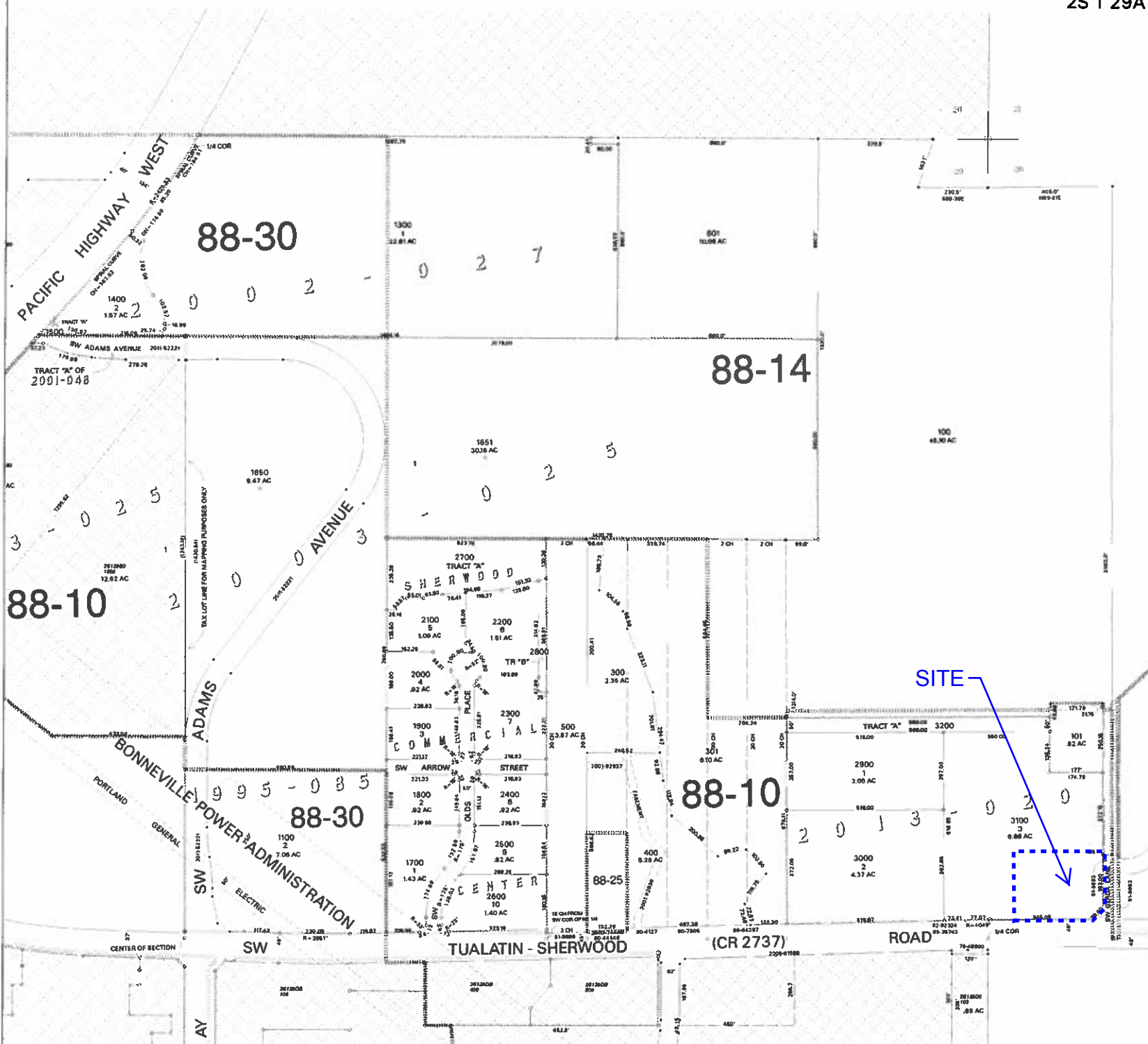
None required

*If proposed and future net trips per net acre (3c) are less than the existing net trips per net acre (3a) then the application is EXEMPT from CAP Ordinance requirements.

If any changes are proposed for the regulated activity (i.e. type of activity, acreage, etc.) the trip analysis worksheet shall be resubmitted with the original for comparative purposes and approval.

Comments:





WASHINGTON COUNTY OREGON
 NE1/4 SECTION 29 T2S R1W W.M.
 SCALE 1" = 200'

36	31	32	33	34	35	36	31
1	6	5	4	3	2	1	6
12	7	8	9	10	11	12	7
13	18	17	16	15	14	13	18
24	19	20	21	22	23	24	19
25	30	29	28	27	26	25	30
38	31	32	33	34	35	36	31
1	6	5	4	3	2	1	6

FOR ADDITIONAL MAPS VISIT OUR WEBSITE AT
www.co.washington.or.us

BB	BA	AB	AA
B			A
BC	BD	AC	AD
SECTION 29			
CB	CA	DB	DA
C			D
CC	CD	DC	DD

Cancelled Taxlots For: 2S129A
 401,103,200,300,1000,800,1200,600,700,102,1000.



PLOT DATE: July 17, 2013
FOR ASSESSMENT PURPOSES ONLY - DO NOT RELY ON FOR OTHER USE

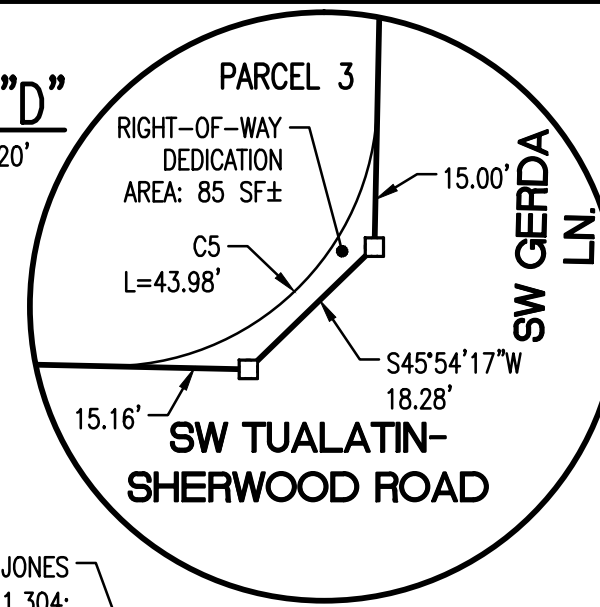
Map areas delineated by either gray shading or a cross-hatched pattern are for reference only and may not indicate the most current property boundaries. Please consult the appropriate map for the most current information.

PARTITION PLAT

LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, AND THE
NORTHEAST 1/4 OF SECTION 29, TOWNSHIP 2 SOUTH, RANGE 1 WEST,
WILLAMETTE MERIDIAN, CITY OF SHERWOOD, WASHINGTON COUNTY, OREGON

DATE: _____

DETAIL "D"
SCALE 1" = 20'



PARTITION PLAT NO. _____
RECORDED AS DOCUMENT NO. _____

SHEET 1 OF 4

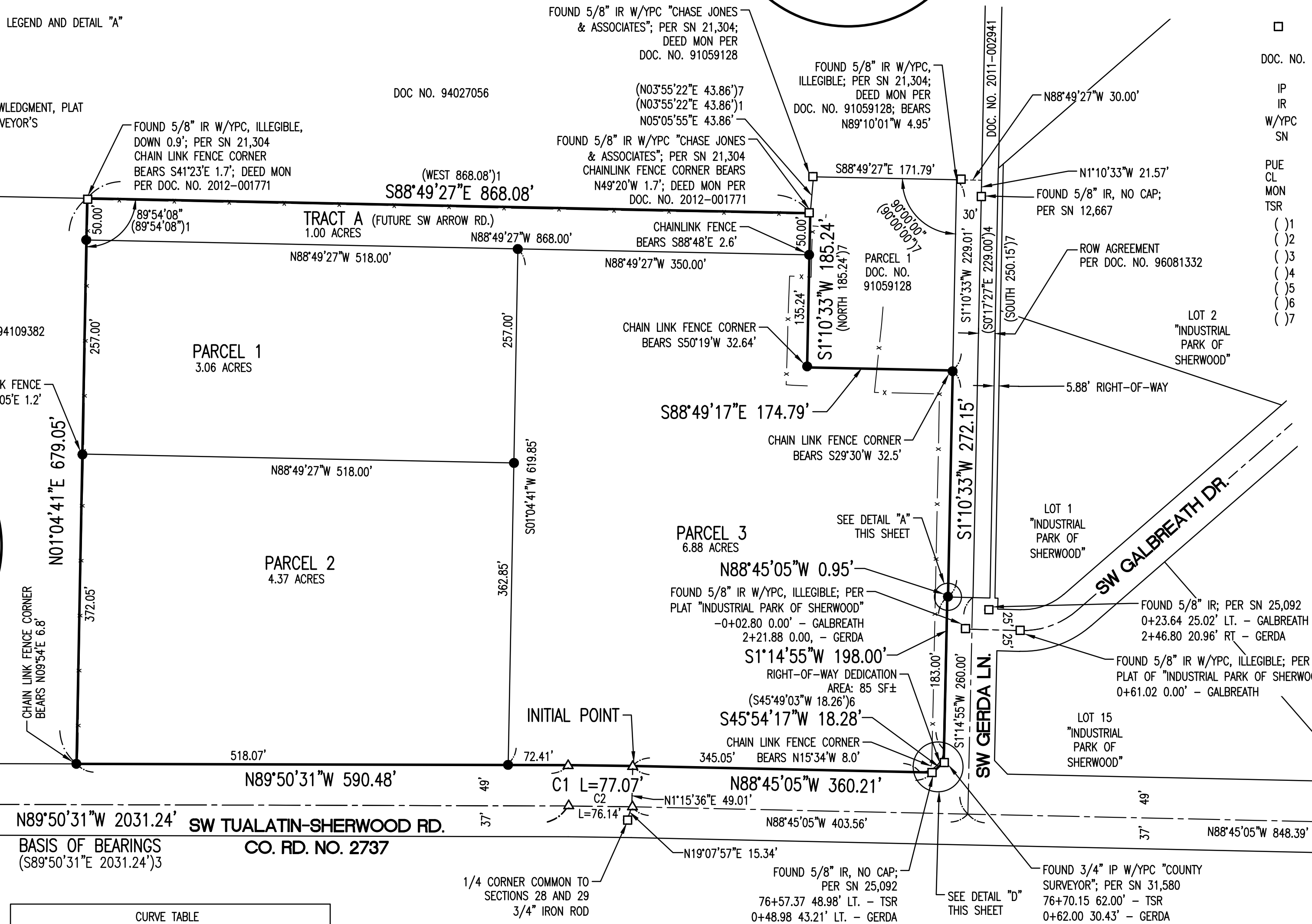
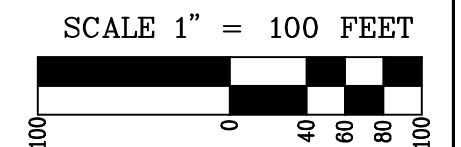
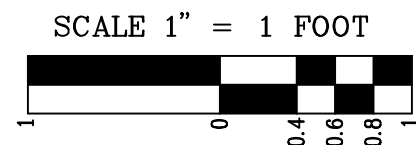
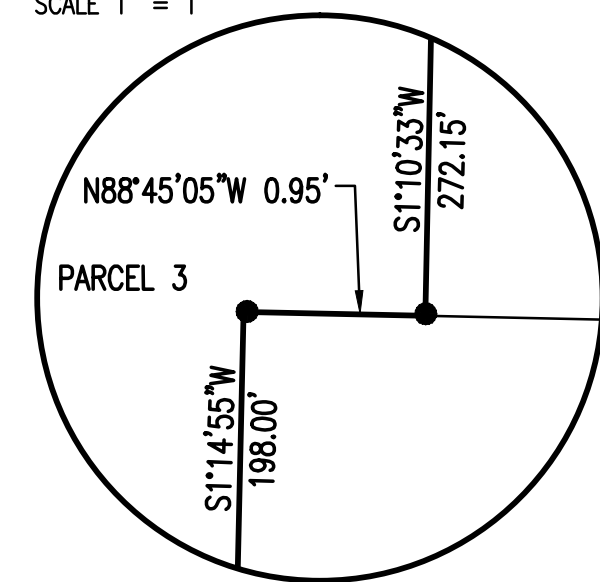
LEGEND

- SET 5/8" X 30" IRON ROD W/YPC INSCRIBED "AKS ENGR."
- △ FOUND 5/8" IRON ROD W/YPC INSCRIBED "W&H PACIFIC", PER SN 25,092
- FOUND MONUMENT AS NOTED, HELD UNLESS NOTED OTHERWISE
- DOC. NO. DOCUMENT NUMBER PER WASHINGTON COUNTY DEED RECORDS
- IP IRON PIPE
- IR IRON ROD
- W/YPC WITH A YELLOW PLASTIC CAP
- SN SURVEY NUMBER PER WASHINGTON COUNTY SURVEY RECORDS
- PUE PUBLIC UTILITY EASEMENT
- CL CENTERLINE
- MON MONUMENT
- TSR SW TUALATIN-SHERWOOD ROAD
- () 1 RECORD INFORMATION PER SN 21,304
- () 2 RECORD INFORMATION PER SN 31,238
- () 3 RECORD INFORMATION PER SN 25,092
- () 4 RECORD INFORMATION PER SN 12,667
- () 5 RECORD INFORMATION PER SN 24,902
- () 6 RECORD INFORMATION PER SN 25,901
- () 7 RECORD INFORMATION PER DOC. NO. 91059128

SHEET INDEX

- SHEET 1 - PLAT BOUNDARY, CURVE TABLE, LEGEND AND DETAIL "A"
- SHEET 2 - EASEMENTS
- SHEET 3 - DETAILS "B" AND "C"
- SHEET 4 - NARRATIVE, APPROVALS, ACKNOWLEDGMENT, PLAT NOTES, DECLARATION, AND SURVEYOR'S CERTIFICATE

DETAIL "A"
SCALE 1" = 1'



CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	4049.00' (4049.00') ³	1°05'26" (1°05'26") ³	77.07' (77.07') ³	N89°17'48"W 77.07' (N89°17'48"W 77.07') ³
C2	4000.00' (4000.00') ³	1°05'26" (1°05'26") ³	76.14' (76.14') ³	N89°17'48"W 76.13' (N89°17'48"W 76.13') ³
C5	28.00'	90°00'00"	43.98'	S46°14'55"E 39.60'

I CERTIFY THAT THIS SURVEY WAS PREPARED USING HP PRODUCT #51645A CARTRIDGE ON OCE #868342.

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JANUARY 9, 2007
NICK WHITE
70652LS
RENEWS: 6/30/12

JOB NAME: GERDA LANE
JOB NUMBER: 2977
DRAWN BY: BDT
CHECKED BY: NSW
DRAWING NO.: C3D2977PP

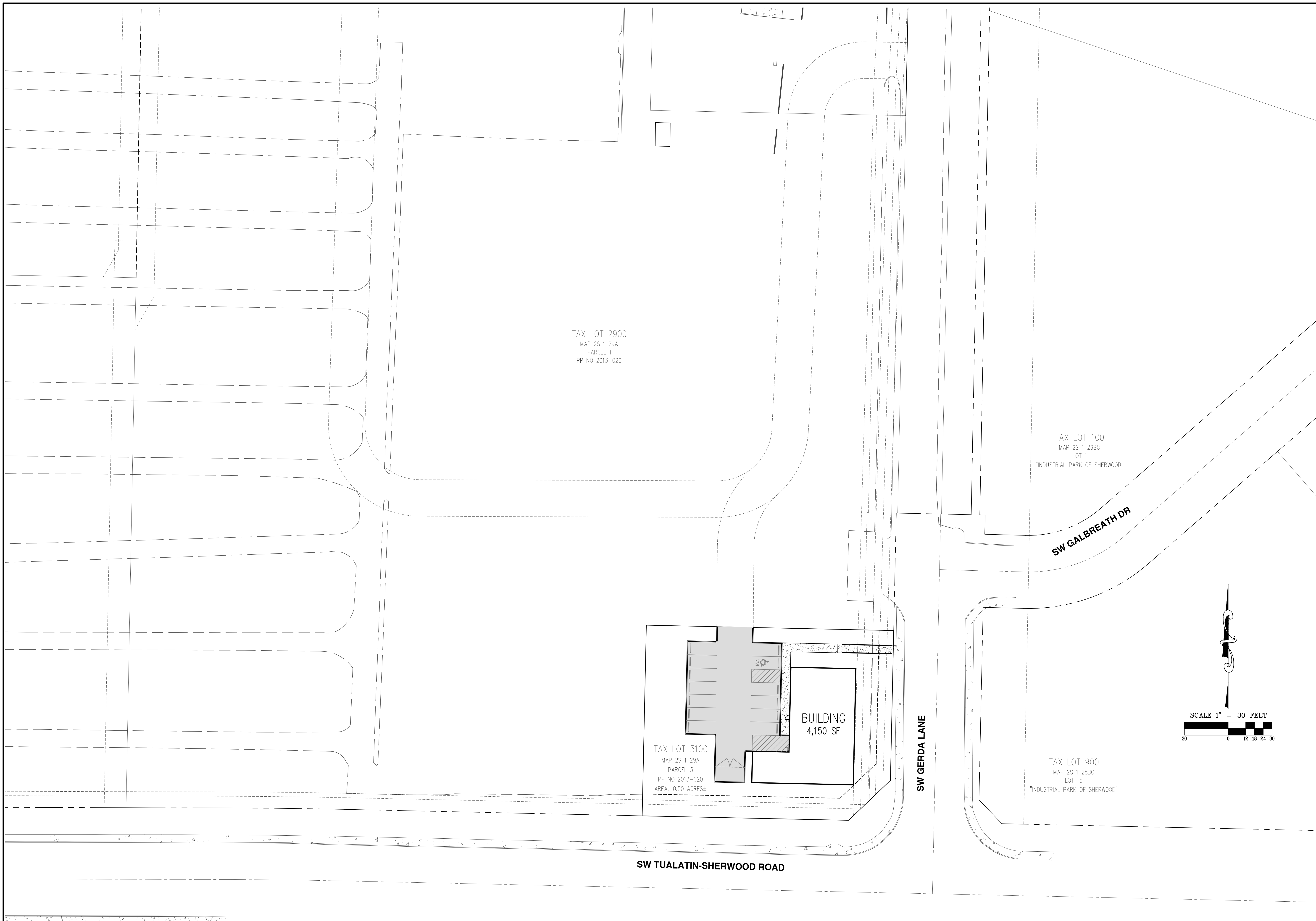
ENGINEERING • PLANNING • LANDSCAPE ARCHITECTURE
FORESTRY • SURVEYING



LICENSED IN OR & WA
13910 SW GALBREATH DRIVE, SUITE 100
SHERWOOD, OR 97140
PHONE: (503) 925-8799
FAX: (503) 925-8969

OFFICES LOCATED IN SALEM, OR & VANCOUVER, WA

PREPARED FOR
MISTY MOUNTAIN ENTERPRISES
P.O. BOX 623
MANZANITA, OR 97130





TRIP GENERATION CALCULATIONS

Land Use: General Office Building
Land Use Code: 710
Variable: 1000 Sq Ft Gross Floor Area
Variable Value: 4.2

AM PEAK HOUR

Trip Rate: 1.56

	Enter	Exit	Total
Directional Distribution	88%	12%	
Trip Ends	5	1	6

PM PEAK HOUR

Trip Rate: 1.49

	Enter	Exit	Total
Directional Distribution	17%	83%	
Trip Ends	1	5	6

WEEKDAY

Trip Rate: 11.03

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	23	23	46

SATURDAY

Trip Rate: 2.46

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	5	5	10

Land Use: 710

General Office Building

Description

A general office building houses multiple tenants; it is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building or buildings may contain a mixture of tenants including professional services, insurance companies, investment brokers and tenant services, such as a bank or savings and loan institution, a restaurant or cafeteria and service retail facilities. Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), research and development center (Land Use 760) and business park (Land Use 770) are related uses.

If information is known about individual buildings, it is suggested that the general office building category be used rather than office parks when estimating trip generation for one or more office buildings in a single development. The office park category is more general and should be used when a breakdown of individual or different uses is not known. If the general office building category is used and if additional buildings, such as banks, restaurants, or retail stores, are included in the development, the development should be treated as a multiuse project. On the other hand, if the office park category is used, internal trips are already reflected in the data and do not need to be considered.

When the buildings are interrelated (defined by shared parking facilities or the ability to easily walk between buildings) or house one tenant, it is suggested that the total area or employment of all the buildings be used for calculating the trip generation. When the individual buildings are isolated and not related to one another, it is suggested that trip generation be calculated for each building separately and then summed.

Additional Data

Average weekday transit trip ends—

Transit service was either nonexistent or negligible at the majority of the sites surveyed in this land use. Users may wish to modify trip generation rates presented in this land use to reflect the presence of public transit, carpools and other transportation demand management (TDM) strategies. Information has not been analyzed to document the impacts of TDM measures on the total trip generation of a site. See the ITE *Trip Generation Handbook*, Second Edition for additional information on this topic.

The average building occupancy varied considerably within the studies for which occupancy data were provided. For buildings with occupancy rates reported, the average occupied gross leasable area was 88 percent.

Some of the regression curves plotted for this land use may produce illogical trip-end estimates for small office buildings. When the proposed site size is significantly smaller than the average-sized facility published in this report, caution should be used when applying these statistics. For more information, please refer to Chapter 3, "Guidelines for Estimating Trip Generation," of the ITE *Trip Generation Handbook*, Second Edition.

In some regions, peaking may occur earlier or later and may last somewhat longer than the traditional 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. peak period time frames.

The sites were surveyed between the 1960s and the 2000s throughout the United States.

Trip Characteristics

The trip generation for the A.M. and P.M. peak hours of the generator typically coincided with the peak hours of the adjacent street traffic; therefore, only one A.M. peak hour and one P.M. peak hour, which represent both the peak hour of the generator and the peak hour of the adjacent street traffic, are shown for general office buildings.

Source Numbers

2, 5, 20, 21, 51, 53, 54, 72, 88, 89, 92, 95, 98, 100, 159, 161, 172, 175, 178, 183, 184, 185, 189, 193, 207, 212, 217, 247, 253, 257, 260, 262, 279, 295, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 418, 419, 423, 562, 734

General Office Building (710)

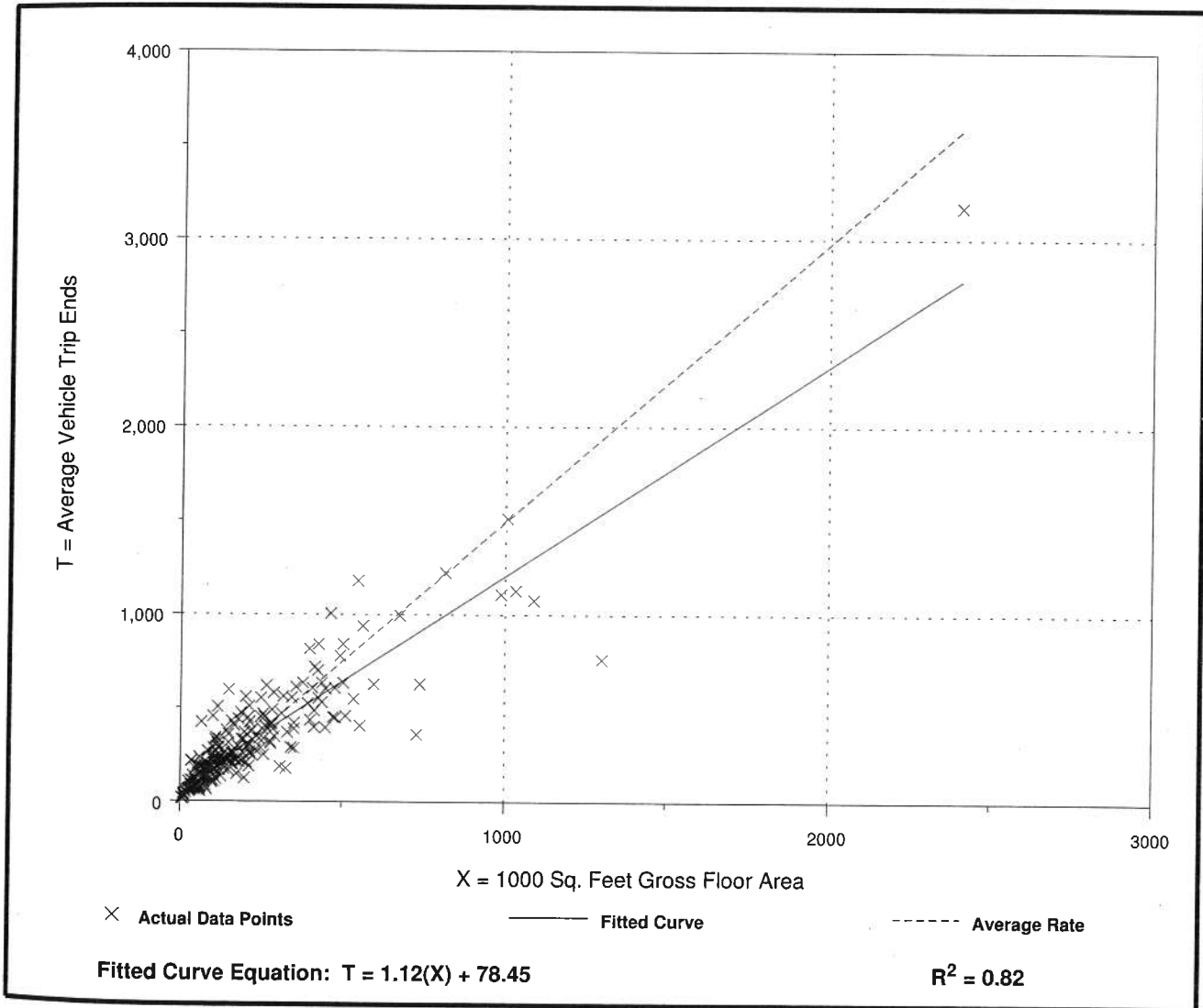
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
P.M. Peak Hour

Number of Studies: 236
 Average 1000 Sq. Feet GFA: 215
 Directional Distribution: 17% entering, 83% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.49	0.49 - 6.39	1.37

Data Plot and Equation



RECEIVED
OCT 18 2013



Clean Water Services File Number

13-002904

Sensitive Area Pre-Screening Site Assessment

1. Jurisdiction: Sherwood

2. Property Information (example 1S234AB01400)
 Tax lot ID(s): 2S1 29A 3100

 _____ *site address associated with TL 101*
 Site Address: 20765-SW Gerda Lane
 City, State, Zip: Sherwood, OR 97140
 Nearest Cross Street: Tualatin Sherwood Road

3. Owner Information
 Name: Jim and Patricia Dougherty
 Company: _____
 Address: PO Box 623
 City, State, Zip: Manzanita, OR 97130
 Phone/Fax: _____
 E-Mail: _____

4. Development Activity (check all that apply)

Addition to Single Family Residence (rooms, deck, garage)
 Lot Line Adjustment Minor Land Partition
 Residential Condominium Commercial Condominium
 Residential Subdivision Commercial Subdivision
 Single Lot Commercial Multi Lot Commercial
 Other Commercial Site Plan Review

5. Applicant Information
 Name: _____
 Company: AKS Engineering & Forestry, LLC
 Address: 13910 SW Galbreath Drive, Suite 100
 City, State, Zip: Sherwood, OR 97140
 Phone/Fax: 503.925.8799 / 503.925.8969
 E-Mail: chrsg@aks-eng.com

6. Will the project involve any off-site work? Yes No Unknown
 Location and description of off-site work _____

7. Additional comments or information that may be needed to understand your project _____
 Please see attached site plan and property line adjustment information

This application does NOT replace Grading and Erosion Control Permits, Connection Permits, Building Permits, Site Development Permits, DEQ 1200-C Permit or other permits as issued by the Department of Environmental Quality, Department of State Lands and/or Department of the Army COE. All required permits and approvals must be obtained and completed under applicable local, state, and federal law.

By signing this form, the Owner or Owner's authorized agent or representative, acknowledges and agrees that employees of Clean Water Services have authority to enter the project site at all reasonable times for the purpose of inspecting project site conditions and gathering information related to the project site. I certify that I am familiar with the information contained in this document, and to the best of my knowledge and belief, this information is true, complete, and accurate.

Print/Type Name Chris Goodell Print/Type Title Planner
 Signature _____ Date 10/18/2013

FOR DISTRICT USE ONLY

- Sensitive areas potentially exist on site or within 200' of the site. THE APPLICANT MUST PERFORM A SITE ASSESSMENT PRIOR TO ISSUANCE OF A SERVICE PROVIDER LETTER. If Sensitive Areas exist on the site or within 200 feet on adjacent properties, a Natural Resources Assessment Report may also be required.
- Based on review of the submitted materials and best available information Sensitive areas do not appear to exist on site or within 200' of the site. This Sensitive Area Pre-Screening Site Assessment does NOT eliminate the need to evaluate and protect water quality sensitive areas if they are subsequently discovered. This document will serve as your Service Provider letter as required by Resolution and Order 07-20, Section 3.02.1. All required permits and approvals must be obtained and completed under applicable local, State, and federal law.
- Based on review of the submitted materials and best available information the above referenced project will not significantly impact the existing or potentially sensitive area(s) found near the site. This Sensitive Area Pre-Screening Site Assessment does NOT eliminate the need to evaluate and protect additional water quality sensitive areas if they are subsequently discovered. This document will serve as your Service Provider letter as required by Resolution and Order 07-20, Section 3.02.1. All required permits and approvals must be obtained and completed under applicable local, state and federal law.
- This Service Provider Letter is not valid unless _____ CWS approved site plan(s) are attached. Partition Plat 2013-020
- The proposed activity does not meet the definition of development of the lot was platted after 9/9/95 ORS 92.040(2). NO SITE ASSESSMENT OR SERVICE PROVIDER LETTER IS REQUIRED.

Reviewed by Laurie Harris Date 10/25/13



Home of the Tualatin River National Wildlife Refuge

Community Development Division
Planning Department
22560 SW Pine St
Sherwood, OR 97140
503-625-4202

Staff Report and Notice of Decision

CASE Nos. LLA 13-02 Dougherty
Lot Line Adjustment
Decision Date: August 29, 2013

I. BACKGROUND

APPLICANT/OWNER: Misty Mountain Enterprises
Attn: Jim or Patricia Dougherty
PO Box 623
Manzanita, OR 97130

APPLICANT'S REPRESENTATIVE: AKS Engineering & Forestry, LLC
Attn: Nick White
13910 SW Galbreath Drive, Suite 100
Sherwood, Oregon 97140

PROPERTY LOCATION: The subject parcels are located at the NW intersection of SW Gerda Lane and SW Tualatin-Sherwood Road. The properties are identified as tax lots 2900 and 3100 on Washington County Tax Assessor's Map 2S129A, and are owned by the same owner. Both Tax lots take access from SW Gerda Lane.

PARCEL SIZE (existing): Tax lot 2900 is approximately 3.06 acres in size and tax lot 3100 is approximately 6.88 acres in size.

BACKGROUND and EXISTING DEVELOPMENT: Both lots are zoned General Industrial. Tax Lot 2900 is currently vacant while tax lot 3100 is currently being utilized for auto and equipment storage by Enterprise and Republic Services, a local waste hauler. Both properties have been used as storage for vehicles and equipment as part of a prior business that auctioned off vehicles. The site was annexed into the City of Sherwood in the 1980s.

REQUEST: The applicant requests approval to adjust the shared lot line between tax lot 2900 and 3100 for the purposes of creating lot for the purposes of future development. The adjustment will entail adjusting the eastern lot line of tax lot 2900 further east resulting in amended lot areas of 21,780 sq ft. for tax lot 3100, and 9.44 acres for tax lot 2900.

REVIEW CRITERIA: Approval or denial of the request shall be based on the decision criteria contained in Section 16.124 of the Sherwood Zoning and Community Development Code (SZCDC).

II. FINDINGS

Lot Line Adjustment

Section 16.124, outlines the requirements for a property boundary adjustment. Specific requirements are found in Section 16.124.020 which states the following:

A. The City Manager or his/her designee shall approve or deny a request for a property line adjustment in writing based on findings that the following criteria are satisfied:

1. *No new lots are created.*

Staff Analysis: The proposed adjustment relocates a common property line between two separate lots. There are no new lots created by this request.

2. *The adjusted lots comply with the applicable zone requirements.*

Staff Analysis: The adjusted lots meet or satisfy all of the dimensional standards for properties within the General Industrial zone. All other dimensional requirements can reasonably be satisfied by future development with the approval of this adjustment.

3. *The adjusted lots continue to comply with other regulatory agency or department requirements.*

Staff Analysis: There is no evidence within the record to suggest that the proposed lots would not continue to comply with the other regulatory agency or departmental requirements. It should be noted that any future development on either lot would require review for compliance with all applicable regulations, and that this approval does not provide the City or applicant with any approvals other than the requested property line adjustment.

B. If the property line adjustment is processed with another development application, all applicable standards of the Code shall apply.

Staff Analysis: This review is a stand-alone request. All applicable standards of the Code were applied to the current proposal in staffs review for compliance.

FINDING: As proposed and discussed above, the proposed lot line adjustment satisfies the approval criteria for a lot line adjustment, and is approved.

III. DECISION

Based on the submitted plan, staff finds the proposal to adjust the lot lines between tax lots 2900 and 3100 complies with the applicable decision criteria in the Sherwood Zoning and Community Development Code. The Planning Department, acting as the City Manager's designee, reviewed the submitted application and **APPROVES** the requests subject to the following conditions:

1. The owner shall record a property line adjustment survey and legal descriptions in substantial compliance with the preliminary property line adjustment map submitted with this application and labeled "20765 SW Gerda Lane Property Line Adjustment" prepared by AKS, Inc. on July 17, 2013, and received by the City on July 18, 2013.
2. After recordation of the lot line adjustment, the owner shall submit a copy of the recorded Property Line Adjustment to the City of Sherwood Planning Department.

V. APPEAL

As per Section 16.76.020 of the Sherwood Zoning and Community Development Code (SZCDC), the decision of staff detailed above will become final unless an appeal is received by the Planning Department from the applicant. The appeal deadline is 5:00 PM on September 12, 2013.

STATE OF OREGON)
)
Washington County)

I, Brad Kilby for the Planning Department of the City of Sherwood, State of Oregon, in Washington County, do hereby certify that the Notice of Decision on Case Nos. LLA 13-02 was placed in a U.S. Postal receptacle on August 29, 2013.



Planning Department
City of Sherwood

cc: Washington County Surveyor's Office via e-mail.

RECORD OF SURVEY

PROPERTY LINE ADJUSTMENT

LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, AND THE
NORTHEAST 1/4 OF SECTION 29, TOWNSHIP 2 SOUTH, RANGE 1 WEST,
WILLAMETTE MERIDIAN, CITY OF SHERWOOD, WASHINGTON COUNTY, OREGON
SEPTEMBER 9, 2013

32100 SHEET 1 OF 3

WASHINGTON COUNTY SURVEYOR'S OFFICE
ACCEPTED FOR FILING: 10-24-13

NARRATIVE

THE PURPOSE OF THIS SURVEY IS TO ADJUST AND MONUMENT THE PROPERTY LINE BETWEEN PARCELS 1 AND 3 OF PARTITION PLAT NO. 2013-020, WASHINGTON COUNTY SURVEY RECORDS. THE BASIS OF BEARINGS WAS ESTABLISHED BY HOLDING FOUND MONUMENTS ON THE CENTERLINE OF SW TUALATIN-SHERWOOD ROAD (COUNTY ROAD 2737), AS SHOWN, PER SURVEY NUMBER 25,092.

ALL FOUND MONUMENTS, BEARINGS, DISTANCES, AND CURVE INFORMATION PER SAID PARTITION PLAT NO. 2013-020 ARE HELD.

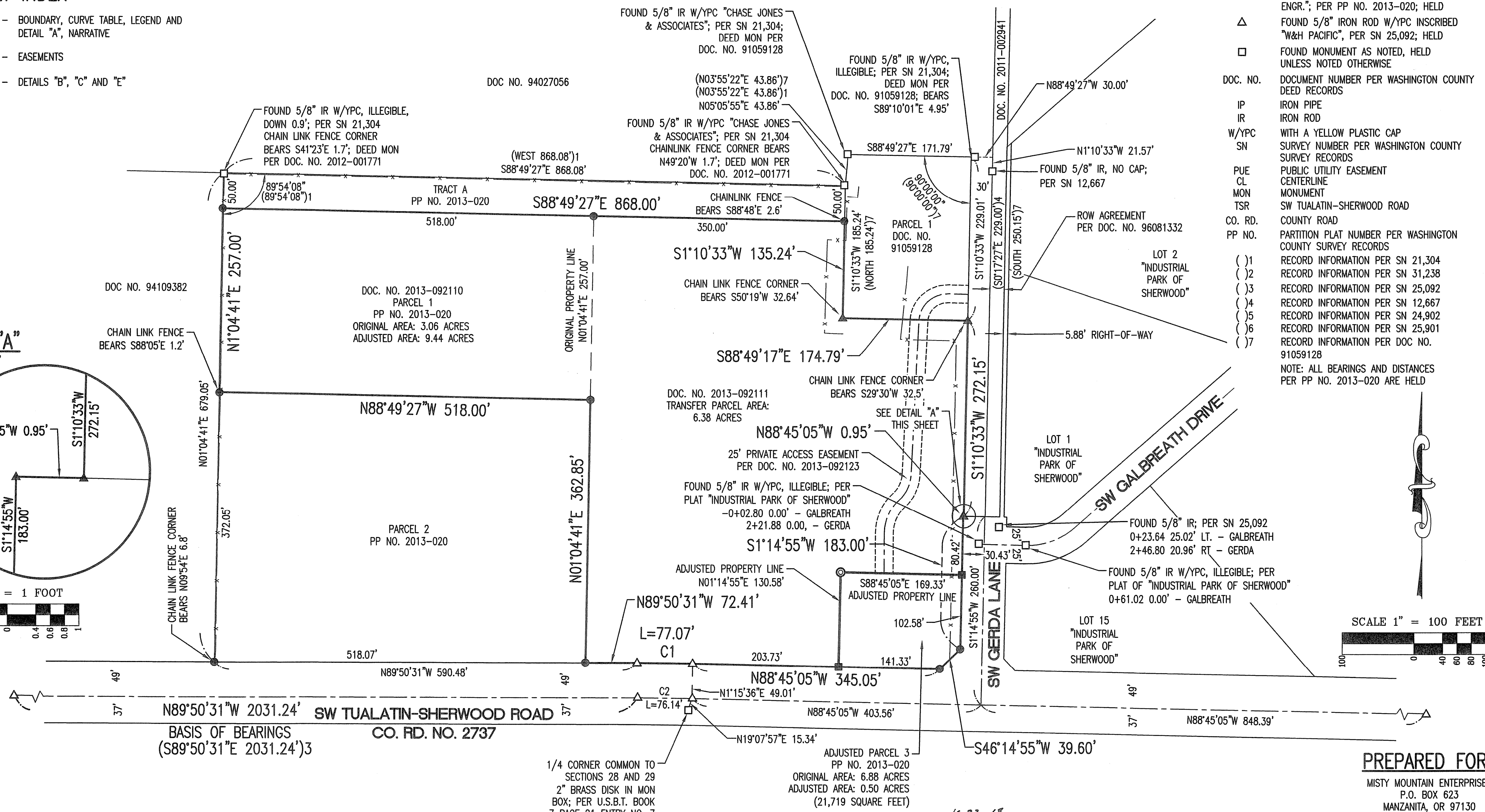
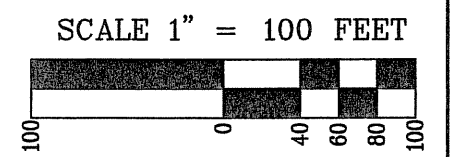
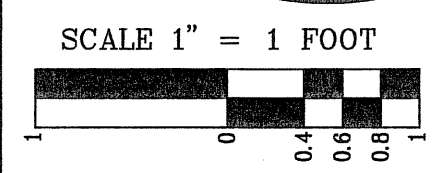
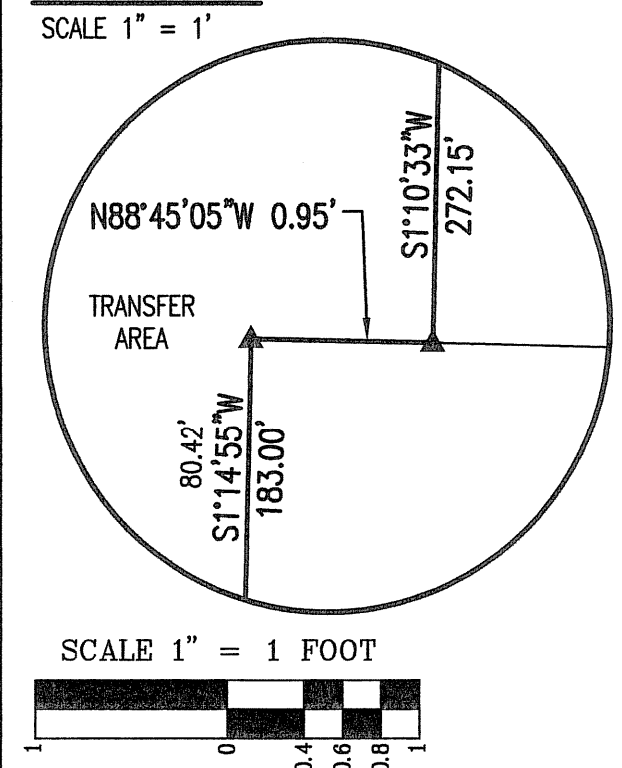
LEGEND

- SET 5/8" X 30" IRON ROD W/YPC INSCRIBED "AKS ENGR." ON: 09/09/13
 - ⊙ SET 5/8" X 30" IRON ROD WITH A 2" ALUMINUM CAP INSCRIBED "AKS ENGR." ON: 09/09/13
 - ▲ 5/8" IRON ROD WITH 2" ALUMINUM CAP INSCRIBED "AKS ENGR."; PER PP NO. 2013-020; HELD
 - 5/8" IRON ROD W/YPC INSCRIBED "AKS ENGR."; PER PP NO. 2013-020; HELD
 - △ FOUND 5/8" IRON ROD W/YPC INSCRIBED "W&H PACIFIC", PER SN 25,092; HELD
 - FOUND MONUMENT AS NOTED, HELD UNLESS NOTED OTHERWISE
- DOC. NO. DOCUMENT NUMBER PER WASHINGTON COUNTY DEED RECORDS
- IP IRON PIPE
IR IRON ROD
W/YPC WITH A YELLOW PLASTIC CAP
SN SURVEY NUMBER PER WASHINGTON COUNTY SURVEY RECORDS
- PUE PUBLIC UTILITY EASEMENT
CL CENTERLINE
MON MONUMENT
TSR SW TUALATIN-SHERWOOD ROAD
- CO. RD. COUNTY ROAD
PP NO. PARTITION PLAT NUMBER PER WASHINGTON COUNTY SURVEY RECORDS
- () RECORD INFORMATION PER SN 21,304
() RECORD INFORMATION PER SN 31,238
() RECORD INFORMATION PER SN 25,092
() RECORD INFORMATION PER SN 12,667
() RECORD INFORMATION PER SN 24,902
() RECORD INFORMATION PER SN 25,901
() RECORD INFORMATION PER DOC NO. 91059128
- NOTE: ALL BEARINGS AND DISTANCES PER PP NO. 2013-020 ARE HELD

SHEET INDEX

- SHEET 1 - BOUNDARY, CURVE TABLE, LEGEND AND DETAIL "A", NARRATIVE
- SHEET 2 - EASEMENTS
- SHEET 3 - DETAILS "B", "C" AND "E"

DETAIL "A"



CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	4049.00' (4049.00') ³	1°05'26\"/> (1°05'26\") ³	77.07' (77.07') ³	N89°17'48\"/> W 77.07' (N89°17'48\"/> W 77.07') ³
C2	4000.00' (4000.00') ³	1°05'26\"/> (1°05'26\") ³	76.14' (76.14') ³	N89°17'48\"/> W 76.13' (N89°17'48\"/> W 76.13') ³

REGISTERED PROFESSIONAL LAND SURVEYOR
Nick White
OREGON
JANUARY 9, 2007
NICK WHITE
70652LS
RENEWS: 6/30/14

JOB NAME: GERDA LANE
JOB NUMBER: 3592
DRAWN BY: BDT/JOH
CHECKED BY: NSW
DRAWING NO.: C3D2977PP

ENGINEERING • PLANNING • LANDSCAPE ARCHITECTURE
FORESTRY • SURVEYING
AKS
ENGINEERING & FORESTRY
LICENSED IN OR & WA
13910 SW GALBREATH DRIVE, SUITE 100
SHERWOOD, OR 97140
PHONE: (503) 925-8799
FAX: (503) 925-8969
OFFICES LOCATED IN SALEM, OR & VANCOUVER, WA

PREPARED FOR
MISTY MOUNTAIN ENTERPRISES
P.O. BOX 623
MANZANITA, OR 97130

RECORD OF SURVEY

PROPERTY LINE ADJUSTMENT

LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, AND THE
NORTHEAST 1/4 OF SECTION 29, TOWNSHIP 2 SOUTH, RANGE 1 WEST,
WILLAMETTE MERIDIAN, CITY OF SHERWOOD, WASHINGTON COUNTY, OREGON
SEPTEMBER 9, 2013

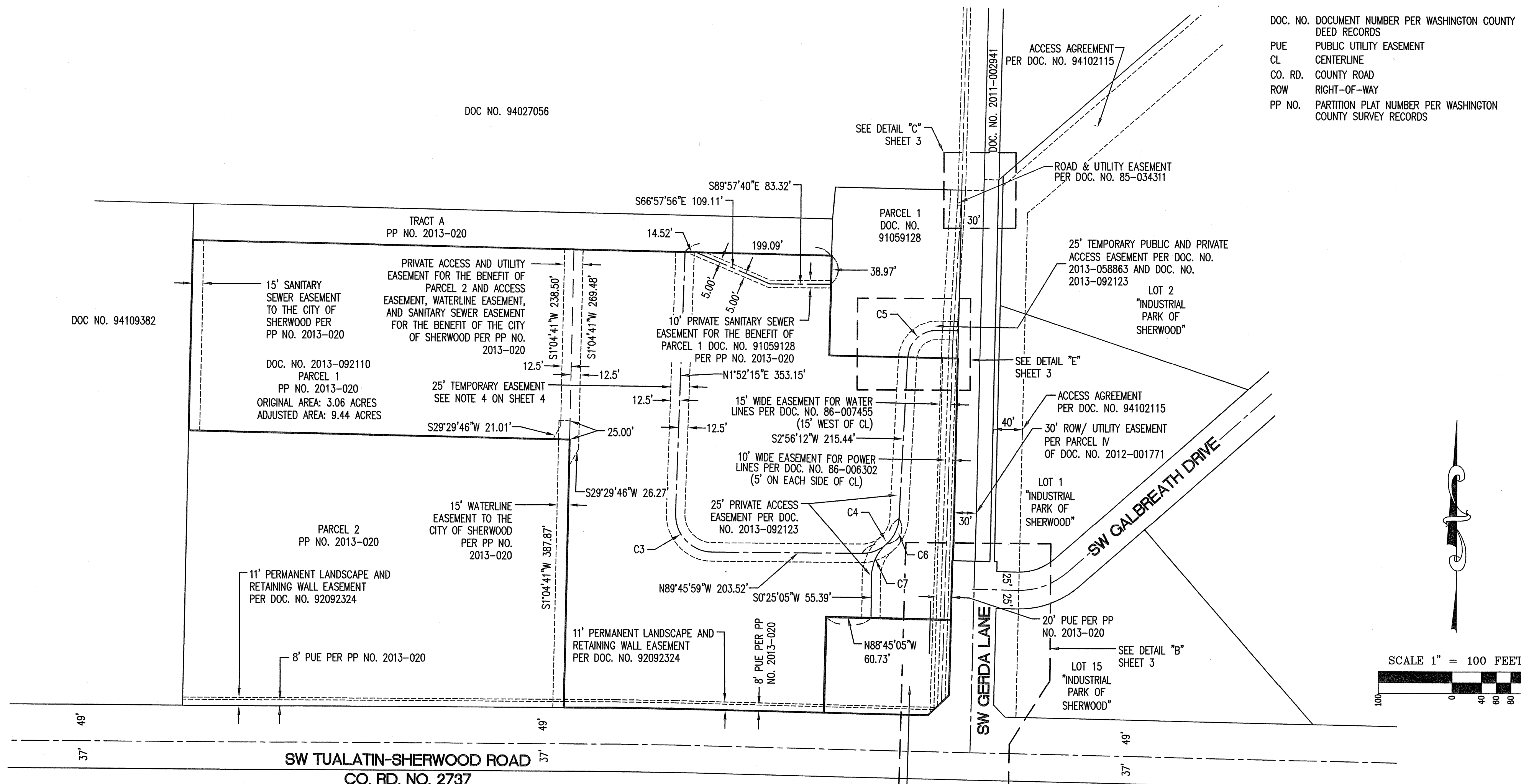
SHEET 2 OF 3
32100

PREPARED FOR

MISTY MOUNTAIN ENTERPRISES
P.O. BOX 623
MANZANITA, OR 97130

LEGEND

DOC. NO. DOCUMENT NUMBER PER WASHINGTON COUNTY DEED RECORDS
PUE PUBLIC UTILITY EASEMENT
CL CENTERLINE
CO. RD. COUNTY ROAD
ROW RIGHT-OF-WAY
PP NO. PARTITION PLAT NUMBER PER WASHINGTON COUNTY SURVEY RECORDS



DOC NO. 94027056

TRACT A
PP NO. 2013-020

15' SANITARY SEWER EASEMENT TO THE CITY OF SHERWOOD PER PP NO. 2013-020

DOC. NO. 2013-092110
PARCEL 1
PP NO. 2013-020
ORIGINAL AREA: 3.06 ACRES
ADJUSTED AREA: 9.44 ACRES

PRIVATE ACCESS AND UTILITY EASEMENT FOR THE BENEFIT OF PARCEL 2 AND ACCESS EASEMENT, WATERLINE EASEMENT, AND SANITARY SEWER EASEMENT FOR THE BENEFIT OF THE CITY OF SHERWOOD PER PP NO. 2013-020

25' TEMPORARY EASEMENT SEE NOTE 4 ON SHEET 4

15' WATERLINE EASEMENT TO THE CITY OF SHERWOOD PER PP NO. 2013-020

11' PERMANENT LANDSCAPE AND RETAINING WALL EASEMENT PER DOC. NO. 92092324

8' PUE PER PP NO. 2013-020

CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C3	50.00'	91°38'14"	79.97'	N43°56'52"W 71.71'
C4	50.00'	87°17'49"	76.18'	S46°35'06"W 69.02'
C5	40.00'	88°14'21"	61.60'	S47°03'23"W 55.69'
C6	50.00'	45°45'02"	39.92'	N25°48'43"E 38.87'
C7	60.00'	48°16'10"	50.55'	S24°33'10"W 49.07'

ADJUSTED PARCEL 3
PP NO. 2013-020
ORIGINAL AREA: 6.88 ACRES
ADJUSTED AREA: 0.50 ACRES
(21,719 SQUARE FEET)

10-22-13

REGISTERED PROFESSIONAL LAND SURVEYOR

Nick White

OREGON
JANUARY 9, 2007
NICK WHITE
70652LS
RENEWS: 6/30/14

JOB NAME: GERDA LANE

JOB NUMBER: 3592

DRAWN BY: BDT/JOH

CHECKED BY: NSW

DRAWING NO.: C3D2977PP

ENGINEERING • PLANNING • LANDSCAPE ARCHITECTURE
FORESTRY • SURVEYING

LICENSED IN OR & WA

AKS
ENGINEERING & FORESTRY

13910 SW GALBREATH DRIVE, SUITE 100
SHERWOOD, OR 97140
PHONE: (503) 925-8799
FAX: (503) 925-8969

OFFICES LOCATED IN SALEM, OR & VANCOUVER, WA

RECORD OF SURVEY

PROPERTY LINE ADJUSTMENT

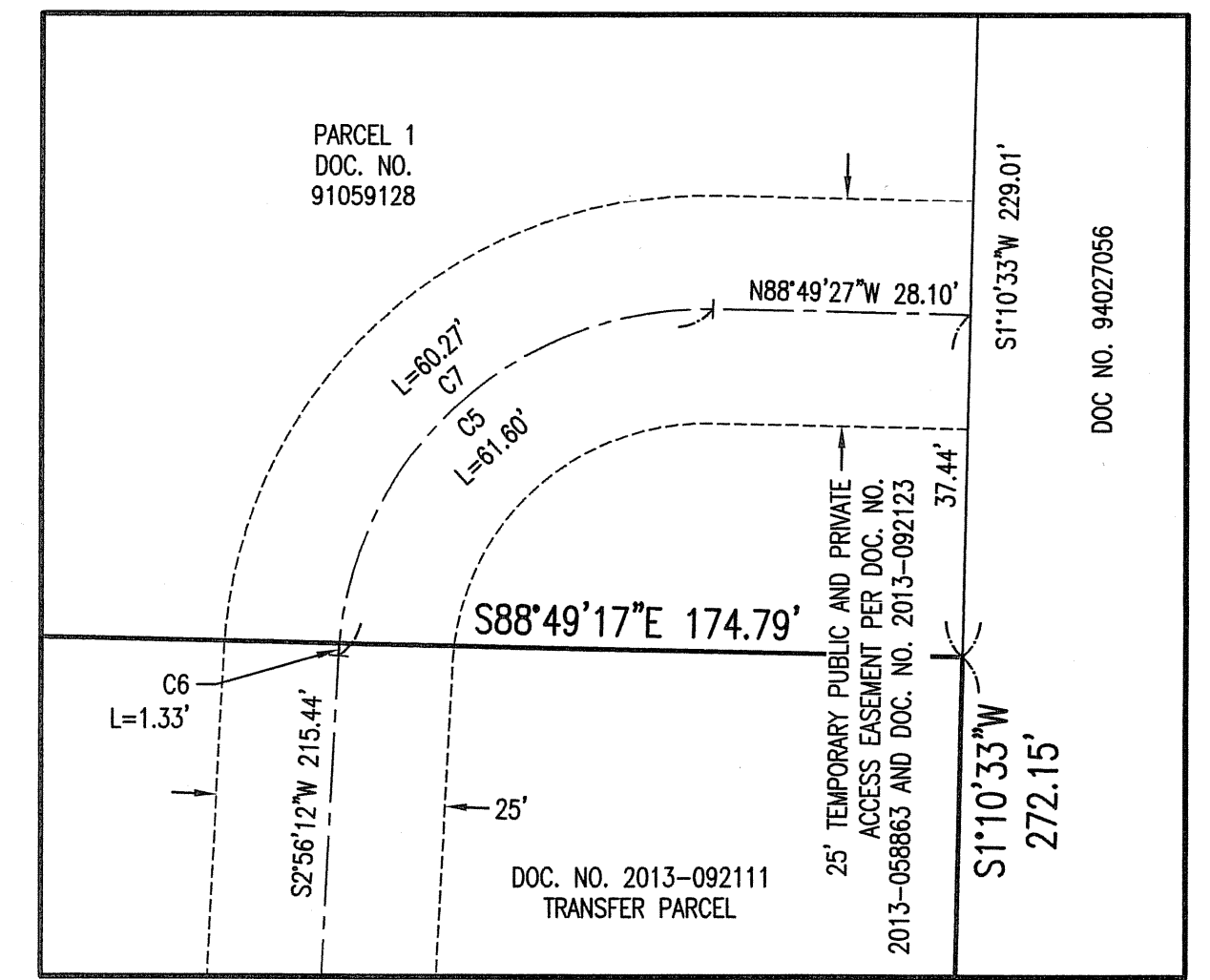
LOCATED IN THE NORTHWEST 1/4 OF SECTION 28, AND THE
NORTHEAST 1/4 OF SECTION 29, TOWNSHIP 2 SOUTH, RANGE 1 WEST,
WILLAMETTE MERIDIAN, CITY OF SHERWOOD, WASHINGTON COUNTY, OREGON
SEPTEMBER 9, 2013

LEGEND

- DOC. NO. DOCUMENT NUMBER PER WASHINGTON COUNTY DEED RECORDS
- PUE PUBLIC UTILITY EASEMENT
- CL CENTERLINE
- TSR SW TUALATIN-SHERWOOD ROAD
- PP NO. PARTITION PLAT NUMBER PER WASHINGTON COUNTY SURVEY RECORDS

DETAIL "E"

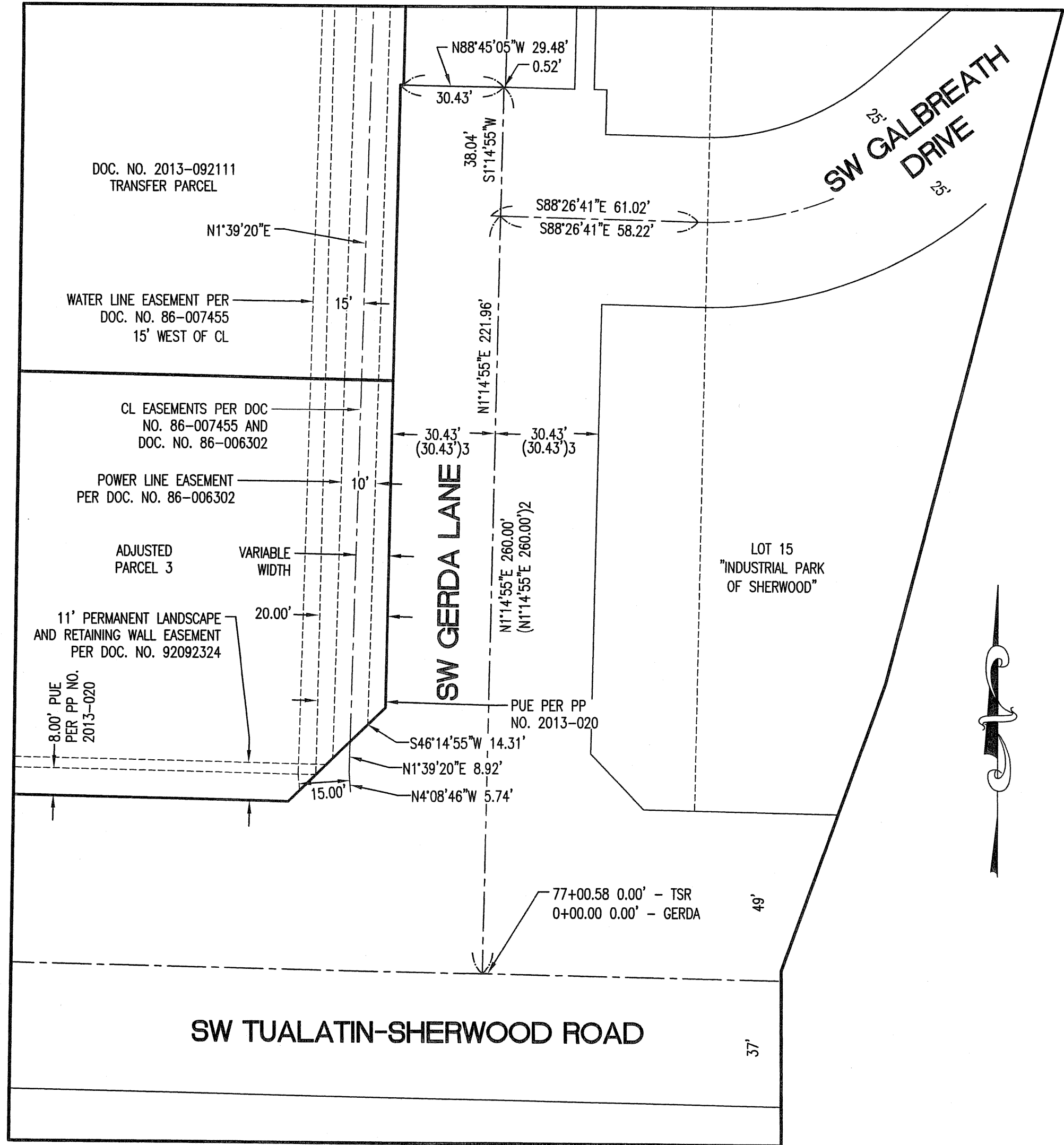
SCALE 1" = 20'



CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C5	40.00'	88°14'21"	61.60'	S47°03'23"W 55.69'
C6	40.00'	1°54'33"	1.33'	S3°53'28"W 1.33'
C7	40.00'	86°19'48"	60.27'	S48°00'39"W 54.73'

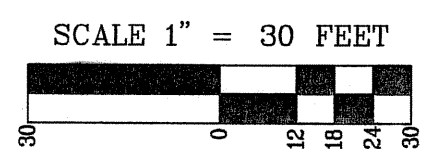
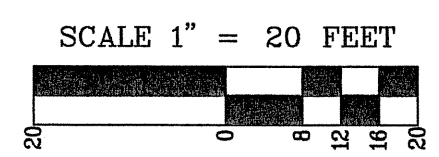
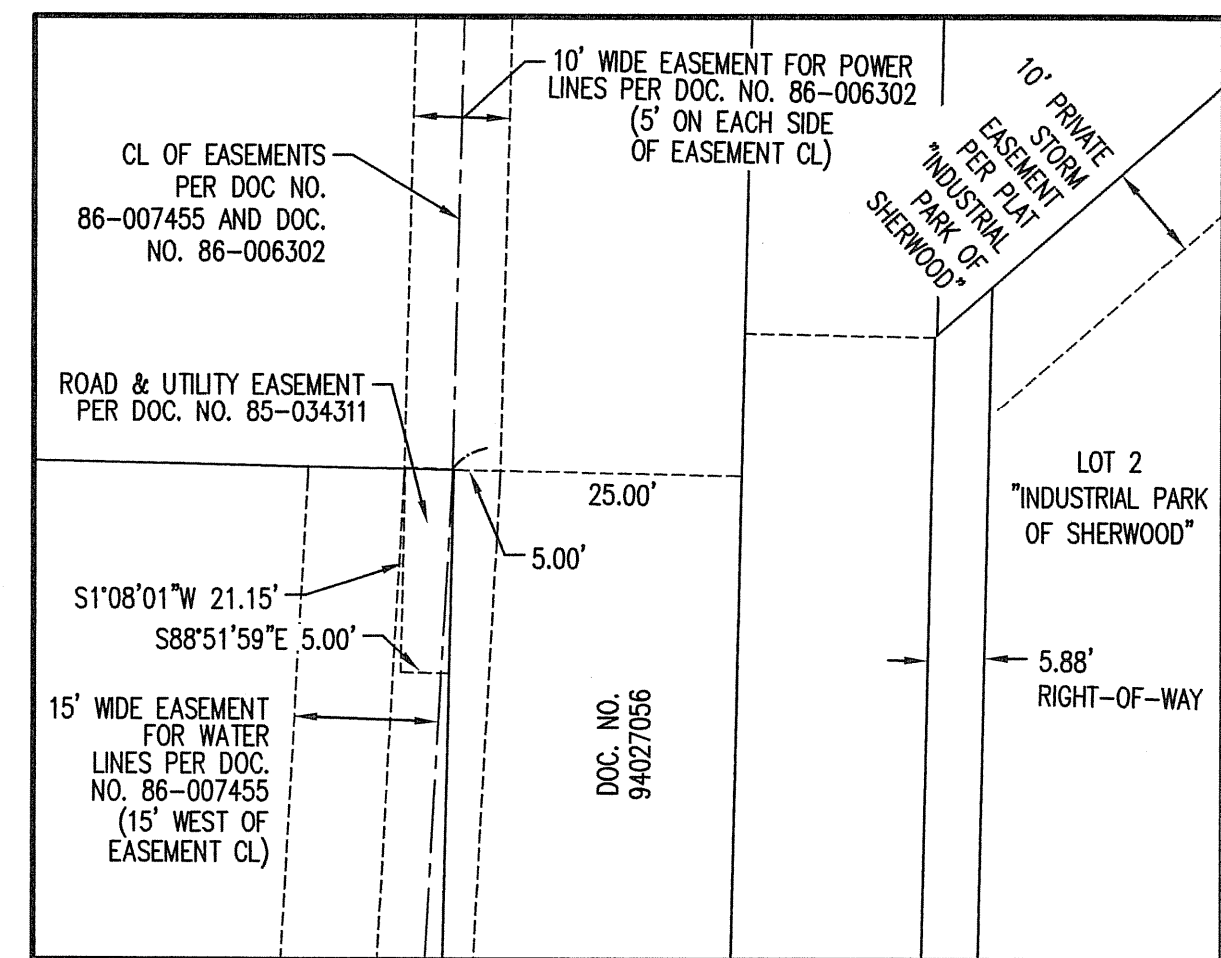
DETAIL "B"

SCALE 1" = 30'



DETAIL "C"

SCALE 1" = 20'



PREPARED FOR
MISTY MOUNTAIN ENTERPRISES, LLC
P.O. BOX 623
MANZANITA, OR 97130

10-22-13
REGISTERED PROFESSIONAL LAND SURVEYOR
Nick White
OREGON
JANUARY 9, 2007
NICK WHITE
70652LS
RENEWS: 6/30/14

JOB NAME: GERDA LANE
JOB NUMBER: 3592
DRAWN BY: BDT/JOH
CHECKED BY: NSW
DRAWING NO.: C3D2977PP

ENGINEERING • PLANNING • LANDSCAPE ARCHITECTURE
FORESTRY • SURVEYING
LICENSED IN OR & WA
AKS
ENGINEERING & FORESTRY
13910 SW GALBREATH DRIVE, SUITE 100
SHERWOOD, OR 97140
PHONE: (503) 925-8799
FAX: (503) 925-8969
OFFICES LOCATED IN SALEM, OR & VANCOUVER, WA

Washington County, Oregon **2013-092110**
D-DBS
Stn=12 S PFEIFER 10/18/2013 12:25:32 PM
\$20.00 \$11.00 \$5.00 \$15.00 **\$51.00**

I, Richard Hobernicht, Director of Assessment and Taxation and Ex-Officio County Clerk for Washington County, Oregon, do hereby certify that the within instrument of writing was received and recorded in the book of records of said county.

Richard Hobernicht, Director of Assessment and Taxation, Ex-Officio

After Recording Return To:
Jim Dougherty and Patricia Dougherty
PO Box 623
Manzanita, OR 97130

Mail Tax Statement To:
Same As Above

BARGAIN AND SALE DEED
Property Line Adjustment
(Deed 1 of 2)

LAWYERS TITLE INS. CORP. Ac 133 5585

KNOW ALL MEN BY THESE PRESENTS, Jim A. Dougherty and Patricia Dougherty, as tenant by the entirety, for the consideration hereinafter called grantor stated, does hereby grant, bargain, sell and convey unto, Jim A. Dougherty and Patricia Dougherty, as tenant by the entirety, hereinafter called grantee, and unto grantee's heirs, successors and assigns all of that certain real property with the tenements, hereditaments and appurtenances thereunto belonging or appertaining, situated in the City of Sherwood, County of Washington and State of Oregon, described as follows, to-wit:

SEE EXHIBIT "A" ATTACHED

This deed is given to complete a Property Line Adjustment in the City of Sherwood Case File #LLA 13-02.

The deed or deeds given are to complete a property line adjustment. The property of the Grantor/Grantee was previously described in Partition Plat 2013-020, Deed Recorders of Washington County, Oregon.
** PARCELS 1 + 3*

To Have and to Hold the same unto the said grantee and grantee's heirs, successors and assigns forever.

The true and actual consideration paid for this transfer, stated in terms of dollars is \$ 0 .

However the actual consideration consists of or includes other property or value given or promised which is the whole consideration.

In construing this deed and where the context so requires, the singular includes the plural and all grammatical changes shall be implied to make the provisions hereof apply equally to corporations and to individuals.

RECORDED BY LAWYERS TITLE INS. CORP. AS AN ACCOMMODATION ONLY NO LIABILITY IS ACCEPTED FOR THE CONDITION OF TITLE OR FOR THE VALIDITY, SUFFICIENCY, OR EFFECT OF THIS DOCUMENT.

**THIS PAGE IS A PART OF
THE OFFICIAL DOCUMENT
PLEASE DO NOT REMOVE**

After Recording Return To:
Jim Dougherty and Patricia Dougherty
PO Box 623
Manzanita, OR 97130

Mail Tax Statement To:
Same As Above

BARGAIN AND SALE DEED
Property Line Adjustment
(Deed 1 of 2)

KNOW ALL MEN BY THESE PRESENTS, Jim A. Dougherty and Patricia Dougherty, as tenant by the entirety, for the consideration hereinafter called grantor stated, does hereby grant, bargain, sell and convey unto, Jim A. Dougherty and Patricia Dougherty, as tenant by the entirety, hereinafter called grantee, and unto grantee's heirs, successors and assigns all of that certain real property with the tenements, hereditaments and appurtenances thereunto belonging or appertaining, situated in the City of Sherwood, County of Washington and State of Oregon, described as follows, to-wit:

SEE EXHIBIT "A" ATTACHED

This deed is given to complete a Property Line Adjustment in the City of Sherwood Case File #LLA 13-02.

The deed or deeds given are to complete a property line adjustment. The property of the Grantor/Grantee was previously described in ^{*}Partition Plat 2013-020, Deed Recorders of Washington County, Oregon.
* PARCELS 1 + 3

To Have and to Hold the same unto the said grantee and grantee's heirs, successors and assigns forever.

The true and actual consideration paid for this transfer, stated in terms of dollars is \$ 0_.

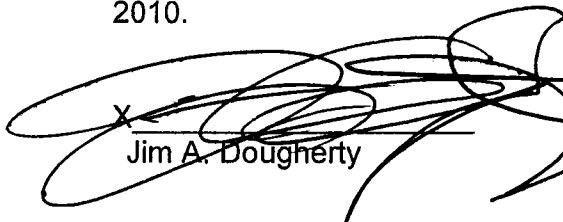
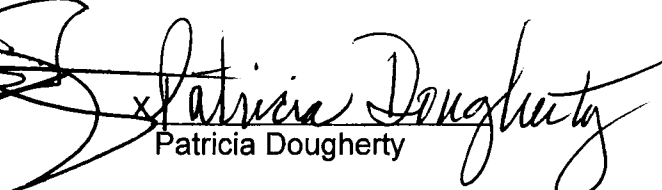
However the actual consideration consists of or includes other property or value given or promised which is the whole consideration.

In construing this deed and where the context so requires, the singular includes the plural and all grammatical changes shall be implied to make the provisions hereof apply equally to corporations and to individuals.

LAWYERS TITLE INS. CORP. Ac 133 5585

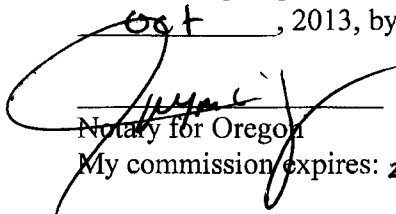
In Witness Whereof, the grantor has executed this instrument this 17th day of October, 2013; if a corporate grantor, it has caused its name to be signed and its seal affixed by an officer or other person duly authorized to do so by order of its board of directors.

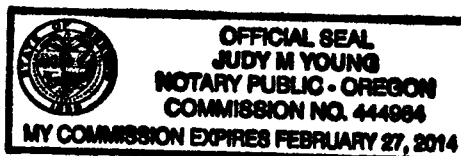
BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

x  Jim A. Dougherty
x  Patricia Dougherty

STATE OF OREGON)ss.
County of MULT.)

The foregoing instrument was acknowledged before me on this 17 day of Oct, 2013, by Jim A. Dougherty.

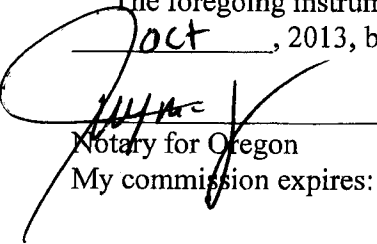

Notary for Oregon
My commission expires: 2/27/14



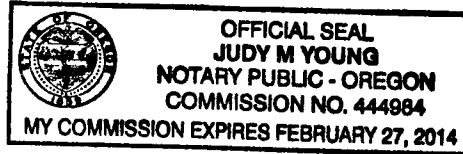
THE COMMISSION EXPIRES FEBRUARY 27, 2014
NOTARY PUBLIC - OREGON
COMMISSION NO. 44404
JAMES JACOB
OFFICIAL SEAL

STATE OF Oregon)ss.
County of Mult.)

The foregoing instrument was acknowledged before me on this 17 day of
Oct, 2013, by Patricia Dougherty.


Notary for Oregon

My commission expires: 2/27/14



**ENGINEERING PLANNING
FORESTRY**

13910 S.W. Galbreath Dr., Suite 100
Sherwood, Oregon 97140
Phone: (503) 925-8799
Fax: (503) 925-8969



**LANDSCAPE ARCHITECTURE
SURVEYING**

AKS Group of Companies:
SHERWOOD, OREGON
SALEM, OREGON
VANCOUVER, WASHINGTON
www.aks-eng.com

EXHIBIT A
Adjusted Parcel 1

Parcel 1 and a portion of Parcel 3 of Partition Plat No. 2013-020, Washington County Survey Records, located in the Northwest One-Quarter of Section 28, and the Northeast One-Quarter of Section 29, Township 2 South, Range 1 West, Willamette Meridian, City of Sherwood, Washington County, Oregon, the centerline of which is more particularly described as follows:

Beginning at the 2 inch brass disk at the 1/4 corner common to Sections 28 and 29; thence North 19°07'57" East 15.34 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "W&H Pacific" on the centerline of SW Tualatin Sherwood Road; thence North 01°15'36" East 49.01 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "W&H Pacific" on the north right-of-way line of said SW Tualatin Sherwood Road, being the south line of said Partition Plat No. 2013-020 and the True Point of Beginning; thence along a said north right-of-way line along a non-tangent curve to the left (Radial: South 01°14'55" West) with a Radius of 4049.00 feet, a Delta of 01°05'26", a Length of 77.07 feet, and a Chord of North 89°17'48" West 77.07 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "W&H Pacific"; thence continuing along said north right-of-way line North 89°50'31" West 72.41 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence along the west line of said Parcel 3 North 01°04'41" East 362.85 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence along the south line of said Parcel 1 North 88°49'27" West 518.00 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence along the west line of said Parcel 1 North 01°04'41" East 257.00 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence along the north lines of Parcels 1 and 3 South 88°49'27" East 868.00 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence along the west line of Parcel 1 of Document Number 91059128, Washington County Deed Records South 01°10'33" West 135.24 feet to a 5/8 inch iron rod with 2 inch aluminum cap inscribed "AKS ENGR."; thence along the south line of said Parcel 1 of Document Number 91059128 South 88°49'17" East 174.79 feet to a 5/8 inch iron rod with 2 inch aluminum cap inscribed "AKS ENGR."; thence along the east line of Parcel 3 of said partition plat South 01°10'33" West 272.15 feet to a 5/8 inch iron rod with 2 inch aluminum cap inscribed "AKS ENGR."; thence continuing along said east line North 88°45'05" West 0.95 feet to a 5/8 inch iron rod with 2 inch aluminum cap inscribed "AKS ENGR."; thence continuing along said east line South 01°14'55" West 80.42 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence leaving said east line North 88°45'05" West 169.33 feet to a 5/8 inch iron rod with a 2 inch aluminum cap inscribed "AKS ENGR."; thence South 01°14'55" West 130.58 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR." on the north right-of-way line of SW Tualatin Sherwood Road; thence along said north right-of-way line North 88°45'05" West 203.73 feet to the True Point of Beginning.

The above described strip of land contains 9.44 acres, more or less.

09/10/13

**REGISTERED
PROFESSIONAL
LAND SURVEYOR**

A handwritten signature in black ink, appearing to read 'Nick White', is written over a white background within a rectangular box.

**OREGON
JANUARY 9, 2007
NICK WHITE
70652LS**

RENEWS: 6/30/14

Washington County, Oregon **2013-092111**
D-DBS
Stn=12 S PFEIFER 10/18/2013 12:25:32 PM
\$20.00 \$11.00 \$5.00 \$15.00 **\$51.00**

I, Richard Hobernicht, Director of Assessment and Taxation and Ex-Officio County Clerk for Washington County, Oregon, do hereby certify that the within instrument of writing was received and recorded in the book of records of said county.

Richard Hobernicht, Director of Assessment and Taxation, Ex-Officio

After Recording Return To:
Jim Dougherty and Patricia Dougherty
PO Box 623
Manzanita, OR 97130

Mail Tax Statement to:
Same As Above

BARGAIN AND SALE DEED
Property Line Adjustment
(Deed 2 of 2)

KNOW ALL MEN BY THESE PRESENTS, Jim A. Dougherty and Patricia Dougherty, as tenant by the entirety, for the consideration hereinafter called grantor stated, does hereby grant, bargain, sell and convey unto, Jim A. Dougherty and Patricia Dougherty, as tenant by the entirety, hereinafter called grantee, and unto grantee's heirs, successors and assigns all of that certain real property with the tenements, hereditaments and appurtenances thereunto belonging or appertaining, situated in the City of Sherwood, County of Washington and State of Oregon, described as follows, to-wit:

SEE EXHIBIT "D" ATTACHED

This deed is given to complete a Property Line Adjustment in City of Sherwood Case File #LLA 13-02.

The deed or deeds given are to complete a property line adjustment. The property of the Grantor/Grantee was previously described in Partition Plat 2013-020, Deed Recorders of Washington County, Oregon.
** Parcel 3*

To Have and to Hold the same unto the said grantee and grantee's heirs, successors and assigns forever.

The true and actual consideration paid for this transfer, stated in terms of dollars is \$_0_.

However the actual consideration consists of or includes other property or value given or promised which is the whole consideration.

In construing this deed and where the context so requires, the singular includes the plural and all grammatical changes shall be implied to make the provisions hereof apply equally to corporations and to individuals.

**THIS PAGE IS A PART OF
THE OFFICIAL DOCUMENT
PLEASE DO NOT REMOVE**

LAWYERS TITLE INS. CORP. AC 1335585

RECORDED IN WASHINGTON COUNTY AS AN ACCOMMODATION
ONLY NO. ... FOR THE VALUE ...
... FOR THE CONDITION OF TITLE OR ...
... OR EFFECT OF THIS DOCUMENT.

After Recording Return To:
Jim Dougherty and Patricia Dougherty
PO Box 623
Manzanita, OR 97130

Main Tax Statement to:
Same As Above

BARGAIN AND SALE DEED
Property Line Adjustment
(Deed 2 of 2)

KNOW ALL MEN BY THESE PRESENTS, Jim A. Dougherty and Patricia Dougherty, as tenant by the entirety, for the consideration hereinafter called grantor stated, does hereby grant, bargain, sell and convey unto, Jim A. Dougherty and Patricia Dougherty, as tenant by the entirety, hereinafter called grantee, and unto grantee's heirs, successors and assigns all of that certain real property with the tenements, hereditaments and appurtenances thereunto belonging or appertaining, situated in the City of Sherwood, County of Washington and State of Oregon, described as follows, to-wit:

SEE EXHIBIT "D" ATTACHED

This deed is given to complete a Property Line Adjustment in City of Sherwood Case File #LLA 13-02.

The deed or deeds given are to complete a property line adjustment. The property of the Grantor/Grantee was previously described in ^{*}Partition Plat 2013-020, Deed Recorders of Washington County, Oregon. _{* Parcel 3}

To Have and to Hold the same unto the said grantee and grantee's heirs, successors and assigns forever.

The true and actual consideration paid for this transfer, stated in terms of dollars is \$_0_.

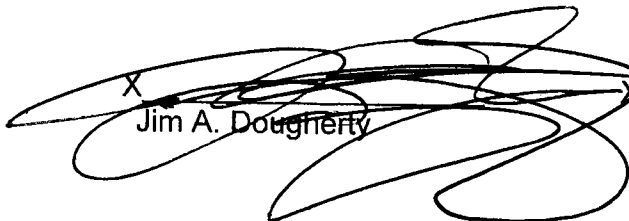
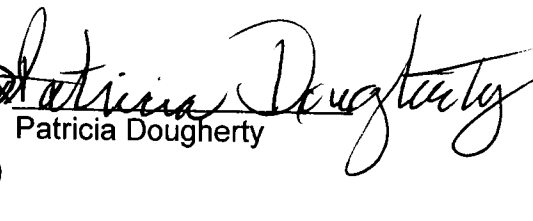
However the actual consideration consists of or includes other property or value given or promised which is the whole consideration.

In construing this deed and where the context so requires, the singular includes the plural and all grammatical changes shall be implied to make the provisions hereof apply equally to corporations and to individuals.

LAWYERS TITLE INS. CORP. AC 1335585

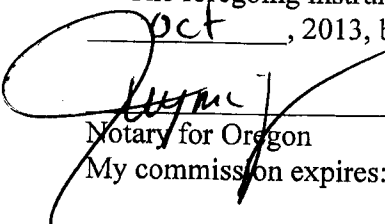
In Witness Whereof, the grantor has executed this 17th day of OCTOBER, 2013; if a corporate grantor, it has caused its name to be signed and its seal affixed by an officer or other person duly authorized to do so by order of its board of directors.

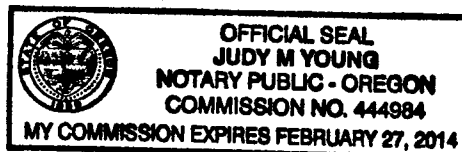
BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

X  Jim A. Dougherty
 Patricia Dougherty

STATE OF OREGON)ss.
County of MULT

The foregoing instrument was acknowledged before me on this 17 day of Oct, 2013, by Jim A. Dougherty.

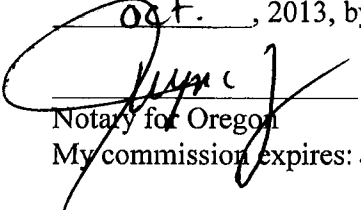

Notary for Oregon
My commission expires: 2/27/14





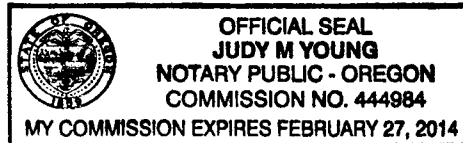
STATE OF Oregon)ss.
County of Mult.)

The foregoing instrument was acknowledged before me on this 17 day of
Oct., 2013, by Patricia Dougherty.



Notary for Oregon

My commission expires: 2/27/14



**ENGINEERING PLANNING
FORESTRY**

13910 S.W. Galbreath Dr., Suite 100
Sherwood, Oregon 97140
Phone: (503) 925-8799
Fax: (503) 925-8969



**LANDSCAPE ARCHITECTURE
SURVEYING**

AKS Group of Companies:
SHERWOOD, OREGON
SALEM, OREGON
VANCOUVER, WASHINGTON
www.aks-eng.com

EXHIBIT D
Adjusted Parcel 3

Parcel 3 of Partition Plat No. 2013-020, Washington County Survey Records, located in the Northwest One-Quarter of Section 28, and the Northeast One-Quarter of Section 29, Township 2 South, Range 1 West, Willamette Meridian, City of Sherwood, Washington County, Oregon.

EXCEPTING THEREFROM:

Beginning at the 2 inch brass disk at the 1/4 corner common to Sections 28 and 29; thence North 19°07'57" East 15.34 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "W&H Pacific" on the centerline of SW Tualatin Sherwood Road; thence North 01°15'36" East 49.01 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "W&H Pacific" on the north right-of-way line of said SW Tualatin Sherwood Road, being the south line of said Partition Plat No. 2013-020 and the True Point of Beginning; thence along said north right-of-way line along a non-tangent curve to the left (Radial: South 01°14'55" West) with a Radius of 4049.00 feet, a Delta of 01°05'26", a Length of 77.07 feet, and a Chord of North 89°17'48" West 77.07 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "W&H Pacific"; thence continuing along said north right-of-way line North 89°50'31" West 72.41 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence along the west line of said Parcel 3 North 01°04'41" East 619.85 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence along the north line of said Parcel 3 South 88°49'27" East 350.00 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence along the west line of Parcel 1 of Document Number 91059128, Washington County Deed Records South 01°10'33" West 135.24 feet to a 5/8 inch iron rod with 2 inch aluminum cap inscribed "AKS ENGR."; thence along the south line of said Parcel 1 of Document Number 91059128 South 88°49'17" East 174.79 feet to a 5/8 inch iron rod with 2 inch aluminum cap inscribed "AKS ENGR."; thence along the easterly line of Parcel 3 of said partition plat South 01°10'33" West 272.15 feet to a 5/8 inch iron rod with 2 inch aluminum cap inscribed "AKS ENGR."; thence continuing along said easterly line North 88°45'05" West 0.95 feet to a 5/8 inch iron rod with 2 inch aluminum cap inscribed "AKS ENGR."; thence continuing along said easterly line South 01°14'55" West 80.42 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR."; thence leaving said easterly line North 88°45'05" West 169.33 feet to a 5/8 inch iron rod with a 2 inch aluminum cap inscribed "AKS ENGR."; thence South 01°14'55" West 130.58 feet to a 5/8 inch iron rod with yellow plastic cap inscribed "AKS ENGR." on the north right-of-way line of SW Tualatin Sherwood Road; thence along said north right-of-way line North 88°45'05" West 203.73 feet to the True Point of Beginning.

09/24/13

The above described tract of land contains 21,719 square feet, more or less.

**REGISTERED
PROFESSIONAL
LAND SURVEYOR**

A handwritten signature in black ink, appearing to read 'Nick White', is written over the top portion of the registration stamp.

**OREGON
JANUARY 9, 2007
NICK WHITE
70852LS**

RENEWS: 6/30/14

7th Revision

PUBLIC RECORDS REPORT FOR PARTITION / SUBDIVISION / CONDOMINIUM

THIS REPORT IS FOR THE EXCLUSIVE USE OF:

AKS Engineering & Forestry, LLC
13910 SW Galbreath Drive, Suite 100
Sherwood, OR 97140

Date Prepared: June 26, 2013

Order No.: 15F0002489

Customer Ref:

File Reference: Dougherty - Report

CONDITIONS, STIPULATIONS AND DEFINITIONS

(I) Definitions:

- (a) "Customer": The person or persons named or shown on this cover sheet.
- (b) "Effective date": The title plant date of June 18, 2013.
- (c) "Land": The land described, specifically as by reference, in this public record report and improvements affixed thereto which by law constitute real property.
- (d) "Liens and encumbrances": Include taxes, mortgages, and deeds of trust, contracts, assignments, rights of way, easements, covenants, and other restrictions on title.
- (e) "Public records": Those records which by the laws of the State of Oregon impart constructive notice of matters relating to said land.

(II) Liability of Lawyers Title:

- (a) THIS IS NOT A COMMITMENT TO ISSUE TITLE INSURANCE AND DOES NOT CONSTITUTE A POLICY OF TITLE INSURANCE.
- (b) The liability of Lawyers Title for errors or omissions in this public record report is limited to the amount of the fee paid by the customer, provided, however, that Lawyers Title has no liability in the event of no actual loss to the customer.
- (c) No costs of defense, or prosecution of any action, is afforded to the customer.
- (d) In any event, Lawyers Title assumes no liability for loss or damage by reason of the following:
 - 1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
 - 2. Any facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
 - 3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
 - 4. Discrepancies, encroachments, shortage in area, conflicts in boundary lines or any other facts which a survey would disclose.
 - 5. (i) Unpatented mining claims; (ii) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (iii) water rights or claims or title to water.
 - 6. Any right, title, interest, estate or easement in land beyond the lines of the area specifically described or referred to in this report, or in abutting streets, roads, avenues, alleys, lanes, ways or waterways.

7. Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use or enjoyment of the land; (ii) the character, dimensions or location of an improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at the effective date hereof.
8. Any governmental police power not excluded by (II)(d)(7) above, except to the extent that notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at the effective date hereof.
9. Defects, liens, encumbrances, adverse claims or other matters created, suffered, assumed, agreed to or actually known by the customer.

(III) Report Entire Contract:

Any rights or actions or rights of action that the customer may have or may bring against [Lawyers Title](#) arising out of the subject matter of this report must be based on the provisions of this report. No provision or condition of this report can be waived or changed except by a writing signed by an authorized officer of [Lawyers Title](#). By accepting this form report, the customer acknowledges and agrees that the customer has been afforded the opportunity to purchase a title insurance policy but has elected to utilize this form of public record report and accepts the limitation of liability of [Lawyers Title](#) as set forth herein.

(IV) Fee:

The fee charged for this Report does not include supplemental reports, updates or other additional services of [Lawyers Title](#).

REPORT

Order No. : 15F0002489

Effective Date : 5:00 P.M. on June 18, 2013

Customer Ref:

A. The land referred to in this public record report is located in the County of Washington, State of Oregon, and is described as follows:

SEE ATTACHED EXHIBIT "A"

B. As of the effective date and according to the public records, we find title to the land apparently vested in:

Jim A. Dougherty and Patricia Dougherty as tenants by the entirety

C. And as of the effective date and according to the public records. The land is subject to the following liens and encumbrances, which are not necessarily shown in the order of priority:

1. NOTE: 2012-13 TAXES ARE PAID IN FULL and are being shown for informational purposes only.
Original Amount : \$22,053.19
Account No. R1369584; Levy Code 088.10; Map 1E2S29A 00102
2. Municipal Liens, if any imposed by the City of Sherwood.
3. The rights of the public in and to that portion of the herein described property lying within the limits of roads and highways.
4. An easement created by instrument, including the terms and provisions thereof,
Recorded : February 11, 1986
As : 86006302
In favor of : Portland General Electric Company
For : Electric power line
5. An easement disclosed by instrument,
Recorded : February 19, 1986
As : 86007455
In favor of : City of Sherwood
For : Water main
6. An easement disclosed by instrument,
Recorded : December 24, 1992
As : 92092324
In favor of : Washington County
For : Landscape and retaining wall

7. Trust Deed, to secure an indebtedness in the amount shown below, and any other obligations secured thereby,
Recorded : January 25, 2001
As : 2001006118
Grantor : Jimmie A. Dougherty and Patricia L. Dougherty
Trustee : Key Title Company
Beneficiary : Bank of the Cascades
Amount : \$800,000.00
Loan No. : 90003909
- The above trust deed was modified by instrument,
Entitled : Modification of Deed of Trust
Recorded : February 5, 2009
As : 2009009228
- The above trust deed was modified by instrument,
Entitled : Modification of Deed of Trust
Recording Date : January 26, 2012
Recording No. : 2012004942
8. Assignment of Rents, including the terms and provisions thereof,
Recorded : January 25, 2001
As : 2001006119
given as additional security to the Trust Deed
Recorded the same date
As : 2001006118
9. Terms and provisions of unrecorded Lease, and such other matters, interests, or exceptions as may appear necessary upon examination of the original lease,
Dated : June 17, 1993
Lessor : Jimmie A. Dougherty and Patricia L. Dougherty
Lessee : West Coast Acquisition Corp., a Delaware corporation
A memorandum of which was
Recorded : June 18, 1993
As : 93048049
- The lien of in the above Lease was subordinated to the lien of the Trust Deed
Recorded : January 25, 2001
As : 2001006118
By subordination agreement,
Recorded : March 12, 2001
As : 2001019736
10. Restrictive covenants to waive future rights of remonstrance against the formation of a local improvement district and any assessment thereof,
Recorded : November 14, 2012
As : 2012-096765
For : Street LID
11. Existing leases and tenancies, if any, and any interests that may appear upon examination of such leases.

End of Reported Information

There will be additional charges for additional information or copies. For questions or additional requests, contact:

Escrow Officer: Frank Lambert, 503-220-8374 Fax: 503-228-7817
E-Mail: flambert@ltic.com

Exhibit "A"

PARCEL I

A tract of land situated in the Northeast one-quarter of Section 29 and the Northwest one-quarter of Section 28, Township 2 South, Range 1 West, of the Willamette Meridian, in the County of Washington and State of Oregon, more particularly described as follows:

Commencing at the West one-quarter of said Section 28; thence South 89° 59' 00" East along the South line of the Northwest one-quarter of said Section 28, a distance of 379.16 feet to a point 30 feet West of the Southeast corner of that certain tract conveyed to David Cereghino, et al, and described in Book 862, Page 452, Deed Records; thence North to the North line of Edy Road (County Road No. 2291) continuing North, parallel with the East line of said Cereghino tract and 30 feet West thereof, a distance of 761.91 feet to the point of beginning of the tract herein to be described; thence West 171.79 feet to a 5/8 inch iron rod; thence South 3° 55' 22" West, 43.86 feet to a 5/8 inch iron rod; thence West 868.08 feet to a 5/8 inch iron rod in the West line of said Cereghino tract; thence South 0° 05' 52" East along said West line, a distance of 684.52 feet to a point being North 25 feet (when measured at right angles) to the North line of said Edy Road; thence parallel with said North line South 89° 31' 29" East, 1041.74 feet; thence North parallel with said East line of the Cereghino tract and 30 feet Westerly thereof, when measured at right angles, 736.92 feet, to the point of beginning.

EXCEPTING THEREFROM the following described portion thereof:

The first described tract in deed of record in Book 790 at Page 971, Deed Records of Washington County, Oregon, wherein David Cereghino and Gerda Cereghino, husband and wife, are the grantors, and David Erwin Cereghino and JoAnn Cereghino, husband and wife, are the grantees.

ALSO EXCEPTING the following:

Beginning at the Northeasterly most corner of the first described tract in deed recorded August 27, 1970 in Book 790 at Page 971, Deed Records, wherein David Cereghino and Gerda Cereghino, husband and wife, are the grantors, and David Erwin Cereghino and JoAnn Cereghino, husband and wife, are the grantees; thence West along the North line of said tract 5 feet to the point of true beginning; thence North parallel to the East line of tract described in Book 862 at Page 452, Deed Records 21.15 feet; thence West parallel with the North line of said tract as described in Book 790, Page 971, Deed Records, 171.79 feet to a point marked by an iron rod; thence South 3° 55' 22" West, 21.20 feet to a point; thence East along the North line of the first described tract in deed of record in Book 790, Page 971, Deed Records, to the true point of beginning.

ALSO EXCEPTING THEREFROM those portions described in deed, recorded September 11, 1985 as 85035743, recorded February 27, 1991 as 91009683 and recorded December 24, 1992 as 92092324, for road purposes.

PARCEL II

A non-exclusive perpetual right-of-way and easement for road and utility purposes on, over, along and under the following described tract:

All that portion of that certain tract described in Book 862, Page 452, Washington County Deed Records, lying Westerly of and within 30 feet of the East line of that certain tract conveyed to David Cereghino, et al, as described in Book 862, Page 452, Deed Records, and extending from the present North line of Edy Road Northerly 761.91 feet to the Northeast corner of the lands above described as Parcel I.

R1032055
Brune Investment Co
21433 SW Oregon St
Sherwood, OR 97140

R1032260
Blakeslee Properties LLC
16004 SW Tualatin-Sherwood Rd
Sherwood, OR 97140

R1166222
Glen Wetzel
PO Box 3451
Tualatin, OR 97062

R2024911
Allied Systems Company
21433 SW Oregon St
Sherwood, OR 97140

R2027564
Sherwood, City Of
22560 SW Pine St
Sherwood, OR 97140

R2046572
Sherwood, City Of
22560 SW Pine St
Sherwood, OR 97140

R2051429
Jjb Properties, LLC
21540 SW 110th Pl
Tualatin, OR 97062

R2051430
Cat Adoption Team
14175 SW Galbreath Dr
Sherwood, OR 97140

R2051431
Organization For Educational Tec
14145 SW Galbreath Dr
Sherwood, OR 97140

R2051432
Bond Properties, LLC
14085 SW Galbreath Dr
Sherwood, OR 97140

R2051433
Gamroth Properties LLC
21380 SW Chapman Rd
Sherwood, OR 97140-8608

R2051434
Onni LLC
20643 SW Cooper Ridge Ct
Beaverton, OR 97007

R2051439
La Hirte Properties LLC
PO Box 413
Dundee, OR 97115

R2051441
Winslow Building LLC
PO Box 1339
Clackamas, OR 97015

R2051442
Parr-Franklin LLC
885 Airport Rd SE Bldg X
Salem, OR 97301

R2051443
J & M Properties LLC
14270 SW Galbreath Dr
Sherwood, OR 97140

R2051445
Joseph Galbreath
415 N Main St
Pendleton, OR 97801

R2053318
Firf LLC
1601 NW Expressway Ste #59
Oklahoma City, OK 73118

R2053319
Douglas Mark & Kathleen Seeber
PO Box 965
Newberg, OR 97132

R2077141
Northstar
14200 SW Tual-Sher Rd Bldg B
Sherwood, OR 97140

R2077496
Erna Treske
3860 Rosepark Dr
West Linn, OR 97068

R2118350
Portland General
121 SW Salmon St
Portland, OR 97204

R2118351
Portland General
121 SW Salmon St
Portland, OR 97204

R2119689
Sherwood Venture LLC
633 NW 19th Ave
Portland, OR 97209

R2144296
Tamara Green
415 N Main
Pendleton, OR 97801

R2151077
Sherwood Commercial
6141 SW Orchid Dr
Portland, OR 97219

R2151078
Olds Business Park LLC
1086 SW Tobias Way
Beaverton, OR 97006

R2151079
Sherwood Commercial
6141 SW Orchid Dr
Portland, OR 97219

R2151080
Sherwood Commercial
6141 SW Orchid Dr
Portland, OR 97219

R2151081
Sherwood Commercial
6141 SW Orchid Dr
Portland, OR 97219

R2151082
Sherwood, City Of
22560 SW Pine St
Sherwood, OR 97140

R2151083
Sherwood, City Of
22560 SW Pine St
Sherwood, OR 97140

R2161833
Banc Of America
PO Box 100918
Atlanta, GA 30384

R2165312
Northwest Fourslide Inc
13945 SW Galbreath Dr
Sherwood, OR 97140

R2171245
Salem Equipment Inc
2525 Firestone Ln
Vancouver, WA 98660

R2179743
Northstar
14200 SW Tual-Sher Rd Bldg B
Sherwood, OR 97140

R2180040
Wellons Inc
2525 W Firestone Ln
Vancouver, WA 98660

R2180054
Wellons Inc
2525 W Firestone Ln
Vancouver, WA 98660

R547288
William Galbreath
19915 SW Cipole Rd
Sherwood, OR 97140

R547297
Tamara Green
415 N Main
Pendleton, OR 97801

R547304
Tamara Green
19915 SW Cipole Rd
Sherwood, OR 97140

R547322
William Galbreath
19915 SW Cipole Rd
Sherwood, OR 97140

R547395
Leichner Trust
PO Box 820
Sherwood, OR 97140

R547411
Sherwood Road Industrial LLC
6900 Fox Ave S
Seattle, WA 98108

R547420
Wellons Inc
2525 W Firestone Ln
Vancouver, WA 98660

R547439
Wellons Inc
2525 W Firestone Ln
Vancouver, WA 98660

R547448
Voxvon Properties LLC
14420 SW Tualatin-Sherwood Rd
Sherwood, OR 97140

R547634
United States Of America
911 NE 11th Ave
Portland, OR 97232

R547652
United States Of America
911 NE 11th Ave
Portland, OR 97232

R547689
Tmk Properties LLC
21555 NW Amberwood Dr
Hillsboro, OR 97124

R547698
Sherwood Venture LLC
633 NW 19th Ave
Portland, OR 97209

R547705
Bernardo Bravo
PO Box 754
Sherwood, OR 97140

R548090
Orwa Sherwood LLC
8320 NE Highway 99
Vancouver, WA 98665

R548125
Dld LLC
PO Box 926
Sherwood, OR 97140

R548189
Washington County
169 N First Ave #42
Hillsboro, OR 97124

R955862
Brune Investment Co
21433 SW Oregon St
Sherwood, OR 97140

MISTY MOUNTAIN ENTERPRISES LLC
P O BOX 623 PH. 503-368-4567
MANZANITA, OREGON 97130

171

96-602/1232

DATE October 22, 2013

PAY
TO THE
ORDER OF

City of Sherwood

\$ 6,788.00

Six Thousand Seven Hundred Eighty Eight and 00/100

DOLLARS



FOR Site Review Application

Patricia Dougherty MP

⑈00017⑈ ⑆123206024⑆ 09 32520 4⑈