



City of Oregon City

625 Center Street
Oregon City, OR 97045
503-657-0891

Meeting Agenda Planning Commission

Monday, June 9, 2014

7:00 PM

Commission Chambers

1. **Call to Order**
2. **Public Comment on Non-Agenda Items**
3. **Public Hearing**
- 3a. [PC 14-051](#) Portland Metro Men's Center -
Conditional Use Permit (CU 13-01), Site Plan and Design Review (SP 13-11), Lot Line
Abandonment (LL 13-04), and Nonconforming Use Review (LN 14-04)
Sponsors: Community Development Director Tony Konkol
Attachments: [Commission Report](#)
[OC Teen Challenge Memo to PC](#)
[Applicant's Submittal - LN](#)
[KPFF Sanitary Sewer Memo 052914](#)
[Boeger to Reeder-Santary Sewer Recommendation 052914 Pt. 1 of 2](#)
[Boeger to Reeder-Santary Sewer Recommendation 052914 Pt. 2 of 2](#)
[Public Comments Combined](#)

- 3b.** [PC 14-049](#) ZC 14-01 / TP 14-01 (Continued from May 12, 2014): Zone Change from R-10 to R-8 with 29-Lot Subdivision between Ames Street and Holcomb Boulevard.

Sponsors: Community Development Director Tony Konkol and Planner Pete Walter

Attachments: [Commission Report](#)

[6.02.2014 Summary Memorandum](#)

[6.02.2014 Proposed Zoning](#)

[6.02.2014 Aerial with Revised Layout](#)

[6.02.2014 Revised Layout](#)

[6.02.2014 Lot Calculations for Revised 27 Lots.pdf](#)

[6.02.2014 Engineering Comments about Storm Pond Design.pdf](#)

[6.02.2014 Multi-Modal Plan Pages from 2013 Oregon City TSP.pdf](#)

[Woody Berends Letter 5.24.2014.pdf](#)

[6.02.2014 Debbie Fuller Pictures.pdf](#)

[The Barlow Road.pdf](#)

[AP06-02.FinalOrder.pdf](#)

[AP 06-02 NOD_final order.pdf](#)

[AP 06-02 VossDrainage.pdf](#)

[CD Director Response to Barbara Renkin.pdf](#)

[May 12 Public Comment Cards.pdf](#)

[May 12 Commission Report](#)

[May 12 ZC 14-01 / TP 14-01 Staff Report](#)

[May 12 Vicinity Map](#)

[May 12 Complete Application](#)

[May 12 Replinger Comments](#)

[May 12 All Public Comments Recieved Prior to May 5](#)

[May 12 Engineering Policy EP00-01v6_1](#)

[May 12 Ted Thonstad School District Capacity Email](#)

[May 12 Preliminary Plat Lot Dimensional Calculations](#)

[May 12 SHPO response](#)

[May 12 CRW Comments](#)

[May 12 Public Notices](#)

[May 12 Land Use Transmittal Email and Form](#)

[May 12 HUD Email regarding Dedications.pdf](#)

[May 12 OCSD Emails regarding Dedications.pdf](#)

[May 12 PC Applicant Exhibit Tax Lots.pdf](#)

[May 12 PC Exhibit Debbie Fuller Pictures.pdf](#)

[May 12 PC Exhibit C LaSalle Zoning.pdf](#)

- 3c. [PC 14-050](#) Proposed zone change from R-8 single-family to R-6 single-family and a 10-lot subdivision for properties located at 19751 and 19735 Meyer Road (Planning Files ZC 14-02 and TP 14-02)

Sponsors: Community Development Director Tony Konkol

Attachments: [Commission Report](#)

[ZC 14-12 TP 14-02 Staff Report final](#)

[Vicinity Map](#)

[Surrounding Zoning Map](#)

[Signed Applications](#)

[Applicant's Letter to Planning Commission](#)

[Applicant's Narrative Revised](#)

[Applicant's Response to Determination of Incompleteness](#)

[Preliminary Plat and Plan Set Revised](#)

[Trails Master Plan Map](#)

[Traffic Analysis Letter](#)

[Letter from John Replinger](#)

[Preliminary Stormwater Plan Revised](#)

[Preliminary Title Reports](#)

[Gaffney Lane Neighborhood Association Notes](#)

[Pre-Application Notes](#)

4. Communications

5. Adjournment

Public Comments: The following guidelines are given for citizens presenting information or raising issues relevant to the City but not listed on the agenda.

- Complete a Comment Card prior to the meeting and submit it to the staff member.
- When the Chair calls your name, proceed to the speaker table and state your name and city of residence into the microphone.
- Each speaker is given 3 minutes to speak. To assist in tracking your speaking time, refer to the timer at the dais.
- As a general practice, Oregon City Officers do not engage in discussion with those making comments.

Agenda Posted at City Hall, Pioneer Community Center, Library, and City Web site(oregon-city.legistar.com).

Video Streaming & Broadcasts: The meeting is streamed live on Oregon City's Web site at www.orcity.org and is available on demand following the meeting.

ADA: City Hall is wheelchair accessible with entry ramps and handicapped parking located on the east side of the building. Hearing devices may be requested from the City staff member prior to the meeting. Disabled individuals requiring other assistance must make their request known 48 hours preceding the meeting by contacting the City Recorder's Office at 503-657-0891.



City of Oregon City

625 Center Street
Oregon City, OR 97045
503-657-0891

Staff Report

File Number: PC 14-051

Agenda Date: 6/9/2014

Status: Agenda Ready

To: Planning Commission

Agenda #: 3a.

From: Community Development Director Tony Konkol

File Type: Planning Item

SUBJECT:

Portland Metro Men's Center -
Conditional Use Permit (CU 13-01), Site Plan and Design Review (SP 13-11), Lot Line
Abandonment (LL 13-04), and Nonconforming Use Review (LN 14-04)

RECOMMENDED ACTION (Motion):

Staff recommends that the Planning Commission take additional public testimony and then continue the public hearing to the the July 14th, 2014 meeting.

BACKGROUND:

The applicant has submitted a Site Plan and Design Review, Conditional Use, Nonconforming Use, and Lot Line Abandonment application in order to utilize the site for the Portland Metro Men's Center , a religious institution and associated Christian recovery program, including dormitory facilities for sixty-two (62) people comprised of up to sixty (60) students enrolled in the program and at least two employees, construct associated structures, and consolidate two lots. The new nonconforming use application was submitted to verify the legality of the religious institution use of the subject property to continue its non-residential Christian recovery program for men (including counseling, religious training, worship services and religious ceremonies).

Please see the Memorandum from staff for details.



MEMORANDUM

To: Oregon City Planning Commission
From: Kelly Moosbrugger, Planner
Re: CU 13-01/SP 13-11/LL 13-04 /LN 14-04 Portland Metro Men's Center
Date: June 2, 2014

On April 28th, 2014, the Planning Commission continued the public hearing for the Portland Metro Men's Center conditional use proposal (CU 13-01/SP 13-11/LL 13-04) to June 9th, 2014.

The applicant submitted additional items into the record subsequent to the April 28th meeting date:

- On May 8, 2014 the applicant submitted a nonconforming use application to verify the legality of the religious institution use of the subject property to continue its non-residential Christian recovery program for men (including counseling, religious training, worship services and religious ceremonies). As this is considered a substantial change to the land use application, the 120-day clock re-started on May 8, 2014, when the City staff determined the application was complete. As a result, the City provided public notice of the complete revised application, including CU 13-01 Conditional Use, SP 13-11 Site Plan and Design Review, LL 13-04 Lot Line Adjustment, and LN 14-04 Nonconforming Use Review. The new 120-day deadline is September 4, 2014.
- On May 29, 2014, the applicant submitted a memorandum from KPFF Consulting Engineers that describes a proposal for on-site underground sewage storage tanks.
- On May 30, 2014, the applicant submitted a letter from Boeger & Associates, LLC in support of the memorandum from KPFF.

As a result of the late submittal from the Applicant's project engineers, the City staff was unable to review the storage tank proposal to prepare a staff report by the June 2nd release of the Planning Commission packet. Thus, staff requests the Planning Commission continue the hearing until July 14th, 2014.



In addition to the items entered into the record by the Applicant and this memorandum, the following items are entered into the record by staff:

PUBLIC COMMENTS RECEIVED:

1. A letter from Walter and Sherrill Johnson opposing the recovery program at this location.
2. A letter from Gayle Scalf opposing the use of the church for anything but worship, and expressing concerns about the safety of the neighborhood resulting from the patients at the center.
3. A letter from Janet Brumbaugh opposing the use of the church for anything but worship, and expressing concerns about the safety of the neighborhood resulting from the patients at the center.



OREGON CITY

Community Development - Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3789

LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)	Type II (OCMC 17.50.030.B)	Type III / IV (OCMC 17.50.030.C)
<input type="checkbox"/> Compatibility Review	<input type="checkbox"/> Extension	<input type="checkbox"/> Annexation
<input type="checkbox"/> Lot Line Adjustment	<input type="checkbox"/> Detailed Development Review	<input type="checkbox"/> Code Interpretation / Similar Use
<input type="checkbox"/> Non-Conforming Use Review	<input type="checkbox"/> Geotechnical Hazards	<input type="checkbox"/> Concept Development Plan
<input type="checkbox"/> Natural Resource (NROD) Verification	<input type="checkbox"/> Minor Partition (<4 lots)	<input type="checkbox"/> Conditional Use
	<input type="checkbox"/> Minor Site Plan & Design Review	<input type="checkbox"/> Comprehensive Plan Amendment (Text/Map)
	<input checked="" type="checkbox"/> Non-Conforming Use Review	<input type="checkbox"/> Detailed Development Plan
	<input type="checkbox"/> Site Plan and Design Review	<input type="checkbox"/> Historic Review
	<input type="checkbox"/> Subdivision (4+ lots)	<input type="checkbox"/> Municipal Code Amendment
	<input type="checkbox"/> Minor Variance	<input type="checkbox"/> Variance
	<input type="checkbox"/> Natural Resource (NROD) Review	<input type="checkbox"/> Zone Change

File Number(s): Consolidate with CUP 13-01/Sp 13-1/LL13-04 LD 14-04

Proposed Land Use or Activity: Non-Conforming Use Review for current use of site as a religious institution

Non-Residential Christian recovery program for men (including counseling, religious training, worship services and religious ceremonies)

Project Name: Portland Metro Men's Center Number of Lots Proposed (If Applicable): n/a

Physical Address of Site: 405 Warner Parrott Road, Oregon City, Oregon 97045

Clackamas County Map and Tax Lot Number(s): Map 3-2E-06CA, Tax Lots 1700 and 1800

Applicant(s):

Applicant(s) Signature: [Signature]

Applicant(s) Name Printed: Dave Oliver for Teen Challenge International PNWC Date: 5/7/14

Mailing Address: PO Box 609, Lebanon, Oregon 97355

Phone: (541) 230-1910 Fax: Email: dave.oliver@teenchallengepnw.com

Property Owner(s):

Property Owner(s) Signature:

Property Owner(s) Name Printed: same as applicant Date:

Mailing Address:

Phone: Fax: Email:

Representative(s):

Representative(s) Signature: [Signature]

Representative (s) Name Printed: Micheal M. Reeder, Arnold Gallagher P.C. Date: 5/6/14

Mailing Address: 800 Willamette Street, Suite 800, Eugene, Oregon 97401

Phone: (541) 484-0188 Fax: (541) 484-0536 Email: mreeder@arnoldgallagher.com

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.

www.orcity.org/planning



Michael M. Reeder
mreeder@arnoldgallagher.com
541-484-0188

May 7, 2014

Tony Konkel
Community Development Director
City of Oregon City
221 Molalla Avenue, Suite 200
Oregon City, Oregon 97045

**Re: Teen Challenge International Pacific Northwest Centers – PMMC
Non-Conforming Use Review Application Written Narrative**

Dear Mr. Konkel:

As you may know, I represent Teen Challenge International Pacific Northwest Centers (“Teen Challenge”), the owner of 405 Warner Parrott Road (the “Subject Property”) and the religious nonprofit organization that operates various Christian-based recovery centers for teens and adults throughout the Pacific Northwest, including the Portland Metro Men’s Center (“PMMC”). The PMMC has operated on the Subject Property since November 2012.

Please accept this letter as the written narrative in support for the Non-Conforming Use Review Application (the “NCU Application”) for the current “day use”¹ of the Subject Property pursuant to Oregon City Municipal Code (“OCMC”) 17.58.060. While we do not believe there is any legal or factual question that the current use of the Subject Property as a religious institution is a legal, nonconforming use, we submit this application out of an abundance of caution based on our conversations with you and the City Attorney. We specifically ask that you consolidate this application with the pending applications, CU 13-01,

¹ While there have been accusations from opponents to the CUP Application (defined below) that the Subject Property is being used for overnight accommodations, these accusations are meritless; no one has stayed overnight on the Subject Property since my client acquired the Subject Property in November 2012. An anonymous complaint was filed with the Oregon City Code Enforcement Division alleging that the Subject Property was being used as a “dormitory.” On February 20, 2014, my client and I both received an unsigned letter from the Oregon City Code Enforcement Division alerting us to the fact that someone had filed a complaint and demand that “[i]f the property is currently being used as a dormitory, this use must cease immediately.” I responded to the code enforcement letter in an email to the code enforcement officer, Ms. Wilson, on February 24, 2014, wherein I explained that my client is not using, nor has it ever used, the Subject Property for overnight accommodations or dormitory use. I submitted this email into the record for the CUP Application on February 24, 2014. It is my understanding that the anonymous complainant has offered no evidence that would support his or her conclusion that any code violations are occurring on the Subject Property. Mere suspicion is not evidence.

SP 13-11, LL 13-04 (the “CUP Application”) and have the Planning Commission review and process all four applications together.

There are two preliminary matters that require some explanation before analyzing the NCU Application.

CUP Application Approval Would Make Non-Conforming Use Question Moot

As explained throughout the February 3, 2014 staff report for the CUP Application (the “CUP Staff Report”), should the Planning Commission approve the CUP Application, the question of the legal status of the current use is moot. In the CUP Staff Report, page 11, staff asserts: “If this application is denied, the applicant will be required to stop using the site until the necessary approvals are obtained. The current day-use of the site requires Conditional Use approval by the Planning Commission.” While we disagree with staff that a conditional use approval is required in order to continue the current use of the Subject Property, we nonetheless agree that should the Planning Commission approve the CUP Application, no conditional use approval for the current use of the Subject Property would be required.²

RLUIPA’s Equal Terms Provision Makes Non-Conforming Use Question Moot

A nonconforming use determination for the current use of the Subject Property is not required because the “Equal Terms” provision of the Religious Land Use and Institutionalized Persons Act of 2000, 42 U.S.C. Sec. 2000cc (“RLUIPA”), requires the City to treat the current, religious day use of the Subject Property equally with nonreligious institutions and assemblies.

We therefore ask that the Planning Commission find that the Equal Terms provision of RLUIPA applies in this case and that, therefore, no nonconforming use review or conditional use approval for the current use of the Subject Property is required.

The Equal Terms provision states:

“No government shall impose or implement a land use regulation in a manner that treats a religious assembly or institution on less than equal terms with a nonreligious assembly or institution.”³

² For reasons discussed previously and in this letter, we do not believe that a CUP is required for either the current use (i.e. day use) or the proposed use. We mention this only to preserve such issue should it become necessary to preserve my client’s rights under the Federal Fair Housing Act and the Religious Land Use and Institutionalized Persons Act.

³ 42 USC 2000cc-(b)(1).

The explicit language of RLUIPA requires a broad construction of RLUIPA:

*"This Act shall be construed in favor of a broad protection of religious exercise, to the maximum extent permitted by the terms of this Act and the Constitution."*⁴

RLUIPA's Equal Terms provision requires the City to treat the current use of the Subject Property as an outright permitted use just as it does other nonreligious institutions and assemblies in the R-10 zoning district. As you well know, the R-10 district permits outright "Community Centers" and "Neighborhood Centers." See OCMC 17.08.020, "Permitted Uses." The day use of the PMMC is a valid comparator to a Neighborhood and/or Community Center. RLUIPA's Equal Terms provision requires the City to treat the PMMC day use on equal terms as the comparators.⁵ Since Neighborhood Centers and Community Centers are permitted in the R-10 zone without the need for a CUP, then the PMMC day use also need not apply for a CUP. Therefore, the issue of whether the PMMC day use is a legal, nonconforming use is moot because under RLUIPA's Equal Terms provision, the City is required to treat the Subject Property as a legal conforming use, permitted outright.

Evidence of Legal Non-Conforming Use as a Religious Institution

In addition to approving the CUP Application, and in addition to determining that the RLUIPA Equal Terms provision applies, Teen Challenge also respectfully requests that the City approve the NCU Application and determine that the current use of the Subject Property is (at the very least) a legal, nonconforming use.

In order for an applicant to receive a determination from the City that the current use of the property is a legal, nonconforming use, the applicant is required to show that: (1) the nonconforming use was lawfully established and (2) the nonconforming use has not become more nonconforming within the past 20 years from the date of application. OCMC 17.58.060. The applicant must also show that the use has not been discontinued for a year or more. OCMC 17.58.030.

During our conversation with you and the City Attorney at the City Attorney's office, City staff instructed Teen Challenge that in order to receive a nonconforming use determination from the City that Teen Challenge would need to provide proof showing that the "religious institution"⁶ use at the Subject Property was not discontinued for a year or more. I have attached three letters that each, independently, verify that the Subject Property

⁴ 42 USC 2000cc-3(g).

⁵ See *Young v. Jackson County*, 58 Or LUBA 64, 67-68 (2008).

⁶ OCMC 17.04.1015 defines "religious institution" as follows: "A church or place of worship or religious assembly with related facilities such as the following in any combination; rectory or co[n]vent, private school, meeting hall, offices for administration of the institution, licensed child or adult daycare, playground or cemetery."

was used continuously as a religious institution (as defined by the OCMC) since the church building's construction in the 1960s.

The use of the Subject Property for a religious institution ceased on April 29, 2012, and then resumed again in November 2012. This lapse in use of less than 7 months is less than the one-year limitation imposed in the OCMC. There is no question that the prior use of the Subject Property was for a "religious institution" and there is also no question that the current use of the Subject Property (since November 2012) is for a "religious institution." Therefore, it is quite obvious that the current day use of the Subject Property is a legal, nonconforming use. Please see below a summary of the three attached letters verifying this fact.

Letter from Rev. Michael J. Gerlicher

Reverend Michael Gerlicher, Director of Finance for the Oregon Ministry Network of the Assemblies of God, provided a letter dated March 31, 2014, to the City wherein he verified the following:

- The Assemblies of God, Oregon District acquired title to the Subject Property on May 4, 1962.
- Church services operated continuously until April 29, 2012.

Letter from Rev. Michael Durant

Reverend Michael Durant, a former Oregon City Assembly of God board member and associate pastor, provided a letter to the City dated March 28, 2014, wherein he verified the following:

- The continuous use of the Subject Property for use as a religious institution since the "mid 1960's."
- The names and duration of service of various pastors who lead the Oregon City Assembly of God church since 1978.
- The current use of the Subject Property by Teen Challenge is a continuation of the former religious institution.

Letter from Ed and Evelyn Brubaker

These two individuals provided a handwritten, undated letter that verified the following:

- The Subject Property was acquired for the Oregon City Assembly of God in 1962.



- The names and duration of service of various pastors who lead the Oregon City Assembly of God church since 1946.
- That the church on the Subject Property operated continuously from 1962 to 2012.

Please note that the OCMC specifically allows for a change in ownership, tenancy or management without affecting its lawful nonconforming status. OCMC 17.58.030. Merely because the Subject Property changed ownership in 2012, that change in ownership does not constitute "discontinuance."

For the reasons stated above, and based on the evidence attached, Teen Challenge respectfully requests that the City determine that the current use of the Subject Property is a legal, nonconforming use and may continue without need for an additional land use approval.

Conclusion

Teen Challenge respectfully requests that the City: (1) approve the CUP Application, (2) determine that the RLUIPA Equal Terms provision applies and that no nonconforming use determination for the current use of the Subject Property is necessary, and (3) to the extent that actions (1) and (2) may be challenged, determine that the current religious institution use of the Subject Property is (at the very least) a legal, nonconforming use and may therefore continue without need for any additional action.

Respectfully submitted,



Micheal M. Reeder
Attorney for Teen Challenge

MMR:jgh

Attachments

N:\P - T\Teen Challenge Internatl. 16249\Oregon City CUP 16249-13\Nonconforming Use\NCU Review Application Letter.docx





oregon ministry network
of the assemblies of god

Developing Effective Leaders :: Building Healthy Churches and Ministries

March 31, 2014

City of Oregon City
625 Center Street
Oregon City, OR 97045

To whom it may concern:

On May 4, 1962 the property located at 405 WARNER PARROTT ROAD was deeded to both the Assemblies of God, Oregon District, Inc. and the local church also known as Assembly of God of Oregon City. The congregation operated continuously as a local church without interruption until the last service was held on April 29, 2012.

Shortly thereafter, the Assemblies of God, Oregon District was pleased to enter into negotiations with Teen Challenge Pacific Northwest. We extended a reasonable period of due diligence. Our organizations share common origins in the Assemblies of God U.S.A. denomination and we were delighted to have ministry continue in this location.

If you have questions about this matter, we would be delighted to help.

Sincerely,

Rev. Michael J. Gerlicher, CPA
Director of Finance

Cc: Garry Wallace, Executive Director
Portland Metro Men's Center

March 28, 2014

To whom it may concern,

My name is Michael Durant and I am writing this letter on behalf of the Teen Challenge Center located at 405 Warnerparrot RD. in Oregon City.

The location in Oregon City 405 Warnerparrot RD. has a significant meaning to me as I attended church at this location for approx. 32 years. I have lived in the Oregon City area for all of my life. My family started attending Oregon City Assembly of God in October of 1978. At that time I was 7 years old. Dr. J.W. Jepson was our pastor. Dr. Jepson pastored OCAG until moving to another ministry in 1985. He was replaced by Pastor Eugene Slape who pastored the church for a few years. During my high school years (around 1988) a new and younger pastor named Larry Rogers was elected as the pastor. He pastored the church until sometime around 1996.

In the mid 90's Pastor Wayne Wilson came from Goshen Oregon to pastor Oregon City Assembly of God. Pastor Wayne pastored the church for about ten years before moving on to another ministry. He was replaced by Zach Lucas.

During Zach Lucas's time as pastor of the church, the church name was changed to River of Life Christian Center. Legally it was Oregon City Assembly of God doing business under the name River of Life Christian Center. I was a board member of the church at this time. In 2008 I became the associate pastor of River of Life Christian Center. In the summer of 2010 I left my position at River of Life to pursue other ministry opportunities. However my parents, my sister and my brother-laws-family still attended the church.

In the fall of 2010 Zach Lucas resigned as the pastor at River of Life Christian Center. He was replaced by Pastor Alan Kern.

Alan Kern had a difficult time pastoring the church as it was in significant financial trouble. He was only pastor for 6-7 months before resigning.

After Alan Kern resigned Pastor Randy Robertson a former missionary and former Sr. Pastor of another church served as the pastor at River of Life Christian Center. Pastor Randy is known for turning churches around in Oregon. He had a tough time as the finances of the church were at a critical point.

AS the finances became worse Pastor Randy contacted The Oregon Ministry Network (Oregon District of the Assemblies of God) who stepped in to evaluate the financial condition of the church. The decision at that point was made to close the church.

I was asked to attend a meeting with the board and the members at that time. It was announced the church was to close. When everyone left the doors were locked. That was April of 2012. It was a very sad day as the church that started all the way back in 1941 and was a church over 71 years was now closed.

The building sat vacant for a few months before Teen Challenge purchased the building. The church existed at that location from the mid 1960's until it closed and became the new Teen Challenge Center.

I still serve in ministry and not only minister to others in the community but also at Teen Challenge in Oregon City. I hold ministerial credentials from the General Counsel of the Assemblies of God.

The work God started there is still continuing just under a new name and a new sign.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Durant", with a long horizontal flourish extending to the right.

Rev Michael Durant
22875 S. Tonya CT.
Beavercreek, OR 97004

To whom it may concern.

I understand there is some question as to how long Oregon City Assembly of God has been in operation.

They started in 1946, with Grace Butler.

However the property at 405 Warner Parrotte Rd was acquired in 1962. Pastor Donald Caves was the Pastor at that time. He came in 1956 and was there until 1964 when Kenneth Hamor came. I also started coming in 1964. I was there when Pastor Caves was there. My husband and his family have attended there since about 1955.

Pastor Hamor left in 1979. That's when J.W. Gipson came. He was there until 1985. That's when he left and Rev. Fountain was an interim pastor until later in 1985 when Pastor Slape

came. He was there until 1987 when
Larry Rogers came. He pastored until
1992. Pastor Gordon Meyers filled
in until Pastor Wayne Wilson
came. He was there from 1993
until 2005. After he left we had
a couple of people fill in for 6 weeks,
Pastor Don Jacobson & a deacon Bill
~~Dutton~~. Then pastor Zack Lucas came
in 2005. He was with us until 2010.

At that time we had different speakers
come and fill in until Alan Kern came
in 2010. He was there until 2012.

That is the year Oregon City Assembly
of God Church closed its doors.

I can't remember the month they
closed seems it was late summer.

I hope this is helpful

Ed & Evelyn Brubaker

Mike Puerst would you need this info.
If you have any questions please
feel free to call me. my # is
503-799-3710

I can tell you the church was
never closed until Glen Kiser left.
It has been in operation from
1946 - 2012. Let's and from
1962 - 2012 at 405 Warner Paver Rd.

Andy

I do have the complete list of pastors
from 1946 - 2012



OREGON CITY

Permit Receipt

RECEIPT NUMBER 00027899

Account Number: 001731

Paid: 5/8/2014

Applicant: TEEN CHALLENGE INTL PAC NW CNT

Cashier: Iterway

Type: check # 1045

Description: May 2014

Notes:

Permit Number	Fee Description	Amount
LN-14-0004	4332 Legal Non Conforming	808.00
	Total:	\$808.00



Memorandum

Page 1 of 4

DATE: 5/29/14

PROJECT: 314808-Portland Men's Metro Center **SUBJECT:** Sanitary Sewer Recommendations at 405 Warner Parrott Road

TO: Micheal M. Reeder
Arnold Gallagher P.C.

FROM: Pete Miller, PE, Oregon, 85480
KPFF Consulting Engineers

PHONE: 541-484-0188

PHONE: 541-684-4902

EMAIL: mreeder@arnoldgallagher.com

EMAIL: pete.miller@kpffcivil.com

Introduction

KPFF Consulting Engineers has been retained by you in your capacity as legal counsel for Teen Challenge Portland Men's Metro Center (PMMC). We have been asked to review the proposed project at 405 Warner Parrott Road in relation to the sanitary sewer capacity within the Oregon City sanitary sewer system and to team with Boeger and Associates to develop a plan that will assure that the proposed project described in the PMMC application for file numbers CU 13-01, SP 13-11, LL 13-04 and LN 14-04 complies with *former* Oregon City Municipal Code (OCMC) 17.56.010.A.3, which states:

"The site and proposed development are timely, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use."

The purpose of this memorandum is, to the extent that it is necessary, to provide substantial evidence that the proposed project will meet the criteria found at *former* OCMC 17.56.010.A.3, specifically in relation to adequate sanitary sewer facilities.

Background

PMMC is proposing a dormitory facility for up to 62 people (60 residents and 2 residential staff members) as part of its Christian faith-based recovery program for adult men. It is our understanding that the PMMC program will also have up to eight daytime office staff members at the site as well. We also understand the existing church building will continue to be utilized for administrative and other religious services for the residents; the use of the site facilities will be exclusive to the PMMC. The church will not be used by a local congregation open to the general public. The total maximum number of people that will regularly occupy the site will be 70 people.

In its February 3, 2014 staff report, City staff found that the criteria of *former* OCMC 17.56.010.A.3 had been met. The staff report stated:

"Utilities- As demonstrated within this report, the [sanitary] sewer, water and storm drainage utilities are present and adequate to serve the proposed uses." (p. 15)





During the initial public hearing before the Planning Commission on February 10, 2014, there was no indication from City staff that there was any problem with the sanitary sewer capacity for the site. It is my understanding that for various reasons (unrelated to the sanitary sewer capacity issue) the public hearing on the PMMC application was continued to February 24, 2014. However, a few hours prior to the February 24, 2014 “continued” public hearing before the Planning Commission on the PMMC application, you were alerted by the City Attorney, Jennifer Bragar of Garvey Schubert Barer, that City staff recently received new preliminary information regarding the performance and capacity issues for the City’s sanitary sewer system directly abutting the PMMC property at 405 Warner Parrott Road. It came to your attention that the City’s consultant engineering firm, Brown and Caldwell, had discovered, what the City believed to be existing sanitary sewer capacity problems, in the sanitary sewer services area that serves the PMMC site.

After the February 24th meeting, and in response to City staff’s newly identified sanitary sewer capacity concerns, you retained KPFF to review the situation and provide an analysis of the City’s concerns and to propose any recommendations that would alleviate the City’s concerns. I carefully reviewed the City’s adopted and acknowledged 2003 Oregon City Sanitary Sewer Master Plan (the Adopted SSMP). While the Adopted SSMP identified some surcharging in the Hazelwood system just downstream of Warner Parrott Road, the Adopted SSMP did not identify any deficiencies over the 20-year planning period. According to my review of the Adopted SSMP, it is clear that the Adopted SSMP identifies the Hazelwood tributary adjacent to the PMMC site as adequate. Specifically, the Adopted SSMP states on page ES-6, “Although the modeling indicates slight surcharging in some pipe segments for existing and buildout conditions, the surcharging is not enough to warrant improvements.”

On March 6, 2014, City staff invited Teen Challenge and its team, including myself, to a meeting at the City Attorneys’ offices at Garvey Shubert Barer in Portland to discuss the sanitary sewer issue. The City Engineer presented calculations and profile information, based on modeling, which showed a surcharge and a potential overflow condition at Warner Parrott Road adjacent to the proposed PMMC site during a 10-year storm event. At this meeting, City staff indicated that a moratorium may need to be imposed until the sanitary sewer system in the Hazelwood area could be upgraded. After this meeting, I discussed possible solutions with the City Engineer via telephone on April 8, 2014. The City Engineer stated there would need to be “no increased flows” from redevelopment sites such as PMMC.

Given the concerns that Oregon City had regarding the impact to their sanitary sewer system, KPFF reviewed the “Draft Sanitary Sewer Master Plan” dated January 30, 2014, prepared by Brown and Caldwell (the Draft SSMP) and attempted to gather as much information as possible regarding the prior uses associated with the property in an effort to establish a baseline for existing use versus proposed use. Based upon information provided by Garry Wallace, Executive Director of PMMC, the church construction (remodel) drawings from the 1970s show seating for 448 people. This information was presented in a memorandum dated April 22, 2014, from KPFF to you that you subsequently provided to the City.

The City responded with a memorandum from Brown and Caldwell dated April 28, 2014. On page 14, there is a comparison between the flows from a 448-seat church and the proposed PMMC development. According to the assumptions made by Brown and Caldwell, the peak flows from the 448-seat church (4 gallons/seat/day) equate to 8.8 gpm while the peak flows from the proposed PMMC development equate to 21.04 gpm (85 gallons/resident/day plus 10 gallons/office staff/day).



Analysis

To restate the issue, according to the modeling done by Brown and Caldwell, the City believes that the sanitary sewer system in Warner Parrott Road has the potential to surcharge and overflow at the 5-year and 10-year storm events. The main reason is due to infiltration and inflow (I & I) from stormwater and groundwater. The flows from I & I are about 80% of the total flow in the system so, consequently, the average daily sewer flow in the sewer system is adequately conveyed. Only when there are significant rainfall events (e.g. 5-year and 10-year storm events) will there be concerns with conveyance.

Brown and Caldwell's Methodology Baseline

Using the Brown and Caldwell methodology as a baseline, the flow from the existing church equates to 20 residents and 8 staff at the PMMC site (Exhibit A). Based on this methodology, at the very least and without any on-site mitigation of any kind, the project could be approved for 20 residents and 8 staff without increasing the flow over the historic use of the property as a 448-person church. According to the Brown and Caldwell analysis, any number of residents (and staff) above this would potentially increase flows to Warner Parrott Road.

We believe that Brown and Caldwell's methodology is overly and unjustifiably conservative and, therefore, incorrect. It appears that Brown and Caldwell assumed that the proposed dormitory would produce 85 gallons/resident/day. It also appears that Brown and Caldwell categorized the proposed dormitory use as falling under the category of "boarding school" (which, according to Metcalf and Eddy, Inc. has a typical flowrate of 85 gallons/student/day). We believe this flowrate to be inaccurate. The PMMC residents generally spend the majority of the day off-site working, volunteering, and participating in other activities conducted away from the site. In this regard, they are more like a resident of a single-family residence and not a boarding school student who generally remains on site 24 hours a day. The Brown and Caldwell flowrate of 85 gallons/student (resident)/day is not accurate; it is too high.

The USEPA On-site Wastewater Treatment Systems Manual states that homes with US Energy Policy Act (EPACT) efficient fixtures would have typical average daily wastewater flows of 40 to 60/gallons/person/day (Exhibit B). Using these flow values:

- At 60 gallons/person/day = 28 residents and 8 staff
- At 40 gallons/person/day = 42 residents and 8 staff

Also highlighted on Exhibit B is an analysis of average daily residential flows conducted by Brown and Caldwell in 1984. Approximately 30 years ago, before low flow plumbing fixtures became commonplace, Brown and Caldwell determined average daily residential wastewater flows varied from 57.3 to 73.0 gallons/person/day. Consequently, 30 years later, using an estimate of 40 to 60 gallons/person/day is completely within reason.

KPFF Methodology Baseline

In the April 22, 2014 KPFF memorandum from to you, we asserted that the site could accommodate between 23 and 160 residents depending on the methodology used. We concluded that the best approach was to discard the low number (23) and the high number (160). We concluded, therefore, that the best

approach was to choose the average site occupancy of 54 residents. We continue to believe that this methodology is the best approach and that the baseline should be 54 residents (which equates to 53 residents and 8 staff).

Suggested Solution

Since the peak flows in the City system will likely last only a few hours every 5 to 10 years at most, a viable solution is to mitigate for the peak flow from the PMMC site. In order to accommodate the proposed additional residents (42 using the Brown and Caldwell baseline methodology or 9 using the KPFF methodology) and to meet the City's desire to have "no increased flows," the solution is to provide underground storage tanks to store sewer flow from the dormitory and release it when there is capacity in the City system (Exhibit C).

In the proposed solution, sewer flow from the new dormitory building will gravity drain to three, 3000-gallon underground tanks that will be located on the northeast section of the property. According to the Brown and Caldwell assumptions, the average daily sewer flow from the site is 5350 gallons [(85 gpcd x 62 full-time residents) + (10 gpcd x 8 office staff)]. Consequently, the tanks can conservatively store 1.6 days of flow without discharging to the City system. The sewage will then be pumped via a grinder pump to the City system in Warner Parrott Road. There will be a monitoring system in or near the right of way which will monitor the flow and elevation within the public system. The flow monitor will send a signal to the pump and to the City (if requested). If there is capacity in the system, which is the vast majority of the time, the flow from the PMMC site will be discharged to the City system. If the City sewer is surcharged and flowing at a high elevation, the PMMC sewer flow will be stored on-site in the underground tanks and no flow will be pumped to the City system. Once the fully automated system determines there is capacity in the City system, the site flow will be released.

This solution is ideal and practical for the following reasons:

1. The surcharging in the City system only lasts a few hours every 5 to 10 years.
2. The tanks and pump system with monitoring can adequately control the flow from the site.
3. System monitoring benefits the City by conveying real time information about the characteristics of the system.

Conclusion

The proposed project complies with *former* OMMC 17.56.010.A.3, which states:

"The site and proposed development are timely, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use."

The existing City service is impacted by I & I issues on an infrequent basis during large storm events. By mitigating for the potential increase in flow from the PMMC site during 5- and 10-year storm events, the existing service is clearly adequate to serve the proposed development. In addition to the low flow fixtures that will be used throughout the project, the storage tanks and pump system with monitoring controls will mitigate for potential impacts to the City system. In fact, the proposed mitigation measure will **improve** the current situation and has the potential to provide the City with valuable and critical real time information regarding this part of its sanitary sewer system.

EXHIBIT A - ESTIMATED FLOWS FROM PMMC

	User Type	Net Acres	Residents /users	Unit Flow, gpcd	Average Daily sanitary flow, gal/day	Average Daily sanitary flow, cfs	Peak Factor	Dry Weather Peak Flow, gal/day	Infiltration/Inflow at 1,000 gpad	Peak Flow gal/day	Peak Flow gpm	
Existing Church Brown & Caldwell	NA	2.13	448	4	2240	0.0035	4.707	10543	2130	12673	8.80	Peak Flow Ex. Church
Proposed Dormitory Brown & Caldwell	Resident	2.13	62	85	6588	0.0103	4.213	28171	2130	30301	21.04	
	Staff	2.13	8	10	100							
Proposed Dormitory (85 gpcd)	Resident	2.13	20	85	2125	0.0034	4.710	10479	2130	12609	8.76	Peak flow less than Ex. Church
	Staff	2.13	8	10	100							
Proposed Dormitory (60 gpcd)	Resident	2.13	28	60	2100	0.0034	4.715	10373	2130	12503	8.68	Peak flow less than Ex. Church
	Staff	2.13	8	10	100							
Proposed Dormitory (40 gpcd)	Resident	2.13	42	40	2100	0.0034	4.715	10373	2130	12503	8.68	Peak flow less than Ex. Church
	Staff	2.13	8	10	100							

Average Daily Sanitary Flow includes 1.25 contingency factor for unanticipated changes in land use per Chapter 5 of the Portland, BES, Sewer and Drainage Facilities Design Manual, 2007

Peak Factor Formula from Chapter 5 of the Portland, BES, Sewer and Drainage Facilities Design Manual, 2007

$$PF = 2.65 (Q_{ADF \text{ in cfs}})^{-0.1014}$$

EPA/625/R-00/008

February 2002

Onsite Wastewater Treatment Systems Manual

Office of Water
Office of Research and Development
U.S. Environmental Protection Agency

cracked treatment tanks, and system damage caused by tree roots also can be significant sources of clear water that can adversely affect treatment performance. These flows might cause periodic hydraulic overloads to the system, reducing treatment effectiveness and potentially causing hydraulic failure.

3.3.1 Residential wastewater flows

Average daily flow

The average daily wastewater flow from typical residential dwellings can be estimated from indoor water use in the home. Several studies have evaluated residential indoor water use in detail (Anderson and Siegrist, 1989; Anderson et al., 1993; Brown and Caldwell, 1984; Mayer et al., 1999). A summary of recent studies is provided in table 3-1. These studies were conducted primarily on homes in suburban areas with public water supplies. Previous studies of rural homes on private wells generally indicated slightly lower indoor water use values. However, over the past three decades there has been a significant increase in the number of suburban housing units with onsite systems, and it has recently been estimated that the majority of OWTSSs in the United States are located in suburban metropolitan areas (Knowles, 1999).

In 1994 the U.S. Energy Policy Act (EPACT) standards went into effect to improve water use efficiency nationwide. EPACT established national flow rates for showerheads, faucets, urinals, and water closets. In 2004 and again in 2007 energy use standards for clothes washers will go into effect, and they are expected to further reduce water use by those appliances. Homes built after 1994 or retrofitted with EPACT-efficient fixtures would have typical average daily wastewater flows in the 40 to 60 gallons/person/day range. Energy- and water-efficient clothes washers may reduce the per capita flow rate by up to 5 gallons/person/day (Mayer et al., 2000).

Of particular interest are the results of the Residential End Uses of Water Study (REUWS), which was funded by the American Water Works Association Research Foundation (AWWARF) and 12 water supply utilities (Mayer et al., 1999). This study involved the largest number of residential water users ever characterized and provided an evaluation of annual water use at 1,188 homes in 12 metropolitan areas in North America. In addition, detailed indoor water use characteristics of approximately 100 homes in each of the 12 study areas were evaluated by continuous data loggers and computer software that identified fixture-specific end uses of water. Table 3-2 provides the

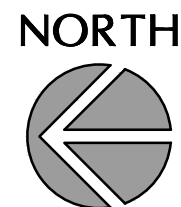
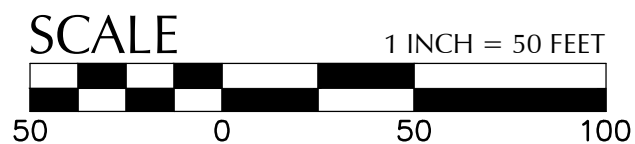
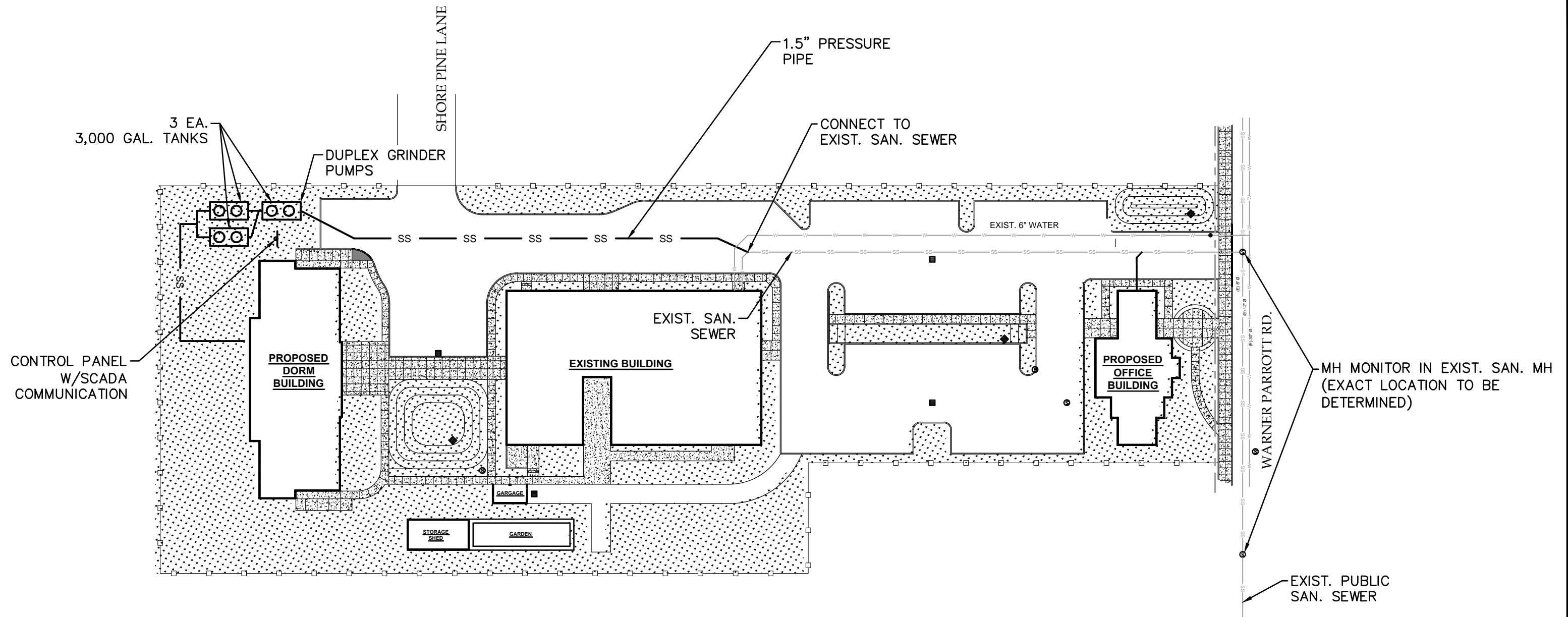
Table 3-1. Summary of average daily residential wastewater flows^a

Study	Number of residences	Study duration (months)	Study average (gal/pers/day) ^b	Study range (gal/pers/day)
Brown & Caldwell (1984)	210		66.2 (250.6) ^b	57.3–73.0 (216.9–276.3) ^b
Anderson & Siegrist (1989)	90	3	70.8 (268.0)	65.9–76.6 (249.4–289.9)
Anderson et al. (1993)	25	3	50.7 (191.9)	26.1–85.2 (98.9–322.5)
Mayer et al. (1999)	1188	1 ^c	69.3 (262.3)	57.1–83.5 (216.1–316.1)
Weighted Average	153		68.6 (259.7)	

^a Based on indoor water use monitoring and not wastewater flow monitoring.

^b Liters/person/day in parentheses.

^c Based on 2 weeks of continuous flow monitoring in each of two seasons at each home.



kpff
Consulting Engineers
1201 Oak Street
Suite 100
Eugene, Oregon 97401
(541) 684-4902
FAX (541) 684-4909

SCALE:	1"=50'
JOB NO.:	314808
DATE:	05/27/2014

TITLE:	CONCEPTUAL SANITARY SEWER PLAN
PROJECT:	PORTLAND METRO MEN'S CENTER TEEN CHALLENGE - OREGON CITY

SHEET NO.:	EXHIBIT C
REFERENCE SHEET NO.:	1



Boeger & Associates, LLC

Civil and Environmental - Engineering and Planning

May 29, 2014

Mr. Micheal Reeder
Arnold Gallagher P.C.
800 Willamette Street, Suite 800
Eugene, OR 97401

RE: Teen Challenge Portland Men's Metro Center – Sanitary Sewer Recommendations

Dear Mr. Reeder,

Boeger & Associates, LLC. has been retained by Arnold Gallagher P.C. to provide technical assistance and oversight regarding the sanitary sewer capacity concerns raised by the City of Oregon City for the Teen Challenge Portland Men's Metro Center (PMMC).

It is my understanding that the City has taken the position that the sanitary sewer system in the Hazelwood (Warner Parrot Road) area may flood during a 1- in 10-year storm event. (See "Draft Technical Memorandum" produced by City's consultant Brown and Caldwell, dated April 28, 2014). It is also my understanding that based on this concern, the City has taken the position that it cannot permit any "increased flows" from the redevelopment of the PMMC site.

The purpose of this letter is to support the May 29, 2014 memorandum from Pete Miller of KPFF, and to briefly explain why the proposed solution is an effective method to address capacity concerns while allowing the PMMC to develop the site as proposed. Before discussing our approach, a brief summary of our qualifications is presented to document our experience and expertise in this area of engineering.

Qualifications of Dennis J. Boeger, PE, CWRE

I have over 20 years of experience in the field of septic system and water system on-site planning, design, and construction management. This includes residential, industrial, and commercial sites over much of the state of Oregon. I am registered as a Professional Engineer in Oregon and Washington, and am a Certified Water Rights Examiner in the state of Oregon. I have been responsible for projects ranging from residential size, up to 50,000 gallons per day. This has included many projects which incorporate many of the same features that are proposed to serve the metro center. I have also designed and obtained approvals for various concrete tanks manufactured by Willamette Graystone, Inc. The tank submittals went through the DEQ Product Approval Process and received the approvals to install them on sites all over Oregon.

I am currently on the Board of Directors of the Oregon On-Site Waste Water Association (O2WA) as Engineer. I have attended numerous annual O2WA conferences, and have presented at two of them regarding the topics of designing a facility with focus on operation and

maintenance. I am currently serving as Engineering Committee Member on the Willamette Valley Groundwater Management Committee (GWMA). I have also served as an expert witness on private waste water projects to provide specific information on how and why it is feasible to collect sewage on a particular site, and then treat it further, or disperse it on site or discharge it off-site (public sewer in this case).

Proposed Solution at the PMMC

KPFF and Boeger & Associates, LLC have devised a solution to address the City's concerns regarding the adequacy of sanitary sewer in the Warner Parrott Road area. The solution is more fully described in detail by Pete Miller in his May 29, 2014 KPFF memorandum. Essentially, the solution is to install three, 3,000 gallon tanks underground on the northeast section of the PMMC site. An automated manhole monitoring system would be installed into a designated manhole in the City's public sewer system that would indicate when the sewer system capacity being reached. Once the automated system indicates the liquid levels have dropped, the system on site will automatically trigger the timed dosing of sewage flows to the City's sewer system.

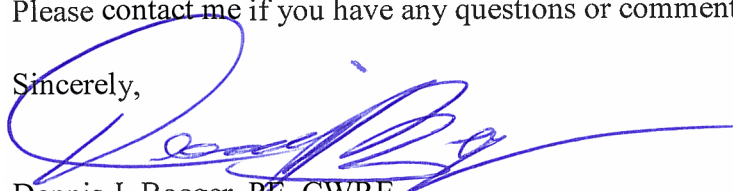
The proposed method to store the sewage on site during a high flow, or surcharged event, and then release it at lower flows is a routine practice in the on-site industry. In the on-site arena, it is often required to store incoming sewage in a tank or tanks under high flow periods, then dose it to the next component downstream in a more consistent manner. The proposed tanks are standard off-the-shelf concrete tanks manufactured by Willamette Graystone, specifically made for storing/treating sewage. These tanks are required to be water-tight, and are structurally sound to address buoyancy and traffic loading issues.

The automated system proposed for this solution is manufactured by Mission Communications, Inc. It has been incorporated in many municipal and other applications for the very purpose of providing actual liquid level data on a 24 hour basis. This automation includes signals to activate or de-activate a system on the site. The Mission system shall be monitored by Mission's office in North Carolina, and the data can be shared with others as authorized. This may be valuable hard flow data the city can use towards further modeling or notifications to the public from this system.

In summary, the proposed method to store and release the sewage flows from the PMMC site is a standard solution routinely used in the on-site industry. The unique aspect of this solution is that a remote signal will determine if the sewage is held on site, or is released to the sewer. It is a solution which directly meets the City's capacity concerns.

Please contact me if you have any questions or comments.

Sincerely,



Dennis J. Boeger, PE, CWRE
Principal Engineer

REMOTE MONITORING

Left: Clarksburg, W.Va., currently has monitors on four manhole sites.

Right: The monitor sends notifications when the level in the well begins to rise.



banishing backups

By Lauryn Colquitt

Cities eliminate backups
& overflows with remote
manhole monitoring

Sewer backups are an ongoing problem for municipalities in the U.S. According to the U.S. Environmental Protection Agency, up to 75,000 annual backups and overflows account for 10 billion gal of untreated wastewater discharge. Underground infrastructure management is difficult for many utilities, but there is equipment that can help them detect problems before they become catastrophic. Solutions are helping utilities nationwide take proactive measures to streamline efficiency, improve infrastructure and avoid problems. The village of Waterford, Wis., and the city of Clarksburg, W.Va., are two utilities that were able to end backups and overflows with new manhole monitoring equipment.

Village of Waterford, Wis.

The village of Waterford in southern Wisconsin is a community surrounded by several rivers. It serves 5,000 customers with average flows of 500,000 gal per day (gpd). The oldest part of the village was built in the 1900s.

For years, officials have struggled to prevent recurring backups in an environmentally

middle of a flower bed, and we were able to make the in-ground antenna blend in with it."

The monitor sends notifications when the level in the well begins to rise. This gives utility workers a chance to tend to the well and clean it before a backup occurs. The monitoring device has helped the village utility prevent any basement backups. Workers had to raise the floats about 2 in. because heavy rain events would trigger an early alarm.

"Most of the time, the level drops back down because it's still flowing," Bergles said. "When the float is triggered and we receive an alarm, we know there is a problem."

"The Manhole Monitor is great," Bergles added. "We are definitely planning on placing them in more wells and manholes."

Bergles can obtain reports on the Mission Web portal. When the utility installs additional monitors, personnel will be able to compare historical data. Reports show high level and surcharge events in comparison to the rainfall documented by the local National Oceanic and Atmospheric Administration station.

The village continues to update its equipment

monitoring equipment.

Village of Waterford, Wis.

The village of Waterford in southern Wisconsin is a community surrounded by several rivers. It serves 5,000 customers with average flows of 500,000 gal per day (gpd). The oldest part of the village was built in the 1900s.

For years, officials have struggled to prevent recurring backups in an environmentally responsible manner. Assistant Director of Public Utilities James Bergles said he and his team spent many hours addressing these issues and resolving them. One of the problem areas was an unmonitored siphon well.

The River Street gravity siphon well is located 15 ft away from one of the rivers in town. It is near many houses, restaurants and a high school. A gravity siphon well doesn't use power to move sewage. Instead, it relies on gravity and atmospheric pressure. The sewage travels under the river to the manhole on the opposite side of the river. Grease and oil buildup from nearby restaurants frequently inhibit the well. During heavy rain, the well also is overwhelmed with surge flows. These two factors significantly decrease the performance of the well. With no monitoring equipment in place, this presented a significant problem to the village utility.

"We haven't had any sanitary sewer overflows, but we have experienced basement backups with a nearby resident," Bergles said. "The homeowner is quick to call when there's a backup in their basement."

The remote location of the well made it difficult to provide AC power for a monitoring device. Bergles knew it was going to take a specialized product to monitor the area. He considered the Manhole Monitor, designed and manufactured by Mission Communications.

"We like that it's plug-and-play and no external power is required," Bergles said. "Other than the preemptive alarms, we wanted the monitoring device to blend in with the aesthetics of the natural environment. The well is actually located in the

"We are definitely planning on placing them in more wells and manholes."

Bergles can obtain reports on the Mission Web portal. When the utility installs additional monitors, personnel will be able to compare historical data. Reports show high level and surcharge events in comparison to the rainfall documented by the local National Oceanic and Atmospheric Administration station.

The village continues to update its equipment and its infrastructure.

City of Clarksburg, W.Va.

The city of Clarksburg, W.Va., manages a combined sewer system that originally was built in the early 1950s. Treatment plant capacity currently is 8 mgd. With heavy rain events, the sewer system takes in up to 12 million gal. Wastewater Treatment Plant Superintendent Paul Lehosit and his team have spearheaded a long-term control plan to improve the entire collection system. Lehosit has worked closely with the West Virginia Department of Environmental Protection (DEP) to accomplish this task. DEP approved a \$12-million upgrade, which includes monitoring equipment on each of the city's 56 combined sewer overflow (CSO) manholes. The city currently has Manhole Monitors on four of its most active CSO manhole sites. Lehosit plans on installing the monitors at additional CSO manhole locations.

"We've been using the Mission system for nearly three years. The data and charts that we get from the Web portal are so helpful when it comes to preparing the reports that we submit to the DEP," Lehosit said.

Before using Mission for its CSO monitoring, the city of Clarksburg used a different device that required daily site visits by CSO inspector Jody Ash to download data. He said the new system is an improvement. "The data from the Mission system comes straight to our website," Ash said. "We don't have to go out of our way to get it. Ultimately, this gives us more time to focus on other tasks."

Ash uses the monitor to track the duration of

REMOTE MONITORING

overflows. He monitors when an overflow starts and stops during a heavy rainfall. The monitor sends early notifications when the float is tipped, but Ash said that because it is a combined system, there is nothing the city can do to stop the CSO manholes from overflowing. "The rain is our biggest enemy. We are confident that this new upgrade, along with the monitors will completely eliminate the overflows," Ash said.

According to Ash, the monitors are very easy

to install inside the manholes. "It has cut installation time in half," he said. "There is no wiring. You just plug it in and it's good to go."

Online data access and reliability of alarms have given staff more time to spend on other projects. The utility has achieved a significant savings in operations and maintenance schedules with a 50% reduction in site visits. Ash still makes daily visits to the most active CSO manholes to double check their status. Lehosit said he hopes the monitors

will help detect non-rainfall-related problems in the city of Clarksburg once the upgrade is complete. **WWD**

Lauryn Colquitt is marketing coordinator for Mission Communications. Colquitt can be reached at laurync@123mc.com or 678.969.0021.

For more information, write in 1110 on this issue's reader service form on page 63.



SELF-CLEANING WATER FILTERS

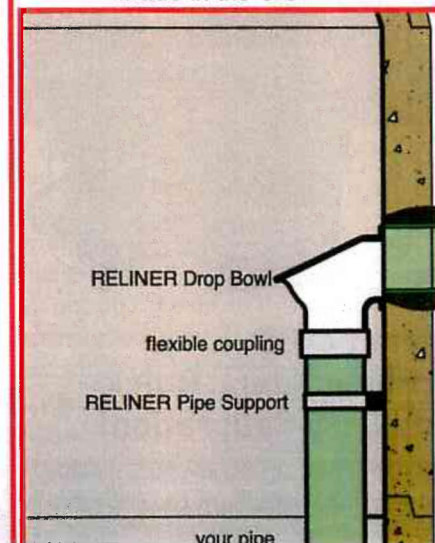
Forsta Filters™ are ideal for municipal and industrial applications and offer automatic operation with minimal maintenance. The point-of-suction backwash won't interrupt system flow while

FORSTAFILTERS
Self Cleaning Water Filters

www.forstafilters.com
info@forstafilters.com

INSIDE DROP SYSTEM

U.S. Patent 6074130
Made in the U.S.A.



May 19, 2014

TO: Oregon City, Community Development-Planning

221 Molalla Ave. Suite 200

Oregon City, OR. 97045

ATTN: Kelly Moosbrugger, Planner

SUBJECT: File #CU 13-01: Conditional Use, SP 13-11, LL 13-04, LN 14-04. 405 Warner Parrott Road,
Oregon City, OR. 97045.

I strongly oppose the development of the church as a business. It is supposed to be a place of worship only.

I oppose any and all re-zoning.

I will not be safe in my home or neighborhood because of drug users. Do you hear and understand what I
am saying? I will not be safe.

Please stop this Project now.

Sincerely,

A handwritten signature in cursive script that reads "Janet Brumbaugh". The signature is written in dark ink and is positioned to the right of the word "Sincerely,".

Janet Brumbaugh
1071 Birchwood Drive
Oregon City, OR. 97045

cc

May 19, 2014

TO: Oregon City, Community Development-Planning

221 Molalla Ave. Suite 200

Oregon City, OR. 97045

ATTN: Kelly Moosbrugger, Planner

SUBJECT: File #CU 13-01: Conditional Use, SP 13-11, LL 13-04, LN 14-04. 405 Warner Parrott Road,
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I oppose any and all re-zoning.

I will not be safe in my home or neighborhood because of drug users. Do you hear and understand what I am saying? I will not be safe.

Please stop this Project now.

Sincerely,

A handwritten signature in cursive script that reads "Gayle Scalf".

Gayle Scalf
1072 Birchwood Drive
Oregon City, OR. 97045

cc

Att. Planning Commission

Walter and Sherilee Johnson
Own property at 374 Warner
Parrott in Oregon City. Under
no circumstance do we want
any recovery program Christian
or otherwise. That is the last
thing our neighborhood needs
with children in schools at
each end of the street. Build
out in the country away from
families.

Just because they are involved
with the Church does not
make it right for the neighborhood.
Do not let them open this.

Thank You

Walter and Sherilee Johnson



City of Oregon City

625 Center Street
Oregon City, OR 97045
503-657-0891

Staff Report

File Number: PC 14-049

Agenda Date: 6/9/2014

Status: Agenda Ready

To: Planning Commission

Agenda #: 3b.

From: Community Development Director Tony Konkol and

File Type: Planning Item

SUBJECT:

ZC 14-01 / TP 14-01 (Continued from May 12, 2014): Zone Change from R-10 to R-8 with 29-Lot Subdivision between Ames Street and Holcomb Boulevard.

RECOMMENDED ACTION (Motion):

Staff recommends that the Planning Commission recommend approval with conditions to the City Commission for their consideration.

BACKGROUND:

Please see attached Summary Memorandum from the reviewing planner Pete Walter for details.

The applicant has revised the application since June 2. The new application still requests a zone change to R-8 a portion of the property but the subdivision includes 2 fewer lots than previously proposed. Staff has prepared a memorandum (attached) that describes the various changes that have been made to the proposal. These changes include the following which are described in detail in the attached memorandum:

- Slightly different layout for 27 lots vs. 29 lots.
- Larger average lot size.
- Reduced block length proposed, eliminating need to provide a pedestrian accessway in one location.
- Inclusion of Barlow Road Historic Corridor Easement (1993 adopted alignment). The adopted alignment of the Historic Barlow Road was overlooked and as such the applicant has included the required Visual Corridor Easement into the current proposal. Per OCMC 17.40 HRB review is not required if the applicant does not propose a modification of the adopted alignment.
- Proposal for off-site improvements to Ames and Swan intersection to widen road pavement to address statements from the public about congestion issues due to the narrow pavement width of Ames Street at the intersection with - Swan Avenue. ICON would like to offer a solution by paving additional road pavement to bring the widen the current paved width of pavement.
- The proposed layout continues to implement and concur with the Oregon City Transportation System Plan "Multi-Modal Connectivity Plan", Figure 10 (attached) by providing needed additional local street connections.
- The applicant's transportation engineer and the City's Transportation consultant will be present to respond to commissioner concerns related to Traffic Safety, Sight Distance and Speeding at the intersection of Holcomb Blvd and Holcomb School Road. traffic impacts at Holcomb School Road and Holcomb Boulevard.

- The applicant's transportation engineer and the City's Transportation consultant will be present to respond to commissioner concerns related to potential cut-through traffic impacts between Holcomb Boulevard and Forsythe Road / Swan Avenue.
- Further clarification of the support of Clackamas County Housing Authority and Oregon City School District regarding the street improvements and connection to Holcomb School Road.
- The applicant is proposing to construct an off-site pathway on the school property to connect to the pedestrian accessway within the development.
- The applicant will address concerns regarding the perceived impacts to the off-site drainage ditch. Staff has provided the City Commission prior denial of an appeal of the Sunnybrook subdivision to the north in 2005 based on the adequacy of the Sunnybrook stormwater report and pond design.

Staff finds that the proposed zone change from R-10 to R-8 and 27-Lot subdivision application as proposed by the applicant can meet all of the applicable criteria for approval, with the proposed Conditions of Approval as addressed in the original Staff Report, with the addition of Condition of Approval #29 as discussed in the attached memorandum.



MEMORANDUM

To: Oregon City Planning Division
From: Pete Walter, AICP, Associate Planner
Re: ZC 14-01 / TP 14-01
Date: 6/02/2014

Dear Chair Kidwell and Planning Commissioners:

This memo attempts to summarize and respond to several issues and concerns raised by the Planning Commission during the May 12, 2014 public hearing to consider ZC 14-01 / TP 14-01.

The applicant has revised the application based on comments received at the May 12, 2014 public hearing. The new application continues to request a zone change to R-8 on a portion of the property but the subdivision includes 2 fewer lots than previously proposed. This memorandum summarizes some of the changes and also attempts to respond to the Planning Commission concerns regarding the proposal.

Revised layout for 27 lots vs. 29 lots.

The revised layout includes 27 lots. Ten of the lots will have R-10 zoning, with the remaining 17 lots re-zoned to R-8. Staff has reviewed all of the lots for compliance with the respective lot size, depth and width requirements for the proposed zone and found all lots to be in compliance with applicable dimensional standards for lot layout, size, width and depth. Lot calculations are provided in the attachments.

Slightly larger average lot size.

The average lot size for the R-10 lots is 10,009 sf, the average lot size for the R-8 lots is 9,156 sf, and the average lot size for the entire subdivision is 9,465 square feet, approximately 513 square feet more than the initial proposal for 29 lots.

Reduced block length

The location of Stables Place has moved north, shortening the overall block length and eliminating the need to provide a pedestrian access way between Stable's Way and Pastures Way.



Inclusion of Barlow Road Historic Corridor Easement (1993 adopted alignment).

The Planning Commission correctly pointed out that the adopted alignment of the Historic Barlow Road affects the property. The applicant has included the required Visual Corridor Easement into the current proposal without modification. Historic Review Board approval is not required if the applicant does not propose a modification of the adopted corridor alignment. A copy of the 1993 adopted alignment is attached, as is a copy of the tax map indicating a dotted line across the subject property. The historic overlay district applies pursuant to *OCMC 17.40.030 Designated, 4. Historic corridors designated in accordance with this section.*

3. The Oregon Trail-Barlow Road Historic Corridor: properties identified in the 1993 Barlow Road Historic Corridor inventory of the Barlow Road by Clackamas County. (copy attached)

The city's GIS system was not updated to include the historic corridor alignment in the applicable layer when the Historic Review Board affirmed the corridor alignment in 2008, and as such the property was not flagged automatically as falling within the historic overlay district. Staff is updating the city GIS map layer to include the corridor for the Barlow Road 1993 alignment.

Recommended Revised Finding for OCMC 17.40 Barlow Trail

17.40.060 Exterior alteration and new construction.

H. The following standards apply to development within historic corridors:

- 1. Within the Oregon Trail-Barlow Road historic corridor, a minimum of a thirty-foot wide-open visual corridor shall be maintained and shall follow the actual route of the Oregon Trail, if known. If the actual route is unknown, the open visual corridor shall connect within the open visual corridor on adjacent property.*
- 2. No new building or sign construction shall be permitted within required open visual corridors. Landscaping, parking, streets, driveways are permitted within required open visual corridors.*

Finding: Complies with Condition. *The applicant has proposed a 30' wide View Corridor Easement across lots 20, 24, 25, 26, and 27 for the Historic corridor of the Barlow Trail. The applicant has not proposed to modify the adopted alignment. Prior to recordation of the final plat for the subdivision, a plat restriction shall be placed on the subdivision indicating the requirements of OCMC 17.40.060-H. Oregon Trail-Barlow Road Historic Corridor and the location of the Barlow Road easement on the applicable lots. The plat note shall state "No new building or sign construction shall be permitted within required open visual corridors. Landscaping, parking, streets, driveways are permitted within required open visual corridors."*

The applicant can assure this standard is met through Compliance with Condition of Approval #29.



Oregon City Transportation System Plan

The proposed layout continues to implement and concur with the Oregon City Transportation System Plan "Multi-Modal Connectivity Plan", Figure 10 (attached) by providing needed additional local street connections. The plan clearly indicates the need for additional local street connections through the parcel and connecting to Holcomb School Road.

Holcomb Boulevard / Holcomb School Road Intersection

The applicant's transportation engineer and the City's Transportation consultant will be present to respond to commissioner concerns related to Traffic Safety, Sight Distance and Speeding at the intersection of Holcomb Blvd and Holcomb School Road. This three legged intersection was analyzed in detail in the applicant's TIA, and determined to operate acceptably at full buildout of the subdivision. Various concerns regarding traffic generation, crashes, speeding, and sight distance at this intersection have been raised. The City's adopted standards regarding the preparation of Traffic Impact Analyses may be reviewed at the following link:

<http://www.oregoncity.org/publicworks/guidelines-transportation-impact-analysis-tia>

Swan Avenue / Ames Street Intersection

The applicant's transportation engineer and the City's Transportation consultant will be present to respond to commissioner concerns related to potential cut-through traffic impacts between Holcomb Boulevard and Forsythe Road / Swan Avenue. The applicant also submitted an excerpt from the submitted TIA of the traffic counts for this intersection at the previous hearing on May 12, which show that traffic volumes are sufficiently low that it will operate well within Oregon City's performance standards upon full buildout of the site.

Off-site road and drainage improvements to Ames and Swan intersection

To address statements from the public about congestion issues due to the narrow pavement width of Ames Street at the intersection with Swan Avenue, the applicant would like to offer a solution by paving additional road pavement to bring the widen the current paved width of pavement. The traffic impact analysis submitted did not identify any problems at this off-site intersection and city code does not require off-site improvements that are not directly abutting the subject parcel. The applicant submitted the specific traffic counts for the record for the intersection, which show that traffic volumes are sufficiently low that it will operate well within Oregon City's performance standards upon full buildout of the site. However, the current pavement width and drainage situation at the intersection was built to an older, county standard, and does not meet current city standards. Widening the pavement may improve turning movements. The public works department



will need to review and approve construction plans for these improvements within the existing ROW, however staff supports the applicant's proposal.

Status of off-site Road Dedications Pastures Way / Holcomb School Road.

The planning commission requested further clarification of the support of Clackamas County Housing Authority (CCHA) and Oregon City School District (OCSD) regarding the street improvements and connection to Holcomb School Road. The applicant is proposing to construct an off-site pathway on the school property to connect to the pedestrian accessway within the development. Staff has attached an email from Wes Rogers of the school district regarding the proposal and the applicant will provide an update at the hearing, both with respect to OCSD and CCHA's support for the road improvements.

It should be noted that a Minor Partition application (MP 13-03) was recently approved for the properties abutting the south side of Holcomb School Road which requires street improvements including sidewalks on that side of the street. The applicant will be responsible for coordinating the design of the street improvements with the proposed development to ensure that the improvements meet city standards for ADA, pedestrian, bicycle and traffic safety improvements.

Drainage Impacts / Drainage Ditch

The applicant will address concerns regarding the perceived impacts to the existing off-site drainage ditch, to which the Sunnybrook Estates development to the north is connected via an armored drainage outfall from the Sunnybrook Estates pond meeting city standards. The applicant has proposed a new drainage pond within Tract A of the proposed development. The Testimony was provided at the May 12, 2014 that farm run-off may be the draining directly into the ditch and that the run-off from the actual subdivision pond in Sunnybrook Estates is not the cause of any bank erosion. For further background, staff has provided a copy of the City Commission prior denial of an appeal (AP 06-02) of the Sunnybrook subdivision (TP 05-10) to the north in 2005 based on the adequacy of the Sunnybrook stormwater report and pond design. A copy of the City Commission's final order regarding that is attached, and public works staff will be present to answer any questions the planning commission may have regarding the city's storm water design standards at June 9 public hearing.

Storm Pond Design

There was a concern expressed regarding the future design of the storm pond and whether it would have vertical or sloped walls. Currently, the City's adopted Stormwater and Grading Design Standards for a Type "A" Storm Pond state that interior side slopes are not permitted to be steeper



than 4 horizontal to 1 vertical, however retaining walls are permitted. Engineering staff will address this in further detail at the public hearing.

Lot Dimensions around the Existing House

A concern was raised about lot dimensions and setbacks for the existing house and a request was made to superimpose the plat on a recent aerial photograph. The applicant has provided this.

Off-site Recreational / Pedestrian Trail at Holcomb Elementary

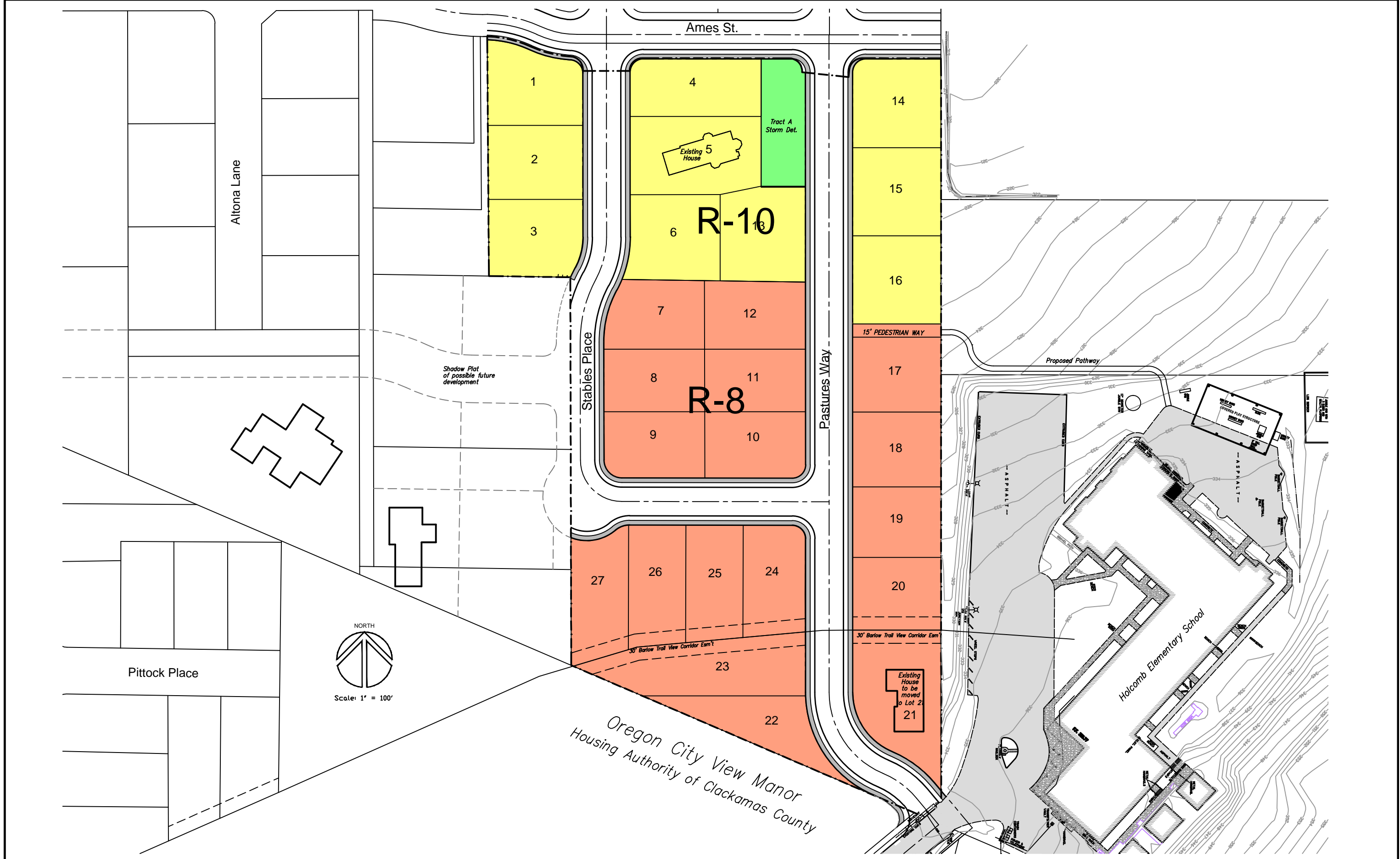
The applicant has proposed to construct a portion of the new trail system at Holcomb Elementary School which will connect to the required pedestrian accessway within the subdivision. This trail will also provide another off-street connection for pedestrians and bicyclists.

Summary and Recommendation

Staff has prepared a staff report for the proposed development. With the additional finding attached to this memorandum and repeated below regarding compliance with OCMC 17.40 staff requests that the Planning Commission recommend approval of the revised proposal based on the applicant's proposal and the Staff Report of May 12, 2014. No additional conditions of approval are recommended at this time. Staff will add the following finding to the staff report of May 12th, 2014 and include the new condition of approval #29.

Finding: Complies with Condition. *The applicant has proposed a 30' wide View Corridor Easement across lots 20, 24, 25, 26, and 27 for the Historic corridor of the Barlow Trail. The applicant has not proposed to modify the adopted alignment. Prior to recordation of the final plat for the subdivision, a plat restriction shall be placed on the subdivision indicating the requirements of OCMC 17.40.060-H. Oregon Trail-Barlow Road Historic Corridor and the location of the Barlow Road easement on the applicable lots. The plat note shall state "No new building or sign construction shall be permitted within required open visual corridors. Landscaping, parking, streets, driveways are permitted within required open visual corridors." The applicant can assure this standard is met through Compliance with Condition of Approval #29.*

Condition of Approval 29. *Prior to recordation of the final plat for the subdivision, a plat restriction shall be placed on the subdivision indicating the requirements of OCMC 17.40.060-H. Oregon Trail-Barlow Road Historic Corridor and the location of the Barlow Road easement on the applicable lots. The plat note shall state "No new building or sign construction shall be permitted within required open visual corridors. Landscaping, parking, streets, driveways are permitted within required open visual corridors."*

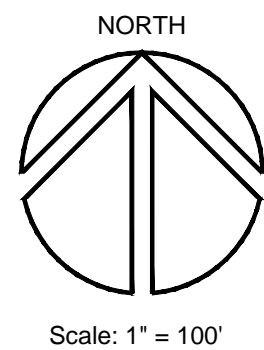
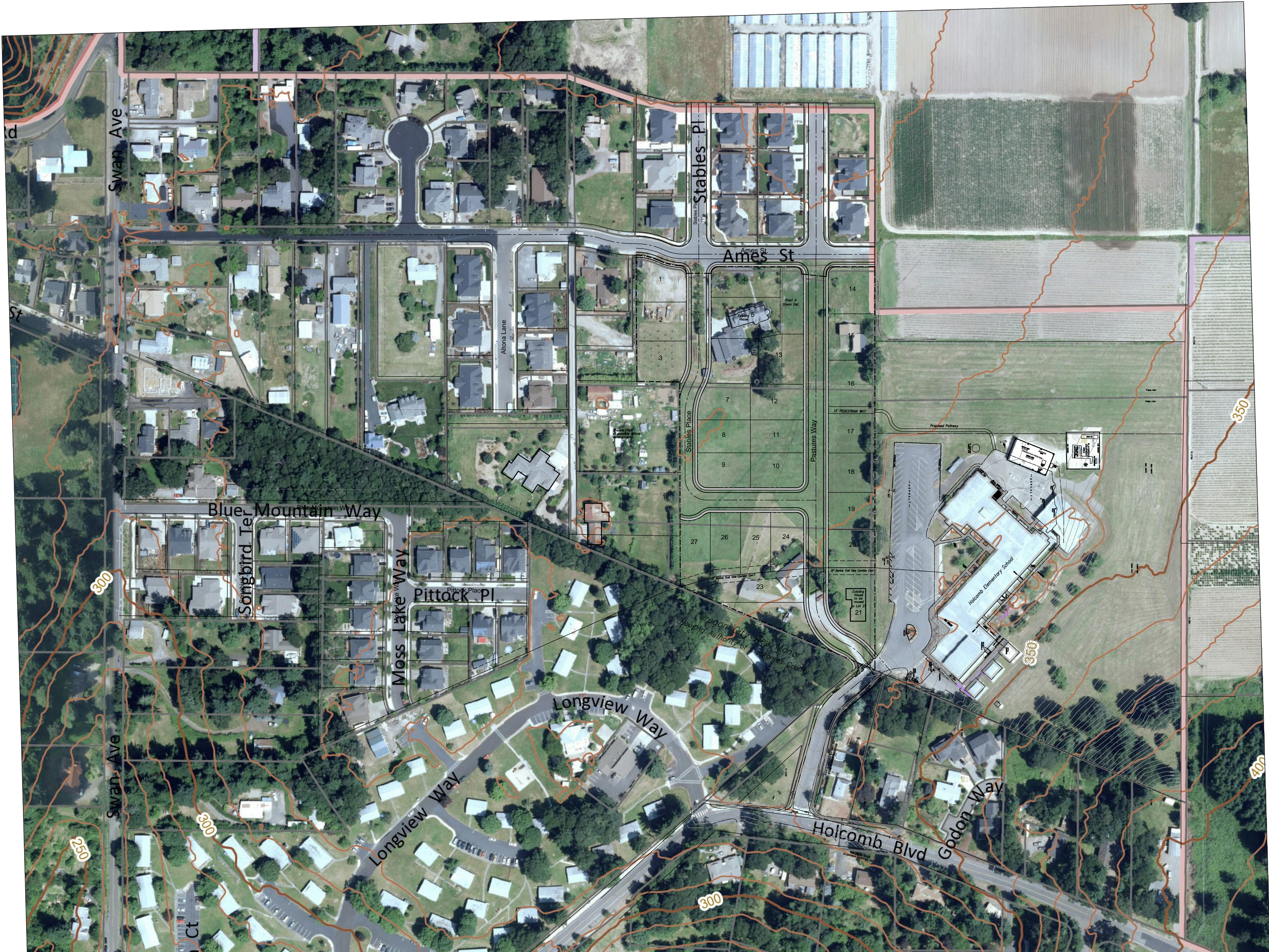


DESIGNED:	R.E.G.			
DRAWN:	R.E.G.			
SCALE:	1" = 100'			
DATE:	May 2014			
FILE:	13-ICN-103	DATE	NO.	REVISION

Richard E. Givens, Planning Consultant
18680 Sunblaze Dr.
Oregon City, OR 97045
PH: (503) 479-0097

APPLICANT: Icon Construction & Development, LLC
Street Address
City, State, Zip
PH: (503)

Sunnybrook Phase 2
Proposed Zoning

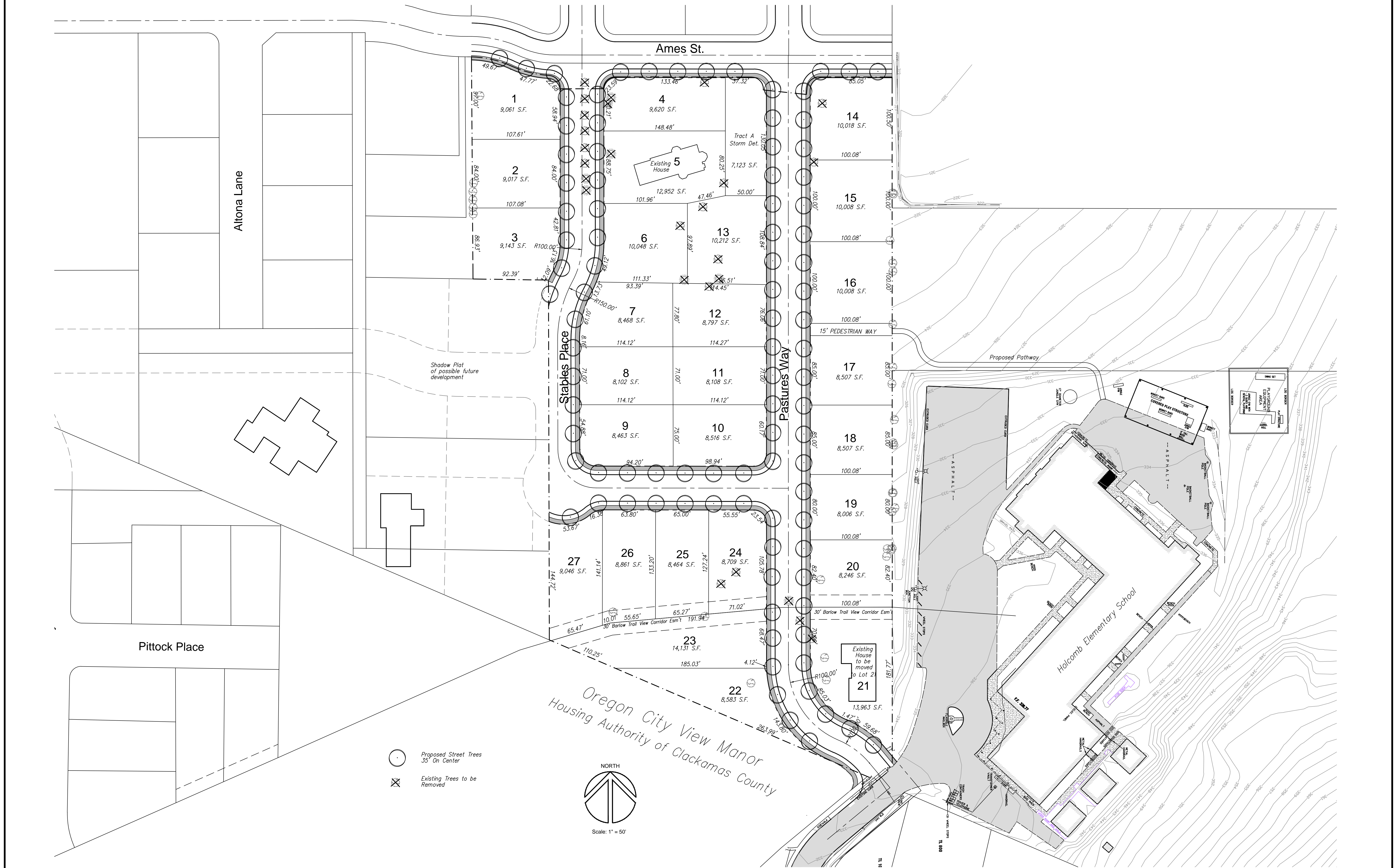


DESIGNED:	REG			
DRAWN:	REG			
SCALE:	1" = 100'			
DATE:	May 19, 2014			
FILE:	13-ICN-102	DATE	NO.	REVISION

Richard E. Givens, Planning Consultant
18680 Sunblaze Dr.
Oregon City, OR 97045
PH: (503) 479-0097

APPLICANT: Icon Construction & Development, LLC
1980 Willamette Falls Drive, Suite 200
West Linn, OR 97068
PH: (503) 655-5991

Sunnybrook Phase 2 Surrounding Vicinity



DESIGNED:	REG			
DRAWN:	REG			
SCALE:	1" = 50'			
DATE:	May 19, 2014			
FILE:	13-ICN-102	DATE	NO.	REVISION

Richard E. Givens, Planning Consultant
18680 Sunblaze Dr.
Oregon City, OR 97045
PH: (503) 479-0097

APPLICANT: Icon Construction & Development, LLC
1880 Willamette Falls Drive, Suite 200
West Linn, OR 97068
PH: (503) 655-5991

Sunnybrook II - ZC 14-01/ TP 14-01 Preliminary Plat Lot Calculations - Revised

Lot	Size (sf)	Width (ft)	Depth (ft)
R-10 Lots		(min = 65)	(min = 80)
1	9061	80	106
2	9017	84	107
3	9143	87	107
4	9620	65	148
5	12952	89	148
6	10048	97.9	105
13	10212	103	96.5
14	10018	100	100.8
15	10008	100	100.8
16	10008	100	100.8
Total	100087		
Avg	10009	91	112
Min	9017	65	96.5
Max	12952	103	148
R-8 lots		(min = 60)	(min = 75)
7	8468	77	112
8	8102	71	114
9	8463	75	114
10	8516	75	114
11	8108	71	114
12	8797	78	114
17	8507	85	101
18	8507	85	101
19	8006	80	101
20	8246	82.4	101
21	13963	101	150
22	8583	60	85
23	14131	65	185
24	8709	71	127
25	8464	65	127
26	8861	63.8	133
27	9046	65	142
Total	155477		
Avg	9146	75	116
Min	8006	60	85
Max	14131	101	185

Summary

Avg	9465	81	117
Min	8006	60	85
Max	14131	103	185

Pete Walter

From: Todd Martinez
Sent: Monday, June 02, 2014 2:36 PM
To: Pete Walter
Cc: Gordon Munro; Aleta Froman-Goodrich
Subject: RE: Memorandum summarizing modifications for ZC 14-01 TP 14-01 Sunnybrook II

You're right on, and I can talk about current standards and any proposed modifications (if relevant). I assumed the memo item had some to do in particular with a variance or modification from both our standard and from what they've proposed before.

Todd

From: Pete Walter
Sent: Monday, June 02, 2014 2:31 PM
To: Todd Martinez
Cc: Gordon Munro; Aleta Froman-Goodrich
Subject: RE: Memorandum summarizing modifications for ZC 14-01 TP 14-01 Sunnybrook II

Regarding the storm pond, I am under the impression that we are still using the old manual, which was adopted in 2000. In Chapter 4, Page 21 for a Type "A" pond it specifies that side slopes above retaining walls can be no steeper than 4:1, but it clearly still allows retaining walls on the interior.

I know that these standards are being revised, so if I am totally off base with this, let me know.

Pete

From: Todd Martinez
Sent: Monday, June 02, 2014 2:25 PM
To: Pete Walter
Cc: Gordon Munro; Aleta Froman-Goodrich
Subject: RE: Memorandum summarizing modifications for ZC 14-01 TP 14-01 Sunnybrook II

Pete,

From what Gordon briefed me on from last planning commission hearing, you've hit the "hot" topics for engineering. I would like to confirm the applicant's engineer (civil) and transportation engineer (same) and John Replinger will be at the hearing also. I won't be able to talk in detail about their proposed new storm pond geometry or about the impacts to safety, trips, etc. for either of the new street intersections proposed.

Thanks,

Todd

From: Pete Walter
Sent: Monday, June 02, 2014 9:55 AM

To: Gordon Munro

Cc: Aleta Froman-Goodrich; Todd Martinez

Subject: Memorandum summarizing modifications for ZC 14-01 TP 14-01 Sunnybrook II

Gordon,

Please can you scan this memorandum ASAP and let me know if you have any changes. I am recommending the addition of one condition of approval for the Barlow Trail. Other than that, I do not see the need to modify the original staff report from May 12 for the change to 27 lots.

Pete

Multi-Modal Connectivity

The aggregate effect of local street design impacts the effectiveness of the regional system when local travel is restricted by a lack of connecting routes, and local trips are forced onto the regional network.² Therefore, streets should be designed to keep through motor vehicle trips on arterial streets and provide local trips with alternative routes. Street system connectivity is critical because roadway networks provide the backbone for bicycle and pedestrian travel in the region. Metro's local street connectivity principal encourages communities to develop a connected network of local streets to provide a high level of access, comfort, and convenience for bicyclists and walkers that travel to and among centers.

Connectivity of the existing transportation system was reviewed to identify current deficiencies. These locations will be further addressed in the pedestrian, bicycle and motor vehicle plans. Topography, environmental constraints, railroads and existing development may be limiting the connectivity in areas of Oregon City. These factors may not stop the possible connections from being made in the noted areas lacking connectivity, but will affect what modes could be accommodated and the financial viability. The major areas lacking connectivity include:

- East and west connectivity across OR 213 between Redland Road and Beavercreek Road, a distance of over two miles
- East to west connectivity between OR 99E (south of the Canemah neighborhood) and the South End neighborhood, with greater than four miles between connections

A multi-modal connectivity plan for Oregon City is shown in Figure 5. It specifies the general location where new streets or shared-use paths could potentially be installed as nearby areas are developed or as the opportunity arises. The purpose of the plan is to ensure that new developments accommodate circulation between adjacent neighborhoods to improve connectivity for all modes of transportation. The criteria used for providing connections are as follows (as required in the Metro Regional Transportation Functional Plan³):

- Provide a full local street connection at least every 530 feet (or 1/10 of a mile), if possible
- Provide a pedestrian and bicycle connection every 330 feet if a full-street connection is not possible

² Metro 2035 Regional Transportation Plan, Local Street Network Concept

³ Metro Regional Transportation Functional Plan, Section 3.08.110, Subsection E, Street System Design Requirements

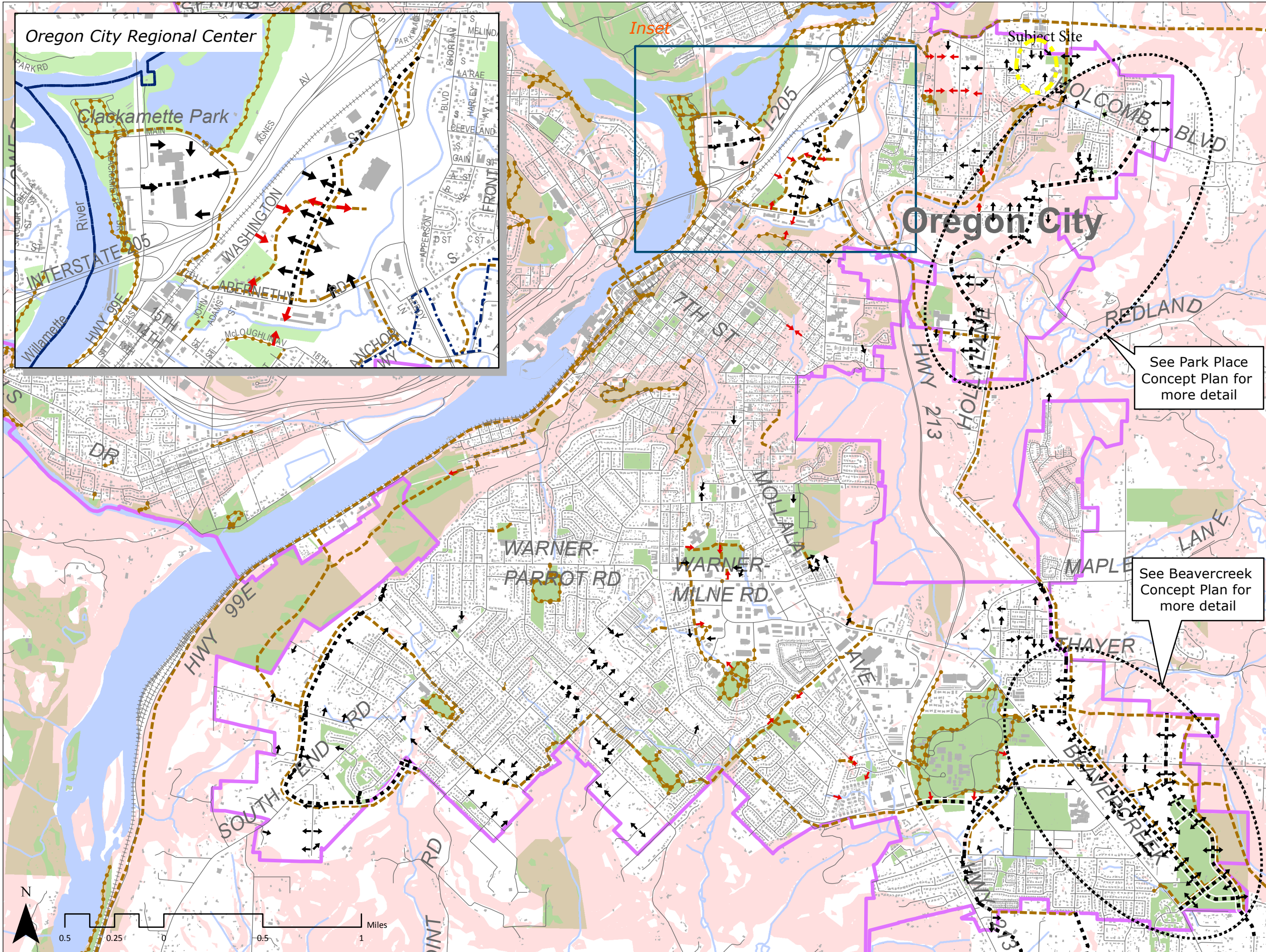


FIGURE 5

Multi-Modal Connectivity Plan

Legend

Street Connectivity

- Existing Street
- Planned Roadway Extension (Conceptual Alignment)
- Potential Street Extension

Trail Connectivity

- Existing Shared-Use Path
- Planned Shared-Use Path (Conceptual Alignment)
- Potential Trail Connection

- Steep Slope
- Building
- Stream
- River
- Park/Public Property
- Urban Growth Boundary
- Railroad

Planning Commission,

5/24/2014

I'm Woody Berends and I live on the corner of Ames & Swan Av here in Oregon City. I brought a letter in to your office awhile back with my concerns about the proposed development of Mark Handris. Since that letter Mark called me with a proposal that sounded reasonable. He stated he would like to put in only 2 extra houses over the R10 zoning. He also said he would propose doing road and drainage improvements along Ames. He stated some signs and speed bumps in the new development would be added.

I contacted a few neighbors such as Aaron McCloud, Warren Berends and Mark Higgley to see what they thought of such a proposal. All that I spoke to said they would support this. There are some that I didn't speak to that want no compromises from what I hear. So, I guess this neighborhood is split on the issue. While I understand we are not the city planners, I believe we have a voice. If Icon is not required to do any improvements to Ames, all said they would not support his proposals. These are all important safety and drainage issues that need to be addressed. Thank You for listening.

Sincerely,
Elwood (Woody) Berends

A handwritten signature in cursive script that reads "Woody Berends". The signature is written in dark ink and is positioned below the typed name.







"so after 4 months & 3 days wandering we have reach the settlement with our horses, 3 in number, & dog all alive, for which we ought & I trust are thankful to kind Providence. We have not been laid up by sickness or lameness, either ourselves or our horses. Our fellow travelers have lost their horses & oxen by accidents, by drowning, by sickness, by poverty, by thieves & their own lives by Fevers, by Cholera, by Small pox, by measles, by indians, by other emigrants, by drowning & various other accidents. O how thankfull ought we be, and others now are sick and starving and have lost their teams or are far from being through. Lord help us and bless us still."

Jared Fox
August 15, 1852

"My heart arose in gratitude to God that we had been spared to reach this land! Six long months have elapsed since we left our native land, and now after having passed through dangers seen and unseen, sickness, trial and difficulty, toil and fatigue, we are safely landed on the Pacific shores! Thus far the Lord has led us on. Hitherto He has helped us. What shall we render unto His name for his goodness unto us."

Esther Hanna
September 16, 1852

"Passing through the timber that lies to the east of the city, we beheld Oregon City and the Falls of the Willamette at the same moment."

Joel Palmer
November 1, 1845

HOLCOMB VALLEY SEGMENT

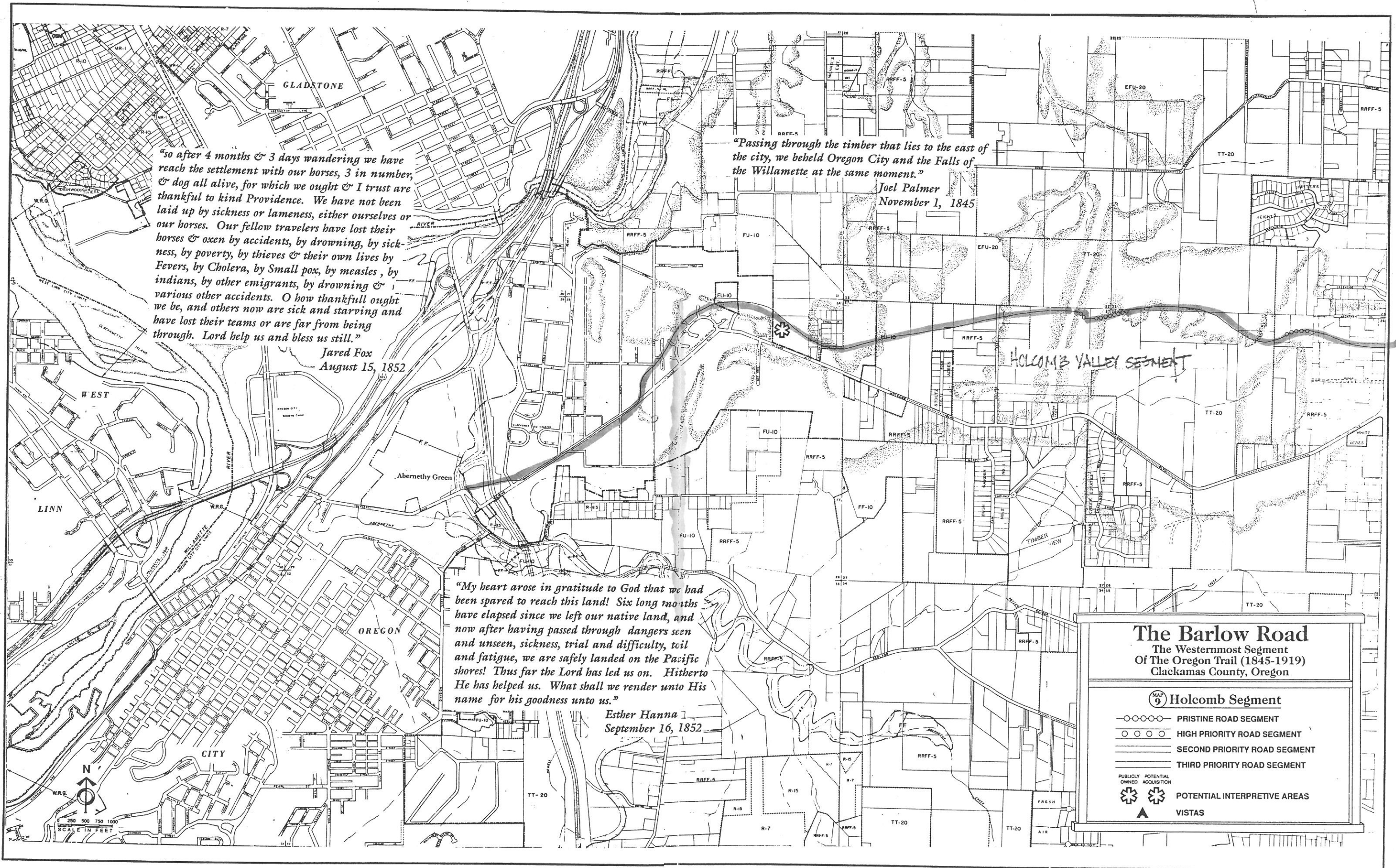
The Barlow Road

The Westernmost Segment
Of The Oregon Trail (1845-1919)
Clackamas County, Oregon

MAP 9 Holcomb Segment

- ○ ○ ○ ○ PRISTINE ROAD SEGMENT
- ○ ○ ○ ○ HIGH PRIORITY ROAD SEGMENT
- SECOND PRIORITY ROAD SEGMENT
- THIRD PRIORITY ROAD SEGMENT

- POTENTIAL INTERPRETIVE AREAS
- VISTAS



**BEFORE THE CITY COMMISSION
FOR THE CITY OF OREGON CITY, OREGON**

In the matter of an appeal of the
Director's approval of an 11-lot
residential subdivision on
approximately 7.23 acres zoned R-10
in the City of Oregon City.
City File No. TP 05-10

City File No. AP 06-02
(Serres Appeal of the Voss Subdivision)

**FINDINGS OF FACT,
CONCLUSIONS OF LAW
AND FINAL ORDER**

I. Summary:

This Opinion is the decision of the City Commission denying the appeal and approving with conditions this application for an 11-lot residential subdivision on approximately 7.23 acres zoned R-10. This decision is based on the September 29, 2006 Staff Report and Notice of Decision, including the conditions contained therein, and the November 21, 2006 Memorandum from the City Attorney as supplemented by the Findings of Fact and Conclusions of Law set forth below.

II. Procedural Overview:

The subject property is identified in the September 29, 2006 Director's decision approving this 11-lot residential subdivision, subject to 22 conditions of approval. The property is bounded on two sides (on the north and east) by the city limits and the Urban Growth Boundary. The owner of the neighboring property immediately north of the subject site, Dan Serres represented by attorney William Stalnaker, timely appealed the Director's decision, raising the following three assignments of error:

1. The City's Decision to approve the Application for Subdivision Approval conditioned on satisfying Conditions 17 and 19 of the Staff Report and Notice of Decision is inconsistent with the City's Stormwater Drainage System, Chapter 16.12.350.
2. Collection of stormwater in a retention facility and discharge to a single point onto an adjoining property transforms sheet flow into a single discharge; this is not consistent with the common law of surface water drainage in Oregon.
3. The City's decision to require "...an armored flow path from the storm manhole to the ditch" presumes a connection to Appellant's farm drainage ditches. Appellant's farm drainage ditches lie entirely on his property. Connection to the farm drainage ditches will require the Applicant to trespass on Appellant's property.

Mr. Stalnaker included with the appeal a July 19, 2006 letter that was already part of the record of this matter, and the appeal was scheduled and noticed for a public hearing before the City Commission on December 6, 2006. The City Attorney prepared and released to the public, more than seven days before the hearing, a November 21, 2006 memorandum addressing the appeal issues.

At the December 6, 2006 hearing, the City Attorney read the announcements required by ORS 197.763 (5) & (6) and ORS 197.796, and stated that the Commission's review of the matter was on the record, with no new evidence allowed. The City Commission disclosed all ex parte contacts, conflicts of interest and bias. The only ex parte contact disclosed was a site visit by the Mayor. Daniel Kearns, attorney representing the applicant Terry Voss, asked the Mayor to elaborate on what she heard and saw in her site visit. Following this disclosure, there were no procedural objections, nor any objections to the participation of any member of the Commission. No one requested a continuance or that the record be kept open.

At the December 6th hearing, the Commission received a verbal explanation of the development proposal and the Director's decision approving the subdivision from Dan Drentlaw, Community Development Director. The City Attorney, William Kabeiseman, provided an explanation of his memorandum, and the City Engineer, Nancy Kraushaar, provided comments on the City's stormwater system and design requirements for subdivisions. Public testimony was received from the applicant's attorney, Daniel Kearns, and design engineer, Steve Roper. The appellant had informed staff in advance that neither he nor his attorney would be present at the hearing. No one else asked to testify, and the record closed at the conclusion of the December 6th hearing.

III. Findings of Fact and Conclusions of Law: The City Commission finds as follows:

This is an on-the-record review of the Director's approval of this 11-lot subdivision and Mr. Serres' appeal, which raised three assignments of error. Under OCMC 17.50.190(F), the City Commission's review of the Director's decision to approve this subdivision is limited to the three bases stated in Mr. Serres' Notice of Appeal. We address each in turn.

1. The City's Decision to approve the Application for Subdivision Approval conditioned on satisfying Conditions 17 and 19 of the Staff Report and Notice of Decision is inconsistent with the City's Stormwater Drainage System, Chapter 16.12.350.

In this assignment, Mr. Serres asserts that the subdivision proposal does not meet the requirements of OCMC §16.12.350, and the Director erred in concluding otherwise. OCMC §16.12.350 requires in pertinent part that:

16.12.350. Minimum Improvements – Public Facilities and Services

The following minimum improvements shall be required of all applicants for a land division under Title 16, unless the decision-maker determines that any such improvement is not proportional to the impact imposed on the City's public systems and facilities.

* * *

B. Stormwater Drainage System. Applicants shall design and install drainage facilities within land divisions and shall connect the development's drainage system to the city's storm drainage system as a minimum requirement for providing services to the applicant's development. All applicants shall execute a binding agreement to not remonstrate against the formation of a local improvement district for stormwater drainage improvements that benefit the applicant's property. Applicants are responsible for extending the city's storm drainage system to the development site and for providing for the connection of

upgradient properties to that system. The applicant shall design the drainage facilities in accordance with city drainage master plan system. The applicant shall design the drainage facilities in accordance with the city drainage master plan requirements, Chapter 13.12 and the Public Works Stormwater and Grading Design Standards. (emphasis added)

According to the appeal, this subdivision will not connect to the "city's storm drainage system" because it discharges at the property line into an existing ditch, which the appellant claims is on his property and into which the applicant is not allowed to discharge stormwater.

The Community Development Director and City Engineer both testified, as did the applicant's engineer Steve Roper, that this development meets the City's stormwater system design requirements and that, in fact, it will discharge into the City's storm drainage system. In particular, the development design includes a stormwater collection system that will collect all surface stormwater runoff from each lot and the public rights-of-way and convey those flows to a publicly owned treatment and detention facility (Tract A) in the northeast corner of the property. This detention facility will be dedicated to the City and will become part of the City's storm drainage system. Accordingly, this development will connect to, and discharge its stormwater into, a city-owned stormwater facility in compliance with OCMC §16.12.350.

Based on the testimony of the Community Development Director, the City Engineer and the applicant's engineer, the Commission finds this criterion is met, and the Director did not err in finding compliance. Accordingly, we deny this assignment of error.

2. Collection of stormwater in a retention facility and discharge to a single point onto an adjoining property transforms sheet flow into a single discharge; this is not consistent with the common law of surface water drainage in Oregon.

This argument does not implicate any of the mandatory approval criteria upon which the City evaluates development proposals, including this subdivision. Instead, the argument asserts that Oregon common law may be violated if and when this development is constructed. The argument is premised on the assumption that this development will disrupt the natural surface drainage patterns and stormwater flow that has historically passed from up-gradient properties (from the south and west) over and through this property to the north and east.

Again, the Commission heard testimony from the City Engineer, the applicant's attorney and design engineer about the historic and natural flow patterns over these properties based on the evidence in the record. This un rebutted testimony shows that the up-gradient properties have recorded drainage easements over the subject property to convey their stormwater onto and across the subject property through existing French drains. These drains exit the subject property into the ditch that Mr. Serres claims to be on his property that runs along the eastern and northern edges of the subject property. Moreover, this testimony shows there has been an extensive system of drainage tiles on the subject property for more than 30 years that collect and convey surface and subsurface water northward toward the Serres property, day-lighting into Mr. Serres' ditch. This testimony, in light of the City Attorney's memo, appears to establish the natural and historic stormwater drainage patterns and is sufficient to convince the Commission that the applicant has a legal claim to discharge stormwater from his property into these ditches on the north and east boundaries of his property.

We find, based on this testimony and evidence in the record, that the second assignment of error does not raise an issue related to the mandatory subdivision approval criteria administered by the City. On that basis we deny the appellant's second argument.

- 3. The City's decision to require "...an armored flow path from the storm manhole to the ditch" presumes a connection to Appellant's farm drainage ditches. Appellant's farm drainage ditches lie entirely on his property. Connection to the farm drainage ditches will require the Applicant to trespass on Appellant's property.**

Under this final assignment of error, the appellant asserts that the stormwater overflow discharge from the detention facility (Tract A) would cause a trespass of stormwater onto Mr. Serres' property. The assignment also indicates that Condition 17 imposed by the Director would similarly result in a trespass by requiring the applicant to install rip-rap on land owned by Mr. Serres.¹

We disagree. A plain reading of Condition 17 does not necessarily require trespass onto Mr. Serres' property, and its requirements can be met without trespassing. Moreover, the testimony presented at the hearing by the applicant's attorney and design engineer indicates that the subject property has long been tiled, and those tiles drain directly into the ditch claimed by Mr. Serres. This establishes the natural and historic flow patterns for this property, and it creates the presumption that the applicant has a long-standing prescriptive easement and common law drainage right to convey stormwater from his property into the ditch. For these reasons, we deny this assignment of error.

As a final matter, Mr. Serres' appeal statement and supporting letter express his concern that this development will increase stormwater flow volumes and velocity onto his property, causing erosion and flooding. The applicant's design engineer, however, testified that only the current and normal amount (volume) of stormwater will flow from the subject property onto Mr. Serres' property, and no more. Mr. Roper also testified that, because the stormwater system for this subdivision is designed according to the City's stormwater design standards, it will detain the peak flows and discharge from the detention facility at one-half the rate of the pre-development 2-year storm event and the pre-development 10-year storm event. According to Mr. Roper, this design, in accordance with the City's standards, will ensure that peak flows are less than current/normal peak flows, which will reduce (and not increase) the possibility for erosion and flooding during storm events. In other words, post-development rates of stormwater discharge will not exceed the pre-development rates of discharge.

Based on this testimony and the record before us, we are satisfied that the problems Mr. Serres fears are unlikely to occur. In any event, the unrebutted evidence and testimony in the record shows that this development meets the City's subdivision requirements, including the applicable stormwater standards, and the Director's approval was proper. In the event Mr. Serres finds he has a trespass claim against the applicant upon completion of this development, he must pursue that claim as a civil matter since it is not within the jurisdiction or authority of the City Commission to resolve.

IV. Decision:

¹ Condition 17 provides that "The applicant shall provide, at a minimum, an armored flow path from the storm manhole to the ditch."

The Commission adopts as its own, and incorporates herein by this reference, the Director's September 29, 2006 Staff Report and Notice of Decision and the City Attorney's November 21, 2006 Memorandum. Based on these documents and the foregoing findings and conclusions that resolve the appeal issues, the Commission finds that the proposal meets all of the applicable approval criteria, and for that reason the appeal (AP 06-02) is denied, and this subdivision (TP 05-10) is approved, subject to compliance with the 22 conditions of approval set forth in the Director's September 29, 2006 Decision.

Date of Decision: December 20, 2006.

The City Commission for Oregon City

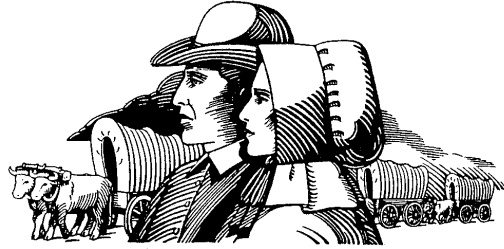
By: *Alvin P. Harris*

CITY OF OREGON CITY

Land Use Decision

320 WARNER MILNE ROAD
TEL (503) 657-0891

OREGON CITY, OREGON 97045
FAX (503) 722-3880



NOTICE OF LAND USE DECISION

AP 06-02 (Appeal of Planning File TP 05-10)

DATE OF NOTICE OF DECISION: December 21, 2006

APPELLANT: Dan Serres
14620 S. Forsythe Rd
Oregon City, OR 97045

William J. Stalnaker, Atty.
1001 Molalla Avenue, Suite 200
Oregon City, OR 97045

**APPLICANT/
OWNER:** Terry Voss
14550 S Ames Street
Oregon City, OR 97045

REPRESENTATIVE: SR Design LLC
8196 SW Hall Boulevard
Beaverton, Oregon 97008

Dan Kearns, Atty.
610 SW Alder Street, Suite 910
Portland, OR 97205

REQUEST: The applicant is seeking approval for an 11-Lot Subdivision on approximately 3.08 acres in the R-10 Single-Family Dwelling District.

LOCATION: Parcels located at No Address, identified as Clackamas County Map 2-2E-21D, Tax Lot 1402, and 14550 Ames Street, identified as Clackamas County Map 2-2E-21D, Tax Lot 1404.

CONTACT: Peter Walter, AICP, Associate Planner - 503.657.0891

DECISION: On December 20th, 2006, after reviewing all of the evidence in the record and considering all of the arguments made by the applicant, appellant and citizens, the City Commission concluded that the Community Development Director was correct and that the criteria for the approval of a Subdivision had been met with conditions. Accordingly, the City Commission entered a final order, attached as Exhibit 1, affirming and adopting as its own the Staff Report, findings and Conditions of Approval, attached as Exhibit 2, for File Number TP 05-10.

PROCESS: Type IV decisions include only quasi-judicial plan amendments and zone changes. These applications involve the greatest amount of discretion and evaluation of subjective approval standards and must be heard by the city commission for final action. The process for these land use decisions is controlled by ORS 197.763. Notice of the application and planning commission hearing is published and mailed to the applicant, recognized neighborhood association and property owners within three hundred feet. Notice must be issued at least twenty days pre-hearing, and the staff report must be available at least seven days pre-hearing. At the evidentiary hearing held before the planning commission, all issues are addressed. If the planning commission denies the application, any party with standing (i.e., anyone who appeared before the planning commission either in person or in writing) may appeal the planning commission denial to the city commission. If the planning commission denies the application and no appeal has been received within ten days of the issuance of the final decision then the action of the planning commission becomes the final decision of the city. If the planning commission votes to approve the application, that decision is forwarded as a recommendation to the city commission for final consideration. In either case, any review by the city commission is on the record and only issues raised before the planning commission may be raised before the city commission. **The city commission decision is the city's final decision and is appealable to the land use board of appeals (LUBA) within twenty-one days of when it becomes final.**

The application, decision, and supporting documents are available for inspection at the Oregon City Planning Division located at 320 Warner-Milne Road, Oregon City, OR 97045, (503) 657-0891, between the hours of 8am and 1pm. Copies of these documents are available (for a fee) upon request.

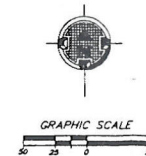
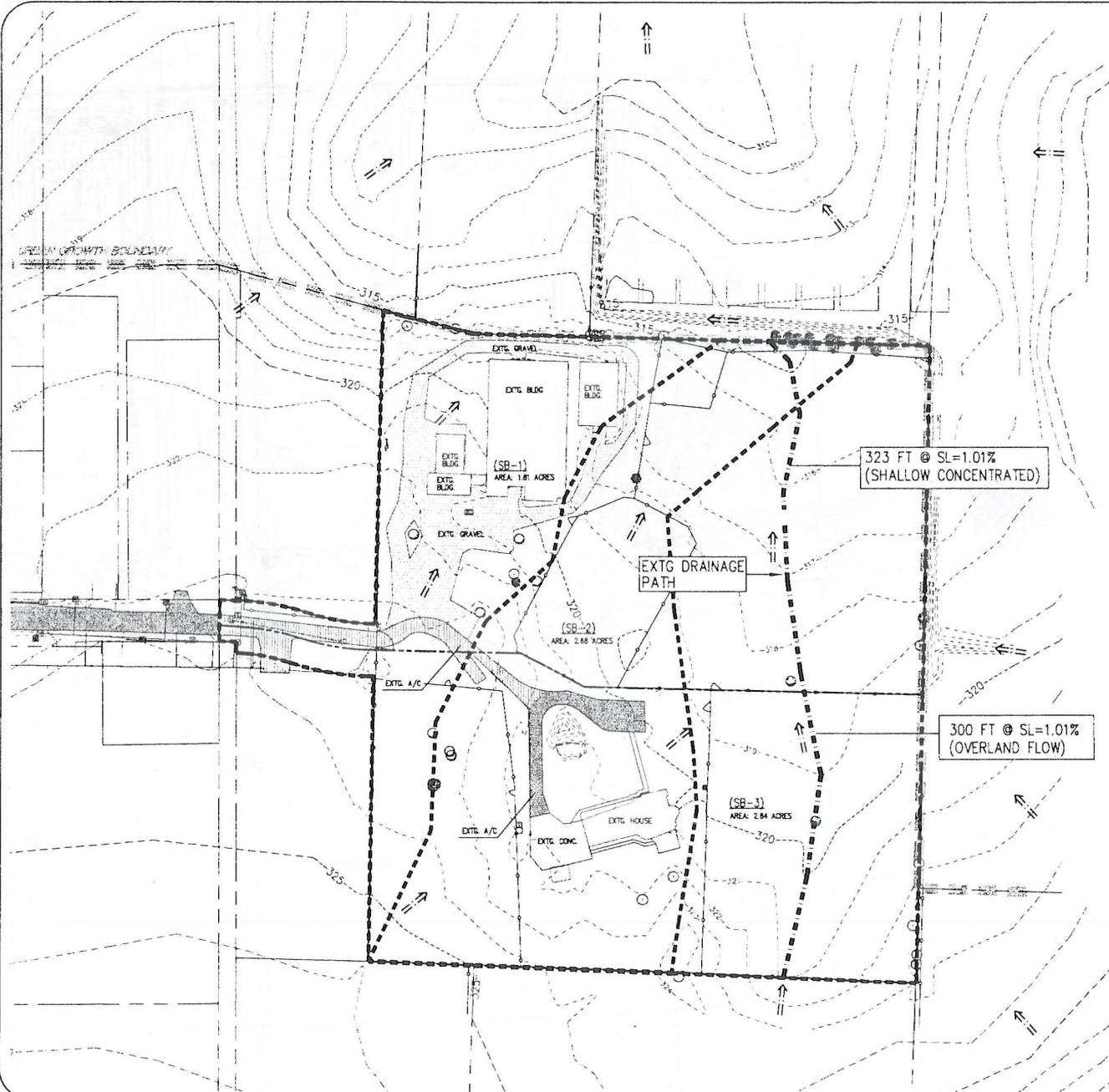
FINAL ORDER – EXHIBIT 1
AP 06-02

(ATTACHED)

CONDITIONS OF APPROVAL – EXHIBIT 2
Planning File: AP 06-02 (TP 05-10)
Date: December 21, 2006

1. The applicant is responsible for this project's compliance to Engineering Policy 00-01. The policies pertain to any land use decision requiring the applicant to provide any public improvements.
2. The applicant shall sign a Non-remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's Capital Improvement regulations in effect at the time of such improvement.
3. The water system shall be designed for Ames Street, "A" Street, and "B" Street. All water mains in dead end streets will have to be extended to the ends of the roadways, and ended with 8-inch gate valves and blow-offs for future extension with development of adjacent properties.
4. Fire hydrants shall be located and installed per Clackamas County Fire District No. 1's requirements.
5. The sanitary sewer system shall be designed to provide for future extension of gravity sanitary sewer mains where needed for development of adjacent properties. The use of the proposed 6-inch main in "A" Street requires further scrutiny during the plan review stage. The details of how the private force mains connect to the public line will also be further reviewed during the plan review stage.
6. Sanitary sewer improvements shall be constructed along the site's street frontages of Ames Street, and to the extent possible, along "A" Street and "B" Street.
7. Storm sewer improvements shall be constructed along the site's street frontages of Ames Street, "A" Street, and "B" Street.
8. The applicant shall provide a full-street improvement from the existing east end of Ames Street to the east edge of Tax Lot 1500 matching the requirement for "A" and "B" Streets except for the narrower planter strip of 3.5 feet. The rest of Ames Street shall be a half-street plus 10 feet of pavement for a total of 26 feet of pavement. The applicant shall provide curb and gutter on the north side, 5-foot planter strip including curb, and 5-foot sidewalk on the north side while the south side will not have the planter strip or sidewalk.
9. The City requires full-street improvements for A and B Streets. The improved street portion the applicant is required to provide for a full-street includes, but is not to be limited to, base rock, paved full-street width of 32 feet, curbs and gutters, 5-foot planter strip including curb width, 5-foot concrete sidewalk behind the planter strip, city utilities (water, sanitary and storm drainage facilities), curb return radii, curb (handicap) ramps, centerline monumentation in monument boxes, traffic control devices, street trees, and street lights.
10. The applicant has proposed a temporary emergency access turnaround easement for both streets until the street continues through to another access point. These easements or an alternate solution will be subject to approval by the Clackamas County Fire District #1.
11. The applicant shall ensure drainage for the southern half of the half-street Ames Street improvement is controlled and designed to flow into a city stormwater facility.
12. The Applicant shall provide reserve strips for this development at the stub ends of Ames Street, "A" Street, and "B" Street and along the southern side of Ames along the TL 1404 boundary.

13. The applicant shall submit for approval a street tree plan prior to the issuance of a grading permit for the site. The street tree plan shall also include the planting of street trees on all new streets and along the newly extended Ames Street.
14. A tree removal and replanting plan is required prior to receiving engineering approval. If trees are later proposed to be removed outside of the building area, the applicant will follow the prescriptive replanting schedule outlined in OCMC 16.12.310-1.
15. Ten-foot public utility easements along all street frontages and all easements required for the final engineering plans shall be dedicated to the public on the final plat. All existing and proposed utilities and easements shall be indicated on the construction plans. All off-site utility easements required for this project shall be obtained and submitted to the City prior to approval of the construction plans.
16. The applicant shall follow the conclusions and recommendations of the Geotechnical Engineering Report dated August 18, 2005 (Exhibit 10) by Beth K. Rapp, Staff Geologist, and Scott L. Hardman, P.E., of GeoPacific Engineering, Inc.
17. The applicant shall provide, at a minimum, an armored flow path from the storm manhole to the ditch.
18. The applicant shall provide a revised Landscaping Plan identifying which trees will be removed from the site in relation to the setbacks, utility easements and ROW for the project. The landscaping plan shall be approved by the Planning Department prior to the issuance of a grading permit for the site. Trees that are to be removed that are not located within the ROW, utility easements or setbacks shall be replaced on site pursuant to OCMC 16.12.310.
19. The applicant must plan to construct and complete the entire stormwater system, including the pond and its landscaping prior to recording of the plat. The City will not accept a surety for the pond landscaping unless Staff determines that an adequate planting season is not available prior to submission of the final plat. Even if this is the case, Staff will still require a minimum of an adequate application of hydroseeding/erosion blanket or other means to ensure the pond performs adequately to meet turbidity regulations within the City's Erosion Control regulations.
20. Prior to receiving Plat approvals, the applicant shall submit all CC&R's, maintenance agreements, dedications, easements, and related documents for the subdivision
21. The applicant shall ensure that construction plans for the subdivision conform to the Sight Distance Requirements of OCMC 10.32.
22. The applicant shall agree to transfer the appropriate number of PPSS LID "lot" units from TL 1402 to TL 1404 to match the 11 lots being proposed on TL 1402. The applicant shall pay the city for the 11 units of PPSS LID for TL 1402 prior to recordation of the plat.



PRE-DEVELOPED BASIN DATA:

AREA pervious = 6.19 ACRES
 AREA impervious = 0.69 ACRES
 CN pervious = 89
 CN impervious = 98

SUB BASIN DATA:

SB-1:

AREA perv

.91 acres-pasture
 .41 acres-Gravel

AREA imp = 0.43 acres

.11 acres-Asphalt
 .32 acres-Outbuildings

SB-2:

AREA perv = 2.42 acres

2.38 acres-pasture
 .04 acres-Gravel

AREA imp = 0.26 acres

.11 acres-Asphalt
 .08 acres-Concrete
 .07 acres-Building

SB-3:

AREA perv = 2.84 acres

AREA imp = 0 acres

Attachment: C

PRE DEVELOPMENT DRAINAGE MAP
 SUNNYBROOK ESTATES

22E-21D TL 1402 + 1404

OREGON CITY, OREGON
 FOR TERRY VOSS

REV.	DESCRIPTION	DATE

PROJECT NO.
 VOS 001

CASE FILE NO.

DATE: 6/27/06
 DESIGNED: J. PECK
 ENGINEER: S. ROPER
 CHECKED:
 SHEET TITLE
 DRAINAGE
 SHEET NUMBER

D1



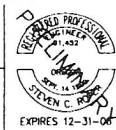
DATE	6/26/06
DESIGNED	J PECK
ENGINEER	S ROPER
CHECKED	
SHEET TITLE	
DRAINAGE	
SHEET NUMBER	

PROJECT NO.	VOS001
CASE FILE NO	

[illegible]

22E-21D TL 1402 AND 1404

OREGON CITY, OREGON
FOR TERRY VOSS



SR Design LLC

ENGINEERING - PLANNING

8196 SW HALL BLVD., STE. 232
BEAVERTON, OR 97008
PHONE: (503) 469-1213 FAX: (503) 469-8553

Tony Konkol

From: Tony Konkol
Sent: Thursday, May 15, 2014 9:47 AM
To: 'Barbara Renken'
Cc: David Frasher; Jim Loeffler; Charles Kidwell
Subject: RE: Planning Commission Meeting, May 12, 2014

Morning Barbara,

Thank you for the email and bringing forward your, and others concerns, it is greatly appreciated. I will be happy to explain and enter the following summary into record at the next Planning Commission meeting.

During the meeting there were several issues raised through testimony and by the Planning Commission members. I emailed one of my staff members asking them to give me a call if they were available because I had a question. My staff member called me and I left room to take the call.

I then asked Mr. Handris to step outside and we exited the commission chamber into the public lobby. I informed Mr. Handris that there were several questions/concerns raised during the hearing, including questions and requests for detailed drawings/information from the Planning Commission, that we did not have available at the meeting to respond to. I asked Mr. Handris how he would like to proceed. Mr. Handris asked if the application was denied, would he be allowed to submit another application. I informed him that there is a specific section of the code that addresses the re-submittal of an application and that I would need to review it.

I informed Mr. Handris that if he were to request a continuance, that do to Memorial Day, we would not have another meeting until June 9th and that he would need to request an extension of the 120-day decision deadline because there would not be sufficient time with the continuance to meet the 120-day notice of decision date. The applicant controls the 120-date and this date cannot be changed by the city without a request to do so from the applicant. I also informed Mr. Handris that if he were to request a continuance, it would need to occur prior to the Planning Commission closing the public hearing. Mr. Handris asked if he could withdraw the application and submit an R-10 subdivision. I informed him that he is permitted to do so. The discussion was general in nature, including recent zone change decisions by the Planning Commission and clarifying how the hearing process would move forward, both at the Planning Commission and City Commission, if based on a recommendation from the Planning Commission or an appeal.

The Assistant City Attorney joined Mr. Handris and myself in the public lobby right outside the chamber doors. I introduced Mr. Handris and Ms. Bragar and then updated Ms. Bragar on the hearing procedural discussion Mr. Handris and I had. We returned to the commission chambers.

I, as well as my staff, have many responsibilities during the public meetings. Assisting the City Commission and Planning Commission in making decisions, working with citizens to participate in the process and ensuring for all involved, the city, citizens and the applicant, that the public hearing process is conducted fairly, appropriately and per the requirements of the Oregon City Municipal Code.

Once again, thank you for your email, I certainly understand why you and others had questions and I hope my response above addresses your concerns. I will certainly do a better job of clarifying in the future. I would request, if you have the ability, that you forward this email to those that have raised the concern with you. I would like to make sure the facts are available and continued questions, suspicions or rumors of my conduct, ethics or ability to conduct myself as a professional representative of this city are not left unanswered until the next Planning Commission meeting. Please let me know if you have any questions.

Thanks,
Tony

From: Barbara Renken [<mailto:miniflower@comcast.net>]
Sent: Wednesday, May 14, 2014 9:26 AM
To: Tony Konkol
Cc: David Frasher
Subject: Planning Commission Meeting, May 12, 2014

Hello Tony,

Monday night at the Planning Commission Meeting, at approximately 2 hrs:33 minutes, during the rebuttal to the Citizen Comments, you left the meeting in the middle of Rick Givens' response. You returned shortly and requested that Mr. Handris step outside the Chambers with you. At 2 hrs:37min:19 seconds, the attorney exits the Chambers. All three of you return at 2 hrs: 37min:57 seconds.

Since this was an open meeting I find your action places you in a compromising position. What could you possibly have to say to Mr. Handris that you couldn't say from your position on the panel, given this was a public hearing? Your actions were of concern to many guests and thought to be inappropriate.

I am requesting that you explain your actions at the next meeting of the Planning Commission.

Thank you,
Barbara Renken
PPNA C.I.C.

COMMENT FORM



PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to 3 MINUTES.
- Give to the Clerk in Chambers prior to the meeting.

Date of Meeting 5-12-14

Item Number From Agenda 2a

NAME: Louise m Davis

ADDRESS: Street: 15842 Ames St

City, State, Zip: Oregon City OR 97045

PHONE NUMBER: 503 650 8499

E-MAIL ADDRESS: _____

SIGNATURE: _____

Louise M Davis

COMMENT FORM



PLEASE PRINT CLEARLY

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- Limit Comments to 3 MINUTES.
- Give to the Clerk in Chambers prior to the meeting.

Date of Meeting

5/12/14

Item Number From Agenda

3A

NAME:

Woody Berends

ADDRESS:

Street: 15880 Swan Ave

City, State, Zip: Oregon city OR 97045

PHONE NUMBER:

503-781-0086

E-MAIL ADDRESS:

Woody's desk @ Gmail.com

SIGNATURE:

Woody Berends

COMMENT FORM



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Date of Meeting 5/12/2014

Item Number From Agenda 3A

NAME: DEBBIE FULLER

ADDRESS: Street: 15901 AMES ST

City, State, Zip: OREGON CITY OR 97045

PHONE NUMBER: 503-888-1972

E-MAIL ADDRESS: gramzx3@gmail.com

SIGNATURE: Debbie Fuller

COMMENT FORM



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Date of Meeting 5.12.14

Item Number From Agenda 3A

NAME:

Shirley Patton

ADDRESS:

Street: 14550 Forsythe Road, O.C. 97045

City, State, Zip: _____

PHONE NUMBER:

503.804.2460

E-MAIL ADDRESS:

Shirley.pattton@westoffice.net

SIGNATURE:

Shirley Patton

COMMENT FORM



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Date of Meeting 5-12-14

Item Number From Agenda 3A

NAME: Herb Staudenmiller

ADDRESS: Street: 14491 Ames

City, State, Zip: Oregon City OR

PHONE NUMBER: 503-557-8627

E-MAIL ADDRESS: _____

SIGNATURE: [Signature]

COMMENT FORM



OREGON
CITY

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Date of Meeting 5/12/14

Item Number From Agenda 3A

NAME: STEVEN BROWER

ADDRESS: Street: ~~13800~~ 15944 AMES ST.

City, State, Zip: OREGON CITY, OR 97045

PHONE NUMBER: 509-879-2038

E-MAIL ADDRESS: SBAUDEB@GMAIL.COM

SIGNATURE: 

COMMENT FORM



OREGON
CITY

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Date of Meeting

05/12/14

Item Number From Agenda

111 3a

NAME:

Gary Martin

ADDRESS:

Street: 15893 Altona Ln

City, State, Zip: Or City 97045

PHONE NUMBER:

503 881 4756

E-MAIL ADDRESS:

martingl@comcast.net

SIGNATURE:

Gary A. Martin

COMMENT FORM



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Date of Meeting May 12, 2014

Item Number From Agenda 3a

NAME: Barbara Renken

ADDRESS: Street: 15090 Dyer Dr.

City, State, Zip: OC. 97045

PHONE NUMBER: 503 722-3941

E-MAIL ADDRESS: miniflower@comcast.net

SIGNATURE: Barbara Renken

COMMENT FORM



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- Give to the Clerk in Chambers prior to the meeting.

Date of Meeting 05-12-2014

Item Number From Agenda PC 14-048

NAME: Ray Renken

ADDRESS: Street: 15090 Oyer Dr

City, State, Zip: OC OR 97045

PHONE NUMBER: 503 722-3941

E-MAIL ADDRESS: rbrenken@comcast.net

SIGNATURE: Ray Renken

COMMENT FORM



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Date of Meeting 5-12-2014

Item Number From Agenda 3A

NAME: Janice Vandomelen

ADDRESS: Street: 15831 Stables Pl

City, State, Zip: Oregon City OR 97045

PHONE NUMBER: 503-655-1740

E-MAIL ADDRESS: vandomelen6966@comcast.net

SIGNATURE: Janice Vandomelen

COMMENT FORM



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- Give to the Clerk in Chambers prior to the meeting.

Date of Meeting 5-12-14

Item Number From Agenda 9a

NAME: BOB LA SALLE

ADDRESS: Street: 16298 S. OAKTREE TERR

City, State, Zip: O.C. 97045

PHONE NUMBER: 503-318-2969

E-MAIL ADDRESS: jeanbob06@comcast.net

SIGNATURE: Bob LaSalle

COMMENT FORM



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- Give to the Clerk in Chambers prior to the meeting.

Date of Meeting

5/12/2014

Item Number From Agenda

Sunnybrook 2

NAME:

Rick Givens

ADDRESS:

Street: 18680 Sunblaze Dr.

City, State, Zip: Oregon City, OR 97045

PHONE NUMBER:

503-479-0097

E-MAIL ADDRESS:

rickgivens@gmail.com

SIGNATURE:

Rick Givens

COMMENT FORM



PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to **3 MINUTES**.
- Give to the Clerk in Chambers **prior** to the meeting.

Date of Meeting

5/12/14

Item Number From Agenda

AMES

NAME:

Bruce Gordon

ADDRESS:

Street:

P.O. Box 1345

City, State, Zip:

LAKE OSWEGO - 97035

PHONE NUMBER:

E-MAIL ADDRESS:

thetange.comcast.net

SIGNATURE:

[Handwritten signature]



City of Oregon City

625 Center Street
Oregon City, OR 97045
503-657-0891

Staff Report

File Number: PC 14-046

Agenda Date: 5/12/2014

Status: Agenda Ready

To: Planning Commission

Agenda #: 3a

From: Community Development Director Tony Konkol and
Planning Commission

File Type: Planning Item

SUBJECT:

ZC 14-01 / TP 14-01: Zone Change from R-10 to R-8 with 29-Lot Subdivision between Ames Street and Holcomb Boulevard.

RECOMMENDED ACTION (Motion):

Staff recommends that the Planning Commission approve the proposed zone change and subdivision and forward the application to the City Commission for consideration at the June 4th, 2014 City Commission Public Hearing.

BACKGROUND:

Staff finds that the proposed zone change from R-10 to R-8 and 29-Lot subdivision application as proposed by the applicant can meet all of the applicable criteria for approval, with the proposed Conditions of Approval as addressed in the attached Staff Report.



TYPE IV APPLICATION STAFF REPORT AND RECOMMENDATION

May 7, 2014

Planning Commission Public Hearing: May 12, 2014

FILE NO.: TP 14-01: 29-Lot Subdivision
ZC 14-01: Zone Change

OWNERS: Terry & Rene Voss / Stephen Jones

APPLICANT: Mark Handris, ICON Construction and Development

REPRESENTATIVES: Rick Givens, Planning Consultant
Bruce Goldson, P.E., Theta Engineering

REQUEST: The Applicant is seeking approval for a Zone Change from “R-10” Single-Family Dwelling District to “R-8” Single-Family Dwelling District as well as a 29-lot subdivision.

LOCATION: Clackamas Map 2-2E-21DC-01600 / NO SITUS ADDRESS
(Exhibit 1) 14550 Ames Street, Oregon City, Clackamas Map 2-2E-21DC-01300
14591 Holcomb Blvd, Oregon City, Clackamas Map 2-2E-28AB-01600

REVIEWER: Pete Walter, AICP, Associate Planner
Todd Martinez, P.E., Development Services

RECOMMENDATION: Staff recommends the Planning Commission recommend approval with conditions of Planning files TP 14-01 and ZC 14-01 to the City Commission for their consideration at the June 4, 2014 public hearing.

PROCESS: Type IV decisions include only quasi-judicial plan amendments and zone changes. These applications involve the greatest amount of discretion and evaluation of subjective approval standards and must be heard by the city commission for final action. The process for these land use decisions is controlled by ORS 197.763. At the evidentiary hearing held before the planning commission, all issues are addressed. If the planning commission denies the application, any party with standing (i.e., anyone who appeared before the planning commission either in person or in writing) may appeal the planning commission denial to the city commission. If the planning commission denies the application and no appeal has been received within ten days of the issuance of the final decision then the action of the planning commission becomes the final decision of the city. If the planning commission votes to approve the application, that decision is forwarded as a recommendation to the city commission for final consideration. In either case, any review by the city commission is on the record and only issues raised before the planning commission may be raised before the city commission. The city commission decision is the city's final decision and is appealable to the land use board of appeals (LUBA) within twenty-one days of when it becomes final.
IF YOU HAVE ANY QUESTIONS ABOUT THIS APPLICATION, PLEASE CONTACT THE PLANNING DIVISION OFFICE AT (503) 722-3789.

I. BACKGROUND AND PROPOSED DEVELOPMENT:

The subject property is located on the south side of Ames Street at its present terminus at the city limit. It is immediately west of the Holcomb Elementary School campus and abuts on its south boundary the Housing Authority of Clackamas County (HACC) "Oregon City View Manor" development on Holcomb Blvd.

The subject property is zoned R-10 and this application includes a proposal to apply R-8 zoning to Tax Lots 2-2E-21DC 1600 and 2-2E-28AB 1600, as well as to a small area of Tax Lot 2-2E-21DC 1300.

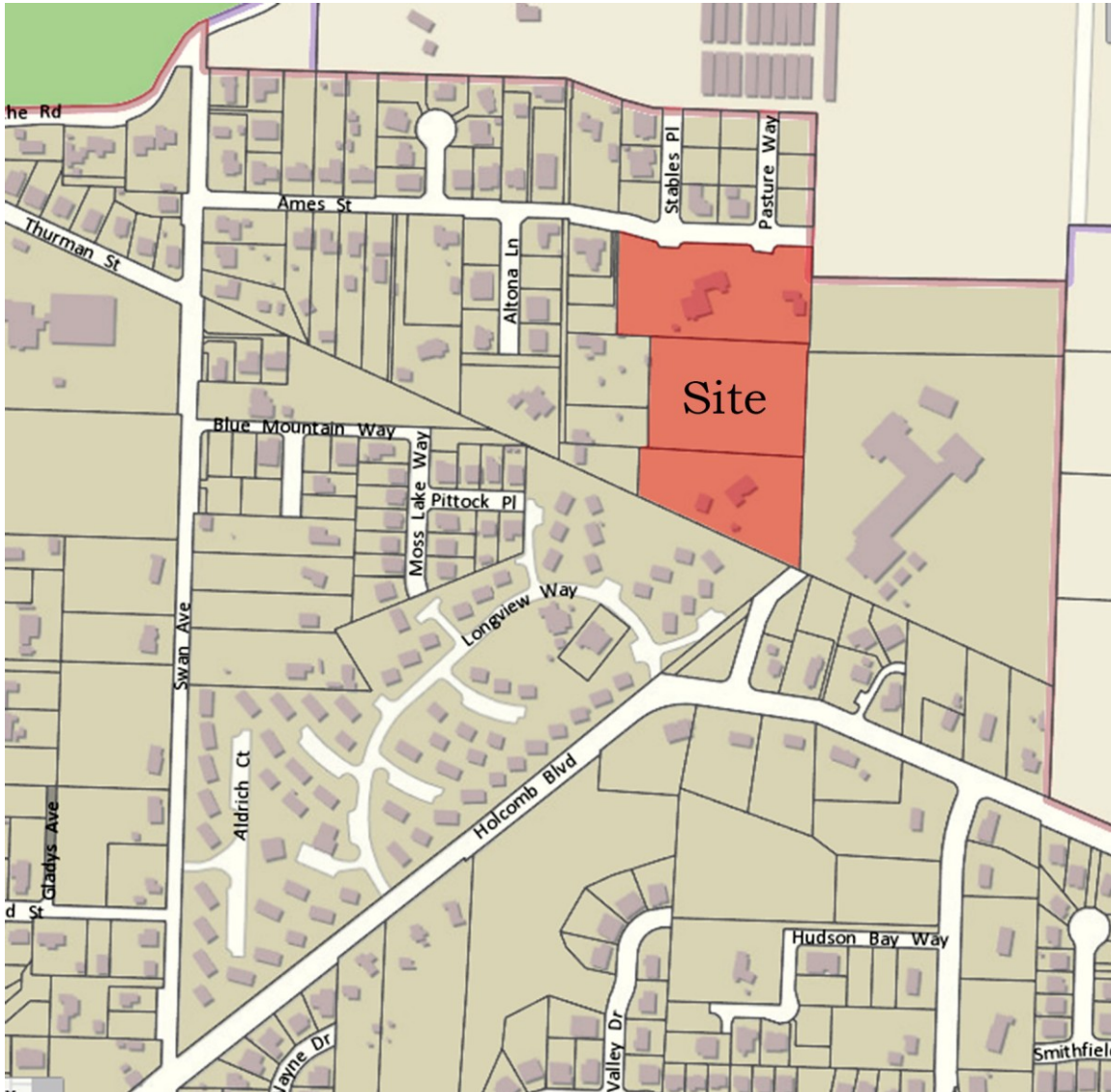


Figure 1. Vicinity Map

The subject property slopes gently from north to south. The original Sunnybrook Estates subdivision is located immediately to the north of this site and is developed with single family homes.

The site contains two existing single-family homes and several outbuildings. The existing home on the southerly Tax Lot 1600 is proposed to be moved to Lot 16 within the planned subdivision to allow for the proposed development of the property. The proposal for the northerly home includes removal of some portions of the structure that were added on to the main house structure. With this remodeling, the home will fit on proposed Lot 5 in conformance with R-10 setbacks.



Figure 2: Aerial Photo of Site

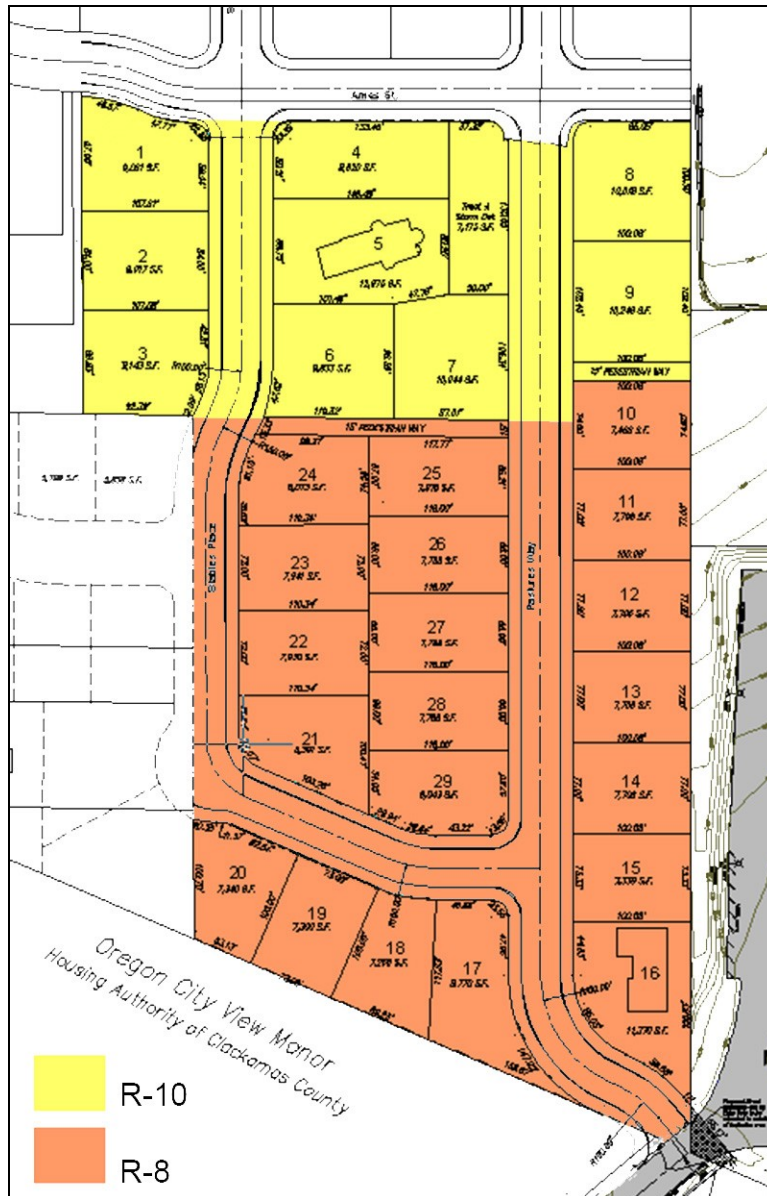


Figure 3: Proposed Zoning

Surrounding Uses and Zoning:

The subject property is bordered by residential zoning: R-10 to the north, east, and west, and R-3.5 to the south. Other nearby zoning designations include R-8 and County lands outside of the City limits and Urban Growth boundary. See Figure 4 for a surrounding zoning map.

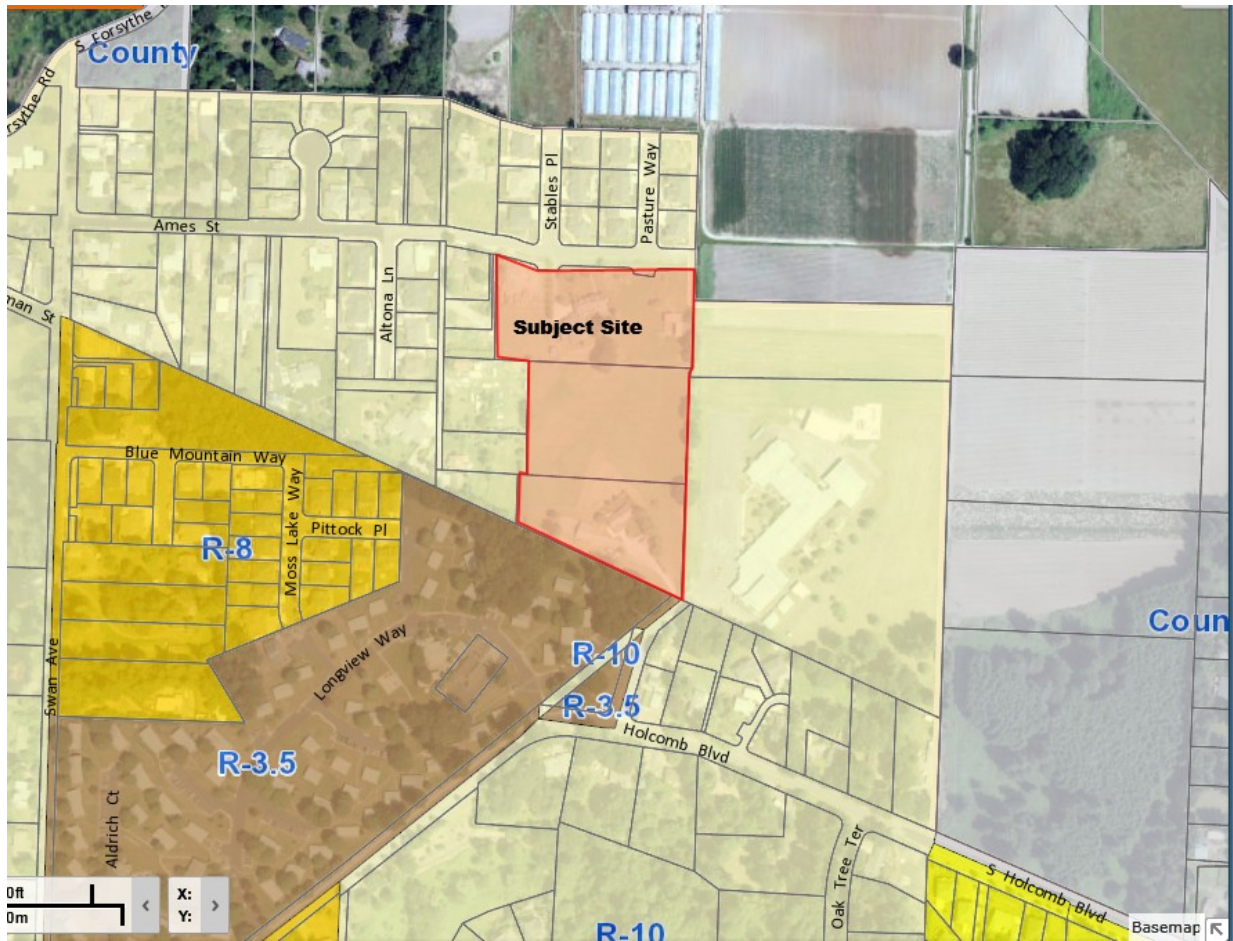


Figure 4. Surrounding zoning

City/Public Notice and Comments:

Notice of the public hearings for this proposal (See Exhibit 10) was mailed to property owners within 300 feet of the subject site, the neighborhood association and the Citizen Involvement Council. The notice was advertised in the Clackamas Review / Oregon City News and Estacada News and the site was posted with land use notification signs. The notice requested comments and indicated that interested parties could testify at the public hearing or submit written comments prior to or at the hearing. The application was transmitted to the Clackamas River Water District, Oregon Department of Transportation, Clackamas County, Oregon City Police Department, City Engineer, Public Works Operations Manager, Development Services Manager, Oregon City School District, GIS Coordinator, and the City transportation consultant for comment. Comments from John Replinger, a City consultant for Replinger and Associates, have been incorporated into this staff report. Also, a copy of the complete application ZC 14-01 / TP 14-01 was made available on the city website for downloading at <http://www.orcity.org/planning/landuse> once the application was deemed to be complete.

Comments received before the staff report was written include the following:

Betty Johnson, Engineering Associate with Clackamas River Water (Exhibit 9):

1. Parcels 22E21DC01600 & 22E28AB01600 are currently within the Clackamas River Water District service boundary and within the city limits of Oregon City.

2. There are no available Clackamas River Water waterlines to serve these parcels. It is recommended that the parcels be served by Oregon City water infrastructure.

3. If the City requires this development to undergo an annexation process for city services the District would like to be included as part of the process to withdraw the parcels from the District's Service Boundary.

CRW has no objections to this application, however these comments are introductory and may change based on the preliminary/final design.

The Public Works Department is working with Clackamas River Water to address and resolve these jurisdictional issues independently of this development review.

Public Comments

Public Comments were received before 5/5/2014 from the following residents and groups (Exhibit 5).

Leroy and Marge Staudenmier (opposed):

The Staudenmiers' primary comments include concerns about the adequacy of the retention pond, drainage impacts, water and mud running out of the drainage pond in existing Sunnybrook Estates subdivision, lots size, quality of life, unimproved conditions of off-site roads, and traffic impacts at Ames and Swan avenue intersection.

Duane and Wanda Shearer (opposed):

The Shearer's primary comments include concerns about street safety, changes to lot size, limited on-street parking, school capacity, and drainage.

Debbie Fuller (opposed):

Ms. Fuller's primary comments include concerns about re-zoning, subdivision, construction traffic, driveway blockages, fencing, half streets, property values, rental ownership, liveability and quality of life.

Woody Berends (opposed):

Mr. Berend's primary comments include concerns about the safety of the Ames Street / San Avenue intersection, the existing width of Ames Street, on-street parking, drainage impacts, storm water drainage and maintenance for a ditch that runs on/near his property, and changes from R-10 zoning.

Bob LaSalle, Chair, Park Place Neighborhood Association (opposed)

Please Note: the first set of comments of the PPNA were submitted on February 3, 2014 prior to the formal public notice of the application. The letter, accompanied by numerous resident signatures, summarizes the neighborhood association meeting that was held on January 20, 2014. The letter includes concerns about the current width of Ames Street (20') where it intersects Swan Avenue, the proposed connection to the Holcomb Boulevard/ School road, reductions in property values, smaller lots sizes and changing zoning from R-10.

Bob LaSalle, Chair, Park Place Neighborhood Association (opposed)

The second letter from Mr. LaSalle was submitted on April 28, 2014. The PPNA is opposed to the R-8 rezoning. Comments include concerns about the changes to the feel of the development due to smaller lot sizes and setbacks., the narrow width of Ames Street where it intersects with Swan Avenue, possible damage to streets that may be caused by construction traffic, the proposed street connection to Holcomb School Road, street widths, on-street parking. The letter also makes reference to certain comprehensive plan policies and makes remarks about the review process.

Staff Response to Public Comments

Due to the wide variety of the issues discussed in the various public comments, Planning Staff will address the public comments verbally during the presentation of the Staff Report at the upcoming public hearing, however, staff has determined that none of the comments submitted cite or indicate an approval criterion in the Oregon City Municipal Code which has not been met or which cannot be met through compliance with the recommended Conditions of Approval.

II. DECISION-MAKING CRITERIA:

Oregon City Municipal Code Standards and Requirements

Title 16: Land Division:

Chapter 16.08, Subdivisions-Process and Standards

Chapter 16.12, Minimum Improvements and Design Standards for Land Divisions

Title 12: Streets, Sidewalks and Public Places:

Chapter 12.04, Street Design Standards

Chapter 12.08, Public and Street Trees

Title 13: Public Services

Chapter 13.12, Stormwater Management

Title 17: Zoning:

Chapter 17.08, R-10 Single Family Dwelling District

Chapter 17.10, R-8 Single Family Dwelling District

Chapter 17.41, Tree Protection

Chapter 17.47, Erosion and Sediment Control

Chapter 17.68, Zone Changes and Amendments

III. COMPLIANCE WITH APPROVAL CRITERIA

CHAPTER 17.68.020 ZONE CHANGES AND AMENDMENTS

A. The proposal shall be consistent with the goals and policies of the comprehensive plan.

Goal 1: Citizen Involvement

Goal 1.2: Ensure that citizens, neighborhood groups and affected property owners are involved in all phases of the comprehensive planning program.

Finding: Complies as Proposed. Chapter 17.50 of the Oregon City Municipal Code includes provisions to ensure that citizens, neighborhood groups, and affected property owners have ample opportunity for participation in zone change applications. The Applicant met with a neighborhood association prior to submitting this application. Once the application was deemed complete, the City noticed the application to

properties within 300 feet and the neighborhood association, and Citizens Involvement Council, and posted the application on the City's website. In addition, the Applicant posted signs on the subject site. All interested persons have the opportunity to comment in writing or in person through the public hearing process. By following this process, the requirements of this policy are met.

Goal 2: Land Use

Goal 2.1: Ensure that property planned for residential, commercial, office and industrial uses is used efficiently and that land is developed following principles of sustainable development.

Finding: Complies as Proposed. The Applicant requested a zone change from "R-10" Single-Family Dwelling District to the "R-8" Single-Family Dwelling District. The zone change would allow additional dwellings to be constructed and the property to be utilized in an efficient manner, consistent with the adjacent properties. This standard has been met.

Goal 2.7: Maintain the Oregon City Comprehensive Plan Land-Use Map as the official long-range planning guide for land-use development of the city by type, density and location.

Finding: Complies as Proposed. The Oregon City Comprehensive Plan designates the subject property as within the "LR" Low Density Residential Development designation. The "LR" Low Density Residential Development designation includes the R-10, R-8 and R-6 zoning designations. The Applicant has not proposed to alter the Comprehensive Plan designation of the site. The subject site is located adjacent to R-3.5 and near R-8 zoned properties, and thus the density of R-8 development is appropriate.

Goal (5) Natural Resources

Policy 5.4.4: Consider natural resources and their contribution to quality of life as a key community value when planning, evaluating and assessing costs of City actions.

Finding: Complies as Proposed. This policy is implemented by the application of the Natural Resources Overlay District (NROD). The subject property is not located within the NROD boundary.

Goal 6: Quality of Air, Water and Land Resources

Goal 6.1.1: Promote land-use patterns that reduce the need for distance travel by single-occupancy vehicles and increase opportunities for walking, biking and/or transit to destinations such as places of employment, shopping and education.

Finding: Complies as Proposed. The proposed R-8 development pattern will be consistent with this policy by creation of a more compact land use pattern and reduction in the square footage of public street per dwelling, thereby reducing travel by single-occupancy vehicles and increasing use of alternative modes of transportation. Public sidewalks will be provided on all streets within this project. This standard has been met.

Policy 6.2.1 Prevent erosion and restrict the discharge of sediments into surface and groundwater by requiring erosion prevention measures and sediment control practices.

Finding: Complies as Proposed. This policy is implemented by development standards that require appropriate handling of storm water runoff. Standard erosion control measures will be implemented during construction. Storm runoff from the proposed development will be collected with a storm sewer system, as shown on the preliminary utility plan submitted with this application. The applicant has proposed to construct erosion control improvements at the existing outfall. Please refer to the findings within this report.

Goal 10: Housing

Goal 10.1.3: Designate residential land for a balanced variety of densities and types of housing, such as single-family attached and detached, and a range of multi-family densities and types, including mixed-use development.

Finding: Complies as Proposed. The proposed zone change will maintain the basic land use for this site as Low Density Residential, consistent with the Oregon City Comprehensive Plan. The increased density allowed by the R-8 zoning, as compared with the existing R-10 district will provide for a greater number of single-family homes on this site, thereby increasing the availability of more choices in the marketplace. This standard has been met.

Goal 11: Public Facilities

Goal 11.1: Serve the health, safety, education, welfare and recreational needs of all Oregon City residents through the planning and provision of adequate public facilities.

Finding: Complies as Proposed. All public facilities necessary to serve this project are available at adequate levels to meet the proposed R-8 zoning. Sanitary sewer is available from an existing 8-inch line that is installed in Ames Street along the frontage of the property which will be extended into the property. Water service is available from an 8-inch City line in Ames Street and School Road that will be extended into the property. Storm water service is provided by a 12-inch pipe on Ames Street that will be extended into the property. Oregon City School District provides education services and has adequate levels of service available (Exhibit 6). Police and fire protection are provided by the City of Oregon City. The site is not located within walking distance of any parks, however builders will be required to pay Park SDCs (System Development Charges for each new unit to pay for future parks to serve the area if indicated in the parks master plan.

Policy 11.1.4: Support development of underdeveloped or vacant buildable land within the city where public facilities and services are available or can be provided and where land use compatibility can be found relative to the environment, zoning and comprehensive plan goals.

Finding: Complies as Proposed. All public facilities necessary to serve this project are available at adequate levels to meet the proposed R-8 zoning. The proposed zone change would maintain the basic land use for this site as Low Density Residential, consistent with the Oregon City Comprehensive Plan. Please refer to the findings within this report.

Goal 12: Transportation

Goal 12.6: Develop and maintain a transportation system that has enough capacity to meet users' needs.

Finding: Complies as Proposed. A transportation impact study (TIS) was prepared for this project, dated February 4, 2014, by Todd Mobley, P.E. of Lancaster Engineering (Exhibit 2). The TIS was reviewed by John Replinger of Replinger and Associates, City transportation consultant, who concluded: "15. Conclusions and Recommendations. The engineer concludes that traffic operations would be adequate at all analyzed intersections. He concludes no mitigation is needed for traffic operations. He concludes no safety mitigation is necessary and sight distance is acceptable. I concur with the conclusions of the applicant's engineer."

Mr. Replinger finds that the submitted TIS provides an adequate basis upon which to assess the impacts of the proposed subdivision and agreed that off-site mitigation for traffic impacts is not required (Exhibit 3).

B. That public facilities and services (water, sewer, storm drainage, transportation, schools, police and fire protection) are presently capable of supporting the uses allowed in the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.

Finding: Complies as Proposed. The public facilities and services have been addressed in the discussion of

compliance with Goal 11, above and within this report. All the services are available and adequate to meet the needs of this property when developed to levels allowed by the R-8 zoning district. Staff finds that the application is consistent with this approval criterion (B).

C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.

Finding: Complies as Proposed. Please see above comments. Additionally, Mr. Replinger reviewed the TIS specifically for compliance with this standard. As stated in Exhibit 3 - *Comment 6. Analysis:*

"Traffic volumes were calculated for the intersections described in #1, above. At each location, the level of service (LOS) and delay calculations were provided to assess operations relative to the city's operational standard. The analysis was undertaken for the AM, mid-day, and PM peak hours and included year 2014 existing conditions, 2017 background conditions, and year 2017 total traffic conditions.

According to the engineer, the intersection of Holcomb Boulevard and Holcomb School Road is predicted to operate at LOS "C" during the AM peak hour; "B" during the mid-day peak hour and "A" during the PM peak hour under all conditions. The intersection volume-to-capacity ratio (v/c) is predicted to be 0.43 or better under all conditions and easily meets the city's operational standard. The other three intersections are predicted to operate at LOS "A" or better under all conditions during all hours. The performance of all study area intersections is predicted to meet city standards during the peak hours.

The engineer also analyzed the potential for the new connection, Pasture Way, from Ames Street to Holcomb School Road to shift traffic patterns. He concluded that even with the potential new cut-through traffic, the intersections would still easily meet the city's operational standards. I found his methodology to be sound and concur with his conclusions on the ability of the streets to accommodate this neighborhood traffic. The engineer concluded no mitigation measures were necessary. I concur with his conclusions."

And, under comment 14, "The engineer states that the proposal does not change the functional classification of any existing or planned transportation facility; does not alter the standards for implementing the functional classification system; and does not alter the level of travel or degrade the performance of the transportation system such that it would not meet applicable performance standards."

Staff concurs with Mr. Replinger and finds that the application is consistent with this approval criterion (C).

D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.

Finding: Not Applicable. The comprehensive plan contains specific policies and provisions which control the zone change.

CHAPTER 17.10 "R-8" SINGLE-FAMILY DWELLING DISTRICT

Lots 10-29 will be rezoned to R-8. Please refer to Staff's Preliminary Plat Lot Analysis chart in Exhibit 7.

17.10.040. A. Minimum lot area, eight thousand square feet;

Finding: Complies as Proposed. Chapter 16.10.050 of the Oregon City Municipal Code allows lots that are up to 20% less than the required minimum lot area of the applicable zoning designation provided the

subdivision, on average, meets the minimum site area requirement of the underlying R-8 zone. In the R-8 zone, the 20% standard would allow certain lots to be as small as 6,400 square feet. The smallest lot size proposed is 7,266 square feet. The largest is 11,370 square feet. The average lot size for the entire R-8 portion of subdivision is 8,017 square feet.

17.10.040. B. Minimum lot width, sixty feet;

Finding: Complies as proposed. The proposed lot widths exceed the minimum lot width of 60 feet. The smallest lot width proposed is 65 feet. The widest is 101 feet. The average lot width is 73 feet. This standard has been met.

17.10.040. C. Minimum lot depth, seventy-five feet;

Finding: Complies as Proposed. As demonstrated below, the proposed lot depths exceed the minimum lot depth of 75 feet. The smallest lot depth proposed is 100 feet. The deepest is 135 feet. The average lot depth is 109 feet. This standard has been met.

17.10.040.D. Maximum building height: two and one-half stories, not to exceed thirty-five feet.

Finding: Not Applicable. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed. The Applicant did not propose to construct structures with the proposed development.

17.10.040.E

E. Minimum Required Setbacks:

- 1. Front yard fifteen feet minimum setback;*
- 2. Front porch, ten feet minimum setback;*
- 2. Attached and detached garage, twenty feet minimum setback from the public right-of-way where access is taken, except for alleys. Detached garages on an alley shall be setback a minimum of five feet in residential areas;*
- 3. Interior side yard, nine feet minimum setback for at least one side yard, seven feet minimum setback for the other side yard;*
- 4. Corner side yard, fifteen feet minimum setback;*
- 5. Rear yard, twenty feet minimum setback;*
- 6. Rear porch, fifteen feet minimum setback.*

Finding: Complies as Proposed. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed.

17.10.040.F. Garage standards: See Chapter 17.20—Residential Design Standards.

Finding: Complies as Proposed. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed.

G. Maximum lot coverage: The footprint of all structures two hundred square feet or greater shall cover a maximum of forty percent of the lot area.

Finding: Complies as Proposed. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed.

CHAPTER 17.08 “R-10” SINGLE-FAMILY DWELLING DISTRICT

Lots 1-9 will remain zoned R-10. Please refer to Staff’s Preliminary Plat Lot Analysis chart in Exhibit 7.

17.08.040. A. Minimum lot area, ten thousand square feet;

Finding: Complies as Proposed. Chapter 16.10.050 of the Oregon City Municipal Code allows lots that are up to 20% less than the required minimum lot area of the applicable zoning designation provided the subdivision, on average, meets the minimum site area requirement of the underlying R-10 zone. In the R-10 zone, the 20% standard would allow certain lots to be as small as 8,000 square feet. The smallest lot size proposed in the R-10 zone is 9,017 square feet. The largest is 12,952 square feet. The average lot size for the R-10 portion of the subdivision is 10,001 square feet.

17.08.040. B. Minimum lot width, sixty-five feet;

Finding: Complies as proposed. The proposed lot widths for the R-10 portion of the subdivision meet or exceed the minimum lot width of 65 feet. The smallest lot width proposed is 65 feet. The widest is 107 feet. The average lot width is 90 feet. This standard has been met.

17.08.040. C. Minimum lot depth, eighty feet;

Finding: Complies as Proposed. As demonstrated below, the proposed lot depths for the R-10 portion of the subdivision exceed the minimum lot depth of 80 feet. The smallest lot depth proposed is 87 feet. The deepest is 148 feet. The average lot depth is 113 feet. This standard has been met.

17.08.040.D. Maximum building height: two and one-half stories, not to exceed thirty-five feet.

Finding: Not Applicable. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed. The Applicant did not propose to construct structures with the proposed development.

17.08.040.E

Minimum required setbacks:

- 1. Front yard, twenty feet minimum setback,*
- 2. Front porch, fifteen feet minimum setback,*
- 3. Attached and detached garage, twenty feet minimum setback from the public right-of-way where access is taken, except for alleys. Detached garages on an alley shall be setback a minimum of five feet in residential areas.*
- 4. Interior side yard, ten feet minimum setback for at least one side yard; eight feet minimum setback for the other side yard,*
- 5. Corner side yard, fifteen feet minimum setback,*
- 6. Rear yard, twenty feet minimum setback,*
- 7. Rear porch, fifteen feet minimum setback.*

Finding: Complies as Proposed. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed.

17.08.040.F. Garage standards: See Chapter 17.20—Residential Design Standards.

Finding: Complies as Proposed. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed.

G. Maximum lot coverage: The footprint of all structures two hundred square feet or greater shall cover a maximum of forty percent of the lot area.

Finding: Complies as Proposed. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed.

CHAPTER 16.08 – SUBDIVISIONS PROCESS AND STANDARDS

16.08.010

All subdivisions shall be in compliance with the policies and design standards established by this chapter and with applicable standards in the City's Public Facilities Master Plan and the City Design Standards and Specifications. The evidence contained in this record indicates that the proposed subdivision is in compliance with standards and design specifications listed in this document, subject to the conditions of approval.

Finding: Complies with Conditions. As demonstrated within this staff report the proposed project was reviewed by the appropriate agencies and will comply with the criterion in the Oregon City Municipal Code with the conditions of approval. **The Applicant can meet this standard through all Conditions of Approval.**

16.08.015 *Preapplication conference required.*

Finding: Complies as Proposed. Consistent with City procedures, a pre-application conference was held on November 19, 2013 (PA 13-37).

16.08.020 - *Preliminary subdivision plat application.*

Within six months of the preapplication conference, an Applicant may apply for preliminary subdivision plat approval. The applicant's submittal must provide a complete description of existing conditions, the proposed subdivision and an explanation of how the application meets all applicable approval standards. The following sections describe the specific submittal requirements for a preliminary subdivision plat, which include plan drawings, a narrative statement and certain tabular information. Once the application is deemed to be complete, the community development director shall provide notice of the application and an invitation to comment for a minimum of fourteen days to surrounding property owners in accordance with Section 17.50.090(A). At the conclusion of the comment period, the community development director will evaluate the application, taking into consideration all relevant, timely filed comments, and render a written decision in accordance with Chapter 17.50. The community development director's decision may be appealed to the city commission with notification to the planning commission.

Finding: Complies as Proposed. The preliminary plat was submitted within six months of the pre-application conference date. The applicant's narrative and the other plans and documents submitted with it, contain the required information that will allow the City to determine compliance with relevant City standards. The application was reviewed and determined to be complete on March 7, 2014.

16.08.025 - *Preliminary subdivision plat—Required plans.*

The preliminary subdivision plat shall specifically and clearly show the following features and information on the maps, drawings, application form or attachments. All maps and site drawings shall be at a minimum scale of one inch to fifty feet.

A. Site Plan. A detailed site development plan showing the location and dimensions of lots, streets, pedestrian ways, transit stops, common areas, building envelopes and setbacks, all existing and proposed utilities and improvements including sanitary sewer, stormwater and water facilities, total impervious surface created (including streets, sidewalks, etc.) and an indication of existing and proposed land uses for the site. If required

by staff at the pre-application conference, a subdivision connectivity analysis shall be prepared by a transportation engineer licensed by the State of Oregon that describes the existing and future vehicular, bicycle and pedestrian connections between the proposed subdivision and existing or planned land uses on adjacent properties. The subdivision connectivity analysis shall include shadow plats of adjacent properties demonstrating how lot and street patterns within the proposed subdivision will extend to and/or from such adjacent properties and can be developed meeting the existing Oregon City Municipal Code design standards.

Finding: Complies as Proposed. The development application included a preliminary site plan displaying the necessary submittal requirements. This standard is met.

B. Traffic/Transportation Plan. The applicant's traffic/transportation information shall include two elements: (1) A detailed site circulation plan showing proposed vehicular, bicycle, transit and pedestrian access points and connections to the existing system, circulation patterns and connectivity to existing rights-of-way or adjacent tracts, parking and loading areas and any other transportation facilities in relation to the features illustrated on the site plan; and (2) a traffic impact study prepared by a qualified professional transportation engineer, licensed in the state of Oregon, that assesses the traffic impacts of the proposed development on the existing transportation system and analyzes the adequacy of the proposed internal transportation network to handle the anticipated traffic and the adequacy of the existing system to accommodate the traffic from the proposed development. The City Engineer may waive any of the foregoing requirements if determined that the requirement is unnecessary in the particular case.

Finding: Complies as Proposed. The development application included a preliminary site plan with connectivity analysis as well as a Transportation Impact Study (Exhibit 2). This standard is met.

C. Natural Features Plan and Topography, Preliminary Grading and Drainage Plan. The applicant shall submit a map illustrating all of the natural features and hazards on the subject property and, where practicable, within two hundred fifty feet of the property's boundary. The map shall also illustrate the approximate grade of the site before and after development. Illustrated features must include all proposed streets and cul-de-sacs, the location and estimated volume of all cuts and fills, and all stormwater management features. This plan shall identify the location of drainage patterns and courses on the site and within two hundred fifty feet of the property boundaries where practicable. Features that must be illustrated shall include the following:

1. Proposed and existing street rights-of-way and all other transportation facilities;
2. All proposed lots and tracts;
3. All trees proposed to be removed prior to final plat with a diameter six inches or greater diameter at breast height (d.b.h.);
4. All natural resource areas pursuant to Chapter 17.49, including all jurisdictional wetlands shown in a delineation according to the Corps of Engineers Wetlands Delineation Manual, January, 1987 edition, and approved by the Division of State Lands and wetlands identified in the City of Oregon Local Wetlands inventory, adopted by reference in the City of Oregon City comprehensive plan;
5. All known geologic and flood hazards, landslides or faults, areas with a water table within one foot of the surface and all flood management areas pursuant to Chapter 17.42
6. The location of any known state or federal threatened or endangered species;
7. All historic areas or cultural features acknowledged as such on any federal, state or city inventory;
8. All wildlife habitat or other natural features listed on any of the city's official inventories.

Finding: Complies as Proposed. The development application included preliminary site, utility, and drainage plans as well as the proposed lots, street, and trees proposed to be removed. The site does not contain any known wetlands or other natural or cultural features according to the city's official inventories.

D. Archeological Monitoring Recommendation. For all projects that will involve ground disturbance, the applicant shall provide,

1. A letter or email from the Oregon State Historic Preservation Office Archaeological Division indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the Oregon State Historic Preservation Office and that the Oregon State Historic Preservation Office had not commented within forty-five days of notification by the applicant; and
2. A letter or email from the applicable tribal cultural resource representative of the Confederated Tribes of the Grand Ronde, Confederated Tribes of the Siletz, Confederated Tribes of the Umatilla, Confederated Tribes of the Warm Springs and the Confederated Tribes of the Yakama Nation indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the applicable tribal cultural resource representative and that the applicable tribal cultural resource representative had not commented within forty-five days of notification by the applicant.

If, after forty-five days notice from the applicant, the Oregon State Historic Preservation Office or the applicable tribal cultural resource representative fails to provide comment, the city will not require the letter or email as part of the completeness review. For the purpose of this section, ground disturbance is defined as the movement of native soils. The community development director may waive any of the foregoing requirements if the community development director determines that the requirement is unnecessary in the particular case and that the intent of this chapter has been met.

Finding: Complies as Proposed. A description of the proposed development (PA 13-37) was sent to the Oregon State Historic Preservation Office (SHPO) as well as various tribes for review. SHPO indicated the proposed development would have no impact on any known archeological resources (Exhibit 8).

16.08.030 – Preliminary Subdivision Plat – Narrative Statement

In addition to the plans required in the previous section, the applicant shall also prepare and submit a narrative statement that addresses the following issues:

A. Subdivision Description. A detailed description of the proposed development, including a description of proposed uses, number and type of residential units, allocation and ownership of all lots, tracts, streets, and public improvements, the structure of any homeowner's association, and each instance where the proposed subdivision will vary from some dimensional or other requirement of the underlying zoning district. For each such variance, a separate application will be required pursuant to Chapter 17.60, Variances;

Finding: Complies as Proposed. A detailed description of the proposed subdivision including the above listed information, as applicable, was submitted with this development application.

B. Timely Provision of Public Services and Facilities. The applicant shall explain in detail how and when each of the following public services or facilities is, or will be, adequate to serve the proposed development by the time construction begins:

1. Water

Finding: Complies with Conditions. There is an existing 8-inch Oregon City (City) water main in Ames Street and School Road. The Applicant proposed the water line be installed in the proposed streets connecting to the existing pipe with an 8-inch pipe on both Ames Street and School Road forming a looped system.

All new water services shall be constructed with individual copper water laterals a minimum of 1-inch diameter in size connecting the water main to the water meter.

Staff concurs that sufficient water mains are installed. Prior to final plat, the Applicant shall submit the proposed development to Clackamas County Fire District No. 1 for review. In the event that fire hydrants are required by Clackamas County Fire District No. 1, staff finds there is adequate area available on the subject property for such installation.

The Applicant has proposed a water system that appears to meet City code requirements with a few modifications. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 2, 3, 4, 5 and 6.**

2. Sanitary Sewer

Finding: Complies with Condition. There is an existing 8-inch gravity sanitary sewer main in Ames Street. A new 8-inch public sanitary sewer main will be installed in the proposed streets. The Applicant has proposed to provide sanitary sewer laterals to all of the lots in the proposed development.

The existing pipe cover at Stables Place is 6.5-feet, and at Pasture Way it is only 2.5-feet that is DI pipe. This does not meet City standards of 8-foot of cover. Where there is insufficient cover DI pipe may be required. The initial lots close to the intersection of Ames Street and Pasture Way may not be able to be served by gravity due to the shallow depth of the existing sanitary sewer. A few of the lots may need to be served by individual and privately owned pump stations located on the lots.

The proposed sanitary sewer system will meet City code requirements with a few modifications. All new sanitary sewer laterals shall be constructed with individual laterals connecting to the sanitary sewer main. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 2, 3, 7 and 8.**

3. Storm Sewer and Storm Water Drainage

Finding: Complies with Condition. There are existing storm water facilities in Ames Street which consist of 12-inch pipe to goes to a 16-inch pipe on Pasture Way and discharges to a detention pond. The outfall from the pond is a 12-inch pipe that discharges to a drainage ditch. The overland flow from the property is captured in a catchbasin and conveyed to the existing collection system.

Storm water detention and treatment is required. The applicant has proposed to provide a storm detention and treatment facility on a tract near the intersection of Ames Street and Pasture Way. This will discharge to the existing storm collection system on Ames Street. A preliminary storm report has been submitted to determine the sizing of the facilities. A final storm report will be required as part of the final design.

The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. **Staff has**

determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 2, 3, 9, 10 and 11.

4. Parks and Recreation

Finding: Complies as Proposed. The site is not located within walking distance of any existing city parks; however, Park System Development Charges will be paid at the time building permits are issued for each lot in the subdivision. The Oregon City Park and Recreation Plan (1999) does not identify a park on this property, however it does indicate the need for a trail (N-3), which the applicant has accommodated with the proposed pedestrian accessways that run through the development from east to west.

5. Traffic and Transportation

Finding: Complies as Proposed. A transportation impact study (TIS) was prepared for this project, dated February 4, 2014, by Todd Mobley, P.E. of Lancaster Engineering (Exhibit 2). The TIS was reviewed by John Replinger of Replinger and Associates, City transportation consultant, who concluded: "15. Conclusions and Recommendations. The engineer concludes that traffic operations would be adequate at all analyzed intersections. He concludes no mitigation is needed for traffic operations. He concludes no safety mitigation is necessary and sight distance is acceptable. I concur with the conclusions of the applicant's engineer."

Mr. Replinger finds that the submitted TIS provides an adequate basis upon which to assess the impacts of the proposed subdivision and agreed that off-site mitigation for traffic impacts is not required (Exhibit 3).

Additionally, Mr. Replinger reviewed the TIS specifically for compliance with the planned function, capacity, and level of service standards adopted in the code and TSP (Transportation System Plan). As stated in Exhibit 3 - *Comment 6. Analysis*:

"Traffic volumes were calculated for the intersections described in #1, above. At each location, the level of service (LOS) and delay calculations were provided to assess operations relative to the city's operational standard. The analysis was undertaken for the AM, mid-day, and PM peak hours and included year 2014 existing conditions, 2017 background conditions, and year 2017 total traffic conditions.

According to the engineer, the intersection of Holcomb Boulevard and Holcomb School Road is predicted to operate at LOS "C" during the AM peak hour; "B" during the mid-day peak hour and "A" during the PM peak hour under all conditions. The intersection volume-to-capacity ratio (v/c) is predicted to be 0.43 or better under all conditions and easily meets the city's operational standard. The other three intersections are predicted to operate at LOS "A" or better under all conditions during all hours. The performance of all study area intersections is predicted to meet city standards during the peak hours.

The engineer also analyzed the potential for the new connection, Pasture Way, from Ames Street to Holcomb School Road to shift traffic patterns. He concluded that even with the potential new cut-through traffic, the intersections would still easily meet the city's operational standards. I found his methodology to be sound and concur with his conclusions on the ability of the streets to accommodate this neighborhood traffic. The engineer concluded no mitigation measures were necessary. I concur with his conclusions."

And, under comment 14, "The engineer states that the proposal does not change the functional classification of any existing or planned transportation facility; does not alter the standards for implementing the functional classification system; and does not alter the level of travel or degrade the performance of the transportation system such that it would not meet applicable performance standards."

Additional detail comments in response to the City's adopted standards for preparation of Transportation Impact Analysis were provided in the applicant's TIS and reviewed by the City's Transportation Consultant.

Staff concludes that the proposed improvements to the transportation system are timely and adequate to serve the proposed development.

6. Schools

Finding: Complies as Proposed. The Oregon City School District provides education services for the children of future residents. The School District provided an email in response to concerns regarding the adequate capacity of Holcomb Elementary (Exhibit 6). School funding is provided through a variety of sources including property taxes and surcharges that will be assessed with future building permits for the homes.

7. Fire and Police Services

Finding: Complies with Condition. Clackamas County Fire District No. 1 provides fire services to the subject site. There are no noted concerns about fire services and property taxes will be paid by future property owners to fund fire protection services thereby ensuring funding for protection services. In order to assure adequate protection new fire hydrants shall be located and installed as required per Clackamas County Fire District No. 1. Staff concurs that sufficient water mains are installed. In the event that fire hydrants are required by Clackamas County Fire District No. 1 requirements, staff finds there is adequate area available on the subject property for such installation.

The City of Oregon City Police Department will provide police services to the subject site. Property taxes will be paid by future property owners to fund police protection services, thereby ensuring funding for police services. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 4.**

Where adequate capacity for any of these public facilities and services is not demonstrated to be currently available, the Applicant shall describe how adequate capacity in these services and facilities will be financed and constructed before recording of the plat;

Finding: Not Applicable. As described above, all public facilities and services are available. Therefore, this standard does not apply to this application.

C. Approval Criteria and Justification for Variances. The applicant shall explain how the proposed subdivision is consistent with the standards set forth in Chapter 16.12, 12.04 and any other applicable approval standards identified in the municipal code. For each instance where the applicant proposes a variance from some applicable dimensional or other numeric requirement, the applicant shall address the approval criteria from Chapter 17.60.

Finding: Not Applicable. This application does not include any requests for variances.

D. Drafts of the proposed covenants, conditions and restrictions (CC&Rs), maintenance agreements, homeowner association agreements, dedications, deeds easements, or reservations of public open spaces not dedicated to the city, and related documents for the subdivision;

Finding: Complies as Proposed. The Applicant included draft CC&R's in the application submittal. There are no conflicts with City codes within the CC&Rs.

E. A description of any proposed phasing, including for each phase the time, acreage, number of residential units, amount of area for nonresidential use, open space, development of utilities and public facilities;

Finding: Complies as Proposed. The Applicant proposed to construct the subdivision in a single phase. This standard has been met.

F. Overall density of the subdivision and the density by dwelling type for each.

Finding: Complies as Proposed. According to the applicant, the subject property contains a total area of 8.03 acres. The R-10 portion of the subdivision measures 124,864 square feet in area and would have 25,777 sq. ft. of street area. A storm detention tract measuring 7,123 sq. ft. in area is proposed; together with a 1,501 sq. ft. pedestrian walkway. The nine lots within this section of the project average 10,000 sq. ft. in area, consistent with the R-10 zone's minimum lot size standard. The R-8 section of the subdivision contains 5.17 acres. The street rights-of-way within this section measure 61,422 sq. ft. in area and 3,158 sq. ft. is comprised of pedestrian walkway. The average lot size is 8,030 sq. ft., consistent with the minimum lot size standard of the R-8 zone. Staff calculations based on the proposed preliminary plat indicate a slightly larger average lot size of 8,633 square feet. This will be confirmed upon review of the final plat, however the overall density of the development is in compliance with all applicable criteria.

16.08.035 - Notice and invitation to comment.

Upon the city's determination that an application for a preliminary subdivision plat is complete, pursuant to Section 17.50, the city shall provide notice of the application in accordance with requirements of Section 17.50 applicable to Type II decisions.

Finding: Complies as Proposed. The application was deemed complete and notice was transmitted for comment in accordance with Section 17.50. This standard is met.

16.08.040 - Preliminary subdivision plat—Approval standards and decision.

The minimum approval standards that must be met by all preliminary subdivision plats are set forth in Chapter 16.12, and in the dimensional and use requirements set forth in the chapter of this code that corresponds to the underlying zone. The community development director shall evaluate the application to determine that the proposal does, or can through the imposition of conditions of approval, meet these approval standards. The community development director's decision shall be issued in accordance with the requirements of Section 17.50.

Finding: Complies as Proposed. This staff report contains findings and conditions of approval to assure that the applicable approval criteria are met. Dimensional standards for the underlying zones have been reviewed and found to comply as shown above. These findings are supported by substantial evidence which includes preliminary plans, a Transportation Impact Study, and other written documentation.

16.08.045 - Building site—Frontage width requirement.

Each lot in a subdivision shall abut upon a cul-de-sac or street other than an alley for a width of at least twenty feet.

Finding: Complies as Proposed. As shown in the preliminary plans, each proposed lot's street frontage is in excess of twenty feet.

16.08.050 - Flag lots in subdivisions.

Flag lots shall not be permitted within subdivisions except as approved by the community development director and in compliance with the following standards.

Finding: Not Applicable. No flag lots are proposed.

CHAPTER 16.12 – MINIMUM IMPROVEMENTS AND DESIGN STANDARDS FOR LAND DIVISIONS

Chapter 16.12.015 - Street Design-Generally

Street design standards for all new development and land divisions shall comply with Chapter 12.04—Street Design Standards.

Finding: Please refer to the analysis in Chapter 12.04 of this report.

16.12.020 – Blocks - Generally

The length, width and shape of blocks shall take into account the need for adequate building site size, convenient motor vehicle, pedestrian, bicycle and transit access, control of traffic circulation, and limitations imposed by topography and other natural features.

Finding: Complies as Proposed. The proposed subdivision provides for adequate building site size, convenient motor vehicle, pedestrian, bicycle and transit access, and control of traffic circulation, based on the existing conditions and limitations imposed by topography and other natural features and surrounding development patterns. The proposed street pattern provides for adequate building site size, as demonstrated by the site plan submitted with this application.

16.12.030 Blocks-Width

The width of blocks shall ordinarily be sufficient to allow for two tiers of lots with depths consistent with the type of land use proposed.

Finding: Complies as proposed. The proposed layout is consistent with this requirement.

16.12.040--Building Sites

The size, width, shape and orientation of building sites shall be appropriate for the primary use of the land division, and shall be consistent with the residential lot size provisions of the zoning ordinance.

Finding: Complies as Proposed. The buildings sites proposed that are appropriate in size, width, shape, and orientation for low-density residential development, consistent with the proposed R-10 and R-8 zoning of the property. The applicant is not requesting a variance to any dimensional standard.

16.12.045 Building Sites--Minimum Density

All subdivision layouts shall achieve at least 80% of the maximum density of the base zone for the net developable area as defined in Section 17.04.

Finding: Complies as Proposed. The subject property contains a total area of 8.03 acres. The R-10 portion of the subdivision measures 124,864 square feet in area and would have 25,777 sq. ft. of street area. A storm detention tract measuring 7,123 sq. ft. in area is proposed; together with a 1,501 sq. ft. pedestrian walkway. The net site area for this portion of the site is 90,463 sq. ft. Dividing by 10,000 sq. ft. per unit results in a maximum density of 9 units and, at 80% of the maximum, a minimum density of 8 units. The nine lots within this section of the project exceed the minimum standard. The R-8 section of the subdivision contains 5.17 acres (225,205 sq. ft.). The street rights-of-way within this section measure 61,422 sq. ft. in area and 3,158 sq. ft. is comprised of pedestrian walkway. The net site area is 160,625 sq. ft. Dividing the net area by 8,000 sq. ft. per unit results in a maximum density of 20 units and, at 80% of maximum, a minimum density of 16 units. The proposed 20 units within this area comply with the minimum density standard.

16.12.050 Calculations of Lot Area.

A subdivision in the R-10, R-8, R-6, R-3.5 and R-2 Dwelling District may include lots that are up to 20% less than the required minimum lot area of the applicable zoning designation provided the entire subdivision on average meets the minimum site area requirement of the underlying zone.

Finding: Complies as Proposed. The proposed subdivision includes lots utilizing the flexibility allowed by this section. In the R-10 zone, the 20% standard would allow lots as small as 8,000 square feet. The smallest

lot proposed in the R-10 portion of the subdivision is Lot 2 and it measures 9,017 sq. ft. in area. The average lot size for the R-10 portion of the subdivision is 10,001 square feet. In the R-8 zone, the 20% standard would allow lots as small as 6,400 square feet. The smallest lot proposed in the R-8 portion of the subdivision is Lot 18 at 7,266 sq. ft. in area. The average lot size for the R-8 portion of the subdivision is 8,017 square feet.

16.12.055 Building Sites -Through Lots

Through lots and parcels shall be avoided except where they are essential to provide separation of residential development from major arterials or to overcome specific disadvantages of topography.

Finding: Not applicable. No through lots are proposed.

16.12.060 Building site--Lot and parcel side lines.

The lines of lots and parcels, as far as is practicable, shall run at right angles to the street upon which they face, except that on curved streets they shall be radial to the curve.

Finding: Complies as Proposed. As far as practicable, the proposed lot lines and parcels run at right angles (i.e. are perpendicular) to the street upon which they face. A few exceptions, Lots 16 through 20, have minor deviations due to the required curvature of the proposed new streets.

16.12.065 Building site--Grading.

Grading of building sites shall conform to the State of Oregon Structural Specialty Code, Chapter 18, any approved grading plan and any approved residential lot grading plan in accordance with the requirements of Chapter 15.48, 16.12 and the Public Works Stormwater and Grading Design Standards, and the erosion control requirements of Chapter 17.47.

Finding: Complies with Condition. The Applicant provided a preliminary grading plan demonstrating compliance with the City's Public Works requirements for grading standards if a few modifications are provided. The Applicant shall submit an erosion control plan and obtain an erosion control permit and field installation for review by the Public Works Department prior to start of construction.

The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements.

The Applicant shall provide an Erosion Prevention and Sedimentation Control Plan to the City for approval. The Applicant shall provide a Preliminary Residential Lot Grading Plan to the City for review prior to the approval of construction plans. A final site Residential Lot Grading Plan shall be required as part of the final construction plans per the City's Residential Lot Grading Criteria and the International Building Code. If significant grading is required for the lots due to its location or the nature of the site, rough grading shall be required of the developer prior to the acceptance of the public improvements. There shall not be more than a maximum grade differential of two (2) feet at all subdivision boundaries. Grading shall in no way create any water traps, or other ponding situations. The plan shall show the existing and proposed swales. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 3.**

16.12.070 Building site--Setbacks and building location.

This standard ensures that lots are configured in a way that development can be oriented toward streets to provide a safe, convenient and aesthetically pleasing environment for pedestrians and bicyclists. The objective is for lots located on a neighborhood collector, collector or minor arterial street locate the front yard setback on and design the most architecturally significant elevation of the primary structure to face the neighborhood collector, collector or minor arterial street.

- A. The front setback of all lots located on a neighborhood collector, collector or minor arterial shall be orientated toward the neighborhood collector, collector or minor arterial street.*
- B. The most architecturally significant elevation of the house shall face the neighborhood collector, collector or minor arterial street.*
- C. On corner lots located on the corner of two local streets, the main façade of the dwelling may be oriented towards either street.*
- D. All lots proposed with a driveway and lot orientation on a collector or minor arterial shall combine driveways into one joint access per two or more lots unless the city engineer determines that:*
 - 1. No driveway access may be allowed since the driveway(s) would cause a significant traffic safety hazard; or*
 - 2. Allowing a single driveway access per lot will not cause a significant traffic safety hazard.*
- E. The community development director may approve an alternative design, consistent with the intent of this section, where the applicant can show that existing development patterns preclude the ability to practically meet this standard.*

Finding: Not applicable. The project does not contain or abut any neighborhood collector, collector or minor arterial streets.

16.12.075 Building site--Division of lots.

Where a tract of land is to be divided into lots or parcels capable of redivision in accordance with this chapter, the community development director shall require an arrangement of lots, parcels and streets which facilitates future redivision. In such a case, building setback lines may be required in order to preserve future right-of-way or building sites.

Finding: Not Applicable. No lots have been proposed which are capable of redivision in accordance with this chapter.

16.12.080 Protection of trees.

Protection of trees shall comply with the provisions of Chapter 17.41--Tree Protection.

Finding: Please refer to the analysis in chapter 17.41 of this report.

16.12.085 Easements.

The following shall govern the location, improvement and layout of easements:

- A. Utilities. Utility easements shall be required where necessary as determined by the city engineer. Insofar as practicable, easements shall be continuous and aligned from block-to-block within the land division and with adjoining subdivisions or partitions. Specific utility easements for water, sanitary or storm drainage shall be provided based on approved final engineering plans.*

Finding: Complies with Conditions. The Applicant proposed public utility easements (PUE's) along all street frontages. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 13.**

- B. Unusual Facilities. Easements for unusual facilities such as high voltage electric transmission lines, drainage channels and stormwater detention facilities shall be adequately sized for their intended purpose, including any necessary maintenance roads. These easements shall be shown to scale on the preliminary and final plats or maps. If the easement is for drainage channels, stormwater detention facilities or related purposes, the easement shall comply with the requirements of the Public Works Stormwater and Grading Design Standards.*

Finding: Complies as proposed. There are no unusual facilities in the proposed development.

- C. Watercourses. Where a land division is traversed or bounded by a watercourse, drainageway, channel or stream, a stormwater easement or drainage right-of-way shall be provided which conforms substantially to the line of such watercourse, drainageway, channel or stream and is of a sufficient width to allow construction,*

maintenance and control for the purpose as required by the responsible agency. For those subdivisions or partitions which are bounded by a stream of established recreational value, setbacks or easements may be required to prevent impacts to the water resource or to accommodate pedestrian or bicycle paths.

Finding: Not Applicable. There are no watercourses traversing or bounding the site.

D. Access. When easements are used to provide vehicular access to lots within a land division, the construction standards, but not necessarily width standards, for the easement shall meet city specifications. The minimum width of the easement shall be twenty feet. The easements shall be improved and recorded by the applicant and inspected by the city engineer. Access easements may also provide for utility placement.

Finding: Not Applicable. There are no access easements proposed or required with this development.

E. Resource Protection. Easements or other protective measures may also be required as the community development director deems necessary to ensure compliance with applicable review criteria protecting any unusual significant natural feature or features of historic significance.

Finding: Not Applicable. There are no identified significant natural features that require resource protection pursuant to this section.

16.12.090 Minimum improvements--Procedures.

In addition to other requirements, improvements installed by the applicant either as a requirement of these or other regulations, or at the applicant's option, shall conform to the requirements of this title and be designed to city specifications and standards as set out in the city's facility master plan and Public Works Stormwater and Grading Design Standards. The improvements shall be installed in accordance with the following procedure:

A. Improvement work shall not commence until construction plans have been reviewed and approved by the city engineer and to the extent that improvements are in county or state right-of-way, they shall be approved by the responsible authority. To the extent necessary for evaluation of the proposal, the plans may be required before approval of the preliminary plat of a subdivision or partition. Expenses incurred thereby shall be borne by the applicant and paid for prior to final plan review.

B. Improvements shall be constructed under the inspection and approval of the city engineer. Expenses incurred thereby shall be borne by the applicant and paid prior to final approval. Where required by the city engineer or other city decision-maker, the applicant's project engineer also shall inspect construction.

C. Erosion control or resource protection facilities or measures are required to be installed in accordance with the requirements of Chapter 17.49 and the Public Works Erosion and Sediment Control Standards.

Underground utilities, waterlines, sanitary sewers and storm drains installed in streets shall be constructed prior to the surfacing of the streets. Stubs for service connections for underground utilities and sanitary sewers shall be placed beyond the public utility easement behind to the lot lines.

D. As-built construction plans and digital copies of as-built drawings shall be filed with the city engineer upon completion of the improvements.

E. The city engineer may regulate the hours of construction and access routes for construction equipment to minimize impacts on adjoining residences or neighborhoods.

Finding: Complies with Condition. The Applicant indicated that construction plans for all required improvements will be presented to the city for review and approval prior to the commencement of any construction activities on the site. Inspection will be provided for as required by this standards and city policy. Erosion control measures will be provided and are depicted in conceptual form on the attached preliminary grading plans. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of

such improvement. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 3.**

16.12.095 Same--Public facilities and services.

The following minimum improvements shall be required of all applicants for a land division under Title 16, unless the decision-maker determines that any such improvement is not proportional to the impact imposed on the city's public systems and facilities:

A. Transportation System. *Applicants and all subsequent lot owners shall be responsible for improving the city's planned level of service on all public streets, including alleys within the land division and those portions of public streets adjacent to but only partially within the land division. All applicants shall execute a binding agreement to not remonstrate against the formation of a local improvement district for street improvements that benefit the applicant's property. Applicants are responsible for designing and providing adequate vehicular, bicycle and pedestrian access to their developments and for accommodating future access to neighboring undeveloped properties that are suitably zoned for future development. Storm drainage facilities shall be installed and connected to off-site natural or man-made drainageways. Upon completion of the street improvement survey, the applicant shall reestablish and protect monuments of the type required by ORS 92.060 in monument boxes with covers at every public street intersection and all points or curvature and points of tangency of their center line, and at such other points as directed by the city engineer.*

Finding: Complies as Proposed. The applicant has proposed a street system that appears to conform to the adopted Transportation System Plan and the street connectivity requirements of the city code. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 2.**

B. Stormwater Drainage System. *Applicants shall design and install drainage facilities within land divisions and shall connect the development's drainage system to the appropriate downstream storm drainage system as a minimum requirement for providing services to the applicant's development. The applicant shall obtain county or state approval when appropriate. All applicants shall execute a binding agreement to not remonstrate against the formation of a local improvement district for stormwater drainage improvements that benefit the applicant's property. Applicants are responsible for extending the appropriate storm drainage system to the development site and for providing for the connection of upgradient properties to that system. The applicant shall design the drainage facilities in accordance with city drainage master plan requirements, Chapter 13.12 and the Public Works Stormwater and Grading Design Standards.*

Finding: See section 16.08.030.B.3 of this report for a description of the storm drainage system.

C. Sanitary Sewer System. *The applicant shall design and install a sanitary sewer system to serve all lots or parcels within a land division in accordance with the city's sanitary sewer design standards, and shall connect those lots or parcels to the city's sanitary sewer system, except where connection is required to the county sanitary sewer system as approved by the county. All applicants shall execute a binding agreement to not remonstrate against the formation of a local improvement district for sanitary sewer improvements that benefit the applicant's property. Applicants are responsible for extending the city's sanitary sewer system to the development site and through the applicant's property to allow for the future connection of neighboring undeveloped properties that are suitably zoned for future development. The applicant shall obtain all required*

permits and approvals from all affected jurisdictions prior to final approval and prior to commencement of construction. Design shall be approved by the city engineer before construction begins.

Finding: See section 16.08.030.B.2 of this report for a description of the sanitary sewer system.

D. Water System. *The applicant shall design and install a water system to serve all lots or parcels within a land division in accordance with the city public works water system design standards, and shall connect those lots or parcels to the city's water system. All applicants shall execute a binding agreement to not remonstrate against the formation of a local improvement district for water improvements that benefit the applicant's property. Applicants are responsible for extending the city's water system to the development site and through the applicant's property to allow for the future connection of neighboring undeveloped properties that are suitably zoned for future development.*

Finding: See section 16.08.030.B.1 of this report for a description of the water system.

E. Sidewalks. *The applicant shall provide for sidewalks on both sides of all public streets, on any private street if so required by the decision-maker, and in any special pedestrian way within the land division. Exceptions to this requirement may be allowed in order to accommodate topography, trees or some similar site constraint. In the case of major or minor arterials, the decision-maker may approve a land division without sidewalks where sidewalks are found to be dangerous or otherwise impractical to construct or are not reasonably related to the applicant's development. The decision-maker may require the applicant to provide sidewalks concurrent with the issuance of the initial building permit within the area that is the subject of the land division application. Applicants for partitions may be allowed to meet this requirement by executing a binding agreement to not remonstrate against the formation of a local improvement district for sidewalk improvements that benefit the applicant's property.*

Finding: Complies with Conditions. Currently there are sidewalks on the north side of Ames Street, the street that abuts the proposed development. The Applicant has proposed to install 5- foot wide sidewalks on the south side of Ames Street, and 5-foot wide sidewalks on the new streets within the proposed development. These sidewalks should be constructed to City standards. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 14, 15, 16 and 17.**

F. Bicycle Routes. *If appropriate to the extension of a system of bicycle routes, existing or planned, the decision-maker may require the installation of separate bicycle lanes within streets and separate bicycle paths.*

Finding: Complies as proposed. The applicant has proposed two pedestrian accessways which may be used by bicyclists to cross between local streets. There are no identified on-street or off-street bicycle routes identified within this area in the City's adopted Transportation System Plan.

G. Street Name Signs and Traffic Control Devices. *The applicant shall install street name signs at all street intersections. The applicant shall install traffic control devices as directed by the city engineer. Street name signs and traffic control devices shall be in conformance with all applicable city regulations and standards.*

Finding: Complies with Condition. The Applicant indicated it will comply with this section. **The Applicant can meet this standard through Condition of Approval 22.**

H. Street Lights. *The applicant shall install street lights which shall be served from an underground source of supply. Street lights shall be in conformance with all city regulations.*

Finding: Complies with Condition. As required in this criterion, the Applicant shall install street lights along the frontage of the project. A street lighting plan shall be provided as part of the design plans to be reviewed by the City. PGE owns, installs and maintains all new street lights within the City. The applicant shall coordinate directly with PGE for the design of street lights. The Applicant is responsible for this

project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 14, 15, 16 and 17.**

I. Street Trees.

Finding: Please refer to Chapter 12.08, Street Trees.

J. Bench Marks. At least one bench mark shall be located within the subdivision boundaries using datum plane specified by the city engineer.

Finding: Complies as Proposed. The Applicant's plans indicated compliance with this section.

K. Other. The Applicant shall make all necessary arrangements with utility companies or other affected parties for the installation of underground lines and facilities. Electrical lines and other wires, including but not limited to communication, street lighting and cable television, shall be placed underground.

Finding: Complies as Proposed. The Applicant's application materials indicated compliance with this section.

L. Oversizing of Facilities. All facilities and improvements shall be designed to city standards as set out in the city's facility master plan, public works design standards, or other city ordinances or regulations. Compliance with facility design standards shall be addressed during final engineering. The city may require oversizing of facilities to meet standards in the city's facility master plan or to allow for orderly and efficient development. Where oversizing is required, the applicant may request reimbursement from the city for oversizing based on the city's reimbursement policy and funds available, or provide for recovery of costs from intervening properties as they develop.

Finding: Complies as Proposed. The Applicant indicated they will comply with this section.

M. Erosion Control Plan--Mitigation. The applicant shall be responsible for complying with all applicable provisions of Chapter 17.47 with regard to erosion control.

Finding: Complies with Condition. The Applicant provided a preliminary rough grading plan that indicates the Applicant will be able to meet the City's Public Works erosion control standards. The Applicant shall provide an Erosion Prevention and Sedimentation Control Plan suitable to the Public Works Department to meet the Public Works requirements for erosion control. The Applicant shall provide a Preliminary Residential Lot Grading Plan to the City for review prior to the approval of construction plans. A final site Residential Lot Grading Plan shall be required as part of the final construction plans per the City's Residential Lot Grading Criteria and the International Building Code. If significant grading is required for the lots due to its location or the nature of the site, rough grading shall be required of the developer prior to the acceptance of the public improvements. There shall not be more than a maximum grade differential of two (2) feet at all subdivision boundaries. Grading shall in no way create any water traps, or other ponding situations. The plan shall show the existing and proposed swales. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 3.**

16.12.100 Same--Road standards and requirements.

A. The creation of a public street and the resultant separate land parcels shall be in conformance with requirements for subdivisions or partitions and the applicable street design standards of Chapter 12.04.

Finding: Please refer to the findings in chapter 12.04 within this report.

16.12.105 Same--Timing requirements.

A. Prior to applying for final plat approval, the applicant shall either complete construction of all public improvements required as part of the preliminary plat approval or guarantee the construction of those improvements. Whichever option the applicant elects shall be in accordance with this section.

B. Construction. The applicant shall construct the public improvements according to approved final engineering plans and all applicable requirements of this Code, and under the supervision of the city engineer. Under this option, the improvement must be complete and accepted by the city engineer prior to final plat approval.

C. Financial Guarantee. The applicant shall provide the city with a financial guarantee in a form acceptable to the city attorney and equal to one hundred ten percent of the cost of constructing the public improvements in accordance with Oregon City Municipal Code Chapter 17.50. Possible forms of guarantee include an irrevocable or standby letter of credit, guaranteed construction loan set-aside, reserve account, or performance guarantee, but the form of guarantee shall be specified by the city engineer and, prior to execution and acceptance by the city, must be reviewed and approved by the city attorney. The amount of the guarantee shall be based upon approved final engineering plans, equal to at least one hundred ten percent of the estimated cost of construction, and shall be supported by a verified engineering estimate and approved by the city engineer.

Finding: Complies as Proposed. The Applicant indicated compliance with this section and will submit the required performance guarantees or will perform the improvements required for this application. This standard is met.

16.12.110 - Minimum improvements—Financial guarantee.

When conditions of permit approval require a permittee to construct certain improvements, the city may, in its discretion, allow the permittee to submit a performance guarantee in lieu of actual construction of the improvement. Performance guarantees shall be governed by this section.

A. Form of Guarantee. Performance guarantees shall be in a form approved by the city attorney. Approvable methods of performance guarantee include irrevocable standby letters of credit to the benefit of the city issued by a recognized lending institution, certified checks, dedicated bank accounts or allocations of construction loans held in reserve by the lending institution for the benefit of the city. The form of guarantee shall be specified by the city engineer and, prior to execution and acceptance by the city shall be reviewed and approved by the city attorney. The guarantee shall be filed with the city engineer.

B. Timing of Guarantee. A permittee shall be required to provide a performance guarantee as follows:

1. After Final Approved Design by the City: A permittee may request the option of submitting a performance guarantee when prepared for temporary/final occupancy. The guarantee shall be one hundred twenty percent of the estimated cost of constructing the remaining public improvements as submitted by the permittee's engineer. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the city engineer.

2. Before Complete Design Approval and Established Engineered Cost Estimate: A permittee may request the option of submitting a performance guarantee before public improvements are designed and completed. The guarantee shall be one hundred fifty percent of the estimated cost of constructing the public improvements as submitted by the permittee's engineer and approved by the city engineer. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the city engineer. This scenario applies for a fee-in-lieu situation to ensure adequate funds for the future work involved in design, bid, contracting, and construction management and contract closeout. In this case, the fee-in-lieu must be submitted as cash, certified check, or other negotiable instrument as approved to form by the city attorney.

C. Duration of the Guarantee. The guarantee shall remain in effect until the improvement is actually constructed and accepted by the city. Once the city has inspected and accepted the improvement, the city shall release the guarantee to the permittee. If the improvement is not completed to the city's satisfaction within the time limits specified in the permit approval, the city engineer may, at their discretion, draw upon the guarantee

and use the proceeds to construct or complete construction of the improvement and for any related administrative and legal costs incurred by the city in completing the construction, including any costs incurred in attempting to have the permittee complete the improvement. Once constructed and approved by the city, any remaining funds shall be refunded to the permittee. The city shall not allow a permittee to defer construction of improvements by using a performance guarantee, unless the permittee agrees to construct those improvements upon written notification by the city, or at some other mutually agreed-to time. If the permittee fails to commence construction of the required improvements within six months of being instructed to do so, the city may, without further notice, undertake the construction of the improvements and draw upon the permittee's performance guarantee to pay those costs.

Finding: Complies as Proposed. The Applicant indicated compliance with this section and will submit the required performance guarantees or will perform the improvements required for this application. This standard is met.

CHAPTER 12.04 – STREETS, SIDEWALKS AND PUBLIC PLACES

12.04.007 Modifications.

The review body may consider modification of this standard resulting from constitutional limitations restricting the City's ability to require the dedication of property or for any other reason, based upon the criteria listed below and other criteria identified in the standard to be modified. All modifications shall be processed through a Type II Land Use application and may require additional evidence from a transportation engineer or others to verify compliance. Compliance with the following criteria is required:

- A. The modification meets the intent of the standard;
- B. The modification provides safe and efficient movement of pedestrians, motor vehicles, bicyclists and freight;
- C. The modification is consistent with an adopted plan; and
- D. The modification is complementary with a surrounding street design; or, in the alternative,
- E. If a modification is requested for constitutional reasons, the applicant shall demonstrate the constitutional provision or provisions to be avoided by the modification and propose a modification that complies with the state or federal constitution. The City shall be under no obligation to grant a modification in excess of that which is necessary to meet its constitutional obligations.

Finding: Not applicable. The Applicant has not proposed any modifications to the street standards.

12.04.010 Construction specifications—Improved streets.

All sidewalks hereafter constructed in the city on improved streets shall be constructed to city standards and widths required in the Oregon City Transportation System Plan. The curb shall be constructed at the same time as the construction of the sidewalk and shall be located as provided in the ordinance authorizing the improvement of said street next proceeding unless otherwise ordered by the city commission. Both sidewalks and curbs are to be constructed according to plans and specifications provided by the city engineer.

Finding: Complies as Proposed. The Applicant indicated compliance with this section.

12.04.020 Construction specifications—Unimproved streets.

Sidewalks constructed on unimproved streets shall be constructed of concrete according to lines and grades established by the city engineer and approved by the city commission. On unimproved streets curbs do not have to be constructed at the same time as the sidewalk.

Finding: Not applicable. There are no sidewalks proposed on unimproved streets.

12.04.025 - Street design—Driveway Curb Cuts.

- A. One driveway shall be allowed per frontage. In no case shall more than two driveways be allowed on any single or two-family residential property with multiple frontages.

B. With the exception of the limitations identified in 12.04.025.C, all driveway curb cuts shall be limited to the following dimensions.

Property Use	Minimum Driveway Width at sidewalk or property line	Maximum Driveway Width at sidewalk or property line
Single or Two-Family Dwelling with one Car Garage/Parking Space	10 feet	12 feet
Single or Two-Family Dwelling with two Car Garage/Parking Space	12 feet	24 feet
Single or Two-Family Dwelling with three or more Car Garages/Parking Space	18 feet	30 feet
Non Residential or Multi-Family Residential Driveway Access	15 feet	40 feet

The driveway width abutting the street pavement may be extended 3 feet on either side of the driveway to accommodate turn movements. Driveways may be widened onsite in locations other than where the driveway meets sidewalk or property line (for example between the property line and the entrance to a garage).

Finding: Complies as Proposed. The Applicant indicated compliance with this section. There will be one driveway for each lot, and the dimensions will be met.

C. The decision maker shall be authorized through a Type II process, unless another procedure applicable to the proposal applies, to minimize the number and size of curb cuts (including driveways) as far as practicable for any of the following purposes:

1. To provide adequate space for on-street parking;
2. To facilitate street tree planting requirements;
3. To assure pedestrian and vehicular safety by limiting vehicular access points; and
4. To assure that adequate sight distance requirements are met.
 - a. Where the decision maker determines any of these situations exist or may occur due to the approval of a proposed development for non-residential uses or attached or multi-family housing, a shared driveway shall be required and limited to twenty-four feet in width adjacent to the sidewalk or property line and may extend to a maximum of thirty feet abutting the street pavement to facilitate turning movements.
 - b. Where the decision maker determines any of these situations exist or may occur due to approval of a proposed development for detached housing within the "R-5" Single –Family Dwelling District or "R-3.5" Dwelling District, driveway curb cuts shall be limited to twelve feet in width adjacent to the sidewalk or property line and may extend to a maximum of eighteen feet abutting the street pavement to facilitate turning movements.

D. For all driveways, the following standards apply.

1. Each new or redeveloped curb cut shall have an approved concrete approach or asphalted street connection where there is no concrete curb and a minimum hard surface for at least ten feet and preferably twenty feet back into the lot as measured from the current edge of street pavement to provide for controlling gravel tracking onto the public street. The hard surface may be concrete, asphalt, or other surface approved by the city engineer.
2. Driving vehicles, trailers, boats, or other wheeled objects across a sidewalk or roadside planter strip at a location other than an approved permanent or city-approved temporary driveway approach is prohibited. Damages caused by such action shall be corrected by the adjoining property owner.

3. *Placing soil, gravel, wood, or other material in the gutter or space next to the curb of a public street with the intention of using it as a permanent or temporary driveway is prohibited. Damages caused by such action shall be corrected by the adjoining property owner.*
 4. *Any driveway built within public street or alley right-of-way shall be built and permitted per city requirements as approved by the city engineer.*
 - E. *Exceptions. The public works director reserves the right to waive this standard, if it is determined through a Type II decision including written findings, that it is in the best interest of the public to do so.*
- Finding: Complies as Proposed.** The Applicant acknowledges this requirement.

12.04.030 Maintenance and repair.

The owner of land abutting the street where a sidewalk has been constructed shall be responsible for maintaining said sidewalk and abutting curb, if any, in good repair.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.031 Liability for sidewalk injuries.

- A. *The owner or occupant of real property responsible for maintaining the adjacent sidewalk shall be liable to any person injured because of negligence of such owner or occupant in failing to maintain the sidewalk in good condition.*
- B. *If the city is required to pay damages for an injury to persons or property caused by the failure of a person to perform the duty that this ordinance imposes, the person shall compensate the city for the amount of the damages paid. The city may maintain an action in a court of competent jurisdiction to enforce this section.*

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.032 Required sidewalk repair.

- A. *When the public works director determines that repair of a sidewalk is necessary he or she shall issue a notice to the owner of property adjacent to the sidewalk.*
- B. *The notice shall require the owner of the property adjacent to the defective sidewalk to complete the repair of the sidewalk within ninety days after the service of notice. The notice shall also state that if the repair is not made by the owner, the city may do the work and the cost of the work shall be assessed against the property adjacent to the sidewalk.*
- C. *The public works director shall cause a copy of the notice to be served personally upon the owner of the property adjacent to the defective sidewalk, or the notice may be served by registered or certified mail, return receipt requested. If after diligent search the owner is not discovered, the public works director shall cause a copy of the notice to be posted in a conspicuous place on the property, and such posting shall have the same effect as service of notice by mail or by personal service upon the owner of the property.*
- D. *The person serving the notice shall file with the city recorder a statement stating the time, place and manner of service or notice.*

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.033 City may do work.

If repair of the sidewalk is not completed within ninety days after the service of notice, the public works director shall carry out the needed work on the sidewalk. Upon completion of the work, the public works director shall submit an itemized statement of the cost of the work to the finance director. The city may, at its discretion, construct, repair or maintain sidewalks deemed to be in disrepair by the public works director for the health, safety and general welfare of the residents of the city.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.034 Assessment of costs.

Upon receipt of the report, the finance director shall assess the cost of the sidewalk work against the property adjacent to the sidewalk. The assessment shall be a lien against the property and may be collected in the same manner as is provided for in the collection of street improvement assessment.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.040 Streets--Enforcement.

Any person whose duty it is to maintain and repair any sidewalk, as provided by this chapter, and who fails to do so shall be subject to the enforcement procedures of Chapters 1.16, 1.20 and 1.24. Failure to comply with the provisions of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.050 Retaining walls--Required.

Every owner of a lot within the city, abutting upon an improved street, where the surface of the lot or tract of land is above the surface of the improved street and where the soil or earth from the lot, or tract of land is liable to, or does slide or fall into the street or upon the sidewalk, or both, shall build a retaining wall, the outer side of which shall be on the line separating the lot, or tract of land from the improved street, and the wall shall be so constructed as to prevent the soil or earth from the lot or tract of land from falling or sliding into the street or upon the sidewalk, or both, and the owner of any such property shall keep the wall in good repair.

Finding: Not applicable. No retaining walls are proposed.

12.04.060 Retaining walls--Maintenance.

When a retaining wall is necessary to keep the earth from falling or sliding onto the sidewalk or into a public street and the property owner or person in charge of that property fails or refuses to build such a wall, such shall be deemed a nuisance. The violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Not applicable. No retaining walls are proposed.

12.04.070 Removal of sliding dirt.

It shall be the duty of the owner of any property as mentioned in Section 12.04.050, and in case the owner is a nonresident, then the agent or other person in charge of the same, to remove from the street or sidewalk or both as the case may be, any and all earth or dirt falling on or sliding into or upon the same from the property, and to build and maintain in order at all times, the retaining wall as herein required; and upon the failure, neglect or refusal of the land owner, the agent or person in charge of the same to clean away such earth or dirt, falling or sliding from the property into the street or upon the sidewalk, or both, or to build the retaining wall, shall be deemed guilty of a misdemeanor.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.080 Excavations--Permit required.

It shall be unlawful for any person to dig up, break, excavate, disturb, dig under or undermine any public street or alley, or any part thereof or any macadam, gravel, or other street pavement or improvement without first applying for and obtaining from the engineer a written permit so to do.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.090 Excavations--Permit restrictions.

The permit shall designate the portion of the street to be so taken up or disturbed, together with the purpose for making the excavation, the number of days in which the work shall be done, and the trench or excavation to be refilled and such other restrictions as may be deemed of public necessity or benefit.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.100 Excavations – Restoration of Pavement

Whenever any excavation shall have been made in any pavement or other street improvement on any street or alley in the city for any purpose whatsoever under the permit granted by the engineer, it shall be the duty of the person making the excavation to put the street or alley in as good condition as it was before it was so broken, dug up or disturbed, and shall remove all surplus dirt, rubbish, or other material from the street or alley.

Finding: Complies with conditions. The applicant has proposed cuts for utilities in Ames Street. The pavement restoration shall be done in accordance with the City's Pavement Cut Standards. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 24.**

12.04.110 Excavations--Nuisance--Penalty.

Any excavation in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.120 Obstructions – Permit Required

A. Permanent Obstructions. It is unlawful for any person to place, put or maintain any obstruction, other than a temporary obstruction, as defined in subsection B of this section, in any public street or alley in the city, without obtaining approval for a right-of-way permit from the commission by passage of a resolution.

- 1. The city engineer shall provide applicants with an application form outlining the minimum submittal requirements.*
- 2. The applicant shall submit at least the following information in the permitting process in order to allow the commission to adequately consider whether to allow the placement of an obstruction and whether any conditions may be attached:*
 - a. Site plan showing right-of-way, utilities, driveways as directed by staff;*
 - b. Sight distance per Chapter 10.32, Traffic Sight Obstructions;*
 - c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);*
 - d. Alternative routes if necessary;*
 - e. Minimizing obstruction area; and*
 - f. Hold harmless/maintenance agreement.*
- 3. If the commission adopts a resolution allowing the placement of a permanent obstruction in the right-of-way, the city engineer shall issue a right-of-way permit with any conditions deemed necessary by the commission.*

B. Temporary Obstructions.

- 1. A "temporary obstruction" is defined as an object placed in a public street, road or alley for a period of not more than sixty consecutive days. A "temporary obstruction" includes, but is not limited to, moving containers and debris dumpsters.*
- 2. The city engineer, or designee, is authorized to grant a permit for a temporary obstruction.*
- 3. The city engineer shall provide applicants with an application form outlining the minimum submittal requirements.*
- 4. The applicant shall submit, and the city engineer, or designee, shall consider, at least the following items in the permitting process. Additional information may be required in the discretion of the city engineer:*
 - a. Site plan showing right-of-way, utilities, driveways as directed by staff;*
 - b. Sight distance per Chapter 10.32, Traffic Sight Obstructions;*
 - c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);*

- d. Alternative routes if necessary;
- e. Minimizing obstruction area; and
- f. Hold harmless/maintenance agreement.

5. In determining whether to issue a right-of-way permit to allow a temporary obstruction, the city engineer may issue such a permit only after finding that the following criteria have been satisfied:

- a. The obstruction will not unreasonably impair the safety of people using the right-of-way and nearby residents;
- b. The obstruction will not unreasonably hinder the efficiency of traffic affected by the obstruction;
- c. No alternative locations are available that would not require use of the public right-of-way; and
- d. Any other factor that the city engineer deems relevant.

6. The permittee shall post a weatherproof copy of the temporary obstruction permit in plain view from the right-of-way.

C. Fees. The fee for obtaining a right-of-way permit for either a permanent obstruction or a temporary obstruction shall be set by resolution of the commission.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.130 Obstructions--Sidewalk sales.

- A. It is unlawful for any person to use the public sidewalks of the city for the purpose of packing, unpacking or storage of goods or merchandise or for the display of goods or merchandise for sale. It is permissible to use the public sidewalks for the process of expeditiously loading and unloading goods and merchandise.
- B. The city commission may, in its discretion, designate certain areas of the city to permit the display and sale of goods or merchandise on the public sidewalks under such conditions as may be provided.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.140 Obstructions--Nuisance--Penalty.

Any act or omission in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Complies as Proposed. The Applicant acknowledges this requirement.

12.04.150 Street and alley vacations--Cost.

At the time of filing a petition for vacation of a street, alley or any part thereof, a fee as established by city commission resolution shall be paid to the city.

Finding: Not applicable. The applicant has not proposed to vacate a street or alley.

12.04.160 Street vacations--Restrictions.

The commission, upon hearing such petition, may grant the same in whole or in part, or may deny the same in whole or in part, or may grant the same with such reservations as would appear to be for the public interest, including reservations pertaining to the maintenance and use of underground public utilities in the portion vacated.

Finding: Not applicable. The applicant has not proposed to vacate a street or alley.

12.04.170 Street Design - Purpose and General Provisions.

All development shall be in conformance with the policies and design standards established by this chapter and with applicable standards in the City's Public Facility Master Plan and City design standards and specifications. In reviewing applications for development, the City Engineer shall take into consideration any approved development and the remaining development potential of adjacent properties. All street, water, sanitary sewer, storm drainage and utility plans associated with any development must be reviewed and approved by the city

engineer prior to construction. All streets, driveways or storm drainage connections to another jurisdiction's facility or right-of-way must be reviewed by the appropriate jurisdiction as a condition of the preliminary plat and when required by law or intergovernmental agreement shall be approved by the appropriate jurisdiction.

Finding: Complies as Proposed. The Applicant acknowledges this requirement. The proposed street design provides for the extension of Stables Place and Pasture Way from Ames Street on the north, southward through the subject property to connect with Holcomb School road at the southeast corner of the site. This street system will provide for a much-needed second access point to the existing residential neighborhoods located along Ames Street. At present, in excess of 50 lots are accessed via Ames Street west of Swan Avenue, and there is only one way in and out of the neighborhood. Proposed street improvements and utility plans will be reviewed by the City Engineer for compliance with City standards prior to construction.

12.04.175 Street Design--Generally.

The location, width and grade of street shall be considered in relation to: existing and planned streets, topographical conditions, public convenience and safety for all modes of travel, existing and identified future transit routes and pedestrian/bicycle accessways, and the proposed use of land to be served by the streets. The street system shall assure an adequate traffic circulation system with intersection angles, grades, tangents and curves appropriate for the traffic to be carried considering the terrain. To the extent possible, proposed streets shall connect to all existing or approved stub streets that abut the development site. The arrangement of streets shall either:

- A. *Provide for the continuation or appropriate projection of existing principal streets in the surrounding area and on adjacent parcels or conform to a plan for the area approved or adopted by the city to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical;*
- B. *Where necessary to give access to or permit a satisfactory future development of adjoining land, streets shall be extended to the boundary of the development and the resulting dead-end street (stub) may be approved with a temporary turnaround as approved by the city engineer. Notification that the street is planned for future extension shall be posted on the stub street until the street is extended and shall inform the public that the dead-end street may be extended in the future. Access control in accordance with section 12.04 shall be required to preserve the objectives of street extensions.*

Finding: Complies as Proposed. The Applicant acknowledges this requirement. As discussed above, the proposed street design provides for the extension of Stables Place and Pastures Way from Ames Street on the north, through the subject property to connect with Holcomb School road at the southeast corner of the site. A shadow plan has been provided on the Site Plan that shows how the proposed development will tie in with developable properties to the west. Holcomb Elementary School abuts the site on its eastern border and the HACC housing property abuts on the south.

12.04.180 Street Design.

All development regulated by this Chapter shall provide street improvements in compliance with the standards in Figure 12.04.180 depending on the street classification set forth in the Transportation System Plan and the Comprehensive Plan designation of the adjacent property, unless an alternative plan has been adopted. The standards provided below are maximum design standards and may be reduced with an alternative street design which may be approved based on the modification criteria in 12.04.007. The steps for reducing the maximum design below are found in the Transportation System Plan.

Finding: Complies with Conditions. The Applicant acknowledges this requirement. All streets within the proposed development are local streets that have been designed to comply with City standards by providing for 54 feet of right-of-way and 32' of pavement. A portion of Stables Place has been designed with a roughly $\frac{3}{4}$ street improvement, as the remainder of the street can be provided with the future development of

property to the west. The street section in this area provides 38 feet of right-of-way, 27 feet of pavement, a half-foot of curb on one side, 5 foot planter strip on one side, and a five foot sidewalk.

The proposed connection of Pastures Way with Holcomb School Road will require right-of-way dedication from both Holcomb Elementary School and Oregon City View Manor. According the applicant, discussions are on-going with Oregon City School District and with the Housing Authority of Clackamas County regarding these dedications. Both have indicated initial support for the required dedications. The Oregon City School Board will be considering the matter again at the April 14, 2014 Board meeting. The Housing Authority has forwarded the request to the HUD Special Application Center in Chicago and a decision is expected soon. If either dedication should ultimately fail to be approved, there is sufficient frontage on Holcomb School Road to provide for an emergency vehicle access. The following diagram shows the planned intersection configuration with areas of proposed dedications identified.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 12 through 23.

Table 12.04.180 Street Design

To read the table below, select the road classification as identified in the Transportation System Plan and the Comprehensive Plan designation of the adjacent properties to find the maximum design standards for the road cross section. If the Comprehensive Plan designation on either side of the street differs, the wider right-of-way standard shall apply.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Major Arterial	Mixed Use, Commercial or Public/Quasi Public	116 ft.	94 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.
	Industrial	120 ft.	88 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	N/A	(5) 14 ft. Lanes	6 ft.
	Residential	126 ft.	94 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Minor Arterial	Mixed Use, Commercial or Public/Quasi Public	116 ft.	94 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.
	Industrial	118 ft.	86 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(5) 12 ft. Lanes	N/A
	Residential	100 ft.	68 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	6 ft.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Collector	Mixed Use, Commercial or Public/Quasi Public	86 ft.	64 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(3) 12 ft. Lanes	N/A
	Industrial	88 ft.	62 ft.	0.5 ft.	5 ft.	7.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	N/A

									<i>Lanes</i>	
	<i>Residential</i>	<i>85 ft.</i>	<i>59 ft.</i>	<i>0.5 ft.</i>	<i>5 ft.</i>	<i>7.5 ft.</i>	<i>6 ft.</i>	<i>7 ft.</i>	<i>(3) 11 ft. Lanes</i>	<i>N/A</i>

<i>Road Classification</i>	<i>Comprehensive Plan Designation</i>	<i>Right-of-Way Width</i>	<i>Pavement Width</i>	<i>Public Access</i>	<i>Sidewalk</i>	<i>Landscape Strip</i>	<i>Bike Lane</i>	<i>Street Parking</i>	<i>Travel Lanes</i>	<i>Median</i>
<i>Local</i>	<i>Mixed Use, Commercial or Public/Quasi Public</i>	<i>62 ft.</i>	<i>40 ft.</i>	<i>0.5 ft.</i>	<i>10.5 ft. sidewalk including 5 ft.x5 ft. tree wells</i>		<i>N/A</i>	<i>8 ft.</i>	<i>(2) 12 ft. Lanes</i>	<i>N/A</i>
	<i>Industrial</i>	<i>60 ft.</i>	<i>38 ft.</i>	<i>0.5 ft.</i>	<i>5 ft.</i>	<i>5.5 ft.</i>	<i>(2) 19 ft. Shared Space</i>			<i>N/A</i>
	<i>Residential</i>	<i>54 ft.</i>	<i>32 ft.</i>	<i>0.5 ft.</i>	<i>5 ft.</i>	<i>5.5 ft.</i>	<i>(2) 16 ft. Shared Space</i>			<i>N/A</i>

1. Pavement width includes, bike lane, street parking, travel lanes and median.

2. Public access, sidewalks, landscape strips, bike lanes and on-street parking are required on both sides of the street in all designations. The right-of-way width and pavement widths identified above include the total street section.

3. A 0.5'-foot curb is included in landscape strip or sidewalk width.

4. Travel lanes may be through lanes or turn lanes.

5. The 0.5'-foot public access provides access to adjacent public improvements.

6. Alleys shall have a minimum right-of-way width of 20 feet and a minimum pavement width of 16 feet. If alleys are provided, garage access shall be provided from the alley.

Finding: Complies with conditions. All the proposed streets are local residential streets which have a requirement of 54-feet of right-of-way, 32-feet of pavement, curb & gutter, 5-foot planter strip with trees, 5-foot sidewalk and street lighting. All the streets (Ames Street, Stables Place and Pasture Way) will match the City requirements for local streets.

Pasture Way is proposed to complete a connection between Ames Street and School Street, which connects directly to Holcomb Blvd. This connection provides an important connection in the street network. In order to complete this street connection the applicant has proposed to obtain right-of-way from the School District (Holcomb Elementary School) and the Housing Authority of Clackamas County (Oregon City View Manor development). The applicant has initiated discussions with both entities.

Ames Street is the completion of an existing half street improvement, and a portion of Stables Place will be the construction of a half street improvement. This is discussed in greater depth in section 12.04.220 of this report.

The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 2, 3, 14, 15, 16, 17, 18 and 28.**

12.04.185 Street Design--Access Control.

A. A street which is dedicated to end at the boundary of the development or in the case of half-streets dedicated along a boundary shall have an access control granted to the City as a City controlled plat restriction for the purposes of controlling ingress and egress to the property adjacent to the end of the dedicated street. The

access control restriction shall exist until such time as a public street is created, by dedication and accepted, extending the street to the adjacent property.

- B. The City may grant a permit for the adjoining owner to access through the access control.
- C. The plat shall contain the following access control language or similar on the face of the map at the end of each street for which access control is required: "Access Control (See plat restrictions)."
- D. Said plats shall also contain the following plat restriction note(s): "Access to (name of street or tract) from adjoining tracts (name of deed document number[s]) shall be controlled by the City of Oregon City by the recording of this plat, as shown. These access controls shall be automatically terminated upon the acceptance of a public road dedication or the recording of a plat extending the street to adjacent property that would access through those Access Controls."

Finding: Complies with conditions. The applicant has proposed a half street improvement on a portion of Stables Place that is along the boundary of the property. A City controlled access strip shall be dedicated along the half street portion of Stables Place. It shall be recorded on the plat and shall control the ingress and egress to the property adjacent to the street. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 12.**

12.04.190 Street Design--Alignment.

The centerline of streets shall be:

- A. Aligned with existing streets by continuation of the centerlines; or
- B. Offset from the centerline by no more than five (5) feet, provided appropriate mitigation, in the judgment of the City Engineer, is provided to ensure that the offset intersection will not pose a safety hazard.

Finding: Complies as proposed. There are no off-set intersections proposed.

12.04.194 Traffic Sight Obstructions

All new streets shall comply with the Traffic Sight Obstructions in Chapter 10.32.

Finding: Complies as proposed. The applicant acknowledges this requirement.

12.04.195 Spacing Standards.

- A. All new streets shall be designed as local streets unless otherwise designated as arterials and collectors in Figure 8 in the Transportation System Plan. The maximum block spacing between streets is 530 feet and the minimum block spacing between streets is 150 feet as measured between the right-of-way centerlines. If the maximum block size is exceeded, pedestrian accessways must be provided every 330 feet. The spacing standards within this section do not apply to alleys.
- B. All new development and redevelopment shall meet the minimum driveway spacing standards identified in Table 12.04.195.B.

Table 12.04.195.B Minimum Driveway Spacing Standards		
Street Functional Classification	Minimum Driveway Spacing Standards	Distance
Major Arterial Streets	Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings	175 ft.
Minor Arterial Streets	Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings	175 ft.

Table 12.04.195.B Minimum Driveway Spacing Standards		
Street Functional Classification	Minimum Driveway Spacing Standards	Distance
Collector Streets	Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings	100 ft.
Local Streets	Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings	25 ft.
The distance from a street corner to a driveway is measured along the right-of-way from the edge of the intersection right-of-way to the nearest portion of the driveway and the distance between driveways is measured at the nearest portions of the driveway at the right-of-way.		

Finding: Complies as proposed. The applicant has proposed to connect to existing intersections on Ames Street. The intersection of Stables Place and Pasture Way is more than 150-feet from the intersection of Pasture Way and Ames Street. It is also more than 150-feet from the new intersection of Pasture Way and School Street.

12.04.199 Pedestrian and Bicycle Accessways

Pedestrian/bicycle accessways are intended to provide direct, safe and convenient connections between residential areas, retail and office areas, institutional facilities, industrial parks, transit streets, neighborhood activity centers, rights-of-way, and pedestrian/bicycle accessways which minimize out-of-direction travel, and transit-orientated developments where public street connections for automobiles, bicycles and pedestrians are unavailable. Pedestrian/bicycle accessways are appropriate in areas where public street options are unavailable, impractical or inappropriate. Pedestrian and bicycle accessways are required through private property or as right-of-way connecting development to the right-of-way at intervals not exceeding three-hundred-and-thirty feet of frontage; or where the lack of street continuity creates inconvenient or out of direction travel patterns for local pedestrian or bicycle trips.

- A. Entry points shall align with pedestrian crossing points along adjacent streets and with adjacent street intersections.*
- B. Accessways shall be free of horizontal obstructions and have a nine-foot, six-inch high vertical clearance to accommodate bicyclists. To safely accommodate both pedestrians and bicycles, accessway right-of-way widths shall be as follows:

 - 1. Accessways shall have a fifteen-foot-wide right-of-way with a seven-foot wide paved surface between a five foot planter strip and a three foot planter strip.*
 - 2. If an accessway also provides secondary fire access, the right-of-way width shall be at least twenty-three feet wide with a fifteen-foot paved surface a five foot planter strip and a three foot planter strip.**
- C. Accessways shall be direct with at least one end point of the accessway always visible from any point along the accessway. On-street parking shall be prohibited within fifteen feet of the intersection of the accessway with public streets to preserve safe sight distance and promote safety.*
- D. To enhance pedestrian and bicycle safety, accessways shall be lighted with pedestrian-scale lighting. Accessway lighting shall be to a minimum level of one-half foot-candles, a one and one-half foot-candle average, and a maximum to minimum ratio of seven-to-one and shall be oriented not to shine upon adjacent properties. Street lighting shall be provided at both entrances.*
- E. Accessways shall comply with Americans with Disabilities Act (ADA).*
- F. The planter strips on either side of the accessway shall be landscaped along adjacent property by installation of the following:*

1. *Within the three foot planter strip, an evergreen hedge screen of thirty to forty-two inches high or shrubs spaced no more than four feet apart on average;*
 2. *Ground cover covering one hundred percent of the exposed ground. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees;*
 3. *Within the five foot planter strip, two-inch minimum caliper trees with a maximum of thirty-five feet of separation between the trees to increase the tree canopy over the accessway;*
 4. *In satisfying the requirements of this section, evergreen plant materials that grow over forty-two inches in height shall be avoided. All plant materials shall be selected from the Oregon City Native Plant List.*
- G. Accessways shall be designed to prohibit unauthorized motorized traffic. Curbs and removable, lockable bollards are suggested mechanisms to achieve this.*
- H. Accessway surfaces shall be paved with all-weather materials as approved by the city. Pervious materials are encouraged. Accessway surfaces shall be designed to drain stormwater runoff to the side or sides of the accessway. Minimum cross slope shall be two percent.*
- I. In parks, greenways or other natural resource areas, accessways may be approved with a five-foot wide gravel path with wooden, brick or concrete edgings .*
- J. The Community Development Director may approve an alternative accessway design due to existing site constraints through the modification process set forth in Section 12.04.007.*

Finding: Complies with conditions. The applicant has proposed two 15-foot wide pedestrian access ways as the proposed block length is longer than 330-feet. One access way connects Stables Place and Pasture Way, and the other extends from Pasture Way to the east to the edge of the property.

The pedestrian access ways shall meet the requirements of this section which includes a 5-foot planter strip with trees, 7-foot paved surface and 3-foot planter strip with plantings and pedestrian level lighting. There shall be a street light at either end of the pedestrian way except where it ends at the property boundary.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 19.

K. Ownership, liability and maintenance of accessways.

To ensure that all pedestrian/bicycle accessways will be adequately maintained over time, the hearings body shall require one of the following:

- 1 *Dedicate the accessways to the public as public right-of-way prior to the final approval of the development; or*
- 2 *The developer incorporates the accessway into a recorded easement or tract that specifically requires the property owner and future property owners to provide for the ownership, liability and maintenance of the accessway.*

Finding: Complies with conditions. The pedestrian accessways shall be incorporated into a recorded easement that requires the property owner to provide for ownership, liability and maintenance. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 20.**

12.04.205 Mobility Standards.

Development shall demonstrate compliance with intersection mobility standards. When evaluating the performance of the transportation system, the City of Oregon City requires all intersections, except for the facilities identified in subsection D below, to be maintained at or below the following mobility standards during the two-hour peak operating conditions. The first hour has the highest weekday traffic volumes and the second hour is the next highest hour before or after the first hour. Except as provided otherwise below, this may require

the installation of mobility improvements as set forth in the Transportation System Plan or as otherwise identified by the City Transportation Engineer.

A. *For intersections within the Regional Center, the following mobility standards apply:*

1. *During the first hour, a maximum v/c ratio of 1.10 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*
2. *During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*
3. *Intersections located on the Regional Center boundary shall be considered within the Regional Center.*

Finding: Not applicable. This application is not within the Regional Center.

B. *For intersections outside of the Regional Center but designated on the Arterial and Throughway Network, as defined in the Regional Transportation Plan, the following mobility standards apply:*

1. *During the first hour, a maximum v/c ratio of 0.99 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*
2. *During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*

Finding: Complies as Proposed. The intersection of Holcomb Boulevard at Holcomb School Road currently operates at LOS C with a v/c of 0.36 during the morning peak hour; at LOS B with a v/c ratio of 0.19 during the midday peak hour; and at LOS A with a v/c ratio of 0.09 during the evening peak hour. Following the background growth of traffic and the development of the site, the intersection is projected to operate at LOS C with a v/c ratio of 0.43 during the morning peak hour; at LOS B with a v/c ratio of 0.22 during the midday peak hour; and at LOS A with a v/c ratio of 0.10 during the evening peak hour.

C. *For intersections outside the boundaries of the Regional Center and not designated on the Arterial and Throughway Network, as defined in the Regional Transportation Plan, the following mobility standards apply:*

1. *For signalized intersections:*
 - a. *During the first hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.*
 - b. *During the second hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.*
2. *For unsignalized intersections outside of the boundaries of the Regional Center:*
 - a. *For unsignalized intersections, during the peak hour, all movements serving more than 20 vehicles shall be maintained at LOS "E" or better. LOS "F" will be tolerated at movements serving no more than 20 vehicles during the peak hour.*

Finding: Complies as Proposed. The intersection of Holcomb Boulevard at Holcomb School Road currently operates at LOS C with a v/c of 0.36 during the morning peak hour; at LOS B with a v/c ratio of 0.19 during the midday peak hour; and at LOS A with a v/c ratio of 0.09 during the evening peak hour. Following the background growth of traffic and the development of the site, the intersection is projected to operate at LOS

C with a v/c ratio of 0.43 during the morning peak hour; at LOS B with a v/c ratio of 0.22 during the midday peak hour; and at LOS A with a v/c ratio of 0.10 during the evening peak hour.

D. Until the City adopts new performance measures that identify alternative mobility targets, the City shall exempt proposed development that is permitted, either conditionally, outright, or through detailed development master plan approval, from compliance with the above-referenced mobility standards for the following state-owned facilities:

I-205 / OR 99E Interchange

I-205 / OR 213 Interchange

OR 213 / Beavercreek Road

State intersections located within or on the Regional Center Boundaries

1. In the case of conceptual development approval for a master plan that impacts the above references intersections:

a. The form of mitigation will be determined at the time of the detailed development plan review for subsequent phases utilizing the Code in place at the time the detailed development plan is submitted; and

b. Only those trips approved by a detailed development plan review are vested.

2. Development which does not comply with the mobility standards for the intersections identified in 12.04.205.D shall provide for the improvements identified in the Transportation System Plan (TSP) in an effort to improve intersection mobility as necessary to offset the impact caused by development. Where required by other provisions of the Code, the applicant shall provide a traffic impact study that includes an assessment of the development's impact on the intersections identified in this exemption and shall construct the intersection improvements listed in the TSP or required by the Code.

Finding: Complies as Proposed. See findings above.

12.04.210 Street design--Intersection Angles.

Except where topography requires a lesser angle, streets shall be laid out to intersect at angles as near as possible to right angles. In no case shall the acute angles be less than eighty degrees unless there is a special intersection design. An arterial or collector street intersecting with another street shall have at least one hundred feet of tangent adjacent to the intersection unless topography requires a lesser distance. Other streets, except alleys, shall have at least fifty feet of tangent adjacent to the intersection unless topography requires a lesser distance. All street intersections shall be provided with a minimum curb return radius of twenty-five feet for local streets. Larger radii shall be required for higher street classifications as determined by the city engineer. Additional right-of-way shall be required to accommodate curb returns and sidewalks at intersections. Ordinarily, intersections should not have more than two streets at any one point.

Finding: Complies with conditions. The applicant has proposed that the intersections on Ames Street with Pasture Way and Stables Place are at 90-degrees. The intersection of Pasture Way and Stables Places is also proposed to be at 90-degrees. The intersection of Pasture Way and School Street shall be 90-degrees. Due to the horizontal curves required to provide the intersection angle, additional right-of-way and pavement width is required for the right turn movement from Pasture Way onto School Street.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 21.

12.04.215 Street design--Off-Site Street Improvements.

During consideration of the preliminary plan for a development, the decision maker shall determine whether existing streets impacted by, adjacent to, or abutting the development meet the city's applicable planned minimum design or dimensional requirements. Where such streets fail to meet these requirements, the decision-maker shall require the applicant to make proportional improvements sufficient to achieve conformance with minimum applicable design standards required to serve the proposed development.

Finding: Complies with conditions. See section 12.04.180 and 12.04.220 of this report for improvements on Ames Street and the connection to School Street.

12.04.220 Street Design--Half Street.

Half streets, while generally not acceptable, may be approved where essential to the development, when in conformance with all other applicable requirements, and where it will not create a safety hazard. When approving half streets, the decision maker must first determine that it will be practical to require the dedication of the other half of the street when the adjoining property is divided or developed. Where the decision maker approves a half street, the applicant must construct an additional ten feet of pavement width so as to make the half street safe and usable until such time as the other half is constructed. Whenever a half street is adjacent to property capable of being divided or developed, the other half of the street shall be provided and improved when that adjacent property divides or develops. Access Control may be required to preserve the objectives of half streets.

When the remainder of an existing half-street improvement is made it shall include the following items: dedication of required right-of-way, construction of the remaining portion of the street including pavement, curb and gutter, landscape strip, sidewalk, street trees, lighting and other improvements as required for that particular street. It shall also include at a minimum the pavement replacement to the centerline of the street. Any damage to the existing street shall be repaired in accordance with the City's "Moratorium Pavement Cut Standard" or as approved by the City Engineer.

Finding: Complies with conditions. The applicant has proposed to construct a portion of Stables Place as a half street improvement. It is proposed to dedicate 38-feet of right-of-way, construct 26-feet of pavement, curb & gutter, 5-foot landscape strip and 5-foot sidewalk. The landscape strip and sidewalk would be located on the east side of the street. This meets the requirements of a half-street improvement for a local street. The pavement shall have a temporary curb on the west side for storm water control, or other improvements such that run-off from the street is directed away from the neighboring property.

The applicant proposes to complete the southern portion of Ames Street which is constructed as a half-street right now.

From Stable Place to the east Ames Street has a right-of-way of 53-feet and 26-feet of pavement. The current requirement for a local street is a 54-foot right-of-way, 32-feet of pavement, curb & gutter, 5-foot planter strip and 5-foot sidewalk. The applicant shall dedicate 1-foot of right-of-way, provide 6-feet of new pavement and resurface the pavement to the centerline of the street, provide a curb & gutter, a 5-foot planter strip with trees, a 5-foot sidewalk and street lighting.

From Stable Place to the west Ames Street has a right-of-way of 50-feet and 25-feet of pavement. The current requirement for a local street is a 54-foot right-of-way, 32-feet of pavement, curb & gutter, 5-foot planter strip and 5-foot sidewalk. The applicant shall dedicate 2-foot of right-of-way, provide 7-feet of new pavement and resurface the pavement to the centerline of the street, provide a curb & gutter, a 5-foot planter strip with trees, a 5-foot sidewalk and street lighting.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 2, 15, 16 and 17.

12.04.225 Street Design--Cul-de-sacs and Dead-End Streets.

The city discourages the use of cul-de-sacs and permanent dead-end streets except where construction of a through street is found by the decision maker to be impracticable due to topography or some significant physical constraint such as geologic hazards, wetland, natural or historic resource areas, dedicated open space, existing development patterns, arterial access restrictions or similar situation as determined by the Community Development Director. When permitted, access from new cul-de-sacs and permanent dead-end streets shall be limited to a maximum of 25 dwelling units and a maximum street length of two hundred feet, as measured from the right-of-way line of the nearest intersecting street to the back of the cul-de-sac curb face. In addition, cul-de-sacs and dead end roads shall include pedestrian/bicycle accessways as required in this Chapter. This section is not intended to preclude the use of curvilinear eyebrow widening of a street where needed.

Where approved, cul-de-sacs shall have sufficient radius to provide adequate turn-around for emergency vehicles in accordance with Fire District and City adopted street standards. Permanent dead-end streets other than cul-de-sacs shall provide public street right-of-way / easements sufficient to provide turn-around space with appropriate no-parking signs or markings for waste disposal, sweepers, and other long vehicles in the form of a hammerhead or other design to be approved by the decision maker. Driveways shall be encouraged off the turnaround to provide for additional on-street parking space.

Finding: Not applicable. There are no proposed cul-de-sacs or dead-ends.

12.04.230 Street Design--Street Names.

Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of an existing street. Street names shall conform to the established standards in the City and shall be subject to the approval of the City.

Finding:

12.04.235 Street Design--Grades and Curves.

Grades and center line radii shall conform to the standards in the City's street design standards and specifications.

Finding: Complies with conditions. The applicant has proposed a number of horizontal curves in the street alignment.

On Stables Place there is a compound curve that consists of two curves with a 100-foot radius and one curve with a 150-foot radius. This provides a gentle curve that is mid-block on a long and otherwise straight block on a local street. These curves will act as speed control on a local street, and are short enough not to cause discomfort while driving.

On Stables Place there is also a horizontal curve that has a 52-foot radius. This curve acts like an intersection. There is another 100-foot radius horizontal curve on Stables Place that is only 40-feet long. This is another gentle curve in the street that would act as speed control on a local street and is short enough not to cause discomfort while driving.

Where Pastures Way connects to School Street there is a compound curve that consists of two curves with a 100-foot radius each. This is a longer curve that ends in an intersection. Per the American Association of State Highway and Transportation Officials (AASHTO) standards on the Geometric Design of Highways and

Streets the radius of the curve should be 180-feet for a speed of 25 mph. Mitigating measures are required which include a “stop” sign on Pastures Way at the intersection with School Street, additional lighting of the curve, and a “stop sign ahead” sign on Pastures Way near the beginning of the compound curve.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 18, 22, and 23.

12.04.240 Street Design--Development Abutting Arterial or Collector Street.

Where development abuts or contains an existing or proposed arterial or collector street, the decision maker may require: access control; screen planting or wall contained in an easement or otherwise protected by a restrictive covenant in a form acceptable to the decision maker along the rear or side property line; or such other treatment it deems necessary to adequately protect residential properties or afford separation of through and local traffic. Reverse frontage lots with suitable depth may also be considered an option for residential property that has arterial frontage. Where access for development abuts and connects for vehicular access to another jurisdiction's facility then authorization by that jurisdiction may be required.

Finding: Not applicable. The development does not abut an arterial or collector street.

12.04.245 Street Design--Pedestrian and Bicycle Safety.

Where deemed necessary to ensure public safety, reduce traffic hazards and promote the welfare of pedestrians, bicyclists and residents of the subject area, the decision maker may require that local streets be so designed as to discourage their use by nonlocal automobile traffic.

All crosswalks shall include a large vegetative or sidewalk area which extends into the street pavement as far as practicable to provide safer pedestrian crossing opportunities. These curb extensions can increase the visibility of pedestrians and provide a shorter crosswalk distance as well as encourage motorists to drive slower. The decision maker may approve an alternative design that achieves the same standard for constrained sites or where deemed unnecessary by the City Engineer.

Finding: Not applicable. Additional measures are not warranted for this location. Staff does not anticipate any hazards from cut-through non-local traffic automobile traffic.

12.04.255 Street design--Alleys.

Public alleys shall be provided in the following districts R-5, R-3.5, R-2, MUC-1, MUC-2 and NC zones unless other permanent provisions for private access to off-street parking and loading facilities are approved by the decision maker. The corners of alley intersections shall have a radius of not less than ten feet.

Finding: Not applicable. The property is not located in the zone district indicated above and the applicant has not proposed alleys.

12.04.260 Street Design--Transit.

Streets shall be designed and laid out in a manner that promotes pedestrian and bicycle circulation. The applicant shall coordinate with transit agencies where the application impacts transit streets as identified in 17.04.1310. Pedestrian/bicycle access ways shall be provided as necessary in Chapter 12.04 to minimize the travel distance to transit streets and stops and neighborhood activity centers. The decision maker may require provisions, including easements, for transit facilities along transit streets where a need for bus stops, bus pullouts or other transit facilities within or adjacent to the development has been identified.

Finding: Complies as Proposed. There are no transit facilities indicated within the development site. Pedestrian accessways have been proposed within the development to minimize travel distance.

12.04.265 Street design--Planter Strips.

All development shall include vegetative planter strips that are five feet in width or larger and located adjacent to the curb. This requirement may be waived or modified if the decision maker finds it is not practicable. The decision maker may permit constrained sites to place street trees on the abutting private property within 10 feet of the public right-of-way if a covenant is recorded on the title of the property identifying the tree as a city street tree which is maintained by the property owner. Development proposed along a collector, minor arterial, or major arterial street may use tree wells with root barriers located near the curb within a wider sidewalk in lieu of a planter strip, in which case each tree shall have a protected area to ensure proper root growth and reduce potential damage to sidewalks, curbs and gutters.

To promote and maintain the community tree canopy adjacent to public streets, trees shall be selected and planted in planter strips in accordance with Chapter 12.08, Street Trees. Individual abutting lot owners shall be legally responsible for maintaining healthy and attractive trees and vegetation in the planter strip. If a homeowners' association is created as part of the development, the association may assume the maintenance obligation through a legally binding mechanism, e.g., deed restrictions, maintenance agreement, etc., which shall be reviewed and approved by the city attorney. Failure to properly maintain trees and vegetation in a planter strip shall be a violation of this code and enforceable as a civil infraction.

Finding: Complies with conditions. See sections 12.04.180 and 12.04.220 of this report.

12.04.270 Standard Construction Specifications.

The workmanship and materials for any work performed under permits issued per this chapter shall be in accordance with the edition of the "Standard Specifications for Public Works Construction," as prepared by the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the city, in effect at the time of application. The exception to this requirement is where this chapter and the Public Works Street Design Drawings provide other design details, in which case the requirements of this chapter and the Public Works Street Design Drawings shall be complied with. In the case of work within ODOT or Clackamas County rights-of-way, work shall be in conformance with their respective construction standards.

Finding: Complies as proposed. The applicant acknowledges this requirement.

12.04.280 Violation--Penalty.

Any act or omission in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Complies as proposed. The applicant acknowledges this requirement.

CHAPTER 12.08 - PUBLIC AND STREET TREES**12.08.015 Street tree planting and maintenance requirements.**

All new construction or major redevelopment shall provide street trees adjacent to all street frontages. Species of trees shall be selected based upon vision clearance requirements, but shall in all cases be selected from the Oregon City Street Tree List or be approved by a certified arborist. If a setback sidewalk has already been constructed or the Development Services determines that the forthcoming street design shall include a setback sidewalk, then all street trees shall be installed with a planting strip. If existing street design includes a curb-

tight sidewalk, then all street trees shall be placed within the front yard setback, exclusive of any utility easement.

A. One street tree shall be planted for every thirty-five feet of property frontage. The tree spacing shall be evenly distributed throughout the total development frontage. The community development director may approve an alternative street tree plan if site or other constraints prevent meeting the placement of one street tree per thirty-five feet of property frontage.

B. The following clearance distances shall be maintained when planting trees:

- 1. Fifteen feet from streetlights;*
- 2. Five feet from fire hydrants;*
- 3. Twenty feet from intersections;*
- 4. A minimum of five feet (at mature height) below power lines.*

C. All trees shall be a minimum of two inches in caliper at six inches above the root crown and installed to city specifications.

D. All established trees shall be pruned tight to the trunk to a height that provides adequate clearance for street cleaning equipment and ensures ADA complaint clearance for pedestrians.

Finding: Complies with Conditions. The applicant submitted a preliminary site plan that indicates street trees spaced throughout the development at 35' on center. The Applicant indicated that the street trees would be planted in accordance with Chapter 12.08 but did not indicate the species. Prior to final plat the Applicant shall submit a final Street Tree Plan for the frontage of the properties that includes the number, location, size, and species of the trees. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 25.**

12.08.020 *Street tree species selection.*

The community development director may specify the species of street trees required to be planted if there is an established planting scheme adjacent to a lot frontage, if there are obstructions in the planting strip, or if overhead power lines are present.

Finding: Complies with Condition. The Applicant indicated that the street trees would be planted in accordance with Chapter 12.08 but did not indicate the species. Prior to final plat the Applicant shall submit a final Street Tree Plan for the frontage of the properties that includes the number, location, size, and species of the trees. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 25.**

12.08.035 *- Public tree removal.*

Existing street trees shall be retained and protected during construction unless removal is specified as part of a land use approval or in conjunction with a public facilities construction project, as approved by the community development director. A diseased or hazardous street tree, as determined by a registered arborist and verified by the City, may be removed if replaced. A non-diseased, non-hazardous street tree that is removed shall be replaced in accordance with the Table 12.08.035. All new street trees will have a minimum two-inch caliper trunk measured six inches above the root crown. The community development director may approve off-site installation of replacement trees where necessary due to planting constraints. The community development director may additionally allow a fee in-lieu of planting the tree(s) to be placed into a city fund dedicated to planting trees in Oregon City in accordance with Oregon City Municipal Code 12.08.

Finding: Not Applicable. There are no existing street trees proposed to be removed with this development.

Chapter 17.41 TREE PROTECTION STANDARDS

17.41.010-040 *Tree Protection.*

New development shall be designed in a manner that preserves trees to the maximum extent practicable. As a requirement of any Type II land use application, the siting of structures, roadways and utility easements shall provide for the protection of tree resources to the maximum extent practicable. This applies to all subdivision, partition and site plan and design review applications.

Finding: Applicable. Compliance with this section is required.

17.41.050 Same--Compliance options.

Applicants for review shall comply with these requirements through one of the following procedures:

- A. Option 1 - Mitigation. Retention and removal of trees, with subsequent mitigation by replanting pursuant to Sections 17.41.060 or 17.41.070; or
- B. Option 2 -- Dedicated Tract. Protection of trees or groves by placement in a tract within a new subdivision or partition plat pursuant to Section 17.41.080, or
- C. Option 3 -- Restrictive Covenant. Protection of trees or groves by recordation of a permanent restrictive covenant pursuant to Section 17.41.090.

A regulated tree that has been designated for protection pursuant to this section must be retained or permanently protected unless it has been determined by a certified arborist to be diseased, dying or hazardous, pursuant to the following applicable provisions.

The community development director, pursuant to a Type II procedure, may allow a property owner to cut a specific number of trees within a regulated grove if preserving those trees would:

- 1. Preclude achieving eighty percent of minimum density with reduction of lot size; or
- 2. Preclude meeting minimum connectivity requirements for subdivisions.

Farm or forest resources. An applicant for development may claim that the regulated grove or trees was a designated farm or forest use, tree farm, Christmas tree plantation, or other approved timber use prior to development application. "Forest practices" and "forestlands" as used in this subsection shall have the meaning set out in ORS 30.930. "Farming practice" as used in this subsection shall have the meaning set out in ORS 30.930. "Farm use" as used in this subsection shall have the meaning set out in ORS 215.203. In this case, the applicant may propose an alternative mitigation plan to be approved by the community development director.

Finding: Complies as Proposed. The applicant indicates that the subject property contains a total of thirty-three trees in the main body of the site, another 22 trees along the easterly property line adjacent to Holcomb Elementary School, and an arborvitae hedge along a portion of the rear lines of proposed Lots 2 and 3. As shown on the grading plan, extensive site grading is needed in order to get the site to drain properly to the shallow storm and sewer lines in Ames Street. Several trees in the southern portion of the site, where the existing terrain does not need to be disturbed, will be retained. Additionally, the trees along the east property line will not be disturbed and the arborvitae hedge will remain.

17.41.060 Tree removal and replanting--Mitigation (Option 1).

Regulated trees that are removed outside of the construction area, if removed shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Regulated trees that are removed within the construction area shall be replanted with the number of replacement trees required in Column 2.

Table 17.41.060-1

Tree Replacement Requirements

Size of tree removed (DBH)	Column 1 Number of trees to be planted. (If removed Outside of construction area)	Column 2 Number of trees to be planted. (If removed Within the construction area)
6 to 12"	3	1
13 to 18"	5	2

19 to 24"	8	3
25 to 30"	10	4
31 and over"	15	5

Finding: Complies with Condition. The applicant proposes to make use of Mitigation Option 1. Trees not identified for removal will be protected outside of the construction area throughout the construction phase of the project. Replacement trees will be planted pursuant to the provisions of this section. A mitigation plan will be prepared by an arborist and submitted for review prior to final plat approval. The applicant indicates that the subject property contains a total of thirty-three trees in the main body of the site, another 22 trees along the easterly property line adjacent to Holcomb Elementary School, and an arborvitae hedge along a portion of the rear lines of proposed Lots 2 and 3. Staff has reviewed the plans and it appears that 14 trees that are indicated for removal are located outside of any construction area. The applicant has not provided a specific calculation of the number of trees to be removed, preserved and required to be replaced based on their location. Prior to final plat, the Applicant shall submit a revised tree mitigation plan in accordance with OCMC 17.41 and Table 17.41.060-1. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 26.**

17.41.070 *Planting area priority for mitigation (Option 1).*

Development applications which opt for removal or trees with subsequent replanting pursuant to Section 17.41.050A. and shall be required to mitigate for tree cutting by complying with the following priority for replanting standards C.1.--4. below:

First Priority. Replanting on the development site. First priority for replacement tree locations shall be planting on-site.

Finding: Complies with Condition. See finding above.

17.41.075 –125 *Tree Mitigation Options*

These code sections provide a variety of compliance options for land use applications, including preservation and mitigation of trees, the use of flexible lots sizes and setbacks, on-site density transfer, preservation tracts, and fee-in-lieu of planting.

Finding: Not Applicable. The Applicant did not seek compliance based on these options.

17.41.130. *Regulated Tree Protection Procedures During Construction.*

No permit for any grading or construction of public or private improvements may be released prior to verification by the Community Development Director that regulated trees designated for protection or conservation have been protected according to OCMC 17.41.130(B). No trees designated for removal shall be removed without prior written approval from the Community Development Director.

Finding: Complies with Conditions. The Applicant indicated that the required procedures and arborist recommendations will be followed throughout the period of construction activities on the site. All tree protection measures shall be indicated on all construction plans for the public improvements and grading of the site. Changes in soils hydrology and site drainage within tree protection areas will be avoided. Prior to issuance of any construction permit, grading or fill permit, or construction plans by the Public Works Department the applicant shall request an inspection by a member of the Planning Division that these measures have been installed. **The applicant can assure this standard is met through Condition of Approval 26.**

Stormwater Conveyance, Quantity and Quality in Chapter 13.12

13.12.050 *Pursuant to each of the subsections below, proposed activities may be required to meet the performance standards for stormwater conveyance, stormwater quantity or stormwater quality.*

A. *Stormwater Conveyance. The stormwater conveyance requirements of this chapter shall apply to all*

stormwater systems constructed with any development activity, except as follows:

1. *The conveyance facilities are located entirely on one privately owned parcel;*
2. *The conveyance facilities are privately maintained; and*
3. *The conveyance facilities receive no stormwater runoff from outside the parcel's property limits.*

Those facilities exempted from the stormwater conveyance requirements by the above subsection will remain subject to the requirements of the Oregon Uniform Plumbing Code. Those exempted facilities shall be reviewed by the building official.

Finding: Complies with Condition. The applicant has proposed to install a storm water collection system within the street ROW and a storm water detention and treatment facility within a tract, which shall connect to an existing City owned storm water collection system. The City owned system discharges to an existing drainage way in the County. The applicant performed a preliminary storm water report to determine the storm water requirements and a downstream capacity evaluation and found that there is sufficient capacity in both the City and County collection system to convey the run-off from the proposed development. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 2, 3, 9, 10 and 11.**

13.12.050.B. *Stormwater Quantity Control. The stormwater quantity control requirements of this chapter shall apply to the following proposed activities, uses or developments:*

1. *Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven-year period;*

Finding: Not applicable. The development is not in a Natural Resource Overlay District.

2. *Activities that create more than two thousand square feet of impervious surface, cumulated over any given seven year period; or*

Finding: Complies with Condition. The proposed development will create more than 2,000 square feet of new impervious area, so storm water quantity control is required. See section 16.08.030 B3 of this report for a description of the storm drainage system and quantity control.

3. *Redevelopment of a commercial or industrial land use that will disturb more than five thousand square feet of existing impervious surface. This five thousand square foot measurement cumulates over any given seven year period;*

Finding: Not Applicable. The proposed work is not redevelopment.

4. *An exemption to the stormwater quantity control requirements of this chapter will be granted in the following circumstances:*

- a. *The development site discharges to a stormwater quantity control facility approved by the city engineer to receive the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater, or,*

- b. *The development site discharges to one of the following receiving bodies of water: Willamette River, Clackamas River or Abernethy Creek; and either lies within the one hundred year floodplain or is up to ten feet above the design flood elevation as defined in Chapter 17.42*

Finding: Not Applicable. Exemption has not been requested.

13.12.050.C. *Stormwater Quality Control. The stormwater quality control requirements of this chapter shall apply to the following proposed activities, uses or developments:*

1. *Category A. Activities subject to general water quality requirements of this chapter:*
 - a. *The construction of four or more single-family residences;*
 - b. *Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven year period; or*
 - c. *Activities that create more than eight thousand square feet of new impervious surface for other than a single-family residential development. This eight thousand square foot measurement will be considered cumulative for any given seven year period;*
 - d. *An exemption to the stormwater quantity control requirements of this subsection will be granted if the development site discharges to a stormwater quality control facility approved by the city engineer to receive the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater.*

Finding: Complies as Proposed. The applicant has proposed to construct more than four homes, so storm water quality control is required. See section 16.08.030.B.3 of this report for a description of the storm drainage system and quality control.

2. *Category B. Uses Requiring Additional Management Practices. In addition to any other applicable requirements of this chapter, the following uses are subject to additional management practices as contained in the Public Works Stormwater and Grading Design Standards:*
 - a. *Fuel dispensing facilities;*
 - b. *Bulk petroleum storage in multiple stationary tanks;*
 - c. *Solid waste storage areas for commercial, industrial or multi-family uses;*
 - d. *Loading and unloading docks for commercial or industrial uses; or*
 - e. *Covered vehicle parking for commercial or industrial uses.*

Finding: Not Applicable. The proposed work does not include these elements.

3. *Category C. Clackamas River Watershed. In addition to any other applicable requirements of this chapter, any development that creates new waste discharges and whose stormwater runoff may directly or indirectly flow into the Clackamas River is subject to additional requirements associated with Oregon Administrative Rules (OAR) 340-41-470 (Thee Basin Rule).*

Finding: Not Applicable. No new waste discharges or increased stormwater flow will flow into the Clackamas River with this development.

IV. CONCLUSION AND DECISION:

In conclusion, the proposed zone change and 29-lot subdivision located at 14591 Holcomb Blvd and 14550 Ames Street, Oregon City, identified as Clackamas Map 2-2E-21DC-01600, Clackamas Map 2-2E-21DC-01300 and Clackamas Map 2-2E-28AB-01600, can meet the approval standards outlined in this Staff Report, subject to the Applicant's proposal, and attached proposed Conditions of Approval contained in this report. Therefore, the Community Development Director recommends approval of the application with Conditions.

V. EXHIBITS

The following exhibits are attached to this staff report.

1. Vicinity Map
2. Applicant's Submittal
 - a. Land Use Application Form
 - b. Narrative
 - c. Neighborhood Meeting Notes
 - d. Assessor Maps
 - e. Existing Conditions
 - f. Preliminary Plan w/ Lot Sizes and Tree Locations
 - g. Preliminary Grading and Erosion Control Plan
 - h. Preliminary Street Profiles
 - i. Preliminary Street Plan
 - j. Preliminary Utility Plan
 - k. Preliminary Drainage Report (Jan 2014)
 - l. Revised Preliminary Drainage Report (March 2014)
 - m. Subdivision Guarantee
 - n. Transportation Impact Study
3. Comments from John Replinger of Replinger and Associates
4. Public Comments received prior to May 5.
 - a. Berends
 - b. Fuller
 - c. Shearer
 - d. Staudenmier
 - e. Park Place Neighborhood Association Chair LaSalle
 - f. Park Place Neighborhood Association Chair LaSalle
5. Engineering Policy EP 00-01
6. OCSD Email from Ted Thonstad, Facilities Director, regarding Holcomb school capacity (no conflicts).
7. Preliminary Plat Lot Dimensional Calculations
8. Comments from SHPO re: Archeological Resources (no conflicts).
9. Comments from CRW (no conflicts).
10. Public Notices
11. Land Use Transmittal Form (Emailed to affected parties)

**PROPOSED CONDITIONS OF APPROVAL
TP 14-01 and ZC 14-01**

1. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. This includes attending a pre-design meeting with the City. *(DS)*
2. Prior to final plat approval, the Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water and/or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. *(DS)*
3. Prior to final plat approval, the Applicant shall provide an Erosion Prevention and Sedimentation Control Plan suitable to the Public Works Department to meet the Public Works requirements for erosion control. The Applicant shall provide a Preliminary Residential Lot Grading Plan to the City for review prior to the approval of construction plans. A final site Residential Lot Grading Plan shall be required as part of the final construction plans per the City's Residential Lot Grading Criteria and the International Building Code. If significant grading is required for the lots due to its location or the nature of the site, rough grading shall be required of the developer prior to the acceptance of the public improvements. There shall not be more than a maximum grade differential of two (2) feet at all subdivision boundaries. Grading shall in no way create any water traps, or other ponding situations. The plan shall show the existing and proposed swales. *(DS)*
4. All new water lines shall be 8-inch diameter. The new water lines shall form a looped system with no dead-ends. It shall be connected to the existing water distribution system on Ames Street at both Stables Place and Pastures Way, and on School Street. *(DS)*
5. All new water services shall be constructed with individual copper water laterals a minimum of 1-inch diameter in size connecting the water main to the water meter. *(DS)*
6. Prior to final plat, the Applicant shall submit the proposed development plans to Clackamas County Fire District No. 1 for review and install any required fire hydrants. *(F)*
7. All new sanitary sewer mains shall be 8-inch diameter gravity mains connected to the existing collection system on Ames Street at both Stables Place and Pastures Way. Where there is insufficient cover at the connection on Pastures Way DI pipe shall be used. *(DS)*
8. All new sanitary sewer laterals shall be constructed with individual laterals connecting to the sanitary sewer main. Where there is insufficient depth to provide for gravity service lines near the intersection of Ames Street and Pastures Way, individual and privately owned pump systems shall be provided. It shall be marked on the plans where these systems are required. *(DS)*
9. Public storm sewer improvements shall be designed and constructed to collect, detention and treatment in a manner suitable to the Public Works Department. *(DS)*
10. Temporary storm collection and conveyance shall be designed and constructed along the half street portion of Stables Place such that run-off from the street shall not be discharged to the adjacent property. Improvements may include a temporary curb along the east side of the street. *(DS)*
11. A final storm water report which reflects the final design shall be completed as part of the design. *(DS)*
12. The applicant shall dedicate to the City a controlled access strip along the half street portion of Stables Place. It shall be recorded on the plat and shall control the ingress and egress to the property adjacent to the street. *(DS)*

13. Ten-foot public utility easements along all street frontages and all easements required for the final engineering plans shall be dedicated to the public on the final plat. All existing and proposed utilities and easements shall be indicated on the construction plans. Any off-site utility easements required for this project, such as for work on the storm outfall, shall be obtained and submitted to the City prior to approval of the construction plans. *(DS)*
14. The Applicant shall construct improvements on the proposed new streets that includes dedication of 54-feet of right-of-way, and improvements that include, but are not to limited to, base rock, paved street width of 32 feet, curb and gutter, 5-foot landscape strip excluding curb width, 5-foot concrete sidewalk (curb, landscape strip and sidewalk on both sides of the street), curb return radii, centerline monumentation in monument boxes, traffic control devices, street trees, and street lights. This shall include sidewalks, landscape strip, curb, gutter and pavement on land to be dedicated by the Clackamas County Housing Authority to connect the sidewalk to the existing sidewalk on Holcomb School Street. *(DS)*
15. The Applicant shall construct improvements on Ames Street east of Stables Way which include a 1-foot right-of-way dedication (such that there is 27-feet from centerline), and improvements that includes, but are not to limited to, base rock, 6-feet of additional paved street, resurfacing of the existing pavement to centerline , curb and gutter on the south side of the street, 5-foot landscape strip excluding curb width on the south side of the street, 5-foot concrete sidewalk on the south side of the street, curb return radii, centerline monuments in boxes, traffic control devices, street trees, and street lights. *(DS)*
16. The Applicant shall construct improvements on Ames Street west of Stables Way which include a 2-foot right-of-way dedication (such that there is 27-feet from centerline), and improvements that includes, but are not to limited to, base rock, 7-feet of additional paved street, resurfacing of the existing pavement to centerline , curb and gutter on the south side of the street, 5-foot landscape strip excluding curb width on the south side of the street, 5-foot concrete sidewalk on the south side of the street, curb return radii, centerline monuments in boxes, traffic control devices, street trees, and street lights. *(DS)*
17. The Applicant shall construct improvements on the half street portion of Stables Way which include a dedication of 38-feet of right-of-way, and improvements that includes, but are not to limited to, base rock, 26-feet of paved street, curb and gutter on the west side of the street, 5-foot landscape strip excluding curb width on the west side of the street, 5-foot concrete sidewalk on the west side of the street, curb return radii, centerline monuments in boxes, traffic control devices, street trees, and street lights. *(DS)*
18. The applicant shall obtain sufficient right-of-way from the School District (Holcomb Elementary School) and the Housing Authority of Clackamas County (Oregon City View Manor development) in order to construct a complete street section at the intersection between Pastures Way and School street such that it is a 90-degree angle, and such that there is sufficient room to allow a larger curve at the intersection to facilitate a right hand turn from Pastures Way onto Holcomb School Street. The applicant shall connect the sidewalk on Pastures Way to the sidewalk on the northwest side of Holcomb School Street, and provide a curb ramp. Prior to recording of the final subdivision plat for the subject parcel, the applicant shall finalize the agreements with Holcomb Elementary School (OCSD) and the Housing Authority of Clackamas County (Oregon City View Manor development) and provide copies of the recorded agreements to the City, along with any easements and dedication documents that are required. If full right-of-way cannot be obtained, the applicant shall construct an emergency vehicle access within the dedicated Right-of-Way of Pastures Way to be approved by the City and Clackamas Fire District #1.
19. The applicant shall provide a 15-foot wide pedestrian access way between Stables Place and Pastures Way, and from Pastures Way to the eastern boundary of the property. This shall include a 5-foot planter

strip with trees, a 7-foot paved section and a 3-foot planter strip with plantings per the code. It shall also include pedestrian level lighting, and there shall be street lights in the public right-of-way at the ends of the pedestrian way. (DS)

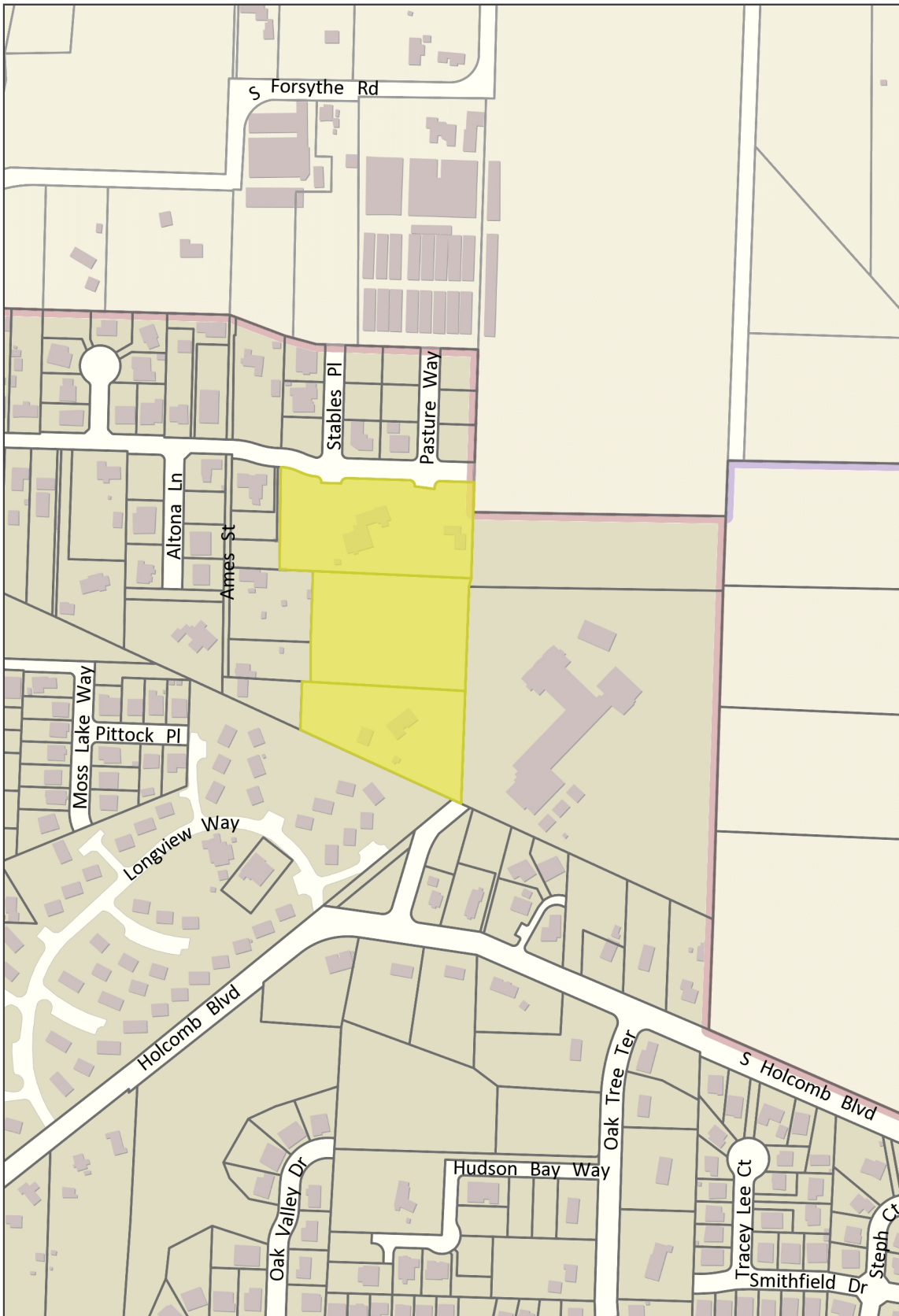
20. The pedestrian accessways shall be incorporated into a recorded easement that requires the property owner to provide for ownership, liability and maintenance. (DS)
21. The intersection of Pasture Way and School Street shall be 90-degrees. Due to the horizontal curves required to provide the intersection angle, additional right-of-way and pavement width is required for the right turn movement from Pasture Way onto School Street. (DS)
22. At the intersection of Pastures Way and there shall be a “stop” sign on Pastures Way. There shall also be a “stop sign ahead” sign on Pastures Way near the beginning of the compound curve. There shall also be extra lighting through the compound horizontal curve. (DS)
23. The horizontal curves on Stables Place are designed as traffic calming structures. The final radius of the curves shall be coordinated with the City staff. (DS)
24. Where pavement cuts are made in existing streets for the installation of improvements, the restoration shall be done in accordance with the City of Oregon City Pavement Cut Standards. (DS)
25. Prior to final plat the Applicant shall submit a final Street Tree Plan for the frontage of the properties that includes the number, location, size, and species of the trees. (P)
26. Prior to final plat approval the Applicant shall submit a tree mitigation plan in accordance with OCMC 17.41. Prior to issuance of any construction permit, grading or fill permit, or construction plans by the Public Works Department the applicant shall request an inspection by a member of the Planning Division that these measures have been installed. Trees not identified for removal will be protected outside of the construction area throughout the construction phase of the project. Replacement trees will be planted pursuant to the provisions of this section. Prior to final plat, the Applicant shall submit a revised tree mitigation plan in accordance with OCMC 17.41 and Table 17.41.060-1. (P)
27. Prior to final plat, the applicant shall coordinate with the City to select an appropriate name for the new streets. (P)
28. Prior to final of building permits, the applicant must submit street lighting plan and documentation from a lighting professional that confirms that the lighting meets the City’s requirements under OCMC 16.12.090. (DS)

(P) = Verify that condition of approval has been met with the Planning Division.

(DS) = Verify that condition of approval has been met with the Development Services Division.

(F) = Verify that condition of approval has been met with the Clackamas County Fire Department.

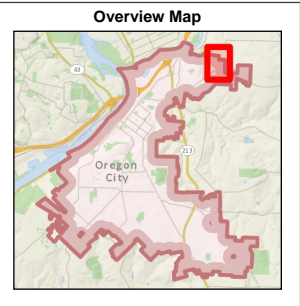
ZC 14-01 / TP 14-01



Legend

- Taxlots
- Taxlots (Outside UGB)
- Unimproved ROW
- City Limits
- UGB

Notes



The City of Oregon City makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. This map is not suitable for legal, engineering, surveying or navigation purposes. Notification of any errors is appreciated.



0 400 Feet
1: 4,800

City of Oregon City
PO Box 3040
625 Center St
Oregon City
OR 97045
(503) 657-0891
www.oregoncity.org





LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)

- ☐ Compatibility Review
- ☐ Lot Line Adjustment
- ☐ Non-Conforming Use Review
- ☐ Natural Resource (NROD) Verification

Type II (OCMC 17.50.030.B)

- ☐ Extension
- ☐ Detailed Development Review
- ☐ Geotechnical Hazards
- ☐ Minor Partition (<4 lots)
- ☐ Minor Site Plan & Design Review
- ☐ Non-Conforming Use Review
- ☐ Site Plan and Design Review
- ☒ Subdivision (4+ lots)
- ☐ Minor Variance
- ☐ Natural Resource (NROD) Review

Type III / IV (OCMC 17.50.030.C)

- ☐ Annexation
- ☐ Code Interpretation / Similar Use
- ☐ Concept Development Plan
- ☐ Conditional Use
- ☐ Comprehensive Plan Amendment (Text/Map)
- ☐ Detailed Development Plan
- ☐ Historic Review
- ☐ Municipal Code Amendment
- ☐ Variance
- ☒ Zone Change

File Number(s): ZC 14-01 / TP 14-01

Proposed Land Use or Activity: Zone change from R-10 to R-8 for TL 22e28ab01600, 22E21DC01600 & part of TL 22E21DC01300

Project Name: Sunnybrook Estates 2 Number of Lots Proposed (If Applicable): 29

Physical Address of Site: 14591 Holcomb Blvd. & Avenue 14550 Ames St.

Clackamas County Map and Tax Lot Number(s): 22E28AB01600, 22E21DC01600 & 22E21DC01300

Applicant(s):

Applicant(s) Signature: _____

Applicant(s) Name Printed: Mark Handris, Icon Construction & Development, LLC Date: _____

Mailing Address: 1980 Willamette Falls Dr., Suite 200, West Linn, OR 97068

Phone: 503-657-0406 Fax: 503-655-5991 Email: handris@aol.com

Property Owner(s):

Property Owner(s) Signature: Terry L. Voss Renee Voss

Property Owner(s) Name Printed: Terry L Voss Renee Voss Date: 1/24/14

Mailing Address: 14550 Ames St, OC, OR

Phone: _____ Fax: _____ Email: _____

Representative(s):

Representative(s) Signature: _____

Representative (s) Name Printed: Rick Givens, Planning Consultant Date: _____

Mailing Address: 18680 Sunblaze Dr., Oregon City, OR 97045

Phone: 503-479-0097 Fax: 503-479-0097 Email: rickgivens@gmail.com

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.

Sunnybrook Phase 2

Subdivision and Zone Change Application

Application Narrative

Project Information:

Date: February 2014

Applicant/Owner: Icon Construction and Development, LLC.
1980 Willamette Falls Drive, Suite 200
West Linn, OR 97068
(503) 657-0406

Planning Consultant: Rick Givens
18680 Sunblaze Dr.
Oregon City, OR 97045
(503) 479-0097

Project Engineer: Bruce Goldson, P.E.
Theta Engineering
4260 Country Woods Ct
Lake Oswego, OR 9703
(503) 481-8822

Request: The applicant is requesting approval of a 29-lot subdivision, and a zone change from "R-10" Single-Family Dwelling District to R-8 Single-Family Dwelling District for a portion of the property.

Location: The property is located at 14550 Ames Street and 14591 Holcomb Blvd., Oregon City, OR.

Legal Description: Tax Lot 1300 and 1600 of Clackamas County Assessor's Map 2-2E-21DC and Tax Lot 1600 of Map 2-2E-28AB.

Site Area: 8.03 Acres

Background Information:

The subject property is located on the south side of Ames Street at its present terminus at the city limits line. It is immediately west of the Holcomb Elementary School campus and abuts on its south boundary the Housing Authority of Clackamas County (HACC) "Oregon City View Manor" development on Holcomb Blvd.

The subject property is zoned R-10 and this application includes a proposal to apply R-8 zoning to Tax Lots 2-2E-21DC 1600 and 2-2E-28AB 1600, as well as to a small area of Tax Lot 2-2E-21DC 1300.

All lots within the proposed subdivision are planned to conform to the R-10 or R-8 standards that apply to the property on which they are located. These lots will be developed for the purpose of construction of single-family detached homes, consistent with the proposed zoning of the property. The homes will be offered for sale and will most likely be owner-occupied.

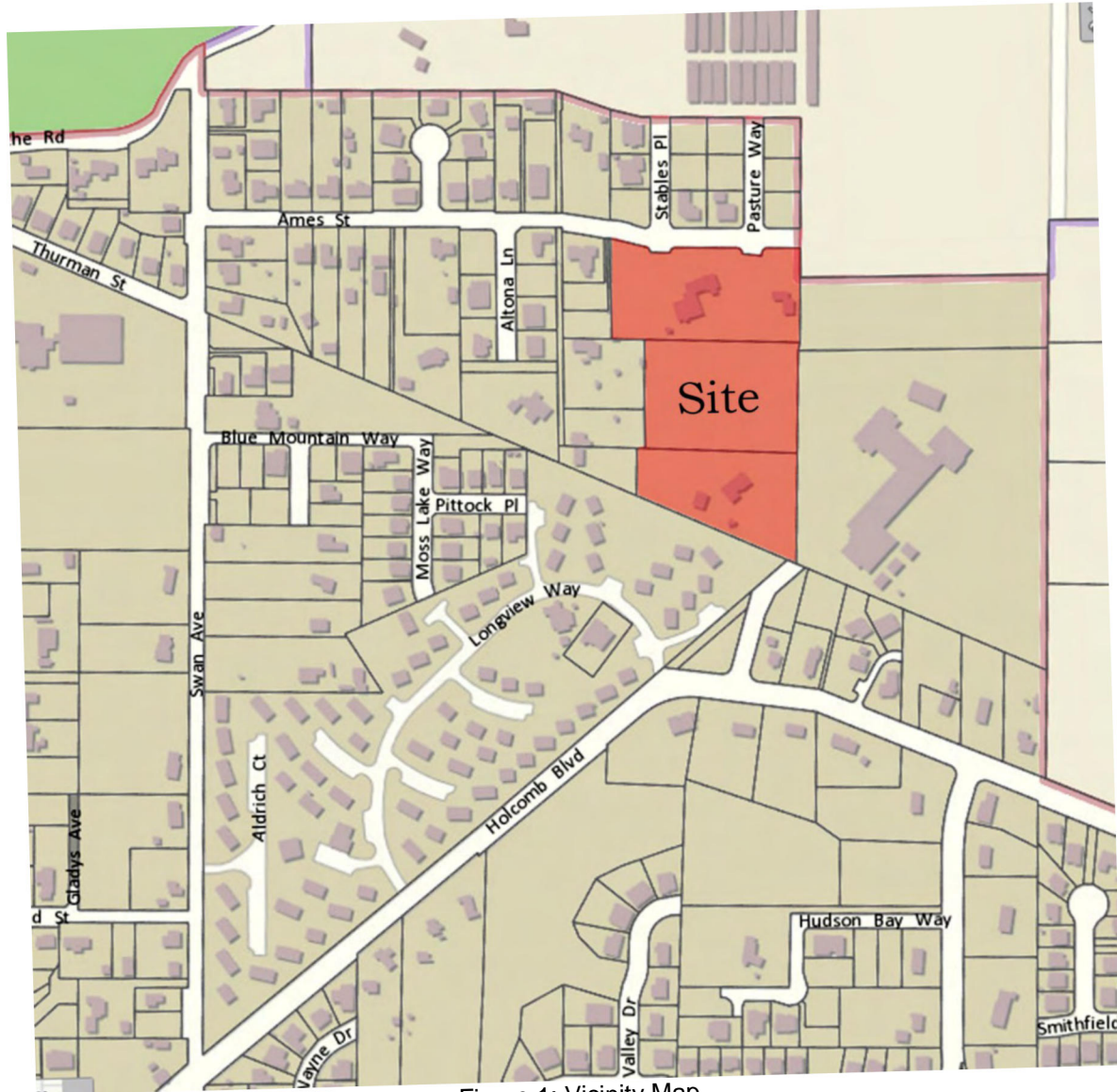


Figure 1: Vicinity Map

The subject property slopes gently from north to south. The original Sunnybrook Estates subdivision is located immediately to the north of this site and is developed with single

The site contains two existing single-family homes and several outbuildings. The existing home on the southerly Tax Lot 1600 is proposed to be moved to Lot 16 within the planned subdivision to allow for the proposed development of the property. The proposal for the northerly home includes removal of some portions of the structure that were

added on to the main house structure. With this remodeling, the home will fit on proposed Lot 5 in conformance with R-10 setbacks.



Figure 2: Aerial Photo of Site

Approval Criteria: The relevant approval criteria for this application are as follows:

Zone Change Application:

Chapter 17.68 – Zone Change

Subdivision Application:

OCMC 12.04 – Streets Sidewalks and Public Places

OCMC 12.08 – Public and Street Trees

OCMC 13.04 – Water Service System

OCMC 13.12 – Stormwater Management

OCMC 16.08 – Subdivisions – Process and Standards

OCMC 16.12 – Minimum Improvements and Design Standards for Land Divisions

OCMC 17.08 – R-10 Single-Family Dwelling District

OCMC 17.10 – R-8 Single-Family Dwelling District.

OCMC 17.20 – Residential Design and Landscaping Standards

OCMC 17.41 – Tree Protection Standards

OCMC 17.47 – Erosion and Sediment Control

OCMC 17.50 – Administration and Procedures

OCMC 17.54 – Supplemental Zoning Regulations and Exceptions

Zone Change Application

COMPLIANCE WITH OCMC – ZONE CHANGE CRITERIA

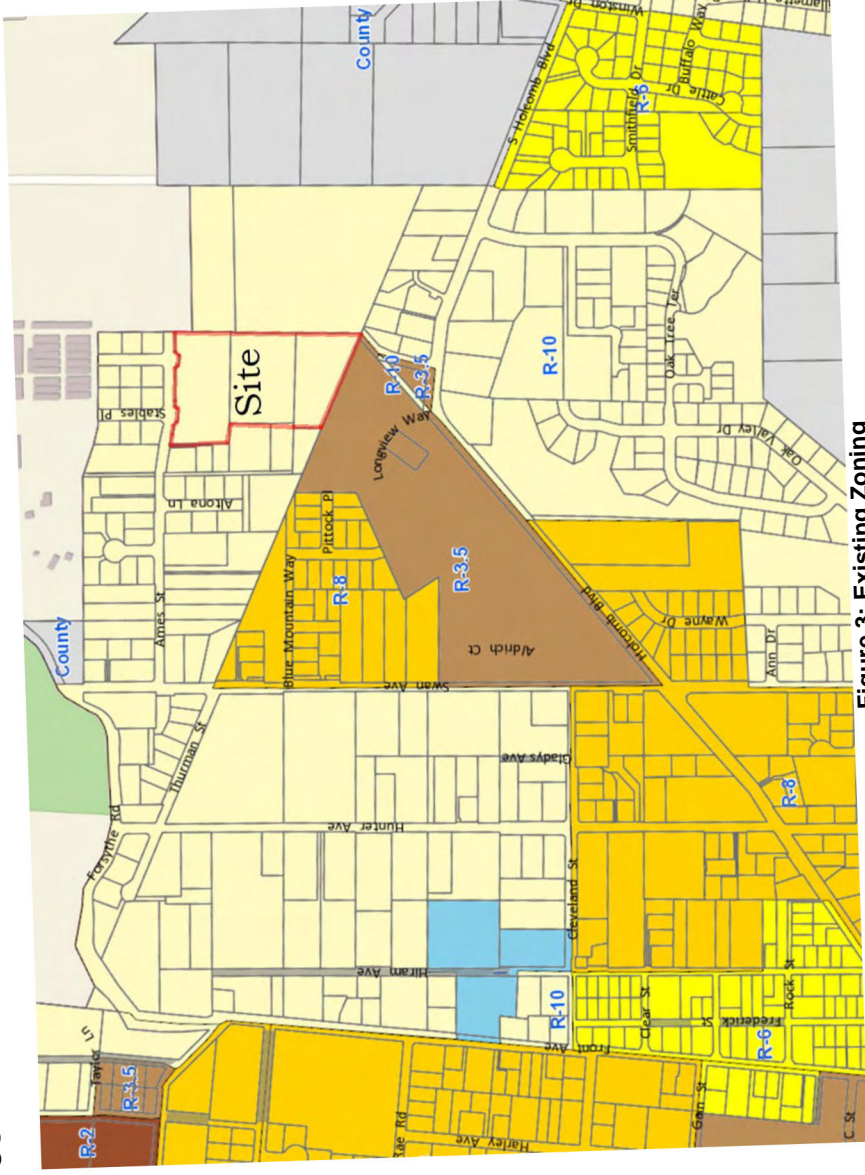


Figure 3: Existing Zoning

Figure 3, above, shows existing zoning patterns in the vicinity of the subject property. The area to the south of the site is zoned R-3.5 and is developed as a low income housing project, Oregon City View Manor, under the ownership of the Housing Authority of Clackamas County. R-10 zoning is applied to the subject property and to property to the north along Ames Street. Holcomb Elementary School abuts the subject on property to the east that is zoned R-10, but which is in institutional use as a public school. The area containing newly developed homes along Blue Mountain Way, to the northwest of the HACC property, is zoned R-8.

The proposed zoning for the subject property is depicted below on Figure 4. The proposed R-8 zoning would be applied to the southerly 5.17 acres of the subject property shaded in light red, with the existing R-10 zoning being retained on the northerly 2.86 acres shaded in yellow. The change in zoning would allow for the development of 4 more lots than would be permitted if the existing R-10 zoning were retained over the entire site. The proposed zone change would provide for a transition from R-10 zoning to the R-3.5 zoning of the HACC property. It would also make for more efficient use of public facilities and services, which are fully adequate to serve the proposed development. Proximity to Holcomb Elementary School is another factor that supports a higher density of development.

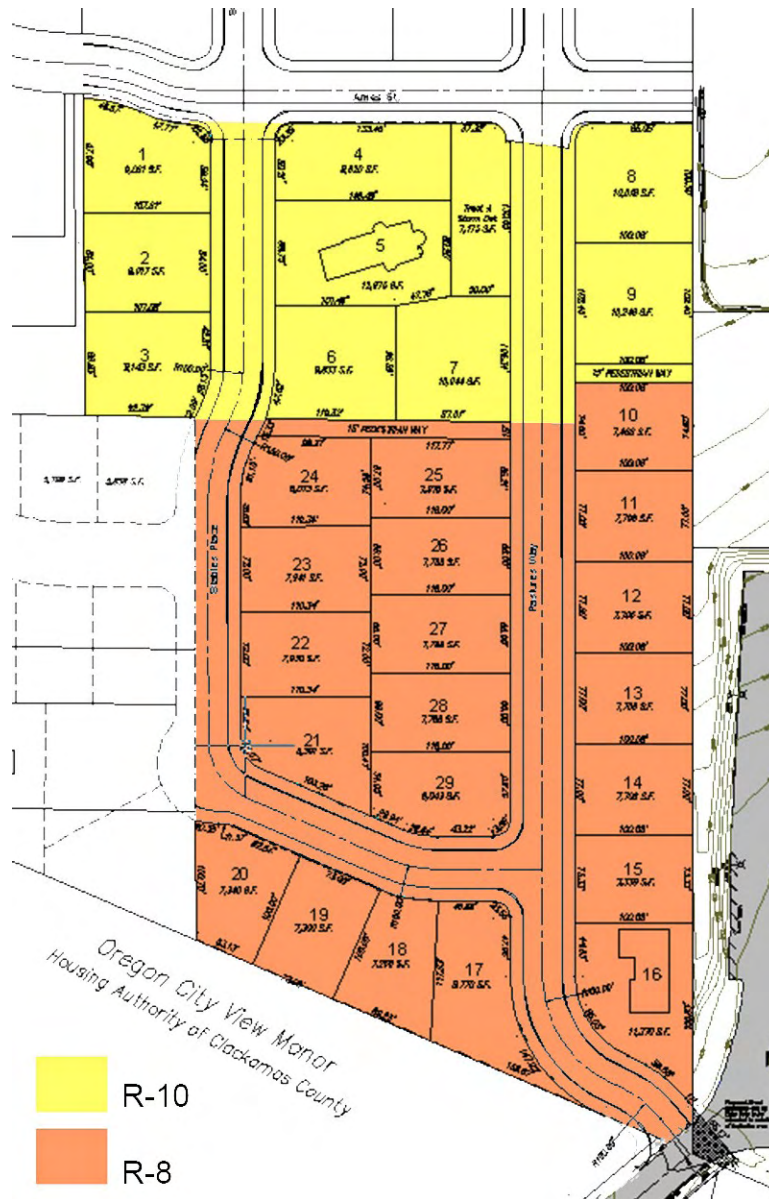


Figure 4: Proposed Zoning

Compliance with Zone Change Approval Criteria:

17.68.010 Initiation of the Amendment.

Comment: Consistent with Subsection C, this application is being initiated by the owners of the property and with the provision of forms and materials specified by City procedures.

17.68.020 Criteria.

The criteria for a zone change are set forth as follows:

- A. *The proposal shall be consistent with the goals and policies of the Comprehensive Plan.*

Comment: The following goals and policies of the Comprehensive Plan apply to this zone change application:

Goal (1) Citizen Involvement

Goal 1.2: Ensure that citizens, neighborhood groups and affected property owners are involved in all phases of the comprehensive planning program.

Comment: The City's adopted development ordinances include provisions that ensure that citizens, neighborhood groups, and affected property owners have ample opportunity for participation in zone change applications. Consistent with these provisions, the applicant met with the Neighborhood Association prior to the submittal of this application. This meeting provided attendees with information regarding the proposal and the applicant took comments from the neighbors into consideration in preparing this application. City provisions provide for public notice prior to hearings that will take place before the Planning Commission and City Commission. All interested persons will have the opportunity to comment in writing or in person through the public hearing process. By following this process, the requirements of this policy are met.

Goal (2) Land Use

Goal 2.4 Neighborhood Livability

Provide a sense of place and identity for residents and visitors by protecting and maintaining neighborhoods as the basic unit of community life in Oregon City while implementing the goals and policies of the other sections of the Comprehensive Plan.

Comment: The proposed change in density from R-10 to a mix of R-10 and R-8 on the subject property is consistent with this policy. These zoning districts are both Low Density Residential zones that implement the comprehensive plan designation of this property. The variation in lot sizes will provide for a range of home styles and prices in order to meet the needs of the residents of this area of Oregon City.

Policy 2.4.2

Strive to establish facilities and land uses in every neighborhood that help give vibrancy, a sense of place, and a feeling of uniqueness; such as activity centers and points of interest.

Comment: The proposed zone change will provide for a varied land use pattern within this neighborhood. It will provide for a range of lot sizes for the construction of single-family homes and will provide for a transition from the existing low

density R-10 single-family residential pattern to R-8 abutting the R-3.5 zoning of the HACC property.

Policy 2.4.3

Promote connectivity between neighborhoods and neighborhood commercial centers through a variety of transportation modes.

Comment: The development of this site at the proposed density complies with this policy by providing for a street connection from Ames Street to Holcomb School Road. This will improve traffic circulation through this neighborhood by providing for another access point to Holcomb Blvd. At the present time, Ames Street is a dead-end street with only a single access point to Swan Avenue. Providing for better connectivity will provide for increased safety in the surrounding neighborhood by ensuring that there are two ways in and out of the neighborhood, thereby precluding problems should an accident or other emergency situation block the present access point. Improved access to Holcomb Elementary School will decrease trip lengths to and from the school for homes in this area. The site plan also provides for additional connectivity to the west, as illustrated by the shadow plat submitted with this application.

Policy 2.4.4

Where environmental constraints reduce the amount of buildable land, and/or where adjacent land differs in uses or density, implement Comprehensive Plan and zoning designations that encourage compatible transitional uses.

Comment: The subject property abuts the HACC property that is zoned R-3.5. The proposed change in zoning from R-10 to R-8 on the southerly portion of the subject property allows for a graduated transition in density of development, consistent with this policy.

Policy 2.4.5

Ensure a process is developed to prevent barriers in the development of neighborhood schools, senior and childcare facilities, parks, and other uses that serve the needs of the immediate area and the residents of Oregon City.

Comment: The proposed development will help to remove existing barriers between the Sunnybrook subdivision and the nearby Holcomb Elementary School campus by providing for both vehicular and pedestrian connections that do not presently exist in this area.

Goal 2.7: Maintain the Oregon City Comprehensive Plan Land Use Map as the official long-range planning guide for land use development of the City by type, density and location.

Comment: The Comprehensive Plan Land Use Map designates the subject property for Low Density Residential Development. The R-10 and R-8 zoning districts are two of the zones that implement this plan designation. Because the subject property is located adjacent to R-3.5 zoning and Holcomb Elementary School, and because the public facilities and services in this area are adequate to

provide for R-8 development, the proposed mix of R-10 and R-8 zoning designations is more appropriate than the existing R-10 designation.

Goal (5) Natural Resources

Policy 5.4.4: Maintain the Oregon City Comprehensive Plan Land Use Map as the official long-range planning guide for land use development of the City by type, density and location.

Comment: The subject property does not contain any natural resource areas, nor is it located adjacent to any such resource areas. This policy is not applicable.

Goal (6) Quality of Air, Water and Land Resources

Policy 6.1.1: Promote land use patterns that reduce the need for distance travel by single-occupancy vehicles and increase opportunities for walking, biking and/or transit to destinations such as places of employment, shopping and education.

Comment: The proposed R-10 and R-8 densities proposed for the subject property will be consistent with this policy. The somewhat higher density of development than the existing R-10 zoning makes for a more compact land use pattern that reduces the amount of public street per dwelling. The increased connectivity afforded by providing for Pastures Way to connect with Holcomb School Road will provide more direct access to this community facility, thereby reducing travel distance. The provision of a pedestrian pathway through the development and to the school will reduce the need to drive to the school from this neighborhood. Public sidewalks will be provided on all streets within this project.

Policy 6.2.1 Prevent erosion and restrict the discharge of sediments into surface and groundwater by requiring erosion prevention measures and sediment control practices.

Comment: This policy is implemented by development standards that require appropriate handling of storm water runoff. Storm runoff from the proposed development will be collected with a storm sewer system, as shown on the preliminary utility plan submitted with this application. A storm detention facility is depicted on the Site Plan and Preliminary Utility Plan. It has been designed with sufficient capacity to accommodate surface runoff from this project.

Goal (10) Housing

Policy 10.1.3 Designate residential land for a balanced variety of densities and types of housing, such as single-family attached and detached, and a range of multi-family densities and types, including mixed-use development.

Comment: The proposed zone change will maintain the basic land use for this site as Low Density Residential, consistent with the Land Use Plan. However, the increased density allowed by the R-10 and R-8 zoning, as compared with the existing R-10 district applied to this site, will provide for four more single-family homes on this site than would

have occurred with straight R-10 development. This will increase the availability of more choices in the marketplace.

Goal (11) Public Facilities

Goal 11.1: Serve the health, safety, education, welfare and recreational needs of all Oregon City residents through the planning and provision of adequate public facilities.

Comment: All public facilities necessary to serve this project are available at adequate levels to meet the proposed R-10 and R-8 zoning. Sanitary sewer is available from an existing 8" line that is installed in Ames Street along the frontage of the property. Water service is available from Ames Street and from Holcomb School Road. This service will be extended through the site as shown on the preliminary utility plan. Storm water facilities are also planned, as shown on the preliminary utility plan, and will connect to existing storm sewer lines in Ames Street. Oregon City Public Schools provides education services and has adequate levels of service available. Police and fire protection are provided by the City of Oregon City.

Goal (12) Transportation

Goal 12.6: Develop and maintain a transportation system that has enough capacity to meet users' needs.

Comment: A Traffic Study was prepared for this project by Lancaster Engineering and is included with this application submittal. No mitigation is required based upon the findings of this study. Please refer to the findings and recommendations of the traffic study.

B. That public facilities and services (water, sewer, storm drainage, transportation, schools, police and fire protection) are presently capable of supporting the uses allowed by the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.

Comment: These public facilities and services have been addressed in the discussion of compliance with Goal 11, above. All of these services are available and adequate to meet the needs of this property when developed to levels allowed by the R-10 and R-8 zoning districts.

C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.

Comment: The capacity of the transportation system is addressed in the traffic study submitted with this application. As discussed under Goal 12, above, the transportation services is adequate to meet the needs of this property when developed to levels allowed by the R-10 and R-8 zoning districts as proposed in this application.

D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.

Comment: The statewide planning goals applicable to this proposed zone change have been addressed in specific goals and policies of the Oregon City Comprehensive Plan. City Goals and Policies addressed above are directly applicable to the corresponding statewide planning goals. No further comment is necessary.

The proposed zone change is in conformance with the approval criteria set forth in this chapter of the Oregon City Municipal Code.

SUBDIVISION APPROVAL CRITERIA

COMPLIANCE WITH OCMC 12.04 – STREETS SIDEWALKS AND PUBLIC PLACES

12.04.005 Jurisdiction and management of the public rights-of-way.

Comment: Consistent with this section, no work will be done within existing or proposed street rights-of-way without obtaining appropriate permits from the City of Oregon City.

12.04.007 Modifications.

Comment: No modifications are proposed.

12.04.010 Construction specifications—Improved streets.

Comment: As required by this section, street, curb and sidewalk improvements will be constructed in accordance with approved plans designed to conform to City street standards.

12.04.020 Construction specifications—Unimproved streets.

Comment: Not applicable.

12.04.25 Street design—Driveway Curb cuts.

Comment: A maximum of one driveway per frontage will be provided for all lots in the development. The applicant will work with City staff at the time of building permit application to ensure that curb cuts are designed and improved consistent with City standards.

12.04.030 Maintenance and repair.

Comment: Consistent with this section, the owner of land abutting the street where a sidewalk has been constructed will be responsible for maintaining the sidewalk and curb in good repair.

12.04.031 Liability for sidewalk injuries.

Comment: As set forth in this section, the future homeowners will be responsible for the liability associated with injuries resulting from failure to maintain sidewalks in good repair.

12.04.032 Required sidewalk repair through 12.040 Streets-Enforcement

Comment: Not applicable. These sections provide standards for notification and process issues relating to potential future sidewalk repairs. While they may impact future homeowners should sidewalks need repair, they are not directly applicable to this subdivision application.

12.04.045 Street Design--Constrained Local Streets and/or Rights-of-Way.

Comment: Not applicable. No constrained local streets or rights-of-way are proposed.

12.04.050 Retaining walls--Required.

Comment: Not applicable. There are no grading issues that would require the use of a retaining wall on this site.

12.04.060 Retaining walls--Maintenance.

Comment: Not applicable. No retaining walls are proposed.

12.04.070 Removal of sliding dirt.

Comment: Future homeowners will have the responsibility to maintain street and sidewalk areas free of dirt and debris as required by this section.

12.04.080 Excavations--Permit required.

It shall be unlawful for any person to dig up, break, excavate, disturb, dig under or undermine any public street or alley, or any part thereof or any macadam, gravel, or other street pavement or improvement without first applying for and obtaining from the engineer a written permit so to do.

Comment: No excavation will be done in rights-of-ways without obtaining required permits.

12.04.090 Excavations--Permit restrictions.

Comment: The applicant will comply with any restrictions placed upon excavation permits associated with this project.

12.04.100 Excavations – Restoration of Pavement

Comment: All excavations within street areas will be restored to appropriate condition per this standard.

12.04.110 Excavations--Nuisance--Penalty.

Comment: Not applicable.

12.04.120 Obstructions – Permit Required

Comment: Required permits will be obtained before any obstructions of street areas that may be necessary are undertaken.

12.04.130 Obstructions--Sidewalk sales.

Comment: Not applicable.

12.04.140 Obstructions--Nuisance--Penalty.

Comment: Not applicable.

12.04.150 Street and alley vacations--Cost.

Comment: Not applicable.

12.04.160 Street vacations--Restrictions.

Comment: Not applicable.

12.04.170 Street Design - Purpose and General Provisions.

All development shall be in conformance with the policies and design standards established by this chapter and with applicable standards in the City's Public Facility Master Plan and City design standards and specifications. In reviewing applications for development, the City Engineer shall take into consideration any approved development and the remaining development potential of adjacent properties. All street, water, sanitary sewer, storm drainage and utility plans associated with any development must be reviewed and approved by the city engineer prior to construction. All streets, driveways or storm drainage connections to another jurisdiction's facility or right-of-way must be reviewed by the appropriate jurisdiction as a condition of the preliminary plat and when required by law or intergovernmental agreement shall be approved by the appropriate jurisdiction.

Comment: The proposed street design provides for the extension of Stables Place and Pasture Way from Ames Street on the north, southward through the subject property to connect with Holcomb School road at the southeast corner of the site. This street system will provide for a much-needed second access point to the existing residential neighborhoods located along Ames Street. At present, in excess of 50 lots are accessed

via Ames Street west of Swan Avenue, and there is only one way in and out of the neighborhood. Proposed street improvements and utility plans will be reviewed by the City Engineer for compliance with City standards prior to construction.

12.04.175 Street Design--Generally.

The location, width and grade of street shall be considered in relation to: existing and planned streets, topographical conditions, public convenience and safety for all modes of travel, existing and identified future transit routes and pedestrian/bicycle accessways, and the proposed use of land to be served by the streets. The street system shall assure an adequate traffic circulation system with intersection angles, grades, tangents and curves appropriate for the traffic to be carried considering the terrain. To the extent possible, proposed streets shall connect to all existing or approved stub streets that abut the development site. Where location is not shown in the development plan, the arrangement of streets shall either:

- A. Provide for the continuation or appropriate projection of existing principal streets in the surrounding area and on adjacent parcels or conform to a plan for the area approved or adopted by the city to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical;*
- B. Where necessary to give access to or permit a satisfactory future development of adjoining land, streets shall be extended to the boundary of the development and the resulting dead-end street (stub) may be approved with a temporary turnaround as approved by the city engineer. Access control in accordance with section 12.04.200 shall be required to preserve the objectives of street extensions.*

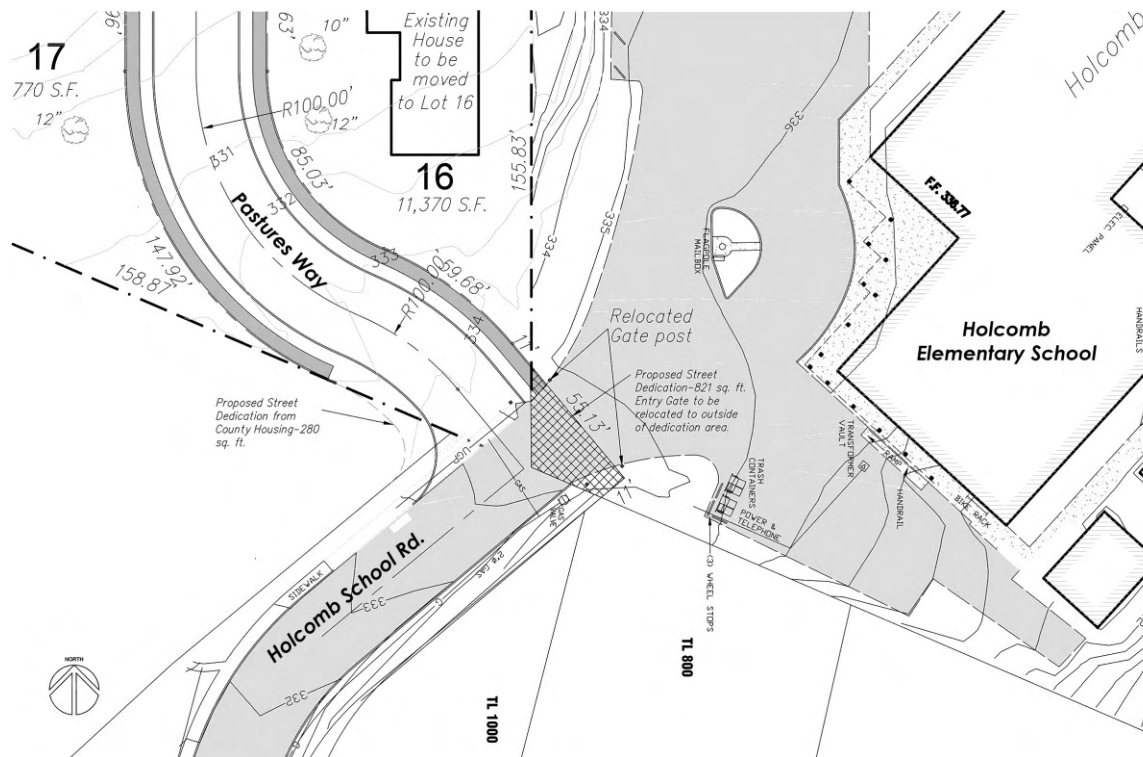
Comment: As discussed above, the proposed street design provides for the extension of Stables Place and Pastures Way from Ames Street on the north, through the subject property to connect with Holcomb School road at the southeast corner of the site. A shadow plan has been provided on the Site Plan that shows how the proposed development will tie in with developable properties to the west. Holcomb Elementary School abuts the site on its eastern border and the HACC housing property abuts on the south.

12.04.180 Street Design--Minimum Right-of-Way.

Comment: All streets within the proposed development are local streets that have been designed to comply with City standards by providing for 54 feet of right-of-way and 32' of pavement. A portion of Stables Place has been designed with a roughly $\frac{3}{4}$ street improvement, as the remainder of the street can be provided with the future development of property to the west. The street section in this area provides 38 feet of right-of-way, 27 feet of pavement, a half-foot of curb on one side, 5 foot planter strip on one side, and a five foot sidewalk.

The proposed connection of Pastures Way with Holcomb School Road will require right-of-way dedication from both Holcomb Elementary School and Oregon City View Manor. Discussions are on-going with Oregon City School District and with the Housing Authority of Clackamas County regarding these dedications. Both have indicated initial support for the required dedications. The Oregon City School Board will be considering

the matter again at the April 14, 2014 Board meeting. The Housing Authority has forwarded the request to the HUD Special Application Center in Chicago and a decision is expected soon. If either dedication should ultimately fail to be approved, there is sufficient frontage on Holcomb School Road to provide for an emergency vehicle access. The following diagram shows the planned intersection configuration with areas of proposed dedications identified.



12.04.185 Street Design--Access Control.

Comment: A one-foot non-access strip will be placed along the $\frac{3}{4}$ street section of Stables Place to ensure that the City retains control over access to this street so that future dedication of the remainder of the right-of-way can be ensured.

12.04.190 Street Design--Alignment.

Comment: The proposed site plan provides for the continuation of Stables Place and Pasture Way from their current intersection with Ames Street. The alignment provides for the centerlines of the streets to match their current alignment north of Ames Street.

12.04.194 Traffic sight obstructions.

Comment: All streets will be designed in accordance with the Traffic Sight Obstructions standards in Chapter 10.32.

12.04.195 Spacing Standards.

- A. All new streets shall be designed as local streets unless otherwise designated as arterials and collectors in Figure 8 in the transportation system plan. The maximum block spacing between streets is five hundred thirty feet and the minimum block spacing between streets is one hundred fifty feet as measured between the right-of-way centerlines. If the maximum block size is exceeded, pedestrian accessways must be provided every three hundred thirty feet. The spacing standards within this section do not apply to alleys.*

Comment: The streets within the proposed subdivision have been designed to conform to local street standards. The block length is approximately 656 feet, which provides for a reasonable lot layout and neighborhood circulation pattern. Pedestrian accessways are provided because the block length exceeds 530 feet. All intersections exceed the minimum 150 feet spacing standard required by this section between two Local Streets.

- B. All new development and redevelopment shall meet the minimum driveway spacing standards identified in Table 12.04.195.B.*

Comment: All driveways for homes to be built will satisfy the minimum driveway spacing standard. This will be reviewed at the time of building permit application.

12.04.199 Pedestrian and bicycle accessways.

Comment: Consistent with these standards, the entry points align as closely as practicable along the adjacent streets. The accessway widths proposed are 15 feet in width and will have a seven-foot paved strip and a 5-foot and 3' foot planter strips. Accessways proposed are direct and are visible from adjacent streets for their entire length. Landscape plans for the planter strips will be provided prior to final plat approval and will conform to City standards. Design treatments will be coordinated with the City to ensure that unauthorized motor vehicle traffic is prohibited. The accessways are proposed to be dedicated as public right-of-way on the final plat for the subdivision.

12.04.205 Mobility standards.

Comment: Level of Service impacts are assessed in the traffic analysis prepared for this subdivision. These impacts will not cause any affected street intersections to exceed permissible levels identified in this section.

12.04.210 Street design--Intersection Angles.

Comment: The proposed street intersections are at 90 degree angles, consistent with the requirements of this section.

12.04.215 Street design--Off-Site Street Improvements.

Comment: No off-site street improvements are needed or proposed.

12.04.220 Street Design--Half Street.

Half streets, while generally not acceptable, may be approved where essential to the development, when in conformance with all other applicable requirements, and where it will not create a safety hazard. When approving half streets, the decision maker must first determine that it will be practical to require the dedication of the other half of the street when the adjoining property is divided or developed. Where the decision maker approves a half street, the applicant must construct an additional ten feet of pavement width so as to make the half street safe and usable until such time as the other half is constructed. Whenever a half street is adjacent to property capable of being divided or developed, the other half of the street shall be provided and improved when that adjacent property divides or develops. Access control may be required to preserve the objectives of half streets.

Comment: The jogged configuration of the property lines in this area, coupled with the limited width of the subject property, make it impracticable to construct Stables Way as a full street through the entire site. The southerly portion is proposed to be developed with 38 feet of the eventual 54' right-of-way being provided on the subject property. The remainder can reasonably be required at such time as the adjacent property to the west is further developed, as shown on the shadow plat submitted with this application. Access control will be provided in the form of a 1' non-access strip per typical City requirements. Please see discussion under 12.04.180 for street design information.

12.04.225 Street Design--Cul-de-sacs and Dead-End Streets.

Comment: Not applicable. No cul-de-sac streets are proposed in this subdivision.

12.04.230 Street Design--Street Names.

Comment: No new street names are proposed in this application.

12.04.235 Street Design--Grades and Curves.

Comment: Grades and center line radii have been designed to conform to the standards in the City's street design standards and specifications.

12.04.240 Street Design--Development Abutting Arterial or Collector Street.

Where development abuts or contains an existing or proposed arterial or collector street, the decision maker may require: access control; screen planting or wall contained in an easement or otherwise protected by a restrictive covenant in a form acceptable to the decision maker along the rear or side property line; or such other treatment it deems necessary to adequately protect residential properties or afford separation of through and local traffic. Reverse frontage lots with suitable depth may also be considered an option for residential property that has arterial frontage. Where access for development abuts and connects for vehicular access to another jurisdiction's facility then authorization by that jurisdiction may be required.

Comment: Not applicable. The site does not abut an arterial or collector street.

12.04.245 Street Design--Pedestrian and Bicycle Safety.

Where deemed necessary to ensure public safety, reduce traffic hazards and promote the welfare of pedestrians, bicyclists and residents of the subject area, the decision maker may require that local streets be so designed as to discourage their use by nonlocal automobile traffic.

All crosswalks shall include a large vegetative or sidewalk area which extends into the street pavement as far as practicable to provide safer pedestrian crossing opportunities. These curb extensions can increase the visibility of pedestrians and provide a shorter crosswalk distance as well as encourage motorists to drive slower. The decision maker may approve an alternative design that achieves the same standard for constrained sites or where deemed unnecessary by the City Engineer.

Comment: The level of development is consistent with typical single-family residential neighborhoods so no extra traffic-calming designs or crosswalk improvements are warranted.

12.04.255 Street design--Alleys.

Comment: Not applicable. No public alleys are proposed or required by this section.

12.04.260 Street Design--Transit.

Comment: Not applicable. The proposed development does not contain or abut any transit streets.

12.04.265 Street design--Planter Strips.

Comment: Consistent with the requirements of this section, proposed street improvements include the provision of planter strips that will accommodate street trees.

12.04.270 Standard Construction Specifications.

Comment: As required by this section, the workmanship and materials for any work performed under permits issued per this chapter will be in accordance with City standards and the edition of the "Standard Specifications for Public Works Construction," as prepared by the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the city, in effect at the time of application.

COMPLIANCE WITH OCMC 12.08 Public and Street Trees

12.08.015 Street tree planting and maintenance requirements.

Comment: In accordance with this section, street trees will be planted along all street frontages abutting lots within the development. The site plan depicts the proposed street trees being located within the planter strip between the curb and sidewalk on 35-foot centers, consistent with this section. The exact planting

locations may be varied somewhat to adjust for driveway locations and to ensure that required clearance distances from street lights, fire hydrants and intersections are maintained. All trees will be a minimum of 2" caliper at six inches above the root crown and installed and pruned to city specifications.

12.08.020 Street tree species selection.

Comment: The street trees selected will be coordinated with the Community Development Director to ensure that they are appropriate for the neighborhood and use.

12.08.025 General tree maintenance.

Comment: As specified in this section, the owners of the lot abutting a street tree will be responsible for its maintenance.

12.08.040 Heritage Trees and Groves.

Comment: Not applicable. No heritage trees or groves are present on this site.

COMPLIANCE WITH OCMC 13.04 Water Service System

Comment: This chapter specifies the standards for construction of water service systems. The Preliminary Utility Plan depicts the proposed water service plan for the subdivision. Prior to final plat approval, construction plans will be prepared and reviewed by the City Public Works Department to ensure that the water system conforms to all applicable standards. Permits for water service to individual lots will be obtained at the time of building permit application.

COMPLIANCE WITH OCMC 13.08 Sewer Regulations

Comment: This chapter specifies the standards for construction of sewer systems within the City of Oregon City. The Preliminary Utility Plan depicts the proposed sewer service plan for the subdivision. Prior to final plat approval, construction plans will be prepared and reviewed by the City Public Works Department to ensure that the sewer system conforms to all applicable standards. Permits for sewer service to individual lots will be obtained at the time of building permit application.

COMPLIANCE WITH OCMC 13.12 Stormwater Management

Comment: The proposed subdivision is subject to the stormwater conveyance, stormwater quantity control, and stormwater quality control provisions of this chapter.

13.12.050 Applicability and exemptions

This chapter establishes performance standards for stormwater conveyance, quantity and quality.

Pursuant to each of the subsections below, proposed activities may be required to meet the performance standards for stormwater conveyance, stormwater quantity or stormwater quality.

A. Stormwater Conveyance. The stormwater conveyance requirements of this chapter shall apply to all stormwater systems constructed with any development activity, except as follows:

- 1. The conveyance facilities are located entirely on one privately owned parcel;*
- 2. The conveyance facilities are privately maintained; and*
- 3. The conveyance facilities receive no stormwater runoff from outside the parcel's property limits.*

Those facilities exempted from the stormwater conveyance requirements by the above subsection will remain subject to the requirements of the Oregon Uniform Plumbing Code. Those exempted facilities shall be reviewed by the building official.

Comment: The stormwater conveyance system for this project conveys water through the subject property, will be designed to City standards and owned and maintained by the City. For this reason , the system is subject to the stormwater conveyance requirements of this chapter.

B. Stormwater Quantity Control. The stormwater quantity control requirements of this chapter shall apply to the following proposed activities, uses or developments:

- 1. Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven-year period;*
- 2. Activities that create more than two thousand square feet of impervious surface, cumulated over any given seven year period; or*
- 3. Redevelopment of a commercial or industrial land use that will disturb more than five thousand square feet of existing impervious surface. This five*

thousand square foot measurement cumulates over any given seven year period;

4. *An exemption to the stormwater quantity control requirements of this chapter will be granted in the following circumstances:*
 - a. *The development site discharges to a stormwater quantity control facility approved by the city engineer to receive the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater, or,*
 - b. *The development site discharges to one of the following receiving bodies of water: Willamette River, Clackamas River or Abernethy Creek; and either lies within the one hundred year floodplain or is up to ten feet above the design flood elevation as defined in Chapter 17.42*

Comment: The stormwater quantity control requirements of this chapter apply to the proposed subdivision. It will create more than 2,000 square feet of impervious surface and it does not discharge directly to an existing stormwater quantity control facility or to the Willamette River, Clackamas River, or Abernethy Creek.

- C. *Stormwater Quality Control. The stormwater quality control requirements of this chapter shall apply to the following proposed activities, uses or developments:*
 1. *Category A. Activities subject to general water quality requirements of this chapter:*
 - a. *The construction of four or more single-family residences;*
 - b. *Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven year period; or*
 - c. *Activities that create more than eight thousand square feet of new impervious surface for other than a single-family residential development. This eight thousand square foot measurement will be considered cumulative for any given seven year period;*

- d. An exemption to the stormwater quantity control requirements of this subsection will be granted if the development site discharges to a stormwater quality control facility approved by the city engineer to receive the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater.*

Comment: The stormwater quality control requirements of this chapter apply because the project will involve the construction of four or more single-family homes. No exemption is warranted as the site does not discharge to an existing stormwater quality control facility approved by the city engineer.

- 2. Category B. Uses Requiring Additional Management Practices. In addition to any other applicable requirements of this chapter, the following uses are subject to additional management practices as contained in the Public Works Stormwater and Grading Design Standards:*
 - a. Fuel dispensing facilities;*
 - b. Bulk petroleum storage in multiple stationary tanks;*
 - c. Solid waste storage areas for commercial, industrial or multi-family uses;*
 - d. Loading and unloading docks for commercial or industrial uses; or*
 - e. Covered vehicle parking for commercial or industrial uses.*

Comment: Not applicable. The proposed development does not include any of these uses or facilities.

- 3. Category C. Clackamas River Watershed. In addition to any other applicable requirements of this chapter, any development that creates new waste discharges and whose stormwater runoff may directly or indirectly flow into the Clackamas River is subject to additional requirements associated with Oregon Administrative Rules (OAR) 340-41-470 (Thee Basin Rule).*

Comment: Not applicable. The subject property does lie within a basin that drains to the Clackamas River.

13.12.080 Submittal requirements.

- A. Timing and Scope of Required Submittal.*

1. *Applications subject to the stormwater conveyance requirements of this chapter shall include an engineered drainage plan and design flow calculation report submitted prior to, or contemporaneous with, submittal of an application for a building, land use or other city issued permit.*
 2. *Applications subject to the stormwater quantity and/or Category A quality requirements of this chapter shall include an engineered drainage plan and an engineered drainage report submitted prior to, or contemporaneous with, submittal of an application for a building, land use or other city issued permit.*
 3. *Applications subject to Category B water quality special management practices shall demonstrate compliance with the additional management practices for commercial, industrial and multi-unit dwelling land uses of the Public Works Stormwater and Grading Design Standards as part of the site plan and design review process.*
 4. *Applications subject to Category C water quality requirements for the Clackamas River Watershed are subject to OAR 340-41-470 (Three Basin Rule). No new discharges will be approved until a copy of a current DEQ permit, or written statement from DEQ that none is required, is on file with the city.*
- B. Required engineered drainage plans, drainage reports, and design flow calculation reports, which contain methods and proposed facilities to manage stormwater conveyance, quantity and/or quality, shall be prepared in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards.*
- C. Each project site, which may be composed of one or more contiguous parcels of land, shall have a separate valid city approved plan and report before proceeding with construction.*

Comment: A storm drainage report and preliminary storm drainage plan have been prepared by Theta Engineering for this proposed subdivision. The plan and report have been prepared in conformance to the standards of this section and are included in the application submittal package. Please refer to the plan and report for more details.

13.12.090 Approval criteria for engineered drainage plans and drainage report.

An engineered drainage plan and/or drainage report shall be approved only upon making the following findings:

- A. The plan and report demonstrate how the proposed development and stormwater management facilities will accomplish the purpose statements of this chapter;*

Comment: The stormwater plan provides for the collection of storm runoff from street and roof areas and pipes this water to Tract A, which is designated for stormwater treatment and detention. The treatment of stormwater will be accomplished in this tract

by providing a low flow swale in the bottom of the detention basin. During normal storm flows, the vegetation in this swale will provide for treatment of the storm water. During heavy storm events, the water will back up into the detention basement as the outflow pipe has been sized to restrict flows to rates in accordance with city standards. Please refer to the Preliminary Utility Plan and storm report for more details..

B. The plan and report meet the requirements of the Public Works Stormwater and Grading Design Standards adopted by resolution under Section 13.12.020

Comment: Please refer to the plan and report.

C. Unless otherwise exempted by Section 13.12.050(B), the plan and report includes adequate stormwater quantity control facilities, so that when the proposed land development activity takes place, peak rates and volumes of runoff:

- 1. Do not exceed the capacity of receiving drainage conveyance facilities;*
- 2. Do not increase the potential for streambank erosion; and*
- 3. Do not add volume to an off-site closed depression without providing for mitigation.*

Comment: A stormwater detention and treatment facility is shown on the preliminary utility plan. As discussed in the stormwater report, this facility will be sized to accommodate runoff from the project in a manner consistent with City standards.

D. Unless otherwise exempted by Section 13.12.050(C), the proposed development includes:

- 1. Adequate stormwater quality control facilities, so that when the proposed land development activity takes place, the temperature and overall pollution level of stormwater runoff is no greater than the water entering. When no water enters a project, then stormwater runoff shall be compared to rain samples; and*
- 2. Stormwater quality control facilities which:*
 - a. Are in compliance with applicable National Pollutant Discharge Elimination System (NPDES) requirements;*
 - b. Minimize the deterioration of existing watercourses, culverts, bridges, dams and other structures; and*
 - c. Minimize any increase in nonpoint source pollution.*

Comment: As stated in this section, detention and treatment are required and are depicted on the Preliminary Utility Plan. The stormwater detention and treatment facility includes stormwater quality control facilities that meet City and NPDES standards. Please refer to the Preliminary Drainage Report prepared by Theta Engineering that is attached to this application.

- E. The storm drainage design within the proposed development includes provisions to adequately control runoff from all public and private streets and roof, footing, and area drains and ensures future extension of the current drainage system.*

Comment: As shown on the Preliminary Utility Plan, provisions for the stormwater system will provide for street, roof, footing and area drains to be connected to the storm sewer and drained to the stormwater detention and treatment facility.

- F. Streambank erosion protection is provided where stormwater, directly or indirectly, discharges to open channels or streams. The postdevelopment peak stormwater discharge rate from a development site for the two year, twenty-four hour duration storm event shall not exceed fifty percent of the two year, twenty-four hour predevelopment peak runoff rate.*

Comment: The stormwater system discharges into an existing storm sewer in Ames Street. No streambank protection measures are necessary.

- G. Specific operation and maintenance measures are proposed that ensure that the proposed stormwater quantity control facilities will be properly operated and maintained.*

Comment: The storm sewer system will be built to City standards and the storm detention and treatment facility will be dedicated to the City in accordance with current standards. The City will maintain the facility and the storm sewer system.

COMPLIANCE WITH OCMC 16.08 – Subdivisions – Process and Standards

16.08.010 Purpose and General Provisions.

- A. Applicability. –The proposed development is subject to the process and approval standards applicable to subdivisions including Chapters 16.08, 12.04, 16.12, and 17.50 of the Oregon City Municipal Code. Those provisions are addressed in this narrative and will be shown to be satisfied by this application.
- B. Process – Subdivision applications typically follow a Type II process. In this instance, however, the applicant is also applying for a zone change and a Type IV process will be used.
- C. Purpose – The proposed design is consistent with basic design criteria so the use of a master plan provided under Chapter 17.65 or a variance per Chapter 16.60 is not necessary.
- D. Process Overview – This application for preliminary plat approval is being processed in accordance with a Type IV land use process and will be heard

before the Planning Commission and City Commission. The final plat will be submitted at a later date and reviewed in accordance with typical procedures.

16.08.015 Preapplication Conference Required.

Consistent with City procedures, a pre-application conference was held on November 19, 2013 (PA 13-37).

16.08.020 Preliminary Subdivision Plat Application.

The preliminary plat is being submitted within six months of the pre-application conference date. This narrative and the other plans and documents submitted with it, contain the required information that will allow the City to determine compliance with relevant City standards.

16.08.025 Preliminary Subdivision Plat--Required Plans.

Consistent with City requirements, the preliminary plat application includes the following:

- A. Site Plan
- B. Traffic/Transportation Plan
- C. Natural Features Plan and Topography, Preliminary Grading & Drainage Plan.
- D. Archeological Monitoring Recommendation – SHPO and applicable Native American tribes were notified of this project, but no archeological resources have been noted for this site.

16.08.030 Preliminary Subdivision Plat--Narrative Statement.

- A. Subdivision Description – The background information section of this narrative provides the required statements regarding the use and ownership of lots within this proposed subdivision.
- B. Timely Provision of Public Services and Facilities
 - 1. Water – There is an existing 8-inch ductile iron City water line in Ames Street along the north boundary of the subject property. Additionally, an existing ductile iron 8-inch water line is also available within Holcomb School Road at the southeast corner of the property. The water system within the new subdivision streets will tie these lines together, thereby providing for a more desirable looped water system. There are existing fire hydrants on Ames Street at the intersections of Pasture Way and Stables Place. The proposed water line improvements to be installed to serve this project are shown on the preliminary utility plan.
 - 2. Sewer – An existing 8-inch sanitary sewer line in Ames Street is available to service the proposed subdivision. Sewer lines will be extended to the south in the proposed rights-of-way of Pasture Way and Stables Place to service the lots within the subdivision. The existing sewer line in Ames Street is at a shallow depth. In order to

provide for positive drainage from the lots at the lower end of the subdivision near Ames Street into this sewer line, approximately 2 to 3 feet of fill will be placed on these lots. Please refer to the Preliminary Grading Plan for details of this fill.

3. Storm Sewer – Storm sewer is available within Ames Street and drains to the north to the detention pond within the first phase of the Sunnybrook subdivision. Storm sewer lines will be constructed within the proposed subdivision to collect street and roof drains. A new storm detention facility is proposed within the subdivision to provide for compliance with City detention and treatment standards (see preliminary utility plan).
 4. Parks and Recreation – The closest park to the subject property is Park Place Park. It is located on Hiram Avenue at Cleveland Street, approximately three-quarters of a mile to the southwest of the subject property. The playground at Holcomb Elementary School provides for an open space and recreation resource immediately adjacent to the subject property. Park System Development Charges required for new single family homes will be paid at the time of building permit application.
 5. Traffic and Transportation – A traffic study for the proposed subdivision was prepared by Lancaster Engineering, Inc. and is attached to this application. The study concludes that the proposed development is adequately served by the transportation system and that no negative impacts upon traffic functionality will result from this project.
 6. Schools – The subject property is located within the service area of Oregon City Public Schools. The school district will have the opportunity to comment on this application, but we are not aware of any problems in providing for the school needs associated with these new lots.
 7. Fire and Police Services – Clackamas County Fire District No. 1 provides fire protection services in this area. The closest fire station is located on Longview Way within the Oregon City View Manor site, approximately 800 feet of travel distance from the subject property. The Oregon City Police Department provides police protection. Prior to final plat approval, the applicant will coordinate with Fire District No. 1 to ensure that their standards are met.
- C. Approval Criteria and Justification for Variances – No variances are being requested so these provisions do not apply. Other relevant approval criteria are addressed below in this narrative.
- D. A draft of CC&Rs is attached. No common facilities are proposed so maintenance agreements, homeowners' association agreements, etc. are not required.

- E. Phasing – Not applicable. The project will be developed in a single phase.
- F. Overall Density – The subject property contains a total area of 8.03 acres. The R-10 portion of the subdivision measures 124,864 square feet in area and would have 25,777 sq. ft. of street area. A storm detention tract measuring 7,123 sq. ft. in area is proposed; together with a 1,501 sq. ft. pedestrian walkway. The nine lots within this section of the project average 10,000 sq. ft. in area, consistent with the R-10 zone's minimum lot size standard. The R-8 section of the subdivision contains 5.17 acres. The street rights-of-way within this section measure 61,422 sq. ft. in area and 3,158 sq. ft. is comprised of pedestrian walkway. The average lot size is 8,030 sq. ft., consistent with the minimum lot size standard of the R-8 zone.

16.08.040 Preliminary Subdivision Plat--Approval Standards and Decision.

The approval standards for subdivisions are addressed below in the discussion of compliance with Chapter 16.12. The dimensional standards applicable to the subdivision are those of the R-10 and R-8 zones. Those standards are addressed in the discussion of Chapters 17.08 and 17.10.

16.08.045 Building Site--Frontage Width Requirement.

All lots in the proposed subdivision abut on a street or cul-de-sac for a width of at least twenty feet, as required by this section.

16.08.050 Flag Lots in Subdivisions

Not applicable. No flag lots are proposed.

COMPLIANCE WITH OCMC 16.12 – MINIMUM IMPROVEMENTS AND DESIGN STANDARDS FOR LAND DIVISIONS

16.12.015 Street Design--Generally.

Street design standards for all new development and land divisions shall comply with Chapter 12.04 Street Design Standards.

Comment: Please see discussion of Chapter 12.04, above.

16.12.020 Blocks--Generally.

The length, width and shape of blocks shall take into account the need for adequate building site size, convenient motor vehicle, pedestrian, bicycle and transit access, control of traffic circulation, and limitations imposed by topography and other natural features.

Comment: The proposed subdivision provides for the extension of Pastures Way and Stable Place through the site from Ames Street, on the north, to connect with Holcomb School Road on the south. This pattern provides for improved

pedestrian, bicycle and motor vehicular circulation in this area. There is no bus service in this area. There is no need for street stubs to adjoining properties because of pre-existing development patterns a ¾ street improvement is proposed along a portion of the west side of the property to allow for future development of property to the west. The proposed street pattern provides for adequate building site size, as demonstrated by the site plan submitted with this application.

16.12.030 Blocks--Width.

The width of blocks shall ordinarily be sufficient to allow for two tiers of lots with depths consistent with the type of land use proposed.

Comment: The proposed layout is consistent with this requirement.

16.12.040 Building Sites.

The size, width, shape and orientation of building sites shall be appropriate for the primary use of the land division, and shall be consistent with the residential lot size provisions of the zoning ordinance with the following exceptions:

- A. Where property is zoned and planned for commercial or industrial use, the community development director may approve other widths in order to carry out the city's comprehensive plan. Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated.*
- B. Minimum lot sizes contained in Title 17 are not affected by those provided herein.*

Comment: The buildings sites proposed that are appropriate in size, width, shape, and orientation for low-density residential development, consistent with the proposed R-10 and R-8 zoning of the property. The applicant is not requesting a variance to any dimensional standard.

16.12.045 Building Sites – Minimum Density

All subdivision layouts shall achieve at least 80% of the maximum density of the base zone for the net developable area as defined in Section 17.04.

Comment: The subject property contains a total area of 8.03 acres. The R-10 portion of the subdivision measures 124,864 square feet in area and would have 25,777 sq. ft. of street area. A storm detention tract measuring 7,123 sq. ft. in area is proposed; together with a 1,501 sq. ft. pedestrian walkway. The net site area for this portion of the site is 90,463 sq. ft. Dividing by 10,000 sq. ft. per unit results in a maximum density of 9 units and, at 80% of the maximum, a minimum density of 8 units. The nine lots within this section of the project exceed the minimum standard. The R-8 section of the subdivision contains 5.17 acres (225,205 sq. ft.). The street rights-of-way within this section measure 61,422 sq. ft. in area and 3,158 sq. ft. is comprised of pedestrian walkway. The net site area is 160,625 sq.

ft. Dividing the net area by 8,000 sq. ft. per unit results in a maximum density of 20 units and, at 80% of maximum, a minimum density of 16 units. The proposed 20 units within this area comply with the minimum density standard.

Chapter 16.12.050 Calculations of Lot Area.

A subdivision in the R-10, R-8, R-6, R-5, or R-3.5 Dwelling District may include lots that are up to 20% less than the required minimum lot area of the applicable zoning designation provided the entire subdivision on average meets the minimum site area requirement of the underlying zone. The average lot area is determined by calculating the total site area devoted to dwelling units and dividing that figure by the proposed number of dwelling lots.

Comment: The proposed subdivision includes lots utilizing the flexibility allowed by this section. In the R-10 zone, the 20% standard would allow lots as small as 8,000 square feet. The smallest lot proposed in the R-10 portion of the subdivision is Lot 2 and it measures 9,017 sq. ft. in area. The average lot size for the R-10 portion of the subdivision is 10,000 square feet. In the R-8 zone, the 20% standard would allow lots as small as 6,400 square feet. The smallest lots proposed in the R-8 portion of the subdivision are Lots 11 through 14 at 7,706 sq. ft. in area. The average lot size for the R-8 portion of the subdivision is 8,000 square feet. This standard is met as proposed.

16.12.055 Building Site--Through Lots.

Comment: No through lots are proposed.

16.12.060 Building Site--Lot and Parcel Side Lines.

Comment: Consistent with this section, side lot lines are designed to be perpendicular to the streets on which they face.

16.12.065 Building Site--Grading.

Comment: Site grading will be designed to conform to Chapter 18 of the Oregon Structural Specialty Code and City standards, as demonstrated by the plan submitted with this application.

16.12.070 Building Site--Setbacks and Building Location.

This standard ensures that lots are configured in a way that development can be orientated toward streets to provide a safe, convenient and aesthetically pleasing environment for pedestrians and bicyclists. The objective is for lots located on a neighborhood collector, collector or minor arterial street locate the front yard setback on and design the most architecturally significant elevation of the primary structure to face the neighborhood collector, collector or minor arterial street.

Comment: Not applicable. The project does not contain or abut any neighborhood collector, collector or minor arterial streets.

16.12.075 Building Site--Division of Lots.

Where a tract of land is to be divided into lots or parcels capable of redivision in accordance with this chapter, the Community Development Director shall require an arrangement of lots, parcels and streets which facilitates future redivision. In such a case, building setback lines may be required in order to preserve future right-of-way or building sites.

Comment: No lots are proposed that are large enough to be capable of redivision. This section does not apply.

16.12.080 Protection of Trees.

Protection of trees shall comply with the provisions of Chapter 17.41 – Tree Protection.

Comment: See discussion of Chapter 17.41, below.

16.12.085 Easements.

Comment: A 10 foot-wide utility easement will be provided along all street frontages within this plat. Other easements required for storm and other utilities are depicted on the preliminary utility plan and site plan.

16.12.090 Minimum Improvements--Procedures.

Comment: No construction will commence until required plans have been approved by the City. All improvements will be constructed under the inspection and approval of the city engineer and expenses relating to this will be paid prior to final plat approval. Erosion control measures will be installed as required and utilities will be installed prior to surfacing of the streets. All other standards relating to construction of site improvements will be met.

16.12.095 Minimum Improvements--Public Facilities and Services.

Comment: Compliance with the minimum improvement standards of this section will be reviewed with the construction plans submitted prior to site construction and final plat review. The applicant will comply with all City standards relating to these improvements.

16.12.100 Minimum Improvements--Road Standards and Requirements.

Comment: The streets created through this subdivision application will be in conformance with requirements for subdivisions or partitions and the applicable

street design standards of Chapter 12.04. No streets are proposed to be created by deed. All streets will be shown on the final plat for the subdivision.

16.12.105 Minimum Improvements--Timing Requirements.

Comment: The applicant will either complete construction of all public improvements required for the subdivision prior to application for final plat approval or will guarantee the construction of those improvements in a manner acceptable to the City Engineer.

16.12.110 Minimum Improvements -- Financial Guarantee.

Comment: If a financial guarantee is proposed for site improvements, the form, timing, and duration of the guarantee will comply with the provisions of this section.

COMPLIANCE WITH OCMC 17.08 – R-10 SINGLE-FAMILY DWELLING DISTRICT

17.10.020 - Permitted uses.

Comment: All lots in this subdivision are proposed to be used for construction of single-family detached homes, consistent with 17.08.020(A).

17.10.040 Dimensional Standards:

Dimensional standards in the R-10 district are:

- A. *Minimum lot areas: ten thousand square feet.*
- B. *Minimum lot width: sixty-five feet.*
- C. *Minimum lot depth: eighty feet.*
- D. *Maximum building height: two and one-half stories, not to exceed thirty-five feet.*
- E. *Minimum Required Setbacks.*
 - 1. *Front yard: twenty feet minimum depth.*
 - 2. *Front porch, fifteen feet minimum setback;*
 - 3. *Attached and detached garage: twenty feet minimum setback from the public right-of-way where access is taken, except for alleys. Detached garages on an alley shall be setback a minimum of five feet in residential areas.*
 - 4. *Interior side yard: ten feet minimum for at least one side yard; eight feet minimum for the other side yard.*
 - 5. *Corner side yard: fifteen feet minimum width.*
 - 6. *Rear yard: twenty feet minimum setback.*
 - 7. *Rear porch, fifteen feet minimum setback.*
- F. *Garage Standards. See Chapter 17.20, Residential Design Standards.*
- G. *Maximum Lot Coverage: The footprint of all structures two hundred square feet or greater shall cover a maximum of forty percent of the lot area.*

Comment: The minimum lot area for this subdivision is being adjusted pursuant to the 20% flexibility allowed by Chapter 16.12.050. All lots proposed in the R-10 portion of the site exceed sixty-five feet in width and eighty feet in depth. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed.

COMPLIANCE WITH OCMC 17.10 – R-8 SINGLE-FAMILY DWELLING DISTRICT

17.10.020 - Permitted uses.

Comment: All lots in this subdivision are proposed to be used for construction of single-family detached homes, consistent with 17.10.020(A).

17.10.040 Dimensional Standards:

Dimensional standards in the R-8 district are:

- H. Minimum lot areas: eight thousand square feet.*
- I. Minimum lot width: sixty feet.*
- J. Minimum lot depth: seventy-five feet.*
- K. Maximum building height: two and one-half stories, not to exceed thirty-five feet.*
- L. Minimum Required Setbacks.*
 - 1. Front yard: fifteen feet minimum depth.*
 - 2. Front porch, ten feet minimum setback;*
 - 3. Attached and detached garage: twenty feet minimum setback from the public right-of-way where access is taken, except for alleys. Detached garages on an alley shall be setback a minimum of five feet in residential areas.*
 - 4. Interior side yard: nine feet minimum for at least one side yard; seven feet minimum for the other side yard.*
 - 5. Corner side yard: fifteen feet minimum width.*
 - 6. Rear yard: twenty feet minimum setback.*
 - 7. Rear porch, fifteen feet minimum setback.*
- M. Garage Standards. See Chapter 17.20, Residential Design and Landscaping Standards.*
- N. Maximum Lot Coverage: The footprint of all structures two hundred square feet or greater shall cover a maximum of forty percent of the lot area.*

Comment: The minimum lot area for this subdivision is being adjusted pursuant to the 20% flexibility allowed by Chapter 16.12.050. All lots proposed in the R-8 portion of the site exceed sixty feet in width and seventy-five feet in depth. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed.

COMPLIANCE WITH OCMC 17.50 – Administration and Procedures

17.50.030 Summary of the city's decision-making processes.

Table 17.50.030 identifies the approval type to be used for the various types of land use permits provided for within the Code. Typically, subdivisions, geologic

hazard reviews, and natural resource reviews are handled through a Type II process – review by City staff with public notice. In this instance, however, a zone change is being requested. Zone change applications are reviewed through a Type IV process and require a public hearing before the Planning Commission. For this reason, the entire application will be reviewed by the Planning Commission through a Type IV process.

17.50.040 - Development review in overlay districts and for erosion control.

This property contains fill and, therefore is subject to review under the Geologic Hazards provisions of Chapter 17.44. The site also contains an area identified as being within the Natural Resource Overlay District and is subject to review under Chapter 17.48. The reviews associated with these sections will be accomplished in conjunction with the Type IV process required for the zone change application.

17.50.050 – Preapplication conference.

As required by this section, a pre-application conference with City staff was held on November 19, 2013. This application is being submitted within 6 months of the date of that pre-application conference.

17.50.055 – Neighborhood association meeting.

As required by this section, a meeting with the Park Place Neighborhood Association was held on January 20, 2014. Minutes and an attendance sheet from that meeting are attached to this application. This meeting was instrumental in the applicant choosing to submit a proposal for lesser density on this site than had been originally considered. Neighbors expressed concerns regarding traffic and impacts of smaller lots on property values in the surrounding neighborhood. Following the meeting, the proposed application was revised to a mix of R-10 and R-8 zoning and 29 lots rather than a mix of R-8 and R-6 zoning and 37 lots that had originally been contemplated.

17.50.060 – Application requirements.

This application is being initiated by the owner of the subject property, as required by this section.

17.070 through 17.50.290 set forth the procedures to be followed by the City in reviewing this application. They are not review criteria for this application and do not need to be addressed in this narrative.

COMPLIANCE WITH OCMC 17.20 – RESIDENTIAL DESIGN AND LANDSCAPING STANDARDS

17.20.015 - Street trees.

All new single or two-family dwellings or additions of twenty-five percent or more of the existing square footage of the home (including the living space and garage(s)) shall install a street tree along the frontage of the site, within the abutting developed right-of-way. Existing trees may be used to meet this requirement. A picture of the planted tree shall be submitted to the planning division prior to issuance of occupancy. Upon approval by the community development director, when a planter strip is not present, a tree may be placed within an easement on the abutting private property within ten feet of the public right-of-way if a covenant is recorded for the property with the Clackamas County Records Office identifying the tree as a city street tree, subject to the standards in Chapter 12.08 of the Oregon City Municipal Code. The street tree shall be a minimum of two-inches in caliper and either selected from the Oregon City Street Tree List or approved by a certified arborist for the planting location.

Comment: Street trees will be provided along the street frontages of all lots within the development, as required by this section.

17.20.030 - Residential design options.

Comment: Compliance with the residential design options will be reviewed at the time of building permit application.

17.20.035 - Corner lots and through lots.

Comment: Compliance with these provisions will be reviewed at the time of building permit application.

17.20.040 - Residential design elements.

Comment: Compliance with these provisions will be reviewed at the time of building permit application.

17.20.050 - Main entrances.

Comment: Compliance with these provisions will be reviewed at the time of building permit application.

17.20.060 - Residential yard landscaping.

Comment: Compliance with these provisions will be reviewed at the time of building permit application.

COMPLIANCE WITH OCMC 17.41 – TREE PROTECTION STANDARDS

17.41.020 - Tree protection—Applicability.

Comment: The proposed subdivision is subject to the provisions of this chapter. Existing trees are mapped on the existing conditions plan.

17.41.050 - Same—Compliance options.

Applicants for review shall comply with these requirements through one or a combination of the following procedures:

- A. Option 1—Mitigation. Retention and removal of trees, with subsequent mitigation by replanting pursuant to Sections 17.41.060 or 17.41.070. All replanted and saved trees shall be protected by a permanent restrictive covenant or easement approved in form by the city.*
- B. Option 2—Dedicated Tract. Protection of trees or groves by placement in a tract within a new subdivision or partition plat pursuant to Sections 17.41.080—17.41.100; or*
- C. Option 3—Restrictive Covenant. Protection of trees or groves by recordation of a permanent restrictive covenant pursuant to Sections 17.41.110—17.41.120; or*
- D. Option 4—Cash-in-lieu of planting pursuant to Section 17.41.130*

A regulated tree that has been designated for protection pursuant to this section must be retained or permanently protected unless it has been determined by a certified arborist to be diseased or hazardous, pursuant to the following applicable provisions.

The community development director, pursuant to a Type II procedure, may allow a property owner to cut a specific number of trees within a regulated grove if preserving those trees would:

- 1. Preclude achieving eighty percent of minimum density with reduction of lot size; or*
- 2. Preclude meeting minimum connectivity requirements for subdivisions.*

Comment: The subject property contains a total of thirty-three trees in the main body of the site, another 22 trees along the easterly property line adjacent to Holcomb Elementary School, and an arborvitae hedge along a portion of the rear lines of proposed Lots 2 and 3. As shown on the grading plan, extensive site grading is needed in order to get the site to drain properly to the shallow storm and sewer lines in Ames Street. Several trees in the southern portion of the site, where the existing terrain does not need to be disturbed, will be retained. Additionally, the trees along the east property line will not be disturbed and the arborvitae hedge will remain.

17.41.060 - Tree removal and replanting—Mitigation (Option 1).

- A. Applicants for development who select this option shall ensure that all healthy trees shall be preserved outside the construction area as defined in Chapter 17.04 to the extent practicable. Compliance with these standards shall be demonstrated in a tree mitigation plan report prepared by a certified arborist, horticulturalist or forester or other environmental professional with experience and academic credentials in forestry or arboriculture. At the applicant's expense, the city may require the report to be reviewed by a consulting arborist. The*

number of replacement trees required on a development site shall be calculated separately from, and in addition to, any public or street trees in the public right-of-way required under section 12.08—Community Forest and Street Trees.

- B. The applicant shall determine the number of trees to be mitigated on the site by counting all of the trees six inch DBH (minimum four and one-half feet from the ground) or larger on the entire site and either:*
- 1. Trees that are removed outside of the construction area, shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Trees that are removed within the construction area shall be replanted with the number of replacement trees required in Column 2; or*
 - 2. Diseased or hazardous trees, when the condition is verified by a certified arborist to be consistent with the definition in Section 17.04.1360, may be removed from the tree replacement calculation. Regulated healthy trees that are removed outside of the construction area, shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Regulated healthy trees that are removed within the construction area shall be replanted with the number of replacement trees required in Column 2.*

Comment: The applicant proposes to make use of Mitigation Option 1. Trees not identified for removal will be protected outside of the construction area throughout the construction phase of the project. Replacement trees will be planted pursuant to the provisions of this section. A mitigation plan will be prepared by an arborist and submitted for review prior to final plat approval.

17.41.080 - Tree preservation within subdivisions and partitions—Dedicated tract (Option 2).

Comment: Not applicable. The applicant does not propose to make use of these provisions.

17.41.110 - Tree protection by restrictive covenant (Option 3).

Comment: Not applicable. The applicant does not propose to make use of these provisions.

17.41.1[25] - Cash-in-lieu of planting (tree bank/fund) (Option 4).

Comment: Not applicable. The applicant does not propose to make use of these provisions.

17.41.130 - Regulated tree protection procedures during construction.

- A. No permit for any grading or construction of public or private improvements may be released prior to verification by the community development director that regulated trees designated for protection or conservation have been protected*

according to the following standards. No trees designated for removal shall be removed without prior written approval from the community development director.

- B. Tree protection shall be as recommended by a qualified arborist or, as a minimum, to include the following protective measures:*
- C. Changes in soil hydrology due to soil compaction and site drainage within tree protection areas shall be avoided. Drainage and grading plans shall include provision to ensure that drainage of the site does not conflict with the standards of this section. Excessive site run-off shall be directed to appropriate storm drainage facilities and away from trees designated for conservation or protection.*

Comment: The required procedures and arborist recommendations will be followed throughout the period of construction activities on the site. Changes in soils hydrology and site drainage within tree protection areas will be avoided.

COMPLIANCE WITH OCMC 17.47 EROSION AND SEDIMENT CONTROL

17.47.060 Permit required.

The applicant must obtain an erosion and sediment control permit prior to, or contemporaneous with, the approval of an application for any building, land use or other city-issued permit that may cause visible or measurable erosion.

Comment: The required erosion and sediment control permit will be obtained prior to approval of the final plat for the subdivision.

17.47.070 Erosion and sediment control plans.

- A. An application for an erosion and sediment control permit shall include an erosion and sediment control plan, which contains methods and interim measures to be used during and following construction to prevent or control erosion prepared in compliance with City of Oregon City public works standards for erosion and sediment control. These standards are incorporated herein and made a part of this title and are on file in the office of the city recorder.*
- B. Approval Standards. An erosion and sediment control plan shall be approved only upon making the following findings:*
 - 1. The erosion and sediment control plan meets the requirements of the City of Oregon City public works standards for erosion and sediment control incorporated by reference as part of this chapter;*
 - 2. The erosion and sediment control plan indicates that erosion and sediment control measures will be managed and maintained during and following development. The erosion and sediment control plan indicates that erosion and sediment control measures will remain in place until disturbed soil areas are permanently stabilized by landscaping, grass, approved mulch or other permanent soil stabilizing measures.*

- C. The erosion and sediment control plan shall be reviewed in conjunction with the requested development approval. If the development does not require additional review, the manager may approve or deny the permit with notice of the decision to the applicant.*
- D. The city may inspect the development site to determine compliance with the erosion and sediment control plan and permit.*
- E. Erosion that occurs on a development site that does not have an erosion and sediment control permit, or that results from a failure to comply with the terms of such a permit, constitutes a violation of this chapter.*
- F. If the manager finds that the facilities and techniques approved in an erosion and sediment control plan and permit are not sufficient to prevent erosion, the manager shall notify the owner or his/her designated representative. Upon receiving notice, the owner or his/her designated representative shall immediately install interim erosion and sediment control measures as specified in the City of Oregon City public works standards for erosion and sediment control. Within three days from the date of notice, the owner or his/her designated representative shall submit a revised erosion and sediment control plan to the city. Upon approval of the revised plan and issuance of an amended permit, the owner or his/her designated representative shall immediately implement the revised plan.*
- G. Approval of an erosion and sediment control plan does not constitute an approval of permanent road or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).*

Chapter 17.54 SUPPLEMENTAL ZONING REGULATIONS AND EXCEPTIONS

Comment: This section establishes standards for accessory buildings and uses, projections from buildings, setback exceptions, seasonal sales, accessory dwelling units, fences, and live/work units. With the possible exception of fences, these standards relate more to the future homes that will be built on the lots than to the subdivision itself. As such these standards will be applicable at the time of building permit and occupancy of the homes. No Accessory Dwelling Units or Live/work units are proposed by the developer. Fences, if constructed by the developer, will conform to the standards set forth in Section 17.54.100.

Sunnybrook 2 Subdivision & Zone Change

Neighborhood Meeting Notes

On January 20, 2014, a neighborhood meeting was held in the library of Alliance Charter Academy at the regularly scheduled meeting of the Park Place Neighborhood Association steering committee. The applicant's representative, Rick Givens, explained the project and the proposed zone change. A site plan of the Sunnybrook 2 project was presented for public comment. At the time of this meeting, the application was described as including a zone change from the existing R-10 to a mixture of R-8, near Ames Street, and R-6 for the southerly portion of the site. The site plan presented at the meeting showed a total of 37 lots proposed, with all lots being designed for construction of single-family detached homes.

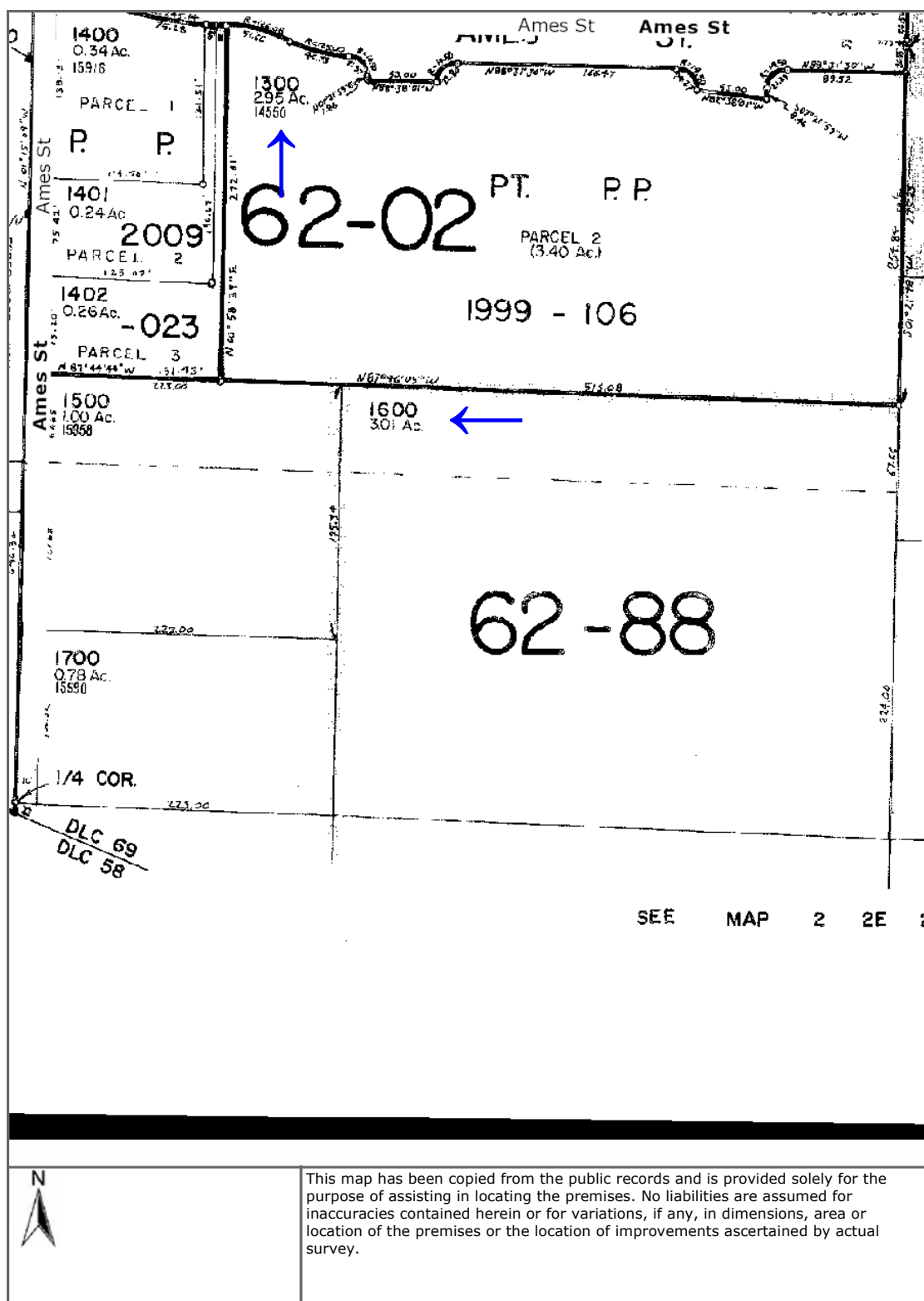
Mr. Givens explained that the increased density proposed was justified due to a variety of factors including:

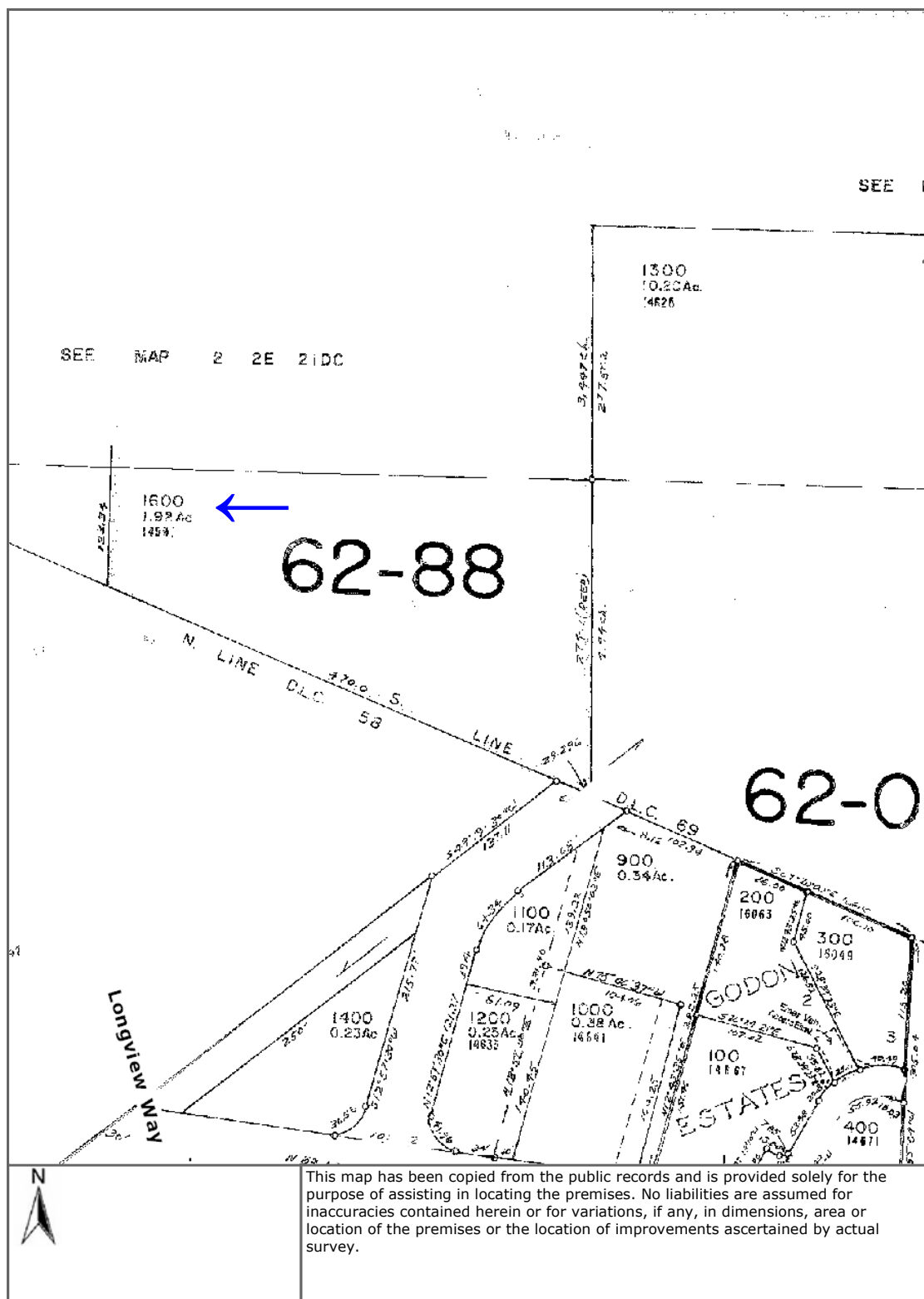
- Proximity of the site to the Holcomb Elementary School campus.
- The site's location abutting R-3.5 zoning on the Housing Authority of Clackamas County's Oregon City View Manor development.
- The need to make efficient use of limited land within the Urban Growth Boundary.
- Availability of sewer, water, and storm drainage facilities at levels capable of accommodating the proposed densities.
- The lack of any natural hazards on the site.

Neighborhood comments were opposed to the change in density, citing a variety of concerns including:

- Perceptions that increased density would diminish property values.
- Concerns about traffic from the project, especially at the intersection of Swan Avenue with Ames Street. Pavement at this location is restricted.
- Concerns about traffic and safety issues with the proposed intersection of Pastures Way with Holcomb School Road.
- School capacity concerns.
- Concerns about the change in neighborhood character from its current low density R-10 development pattern.
- Many expressed opinions that the proposed zoning was only about increased profits.

Following the meeting, the applicant decided to revise the zone change application to a mix of R-10 and R-8 and to reduce the proposed density of development from 37 lots to 29 lots in response to neighborhood concerns. We have addressed traffic issues in the traffic study and are continuing to work with Oregon City Schools regarding the proposed intersection of Pastures Way with Holcomb School Road.





EXISTING CONDITIONS MAP

LOCATED IN TAX LOTS 1300 AND 1600 IN THE S.E. 1/4 SECTION 21
AND TAX LOT 1600 IN THE N.E. 1/4 SECTION 28, T.2S., R.2E., W.M.,
CITY OF OREGON CITY, CLACKAMAS COUNTY, OREGON
DECEMBER 13, 2013 SCALE 1"=50'

SURVEY NOTES:

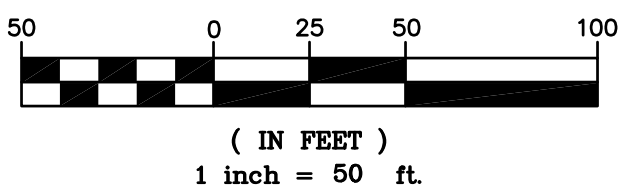
THE DATUM FOR THIS PROJECT IS A CITY OF OREGON CITY BENCH MARK "HOLCOMB"
LOCATED ON SOUTH SIDE OF HOLCOMB ROAD, EAST OF WINSTON DRIVE AT ELEVATION
458.952'.
A TRIMBLE S6-SERIES ROBOTIC INSTRUMENT WAS USED TO COMPLETE A CLOSED LOOP FIELD
TRAVERSE.
AREA OF SUBJECT PARCEL: 350,098 S.F. OR 8.04 ACRES
THE BASIS OF BEARINGS FOR THIS SURVEY IS PER MONUMENTS FOUND AND HELD PER
RECORD OF SURVEY RECORDED UNDER PRIVATE SURVEY NUMBER 29771, RECORDS OF
CLACKAMAS COUNTY.
THE PURPOSE OF THIS SURVEY IS TO RESOLVE AND DETERMINE THE PERIMETER BOUNDARY
OF THE SUBJECT PROPERTY, TO SHOW ALL PERTINENT BOUNDARY ISSUES AND
ENCROACHMENTS. NO PROPERTY CORNERS WERE SET IN THIS SURVEY.
NO WARRANTIES ARE MADE AS TO MATTERS OF UNWRITTEN TITLE, SUCH AS ADVERSE
POSSESSION, ESTOPPEL, ACQUESCENCE, ETC.

LEGEND:

Some Symbols shown may not be used on map

DECIDUOUS TREE	UTILITY AND LIGHT POLE
EVERGREEN TREE	GUY WIRE
STORM SEWER MANHOLE	TRAFFIC SIGNAL POLE
SANITARY SEWER CLEANOUT	ELECTRICAL POWER PEDESTAL
CATCH BASIN	COMMUNICATIONS PEDESTAL
SANITARY SEWER MANHOLE	COMMUNICATIONS MANHOLE
WATER VALVE	OVERHEAD LINE
WATER METER	GAS LINE
FIRE HYDRANT	ELECTRICAL LINE
BOLLARD	COMMUNICATIONS LINE
GAS VALVE	SANITARY SEWER LINE
GAS METER	STORM DRAIN LINE
SIGN	WATER LINE
MAILBOX	FENCELINE
UTILITY POLE	ELECTRIC RISER
LIGHT POLE	UTILITY RISER
ELECTRIC METER	MONITORING WELL
IRRIGATION CONTROL VALVE	WATER BLOWOFF
SANITARY STUB	SEPTIC COVER
STORM PIPE	HEAT PUMP
TRANSFORMER	ELECTRIC BOX
ELECTRIC STUB	STUMP

GRAPHIC SCALE



SIGNED ON:
REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
NOVEMBER 30, 2007
JAMES BURTON BROWN
60379

VALID THROUGH DECEMBER 31, 2013

CENTERLINE CONCEPTS
LAND SURVEYING, INC.
729 MOLALLA AVE., SUITE 1 & 2
OREGON CITY, OREGON 97045
PHONE 503.650.0188 FAX 503.650.0189

Plotted: M:\PROJECTS\CON-AMES STREET\dwg\ECM.dwg

STORM MANHOLE NOTES

SDMH 1
RIM 321.87'
IE 12" IN NW 317.67'
IE IN 12" S 317.65'
IE 12" OUT E 317.52'

SDMH 2
RIM 319.74'
IE 12" IN S 316.74'
IE 12" IN N 316.67'
IE 12" IN W 316.64'
IE 12" OUT E 316.49'

SDMH 3
RIM 319.84'
IE 12" IN W 315.23'
IE 12" IN S 315.04'
IE 12" OUT N 315.01'

SDMH 4
RIM 317.01'
IE IN NE 313.99'
IE 12" IN S 313.99'
IE IN NW 313.89'
IE OUT E 313.81'

SDMH 5
RIM 316.76'
IE IN W 313.49'
IE OUT E 313.45'

SDCI 1
TC 322.11'
OUT 321.56'
IE IN S 317.76'
IE 12" OUT E 317.61'

SDCI 2
TC 319.76'
OUT 319.11'
IE 12" OUT N 316.81'

SDCB 1
RIM 321.39'
IE IN W 318.14'
IE OUT N 317.97'

SDCB 2
RIM 319.57'
IE 12" OUT N 316.91'

SDCB 3
RIM 317.94'
IE 8" IN E 315.39'
IE 12" OUT N 315.28'

SDCB 4
RIM 329.79'
IE 8" OUT SE 327.89'

SDAD 1
TOP GRATE 321.25'
IE 10" IN S 319.40'

SDAD 2
TOP GRATE 321.72'
BOTTOM GRATE 321.16'
IE 10" OUT N 320.31'

SDAD 3
TOP GRATE 323.20'
BOTTOM GRATE 322.63'
FULL OF DIRT

SANITARY MANHOLE NOTES

SSMH 1
RIM 322.56'
IE 8" IN E 314.31'
IE IN SE 314.26'
IE 8" OUT W 314.06'

SSMH 2
RIM 321.91'
IE 8" IN S 315.14'
IE 8" IN E 315.07'
IE 8" IN N 315.00'
IE 8" OUT W 314.92'

SSMH 3
RIM 320.39'
IE 8" IN E 315.86'
IE 6" IN N 315.69'
IE 8" OUT W 315.61'

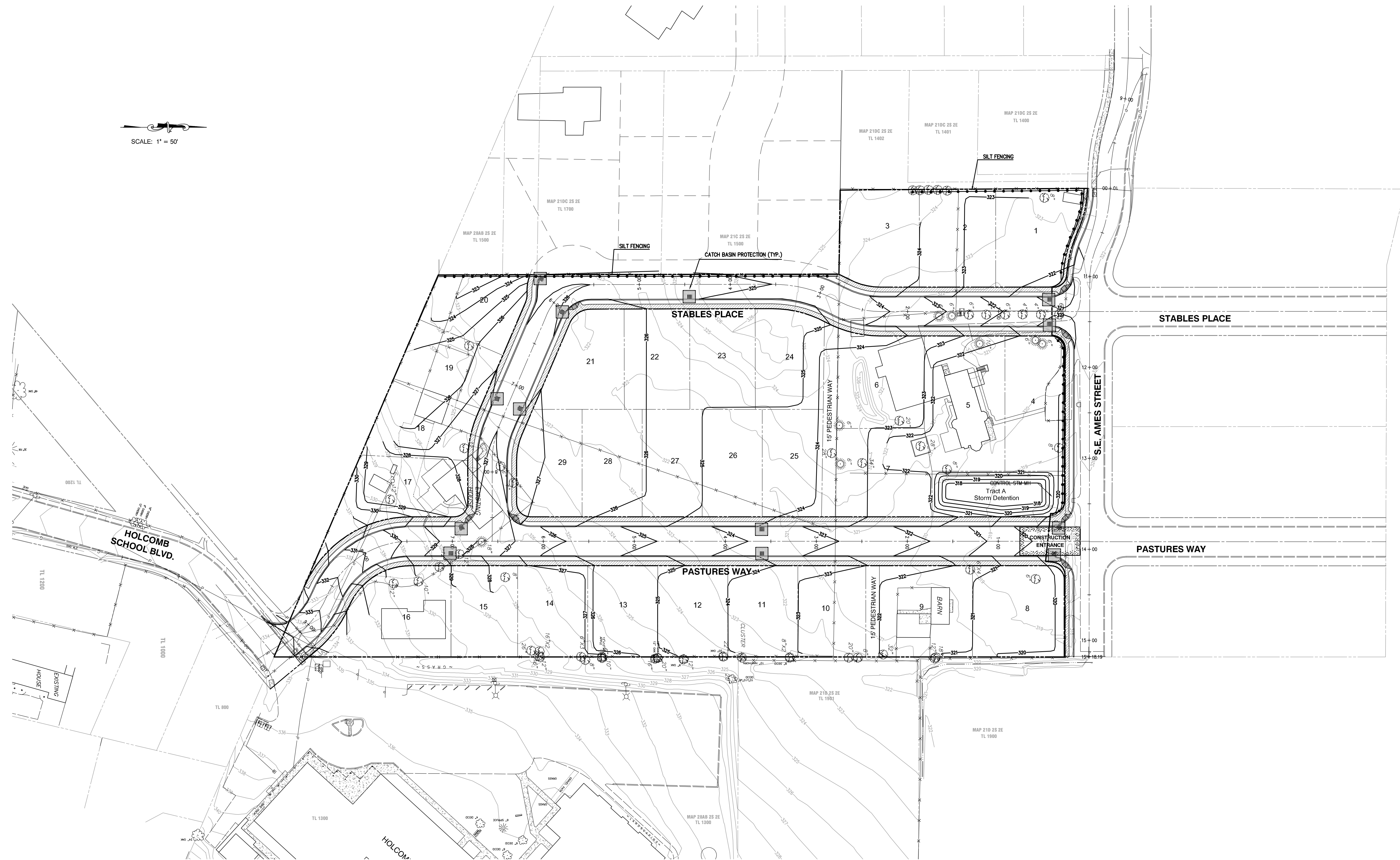
SSMH 4
RIM 319.84'
IE 8" IN S 316.34'
IE 8" IN E 316.34'
IE 8" OUT W 316.32'

SSMH 5
RIM 318.17'
IE 8" OUT S 316.25'

SSMH 6
RIM 334.18'
IE IN NE 326.64'
IE OUT W 326.38'

SSMH 7
RIM 327.22'
IE IN E 322.15'
IE OUT SW 321.77'

SCALE: 1" = 50'



PRELIMINARY GRADING AND EROSION CONTROL PLAN

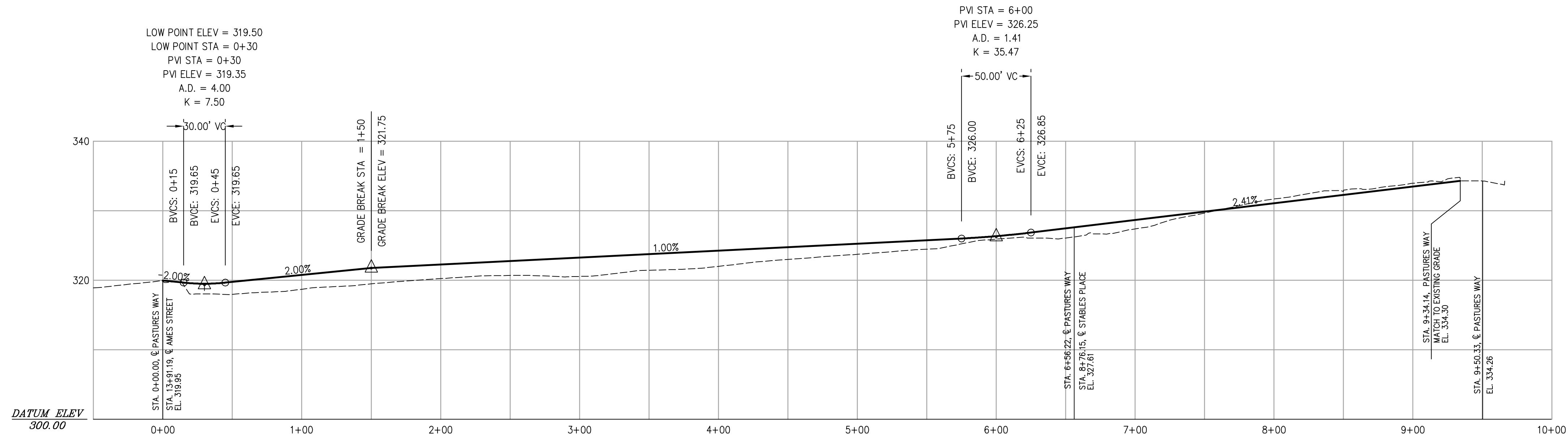
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DRAWN: BJS			
SCALE: 1" = 50'			
DATE: January, 2014			
FILE: Sunnybrook PreCivil1	DATE	NO.	REVISION

Theta, llc
ENGINEERING - SURVEYING - PLANNING
PO Box 1345
Lake Oswego, Oregon 97035

503/481-8822
email: thetaeng@comcast.net

Icon Construction and Development, LLC
1980 Willamette Falls Drive, No. 200
West Linn, Oregon 97068
Phone: 503-567-0406

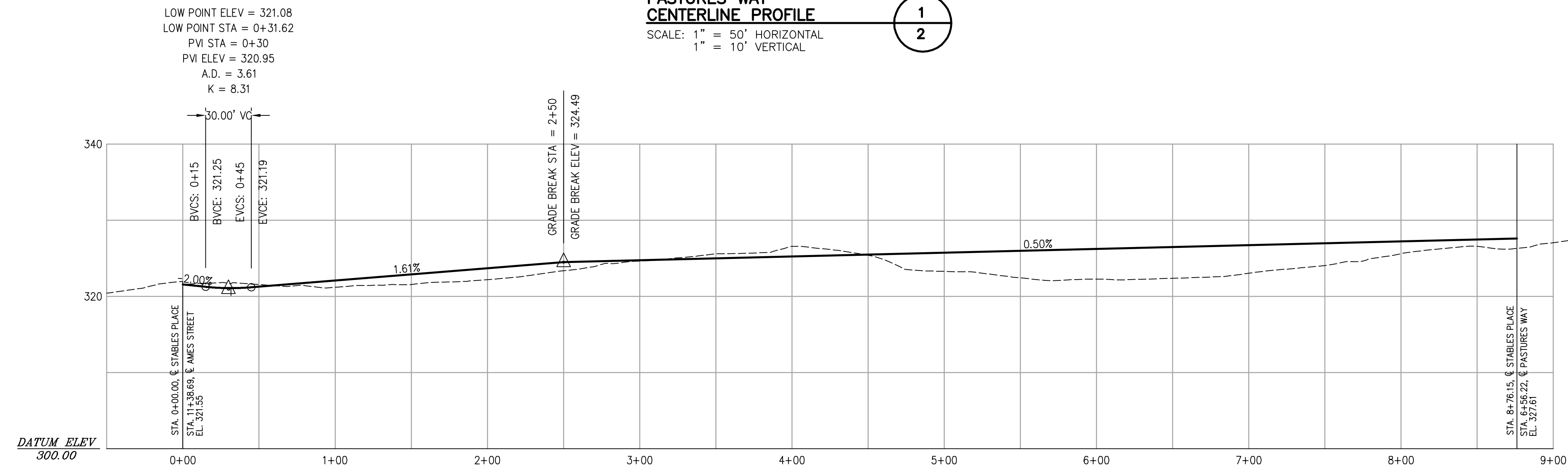
Holcomb Blvd.
Oregon City, Oregon
Icon Construction and Development, LLC



**PASTURES WAY
CENTERLINE PROFILE**

SCALE: 1" = 50' HORIZONTAL
1" = 10' VERTICAL

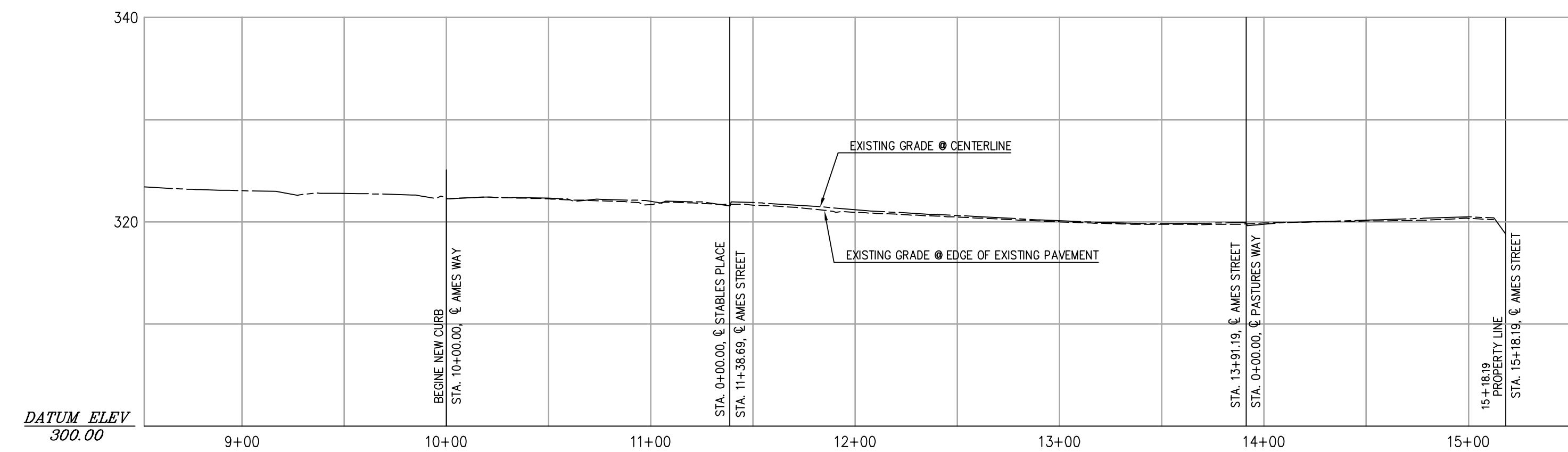
1
2



**STABLES PLACE
CENTERLINE PROFILE**

SCALE: 1" = 50' HORIZONTAL
1" = 10' VERTICAL

2
2



**AMES STREET
CENTERLINE PROFILE**

SCALE: 1" = 50' HORIZONTAL
1" = 10' VERTICAL

3
2

2013-118

DESIGNED: BDG			
DRAWN: BJS			
SCALE: 1" = 50'			
DATE: January, 2014			
FILE: Sunnybrook PreCivil1	DATE	NO.	REVISION

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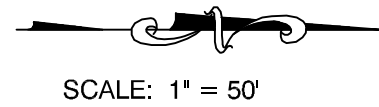
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Holcomb Blvd.
Oregon City, Oregon
Icon Construction and Development, LLC

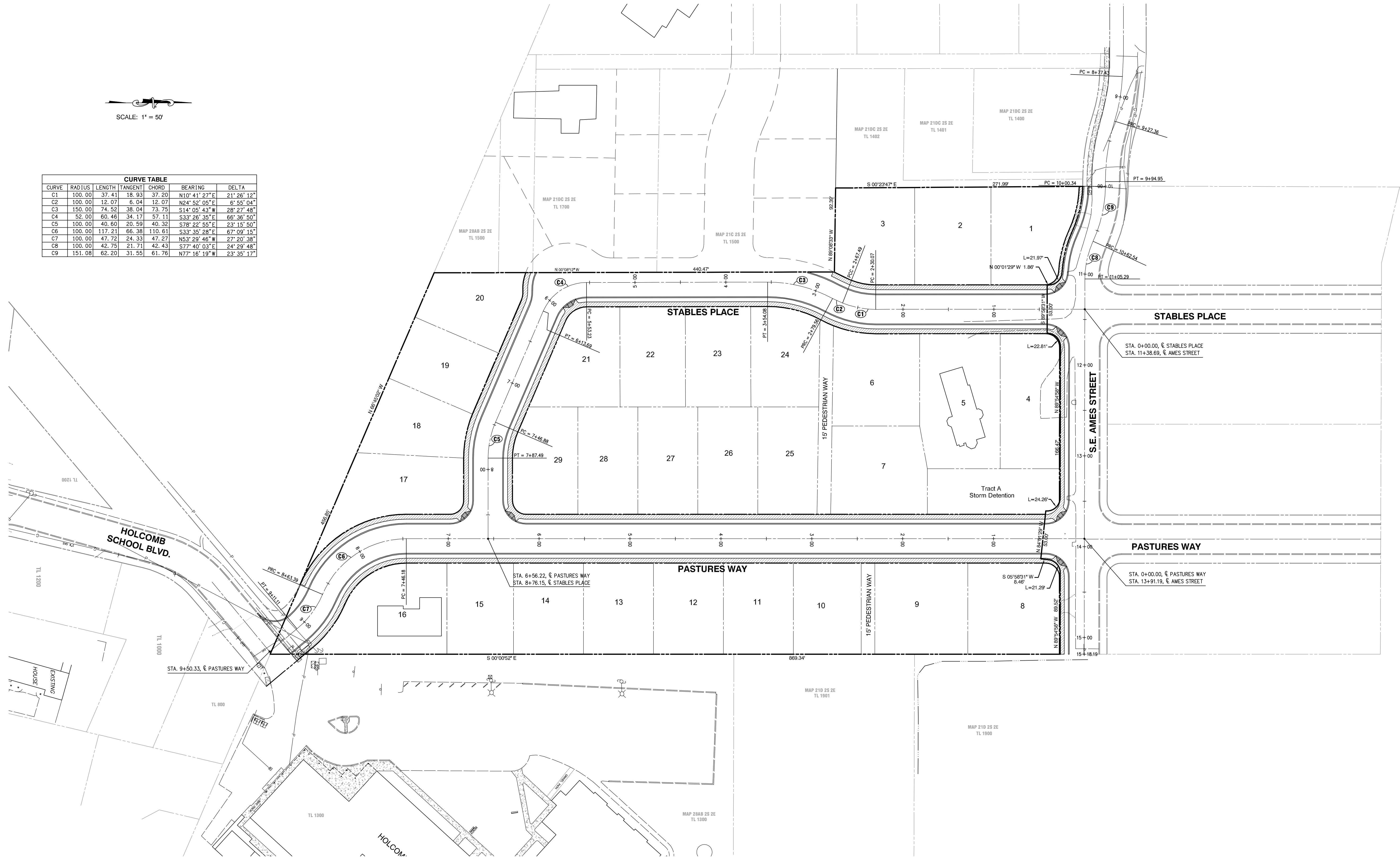
SHEET:

2/4

PRELIMINARY STREET PROFILES



CURVE TABLE							
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA	
C1	100.00	37.41	18.93	37.20	N10°41'27"E	21°26'12"	
C2	100.00	12.07	6.04	12.07	N24°52'05"E	6°55'04"	
C3	150.00	74.52	38.04	73.75	S14°05'43"W	28°27'48"	
C4	52.00	60.46	34.17	57.11	S33°26'35"E	66°36'50"	
C5	100.00	40.60	20.59	40.32	S78°22'55"E	23°18'50"	
C6	100.00	117.21	66.38	110.61	S33°35'28"E	67°09'15"	
C7	100.00	47.72	24.33	47.27	N53°29'46"W	27°20'38"	
C8	100.00	42.75	21.71	42.43	S77°40'03"E	24°29'48"	
C9	151.08	62.20	31.55	61.76	N77°16'19"W	23°35'17"	



2013-118

DESIGNED: BDG			
DRAWN: BJS			
SCALE: 1" = 50'			
DATE: January, 2014			
FILE: Sunnybrook PreCivil1	DATE	NO.	REVISION

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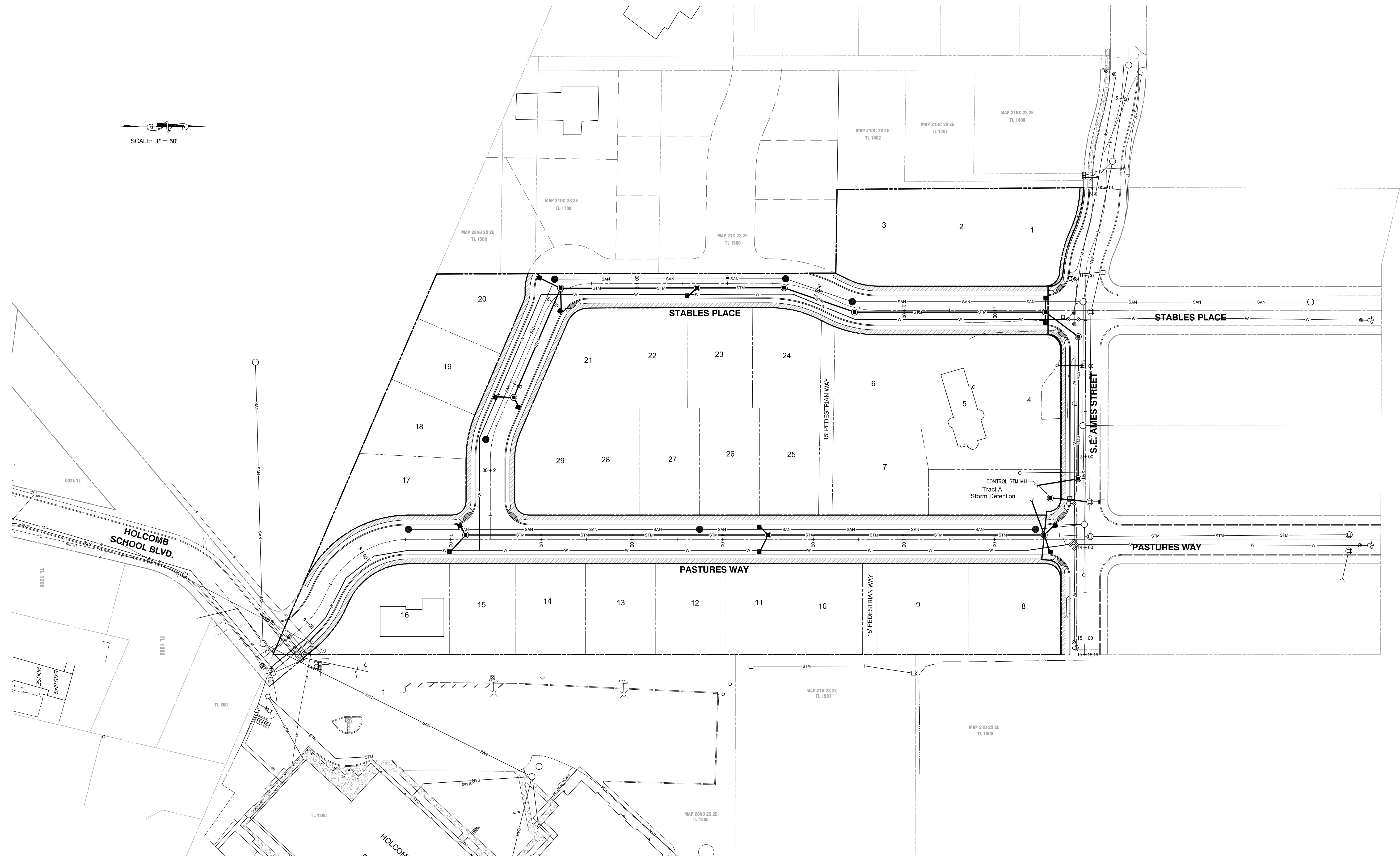
Holcomb Blvd.
Oregon City, Oregon
Icon Construction and Development, LLC

SHEET:

1/4

PRELIMINARY STREET PLAN

SCALE: 1" = 50'



PRELIMINARY UTILITY PLAN

DESIGNED: BDG			
DRAWN: BJS			
SCALE: 1" = 50'			
DATE: January, 2014			
FILE: Sunnybrook PreCivil1	DATE	NO.	REVISION

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Transmittal

To: Pete Walter
Oregon City Planning
221 Molalla Ave., #200
Oregon City, Oregon 97045

Date: March 28, 2014

Job #: Sunnybrook Estates II, PA 13-37

ENCLOSED:

1ea revised storm drainage report

REMARKS

this revised report is based on comments prepared by Gordon Munro dated March 13th. Please note that there was a map showing the pre and post time of concentration in the original report.

Theta, llc

By:
Bruce Goldson

27 - Lot proposed development
Oregon City Pre-App File PA 13-37
Oregon City, Oregon



PRELIMINARY DRAINAGE REPORT

January 2014

March 2014

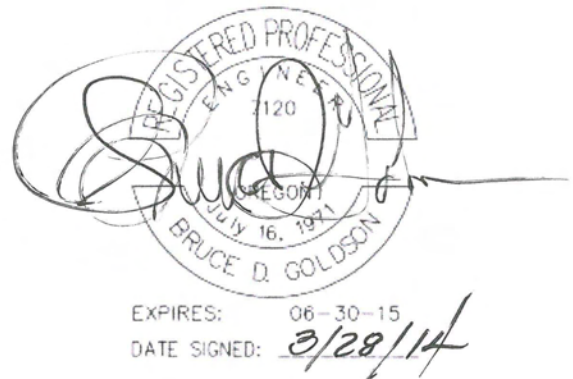
Prepared By:

Bruce D. Goldson, PE

Theta, llc

PO Box 1345, Lake Oswego, Oregon 97035

2012-118



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NARRATIVE ASSUMPTIONS

Existing Conditions:

The subject property has two existing homes with outbuildings on approximately 8 acres. The site is generally open, with few trees and slopes from 1.5% to 5 % generally northerly towards Ames Street. Although Holcomb School has elevations above the subject property a public storm system directs much of the impervious flow out a public system in School Lane. Additionally there is a swale along the easterly boundary of the subject property directing surface water north. Ames Street borders the property on the North. North of Ames Street is Sunnybrook Estates which provides storm and sanitary sewer connections for this proposed development. There are two area drains or catch basins southerly from the partial Ames street that collect the surface water from the site and directs this flow into the public system in Pasture Way. Per the available records this is a 16-inch DI line that is connected to a detention pond on the easterly side of Pasture Way at the end of the street. From this detention pond the storm water is controlled by orifices and discharges into a graded "Farm Ditch".

Developed conditions:

The proposed development is a 29 lot development that will retain one house and move the other house to a new lot. The south side of Ames Street will be completed with curbs and walks and a road system will extend Stables Place and Pasture Way to School Street on the South. A detention/water quality pond will be provided on site with discharge to the existing storm system in Pasture Way with ultimate discharge in an existing channel on the north side of Sunnybrook Estates. Since the existing storm water facility receives the storm water from this

site and this development will have facilities to detain the storm water no adjustments to the existing system are anticipated.

Drain Basin Description:

Existing

School Road on the South is the southerly limit of the drainage basin. Existing development on the west and east have generally directed the storm flow away from the property. There is a drainage channel on the Westerly side of the property that cuts off flow from the school and undeveloped property from this site.

Developed

The pre-development and post development are substantially the same with little off-site influence. The natural drainage is to the North through the Sunnybrook Estates subdivision. The exhibit below illustrates the general flow pattern. The 3/.4 street section along Stables Place will have a temporary rolled asphalt curb to direct flow away from the adjacent property.



Summary of storm water flow

	2-YEAR	5-YEAR	10-YEAR	25-YEAR
PRE-DEVELOP	1.94 CFS	2.62 CFS	3.04 CFS	3.90 CFS
POST-DEVELOP	2.26 CFS	2.91 CFS	3.31 CFS	4.12 CFS

DESIGN STORM	REQUIRED RELEASE	DESIGN RELEASE
25 YEAR-24 HR	3.04 CFS	3.03 CFS
10 YEAR -24 HR	N/A	N/A
5 YEAR - 24 HR	1.94 CFS	1.68 CFS
2 YEAR -24 HR	0.97 CFS	0.97 CFS

REGULATORY DESIGN CRITERIA

The storm water quantity management requirements of Oregon City are:

- City Code 13.12 Storm water management and the 1988 Drainage Mater Plan
- City of Oregon City, Public Works, Storm Water & Grading Design Standards.

References

1. King County Department of Public Works, Surface Water Management Division, Hydrographic Programs, Version 4.21B

Water Quality Facility

The required treatment rate is 1/3 of the 2-year design storm. For this project the calculations the 2-year storm is 2.31 CF and the water quality quantity is 0.77 CFS. The following option will be considered in the final design: a swale inside the detention pond. Poor infiltration rates are found with the soils and another option would be a Stormceptor by CRS with the capacity to treat 100% of the flows.

Down Stream Analysis

The storm water from this property is directed into the Sunnybrook Estates system from two area drains/catch basins on the Ames Street right-of-way. The Sunnybrook Estates is a newer development that was completed in January 2008 and was designed with the same storm water requirements that are in place for this project. At the 25-year event this project will have a required release from its detention system of not to exceed 3.04cfs. The capacity of the 16-inch DI line to the Sunnybrook Estates detention pond has been calculated at 5.06cfs which upon a cursory review of the drainage report for TP 05-10 finds more than adequate. The Sunnybrook Drainage report has accounted for upstream area of this development as both future development and upstream flow. Additional investigation appears required to determine if that report accounted for all the possible upstream area in the calculations.

Design Parameters

The design storm is a 24 hour standard SCS Type 1A

- 2-year.....2.6 inches
- 5-year.....3.1 inches
- 25-year.....4.0 inches
- 100-year.....4.5 inches

SOIL TYPES

17 Clackamas silt loam - Type C/D soil

41 Huberly silt loam - Type C/D soil

78B Saum silt loam- Type C soil

Time of Concentration (see drawing in appendix)

$$T = 0.42(n L)^{.8} / (P_2)^{.5} (S_0)^{.4} \quad \& \quad T = L/60k(s_0)^{.5}$$

Pre: $(.42)[(0.17)(300)]^{.8} / (2.6)^{.5} (0.023)^{.4} = 27.4 \text{ min} + 375/(60)(13)(0.013)^{.5} = 4.2 \text{ min}$: total = 31.6 min.

Post: $(.42)[(0.15)(300)]^{.8} / (2.6)^{.5} (0.010)^{.4} = 34.4 \text{ min} \quad \& \quad + 160/(60)(11)(0.019)^{.5} = 1.8 \text{ min} = \text{total of } 36.2 \text{ min.}$

HYDROGRAPH RESULTS

KING COUNTY DEPARTMENT OF PUBLIC WORKS

Surface Water Management Division

HYDROGRAPH PROGRAMS

Version 4.21B

1 - INFO ON THIS PROGRAM

2 - SBUHYD

3 - MODIFIELD SBUHYD

4 - ROUTE

5 - ROUTE2

6 - ADDHYD

7 - BASEFLOW

8 - PLOTHYD

- 9 - DTATA
- 10 - REFAC
- 11 - RETURN TO DOS

ENTER OPTION:

2

SBUN/SCS METHOD FOR COMPUTING RUNOFF HYDROGRAPH

STORM OPTIONS:

- 1 - S.C.S. TYPE-1A
- 2 - 7-DAY DESIGN STORM
- 3 - STORM DATA FILE

SPECIFY STORM OPTION:

1

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

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

2,24,2.6

XXXXXXXXXXXXXXXXXXXX S.C.S.TYPE-1A DISTRIBUTION XX

XXXXXXXXXXXX 2-YEAR 24-HOUR STORM xxxx 2.60 "TOTAL PRECIP XX

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

7.70,87,0.36,98,31.6

DATA PRINT OUT:

AREA(ACRES)	PERVIOUS		IMPERVIOUS		TC(MINUTES)
	A	CN	A	CN	
8.1	7.7	87	.4	98	31.6
PEAK-Q(CFS)	T-PEAK(HRS)		VOL(CU-FT)		
1.94	7.83		41866		

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

C:a2pre

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

C

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

5.07,86,2.99,98,36.2

DATA PRINT OUT:

AREA(ACRES)	PERVIOUS		IMPERVIOUS		TC(MINUTES)
	A	CN	A	CN	
8.1	5.1	86	3.0	98	36.2
PEAK-Q(CFS)	T-PEAK(HRS)		VOL(CU-FT)		
2.26	7.83		49697		

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

C:a2post

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

STORM OPTIONS:

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

2 - 7-DAY DESIGN STORM

3 - STORM DATA FILE

SPECIFY STORM OPTION:

1

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

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

5,24,3.1

XXXXXXXXXXXXXXXXXXXX S.C.S.TYPE-1A DISTRIBUTION XX

XXXXXXXXXXXX 5-YEAR 24-HOUR STORM xxxx 3.10" TOTAL PRECIP XX

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

7.70,87,0.36,98,31.6

DATA PRINT OUT:

AREA(ACRES)	PERVIOUS		IMPERVIOUS		TC(MINUTES)
	A	CN	A	CN	
8.1	7.7	87	.4	98	31.6
PEAK-Q(CFS)	T-PEAK(HRS)		VOL(CU-FT)		
2.62	7.83		54417		

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

C:a5pre

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

C

5.07,86,2.99,98,36.1

DATA PRINT OUT:

AREA(ACRES)	PERVIOUS		IMPERVIOUS		TC(MINUTES)
	A	CN	A	CN	
8.1	5.1	86	3.0	98	36.2
PEAK-Q(CFS)	T-PEAK(HRS)		VOL(CU-FT)		
2.91	7.83		62786		

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

C:a5post

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

N

STORM OPTIONS:

1 - s.c.s. TYPE-1A

2 - 7-DAY DESIGN STORM

3 - STORM DATA FILE

SPECIFY STORM OPTION:

1

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

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

10,24,3.4

XXXXXXXXXXXXXXXXXXXX S.C.S.TYPE-1A DISTRIBUTION XX

XXXXXXXXXXXX 10-YEAR 24-HOUR STORM xxxx 3.40" TOTAL PRECIP XX

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

7.70,87,0.36,98,31.6

DATA PRINT OUT:

AREA(ACRES)	PERVIOUS		IMPERVIOUS		TC(MINUTES)
	A	CN	A	CN	
8.1	7.7	87	.4	98	31.6
PEAK-Q(CFS)	T-PEAK(HRS)		VOL(CU-FT)		
3.04	7.83		62200		

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

C:a10pre

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

C

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

5.07,86,2.99,98,36.2

DATA PRINT OUT:

AREA(ACRES)	PERVIOUS		IMPERVIOUS		TC(MINUTES)
	A	CN	A	CN	
8.1	5.1	86	3.0	98	36.2
PEAK-Q(CFS)	T-PEAK(HRS)		VOL(CU-FT)		
3.31	7.83		70788		

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

C:a10post

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

N

STORM OPTIONS:

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

2 - 7-DAY DESIGN STORM

3 - STORM DATA FILE

SPECIFY STORM OPTION:

1

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

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

25,24,4

XXXXXXXXXXXXXXXXXXXX S.C.S.TYPE-1A DISTRIBUTION XX

XXXXXXXXXXXX 25-YEAR 24-HOUR STORM xxxx 4.00" TOTAL PRECIP XX

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

7.70,87,0.36,98,31.6

DATA PRINT OUT:

AREA(ACRES)	PERVIOUS		IMPERVIOUS		TC(MINUTES)
	A	CN	A	CN	
8.1	7.7	87	.4	98	31.6
PEAK-Q(CFS)	T-PEAK(HRS)		VOL(CU-FT)		
3.90	7.83		78095		

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

C:a25pre

C

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

5.07,86,2.99,98,36.2

DATA PRINT OUT:

AREA(ACRES)	PERVIOUS		IMPERVIOUS		TC(MINUTES)
	A	CN	A	CN	
8.1	5.1	86	3.0	98	36.2
PEAK-Q(CFS)	T-PEAK(HRS)		VOL(CU-FT)		
4.12	7.83		87037		

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

C:a25post

DETENTION SIZING

ENTER OPTION

10

R/D FACILITY DESIGN ROUTINE

SPEFICY TYPE OF R/D FACILTY

1 - POND	4 - INFILTRATION POND
2 - TANK	5 - INFILTRATION TANK
3 -VAULT	6 - GRAVEL TRENCH/BED

1

ENTER: POND SIDE SLOPE (HORIZ. COMPOENT)

4

ENTER: EFFECTIVE STORAGE DEPTH(ft) BEFORE OVERFLOW

3

ENTER [d:][path]filename[.ext] OF PRIMARY DESIGN INFLOW HYDROGRAPH:

C:a25post

PRELIMINARY DESIGN INFLOW PEAK = 4.12

ENGER PRIMARY DESIGN RELEASE RATE(cfs)

3.04

ENTER NUMBER OF INFLOW HYDROGRAPHS TO BE TESTED FOR PERFORMANCE (5 MAXIMUM)

2

ENTER [d:][path]filename[ext] OF HYDROGRAPH 1:

C:a5post

ENTER TARGET RELEASE RATE(cfs)

2.91

ENTER [d:][path]filename[ext] OF HYDROGRAPH 2:

C:a2post

ENTER TARGET RELEASE RATE(cfs)

.97

ENTER: NUMBER OF ORIFICES, RISER-HEAD(ft), RISER-DIAMETER(in)

3,3.0,15

RISER OVERFLOW DEPTH FOR PRIMARY PEAK INFLOW= 0.49FT

SPECIFY ITERATION DISPLAY: Y -YES, N - NO

N

SPECIFY: R - REVIEW/REVISE INPUT, C - CONTINUE

C

INITIAL STORAGE VALUE FOR ITERATION PURPOSES: 24303 CU-FT

BOTTOM ORIFICE: ENTER Q-MAX(cfs)

1.14

DIA.=4.90 INCHES

MIDDLE ORIFICE: ENTER Q-MAX(cfs), HEIGHT(ft)

1.5,2.5

DIA.-8.84 INCHES

TOP OFIFICE: ENTER HEIGHT(ft)

2.8

DIA.= 5.81 INCHES

PERFORMANCE: INFLOW TARGET-OUTFLOW ACTUAL-OUTFLOW PK-STAGE STORAGE

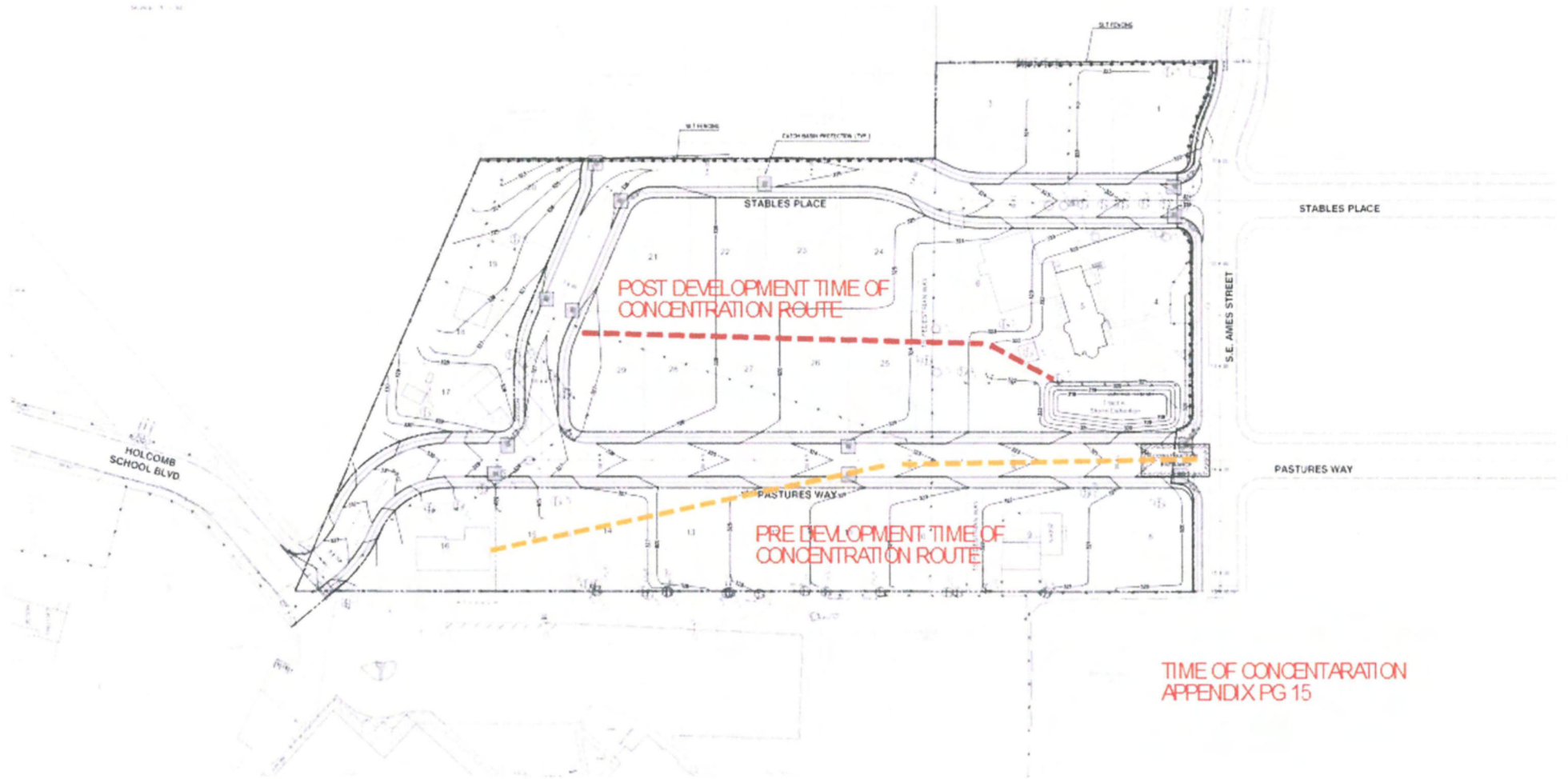
DESIGN HYD:	4.12	3.04	3.03	3.00	11730
TEST HYD 1:	2.26	.97	.97	2.21	7750
TEST HYD 2:	2.91	2.91	1.68	2.63	9780

Specify: D - DOCUMENT, R -REVISE, A - ADJUST ORIF, E -ENLARGE, S -STOP

PRELIMINARY DESIGN:

A proposed detention and water quality pond is proposed on the property at the northerly edge of the property, just south of Ames Street. This the low point of the tract and with direct access to the existing storm sewer in Ames Street. Preliminary calculations indicate that a total of 11730 cubic feet of volume is required. A preliminary calculation of the grading plan for the detention pond area indicates that there is sufficient volume available to meet the City requirements. Infiltration and water quality requirements appear to be able to be met with this pond.

Appendix



TIME OF CONCENTRATION
APPENDIX PG 15

Table 4-3 MODIFIED CURVE NUMBERS

SCS Western Washington Runoff Curve Numbers					
Runoff curve numbers for selected agricultural, suburban, and urban land use for Type 1A rainfall distribution, 24-hour storm duration. (Published by SCS in 1982)					
LAND DESCRIPTION		CURVE NUMBER BY DRAINAGE PERCENTAGE			
Cultivated land ¹	Winter Condition	86	91	94	95
Mountain Open Areas:	Low growing brush and grassland.	74	82	89	92
Meadow or pasture:		65	78	85	89
Wood or forest land:	Undisturbed	42	64	76	81
	Established second growth ²	48	68	78	83
	Young second growth or brush	55	72	81	86
Orchard:	With over crop	81	88	92	94
Open spaces, lawns, parks, golf courses, cemeteries, landscaping					
Good Condition:	Grass cover on > =75% of area	68	80	86	90
Fair Condition:	Grass cover on 50-75% of area	77	85	90	92
Gravel Roads and Parking Lots:		76	85	89	91
Dirt Roads and Parking Lots:		72	82	87	89
Impervious surfaces, pavement, roofs, etc.		98	98	98	98
Open water bodies: Lakes, wetlands, ponds, etc.		100	100	100	100
Single Family Residential ³ :		Select a separate curve number for pervious and impervious portions of the site or basin.			
Dwelling unit/gross acre	% Impervious ⁴				
1.0 DU/GA	15				
1.5 DU/GA	20				
2.0 DU/GA	25				
2.5 DU/GA	30				
3.0 DU/GA	34				
3.5 DU/GA	38				
4.0 DU/GA	42				
4.5 DU/GA	46				
5.0 DU/GA	48				
5.5 DU/GA	50				
6.0 DU/GA	52				
6.5 DU/GA	54				
7.0 DU/GA	56				
Planned Unit Developments, condominiums, apartments, commercial businesses & industrial areas ³	% impervious ⁴	Select a separate curve number for pervious and impervious portions of the site or basin.			
	Must be computed				

¹ For a more detailed description of agricultural land use curve numbers, refer to National Engineering Handbook, Sec. 4, Hydrology, Chapter 9, August 1972.

² Modified by KCFW, 1995.

³ Assumes roof and driveway runoff is directed into street/storm system.

⁴ The remaining pervious areas (lawn) are considered to be in good condition for these curve numbers.

4.1.2.3 TIME OF CONCENTRATION

The time of concentration (T_c) is the length of time for runoff to travel from the hydraulically most distant point of a watershed to the point of discharge from the watershed. For computation purposes, it is assumed that water moves through the watershed as sheetflow, having a maximum depth of less than one tenth foot (0.1'), as shallow concentrated flow, having a maximum depth exceeding one tenth-foot (0.1'), and as open channel flow. Minimum T_c shall be five minutes.

It is assumed that runoff in a watershed begins as sheetflow. It is also assumed that regardless of site conditions, the maximum distance that runoff will travel in the form of sheetflow will not exceed 300 feet. Where there are no topographic features suggesting channel flow within the first 300 feet of flow, it may be assumed that the first 300 feet of flow is sheetflow and the remaining flow distance until water reaches a channel is shallow concentrated flow.

For further discussion of methods of computing time of concentration, the designer is referred to the Washington State Department of Ecology's Stormwater Management Manual for the Puget Sound Basin.

For computing the travel time of sheetflow, the following formula should be used:

$$T = \frac{0.42 (n_s L)^{0.8}}{(P_2)^{0.5} (S_o)^{0.4}}$$

where T	=	travel time, in minutes
n_s	=	Manning's roughness coefficient.-sheetflow (Table 5-3)
L	=	flow length, in feet
P_2	=	two-year, 24-hour rainfall, in inches
s_o	=	slope of land, in feet per foot

Travel time for shallow concentrated flow and open channel flow is computed using the following formula:

$$T = \frac{L}{60 k \sqrt{s_o}}$$

where T	=	travel time, in minutes
L	=	flow length, in feet
60	=	conversion factor from seconds to minutes
k	=	velocity factor, in feet per second (Table 5-3)
s_o	=	slope of flow path, in feet per foot
V	=	$60 k \sqrt{s_o}$, average velocity, in feet per second

Table 4-4 MANNING'S COEFFICIENTS "K" FACTORS

B. AND C. MANNING'S COEFFICIENTS "K" FACTORS FOR HYDRAULICS		
1. Sheet Flow (Shallow) Manning's Values (for initial 30 ft/s of travel)		n
Smooth surfaces (concrete, asphalt, gravel, or bare hand packed soil)		0.01
Fallow fields or loose soil surface (no residue)		0.05
Cultivated soil with residue cover (s # 0.20 ft/ft)		0.06
Cultivated soil with residue cover (s > 0.20 ft/ft)		0.17
Short prairie grass and lawns		0.15
Dense grasses		0.24
Bermuda grass		0.41
Range (natural)		0.13
Woods or forest with light underbrush		0.40
Woods or forest with dense underbrush		0.80
2. Manning's values for sheet flow only, from Overton and Madsen's 1976 (See SCS & R-2-69) 3. Values based on Travel Time Limit of Concentration Calculations Shallow Concentrated Flow (After the initial 30 ft/s of sheet flow, R > 0)		R
1.	Forest with heavy ground litter and meadows (n = 0.10)	3
2.	Brushy ground with some trees (n = 0.060)	5
3.	Fallow or minimum tillage cultivation (n=0.040)	8
4.	High grass (n=0.035)	9
5.	Short grass, pasture, and lawns (n=0.030)	11
6.	Nearly bare ground (n=0.025)	13
7.	Paved and gravel areas (n=0.012)	27
Channel flow (concentrated) (At beginning of visible channel, R=0.2)		R
1.	Forested swale with heavy ground litter (n=0.10)	5
2.	Forested drainage course/ravine with defined channel bed (n=0.050)	10
3.	Rock-lined waterway (n=0.035)	15
4.	Grassed waterway (n=0.030)	17
5.	Earth-lined waterway (n=0.025)	20
6.	CMP pipe (n=0.024)	21
7.	Concrete pipe (0.012)	42
8.	Other waterways and pipe 0.508/n	
Channel flow (concentrated) (Continued)		
9.	Meandering stream with some pools (n=0.040)	20
10.	Rock-lined stream (n=0.035)	23
11.	Grass-lined stream (n=0.030)	27
12.	Other streams, man-made channels and pipe 0.807/n **	
** See Table 4-3 for additional Manning's "n" values for open channels		

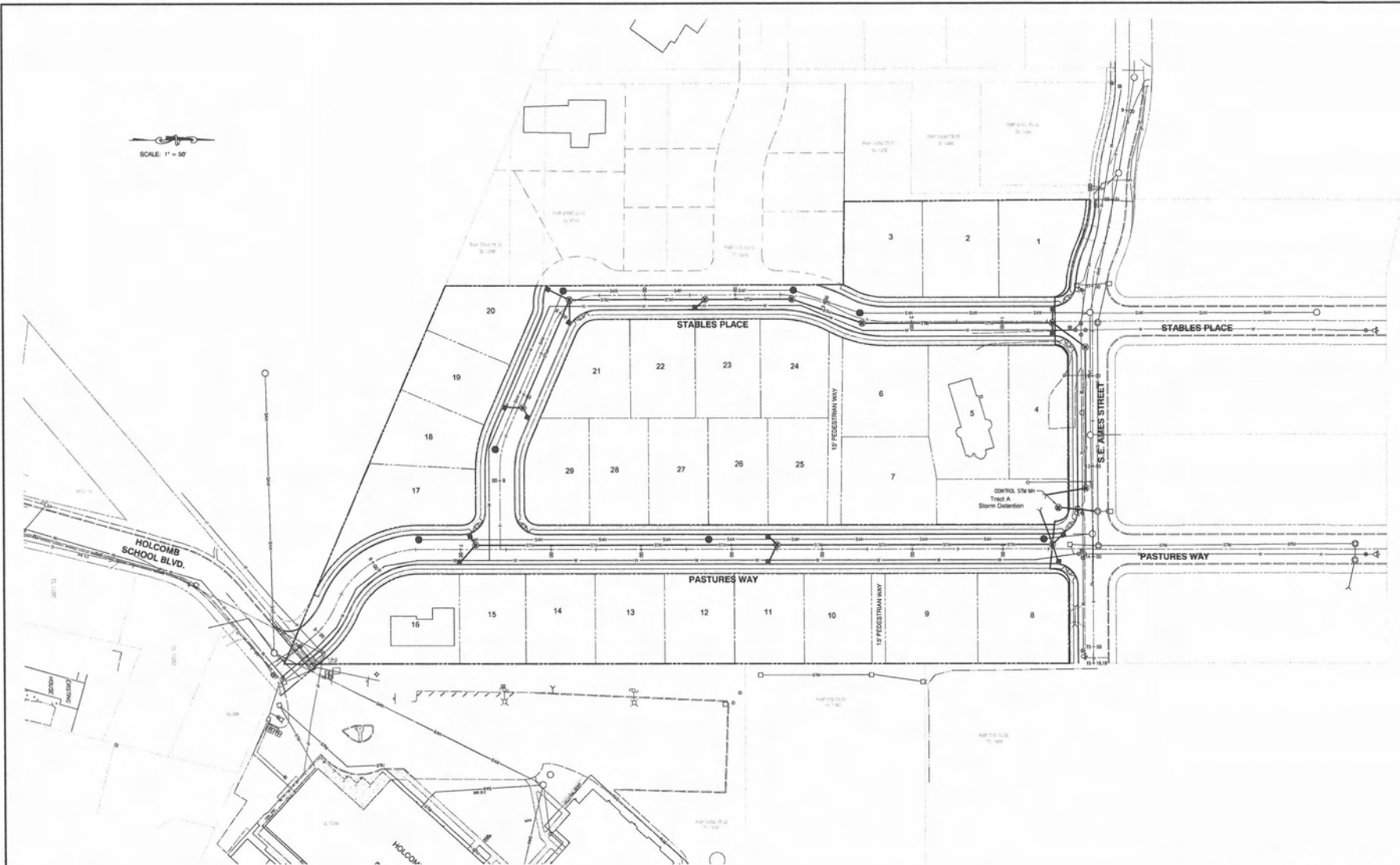
4.1.2.1 RAINFALL DISTRIBUTION

The rainfall distribution to be used within the City is the design storm of 24-hour duration based on the standard SCS Type 1A rainfall distribution (See Figure 4-2).

Table 4-1 below links the total depth per year of reoccurrence.

Table 4-1: TOTAL DEPTH	
Reoccurrence Year	Total Depth
2	2.6
5	3.1
10	3.4
25	4.0
50	4.4
100	4.5

SCALE: 1" = 50'



PRELIMINARY UTILITY PLAN

<p>2013-118</p> <p>DESIGNED: BGS</p> <p>DRAWN: BGS</p> <p>SCALE: 1" = 50'</p> <p>DATE: January, 2014</p> <p>FILE: Surveybook PreOut1</p>	<p>Theta, LLC</p> <p>ENGINEERING - SURVEYING - PLANNING</p> <p>PO Box 1345 Lake Oswego, Oregon 97035</p> <p>503-681-8822 email: thetaeng@comcast.net</p>	<p>Icon Construction and Development, LLC</p> <p>1980 Willamette Falls Drive, No. 200 West Linn, Oregon 97068 Phone: 503-567-0406</p>	<p>Holcomb Blvd. Oregon City, Oregon</p> <p>Icon Construction and Development, LLC</p>	<p>SHEET: 3/4</p>
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20



Fidelity National Title Insurance Company

900 SW 5th Ave., Mezzanine Level, Portland, OR 97204

FAX

**SUBDIVISION GUARANTEE FOR THE PROPOSED
ICON CONSTRUCTION & DEV. SUBDIVISION**

ORDER NO.: 20130087821-FTPOR55

FEE: \$ 400.00

DATED: December 10, 2013

Fidelity National Title Insurance Company
GUARANTEES

Any County or City within which the subdivision or proposed subdivision is located.

That the estate or interest in the land which is covered by this Guarantee is:

A Fee

According to the public records which impart constructive notice of matters affecting title to the premises described on Exhibit "One", we find that as of December 4, 2013, at 08:00-AM the last deed of record runs to:

Terry L. Voss, Sr. and Renee V. Voss, as tenants by the entirety, as to Parcel I; Joyce Anne Jones, Trustee, under The Joyce Anne Jones Revocable Living Trust, dated March 15, 2010, as to an undivided 50% interest and Stephen Dale Jones, Trustee, under The Stephen Dale Jones Revocable Living Trust, dated March 15, 2010, as to an undivided 50% interest, as to Parcel II

We also find the following apparent encumbrances, which include 'Blanket Encumbrances' as defined by ORS 92.305(1), and also easements, restrictive covenants and rights of way.

1. Taxes as follows:

A. Note: Property taxes for the fiscal year shown below are paid in full.

Fiscal Year: 2013-14

Amount: \$10,096.49

Account No.: 05000878, 22E21DC01300, CODE 062-002

Affects: Parcel I

B. Note: Property taxes for the fiscal year shown below are paid in full.

Fiscal Year: 2013-14

Amount: \$4,982.70

Account No.: 00556570, 22E28AB01600, CODE 062-088

Affects: Portion Parcel II

C. Note: Property taxes for the fiscal year shown below are paid in full.

Fiscal Year: 2013-14
Amount: \$1,189.72
Account No.: 00546458, 22E21DC01600, CODE 062-088
Affects: Portion Parcel II

THE FOLLOWING AFFECTS PARCEL I

2. City Liens, if any, in favor of the City of Oregon City. None found as of October 15, 2013.
3. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Adjoining property owner
Purpose: Crawl Space drainage
Recording Date: January 2, 1981
Recording No: 81-000011
Affects: As shown on the recorded Partition Plat
4. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: the City of Oregon City
Purpose: Sanitary sewer
Recording Date: December 31, 1991
Recording No: 91-066722
Affects: As shown on the recorded Partition Plat
5. Restrictive Covenant

Recording Date: March 1, 1995
Recording No.: 95-011796
6. Waiver of Remonstrance and Consent to Local Improvement District:

Purpose: Local Improvement District (LID)
Recording Date: December 30, 1999
Recording No.: 99-118976
7. Restrictions, but omitting restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said restriction is permitted by applicable law, as shown on that certain plat

Name of Plat: Partition Plat No. 1999-106
8. Easement(s) for the purpose(s) shown below and rights incidental thereto as delineated or as offered for dedication, on the map of said tract/plat;

Purpose: Public utility, crawl space drainage and temporary access

9. A deed of trust to secure an indebtedness in the amount shown below,

Amount: \$642,000.00
Dated: April 21, 2005
Trustor/Grantor: Terry L. Voss Sr and Renee V. Voss, as tenants by the entirety
Trustee: Fidelity National Title Insurance Company
Beneficiary: Wells Fargo Bank, NA
Loan No.: 0143423119
Recording Date: April 29, 2005
Recording No: 2005-038552

An assignment of the beneficial interest under said deed of trust which names:

Assignee: US Bank National Association, as Trustee for Citigroup Mortgage Loan Trust Inc.,
Asset-Backed Pass-Through Certificates, Series 2005-WFZ
Loan No.: None shown
Recording Date: July 11, 2011
Recording No: 2011-038946

10. A deed of trust to secure an indebtedness in the amount shown below,

Amount: \$80,000.00
Dated: January 20, 2006
Trustor/Grantor: Terry L. Voss Sr. and Renee V. Voss, husband and wife, as tenants by the entirety
Trustee: Wells Fargo Financial National Bank
Beneficiary: Wells Fargo Bank, NA
Loan No.: 20060137500504
Recording Date: February 16, 2006
Recording No: 2006-14203

THE FOLLOWING AFFECTS PARCEL II

11. City Liens, if any, in favor of the City of Oregon City. An inquiry has been directed to the City Clerk concerning the status of said liens and a report will follow if such liens are found.
12. Rights of the public to any portion of the Land lying within streets, roads and highways.
13. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: The public
Purpose: Roads
Recording Date: June 23, 1966
Recording No.: Book 675, Page 495

14. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: School District No. 62, Clackamas County
Purpose: Sewer
Recording Date: December 31, 1981
Recording No.: 81-044462

15. A deed of trust to secure an indebtedness in the amount shown below,

Amount: \$187,000.00

Dated: April 2, 2010

Trustor/Grantor: Stephen D. Jones and Joyce A. Jones, husband and wife

Trustee: Chicago Title Insurance Co.

Beneficiary: Mortgage Electronic Registration Systems, as nominee for M&T Bank

Loan No.: 13660360/Min No. 100050300009562076

Recording Date: April 12, 2010

Recording No.: 2010-022022

16. The terms of the trust agreement under which The Joyce Anne Jones Revocable Living Trust and The Stephen Dale Jones Revocable Living Trust herein holds title.

We have also searched our General Index for judgments and state and federal liens against the grantees named above and find:

1. In order to complete this report, the Company requires a Statement of Information to be completed by the following party(s),

Party(s): Steven D. Jones and Joyce A. Jones

The Company reserves the right to add additional items or make further requirements after review of the requested Statement of Information.

NOTE: The Statement of Information is necessary to complete the search and examination of title under this order. Any title search includes matters that are indexed by name only, and having a completed Statement of Information assists the Company in the elimination of certain matters which appear to involve the parties but in fact affect another party with the same or similar name. Be assured that the Statement of Information is essential and will be kept strictly confidential to this file.

2. A judgment, for the amount shown below, and any other amounts due:

Amount: \$16,962.59 plus interest plus \$154 costs

Debtor: Terry Lee Voss

Creditor: Delage Landen Financial Services

Date entered: March 25, 2011

County: Clackamas

Court: Circuit

Case No.: CV10120699

Attorney Fees: \$7,638.74

Attorney for creditor: Chelsea S. Lewandowski

This is not a report issued preliminary to the issuance of a title insurance policy. Our search is limited and its use is intended as an informational report only, to be used in conjunction with the development of real property. Liability is limited to an aggregate sum not to exceed \$ 1,000.00

Fidelity National Title Insurance Company

By: _____
Toni Stanhope, Project Coordinator

NOTE - ORS 92.305(1) reads as follows:

"Blanket encumbrance" means a trust deed or mortgage or any other lien or encumbrance, mechanics' lien or otherwise, securing or evidencing the payment of money and affecting more than one interest in subdivided or series partitioned land, or an agreement affecting more than one such lot, parcel or interest by which the subdivider, series partitioner or developer holds such subdivision or series partition under an option, contract to sell or trust agreement.

EXHIBIT "ONE"

The premises are in Clackamas County and are described as follows:

PARCEL I

Parcel 2, PARTITION PLAT NO. 1999-106, in the City of Oregon City, County of Clackamas and State of Oregon, EXCEPTING THEREFROM that portion conveyed to the City of Oregon City in Deed recorded September 11, 2006 as Fee No. 2006-083747.

PARCEL II:

Part of the James Winston Donation Land Claim No. 69, in Sections 21 and 28, Township 2 South, Range 2 East of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows:

Beginning at a point that is North 331.66 feet and East 660 feet from the one-quarter corner on the South line of Section 21, Township 2 South, Range 2 East of the Willamette Meridian, said point being the Northeast corner of that tract of land conveyed to Joe Toman and wife by Deed Book 445, Page 144, Clackamas County Records; thence West along the North line of Toman tract, 421 feet; thence South, 435 feet, more or less, to a point on the Southerly line of the Winston Donation Land Claim; thence South 67°20' East along said South line, 470 feet, more or less, to an iron pipe at the Southwest corner of property conveyed to School District No. 62 by Deed Book 607, Page 279, Clackamas County Records; thence North along said School District West line, 520 feet, more or less, to the Northwest corner of said School District Tract; thence continuing North, 85.66 feet, more or less, to the point of beginning.

Sunnybrook Subdivision

Transportation Impact Study Oregon City, Oregon

DATE:

February 4, 2014

PREPARED FOR:

Icon Construction and Development, LLC

PREPARED BY:

Brian Davis

Todd Mobley, PE, PTOE



EXPIRES: 12/31/2014



LANCASTER
ENGINEERING



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Operational Analysis	9
Safety Analysis	17
Zone Change Analysis.....	19
Conclusion	23
Appendix	24



Executive Summary

1. Three tax south of Ames Street in northeastern Oregon City, Oregon are proposed for subdivision and development. The project will divide the properties into 29 lots with a single family dwelling on each. To serve the homes, Stables Place and Pasture Way will be extended southward, creating a connection with Holcomb School Road.
2. Trip generation estimates show that approximately 22 new trips are expected to be generated during the morning peak hour, approximately 22 new trips are expected to be generated during the midday peak hour, and approximately 29 new trips will be generated during the evening peak hour. The project is projected to generate a total of 276 new trips each weekday.
3. Capacity analyses show that all study intersections are currently operating within the City of Oregon City's performance standards, and will continue to do so following the background growth of traffic volumes and the addition of new site trips.
4. Based on traffic counts conducted in the site vicinity, as many as 25 new vehicles could potentially benefit from additional street connectivity and utilize a new route between Holcomb Boulevard and Ames Street created by extending Pasture Way to Holcomb School Road during the critical morning peak hour. These new trips do not significantly affect the performance of the study intersections, and ample capacity exists to safely accommodate these potential new trips.
5. Sight distance was measured at the location of two planned accesses along Ames Street and a planned access along Holcomb School Road, and was found to be adequate for safe operation of the accesses.
6. No crashes were reported over five year period spanning 2008 to 2012 at any study intersection.
7. Left-turn lane warrants at the intersection of Holcomb Boulevard at Holcomb School Road are not currently met, nor will they be met following the background growth and full build-out of the site.
8. To accommodate the proposed development plan, a zone change from R-10 to R-8 is necessary for a portion of the site. All study intersections will meet Oregon City's performance standards at the planning horizon under both the existing and proposed zonings, and the State of Oregon's Transportation Planning Rule is satisfied with regard to the proposed zone change.
9. No mitigations are needed or recommended to support the proposed zone change and subsequent development plan.



Introduction

Project Description

Three tax lots located to the south of the eastern end of Ames Street in Oregon City, Oregon are proposed for development. The proposed plan divides the property into 29 lots, with a single family home on each, and includes new public street segments providing access to the lots. To support the development, the proposal calls for a zone change of a portion of the property from R-10 to R-8. The proposed site plan is provided in the appendix.

This study addresses the transportation impacts as required under Section 6.0 of the City of Oregon City's *Guidelines for Transportation Impact Analyses*. The purpose of the study is to determine whether the transportation system in the vicinity of the site is capable of safely and efficiently supporting the existing and proposed uses, identifying any mitigations that may be necessary to do so.

The report includes safety and capacity analyses at four intersections:

1. Ames Street at Stables Place
2. Ames Street at Pasture Way
3. Holcomb Boulevard at Holcomb School Road
4. Holcomb School Road at Pasture Way / new site access

Additionally, since the proposed project will create a new route between Holcomb Boulevard and Ames Street, the study analyzes the impacts of this new route, particularly with regard to traffic to and from Holcomb Elementary School. To quantify the impacts of the proposed zone change, the report also includes planning horizon analyses at the study intersections, and addresses the State of Oregon's *Transportation Planning Rule*.

Detailed information on traffic counts, trip generation calculations, and level of service calculations is provided in the appendix to this report.

Site Location

Proposed project is located toward the northeastern edge of Oregon City and is comprised of tax lots 1300 & 1600 on Map 22E21DC and tax lot 1600 on Map 22E28AB. The maps are included in the appendix. These lots are located to the south of Ames Street, opposite Stables Place and Pasture Way. The development plan extends these streets to the south, where the streets intersect with one another before connecting to Holcomb School Road.



Vicinity Streets

Holcomb Boulevard is classified as a Minor Arterial in the Oregon City Transportation System Plan. It has a posted speed of 40 mph, and includes a standard lane and a bicycle lane in each direction. Sidewalks are not generally in place east of the intersection with Holcomb School Road, but largely continuous along the more developed areas of the street located to the east of this intersection.

Ames Street, Stables Place, Pasture Way, and Holcomb School Road are classified as Local Streets and have a statutory speed of 25 mph. These streets do not have marked lanes. Continuous sidewalks are in place along the existing segments of Stables Place and Pasture Way, while sidewalks on Ames Street are discontinuous. Holcomb School Road contains a continuous sidewalk on its west side and no sidewalk on its east side.

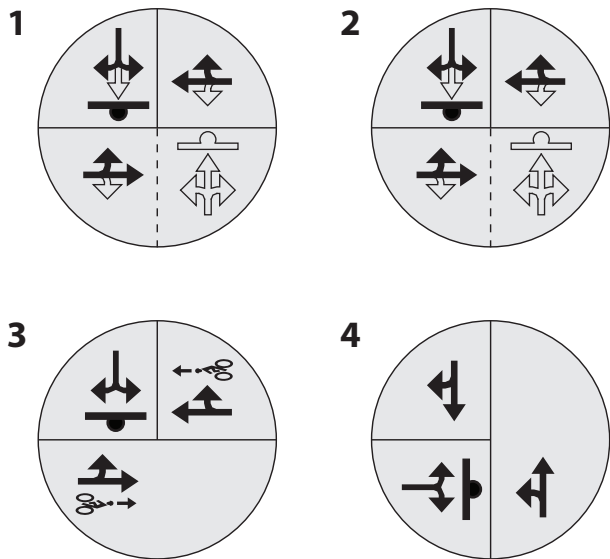
Study Intersections

The intersection Holcomb Boulevard at Holcomb School Road is a three-legged intersection that is controlled by a stop sign on the southbound (Holcomb School Road) approach. Each approach consists of one standard lane for each movement, and the Holcomb Boulevard approaches both include a bike lane. The crosswalk traversing the northern approach is marked, while the crossings of the eastern and western approaches are unmarked.

The intersections of Ames Street at Stables Place and Ames Street at Pasture Way are each three-legged intersections, with each approach consisting of one lane for all movements. The intersections are controlled by stop signs on the southbound (Stables Place and Pasture Way) approaches. The proposed development plan will add a southern leg to each intersection, with the new legs controlled by a stop sign. All crosswalks at each intersection are unmarked.

The proposed development plan creates a new intersection as Pasture Way is extended to the south to connect to Holcomb School Road. The new intersection will be a three-legged intersection connecting to Holcomb School Road at the site of an existing residential driveway, controlled by a stop sign along the new southbound approach.

Figure 1 on page six shows the project study area and the location of the site within this area, as well as the lane configuration and traffic control devices at the study intersections.



Legend

- # Study intersection
- Stop sign
- Planned new street



Figure 1

Vicinity Map and Traffic Control & Lane Configurations
at Study Intersections





Site Trips

Trip Generation

To estimate the number of trips that will be generated by the proposed development, trip rates from *Trip Generation*¹ were used. The data utilized are for, *Single-Family Detached Housing*, which includes, “all single family homes on individual lots.” The trip generation was calculated for 29 single-family homes.

The trip generation calculations show that the proposed development is projected to result in a total of 276 additional trips in total each weekday. The project is expected to generate a total of 22 new trips during the morning peak hour, and 29 new trips during the evening peak hour. Trip generation data for single family dwellings during the midday peak period is not available, so the midday trip generation of the development was assumed to be 75% of the evening peak hour trip generation, with an even number of trips entering and exiting.

The trip generation estimates are summarized in Table 1, and detailed trip generation calculations are included in the appendix to this letter. The net increase in trip generation resulting from the proposed zone change is addressed in detail in the Zone Change Analysis section of this report, beginning on page 19.

Table 1: Trip generation for the proposed land division

Morning Peak Hour			Midday Peak Hour			Evening Peak Hour			Weekday
In	Out	Total	In	Out	Total	In	Out	Total	Total
6	16	22	11	11	22	18	11	29	276

Trip Distribution & Assignment

Based on the existing traffic patterns observed in the site vicinity and a survey of the surrounding street network, it is expected that approximately 60% of all site trips are expected to arrive from and depart toward the southwest along Holcomb Boulevard in the direction of central Oregon City and Highway 213. Approximately 30% of site trips are expecting to arrive from and depart toward the west along Ames Street, which provides an alternate route to Highway 213 and I-205 via Swan Avenue and Forsythe Road. The remaining 10% of site trips are expected to arrive from and depart toward the east along Holcomb Boulevard.

The expected distribution and assignment of site trips is shown in Figure 2 on page eight.

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 9th Edition, 2012.

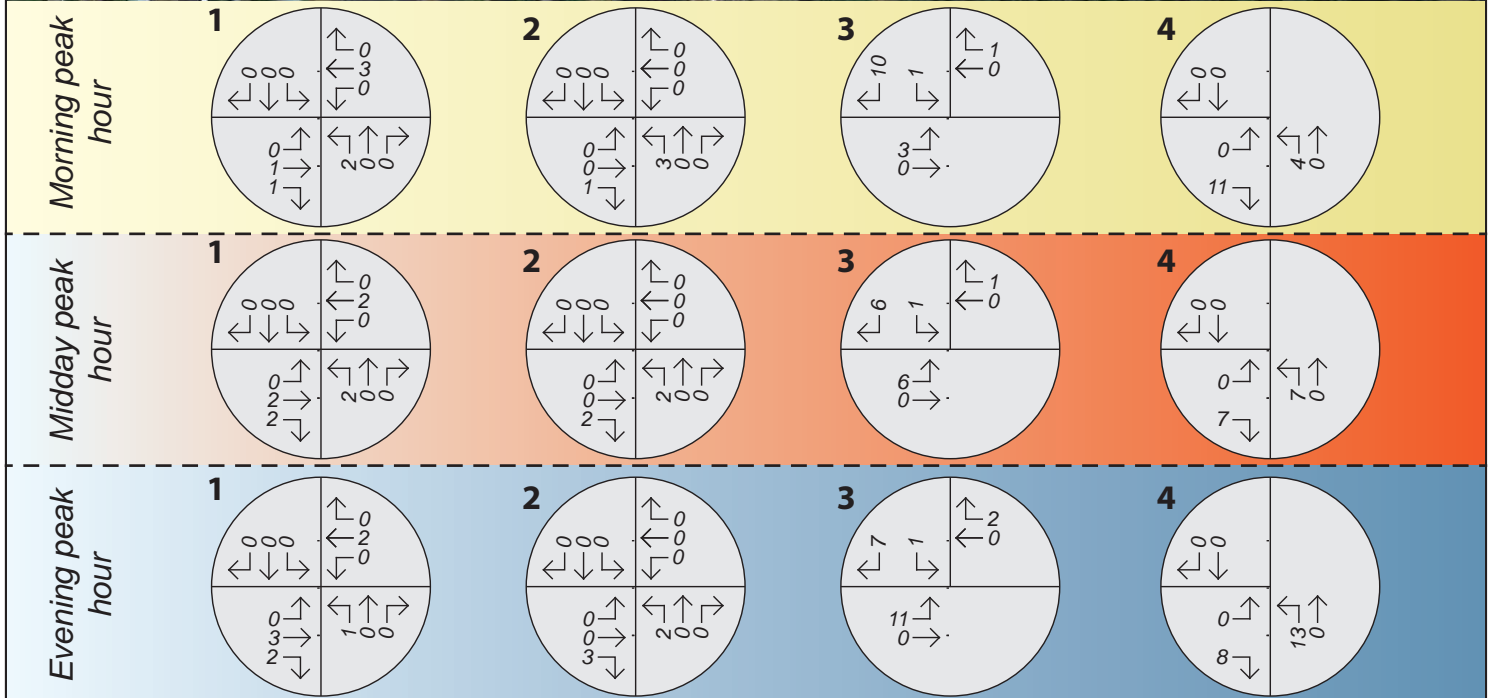


Figure 2

Trip Generation and Distribution
for the Proposed Development





Operational Analysis

Existing and Background Traffic Volumes

To determine existing traffic volumes at the study intersections, traffic counts were conducted at the intersection of Holcomb Boulevard at Holcomb School Road on Tuesday, January 7, 2014. Counts were conducted from 7:00 to 9:00 AM to obtain data for the morning peak hour; from 2:00 to 4:00 PM to obtain data for the midday peak hour; and from 4:00 to 6:00 PM to obtain data for the evening peak hour. Based on the traffic counts at this intersection, traffic volumes at the intersection of the existing residential driveway and planned Pasture Way extension at Holcomb School Road were inferred. Existing volumes at the intersections of Stables Place at Ames Street and Pasture Way at Ames Street are estimated using the trip rates from *Trip Generation* for the six homes that take access to Stables Place and the five that take access to Pasture Way.

These existing volumes are shown in Figure 3 on page 10. The raw data is provided in the technical appendix.

To gauge the effect on the proposed development relative to a *no-build* scenario, background volumes were calculated assuming a three year build-out period and 2% year-over-year growth in traffic volumes. These background traffic volumes are summarized in Figure 4 on page 11. The trips generated by the proposed subdivision summarized in Figure 2 are added to these background volumes; traffic volumes in this scenario are summarized in Figure 5 on page 12.

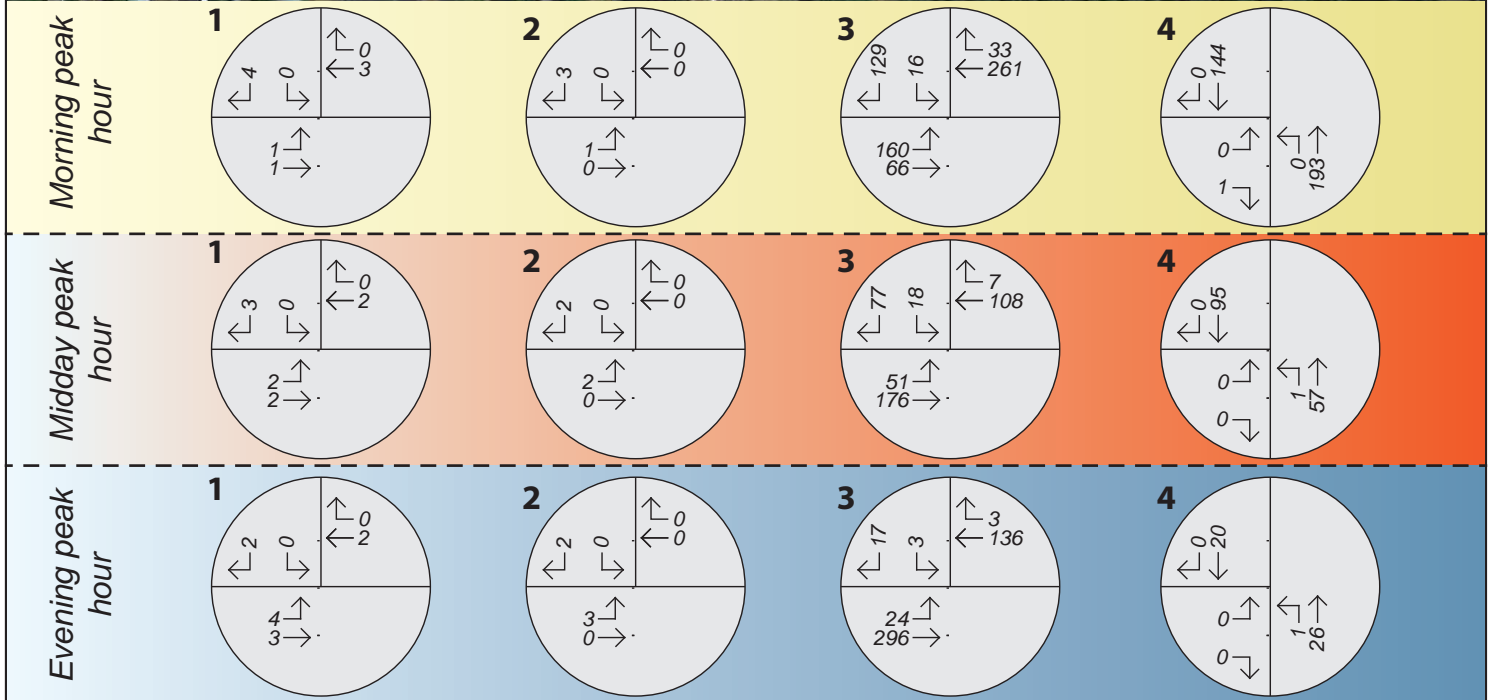


Figure 3

Existing Traffic Volumes



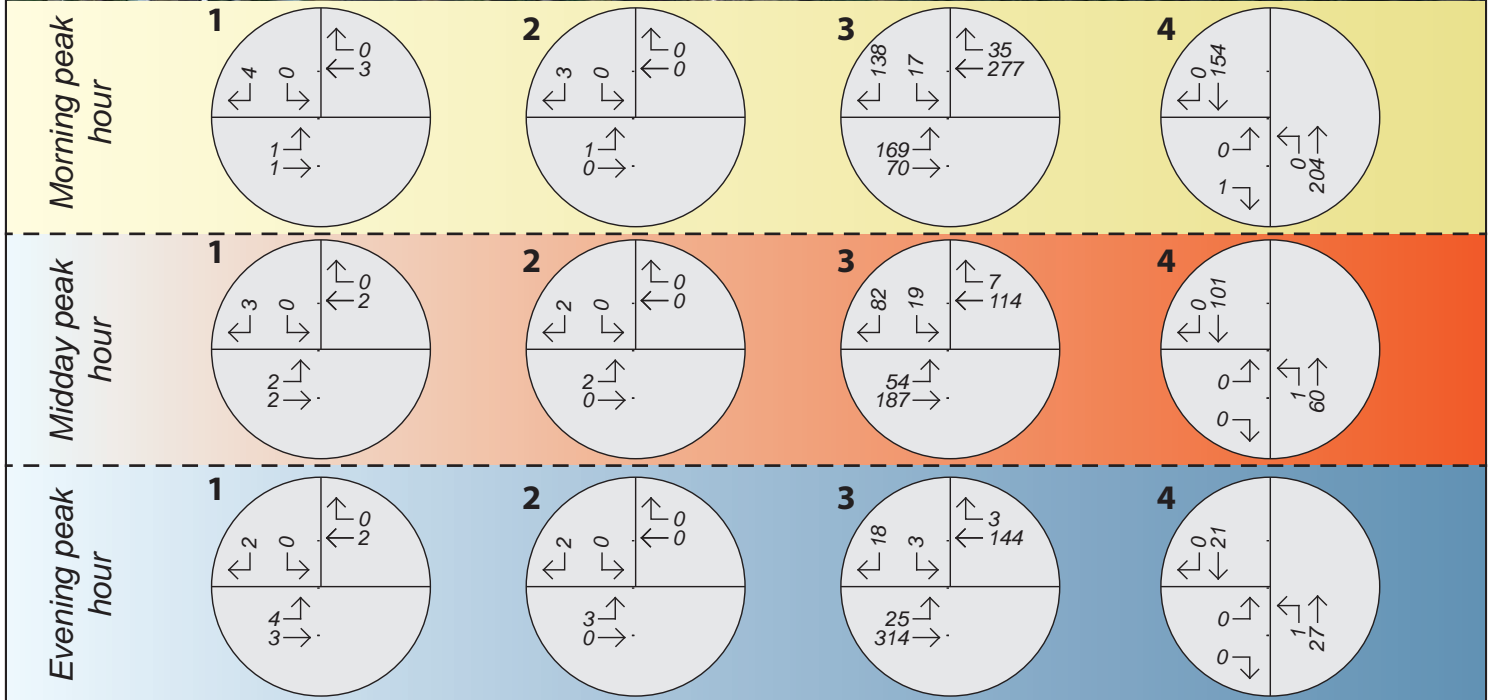


Figure 4

2017 Background Traffic Volumes



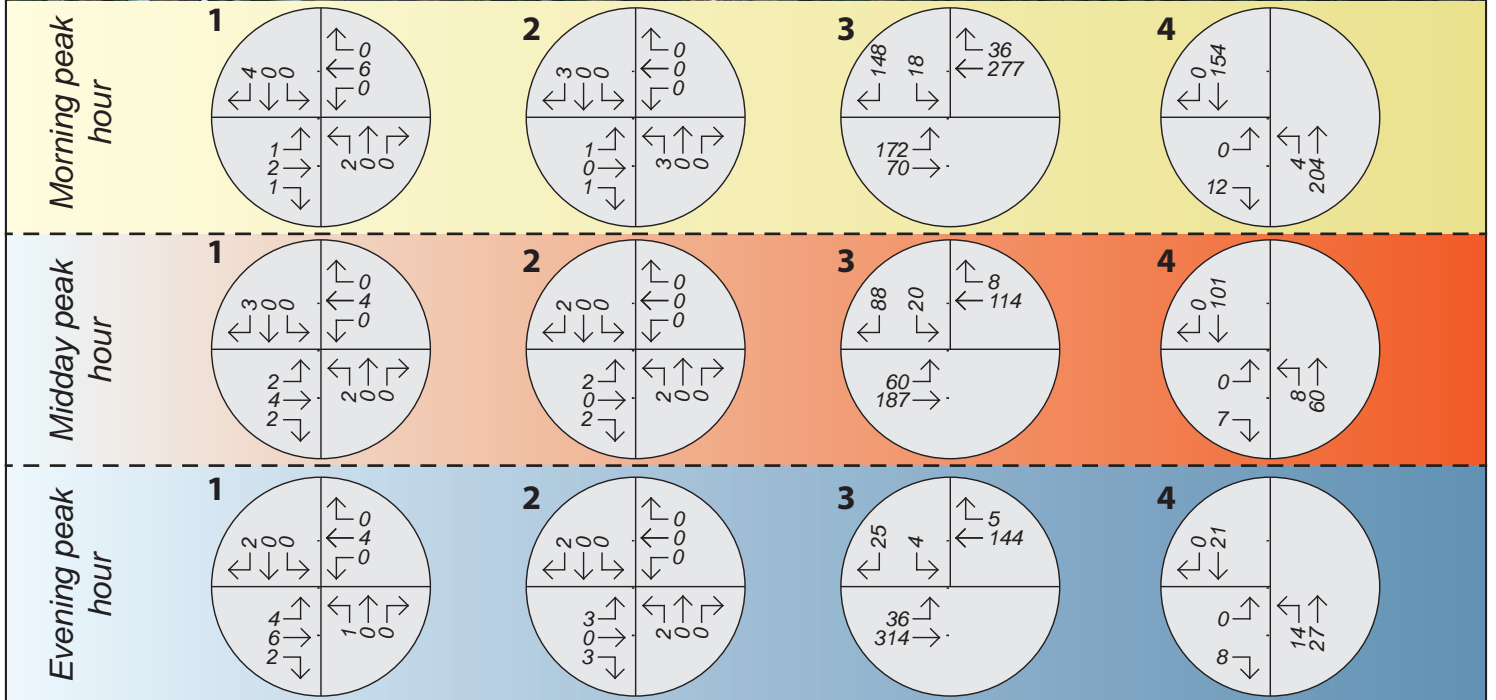


Figure 5

2017 Background Traffic Volumes
with Site Trips Added





Capacity Analysis

To determine the capacity and level-of-service at the study intersections, a capacity analysis was conducted. The analysis was conducted using the intersection analysis methodologies in the *Highway Capacity Manual (HCM)*². Level-of-service (LOS) can range from A, which indicates little or no delay, to F, which indicates a significant amount of congestion and delay. Oregon City's operational standards require unsignalized intersections to operate at LOS D or better. The LOS reported for each intersection corresponds to the stop-controlled approach with the highest average delay. Detailed LOS descriptions are included in the appendix to this report.

In order to gauge the amount of capacity remaining at the intersection, the volume-to-capacity (v/c) ratio is also calculated. A ratio of less than 1.0 indicates that the intersection is operating within capacity. The v/c ratio is reported for the lane group with the highest overall v/c ratio.

Table 2 shows a summary of the capacity and level-of-service calculations at the study intersections under the three scenarios outlined previously: 1) Existing conditions; 2) Background conditions, and; 3) Background conditions with site trips added.

The results of the capacity analysis show that the intersections of Ames Street at Stables Place and Ames Street at Pasture Way are currently operating at LOS A with v/c ratios of 0.01 during all peak hours. Following the background growth of traffic and the development of the site as planned, these intersections are projected to continue to operate at LOS A with v/c ratios of 0.01 during all peak periods.

The intersection of Holcomb Boulevard at Holcomb School Road currently operates at LOS C with a v/c of 0.36 during the morning peak hour; at LOS B with a v/c ratio of 0.19 during the midday peak hour; and at LOS A with a v/c ratio of 0.09 during the evening peak hour. Following the background growth of traffic and the development of the site, the intersection is projected to operate at LOS C with a v/c ratio of 0.43 during the morning peak hour; at LOS B with a v/c ratio of 0.22 during the midday peak hour; and at LOS A with a v/c ratio of 0.10 during the evening peak hour.

The intersection of Holcomb School Road at the existing residential driveway and site of the planned connection with Pasture Way currently operates at LOS A during all peak hours, with v/c ratios of 0.11, 0.08, and 0.01 during the morning, midday, and evening peak hours respectively. Following the background growth of traffic and the development of the site, the intersection will continue to operate at LOS A with v/c ratios during the morning, midday, and evening peak hours projected to increase to 0.12, 0.09, and 0.01 respectively.

All study intersections currently operate within the City of Oregon City's performance standards, and are projected to do so following the background growth of traffic and the development of the site.

² Transportation Research Board, *Highway Capacity Manual*, 5th Edition, 2010.

Detailed capacity analysis results are provided in the appendix.

Table 2: Intersection capacity and level-of-service summary

	Morning Peak		Midday Peak		Evening Peak	
	LOS	V/C	LOS	V/C	LOS	V/C
Ames St. at Stables Pl.						
Existing	A	0.01	A	0.01	A	0.01
Background	A	0.01	A	0.01	A	0.01
Background + Site	A	0.01	A	0.01	A	0.01
Ames St. at Pasture Way						
Existing	A	0.01	A	0.01	A	0.01
Background	A	0.01	A	0.01	A	0.01
Background + Site	A	0.01	A	0.01	A	0.01
Holcomb Blvd. at H.S. Rd.						
Existing	C	0.36	B	0.19	A	0.09
Background	C	0.40	B	0.21	A	0.10
Background + Site	C	0.43	B	0.22	A	0.10
H.S. Rd. at Pasture Way						
Existing	A	0.11	A	0.08	A	0.01
Background	A	0.12	A	0.09	A	0.01
Background + Site	A	0.12	A	0.09	A	0.01

Impacts of New Route between Holcomb Boulevard and Ames Street

As described previously, the planned development includes a new connection between Holcomb Boulevard and Ames Street, as Pasture Way will be extended southward to connect to Holcomb School Road at the site of an existing residential driveway. The new connection will provide a route for vehicles travelling between points east on Holcomb Boulevard and points north on Swan Avenue that is more direct than the existing route, which utilizes the intersection of Holcomb Boulevard at Swan Avenue.

In order to estimate the number of vehicles that could potentially utilize this new route, traffic counts were conducted at the intersection of Swan Avenue at Ames Street on Tuesday, January 7, 2014 at times corresponding to the three peak periods described above. These traffic counts are provided in the appendix.



It is assumed that 50% of the vehicles observed along Swan Avenue at this intersection will arrive from and depart toward the east along Holcomb Boulevard, with the remaining half arriving from and departing toward the west. Note that this represents an upper-bound estimate, as traffic counts at the intersection of Holcomb Boulevard at Holcomb School Road suggest that significantly more vehicles are arriving from and departing toward the west than the east.

Based upon this trip assignment, it is estimated that as many as 25 vehicles could utilize the new route during the morning peak hour; as many as 24 could utilize the route during both the midday and evening peak hours.

The new route will add trips to the intersections of Ames Street at Stables Place, Ames Street at Pasture Way, and Holcomb School Road at the existing driveway and new Pasture Way connection. While the new route will result in no additional trips through the intersection of Holcomb Boulevard at Holcomb School Road, it will slightly alter the distribution of trips through the intersection, adding as many as 13 new left-turns to the critical southbound approach and 12 new right turns to the westbound approach (along with a corresponding reduction of 13 eastbound and 12 westbound through vehicles).

The assignment of potential diverted trips through the study intersections resulting from the new connection during the critical morning peak hour is shown in Figure 6 on page 16. To determine whether the trips utilizing the new route significantly affect the performance of the study intersections, the intersections were analyzed using the HCM methods described previously, adding the new trips shown in Figure 6 to volumes in the “Background plus Site Trips” scenario shown in Figure 5.

With the inclusion of potential new cut-through trips, the intersections of Ames Street at Stable Place and Ames Street at Pasture Way are projected to continue to operate at LOS A with a v/c ratio of 0.01, and the intersection of Holcomb School Road at the existing driveway and planned Pasture Way connection will continue to operate at LOS A with a v/c ratio of 0.12. The intersection of Holcomb Boulevard at Holcomb School Road is projected to continue to operate at LOS C, with the v/c ratio increasing slightly to 0.50. These are all well within Oregon City’s operational standards. Accordingly, the new roadways and intersections have ample capacity to accommodate any potential new cut-through traffic. Detailed results are provided in the appendix.



Morning peak
hour

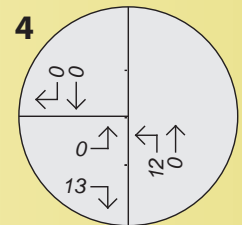
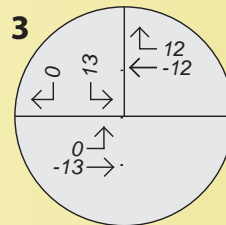
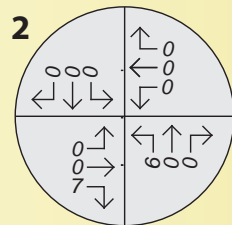
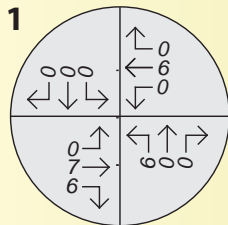


Figure 6

Potential New Trips Resulting from New Route between
Holcomb Boulevard and Ames Street





Safety Analysis

Sight Distance

To ensure that the site accesses can operate safely and efficiently, sight distance measurements were taken according to guidelines specified in *A Policy on Geometric Design of Highways and Streets*³. The measurements use driver's eye heights of 3.5 feet above the road for both vehicles exiting the accesses and vehicles on the main roadway, with the driver's eye 15 feet behind the edge of the near-side travel lane. The intersection sight distance (ISD) necessary at the driveways is based on the speed of traffic on the major street, and represents the sight distance needed such that major street traffic would not have to slow down excessively to accommodate vehicles entering the roadway from the accesses.

Sight distance at the planned new southern leg of the intersection of Ames Street at Stables Place was measured to be 390 feet to the west, with just to the west of this access serving as the limiting factor. Sight distance at the planned new southern leg of the intersection of Ames Street at Pasture Way was found to be in excess of 500 feet. For both accesses, sight distance to the east extends well past the eastern end of Ames Street. Based upon the statutory 25 mph speed along Ames Street, the necessary ISD at these accesses is 280 feet to the west. This is easily exceeded for both accesses.

Sight distance at the planned access to Holcomb School Road at the site of the existing residential driveway extended beyond the southern end of the road, approximately 350 feet to the south of the driveway. Sight distance along the travel path of vehicles turning right onto Holcomb School Road from Holcomb Boulevard was measured to be 363 feet, while sight distance along the travel path of vehicles turning left onto Holcomb School Road from Holcomb Boulevard was measured to be 390 feet. Regarding sight distance to the north, vehicles entering Holcomb School Road at this access have a clear view of the entire parking lot of the school. Based upon the statutory 25 mph speed along Holcomb School Road, the necessary ISD at this access is 280 feet to the west. This is again easily met for this access.

Crash History

Using data obtained from ODOT's Crash Analysis and Reporting Unit, a review of the most recent available five years of crash history (2008-2012) at the study intersections was performed.

No crashes were reported for the five year analysis period along Ames Street. The road serving Holcomb School is not consistently named, so a survey of all crashes along Holcomb Boulevard was performed to identify any that may be attributable to the intersection at Holcomb School Road. These

³ American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 6th Edition, 2011.



crash records are provided in the appendix. No crashes reported during the analysis period appear to be attributable to the intersection of Holcomb Boulevard at Holcomb School Road.

Turn Lane Warrants

Left turn lane warrants were examined at the intersection of Holcomb Boulevard at Holcomb School Road to determine whether a left-turn lane is currently necessary or will be necessary following the planned development of the site. The warrant analysis was conducted during the critical morning peak hour using the methodology outlined by NCHRP Report #457⁴.

It was found that a left-turn is not presently warranted and will not be warranted following development of the site. Accordingly, a left-turn lane is not recommended. Detailed calculations for the left turn lane warrant evaluation are provided in the appendix to this report.

⁴ Transportation Research Board, *NCHRP Report #457: Engineering Study Guide for Evaluating Intersection Improvements*, 2001.



Zone Change Analysis

Planning Horizon Analysis

As described previously, the site of the proposed development is currently zoned R-10. Under this zoning, the site could accommodate up to 25 lots. Because the development plan subdivides the site into 29 lots, it is necessary to rezone a portion of the property from R-10 to R-8 to accommodate the increased density. Note that a rezone is sought only for the portion of the property such that the proposed 29-lot development can be built as planned. The proposed development therefore represents the reasonable worst-case scenario for the proposed zoning, while a 25-lot residential development is the reasonable worst-case scenario under the existing zoning.

Table 3 shows the trip generation of the reasonable worst-case scenarios under the existing and proposed zoning. As described above, it is assumed that the total trips generated by residences during the midday peak period is 75% of the total trips generated during the evening period, with half of the new trips entering and half exiting.

Table 3: Trip generation of the subject site under reasonable worst-case development scenarios for the existing and proposed zonings

	Morning Peak Hour			Midday Peak Hour			Evening Peak Hour			Week-day Total
	In	Out	Total	In	Out	Total	In	Out	Total	
Proposed Zoning	6	16	22	11	11	22	18	11	29	276
Existing Zoning	<u>5</u>	<u>14</u>	<u>19</u>	<u>10</u>	<u>9</u>	<u>19</u>	<u>16</u>	<u>9</u>	<u>25</u>	<u>238</u>
Difference	1	2	3	1	2	3	2	2	4	38

To quantify the impacts of the proposed zone change at the planning horizon, the intersection of Holcomb Boulevard at Holcomb School Road was analyzed using the reasonable worst-case development scenarios described above for the existing and proposed zonings. Since the other study intersections all currently operate at LOS A with very low volumes, it is anticipated that these intersections will operate well within Oregon City's performance standards at the planning horizon.

To obtain planning horizon volumes, the assumed two percent year-over-year growth rate described above was applied to existing volumes including the minor street traffic that is primarily travelling to and from the school. The planning horizon volumes are shown on Figure 4 on page 20.

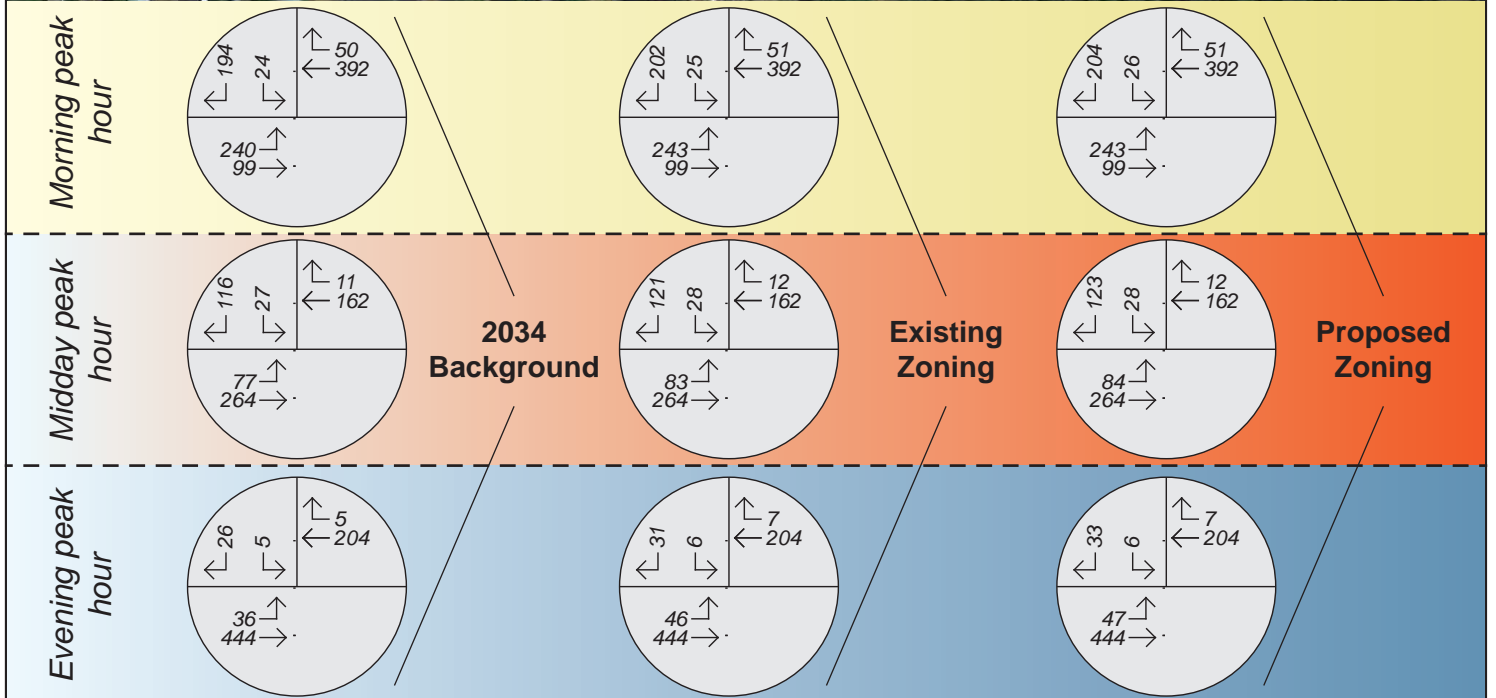


Figure 7

2034 Traffic Volumes at Holcomb Boulevard at Holcomb School Road under Reasonable Worst-Case Development Scenarios





The results of the analysis show that the intersection is projected to operate at LOS D with a v/c ratio of 0.62 during the morning peak hour at the planning horizon for the reasonable worst-case development scenario for the existing zoning. Under the proposed zoning, the intersection is projected to operate at LOS D with a v/c ratio increasing slightly to 0.64. During the midday peak period, the intersection is projected to operate at LOS C with a v/c ratio of 0.38 for worst-case development scenarios under both the existing and proposed zonings. During the evening peak period, the intersection is projected to operate at LOS B with a v/c ratio of 0.14 for worst-case development scenarios under both the existing and proposed zonings. This is within Oregon City's operational standard in all scenarios.

The results of the planning horizon analysis are summarized in Table 4, and detailed results are provided in the appendix.

Table 4: Capacity and level-of-service summary for the intersection of Holcomb Boulevard at Holcomb School Road at the planning horizon under existing and proposed zonings

	Morning Peak		Midday Peak		Evening Peak	
	LOS	V/C	LOS	V/C	LOS	V/C
Holcomb Blvd. at H.S. Rd.						
<i>Existing R-10</i>	D	0.62	C	0.38	B	0.14
<i>Proposed R-10 & R-8</i>	D	0.64	C	0.38	B	0.14

Conformance with Transportation Planning Rule

The Transportation Planning Rule (TPR) is in place to ensure that the transportation system is capable of supporting possible increases in traffic intensity that could result from changes to adopted plans and land use regulations. The applicable section of the TPR is quoted directly in italics below, with a response following.

660-012-0060

- (1) *If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:*
- (a) *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
 - (b) *Change standards implementing a functional classification system; or*
 - (c) *Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted*

TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

- (A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
- (B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or*
- (C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.*

In this instance, subsections (A) and (B) are not triggered, since the proposed zone change will not impact or alter the functional classification of any existing or planned facility and the proposal does not include a change to any functional classification standards.

Subsection (C) is also not triggered as a result of the proposed zone change. The proposed zone change will result in only a minimal increase in overall trips in the site vicinity. The new trips added to Ames Street and Holcomb School Road would all be local trips, consistent with their functional classification as Local Streets. Most site trips are expected to utilize Holcomb Boulevard to travel to and from the greater network, which is consistent with its functional classification as a Minor Arterial. All study intersections are predicted to meet Oregon City's performance standards at the planning horizon.

All relevant performance standards are met and continue to be met through the planning horizon. Accordingly, the Transportation Planning Rule is satisfied.



Conclusions

To quantify the impacts of the proposed 29-lot subdivision and development as well as the zone change necessary to accommodate it, this report provides a detailed analysis of the vicinity streets and intersections that will serve the new trips.

The findings of the operational analysis are:

- (1) The intersections of Ames Street at Stables Place, Ames Street at Pasture Way, Holcomb Boulevard at Holcomb School Road; and Holcomb School Road at the planned new intersection with Pasture Way are all currently operating within Oregon City's performance standard, and are projected to do so following the development of the site; and
- (2) The impacts of the new route between Ames Street and Holcomb Boulevard created by extending Pasture Way to Holcomb School Road are expected to be minimal, with a maximum of 25 vehicles expected to utilize the route during any hour.

The findings of the safety analysis are:

- (1) Sight distance at all proposed new site accesses is adequate;
- (2) There have been no reported crashes at any study intersection during the five year analysis period spanning 2008 to 2012; and
- (3) Left turn lane warrants will not be met at the intersection of Holcomb Boulevard at Holcomb School Road following development of the site.

The findings of the zone change analysis are:

- (1) The study intersections will operate within Oregon City's performance standard at the planning horizon under both the existing R-10 zoning and proposed mix of R-10 and R-8 zoning; and
- (2) The State of Oregon's Transportation Planning Rule is satisfied with respect to the proposed zone change.

No mitigations are therefore needed or recommended to support the proposed development plan.

Le

Appendix



LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

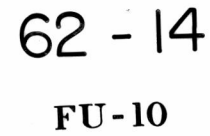
Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.

*LEVEL OF SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS*

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

*LEVEL OF SERVICE CRITERIA
FOR UNSIGNALIZED INTERSECTIONS*

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50



This map was prepared for
assessment purpose only

NW 1/4 NE 1/4 SECTION 28 T2S R2E W.M.
CLACKAMAS COUNTY

1" = 100'

D.L.C.
JAMES WINSTON NO.69
GEORGE ABERNETHY NO.58

2 2E 28AB

14500

14700

SEE MAP 2 2E 21D

SEE MAP 2 2E 21DC

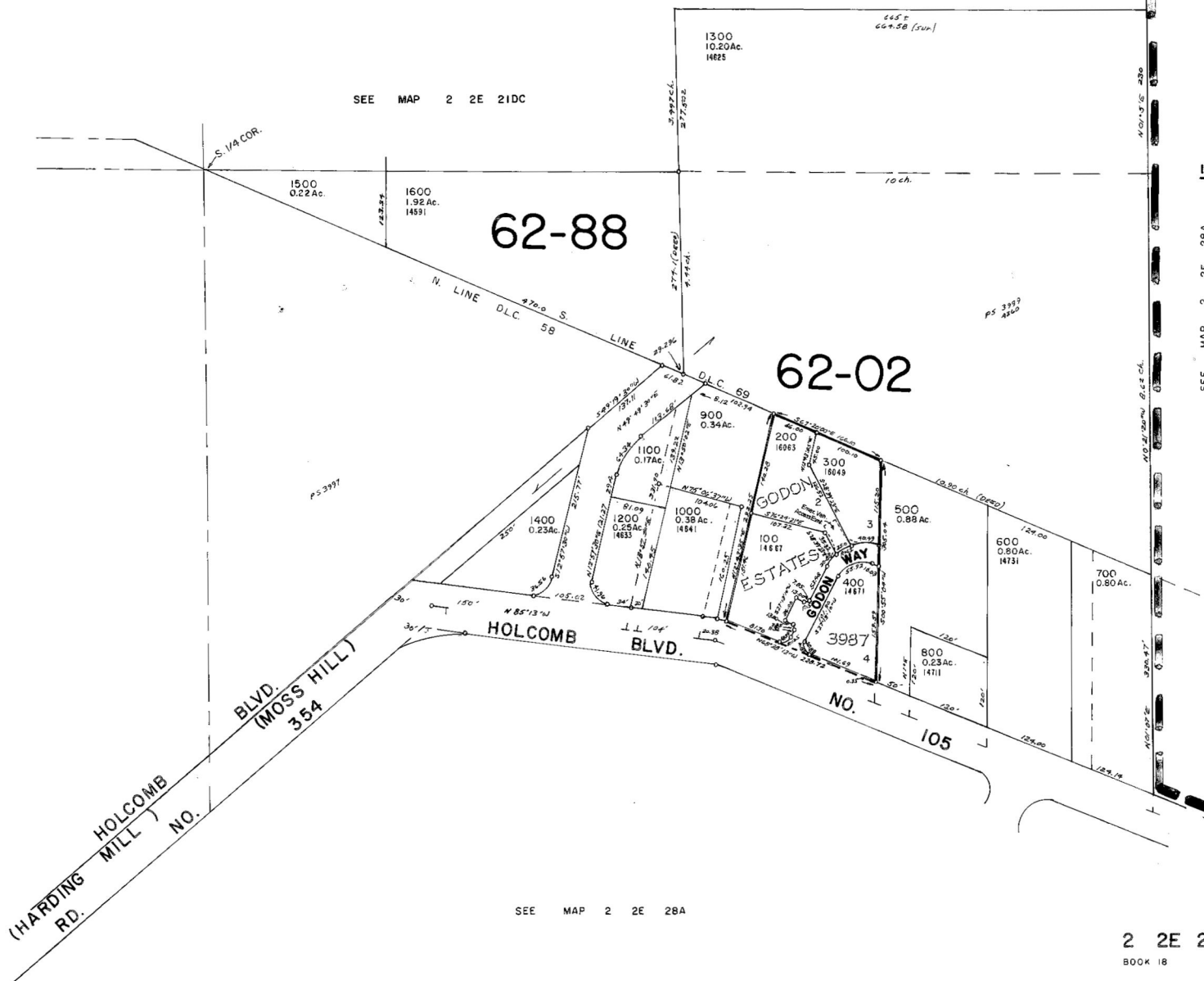
SEE MAP 2 2E 28BA

16000

SEE MAP 2 2E 28A

62-88

62-02



SEE MAP 2 2E 28A

2 2E 28AB
BOOK 18



TRIP GENERATION CALCULATIONS

Planned 29-lot development

Land Use: Single-Family Detached Housing

Land Use Code: 210

Variable: Dwelling Units

Variable Value: 29

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	6	16	22

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	18	11	29

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	138	138	276

SATURDAY

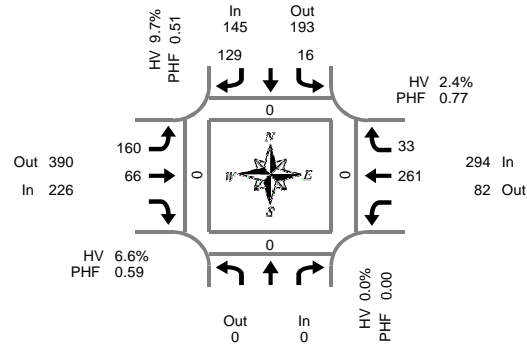
Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	144	144	288

Total Vehicle Summary



Clay Carney
(503) 833-2740



Holcomb School & Holcomb Blvd

Tuesday, January 07, 2014

7:00 AM to 9:00 AM

Peak Hour Summary
7:15 AM to 8:15 AM

5-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
7:00 AM	0	0	0	0	0	0	0	0	3	2	5	0	15	0	0	0	20	0	0	0	0
7:05 AM	0	0	0	0	0	0	0	0	5	5	0	0	23	0	0	0	33	0	0	0	0
7:10 AM	0	0	0	0	0	0	0	0	4	1	0	0	28	0	0	0	33	0	0	0	0
7:15 AM	0	0	0	0	2	0	0	0	9	1	0	0	24	0	0	0	36	0	0	0	0
7:20 AM	0	0	0	0	3	0	0	0	6	6	0	0	23	0	0	0	38	0	0	0	0
7:25 AM	0	0	0	0	3	0	0	0	13	5	0	0	23	3	0	0	47	0	0	0	0
7:30 AM	0	0	0	0	9	0	0	0	17	5	0	0	24	5	0	0	60	0	0	0	0
7:35 AM	0	4	7	0	7	0	0	0	17	7	0	0	20	2	0	0	57	0	0	0	0
7:40 AM	0	0	0	0	13	0	0	0	10	2	0	0	38	7	0	0	70	0	0	0	0
7:45 AM	0	1	10	0	10	0	0	0	30	9	0	0	19	2	0	0	71	0	0	0	0
7:50 AM	0	1	26	0	24	4	0	0	24	4	0	0	19	5	0	0	79	0	0	0	0
7:55 AM	0	2	25	0	17	11	0	0	17	11	0	0	17	2	0	0	74	0	0	0	0
8:00 AM	0	4	13	0	10	5	0	0	15	4	0	0	15	4	0	0	51	0	0	0	0
8:05 AM	0	1	9	0	4	6	0	0	13	2	0	0	13	2	0	0	35	0	0	0	0
8:10 AM	0	3	9	0	3	5	0	0	26	1	0	0	26	1	0	0	47	0	0	0	0
8:15 AM	0	0	3	0	4	9	0	0	19	1	0	0	19	1	0	0	36	0	0	0	0
8:20 AM	0	0	2	0	0	7	0	0	12	0	0	0	12	0	0	0	21	0	0	0	0
8:25 AM	0	0	2	0	2	11	0	0	17	0	0	0	17	0	0	0	32	0	0	0	0
8:30 AM	0	0	1	0	2	7	0	0	16	0	0	0	16	0	0	0	26	0	0	0	0
8:35 AM	0	0	2	0	1	7	0	0	20	0	0	0	20	0	0	0	30	0	0	0	0
8:40 AM	0	0	0	0	0	13	0	0	13	0	0	0	13	0	0	0	26	0	0	0	0
8:45 AM	0	1	2	0	0	4	0	0	14	0	0	0	14	0	0	0	21	0	0	0	0
8:50 AM	0	0	0	0	0	3	0	0	16	0	0	0	16	0	0	0	19	0	0	0	0
8:55 AM	0	0	2	0	1	6	0	0	13	0	0	0	13	0	0	0	22	0	0	0	0
Total Survey	0	17	143	0	182	141	0	0	467	34	0	0	984	0	0	0	984	0	0	0	0

15-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
7:00 AM	0	0	0	0	0	0	0	0	12	8	0	0	66	0	0	0	86	0	0	0	0
7:15 AM	0	0	0	0	8	0	0	0	28	12	0	0	70	3	0	0	121	0	0	0	0
7:30 AM	0	4	29	0	44	14	0	0	82	14	0	0	82	14	0	0	187	0	0	0	0
7:45 AM	0	4	61	0	71	24	0	0	55	9	0	0	55	9	0	0	224	0	0	0	0
8:00 AM	0	8	31	0	17	16	0	0	54	7	0	0	54	7	0	0	133	0	0	0	0
8:15 AM	0	0	7	0	6	27	0	0	48	1	0	0	48	1	0	0	89	0	0	0	0
8:30 AM	0	0	3	0	3	27	0	0	49	0	0	0	49	0	0	0	82	0	0	0	0
8:45 AM	0	1	4	0	1	13	0	0	43	0	0	0	43	0	0	0	62	0	0	0	0
Total Survey	0	17	143	0	182	141	0	0	467	34	0	0	984	0	0	0	984	0	0	0	0

Peak Hour Summary 7:15 AM to 8:15 AM

By Approach	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	0	0	0	145	193	338	0	226	390	616	0	294	82	376	0	665	0	0	0	0
%HV	0.0%	0.0%	0.0%	0.0%	9.7%	0.51	0.51	0.51	6.6%	0.59	0.59	0.59	2.4%	0.77	0.77	0.77	5.4%	0	0	0	0
PHF	0.00	0.00	0.00	0.00	0.51	0.51	0.51	0.51	0.59	0.59	0.59	0.59	0.77	0.77	0.77	0.77	0.74	0	0	0	0

By Movement	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total
	Total	L	R	Total	L	T	Total	L	T	Total	L	T	Total	L	T	Total	
Volume	0	16	129	145	160	58	218	66	226	261	33	294	665	261	33	294	665
%HV	NA	NA	NA	0.0%	0.0%	NA	10.9%	9.7%	6.9%	6.1%	NA	6.6%	NA	1.9%	6.1%	2.4%	5.4%
PHF	0.00	0.50	0.50	0.51	0.56	0.69	0.59	0.59	0.59	0.80	0.59	0.77	0.74	0.80	0.59	0.77	0.74

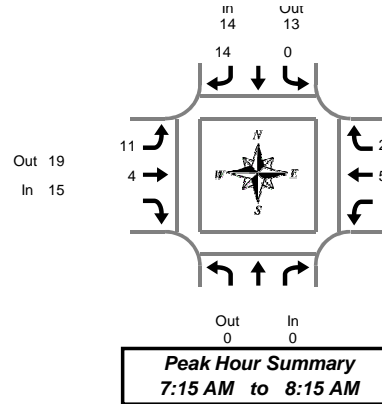
Rolling Hour Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
7:00 AM	0	8	98	0	155	58	213	66	273	26	0	0	273	26	0	0	618	0	0	0	0
7:15 AM	0	16	129	0	160	66	226	66	261	33	0	0	261	33	0	0	665	0	0	0	0
7:30 AM	0	16	128	0	138	81	219	81	239	31	0	0	239	31	0	0	633	0	0	0	0
7:45 AM	0	12	102	0	97	94	191	94	206	17	0	0	206	17	0	0	528	0	0	0	0
8:00 AM	0	9	45	0	27	83	110	83	194	8	0	0	194	8	0	0	366	0	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Holcomb School & Holcomb Blvd

Tuesday, January 07, 2014

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Interval Total	
			Total	L	R	Total	L	T	Total		T	R		Total
7:00 AM			0	0	0	0	0	1	1		1	0	1	2
7:05 AM			0	0	0	0	0	0	0		1	0	1	1
7:10 AM			0	0	0	0	0	0	0		1	0	1	1
7:15 AM			0	0	0	0	0	0	0		0	0	0	0
7:20 AM			0	0	0	0	1	0	1		1	0	1	2
7:25 AM			0	0	1	1	0	0	0		0	0	0	1
7:30 AM			0	0	0	0	1	1	2		0	0	0	2
7:35 AM			0	0	0	0	1	0	1		0	0	0	1
7:40 AM			0	0	2	2	2	0	2		0	2	2	6
7:45 AM			0	0	3	3	4	0	4		1	0	1	8
7:50 AM			0	0	5	5	1	2	3		1	0	1	9
7:55 AM			0	0	2	2	1	0	1		1	0	1	4
8:00 AM			0	0	1	1	0	1	1		0	0	0	2
8:05 AM			0	0	0	0	0	0	0		0	0	0	0
8:10 AM			0	0	0	0	0	0	0		1	0	1	1
8:15 AM			0	0	0	0	0	0	0		0	0	0	0
8:20 AM			0	0	0	0	0	0	0		0	0	0	0
8:25 AM			0	0	0	0	0	0	0		0	0	0	0
8:30 AM			0	0	0	0	0	0	0		0	0	0	0
8:35 AM			0	0	0	0	0	0	0		2	0	2	2
8:40 AM			0	0	0	0	0	3	3		0	0	0	3
8:45 AM			0	0	0	0	0	0	0		1	0	1	1
8:50 AM			0	0	0	0	0	0	0		1	0	1	1
8:55 AM			0	0	1	1	1	0	1		0	0	0	2
Total Survey			0	0	15	15	12	8	20		12	2	14	49

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Interval Total	
			Total	L	R	Total	L	T	Total		T	R		Total
7:00 AM			0	0	0	0	0	1	1	1	3	0	3	4
7:15 AM			0	0	1	1	1	0	1	1	1	0	1	3
7:30 AM			0	0	2	2	4	1	5	5	0	2	2	9
7:45 AM			0	0	10	10	6	2	8	8	3	0	3	21
8:00 AM			0	0	1	1	0	1	1	1	1	0	1	3
8:15 AM			0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM			0	0	0	0	0	3	3	3	2	0	2	5
8:45 AM			0	0	1	1	1	0	1	1	2	0	2	4
Total Survey			0	0	15	15	12	8	20	20	12	2	14	49

Heavy Vehicle Peak Hour Summary

7:15 AM to 8:15 AM

By Approach	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	14	13	27	15	19	34	7	4	11	36
PHF	0.00			0.35			0.42			0.44			0.39

By Movement	Northbound Holcomb School		Southbound Holcomb School		Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Total
	Total	L	R	Total	L	T	Total	T	R	Total	
Volume	0	0	14	14	11	4	15	5	2	7	36
PHF	0.00	0.00	0.35	0.35	0.39	0.33	0.42	0.42	0.25	0.44	0.39

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound		Southbound			Eastbound			Westbound			Interval Total
	Holcomb School	Total	L	R	Total	L	T	Total	T	R	Total	
7:00 AM	0	0	13	13	11	4	15	7	2	9	37	
7:15 AM	0	0	14	14	11	4	15	5	2	7	36	
7:30 AM	0	0	13	13	10	4	14	4	2	6	33	
7:45 AM	0	0	11	11	6	6	12	6	0	6	29	
8:00 AM	0	0	2	2	1	4	5	5	0	5	12	

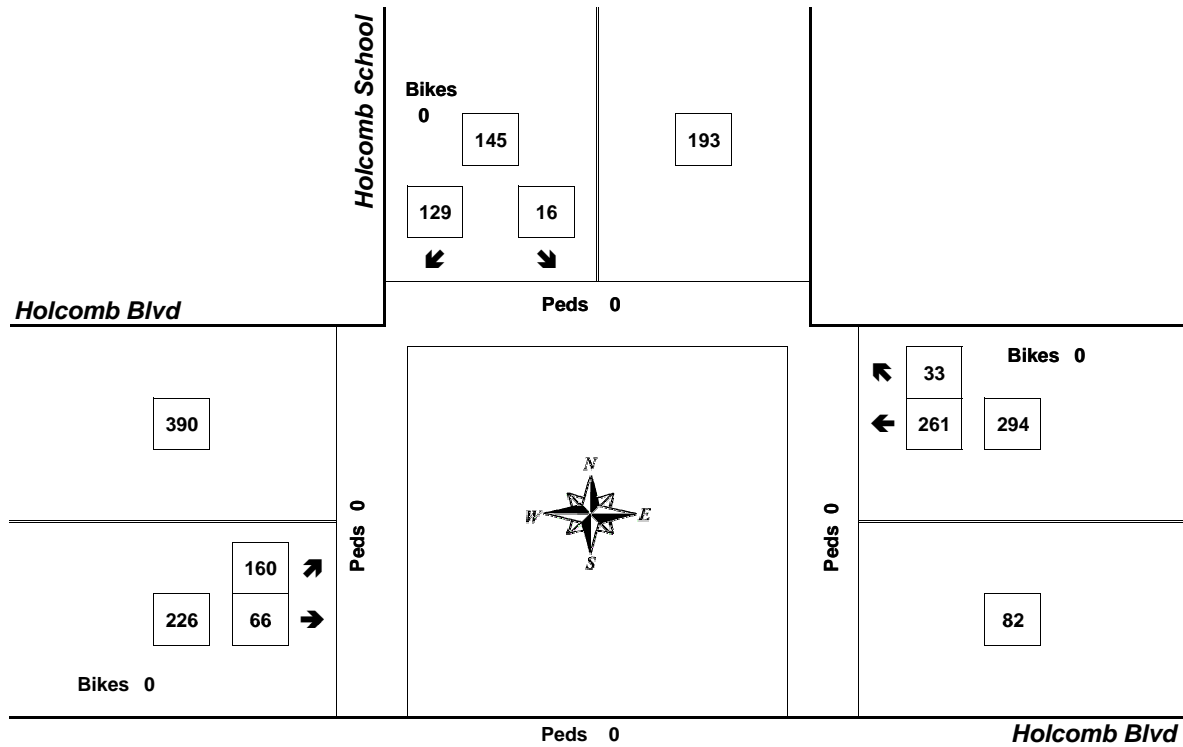
Peak Hour Summary



Clay Carney
(503) 833-2740

Holcomb School & Holcomb Blvd

7:15 AM to 8:15 AM
Tuesday, January 07, 2014



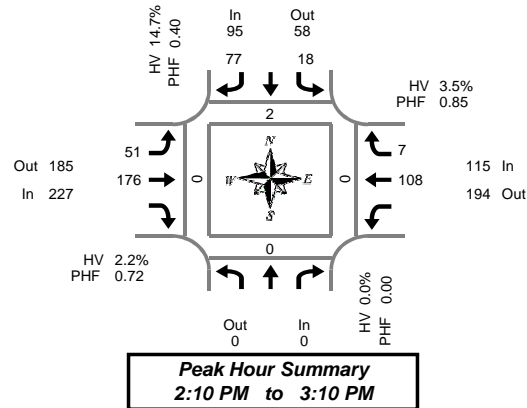
Approach	PHF	HV%	Volume
EB	0.59	6.6%	226
WB	0.77	2.4%	294
NB	0.00	0.0%	0
SB	0.51	9.7%	145
Intersection	0.74	5.4%	665

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



Holcomb School & Holcomb Blvd

Tuesday, January 07, 2014

2:00 PM to 4:00 PM

5-Minute Interval Summary

2:00 PM to 4:00 PM

Interval Start Time	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
2:00 PM				0	1	0	0	0	5	15	0	0	8	0	0	0	29	0	0	0	0
2:05 PM				0	0	0	0	0	10	8	0	0	9	0	0	0	27	0	0	0	0
2:10 PM				0	0	0	0	0	11	15	0	0	8	2	0	0	36	0	0	0	0
2:15 PM				0	0	3	0	6	11	0	0	0	6	3	0	0	29	0	0	0	0
2:20 PM				0	4	7	0	11	10	0	0	0	8	1	0	0	41	0	0	0	0
2:25 PM				0	6	6	0	8	22	0	0	0	6	0	0	0	48	0	0	0	0
2:30 PM				0	5	27	0	6	22	0	0	0	8	1	0	0	69	1	0	0	0
2:35 PM				0	2	14	0	2	14	0	0	0	9	0	0	0	41	0	0	0	0
2:40 PM				0	0	4	0	2	9	0	0	0	7	0	0	0	22	0	0	0	0
2:45 PM				0	0	2	0	1	13	0	0	0	10	0	0	0	26	0	0	0	0
2:50 PM				0	0	5	0	0	9	0	0	0	14	0	0	0	28	1	0	0	0
2:55 PM				0	1	4	0	3	19	0	0	0	10	0	0	0	37	0	0	0	0
3:00 PM				0	0	3	0	0	15	0	0	0	10	0	0	0	28	0	0	0	0
3:05 PM				0	0	2	0	1	17	0	0	0	12	0	0	0	32	0	0	0	0
3:10 PM				0	0	2	0	0	16	0	0	0	7	0	0	0	25	0	0	0	0
3:15 PM				0	0	0	0	0	23	0	0	0	8	0	0	0	31	0	0	0	0
3:20 PM				0	0	2	0	0	18	0	0	0	10	0	0	0	30	0	0	0	0
3:25 PM				0	0	0	0	0	18	0	0	0	9	0	0	0	27	1	0	0	0
3:30 PM				0	0	4	0	1	7	0	0	0	8	1	0	0	21	0	0	0	0
3:35 PM				0	0	5	0	0	15	0	0	0	6	0	0	0	26	0	0	0	0
3:40 PM				0	0	4	0	1	25	0	0	0	13	0	0	0	43	0	0	0	0
3:45 PM				0	0	1	0	0	15	0	0	0	11	0	0	0	27	0	0	0	0
3:50 PM				0	0	1	0	1	21	0	0	0	14	0	0	0	37	0	0	0	0
3:55 PM				0	0	2	0	1	18	0	0	0	13	2	0	0	36	0	0	0	0
Total Survey				0	19	98	0	70	375	0	0	0	224	10	0	0	796	3	0	0	0

15-Minute Interval Summary

2:00 PM to 4:00 PM

Interval Start Time	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
2:00 PM				0	1	0	0	0	26	38	0	0	25	2	0	0	92	0	0	0	0
2:15 PM				0	10	16	0	25	43	0	0	0	20	4	0	0	118	0	0	0	0
2:30 PM				0	7	45	0	10	45	0	0	0	24	1	0	0	132	1	0	0	0
2:45 PM				0	1	11	0	4	41	0	0	0	34	0	0	0	91	1	0	0	0
3:00 PM				0	0	7	0	1	48	0	0	0	29	0	0	0	85	0	0	0	0
3:15 PM				0	0	2	0	0	59	0	0	0	27	0	0	0	88	1	0	0	0
3:30 PM				0	0	13	0	2	47	0	0	0	27	1	0	0	90	0	0	0	0
3:45 PM				0	0	4	0	2	54	0	0	0	38	2	0	0	100	0	0	0	0
Total Survey				0	19	98	0	70	375	0	0	0	224	10	0	0	796	3	0	0	0

Peak Hour Summary

2:10 PM to 3:10 PM

By Approach	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	0	0	0	95	58	153	0	227	185	412	0	115	194	309	0	437	2	0	0	0
%HV	0.0%				14.7%				2.2%				3.5%				5.3%				
PHF	0.00				0.40				0.72				0.85				0.69				

By Movement	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total
				Total	L	R	Total	L	T	Total		T	R	Total			
Volume				0	18		77	95	51	176		227		108	7	115	437
%HV	NA	NA	NA	0.0%	22.2%	NA	13.0%	14.7%	5.9%	1.1%	NA	2.2%	NA	3.7%	0.0%	3.5%	5.3%
PHF				0.00	0.30		0.41	0.40	0.46	0.76		0.72		0.79	0.29	0.85	0.69

Rolling Hour Summary

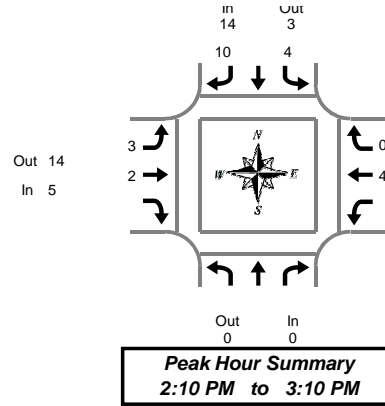
2:00 PM to 4:00 PM

Interval Start Time	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
2:00 PM				0	19	72	0	65	167	0	0	0	103	7	0	0	433	2	0	0	0
2:15 PM				0	18	79	0	40	177	0	0	0	107	5	0	0	426	2	0	0	0
2:30 PM				0	8	65	0	15	193	0	0	0	114	1	0	0	396	3	0	0	0
2:45 PM				0	1	33	0	7	195	0	0	0	117	1	0	0	354	2	0	0	0
3:00 PM				0	0	26	0	5	208	0	0	0	121	3	0	0	363	1	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Holcomb School & Holcomb Blvd

Tuesday, January 07, 2014

2:00 PM to 4:00 PM

Heavy Vehicle 5-Minute Interval Summary

2:00 PM to 4:00 PM

Interval Start Time	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Interval Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
2:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	1
2:05 PM	0	0	0	0	0	0	7	0	7	0	0	0	7
2:10 PM	0	0	0	0	0	0	1	0	1	0	0	0	1
2:15 PM	0	0	0	1	1	2	0	0	0	0	0	0	2
2:20 PM	0	1	1	3	4	7	0	0	0	0	0	0	7
2:25 PM	0	2	2	3	5	8	0	0	0	0	0	0	8
2:30 PM	0	0	0	2	2	4	0	0	0	0	0	0	4
2:35 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
2:40 PM	0	0	0	0	0	0	1	0	1	0	0	0	1
2:45 PM	0	0	0	1	1	2	0	1	1	0	0	0	2
2:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
2:55 PM	0	1	1	0	1	1	1	1	2	1	0	1	4
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
3:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10 PM	0	0	0	0	0	0	1	1	2	0	0	0	2
3:15 PM	0	0	0	0	0	0	1	1	2	0	0	0	2
3:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25 PM	0	0	0	0	0	0	1	1	2	0	0	0	2
3:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
3:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	2	2	4	1	0	1	3
3:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
3:55 PM	0	0	0	0	0	0	2	2	4	1	1	2	4
Total Survey	0	4	4	10	14	24	11	9	20	8	1	9	43

Heavy Vehicle 15-Minute Interval Summary

2:00 PM to 4:00 PM

Interval Start Time	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Interval Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
2:00 PM	0	0	0	0	0	0	9	0	9	0	0	0	9
2:15 PM	0	3	3	7	10	17	0	0	0	0	0	0	10
2:30 PM	0	0	0	2	2	4	1	0	1	1	0	1	4
2:45 PM	0	1	1	1	2	3	2	3	5	2	0	2	7
3:00 PM	0	0	0	0	0	0	1	1	2	1	0	1	2
3:15 PM	0	0	0	0	0	0	2	2	4	0	0	0	2
3:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
3:45 PM	0	0	0	0	0	0	4	4	8	3	1	4	8
Total Survey	0	4	4	10	14	24	11	9	20	8	1	9	43

Heavy Vehicle Peak Hour Summary

2:10 PM to 3:10 PM

By Approach	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	14	3	17	5	14	19	4	6	10	23
PHF	0.00			0.32			0.42			0.33			0.52

By Movement	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Volume	0	4	10	14	3	2	5	2	5	4	0	4	23
PHF	0.00	0.33	0.31	0.32	0.75	0.25	0.42	0.33	0.00	0.33			0.52

Heavy Vehicle Rolling Hour Summary

2:00 PM to 4:00 PM

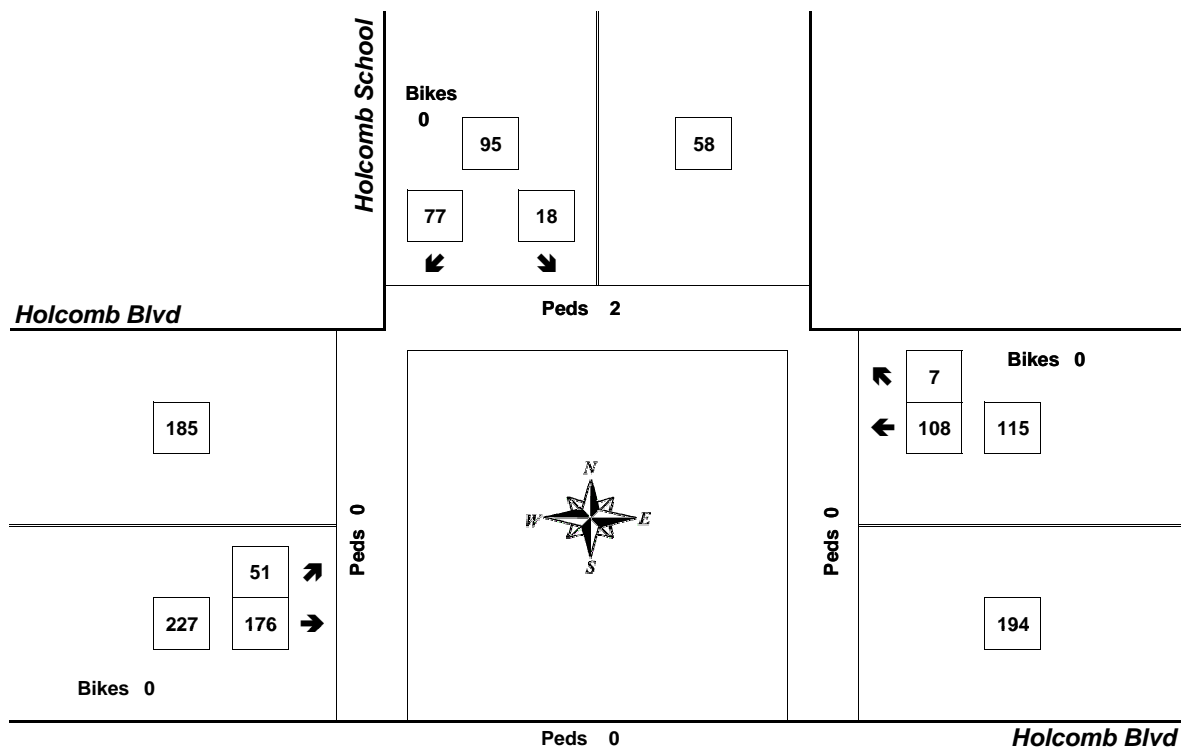
Interval Start Time	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Interval Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
2:00 PM	0	4	4	10	14	24	11	2	13	3	0	3	30
2:15 PM	0	4	4	10	14	24	2	3	5	4	0	4	23
2:30 PM	0	1	1	3	4	7	2	5	7	4	0	4	15
2:45 PM	0	1	1	1	2	3	1	5	6	4	0	4	12
3:00 PM	0	0	0	0	0	0	7	7	14	5	1	6	13

All Traffic Data
Services Inc.

Clay Carney
(503) 833-2740

2:10 PM to 3:10 PM

Tuesday, January 07, 2014



Bikes
0

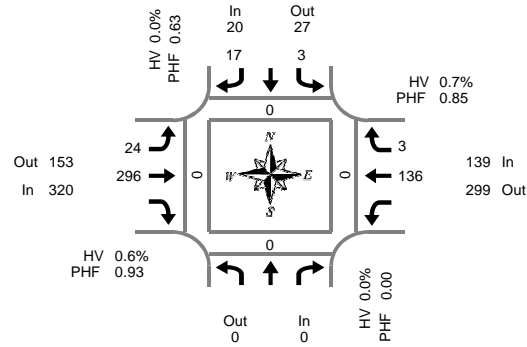
Approach	PHF	HV%	Volume
EB	0.72	2.2%	227
WB	0.85	3.5%	115
NB	0.00	0.0%	0
SB	0.40	14.7%	95
Intersection	0.69	5.3%	437

Count Period: 2:00 PM to 4:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



Holcomb School & Holcomb Blvd

Tuesday, January 07, 2014

4:00 PM to 6:00 PM

Peak Hour Summary
4:50 PM to 5:50 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
4:00 PM				0	3		6	0	0	15		0	9	0	0	0	33	0	0	0	0
4:05 PM				0	0		1	0	0	27		0	14	1	0	0	43	0	0	0	0
4:10 PM				0	0		3	0	0	23		0	8	0	0	0	34	0	0	0	0
4:15 PM				0	0		2	0	1	26		0	14	0	0	0	43	0	0	0	0
4:20 PM				0	0		3	0	0	15		0	12	0	0	0	30	0	0	0	0
4:25 PM				0	0		0	0	0	24		0	8	0	0	0	32	0	0	0	0
4:30 PM				0	0		0	0	0	23		0	8	1	0	0	32	0	0	0	0
4:35 PM				0	1		1	0	0	21		0	7	0	0	0	30	0	0	0	0
4:40 PM				0	0		1	0	1	19		0	13	0	0	0	34	0	0	0	0
4:45 PM				0	0		0	0	1	19		0	9	0	0	0	29	0	0	0	0
4:50 PM				0	1		2	0	2	21		0	13	0	0	0	39	0	0	0	0
4:55 PM				0	0		3	0	2	24		0	11	2	0	0	42	0	0	0	0
5:00 PM				0	0		2	0	1	25		0	7	0	0	0	35	0	0	0	0
5:05 PM				0	1		0	0	2	26		0	10	0	0	0	39	0	0	0	0
5:10 PM				0	0		0	0	3	21		0	12	0	0	0	36	0	0	0	0
5:15 PM				0	1		2	0	4	26		0	16	0	0	0	49	0	0	0	0
5:20 PM				0	0		2	0	1	31		0	12	0	0	0	46	0	0	0	0
5:25 PM				0	0		3	0	1	23		0	7	0	0	0	34	0	0	0	0
5:30 PM				0	0		0	0	1	25		0	8	0	0	0	34	0	0	0	0
5:35 PM				0	0		2	0	1	27		0	15	0	0	0	45	0	0	0	0
5:40 PM				0	0		0	0	3	25		0	13	0	0	0	41	0	0	0	0
5:45 PM				0	0		1	0	3	22		0	12	1	0	0	39	0	0	0	0
5:50 PM				0	0		1	0	0	25		0	12	1	0	0	39	0	0	0	0
5:55 PM				0	0		0	0	3	24		0	14	1	0	0	42	0	0	0	0
Total Survey				0	7		35	0	30	557		0	264	7	0	0	900	0	0	0	0

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
4:00 PM				0	3		10	0	0	65		0	31	1	0	0	110	0	0	0	0
4:15 PM				0	0		5	0	1	65		0	34	0	0	0	105	0	0	0	0
4:30 PM				0	1		2	0	1	63		0	28	1	0	0	96	0	0	0	0
4:45 PM				0	1		5	0	5	64		0	33	2	0	0	110	0	0	0	0
5:00 PM				0	1		2	0	6	72		0	29	0	0	0	110	0	0	0	0
5:15 PM				0	1		7	0	6	80		0	35	0	0	0	129	0	0	0	0
5:30 PM				0	0		2	0	5	77		0	36	0	0	0	120	0	0	0	0
5:45 PM				0	0		2	0	6	71		0	38	3	0	0	120	0	0	0	0
Total Survey				0	7		35	0	30	557		0	264	7	0	0	900	0	0	0	0

Peak Hour Summary

4:50 PM to 5:50 PM

By Approach	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	0	0	0	20	27	47	0	320	153	473	0	139	299	438	0	479	0	0	0	0
%HV				0.0%			0.0%				0.6%				0.7%		0.6%				
PHF				0.00			0.63				0.93				0.85		0.91				

By Movement	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	0	3	3	0	17	20	37	0	24	296	320	0	136	3	139	0	479
%HV	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	0.0%	0.7%	NA	0.6%	NA	0.7%	0.0%	0.7%	0.6%
PHF				0.00	0.38	0.61	0.63	0.67	0.93	0.93	0.93		0.85	0.38	0.85		0.91

Rolling Hour Summary

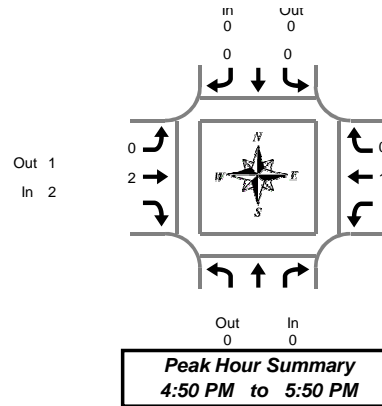
4:00 PM to 6:00 PM

Interval Start Time	Northbound Holcomb School				Southbound Holcomb School				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
4:00 PM				0	5		22	0	7	257		0	126	4	0	0	421	0	0	0	0
4:15 PM				0	3		14	0	13	264		0	124	3	0	0	421	0	0	0	0
4:30 PM				0	4		16	0	18	279		0	125	3	0	0	445	0	0	0	0
4:45 PM				0	3		16	0	22	293		0	133	2	0	0	469	0	0	0	0
5:00 PM				0	2		13	0	23	300		0	138	3	0	0	479	0	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Holcomb School & Holcomb Blvd

Tuesday, January 07, 2014

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Interval Total	
			Total	L	R	Total	L	T	Total		T	R		Total
4:00 PM			0	0	1	1	0	0	0		0	0	0	1
4:05 PM			0	0	0	0	0	1	1		0	0	0	1
4:10 PM			0	0	0	0	0	1	1		0	0	0	1
4:15 PM			0	0	0	0	0	1	1		0	0	0	1
4:20 PM			0	0	0	0	0	0	0		0	0	0	0
4:25 PM			0	0	0	0	0	0	0		0	0	0	0
4:30 PM			0	0	0	0	0	1	1		0	0	0	1
4:35 PM			0	0	0	0	0	1	1		1	0	1	2
4:40 PM			0	0	0	0	0	0	0		0	0	0	0
4:45 PM			0	0	0	0	0	0	0		0	0	0	0
4:50 PM			0	0	0	0	0	1	1		0	0	0	1
4:55 PM			0	0	0	0	0	0	0		0	0	0	0
5:00 PM			0	0	0	0	0	0	0		0	0	0	0
5:05 PM			0	0	0	0	0	0	0		0	0	0	0
5:10 PM			0	0	0	0	0	1	1		0	0	0	1
5:15 PM			0	0	0	0	0	0	0		0	0	0	0
5:20 PM			0	0	0	0	0	0	0		0	0	0	0
5:25 PM			0	0	0	0	0	0	0		0	0	0	0
5:30 PM			0	0	0	0	0	0	0		0	0	0	0
5:35 PM			0	0	0	0	0	0	0		0	0	0	0
5:40 PM			0	0	0	0	0	0	0		0	0	0	0
5:45 PM			0	0	0	0	0	0	0		1	0	1	1
5:50 PM			0	0	0	0	0	0	0		1	0	1	1
5:55 PM			0	0	0	0	0	0	0		0	0	0	0
Total Survey			0	0	1	1	0	7	7		3	0	3	11

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Interval Total	
			Total	L	R	Total	L	T	Total		T	R		Total
4:00 PM			0	0	1	1	0	2	2		0	0	0	3
4:15 PM			0	0		0	0	1	1		0	0	0	1
4:30 PM			0	0	0	0	0	2	2		1	0	1	3
4:45 PM			0	0	0	0	0	1	1		0	0	0	1
5:00 PM			0	0	0	0	0	1	1		0	0	0	1
5:15 PM			0	0	0	0	0	0	0		0	0	0	0
5:30 PM			0	0	0	0	0	0	0		0	0	0	0
5:45 PM			0	0	0	0	0	0	0		2	0	2	2
Total Survey			0	0	1	1	0	7	7		3	0	3	11

Heavy Vehicle Peak Hour Summary

4:50 PM to 5:50 PM

By Approach	Northbound Holcomb School			Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	0	0	0	2	1	3	1	2	3	3
PHF	0.00			0.00			0.50			0.25			0.75

By Movement	Northbound Holcomb School		Southbound Holcomb School			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Total
	Total	L	R	Total	L	T	Total	T	R	Total		
Volume	0	0	0	0	0	0	2	2	1	0	1	3
PHF	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.25	0.00	0.25	0.75

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound			Southbound			Eastbound			Westbound			Interval Total
	Holcomb School			Holcomb School			Holcomb Blvd			Holcomb Blvd			
		Total	L		R	Total	L	T	Total		T	R	Total
4:00 PM		0	0		1	1	0	6	6		1	0	1
4:15 PM		0	0		0	0	0	5	5		1	0	1
4:30 PM		0	0		0	0	0	4	4		1	0	1
4:45 PM		0	0		0	0	0	2	2		0	0	0
5:00 PM		0	0		0	0	0	1	1		2	0	2

Peak Hour Summary

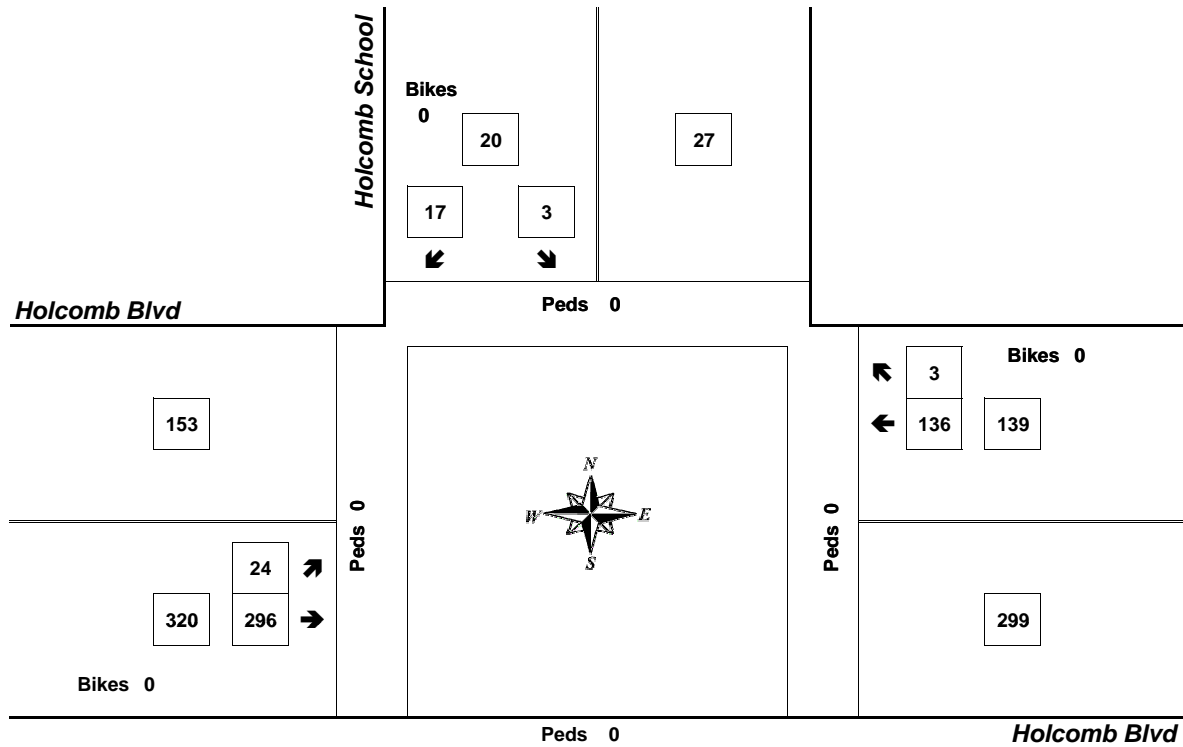


Clay Carney
(503) 833-2740

Holcomb School & Holcomb Blvd

4:50 PM to 5:50 PM

Tuesday, January 07, 2014



Approach	PHF	HV%	Volume
EB	0.93	0.6%	320
WB	0.85	0.7%	139
NB	0.00	0.0%	0
SB	0.63	0.0%	20
Intersection	0.91	0.6%	479

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

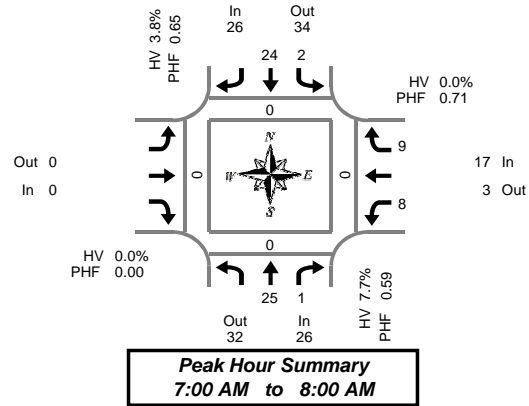


Clay Carney
(503) 833-2740

S Swan St & Ames St

Tuesday, January 07, 2014

7:00 AM to 9:00 AM



5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes			Bikes	L	R	Bikes		North	South	East	West
7:00 AM	1	0	0	0	2	0			0	1	0	0	5	0	0	0	0
7:05 AM	2	0	0	0	2	0			0	2	0	0	6	0	0	0	0
7:10 AM	1	0	0	1	1	0			0	0	1	0	4	0	0	0	0
7:15 AM	1	0	0	0	4	0			0	1	1	0	7	0	0	0	0
7:20 AM	2	0	0	0	0	0			0	0	0	0	2	0	0	0	0
7:25 AM	0	0	0	0	2	0			0	0	2	0	4	0	0	0	0
7:30 AM	4	1	0	0	2	0			0	0	1	0	8	0	0	0	0
7:35 AM	1	0	0	0	1	0			0	1	1	0	4	0	0	0	0
7:40 AM	2	0	0	1	2	0			0	2	1	0	8	0	0	0	0
7:45 AM	3	0	0	0	2	0			0	0	0	0	5	0	0	0	0
7:50 AM	2	0	0	0	5	0			0	1	0	0	8	0	0	0	0
7:55 AM	6	0	0	0	1	0			0	0	1	0	8	0	0	0	0
8:00 AM	1	0	0	0	0	0			0	1	3	0	5	0	0	0	0
8:05 AM	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
8:10 AM	3	0	0	0	4	0			0	0	2	0	9	0	0	0	0
8:15 AM	0	0	0	0	2	0			0	0	1	0	3	0	0	0	0
8:20 AM	0	0	0	0	3	0			0	0	1	0	4	0	0	0	0
8:25 AM	1	0	0	0	0	0			0	0	0	0	1	0	0	0	0
8:30 AM	1	0	0	1	2	0			0	0	0	0	4	0	0	0	0
8:35 AM	6	0	0	1	4	0			0	0	0	0	11	0	0	0	0
8:40 AM	2	0	0	1	2	0			0	0	0	0	5	0	0	0	0
8:45 AM	4	0	0	0	0	0			0	0	1	0	5	0	0	0	0
8:50 AM	3	0	0	0	2	0			0	0	0	0	5	0	0	0	0
8:55 AM	2	2	0	0	1	0			0	0	0	0	5	0	0	0	0
Total Survey	48	3	0	5	44	0			0	9	17	0	126	0	0	0	0

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes			Bikes	L	R	Bikes		North	South	East	West
7:00 AM	4	0	0	1	5	0			0	3	2	0	15	0	0	0	0
7:15 AM	3	0	0	0	6	0			0	1	3	0	13	0	0	0	0
7:30 AM	7	1	0	1	5	0			0	3	3	0	20	0	0	0	0
7:45 AM	11	0	0	0	8	0			0	1	1	0	21	0	0	0	0
8:00 AM	4	0	0	0	4	0			0	1	5	0	14	0	0	0	0
8:15 AM	1	0	0	0	5	0			0	0	2	0	8	0	0	0	0
8:30 AM	9	0	0	3	8	0			0	0	0	0	20	0	0	0	0
8:45 AM	9	2	0	0	3	0			0	0	1	0	15	0	0	0	0
Total Survey	48	3	0	5	44	0			0	9	17	0	126	0	0	0	0

Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total	Pedestrians Crosswalk			
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total		North	South	East	West
Volume	26	32	58	0	26	34	60	0	0	0	17	3	20	0	0	0	0
%HV	7.7%			3.8%			0.0%			0.0%			4.3%				
PHF	0.59			0.65			0.00			0.71			0.82				

By Movement	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total
	T	R	Total	L	T	Total			Total	L	R	Total	
Volume	25	1	26	2	24	26			0	8	9	17	69
%HV	NA	8.0%	0.0%	7.7%	0.0%	4.2%	NA	3.8%	NA	NA	NA	0.0%	4.3%
PHF	0.57	0.25	0.59	0.50	0.67	0.65			0.00	0.67	0.56	0.71	0.82

Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes			Bikes	L	R	Bikes		North	South	East	West
7:00 AM	25	1	0	2	24	0			0	8	9	0	69	0	0	0	0
7:15 AM	25	1	0	1	23	0			0	6	12	0	68	0	0	0	0
7:30 AM	23	1	0	1	22	0			0	5	11	0	63	0	0	0	0
7:45 AM	25	0	0	3	25	0			0	2	8	0	63	0	0	0	0
8:00 AM	23	2	0	3	20	0			0	1	8	0	57	0	0	0	0

Heavy Vehicle Summary

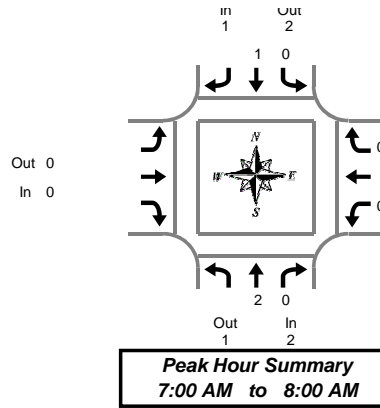


Clay Carney
(503) 833-2740

S Swan St & Ames St

Tuesday, January 07, 2014

7:00 AM to 9:00 AM



Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total
	T	R	Total	L	T	Total			Total	L	R	Total	
7:00 AM	0	0	0	0	0	0			0	0	0	0	0
7:05 AM	0	0	0	0	0	0			0	0	0	0	0
7:10 AM	1	0	1	0	0	0			0	0	0	0	1
7:15 AM	0	0	0	0	0	0			0	0	0	0	0
7:20 AM	0	0	0	0	0	0			0	0	0	0	0
7:25 AM	0	0	0	0	0	0			0	0	0	0	0
7:30 AM	0	0	0	0	0	0			0	0	0	0	0
7:35 AM	0	0	0	0	0	0			0	0	0	0	0
7:40 AM	0	0	0	0	1	1			0	0	0	0	1
7:45 AM	0	0	0	0	0	0			0	0	0	0	0
7:50 AM	0	0	0	0	0	0			0	0	0	0	0
7:55 AM	1	0	1	0	0	0			0	0	0	0	1
8:00 AM	0	0	0	0	0	0			0	0	0	0	0
8:05 AM	0	0	0	0	0	0			0	0	0	0	0
8:10 AM	1	0	1	0	2	2			0	0	0	0	3
8:15 AM	0	0	0	0	0	0			0	0	0	0	0
8:20 AM	0	0	0	0	0	0			0	0	0	0	0
8:25 AM	0	0	0	0	0	0			0	0	0	0	0
8:30 AM	0	0	0	0	0	0			0	0	0	0	0
8:35 AM	1	0	1	0	0	0			0	0	0	0	1
8:40 AM	1	0	1	0	0	0			0	0	0	0	1
8:45 AM	1	0	1	0	0	0			0	0	0	0	1
8:50 AM	0	0	0	0	1	1			0	0	0	0	1
8:55 AM	0	1	1	0	0	0			0	0	0	0	1
Total Survey	6	1	7	0	4	4			0	0	0	0	11

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound S Swan St				Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total
	T	R	Total	L	T	Total			Total	L		R	Total	
7:00 AM	1	0	1	0	0	0			0	0		0	0	1
7:15 AM	0	0	0	0	0	0			0	0		0	0	0
7:30 AM	0	0	0	0	1	1			0	0		0	0	1
7:45 AM	1	0	1	0	0	0			0	0		0	0	1
8:00 AM	1	0	1	0	2	2			0	0		0	0	3
8:15 AM	0	0	0	0	0	0			0	0		0	0	0
8:30 AM	2	0	2	0	0	0			0	0		0	0	2
8:45 AM	1	1	2	0	1	1			0	0		0	0	3
Total Survey	6	1	7	0	4	4			0	0		0	0	11

Heavy Vehicle Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	2	1	3	1	2	3	0	0	0	0	0	0	3
PHF	0.50			0.25			0.00			0.00			0.75

By Movement	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total
	T	R	Total	L	T	Total			Total	L	R	Total	
Volume	2	0	2	0	1	1			0	0	0	0	3
PHF	0.50	0.00	0.50	0.00	0.25	0.25			0.00	0.00	0.00	0.00	0.75

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound S Swan St				Southbound S Swan St				Eastbound Ames St				Westbound Ames St				Interval Total
	T	R	Total		L	T	Total			Total	L		R	Total			
7:00 AM	2	0	2	0	1		1			0	0		0	0	3		
7:15 AM	2	0	2	0	3		3			0	0		0	0	5		
7:30 AM	2	0	2	0	3		3			0	0		0	0	5		
7:45 AM	4	0	4	0	2		2			0	0		0	0	6		
8:00 AM	4	1	5	0	3		3			0	0		0	0	8		

Peak Hour Summary

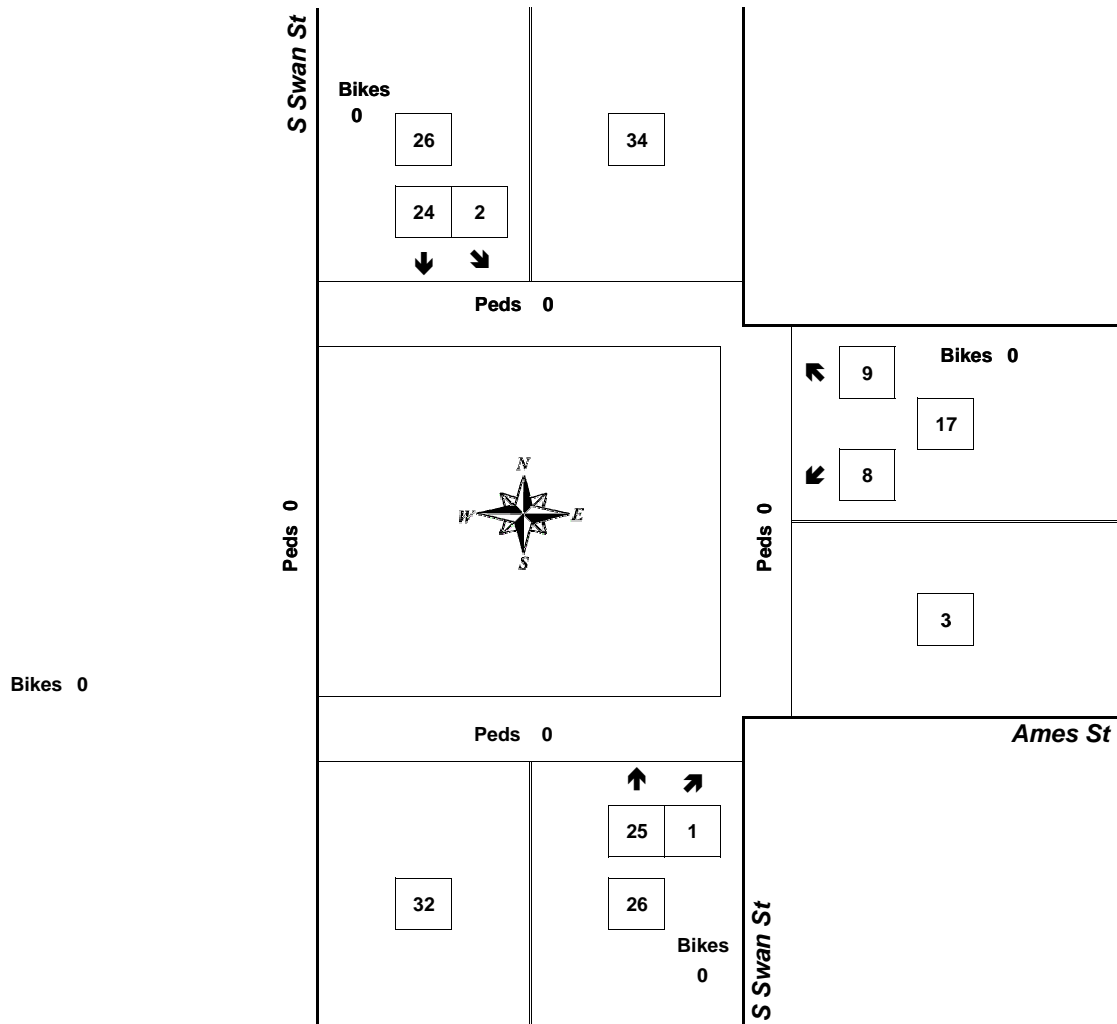


Clay Carney
(503) 833-2740

S Swan St & Ames St

7:00 AM to 8:00 AM

Tuesday, January 07, 2014



Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.71	0.0%	17
NB	0.59	7.7%	26
SB	0.65	3.8%	26
Intersection	0.82	4.3%	69

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

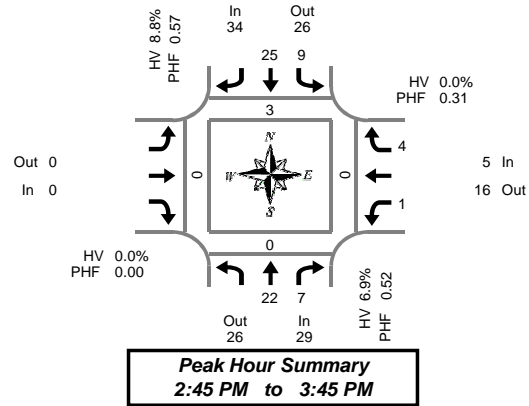


Clay Carney
(503) 833-2740

S Swan St & Ames St

Tuesday, January 07, 2014

2:00 PM to 4:00 PM



5-Minute Interval Summary

2:00 PM to 4:00 PM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes			Bikes	L	R	Bikes		North	South	East	West
2:00 PM	3	0	0	1	2	0			0	0	2	0	8	0	0	0	0
2:05 PM	0	0	0	1	2	0			0	1	0	0	4	0	0	0	0
2:10 PM	0	0	0	1	3	0			0	0	1	0	5	0	0	0	0
2:15 PM	2	0	0	0	1	0			0	0	1	0	4	0	0	0	0
2:20 PM	1	0	0	0	1	0			0	0	1	0	3	0	0	0	0
2:25 PM	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2:30 PM	1	0	0	0	0	0			0	0	0	0	1	0	0	0	0
2:35 PM	1	0	0	1	0	0			0	0	0	0	2	0	0	0	0
2:40 PM	3	1	0	0	1	0			0	0	0	0	5	0	0	0	0
2:45 PM	1	0	0	0	5	0			0	0	1	0	7	0	0	0	0
2:50 PM	7	1	0	1	2	0			0	0	0	0	11	0	0	0	0
2:55 PM	1	1	0	2	2	0			0	1	0	0	7	0	0	0	0
3:00 PM	3	1	0	0	2	0			0	0	2	0	8	0	0	0	0
3:05 PM	0	0	0	0	0	0			0	0	1	0	1	0	0	0	0
3:10 PM	1	0	0	0	0	0			0	0	0	0	1	0	0	0	0
3:15 PM	0	2	0	0	0	0			0	0	0	0	2	0	0	0	0
3:20 PM	3	0	0	1	0	0			0	0	0	0	4	0	0	0	0
3:25 PM	3	1	0	2	4	0			0	0	0	0	10	3	0	0	0
3:30 PM	1	0	0	1	3	0			0	0	0	0	5	0	0	0	0
3:35 PM	1	0	0	1	4	0			0	0	0	0	6	0	0	0	0
3:40 PM	1	1	0	1	3	0			0	0	0	0	6	0	0	0	0
3:45 PM	1	0	0	0	2	0			0	0	0	0	3	0	0	0	0
3:50 PM	4	1	0	1	1	0			0	0	1	0	8	0	0	0	0
3:55 PM	2	0	0	0	2	0			0	0	1	0	5	0	0	1	0
Total Survey	40	9	0	14	40	0			0	2	11	0	116	3	0	1	0

15-Minute Interval Summary

2:00 PM to 4:00 PM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes			Bikes	L	R	Bikes		North	South	East	West
2:00 PM	3	0	0	3	7	0			0	1	3	0	17	0	0	0	0
2:15 PM	3	0	0	0	2	0			0	0	2	0	7	0	0	0	0
2:30 PM	5	1	0	1	1	0			0	0	0	0	8	0	0	0	0
2:45 PM	9	2	0	3	9	0			0	1	1	0	25	0	0	0	0
3:00 PM	4	1	0	0	2	0			0	0	3	0	10	0	0	0	0
3:15 PM	6	3	0	3	4	0			0	0	0	0	16	3	0	0	0
3:30 PM	3	1	0	3	10	0			0	0	0	0	17	0	0	0	0
3:45 PM	7	1	0	1	5	0			0	0	2	0	16	0	0	1	0
Total Survey	40	9	0	14	40	0			0	2	11	0	116	3	0	1	0

Peak Hour Summary

2:45 PM to 3:45 PM

By Approach	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total	Pedestrians Crosswalk			
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total		North	South	East	West
Volume	29	26	55	34	26	60	0	0	0	5	16	21	68	3	0	0	0
%HV	6.9%			8.8%			0.0%			0.0%			7.4%				
PHF	0.52			0.57			0.00			0.31			0.65				

By Movement	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total
	T	R	Total	L	T	Total			Total	L	R	Total	
Volume	22	7	29	9	25	34			0	1	4	5	68
%HV	NA	9.1%	0.0%	6.9%	0.0%	12.0%	NA	8.8%	NA	NA	NA	0.0%	7.4%
PHF	0.50	0.58	0.52	0.56	0.57	0.57			0.00	0.25	0.33	0.31	0.65

Rolling Hour Summary

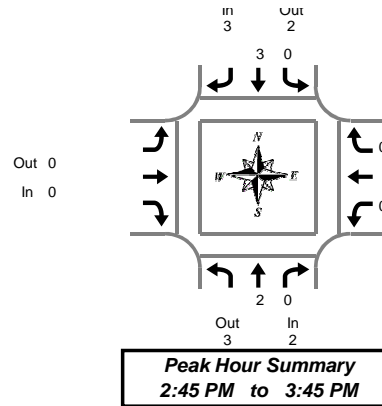
2:00 PM to 4:00 PM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes			Bikes	L	R	Bikes		North	South	East	West
2:00 PM	20	3	0	7	19	0			0	2	6	0	57	0	0	0	0
2:15 PM	21	4	0	4	14	0			0	1	6	0	50	0	0	0	0
2:30 PM	24	7	0	7	16	0			0	1	4	0	59	3	0	0	0
2:45 PM	22	7	0	9	25	0			0	1	4	0	68	3	0	0	0
3:00 PM	20	6	0	7	21	0			0	0	5	0	59	3	0	1	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



S Swan St & Ames St

Tuesday, January 07, 2014

2:00 PM to 4:00 PM

Heavy Vehicle 5-Minute Interval Summary

2:00 PM to 4:00 PM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total
	T	R	Total	L	T	Total			Total	L	R	Total	
2:00 PM	0	0	0	0	0	0			0	0	1	1	1
2:05 PM	0	0	0	0	0	0			0	0	0	0	0
2:10 PM	0	0	0	0	0	0			0	0	0	0	0
2:15 PM	1	0	1	0	0	0			0	0	0	0	1
2:20 PM	0	0	0	0	0	0			0	0	0	0	0
2:25 PM	0	0	0	0	0	0			0	0	0	0	0
2:30 PM	1	0	1	0	0	0			0	0	0	0	1
2:35 PM	0	0	0	0	0	0			0	0	0	0	0
2:40 PM	0	0	0	0	0	0			0	0	0	0	0
2:45 PM	0	0	0	0	1	1			0	0	0	0	1
2:50 PM	0	0	0	0	0	0			0	0	0	0	0
2:55 PM	0	0	0	0	0	0			0	0	0	0	0
3:00 PM	1	0	1	0	0	0			0	0	0	0	1
3:05 PM	0	0	0	0	0	0			0	0	0	0	0
3:10 PM	0	0	0	0	0	0			0	0	0	0	0
3:15 PM	0	0	0	0	0	0			0	0	0	0	0
3:20 PM	1	0	1	0	0	0			0	0	0	0	1
3:25 PM	0	0	0	0	1	1			0	0	0	0	1
3:30 PM	0	0	0	0	1	1			0	0	0	0	1
3:35 PM	0	0	0	0	0	0			0	0	0	0	0
3:40 PM	0	0	0	0	0	0			0	0	0	0	0
3:45 PM	0	0	0	0	0	0			0	0	0	0	0
3:50 PM	1	0	1	0	0	0			0	0	0	0	1
3:55 PM	1	0	1	0	0	0			0	0	0	0	1
Total Survey	6	0	6	0	3	3			0	0	1	1	10

Heavy Vehicle 15-Minute Interval Summary

2:00 PM to 4:00 PM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total
	T	R	Total	L	T	Total			Total	L	R	Total	
2:00 PM	0	0	0	0	0	0			0	0	1	1	1
2:15 PM	1	0	1	0	0	0			0	0	0	0	1
2:30 PM	1	0	1	0	0	0			0	0	0	0	1
2:45 PM	0	0	0	0	1	1			0	0	0	0	1
3:00 PM	1	0	1	0	0	0			0	0	0	0	1
3:15 PM	1	0	1	0	1	1			0	0	0	0	2
3:30 PM	0	0	0	0	1	1			0	0	0	0	1
3:45 PM	2	0	2	0	0	0			0	0	0	0	2
Total Survey	6	0	6	0	3	3			0	0	1	1	10

Heavy Vehicle Peak Hour Summary

2:45 PM to 3:45 PM

By Approach	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	2	3	5	3	2	5	0	0	0	0	0	0	5
PHF	0.50			0.38			0.00			0.00			0.42

By Movement	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total
	T	R	Total	L	T	Total			Total	L	R	Total	
Volume	2	0	2	0	3	3			0	0	0	0	5
PHF	0.50	0.00	0.50	0.00	0.38	0.38			0.00	0.00	0.00	0.00	0.42

Heavy Vehicle Rolling Hour Summary

2:00 PM to 4:00 PM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total
	T	R	Total	L	T	Total			Total	L	R	Total	
2:00 PM	2	0	2	0	1	1			0	0	1	1	4
2:15 PM	3	0	3	0	1	1			0	0	0	0	4
2:30 PM	3	0	3	0	2	2			0	0	0	0	5
2:45 PM	2	0	2	0	3	3			0	0	0	0	5
3:00 PM	4	0	4	0	2	2			0	0	0	0	6

Peak Hour Summary

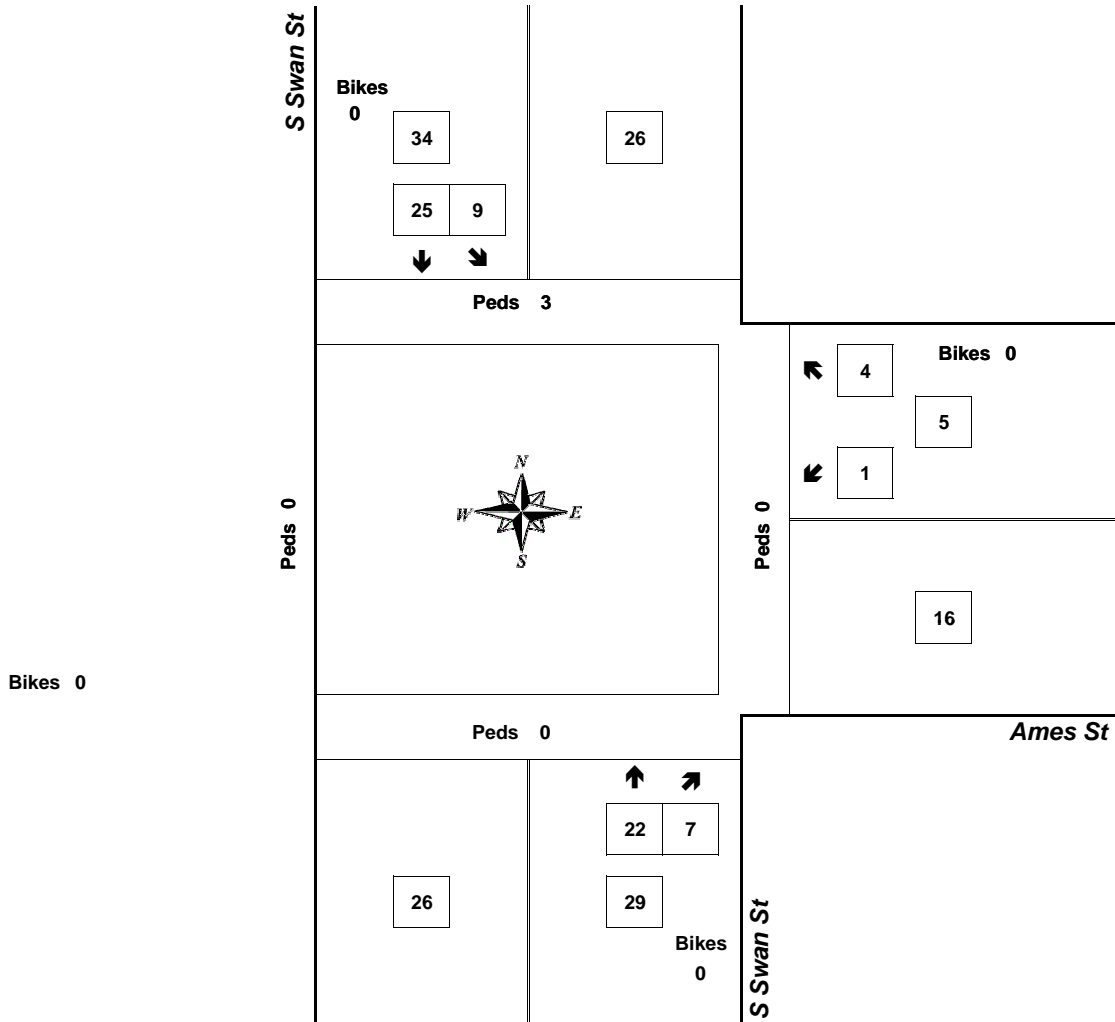


Clay Carney
(503) 833-2740

S Swan St & Ames St

2:45 PM to 3:45 PM

Tuesday, January 07, 2014



Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.31	0.0%	5
NB	0.52	6.9%	29
SB	0.57	8.8%	34
Intersection	0.65	7.4%	68

Count Period: 2:00 PM to 4:00 PM

Total Vehicle Summary

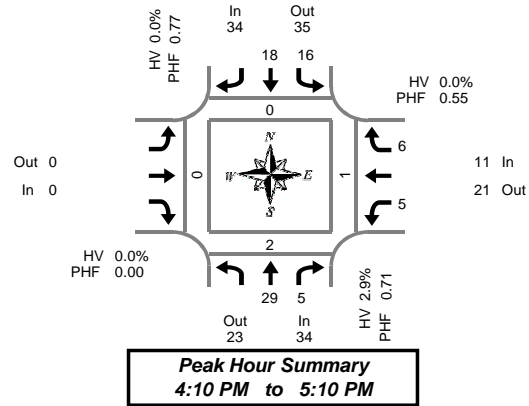


Clay Carney
(503) 833-2740

S Swan St & Ames St

Tuesday, January 07, 2014

4:00 PM to 6:00 PM



5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound S Swan St				Southbound S Swan St				Eastbound Ames St				Westbound Ames St				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T	Bikes				Bikes		L		R	Bikes		North	South	East	West
4:00 PM	2	0	0		2	1	0				0		0	0	0	0	5	0	0	0	0
4:05 PM	2	2	0		1	0	0				0		0	0	2	0	7	0	0	0	0
4:10 PM	5	0	0		0	0	0				0		1	0	0	0	6	0	0	0	0
4:15 PM	3	0	0		1	1	0				0		0	0	0	0	5	0	0	0	0
4:20 PM	3	1	0		4	2	0				0		0	0	0	0	10	0	0	0	0
4:25 PM	3	1	0		1	0	0				0		1	0	0	0	6	0	0	0	0
4:30 PM	2	0	0		1	1	0				0		1	0	1	0	6	0	1	1	0
4:35 PM	1	0	0		1	1	0				0		0	0	0	0	3	0	0	0	0
4:40 PM	3	0	0		2	2	0				0		0	0	2	0	9	0	0	0	0
4:45 PM	2	1	0		0	3	0				0		0	0	0	0	6	0	0	0	0
4:50 PM	3	0	0		2	1	0				0		0	0	1	0	7	0	1	0	0
4:55 PM	0	1	0		0	1	0				0		0	0	1	0	3	0	0	0	0
5:00 PM	1	1	0		1	3	0				0		2	1	1	0	9	0	0	0	0
5:05 PM	3	0	0		3	3	0				0		0	0	0	0	9	0	0	0	0
5:10 PM	1	1	0		1	1	0				0		0	0	1	0	5	0	1	0	0
5:15 PM	3	0	0		1	1	0				0		0	0	1	0	6	0	0	0	0
5:20 PM	0	1	0		0	4	0				0		0	0	0	0	5	0	0	0	0
5:25 PM	0	1	0		0	0	0				0		0	0	1	0	2	0	0	0	0
5:30 PM	3	0	0		0	1	0				0		0	0	0	0	4	0	0	0	0
5:35 PM	0	0	0		2	1	0				0		0	0	0	0	3	0	0	0	0
5:40 PM	1	0	0		1	1	0				0		0	0	1	0	4	0	0	0	0
5:45 PM	4	1	0		2	0	0				0		0	0	1	0	8	0	0	0	0
5:50 PM	0	1	0		0	2	0				0		1	0	0	0	4	0	0	0	0
5:55 PM	1	0	0		1	1	0				0		0	0	0	0	3	0	0	0	0
Total Survey	46	12	0		27	31	0				0		6		13	0	135	0	3	1	0

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound S Swan St				Southbound S Swan St				Eastbound Ames St				Westbound Ames St				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T	Bikes				Bikes		L		R	Bikes		North	South	East	West
4:00 PM	9	2	0		3	1	0				0		1	0	2	0	18	0	0	0	0
4:15 PM	9	2	0		6	3	0				0		1	0	0	0	21	0	0	0	0
4:30 PM	6	0	0		4	4	0				0		1	0	3	0	18	0	1	1	0
4:45 PM	5	2	0		2	5	0				0		0	0	2	0	16	0	1	0	0
5:00 PM	5	2	0		5	7	0				0		2	2	2	0	23	0	1	0	0
5:15 PM	3	2	0		1	5	0				0		0	0	2	0	13	0	0	0	0
5:30 PM	4	0	0		3	3	0				0		0	0	1	0	11	0	0	0	0
5:45 PM	5	2	0		3	3	0				0		1	1	1	0	15	0	0	0	0
Total Survey	46	12	0		27	31	0				0		6		13	0	135	0	3	1	0

Peak Hour Summary

4:10 PM to 5:10 PM

By Approach	Northbound S Swan St				Southbound S Swan St				Eastbound Ames St				Westbound Ames St				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	34	23	57	0	34	35	69	0	0	0	0	0	11	21	32	0	79	0	2	1	0
%HV	2.9%				0.0%				0.0%				0.0%				1.3%				
PHF	0.71				0.77				0.00				0.55				0.90				

By Movement	Northbound S Swan St				Southbound S Swan St				Eastbound Ames St				Westbound Ames St				Total
	T	R	Total		L	T	Total				Total		L		R	Total	
Volume	29	5	34		16	18	34				0		5		6	11	79
%HV	NA	0.0%	20.0%	2.9%	0.0%	0.0%	NA	0.0%	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	1.3%	
PHF	0.66	0.63	0.71		0.67	0.64	0.77				0.00	0.63	0.50	0.55		0.90	

Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound S Swan St				Southbound S Swan St				Eastbound Ames St				Westbound Ames St				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T	Bikes				Bikes		L		R	Bikes		North	South	East	West
4:00 PM	29	6	0		15	13	0				0		3	7	0	0	73	0	2	1	0
4:15 PM	25	6	0		17	19	0				0		4	7	0	0	78	0	3	1	0
4:30 PM	19	6	0		12	21	0				0		3	9	0	0	70	0	3	1	0
4:45 PM	17	6	0		11	20	0				0		2	7	0	0	63	0	2	0	0
5:00 PM	17	6	0		12	18	0				0		3	6	0	0	62	0	1	0	0

Heavy Vehicle Summary

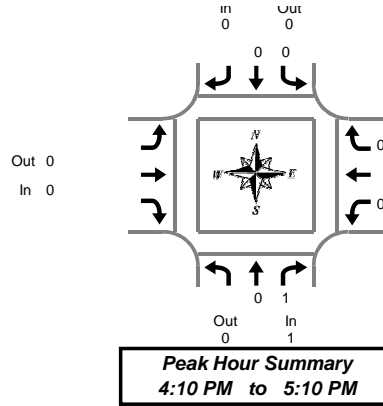


Clay Carney
(503) 833-2740

S Swan St & Ames St

Tuesday, January 07, 2014

4:00 PM to 6:00 PM



Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total
	T	R	Total	L	T	Total			Total	L	R	Total	
4:00 PM	0	0	0	0	0	0			0	0	0	0	0
4:05 PM	0	0	0	0	0	0			0	0	0	0	0
4:10 PM	0	0	0	0	0	0			0	0	0	0	0
4:15 PM	0	0	0	0	0	0			0	0	0	0	0
4:20 PM	0	0	0	0	0	0			0	0	0	0	0
4:25 PM	0	0	0	0	0	0			0	0	0	0	0
4:30 PM	0	0	0	0	0	0			0	0	0	0	0
4:35 PM	0	0	0	0	0	0			0	0	0	0	0
4:40 PM	0	0	0	0	0	0			0	0	0	0	0
4:45 PM	0	0	0	0	0	0			0	0	0	0	0
4:50 PM	0	0	0	0	0	0			0	0	0	0	0
4:55 PM	0	0	0	0	0	0			0	0	0	0	0
5:00 PM	0	1	1	0	0	0			0	0	0	0	1
5:05 PM	0	0	0	0	0	0			0	0	0	0	0
5:10 PM	0	0	0	0	0	0			0	0	0	0	0
5:15 PM	0	0	0	0	0	0			0	0	0	0	0
5:20 PM	0	0	0	0	0	0			0	0	0	0	0
5:25 PM	0	0	0	0	0	0			0	0	0	0	0
5:30 PM	0	0	0	0	0	0			0	0	0	0	0
5:35 PM	0	0	0	0	0	0			0	0	0	0	0
5:40 PM	0	0	0	0	0	0			0	0	0	0	0
5:45 PM	0	0	0	0	0	0			0	0	0	0	0
5:50 PM	0	0	0	0	0	0			0	0	0	0	0
5:55 PM	0	0	0	0	0	0			0	0	0	0	0
Total Survey	0	1	1	0	0	0			0	0	0	0	1

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total	
	T	R	Total	L	T	Total			Total	L		R		Total
4:00 PM	0	0	0	0	0	0			0	0		0	0	0
4:15 PM	0	0	0	0	0	0			0	0		0	0	0
4:30 PM	0	0	0	0	0	0			0	0		0	0	0
4:45 PM	0	0	0	0	0	0			0	0		0	0	0
5:00 PM	0	1	1	0	0	0			0	0		0	0	1
5:15 PM	0	0	0	0	0	0			0	0		0	0	0
5:30 PM	0	0	0	0	0	0			0	0		0	0	0
5:45 PM	0	0	0	0	0	0			0	0		0	0	0
Total Survey		0	1	1	0	0	0			0	0		0	1

Heavy Vehicle Peak Hour Summary

4:10 PM to 5:10 PM

By Approach	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	1	0	1	0	0	0	0	0	0	0	1	1	1
PHF	0.25			0.00			0.00			0.00			0.25

By Movement	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Total
	T	R	Total	L	T	Total			Total	L	R	Total	
Volume	0	1	1	0	0	0			0	0	0	0	1
PHF	0.00	0.25	0.25	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.25

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound S Swan St			Southbound S Swan St			Eastbound Ames St			Westbound Ames St			Interval Total	
	T	R	Total	L	T	Total			Total	L		R		Total
4:00 PM	0	0	0	0	0	0			0	0		0	0	0
4:15 PM	0	1	1	0	0	0			0	0		0	0	1
4:30 PM	0	1	1	0	0	0			0	0		0	0	1
4:45 PM	0	1	1	0	0	0			0	0		0	0	1
5:00 PM	0	1	1	0	0	0			0	0		0	0	1

Peak Hour Summary

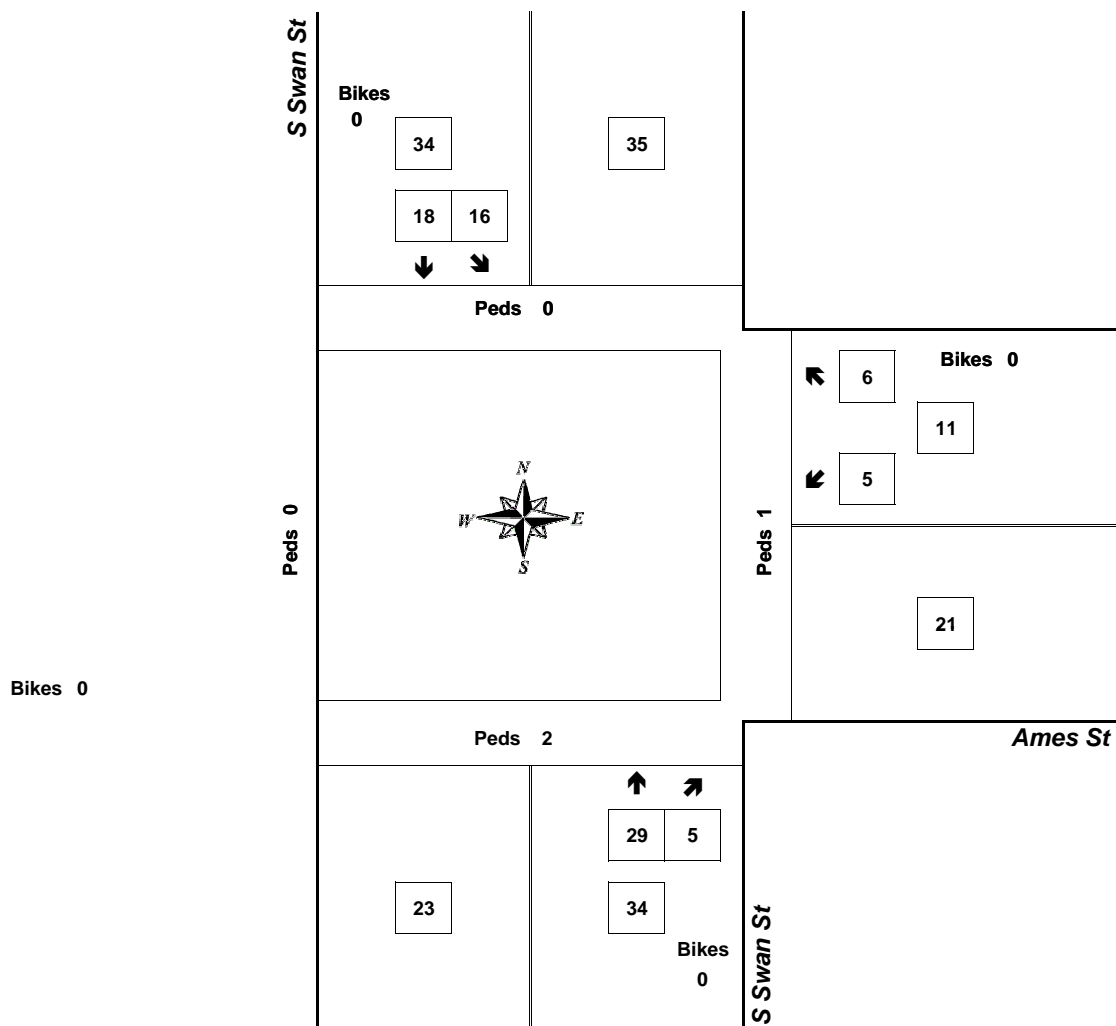


Clay Carney
(503) 833-2740

S Swan St & Ames St

4:10 PM to 5:10 PM

Tuesday, January 07, 2014



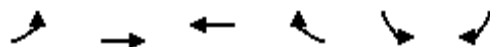
Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.55	0.0%	11
NB	0.71	2.9%	34
SB	0.77	0.0%	34
Intersection	0.90	1.3%	79

Count Period: 4:00 PM to 6:00 PM

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

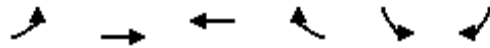
Existing Conditions
Morning Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	1	3	0	0	4
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	1	1	4	0	0	6
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	6				12	8
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	6				12	8
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1612				1003	1070
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	3	4	6			
Volume Left	1	0	0			
Volume Right	0	0	6			
cSH	1612	1700	1070			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	3.6	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	3.6	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		4.5				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis 2: Ames Street & Pasture Way

Existing Conditions
Morning Peak Hour

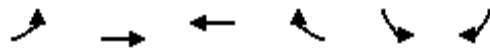


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	0	0	0	0	3
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	1	0	0	0	0	4
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2				7	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2				7	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1618				1010	1076
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	1	0	4			
Volume Left	1	0	0			
Volume Right	0	0	4			
cSH	1618	1700	1076			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	7.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	7.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		8.1				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road








Existing Conditions
Morning Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	160	66	261	33	16	129
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	216	89	353	45	22	174
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	397				897	375
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	397				897	375
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	81				91	73
cM capacity (veh/h)	1135				243	654
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	305	397	196			
Volume Left	216	0	22			
Volume Right	0	45	174			
cSH	1135	1700	551			
Volume to Capacity	0.19	0.23	0.36			
Queue Length 95th (ft)	18	0	40			
Control Delay (s)	6.8	0.0	15.1			
Lane LOS	A		C			
Approach Delay (s)	6.8	0.0	15.1			
Approach LOS			C			
Intersection Summary						
Average Delay			5.6			
Intersection Capacity Utilization		46.9%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 4: Pasture Way & Holcomb School Road

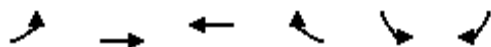
Existing Conditions
Morning Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	1	0	193	144	0
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	0	1	0	261	195	0
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	465	205	205			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	465	205	205			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	551	829	1356			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	1	261	195			
Volume Left	0	0	0			
Volume Right	1	0	0			
cSH	829	1356	1700			
Volume to Capacity	0.00	0.00	0.11			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.3	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.3	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	20.2%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

Morning Peak Hour
2017 Background Conditions

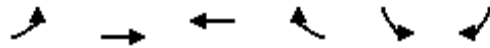


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	1	3	0	0	4
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	1	1	4	0	0	6
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	6				12	8
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	6				12	8
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1612				1003	1070
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	3	4	6			
Volume Left	1	0	0			
Volume Right	0	0	6			
cSH	1612	1700	1070			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	3.6	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	3.6	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		4.5				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

2: Ames Street & Pasture Way

Morning Peak Hour
2017 Background Conditions

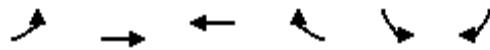


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	0	0	0	0	3
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	1	0	0	0	0	4
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2				7	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2				7	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1618				1010	1076
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	1	0	4			
Volume Left	1	0	0			
Volume Right	0	0	4			
cSH	1618	1700	1076			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	7.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	7.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		8.1				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

Morning Peak Hour
2017 Background Conditions










Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	169	70	277	35	17	138
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	228	95	374	47	23	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	422				949	398
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	422				949	398
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	79				90	71
cM capacity (veh/h)	1111				222	635
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	323	422	209			
Volume Left	228	0	23			
Volume Right	0	47	186			
cSH	1111	1700	527			
Volume to Capacity	0.21	0.25	0.40			
Queue Length 95th (ft)	19	0	47			
Control Delay (s)	7.0	0.0	16.3			
Lane LOS	A		C			
Approach Delay (s)	7.0	0.0	16.3			
Approach LOS			C			
Intersection Summary						
Average Delay		5.9				
Intersection Capacity Utilization		49.2%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

4: Pasture Way & Holcomb School Road

















Morning Peak Hour
2017 Background Conditions

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	1	0	204	154	0
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	0	1	0	276	208	0
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	494	218	218			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	494	218	218			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	530	815	1340			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	1	276	208			
Volume Left	0	0	0			
Volume Right	1	0	0			
cSH	815	1340	1700			
Volume to Capacity	0.00	0.00	0.12			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.4	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.4	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			20.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

















Morning Peak Hour
2017 Background + Site Trips

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	2	1	0	6	0	2	0	0	0	0	4
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	1	3	1	0	8	0	3	0	0	0	0	6
Pedestrians		2			2			2			2	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	10			6			24	19	8	19	19	12
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	10			6			24	19	8	19	19	12
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	99
cM capacity (veh/h)	1606			1612			975	871	1071	989	871	1064
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	6	8	3	6								
Volume Left	1	0	3	0								
Volume Right	1	0	0	6								
cSH	1606	1612	975	1064								
Volume to Capacity	0.00	0.00	0.00	0.01								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	1.8	0.0	8.7	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	1.8	0.0	8.7	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.6									
Intersection Capacity Utilization			14.6%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2: Ames Street & Pasture Way

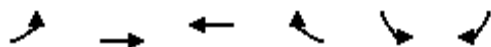
Morning Peak Hour
2017 Background + Site Trips

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	0	1	0	0	0	3	0	0	0	0	3
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	1	0	1	0	0	0	4	0	0	0	0	4
Pedestrians		2			2			2			2	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type							None				None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2			3			12	8	5	8	8	4
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2			3			12	8	5	8	8	4
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1618			1616			995	884	1075	1005	883	1076
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	3	0	4	4								
Volume Left	1	0	4	0								
Volume Right	1	0	0	4								
cSH	1618	1700	995	1076								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	3.6	0.0	8.6	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	3.6	0.0	8.6	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay			7.3									
Intersection Capacity Utilization			14.6%	ICU Level of Service						A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

Morning Peak Hour
2017 Background + Site Trips










Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	172	70	277	36	18	148
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	232	95	374	49	24	200
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	423				958	399
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	423				958	399
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	79				89	68
cM capacity (veh/h)	1110				218	634
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	327	423	224			
Volume Left	232	0	24			
Volume Right	0	49	200			
cSH	1110	1700	525			
Volume to Capacity	0.21	0.25	0.43			
Queue Length 95th (ft)	20	0	53			
Control Delay (s)	7.1	0.0	16.9			
Lane LOS	A		C			
Approach Delay (s)	7.1	0.0	16.9			
Approach LOS			C			
Intersection Summary						
Average Delay			6.2			
Intersection Capacity Utilization		50.1%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

4: Pasture Way & Holcomb School Road

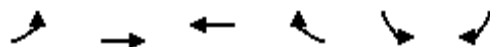
Morning Peak Hour
2017 Background + Site Trips

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	12	4	204	154	0
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	0	16	5	276	208	0
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	505	218	218			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	505	218	218			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	100			
cM capacity (veh/h)	521	815	1340			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	16	281	208			
Volume Left	0	5	0			
Volume Right	16	0	0			
cSH	815	1340	1700			
Volume to Capacity	0.02	0.00	0.12			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	9.5	0.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.5	0.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	23.9%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

Existing Conditions
Midday Peak Hour

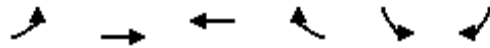


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	2	2	0	0	3
Peak Hour Factor	0.31	0.31	0.31	0.31	0.31	0.31
Hourly flow rate (vph)	6	6	6	0	0	10
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	8				30	10
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	8				30	10
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1609				977	1067
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	13	6	10			
Volume Left	6	0	0			
Volume Right	0	0	10			
cSH	1609	1700	1067			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	3.6	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	3.6	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		4.4				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

2: Ames Street & Pasture Way

Existing Conditions
Midday Peak Hour

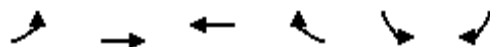


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	0	0	0	0	2
Peak Hour Factor	0.31	0.31	0.31	0.31	0.31	0.31
Hourly flow rate (vph)	6	0	0	0	0	6
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2				17	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2				17	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1618				994	1076
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	6	0	6			
Volume Left	6	0	0			
Volume Right	0	0	6			
cSH	1618	1700	1076			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	7.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	7.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		7.8				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road








Existing Conditions
Midday Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	↩
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	51	176	108	7	18	77
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	74	255	157	10	26	112
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	169				566	164
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	169				566	164
tC, single (s)	4.1				6.5	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	95				94	87
cM capacity (veh/h)	1407				439	847
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	329	167	138			
Volume Left	74	0	26			
Volume Right	0	10	112			
cSH	1407	1700	720			
Volume to Capacity	0.05	0.10	0.19			
Queue Length 95th (ft)	4	0	18			
Control Delay (s)	2.1	0.0	11.2			
Lane LOS	A		B			
Approach Delay (s)	2.1	0.0	11.2			
Approach LOS			B			
Intersection Summary						
Average Delay		3.5				
Intersection Capacity Utilization		31.2%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis 4: Pasture Way & Holcomb School Road

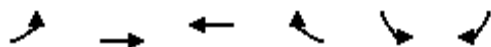
Existing Conditions
Midday Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	1	57	95	0
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	0	0	1	83	138	0
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	233	148	148			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	233	148	148			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	748	892	1422			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	84	138			
Volume Left	0	1	0			
Volume Right	0	0	0			
cSH	1700	1422	1700			
Volume to Capacity	0.00	0.00	0.08			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.1	0.0			
Lane LOS	A	A				
Approach Delay (s)	0.0	0.1	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	10.7%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

Midday Peak Hour
2017 Background Conditions

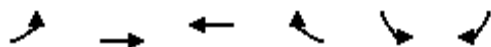


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	2	2	0	0	3
Peak Hour Factor	0.31	0.31	0.31	0.31	0.31	0.31
Hourly flow rate (vph)	6	6	6	0	0	10
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	8				30	10
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	8				30	10
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1609				977	1067
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	13	6	10			
Volume Left	6	0	0			
Volume Right	0	0	10			
cSH	1609	1700	1067			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	3.6	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	3.6	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		4.4				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

2: Ames Street & Pasture Way

Midday Peak Hour
2017 Background Conditions

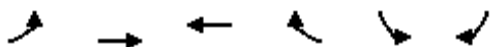


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	0	0	0	0	2
Peak Hour Factor	0.31	0.31	0.31	0.31	0.31	0.31
Hourly flow rate (vph)	6	0	0	0	0	6
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2				17	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2				17	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1618				994	1076
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	6	0	6			
Volume Left	6	0	0			
Volume Right	0	0	6			
cSH	1618	1700	1076			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	7.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	7.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		7.8				
Intersection Capacity Utilization		14.6%	ICU Level of Service	A		
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

Midday Peak Hour
2017 Background Conditions












Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	54	187	114	7	19	82
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	78	271	165	10	28	119
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	177				600	172
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	177				600	172
tC, single (s)	4.1				6.5	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	94				93	86
cM capacity (veh/h)	1396				418	837
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	349	175	146			
Volume Left	78	0	28			
Volume Right	0	10	119			
cSH	1396	1700	704			
Volume to Capacity	0.06	0.10	0.21			
Queue Length 95th (ft)	4	0	19			
Control Delay (s)	2.1	0.0	11.4			
Lane LOS	A		B			
Approach Delay (s)	2.1	0.0	11.4			
Approach LOS			B			
Intersection Summary						
Average Delay			3.6			
Intersection Capacity Utilization		35.8%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

4: Pasture Way & Holcomb School Road

















Midday Peak Hour
2017 Background Conditions

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	  					
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	1	60	101	0
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	0	0	1	87	146	0
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	246	156	156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	246	156	156			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	735	882	1412			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	88	146			
Volume Left	0	1	0			
Volume Right	0	0	0			
cSH	1700	1412	1700			
Volume to Capacity	0.00	0.00	0.09			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.1	0.0			
Lane LOS	A	A				
Approach Delay (s)	0.0	0.1	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	10.9%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

















Midday Peak Hour
2017 Background + Site Trips

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	4	2	0	4	0	2	0	0	0	0	3
Peak Hour Factor	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Hourly flow rate (vph)	6	13	6	0	13	0	6	0	0	0	0	10
Pedestrians		2			2			2			2	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	15			21			56	46	20	46	49	17
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	15			21			56	46	20	46	49	17
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	100	100	100	99
cM capacity (veh/h)	1600			1592			925	840	1054	947	836	1058
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	26	13	6	10								
Volume Left	6	0	6	0								
Volume Right	6	0	0	10								
cSH	1600	1592	925	1058								
Volume to Capacity	0.00	0.00	0.01	0.01								
Queue Length 95th (ft)	0	0	1	1								
Control Delay (s)	1.8	0.0	8.9	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	1.8	0.0	8.9	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.4									
Intersection Capacity Utilization			14.6%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2: Ames Street & Pasture Way

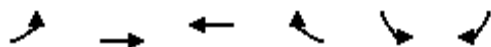
Midday Peak Hour
2017 Background + Site Trips

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	0	2	0	0	0	2	0	0	0	0	2
Peak Hour Factor	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Hourly flow rate (vph)	6	0	6	0	0	0	6	0	0	0	0	6
Pedestrians		2			2			2			2	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type	None								None			
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2			8			27	20	7	20	23	4
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2			8			27	20	7	20	23	4
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	100	100	100	99
cM capacity (veh/h)	1618			1609			969	867	1072	984	864	1076
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	13	0	6	6								
Volume Left	6	0	6	0								
Volume Right	6	0	0	6								
cSH	1618	1700	969	1076								
Volume to Capacity	0.00	0.00	0.01	0.01								
Queue Length 95th (ft)	0	0	1	0								
Control Delay (s)	3.6	0.0	8.7	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	3.6	0.0	8.7	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay			6.1									
Intersection Capacity Utilization			14.6%	ICU Level of Service		A						
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

Midday Peak Hour
2017 Background + Site Trips












Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	60	187	114	8	20	88
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	87	271	165	12	29	128
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	179				618	173
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	179				618	173
tC, single (s)	4.1				6.5	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	94				93	85
cM capacity (veh/h)	1395				405	837
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	358	177	157			
Volume Left	87	0	29			
Volume Right	0	12	128			
cSH	1395	1700	699			
Volume to Capacity	0.06	0.10	0.22			
Queue Length 95th (ft)	5	0	21			
Control Delay (s)	2.3	0.0	11.6			
Lane LOS	A		B			
Approach Delay (s)	2.3	0.0	11.6			
Approach LOS			B			
Intersection Summary						
Average Delay			3.8			
Intersection Capacity Utilization		36.6%		ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

4: Pasture Way & Holcomb School Road

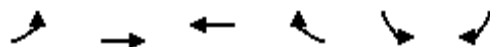
Midday Peak Hour
2017 Background + Site Trips

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	  					
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	7	8	60	101	0
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	0	10	12	87	146	0
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	267	156	156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	267	156	156			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	99			
cM capacity (veh/h)	711	882	1412			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	10	99	146			
Volume Left	0	12	0			
Volume Right	10	0	0			
cSH	882	1412	1700			
Volume to Capacity	0.01	0.01	0.09			
Queue Length 95th (ft)	1	1	0			
Control Delay (s)	9.1	0.9	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.1	0.9	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	19.9%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

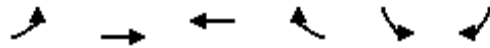
Evening Peak Hour
Existing Conditions



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	↰
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	4	3	2	0	0	2
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	7	5	4	0	0	4
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	6				28	8
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	6				28	8
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1613				980	1071
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	13	4	4			
Volume Left	7	0	0			
Volume Right	0	0	4			
cSH	1613	1700	1071			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	4.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	4.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		4.2				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis 2: Ames Street & Pasture Way

Evening Peak Hour
Existing Conditions

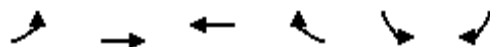


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	0	0	0	0	2
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	5	0	0	0	0	4
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2				15	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2				15	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1618				997	1076
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	5	0	4			
Volume Left	5	0	0			
Volume Right	0	0	4			
cSH	1618	1700	1076			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	7.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	7.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		7.7				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road








Evening Peak Hour
Existing Conditions



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	↰
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	24	296	136	3	3	17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	26	325	149	3	3	19
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	153				529	151
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	153				529	151
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				99	98
cM capacity (veh/h)	1434				504	901
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	352	153	22			
Volume Left	26	0	3			
Volume Right	0	3	19			
cSH	1434	1700	806			
Volume to Capacity	0.02	0.09	0.03			
Queue Length 95th (ft)	1	0	2			
Control Delay (s)	0.7	0.0	9.6			
Lane LOS	A		A			
Approach Delay (s)	0.7	0.0	9.6			
Approach LOS			A			
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization		37.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis 4: Pasture Way & Holcomb School Road

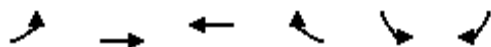
Evening Peak Hour
Existing Conditions

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	1	26	20	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	1	29	22	0
Pedestrians	5					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	58	27	27			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	58	27	27			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	945	1044	1580			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	30	22			
Volume Left	0	1	0			
Volume Right	0	0	0			
cSH	1700	1580	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.3	0.0			
Lane LOS	A	A				
Approach Delay (s)	0.0	0.3	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	8.2%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

Evening Peak Hour
2017 Background Conditions

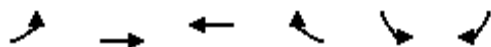


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	4	3	2	0	0	2
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	7	5	4	0	0	4
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	6				28	8
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	6				28	8
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1613				980	1071
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	13	4	4			
Volume Left	7	0	0			
Volume Right	0	0	4			
cSH	1613	1700	1071			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	4.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	4.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		4.2				
Intersection Capacity Utilization		14.6%	ICU Level of Service	A		
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

2: Ames Street & Pasture Way

Evening Peak Hour
2017 Background Conditions

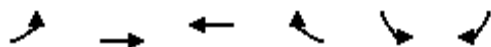


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	0	0	0	0	2
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	5	0	0	0	0	4
Pedestrians		2	2		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2				15	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2				15	4
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1618				997	1076
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	5	0	4			
Volume Left	5	0	0			
Volume Right	0	0	4			
cSH	1618	1700	1076			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	7.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	7.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		7.7				
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

Evening Peak Hour
2017 Background Conditions










Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	25	314	144	3	3	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	27	345	158	3	3	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	162				560	160
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	162				560	160
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				99	98
cM capacity (veh/h)	1424				483	891
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	373	162	23			
Volume Left	27	0	3			
Volume Right	0	3	20			
cSH	1424	1700	795			
Volume to Capacity	0.02	0.10	0.03			
Queue Length 95th (ft)	1	0	2			
Control Delay (s)	0.7	0.0	9.7			
Lane LOS	A		A			
Approach Delay (s)	0.7	0.0	9.7			
Approach LOS			A			
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization		39.0%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

4: Pasture Way & Holcomb School Road

















Evening Peak Hour
2017 Background Conditions

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	1	27	21	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	1	30	23	0
Pedestrians	5					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	60	28	28			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60	28	28			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	942	1043	1579			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	31	23			
Volume Left	0	1	0			
Volume Right	0	0	0			
cSH	1700	1579	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.3	0.0			
Lane LOS	A	A				
Approach Delay (s)	0.0	0.3	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			8.2%		ICU Level of Service	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

















Evening Peak Hour
2017 Background + Site Trips

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	6	2	0	4	0	1	0	0	0	0	2
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	7	11	4	0	7	0	2	0	0	0	0	4
Pedestrians		2			2			2			2	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	9			17			42	39	17	39	40	11
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	9			17			42	39	17	39	40	11
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1608			1598			949	847	1059	957	845	1066
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	7	2	4								
Volume Left	7	0	2	0								
Volume Right	4	0	0	4								
cSH	1608	1598	949	1066								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	2.4	0.0	8.8	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	2.4	0.0	8.8	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			15.3%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2: Ames Street & Pasture Way

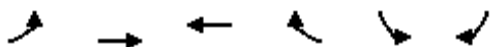
Evening Peak Hour
2017 Background + Site Trips

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Sign Control		Free			Free			Stop			Stop		
Grade		0%			0%			0%			0%		
Volume (veh/h)	3	0	3	0	0	0	2	0	0	0	0	2	
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	
Hourly flow rate (vph)	5	0	5	0	0	0	4	0	0	0	0	4	
Pedestrians		2			2						2		
Lane Width (ft)		12.0			12.0						12.0		
Walking Speed (ft/s)		4.0			4.0						4.0		
Percent Blockage		0			0						0		
Right turn flare (veh)													
Median type		None								None			
Median storage veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	2			5			19	16	5	18	18	4	
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	2			5			19	16	5	18	18	4	
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2	
tC, 2 stage (s)													
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100			100			100	100	100	100	100	100	
cM capacity (veh/h)	1618			1616			986	874	1077	990	871	1076	
Direction, Lane #	EB 1	WB 1	NB 1	SB 1									
Volume Total	11	0	4	4									
Volume Left	5	0	4	0									
Volume Right	5	0	0	4									
cSH	1618	1700	986	1076									
Volume to Capacity	0.00	0.00	0.00	0.00									
Queue Length 95th (ft)	0	0	0	0									
Control Delay (s)	3.6	0.0	8.7	8.4									
Lane LOS	A		A	A									
Approach Delay (s)	3.6	0.0	8.7	8.4									
Approach LOS			A	A									
Intersection Summary													
Average Delay			5.6										
Intersection Capacity Utilization			14.6%	ICU Level of Service			A						
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

Evening Peak Hour
2017 Background + Site Trips












Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	↰
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	36	314	144	5	4	25
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	40	345	158	5	4	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	164				585	161
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	164				585	161
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				99	97
cM capacity (veh/h)	1421				463	889
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	385	164	32			
Volume Left	40	0	4			
Volume Right	0	5	27			
cSH	1421	1700	789			
Volume to Capacity	0.03	0.10	0.04			
Queue Length 95th (ft)	2	0	3			
Control Delay (s)	1.0	0.0	9.8			
Lane LOS	A		A			
Approach Delay (s)	1.0	0.0	9.8			
Approach LOS			A			
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization		39.7%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

4: Pasture Way & Holcomb School Road

Evening Peak Hour
2017 Background + Site Trips

















						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	  					
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	8	14	27	21	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	9	15	30	23	0
Pedestrians	5					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	89	28	28			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	89	28	28			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	99			
cM capacity (veh/h)	900	1043	1579			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	9	45	23			
Volume Left	0	15	0			
Volume Right	9	0	0			
cSH	1043	1579	1700			
Volume to Capacity	0.01	0.01	0.01			
Queue Length 95th (ft)	1	1	0			
Control Delay (s)	8.5	2.5	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.5	2.5	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.5			
Intersection Capacity Utilization			18.9%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: Ames Street & Stables Place

Morning Peak Hour

















2017 Background + Site w/ Cut-Through Trips

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	9	7	0	12	0	8	0	0	0	0	4
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	1	13	10	0	17	0	11	0	0	0	0	6
Pedestrians		2			2			2			2	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type	None								None			
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	19			25			47	41	22	41	46	21
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	19			25			47	41	22	41	46	21
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	100	100	100	99
cM capacity (veh/h)	1595			1587			943	847	1052	956	842	1053
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	24	17	11	6								
Volume Left	1	0	11	0								
Volume Right	10	0	0	6								
cSH	1595	1587	943	1053								
Volume to Capacity	0.00	0.00	0.01	0.01								
Queue Length 95th (ft)	0	0	1	0								
Control Delay (s)	0.4	0.0	8.9	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	0.4	0.0	8.9	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay			2.7									
Intersection Capacity Utilization	17.7%		ICU Level of Service		A							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2: Ames Street & Pasture Way

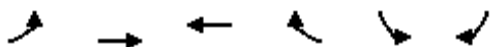
Morning Peak Hour
2017 Background + Site w/ Cut-Through Trips

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	0	8	0	0	0	9	0	0	0	0	3
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	1	0	11	0	0	0	13	0	0	0	0	4
Pedestrians		2			2			2			2	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2			13			17	12	10	12	18	4
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2			13			17	12	10	12	18	4
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	100	100	100	100
cM capacity (veh/h)	1618			1602			988	878	1068	998	872	1076
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	13	0	13	4								
Volume Left	1	0	13	0								
Volume Right	11	0	0	4								
cSH	1618	1700	988	1076								
Volume to Capacity	0.00	0.00	0.01	0.00								
Queue Length 95th (ft)	0	0	1	0								
Control Delay (s)	0.8	0.0	8.7	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	0.8	0.0	8.7	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay			5.3									
Intersection Capacity Utilization			18.2%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

Morning Peak Hour
2017 Background + Site w/ Cut-Through Trips












Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	172	57	265	48	31	148
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	232	77	358	65	42	200
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	423				932	391
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	423				932	391
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	79				81	69
cM capacity (veh/h)	1110				226	641
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	309	423	242			
Volume Left	232	0	42			
Volume Right	0	65	200			
cSH	1110	1700	486			
Volume to Capacity	0.21	0.25	0.50			
Queue Length 95th (ft)	20	0	68			
Control Delay (s)	7.3	0.0	19.5			
Lane LOS	A		C			
Approach Delay (s)	7.3	0.0	19.5			
Approach LOS			C			
Intersection Summary						
Average Delay			7.2			
Intersection Capacity Utilization		50.2%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

4: Pasture Way & Holcomb School Road

Morning Peak Hour
2017 Background + Site w/ Cut-Through Trips

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	25	16	204	154	0
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	0	34	22	276	208	0
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	537	218	218			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	537	218	218			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	98			
cM capacity (veh/h)	492	815	1340			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	34	297	208			
Volume Left	0	22	0			
Volume Right	34	0	0			
cSH	815	1340	1700			
Volume to Capacity	0.04	0.02	0.12			
Queue Length 95th (ft)	3	1	0			
Control Delay (s)	9.6	0.7	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.6	0.7	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		1.0				
Intersection Capacity Utilization		33.9%		ICU Level of Service		A
Analysis Period (min)		15				

CITY OF OREGON CITY, CLACKAMAS COUNTY

HOLCOMB BLVD and Intersection Crashes at HOLCOMB BLVD, City of Oregon City, Clackamas County, 01/01/2009 to 06/30/2013

URBAN NON-SYSTEM CRASH LISTING

Total crash records: 26

SER#	P R S W			CLASS	CITY STREET			INT-TYPE			OFFRD			WTHR			CRASH			SPL USE			MOVE			A S			P E D			ACT EVENT			CAUSE
	E L G H R DAY	E A U C O DATE	D I S T		F I R S T STREET	R D CHAR	(M E D I A N)	I N T - R E L	R N D B T	S U R F	C O L L	T R A F -	D R Y V Y	L I G H T	S U R V Y	F I X	O B J	V H TYPE	O W N E R	T R L R Q T Y	F R O M	P R T C	I N J	G E L I C N S	E X	R E S	L O C	E R R O R	A C T	E V E N T					
																															INVEST	D C S L K TIME	FROM	SECOND STREET	
00042	N N N	01/05/2009	16	HOLCOMB BLVD	UN	UNK	(NONE)	UNKNOWN	N	N	Y	N	WET	RAIN	FIX	FIX	OBJ	01 NONE	PRVTE	0	STRGHT	E -W	01 DRVR	INJB	18 M	OR-Y	OR<25	083,080	000	097,124,062	10				
NO RPT		MO	00000		00		(02)			N	N	N	DARK	INJ				PSNGR	CAR																
00341	N N N	01/26/2009	16	HOLCOMB BLVD	STRGHT	UN	(NONE)	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	PDO	0	01 NONE	PRVTE	0	STRGHT	S -N	01 DRVR	NONE	19 F	OR-Y	OR<25	026	000	000	07				
NO RPT		MO	00000		00		(02)			N	N	N	DAY	PDO				PSNGR	CAR																
00520	N N N	07/16/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
CITY		SA	HOLCOMB BLVD	06			0			N	N	N	DAY	INJ				PSNGR	CAR																
00341	N N N	01/26/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
NO RPT		SA	HOLCOMB BLVD	06			0			N	N	N	DAY	INJ				PSNGR	CAR																
00520	N N N	07/16/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
CITY		SA	HOLCOMB BLVD	06			0			N	N	N	DAY	INJ				PSNGR	CAR																
00341	N N N	01/26/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
NO RPT		SA	HOLCOMB BLVD	06			0			N	N	N	DAY	INJ				PSNGR	CAR																
00520	N N N	07/16/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
CITY		SA	HOLCOMB BLVD	06			0			N	N	N	DAY	INJ				PSNGR	CAR																
00341	N N N	01/26/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
NO RPT		SA	HOLCOMB BLVD	06			0			N	N	N	DAY	INJ				PSNGR	CAR																
00520	N N N	07/16/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
CITY		SA	HOLCOMB BLVD	06			0			N	N	N	DAY	INJ				PSNGR	CAR																
00341	N N N	01/26/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
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NO RPT		SA	HOLCOMB BLVD	06			0			N	N	N	DAY	INJ				PSNGR	CAR																
00520	N N N	07/16/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
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00341	N N N	01/26/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
NO RPT		SA	HOLCOMB BLVD	06			0			N	N	N	DAY	INJ				PSNGR	CAR																
00520	N N N	07/16/2011	16	APPPERSON BLVD	INTER	SW	3-LEG	UNKNOWN	N	N	N	N	CLR	S-1STOP	REAR	INJ	0	01 NONE	PRVTE	0	STRGHT	SW-NE	01 DRVR	NONE	24 F	OR-Y	OR<25	026	000	000	07				
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CITY		SA	HOLCOMB BLVD	06			0			N	N	N																							

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CDS380
01/30/2014

CITY OF OREGON CITY, CLACKAMAS COUNTY
HOLCOMB BLVD and Intersectional Crashes at HOLCOMB BLVD, City of Oregon City, Clackamas County, 01/01/2009 to 06/30/2013
URBAN NON-SYSTEM CRASH LISTING
Total crash records: 26

S P	D R W	E A U C O D E	C L A S S	C I T Y S T R E E T	F I R S T S T R E E T	R D C H A R	I N T - T Y P E (M E D I A N)	O F F R D	W T H R	C R A S H	S P C I A L U S E	M O V E	P H T Y P E	S U R V E Y	I N J	A S	P E D	E R R O R	A C T E V E N T	C A U S E																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

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CITY OF OREGON CITY, CLACKAMAS COUNTY

HOLCOMB BLVD and Intersectional Crashes at HOLCOMB BLVD, City of Oregon City, Clackamas County, 01/01/2009 to 06/30/2013

URBAN NON-SYSTEM CRASH LISTING

Total crash records: 26

S P E S R E A U C O D A T E D I S T F R O M T O T I M E	D A T E	C L A S S	C I T Y S T R E E T	R D C H A R	I N T - T Y P E (M E D I A N)	O F F R D	W H E R E	C R A S H	S P C I A L U S E	M O V E	P T C	I N J	A S	E L I C I T S	P E D	C A U S E
INVEST	D.C.S.L.K	TIME	FROM	TO	TYPE	VEHICLE	TYPE	TYPE	TYPE	TYPE	TYPE	TYPE	TYPE	TYPE	TYPE	TYPE
01882	N N N	05/22/2012	16	HOLCOMB BLVD	INTER	N	N	RAIN	S-1 STOP	0	STRGHT	NONE	27	F	OR-Y	07
NONE		10A		REDLAND RD	06	0		WET	REAR	PRVTE	NE-SW					00
								DAY	PDO	PSNGR CAR						07
										02 NONE	STOP					00
										PRVTE	NE-SW					00
										PSNGR CAR						00
04002	Y N N N	10/31/2010	16	HOLCOMB BLVD	INTER	CROSS	N	RAIN	O-STRGHT	0	STRGHT	NONE	24	M	OR-Y	11, 01
NONE		11P		REDLAND RD	06	0		WET	HEAD	PRVTE	SE-NW					00
								DLIT	INU	PSNGR CAR						01
										01 NONE	STOP					00
										PRVTE	SE-NW					00
										PSNGR CAR						00
										02 NONE	STOP					00
										PRVTE	NW-SE					00
										PSNGR CAR						00
01653	N N N	05/13/2013	16	HOLCOMB BLVD	INTER	CROSS	N	CLR	S-1 STOP	0	STRGHT	NONE	00	M	OR-Y	07
NONE		3P		REDLAND RD	06	0		DRY	REAR	PRVTE	NW-SE					00
								DAY	PDO	PSNGR CAR						07
										02 NONE	STOP					00
										PRVTE	NW-SE					00
										PSNGR CAR						00
										02 NONE	STOP					00
										PRVTE	NW-SE					00
										PSNGR CAR						00
01969	N N N	06/03/2011	16	HOLCOMB BLVD	INTER	CROSS	N	CLR	O-1 TURN	0	STRGHT	NONE	59	M	OR-Y	04
CITY		6A		REDLAND RD	03	0		DRY	TURN	PRVTE	NW-SE					00
								DAY	PDO	PSNGR CAR						04
										02 NONE	TURN-L					00
										PRVTE	SE-SW					00
										PSNGR CAR						00
04046	Y N N	10/30/2011	16	HOLCOMB BLVD	CURVE	(NONE)	N	RAIN	S-STRGHT	0	STRGHT	NONE	77	M	OTH-Y	05
CITY		3P	141	REDLAND RD	05	(02)		WET	SS-O	PRVTE	E -W					00
								DAY	INU	PSNGR CAR						05
										02 NONE	STOP					00
										PRVTE	W -E					00
										PSNGR CAR						00
01404	Y N N N	04/30/2010	16	HOLCOMB BLVD	CURVE	(NONE)	N	CLD	O-STRGHT	0	STRGHT	NONE	51	F	OR-Y	27, 05, 01
CITY		11A	200	REDLAND RD	07			WET	SS-M	PRVTE	SE-NW					00
								DAY	INU	PSNGR CAR						038
										01 NONE	STOP					00
										PRVTE	NW-SE					00
										PSNGR CAR						00

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Left-Turn Lane Warrant Analysis

Le

Intersection: Holcomb Boulevard at Holcomb School Road

Date: 1/30/2014

Scenario: 2017 Background + Site Trips

Time: Morning Peak Hour

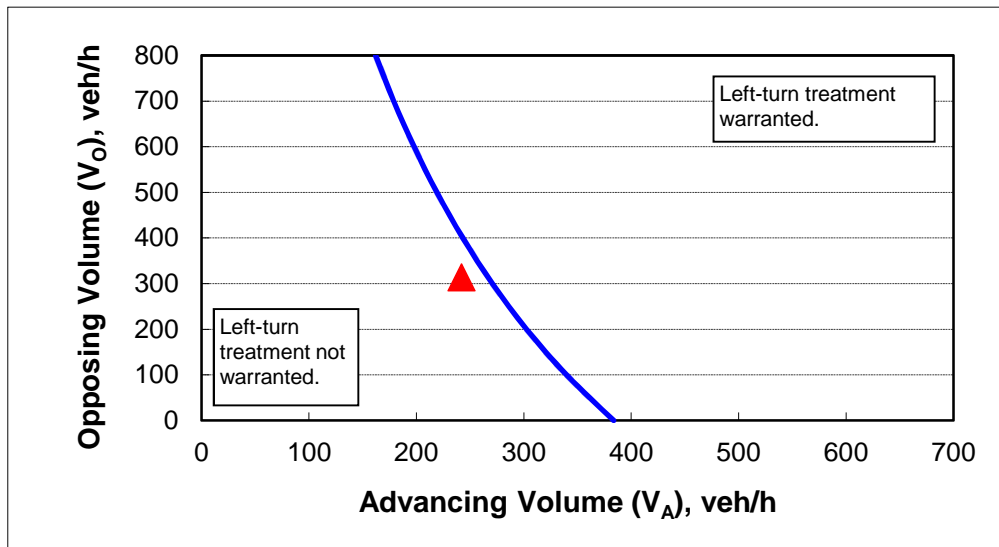
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	71%
Advancing volume (V_A), veh/h:	242
Opposing volume (V_O), veh/h:	313

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	267
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9



TRIP GENERATION CALCULATIONS

Reasonable worst-case development scenario under existing R-10 Zoning

Land Use: Single-Family Detached Housing
Land Use Code: 210
Variable: Dwelling Units
Variable Value: 25

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	5	14	19

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	16	9	25

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	119	119	238

SATURDAY

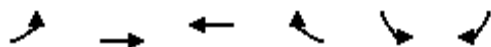
Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	124	124	248

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

2034 Planning Horizon - Existing Zoning
Morning Peak Hour

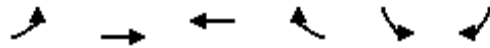


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	243	99	392	51	25	202
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	286	116	461	60	29	238
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	521				1179	491
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	521				1179	491
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	72				80	58
cM capacity (veh/h)	1020				146	562
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	402	521	267			
Volume Left	286	0	29			
Volume Right	0	60	238			
cSH	1020	1700	427			
Volume to Capacity	0.28	0.31	0.62			
Queue Length 95th (ft)	29	0	103			
Control Delay (s)	7.9	0.0	26.4			
Lane LOS	A		D			
Approach Delay (s)	7.9	0.0	26.4			
Approach LOS			D			
Intersection Summary						
Average Delay			8.6			
Intersection Capacity Utilization		66.3%		ICU Level of Service		C
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

2034 Planning Horizon - Proposed Zoning
Morning Peak Hour

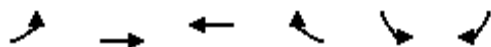


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	243	99	392	51	26	204
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	286	116	461	60	31	240
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	521				1179	491
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	521				1179	491
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	72				79	57
cM capacity (veh/h)	1020				146	562
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	402	521	271			
Volume Left	286	0	31			
Volume Right	0	60	240			
cSH	1020	1700	425			
Volume to Capacity	0.28	0.31	0.64			
Queue Length 95th (ft)	29	0	108			
Control Delay (s)	7.9	0.0	27.2			
Lane LOS	A		D			
Approach Delay (s)	7.9	0.0	27.2			
Approach LOS			D			
Intersection Summary						
Average Delay		8.8				
Intersection Capacity Utilization		66.4%		ICU Level of Service		C
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

2034 Planning Horizon - Existing Zoning
Midday Peak Hour

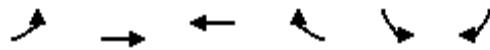


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	↰
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	83	264	162	12	28	121
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	120	383	235	17	41	175
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	254				869	245
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	254				869	245
tC, single (s)	4.1				6.5	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	91				85	77
cM capacity (veh/h)	1309				278	761
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	503	252	216			
Volume Left	120	0	41			
Volume Right	0	17	175			
cSH	1309	1700	573			
Volume to Capacity	0.09	0.15	0.38			
Queue Length 95th (ft)	8	0	44			
Control Delay (s)	2.6	0.0	15.0			
Lane LOS	A		C			
Approach Delay (s)	2.6	0.0	15.0			
Approach LOS			C			
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utilization		47.0%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

2034 Planning Horizon - Proposed Zoning
Midday Peak Hour

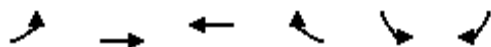


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰		↰	↰
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	84	264	162	12	28	123
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	122	383	235	17	41	178
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	254				872	245
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	254				872	245
tC, single (s)	4.1				6.5	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	91				85	77
cM capacity (veh/h)	1309				276	761
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	504	252	219			
Volume Left	122	0	41			
Volume Right	0	17	178			
cSH	1309	1700	574			
Volume to Capacity	0.09	0.15	0.38			
Queue Length 95th (ft)	8	0	44			
Control Delay (s)	2.7	0.0	15.1			
Lane LOS	A		C			
Approach Delay (s)	2.7	0.0	15.1			
Approach LOS			C			
Intersection Summary						
Average Delay		4.8				
Intersection Capacity Utilization		47.2%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

2034 Planning Horizon - Existing Zoning
Evening Peak Hour

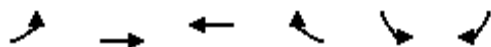


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	↩
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	46	444	204	7	6	31
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	51	488	224	8	7	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	232				817	228
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	232				817	228
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				98	96
cM capacity (veh/h)	1342				336	816
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	538	232	41			
Volume Left	51	0	7			
Volume Right	0	8	34			
cSH	1342	1700	662			
Volume to Capacity	0.04	0.14	0.06			
Queue Length 95th (ft)	3	0	5			
Control Delay (s)	1.1	0.0	10.8			
Lane LOS	A		B			
Approach Delay (s)	1.1	0.0	10.8			
Approach LOS			B			
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization		50.4%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Holcomb Boulevard & Holcomb School Road

2034 Planning Horizon - Proposed Zoning
Evening Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	↩
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	47	444	204	7	6	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	52	488	224	8	7	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	232				819	228
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	232				819	228
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				98	96
cM capacity (veh/h)	1342				334	816
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	540	232	43			
Volume Left	52	0	7			
Volume Right	0	8	36			
cSH	1342	1700	668			
Volume to Capacity	0.04	0.14	0.06			
Queue Length 95th (ft)	3	0	5			
Control Delay (s)	1.1	0.0	10.8			
Lane LOS	A		B			
Approach Delay (s)	1.1	0.0	10.8			
Approach LOS			B			
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization		50.5%		ICU Level of Service		A
Analysis Period (min)			15			

REPLINGER & ASSOCIATES LLC
TRANSPORTATION ENGINEERING

April 30, 2014

Mr. Pete Walter
City of Oregon City
PO Box 3040
Oregon City, OR 97045

**SUBJECT: REVIEW OF TRANSPORTATION IMPACT STUDY – SUNNYBROOK II
SUBDIVISION – ZC14-01 & TP14-01**

Dear Mr. Walter:

In response to your request, I have reviewed the materials submitted in support of the proposed Sunnybrook II subdivision. The relevant materials included the project narrative, site plan and the Transportation Impact Study (TIS). The TIS is dated February 4, 2014 and was prepared under the direction of Todd E. Mobley, PE of Lancaster Engineering.

The proposed subdivision with 29 lots is located to the south of Ames Street and north of Holcomb School Road. Two short streets perpendicular to Ames Street would be extended southward from Ames Street with a new connection to Holcomb School Road.

The TIS provides a basis upon which the subdivision proposal can be evaluated for transportation impacts.

Comments

1. Study Area. The study addresses the appropriate intersections. The engineer evaluated traffic patterns and traffic volumes and evaluated four locations. The key intersections were:

- Ames Street/Stables Place
- Ames Street/Pasture Way
- Holcomb Boulevard/Holcomb School Road
- Holcomb School Road/Pasture Way

The study area is appropriate.

2. Traffic Counts. The traffic counts were conducted in January 2014 at the intersection of Holcomb Boulevard and Holcomb School Road. Traffic counts were conducted during the AM, mid-day, and PM peak periods. Traffic volumes at the other locations were derived from trip generation data and travel characteristics of the area. Mid-day traffic

volumes were also used because of the proximity to the school. The base year traffic volumes appear reasonable.

3. **Trip Generation.** The TIS presents information on trip generation from the construction of 29 single-family dwellings. The trip generation rates were taken from the Institute of Transportation Engineers' *Trip Generation*. The subdivision is predicted to produce 22 AM peak hour trips; 22 mid-day peak hour trips; 29 PM peak hour trips; and 288 total weekday trips.
4. **Trip Distribution.** The engineer's trip distribution shows 60 percent of traffic going to and from the southwest on Holcomb Boulevard; 10 percent using Holcomb Boulevard to the east; and 30 percent using Ames Street. The trip distribution seems reasonable.
5. **Traffic Growth.** To account for background traffic growth, the traffic counts were adjusted by two percent per year through 2017. The traffic growth assumptions and methodology appear reasonable.
6. **Analysis.** Traffic volumes were calculated for the intersections described in #1, above. At each location, the level of service (LOS) and delay calculations were provided to assess operations relative to the city's operational standard. The analysis was undertaken for the AM, mid-day, and PM peak hours and included year 2014 existing conditions, 2017 background conditions, and year 2017 total traffic conditions.

According to the engineer, the intersection of Holcomb Boulevard and Holcomb School Road is predicted to operate at LOS "C" during the AM peak hour; "B" during the mid-day peak hour and "A" during the PM peak hour under all conditions. The intersection volume-to-capacity ratio (v/c) is predicted to be 0.43 or better under all conditions and easily meets the city's operational standard. The other three intersections are predicted to operate at LOS "A" or better under all conditions during all hours. The performance of all study area intersections is predicted to meet city standards during the peak hours.

The engineer also analyzed the potential for the new connection, Pasture Way, from Ames Street to Holcomb School Road to shift traffic patterns. He concluded that even with the potential new cut-through traffic, the intersections would still easily meet the city's operational standards. I found his methodology to be sound and concur with his conclusions on the ability of the streets to accommodate this neighborhood traffic.

The engineer concluded no mitigation measures were necessary. I concur with his conclusions.

7. **Turn Lanes at Site Entrance(s).** The engineer also analyzed the need for a left-turn lane on Holcomb Boulevard at Holcomb School Road. He concluded that a left-turn lane is not now warranted nor will it be with the completion of this development. This is

consistent with the configuration of the road specified in the Holcomb Boulevard Pedestrian Improvement Plan.

- 8. *Crash Information.*** The TIS provides crash information for the most recent five-year period. No crashes were reported on Ames Street and there did not appear to be any reported crashes at the intersection of Holcomb Boulevard and Holcomb School Road.
- 9. *Pedestrian and Bicycle Facilities.*** The narrative and site plan indicate pedestrian facilities would be provided within the development. The TAS identifies the discontinuous sidewalks along Ames Street and that sidewalks are only provided on one side of Holcomb School Road.
- 10. *Site Plan and Access.*** The subdivision proposes three access points: two on Ames Street and one on Holcomb School Road. The two on Ames Street would involve converting the existing T-intersections at Stables Place and Pasture Way into four-leg intersections. The new intersection at Holcomb School Road and Pasture Way would be constructed at the site of an existing driveway. All three access points would be governed by stop-control on the minor streets exiting the subdivision.
- 11. *Intersection Spacing.*** As described above, one new intersection would be created on Holcomb School Road approximately 300 feet northeast of the existing intersection of Holcomb Boulevard and Holcomb School Road. The proposed spacing is appropriate given the configuration and classification of the existing streets. A second new intersection, Pasture Way/Stables Place, would be constructed within the subdivision. The spacing of the intersections on Ames Street is already established. Spacing for all proposed intersections is appropriate.
- 12. *Sight Distance.*** The engineer measured sight distance at all three proposed site access locations. Along Ames Street, he measured it to be in excess of the 280 feet associated with a 25-mph statutory speed. At the proposed new intersection of Pasture Way and Holcomb School Road, he measured sight distance in excess of 350 feet to the southwest and noted that one can see the entire school parking lot. He concluded sight distance is adequate at all three locations. I concur with his analysis and conclusions about the adequacy of sight distance.
- 13. *Consistency with the Transportation System Plan (TSP).*** The project narrative indicates frontage improvements would be made to city standards. The subdivision also provides the added benefit of increasing connectivity in an area where it is currently lacking. This, too, is consistent with the TSP and is highly desirable.
- 14. *Transportation Planning Rule (TPR) Analysis.*** Because the applicant is proposing to rezone the property from R-10 to R-8, a TPR analysis is also included. He provided an analysis of the maximum trip generation under R-10 and concluded the impact was

negligible. During the PM peak hour, the subdivision would generate 4 additional trips due to the higher density proposed in this rezoning. The engineer states that the proposal does not change the functional classification of any existing or planned transportation facility; does not alter the standards for implementing the functional classification system; and does not alter the level of travel or degrade the performance of the transportation system such that it would not meet applicable performance standards. I concur.

15. Conclusions and Recommendations. The engineer concludes that traffic operations would be adequate at all analyzed intersections. He concludes no mitigation is needed for traffic operations. He concludes no safety mitigation is necessary and sight distance is acceptable. I concur with the conclusions of the applicant's engineer.

Conclusion and Recommendations

I find that the TIS provides an adequate basis upon which to assess the impacts of the proposed subdivision. I agree that off-site mitigation for traffic impacts is not required.

If you have any questions or need any further information concerning this review, please contact me at replinger-associates@comcast.net.

Sincerely,

A handwritten signature in cursive script that reads "John Replinger".

John Replinger, PE
Principal

Planning Commission

My name is Woody Berends. I have lived on the corner of Ames St & Swan Av. here in Oregon City for nearly 20 years. I have many concerns about Icons new project proposed to be built at the end of Ames. As it is now the roadway on the the only exit off ames is under 20" wide with no sidewalks. Not enough room for 2 cars to pass if both are not regular sized passenger cars. This corner is a hazard as it is without adding a minimum of 50 to 60 extra cars each day. This is the main school bus stop for this area. People set in their cars on the side of the road to wait for the bus to come which makes this road even worse. This is very dangerous for all with such a narrow road. This must be addressed before the project is allowed to move on because this is the only exit and entrance to this project.

I have an open ditch on the edge of my property that I have maintained since I started living here. It used to run a normal amount of water when it rained. As the building has continued down Ames the ditch runs full because all the natural drainage is gone. It has even flooded my property before creating a lot of damage. When people park on the edge of this ditch to wait for the school bus the side of this drainage ditch caves off in to the ditch creating more work for me. I'm getting old am not able to do as much as when I was younger therefore the ditch becomes clogged then floods. A few years ago they added several homes on Thurman Rd just across the street. Before we knew it they added a pipe from that developments bio swell into our ditch that creates a real mess with extra water and debris hangs up on the pipe that creates clogs also. This should have never happen. The developer should have been responsible for bringing this entire corner up to standards as should this developer. Their projects created a mess for me that most people don't even know exists.

This was a rural area when we moved here now it is not. We have adjusted but there is a matter of safety here that needs much consideration. This corner needs improved by the developer for this project to proceed. This project also needs another outlet. Without these improvements this project should not move forward, it puts to many people at risk.

Rural roads need upgraded by those who are making the upgrades to the area. This project should not be considered for anything other than R-10 because if we wanted to live in Portland we would have moved there in the first place. Living elbow to elbow is not for everyone. The new houses that were just built off Ames were required to have R-10 and so should this project. People like this area because of the rural feel and Ames can not safely carry anymore cars as it is now. Safety is a very big issue here.

Sincerely,



RECEIVED
CITY OF OREGON CITY
2014 APR 30 AM 9:58

Even though Icon Construction can average the lot sizes, the basis for this particular average is based on the existing house on Ames Street that he proposes will be on a 12,000 sq. ft. lot. In my opinion, it does not equally equate. Mr. Handris had previously proposed changing the zoning to "R-6" for this same subdivision. This was an outrageous proposal and he heard the Park Place Neighborhood loud and clear. So now, he wants to appease us by keeping a few lots on Ames Street as "R-10" and changing the majority to the south as "R-8". A previous developer, Greg Ives attempted to decrease the zoning for the "Ives Estate" subdivision on Cherabon Ct. and Ames St. and Oregon City denied his request. Why now, would Oregon City approve a change in zoning? Is it the revenue that the City will receive? Is that what is important; do you want happy property owners living in Oregon City and letting others know to come live here because the livability is awesome? It is a common concern of our neighborhood that Mr. Handris is purchasing many properties to develop into small lots; not even enough room for children to play in their own yards, but play out in the streets. It is obviously for his financial benefit. However, he could choose to build within the current zoning requirements and choose to build for the better of the community. When the "Sunnyside Estates" subdivision was built by Icon (Stables Place and Pasture Way), there were trucks coming and going bringing in hundreds of loads of dirt, etc. constantly. There were times that we had to wait for trucks to pass before being able to drive down Ames Street. Our driveway was often blocked and neighbors were frustrated about the situation. When Icon Construction built the subdivision north of our property, "Altona Lane", I phoned their office and talked to a representative about possible fencing for the homes and was reassured that the entire subdivision would be fenced. I called more than one time to talk about the concern when we noticed the entire subdivision WAS NOT being fenced. None of my calls were returned or answered. There was no fence built behind an existing home that was already in the subdivision and no fence was built at the end of Altona Lane dead ending at our property line. My husband had to build the fence to keep our privacy! I have to admit, this left me not trusting Icon Construction or Mark Handris on their word.

One of the proposed streets (Stables Place) will only be a half street along the lower west side, because the developer will not have enough right of way or property to build a full width street. Is this acceptable code? What about our property values? What about some facts showing that smaller lots and homes will eventually become rentals? Then the real problems begin. Right now, we believe our crime rate is lower because Ames Street is one-way in and one-way out. The bad guys cannot come through when running from the law.

What happened to the "QUALITY OF LIFE" that we were looking for when we moved to this area with large lots and livability for our children to play and grow up in a neighborhood where we know who our neighbors are?

I ask that you not approve the requested subdivision, but if you do approve the subdivision, then PLEASE do not approve the zone change. Thank you for your time.

Sincerely,

A handwritten signature in dark ink, appearing to read "Debbie Fuller", with a stylized, flowing script.

Debbie Fuller
15981 Ames Street

PARK PLACE NEIGHBORHOOD ASSOCIATION
16298 S. Oaktree Terrace, Oregon City, Oregon 97045

DATE: April 27, 2014
TO: Oregon City Planning Department
FROM: Bob La Salle, Chair, Park Place Neighborhood Association
SUBJECT: Sunnybrook Subdivision, File #ZC 14-01

2014 APR 28 PM 2:44
RECEIVED
CITY OF OREGON CITY

This letter is in regard to the proposed zoning change for this subdivision.

The neighbors of the adjoining properties have had several meetings in regard to this subdivision and are opposed to a reduction of zoning from R-10 to R-8. They enjoy their rural and pastoral feeling of their neighborhood and can see no reason for the change. Following are some of the many concerns they have.

R-8 zoning does not fit in with the character of this neighborhood and is not compatible with maintaining neighborhood continuity with existing housing types, land values as well as livability. R-10 is the condition of which they bought their homes. Being surrounded by R-10 zoned property is the condition of which they bought their homes. They like the rural feel and many rejected buying in other areas because there was nearby or adjoining smaller density housing. By changing to smaller lot sizes you would be changing their conditions and reasons for purchasing as they did. Merely the difference in set backs from R-10 to R-8 are enough to change the "feel" and personality of the community. The side set backs are reduced by 2' between each house. That results in a total of 40' reductions of all of the R-8 lots. The front porch set backs are reduced by 5' from R-10 to R-8, resulting in an entirely different feel and look to the streets.

Several people have addressed concerns of the narrow width of Ames Street where it intersects with Swan Avenue. The developers answer to that was he does not have to be concerned with that as it is outside of his area of responsibility. Also, this intersection is not studied in the required Traffic Study, but that doesn't make the problem go away. The traffic impact at Swan and Forsythe and Swan and Holcomb are also not addressed but there certainly will be an impact. Making the problems at those intersections go away is the job of a magician, not that of a Planning Commission.

What will be done to replace or repair the existing streets after all the heavy construction traffic damages them? I'm sure if it is not required by the builder, the citizens of Oregon City and the Public Works department will bear the cost.

There are many concerns about the street connection to School Street such as safety and congestion, both during and after construction. The Traffic Study doesn't address the congestion problems at the beginning and ending of the school day.

At lots 21-24 Stables Place is quite narrow. Will there be no parking on both sides of the street and has the Fire Department approved that restriction?

Speaking of the Traffic Impact Study there seems to be some important issues. As stated before, the intersections of Ames and Swan, Swan and Forsythe and Swan and Holcomb are not addressed. It may not be required to address these intersections but that doesn't make the potential problems go away. It doesn't make common sense to not address them. I have taken just one example of which there seems to be a discrepancy in the Study. At intersection #3 Holcomb Boulevard and School Street existing conditions show that during morning peak there are 193 trips into School Street from Holcomb but it shows no trips out all day. During the projected 2017 conditions it shows there are 208 trips into School Street but none out all day. It's entirely possible I may be reading that wrong but I'd sure like to see how.

From the Oregon City Comprehensive Plan;

Sec. 10 "The housing goals and policies listed in this section are intended to ensure that the Integrity of existing neighborhoods are protected." This change in zoning does not comply to that goal.

Sec. 12 "Provide an interconnected and accessible street system that minimizes vehicle miles travelled and inappropriate cut through traffic." This plan facilitates "cut through" traffic.

Sec. 14 Urbanization.----ensuring that the City's basic utilities and facilities, especially its transportation system, have the capacity to handle the growth." This subdivision certainly doesn't conform to the traffic requirement.

In regard to lot sizes the following should be considered. Lots 1-9 average 9,998 sq. ft.. Take out the dimensions of lot 5 (12,975 sq. ft.) and that goes down to 9,625 sq. ft.. 60% of those lots are below 10,000 sq. ft.. Lots 10-29 average 8017 sq. ft.. However, by allowing averaging this results in 75% of those lots being under 8,000 sq. ft.. Of course, lot 16 with 11,370 sq. ft., skews this whole figure. By playing with figures the developer follows the averaging rules of reducing lot sizes, but fails in the "spirit" of the rules and also fails to be a good neighbor.

An email dated April 18, 2014 from Kelly Moosbrugger to the PPNA Land Use Chair Debbie Fuller in regard to the Engineering Plans: "Kennedy Jenks reviews the application to insure it is complete before we process it. Because the deadline was missed, we deemed the application complete without Kennedy Jenks weigh in on it". This appears that there is no attention or value being placed on some deadlines, while others may be strictly enforced. Can you tell me if I had not turned this letter in on or before the required date could it still be considered? I'll bet the City Attorney would tell you it could not be considered.

In conclusion I would like to state there seems to be a troublesome trend in Oregon City. The builders purchase property and then try to reduce the zoning. We all know this is to enable them to build more homes on the same amount of land. In the case of this subdivision such downsizing of the lots is adversely impacting the adjacent homeowners lives. I am asking you, the citizen Planning Commission to consider the impact your decision may have on some of your fellow citizens. It has been said the Planning Commissioners are not supposed to give consideration to some kinds of testimony. There is a big difference between "not supposed to" and "can't" As Commissioners it is your responsibility to protect the citizens interests. In that context I cannot see you doing anything but denying this request for a zone change.

Most Sincerely;

Bob La Salle

Rec'd Feb 3rd, 2014

C. R. H. - G.

PARK PLACE NEIGHBORHOOD ASSOCIATION

16298 S. Oaktree Terrace, Oregon City, Oregon 97045

January 31, 2014

TO: Oregon City Planning Department

Comments
were submitted
prior to notice
period.

This letter is in regard to the proposed zoning change for the proposed development at 14450 Ames Street.

During the Park Place Neighborhood Association steering committee meeting of January 20, 2014 the following questions and concerns were discussed with the developer representative Rick Givens and representatives from Icon Construction. There were 45 residents in attendance.

Several people expressed concern of the narrow width of Ames Street where it intersects Swan Ave. Mr. Givens stated they would not have to do anything about that as it is outside of the development area. *Note: Ames Street is less than 20 feet wide at that point and already experiences serious congestion, especially during school bus loading and unloading.*

Several people expressed shock that the developer was trying to get a street at the southwest corner of the development connected to School Street. They expressed extreme concern over safety issues at that very congested area, especially when children are starting and ending the school day. There is already serious backup during these times. *NOTE: Since there are limited sidewalks in the Park Place neighborhood leading to the school many parents choose to drive their children to and from school.* Mr. Givens said they are working with the school district about getting an easement to allow street connection and didn't address the safety concerns.

Neighbors were concerned that heavy construction vehicles would destroy the existing street. No answer was given to that concern.

It was asked if Holcomb Elementary School has enough capacity for the anticipated increase in attendance figures. Erin Fernald, Holcomb PTA Chair, stated there was not. The school is already full.

It was asked if the required traffic study had been completed. The answer was no.

Concerns about additional traffic on Swan Street, Forsythe Road and Holcomb Blvd. were expressed. When asked what the additional estimation of traffic was the answer was that is "not in my field".

Many neighbors are concerned about reduction of their property values if zoning is changed in any way from R-10. R-10 is the condition of which they bought their homes and any reduction in lot sizes is not acceptable. They like the rural feel and many rejected buying in other areas because that was near or adjacent to smaller density property. By changing to smaller lot sizes you would be changing their conditions and reasons for purchasing as they did.

When asked what the real reason was for asking for a reduction in lot sizes it was admitted, after the question had been asked several times, part of it was economics.

In conclusion, the neighbors in attendance of at least two meeting in regard to this zone changing are in opposition to any changes. They realize development is inevitable but wish it to maintain the current zoning of R-10 to allow the rural feel of their pleasant neighborhood to remain.

Attached are copies of the attendance sheets for this meeting.

Most Sincerely;

A handwritten signature in cursive script that reads "Bob La Salle".

Bob La Salle

Chair-Park Place Neighborhood Assoc.

PARK PLACE NEIGHBORHOOD ASSOCIATION

SIGN IN SHEET

DATE: Jan 20, 2014

NAME	ADDRESS	PHONE	E-MAIL
Debbie Marge Staudenmaier	14491 S Ames	503 557-8627	LILSLVERDude@aol.com
Carolyn Draeger	14511 Ames St.	503-656-0447	carolyn.draeger@gmail.com
Bob Schell	16248 S. Oak Tree Ter.	503-718-7969	jeanbob06@comcast.net
Gary Martin	15813 Altova Ln	503 881 4750	marting1@comcast.net
Woody & Susan Berends	15880 Swan Av	503 655 2798	suebe52@hotmail.com
Debbie & Bill Finner	15981 AMES ST	503-888-1972	gramx3@gmail.com
John Anderson	16179 Wideman Ct.	503-850-4651	
JAY + LAURA OVEREN	15911 ALTUNA LANE	503-310-9899	JAYOVEREN@COMCAST.NET
PARRIS GISSDORF	1742 19 th ST West Linn	503-481-4450	
RICK & Chris D'Angelo	15912 Altuna LN OC	503 307 1537	RADRIK1@hotmail.com
FRANK & Diane DURKEE	15817 PASTURE WAY	503 816-3038	durkee4@gmail.com
Todd & Pauline Barrett	15834 Pasture Way	503-830-3568	pauline.todd@gmail.com
Jerry & Molly Bruck	14456 Ames St	503-722-9354	mollybruck@gmail.com
Tim & Barbara Hart	15850 Pasture Way	503-857-9007	
Ron & Janice VanDornen	15831 Stables Pl	503-655-1740	vandornen666@comcast.net
Jim & Jennifer REEVES	15849 PASTURE WAY	503-577-7192	SPANKY3474@gmail.com
Erin Fernald	14850 Smithfield Drive	503-545-2851	epfernald@yahoo.com

PARK PLACE NEIGHBORHOOD ASSOCIATION

SIGN IN SHEET

DATE:

January 2012014

NAME

ADDRESS

PHONE

E-MAIL

Tom Veff

14415 Ames St. OC,
OR, 97045

503-657-1800

~~Tom Veff~~ TomVeff@Comcast.NET

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MARK HANDRIS

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Evelyn Mast

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masteka@yahoo.com

PARK PLACE NEIGHBORHOOD ASSOCIATION

SIGN IN SHEET

DATE: January 20, 2014

[illegible]

Duane & Wanda Shearer

14462 Ames St.

Oregon City, OR 97045

April 21, 2014

2014 MAY -1 PM 2:15
RECEIVED
CITY OF OREGON CITY

Oregon City Planning Commission

221 Molalla Ave.

Oregon City, OR 97045

RE: File # ZC 14-01: Zone Change from "R-10" to "R-8" Single Family Dwelling District

TP 14-01: 29 Lot Subdivision

Applicant: ICON

Dear Sirs,

We don't feel you should change the Zoning from "R-10" to "R-8", because of safety concerns. Ames St. is a narrow and dead end street. We do not have sidewalks the full length of Ames St. The added traffic is a major concern. The children who presently live in our neighborhood ride their bikes and skateboards on Ames St. With the added traffic from this new subdivision will take this away from them.

We have lived here since 1971 and our property is 1 acre. We have all ready watched zoning go from 1/4 acre to R-10. There is limited on street parking on Ames St.

Holcomb school is at capacity now. With 29 more homes there are bound to be more children.

We have drainage problems in this area also, which builders have a tendency to ignore--more homes can only make it worse.

Respectfully yours,

Mr & Mrs Duane R. Shearer

Duane & Wanda Shearer

April 21, 2014

Oregon City Planning Commission
221 Molalla Avenue
Oregon City, OR 97045

Re: ZC 14-01 Proposal of Zone Change

All,

I am writing in regards to the subdivision at 14550 Ames St. and 14591 Holcomb Blvd. proposal by Icon Construction, who is seeking approval for a zone change from "R-10" to "R-8". I am in the Park Place Neighborhood and have lived on Ames Street for almost 40 years on a half-acre of property. My wife and I have seen many changes over the years in our neighborhood. We have known that change will come, and we have been accepting of the R-10 zoning around us.

Ames Street is a one-way in and one-way out and dead ends basically, at the City boundary line. There is a large nursery owner that has many acres in nursery stock at the outlying property, which is County.

I have a couple of concerns about this proposed development. On Pasture Way, there is a retention pond that is supposed to hold the run-off water for those existing properties. Water is draining from the sloped nursery property and draining into the retention pond. In the few years these houses have been built, I have been visiting a neighbor north of this subdivision and have seen the water and mud rushing out of the retention pond and down a ditch alongside Carl and Shirley Patton's property. This occurs when we have heavy rain. It comes out with so much force that the Patton's fence has been eroded along their property line. This water flows through a culvert that then goes to the Clackamas River. Environmentally, this mud should be of concern. If another subdivision is allowed to be built with 29 homes, where will the water be routed to?

The second concern is if the zone change from "R-10" to "R-8" is approved, then that means that all of the larger properties currently on Ames Street have the ability to partition into many smaller lots. We are a small neighborhood and everyone knows one another. It is because of this that the zone change is not acceptable to the neighbors currently living here. What happened to the "quality of life" that we were looking for when we moved to this area with large lots and livability for our children to play and grow up in a neighborhood where we knew who our neighbors are?

The corner of Ames Street and Swan Ave. is less than 20' feet wide and it is already a corner that drivers have to be careful turning onto. The sides of the road have ditches, no sidewalks and no street improvements have even been considered in this plan by Icon. I know that SDC's are collected for the subdivision, but those funds are not dedicated funds to improve the road and add sidewalks on Ames Street. As far as I can tell, the traffic study that was completed for the development did not completely consider the traffic at Ames Street and Swan Ave. traveling in and out of the subdivision, other than at Pasture Way and Stables Place (which only 11 homes are impacted). We have lots of walkers, children riding and playing in this street. By adding traffic for an additional 29 homes and cars that will cut through the neighborhood will be unsafe and these drivers will not be aware of the current neighbor's concerns.

We urge you to not approve the requested zone change. Thank you for accepting this letter to the file.

Leroy Staudenmier
Marge Staudenmier

Leroy and Marge Staudenmier
14491 Ames Street
Oregon City, OR 97045

2014 MAY -1 PM 2:15
RECEIVED
CITY OF OREGON

CITY OF OREGON CITY

**ENGINEERING POLICY 00-01
Guidelines for Development**

EFFECTIVE: April 10, 2000

PREPARED BY

PUBLIC WORKS DEPARTMENT

625 Center Street

Post Office Box 3040

Oregon City, Oregon 97045-0304

Telephone: (503) 657-0891

Development Services Division

Applicability. This policy applies to applicants for land use decisions and site plan reviews with regard to providing public improvements and submittal of documentation. The following sections outline some of the important requirements and helpful hints for those unfamiliar with providing public improvements as required by the Oregon City Municipal Code and Oregon City Public Works Standards. This is not an all-inclusive list of City requirements and does not relieve the applicant from meeting [the Conditions of Approval](#) and all applicable City Code and Public Works Standards.

Availability of Codes and Standards. Copies of these City Codes and Standards are available [online at www.orcity.org](#) and at City Hall in hard copy or CD-ROM for a nominal price. Some engineering firms in the local metropolitan area already own these Codes and Standards to enable them to properly plan, design, and construct City projects.

General

- Applicants shall design and construct all required public works improvements to City Standards. These Standards include the latest version in effect at the time of application of the following list of documents: Oregon City Municipal Code, Water Master Plan, Transportation System Plan, Sanitary Sewer Master Plan, Drainage Master Plan, [and any adopted individual Drainage Basin Plans](#). It includes the Public Works Design Standards, which is comprised of Sanitary Sewer, Water Distribution System, Stormwater and Grading, and Erosion Control. This list also includes the Street Work Drawings and the Site Traffic Impact Study Procedures. It may also include the City of Oregon City Review Checklist of Subdivision and Partition Plats when the development is a Subdivision, Partition, or Planned Unit Development.

Water (Water Distribution System Design Standards)

- The applicant shall provide water facilities for their development. This includes water mains, valves, fire hydrants, blow-offs, service laterals, and meters.
- All required public water system improvements shall be designed and constructed to City standards.
- The Fire Marshall shall determine the number of fire hydrants and their locations. All hydrants to be completed, installed, and operational before beginning structural framing. Hydrants shall be painted with Rodda All-Purpose Equipment Enamel (1625 Safety Orange Paint) and all chains shall be removed from the fire hydrants.
- Backflow prevention assemblies are required on all domestic lines for commercial buildings, all fire service lines, and all irrigation lines [and require a plumbing permit issued by the City's Building Division](#). Backflow prevention assemblies are also required on residential domestic lines greater than or equal to 2-inch diameter. These assemblies are also required where internal plumbing is greater than 32 feet above the water main. The type of backflow prevention device required is dependent on the degree of hazard. City Water Department personnel, certified as cross connection inspectors, shall determine the type of device to be installed in any specific instance. All backflow prevention devices shall be located on the applicant's property and are the property owner's responsibility to test and maintain in accordance with manufacturer's recommendations and Oregon statutes.
- The applicant shall verify that there are no wells on site, or if any wells are on the site prior to connecting to the public water system; the applicant shall:
 - Abandon the well per Oregon State requirements and provide copies of the final approval of well abandonment to the City; or

- Disconnect the well from the home and only use the well for irrigation. In this case, the applicant shall [obtain a plumbing permit from the City's Building Division](#) to install a back flow preventor on the public service line. The applicant shall also coordinate with the City water department to provide a cross connection inspection before connecting to the public water system.
- [New water line system must be flushed, filled to test for bacteria and pressure tested; and City Water Division will obtain two bacteriological testing results within 24 hours, and contractor shall obtain City Water Division approval before final connection to existing water line system.](#)

Sanitary Sewer (Sanitary Sewer Design Standards)

- The applicant shall provide sanitary sewer facilities to their development. This includes gravity mains, manholes, stub outs, and service laterals.
- All required public sanitary sewer system improvements shall be designed and constructed to City standards.
- Applicant must process and obtain sanitary sewer system design approval from DEQ.
- Any existing septic system on site shall be abandoned and certification documentation provided from Clackamas County [to the City Development Services Division](#) before recording the plat or obtaining a certificate of occupancy.
- If the Land Use application involves a restaurant, deli, or the like, it will require a private grease interceptor installation which can be quite costly. The Applicant should look into this with their engineer/architect for proper location, installation, and cost estimate as part of their due diligence in deciding to do the project. There are also periodic maintenance costs as well.

Stormwater (Stormwater and Grading Design Standards)

- The applicant shall provide stormwater and detention facilities for their development. This includes the stormwater mains, inlets, manholes, service laterals for roof and foundation drains, detention system if necessary, control structure if necessary, inflow and outflow devices if necessary, energy dissipaters if necessary, and landscaping when directed by the Public Works Stormwater and Grading Standards.
- [The applicant must design, construct, and complete the entire stormwater system, including the pond and it's landscaping prior to recording of the plat or obtaining a certificate of occupancy permit. The City will not accept a surety for the pond landscaping unless Staff determines that an adequate planting season is not available prior to submission of the final plat. Even if this is the case, Staff will still require a minimum of an adequate application of hydro seeding/erosion blanket, sod, or other means to ensure the pond performs adequately to meet turbidity regulations within the City's Erosion Control regulations.](#)
- The applicant shall design and construct required public stormwater system improvements to City standards and it shall be completed before building permits are issued. Each project is to coordinate with the City Drainage Master Plan, the Public Works Stormwater and Grading Standards, and the appropriate individual Basin Master Plan (as adopted) and incorporate recommendations from them as directed.
- The applicant shall design the stormwater system to detain any increased runoff created through the development of the site, as well as convey any existing off-site surface water entering the site from other properties.

- The applicant shall submit hydrology/detention calculations to the City Development Services Division for review and approval before approval of construction plans. The applicant shall provide documentation to verify the hydrology and detention calculations. The applicant shall show the 100-year overflow path and shall not design the flow to cross any developed properties.

Dedications and Easements

- The applicant shall obtain and record all off-site easements required for the project before City approval of construction plans.

Streets

- The applicant shall provide street facilities to their site including within the site and on the perimeter of the site where it borders on existing public streets. This includes half- and full-street width pavement as directed, curbs, gutters, planter strips or tree wells as directed, street trees, sidewalks, and bicycle lanes (when required by the type of street classification). This also includes city utilities (water, sanitary and storm drainage facilities), [handicap access ramps at intersections and mid-block as directed](#), traffic control devices, centerline/[intersection](#) monumentation in monument boxes, and street lights in compliance with the City Code for Oregon City and its various Master Plans. Half-street improvements include an additional 10-foot wide pavement past the centerline subject to City review of existing conditions. [This provides the required improvement on the applicant's portion of the roadway, and allows the opposing travel way to have safe passage on the new gradient.](#)
- All street names shall be reviewed and approved by the City ([Planning and Building Divisions 722-3789](#)) prior to approval of the final plat to ensure [names meet current Planning Division Street Name criteria and that](#) no duplicate names are proposed in Oregon City or the 9-1-1 Service Area.
- All street improvements shall be completed and street name and traffic control signs shall be installed before issuance of building permits.
- The applicant is responsible for all sidewalks in their development. The applicant may transfer the responsibility for the sidewalks adjacent to the right-of-way as part of the requirement for an individual building permit on local streets. However, failure to do so does not waive the applicant's requirement to construct the sidewalks. Applicant shall complete sidewalks on each residential or industrial/commercial lot in accordance with the Land Division (or Project) Compliance Agreement for the project (e.g.; subdivision, partition, or Planned Unit Development) or prior to the final sign off of a building permit.
- Applicant shall install sidewalks along any tracts within their development, any pedestrian/bicycle accessways within their development, along existing homes or industrial/commercial buildings within the development's property boundaries, and all handicap access ramps required in their development [at the time of street construction.](#)
- Street lights shall typically be owned by the City of Oregon City under PGE [Option "B"](#) and installed at the expense of the applicant. The applicant shall submit a street light plan, subject to City and PGE approval, prepared by a qualified electrical contractor. Streetlights shall be placed at street intersections and along streets at property lines. The required lights shall be installed by a qualified electrical contractor.
- Streetlights are to be spaced and installed per recommendations of the Illuminating Engineering Society of North America as published in their current issue of IES, RP-8 to provide adequate lighting for safety of drivers, pedestrians, and other modes of transportation. Streetlights for local streets shall be 100-watt high-pressure sodium fixtures

mounted on [direct-bury](#) fiberglass poles with a 25-foot mounting height unless otherwise specified. Streetlights for arterial, collector, and neighborhood collector streets shall be [200-watt](#) high-pressure sodium fixtures mounted on [base-mounted](#) brushed aluminum poles with a 30-foot mounting height unless otherwise specified. The applicant shall dedicate any necessary electrical easements on the final plat. All streetlight fixtures, mastheads, and poles shall be constructed of material approved by PGE for maintenance by PGE.

- [Street lights along certain designated traffic corridors such as Molalla Avenue require specially-approved non PGE approved lights. These systems are owned and operated by the City and require design by an Oregon-licensed Professional Electrical Engineer who shall stamp the appropriate street light plans. The design shall include the provision of either extending power from an existing City light system or providing a new meter for the power. Provisions to extend these light systems shall be provided.](#)

Grading And Erosion Control

- The applicant's engineer shall submit rough grading plan with construction plans. The engineer shall certify completed rough grading elevations to +/- 0.1 feet. For single family residential developments, a final residential lot-grading plan shall be based on these certified grading elevations and approved by the City Engineer before issuance of a building permit. If significant grading is required for the residential lots due to its location or the nature of the site, rough grading shall be required of the developer before the acceptance of the public improvements. (See Geotechnical section for cut and fill certification issues on building lots or parcels) There shall not be more than a maximum grade differential of two (2) feet at all site boundaries. Final grading shall in no way create any water traps, or create other ponding situations.
- Applicants shall obtain a DEQ 1200c permit when their site clearing effort is over one (1) acre, as modified by DEQ. Applicant shall provide a copy of their DEQ 1200c permit to the City before any clearing efforts are started.
- An Erosion Prevention and Sedimentation Control Plan shall be submitted for City approval. Applicant shall obtain an Erosion Control permit before any work on site.
 - Dewatering excavations shall not be allowed unless the discharge water meets turbidity standards (see next bullet) or is adequately clarified before it enters on-site wetlands, drainage courses, and before it leaves the site. Discharge from man-made, natural, temporary, or permanent ponds shall meet the same standard.
 - Construction activities shall not result in greater than 10 percent turbidity increase between points located upstream and downstream of construction activities.
 - Effective erosion control shall be maintained after site work is complete and throughout building permit issuance.
 - Plans shall document erosion prevention and control measures that will remain effective and be maintained until all construction is complete and permanent vegetation has been established on the site.
 - Responsible party (site steward) for erosion control maintenance throughout construction process shall be shown on the Erosion Control Plan.
 - Staff encourages applicant to select high performance erosion control alternatives to minimize the potential for water quality and fish habitat degradation in receiving waters.

Geotechnical

- Any structural fill to accommodate public improvements shall be overseen and directed by a geotechnical engineer. The geotechnical engineer shall provide test reports and certification that all structural fill has been placed as specified and provide a final summary report to the City certifying all structural fill on the site before City approval and acceptance of public improvements.
- Any cut or fill in building lots or parcels beyond the rough grading shall be subject to the Building Division's requirements for certification under the building permit.

Engineering Requirements

- Design engineer shall schedule a pre-design meeting with the City of Oregon City Development Services Division before submitting engineering plans for review.
- Street Name/Traffic Control Signs. Approved street name signs are required at all street intersections with any traffic control signs/signals/stripping.
- Bench Marks. At least one benchmark based on the City's datum shall be located within a subdivision.
- Other Public Utilities. The applicant shall make necessary arrangements with utility companies for the installation of underground lines and facilities. The City Engineer may require the applicant to pay these utility companies to use trenchless methods to install their utilities in order to save designated and marked trees when the utility crosses within a dripline of a tree marked, or identified, to be saved. Applicant to bear any additional costs that this may incur.
- Technical Plan Check and Inspection Fees. The current Technical Plan Check and Inspection Fee shall be paid before approval of the final engineering plans for the required site improvements. The fee is the established percentage of a City-approved engineer's cost estimate or actual construction bids as submitted by the applicant. Half of the fee is due upon submitting plans [to Development Services](#); the other half is due upon approval of the final plans.
- It is the City's policy that the City will only provide spot check inspection for non public-funded improvements, and the applicant's engineer shall provide inspection and surveying services necessary to stake and construct the project and prepare the record (as-built) drawings when the project is complete.
- [The Applicant's inspector and contractor shall follow the City's Minimum Guidelines for Public Works Construction \(available on the City website\).](#)
- Applicant shall submit two (2) sets of final engineering plans for initial review by the City Development Services Division to include the drainage report (wet signed by the responsible engineer), and the cost estimate with half of the Technical Plan Check fee. The engineering plans shall be blackline copies, 22" x 34" or 24" x 36". Blueline copies are not acceptable.
- For projects such as subdivisions, partitions, and Planned Unit Developments, the applicant shall submit a completed copy of the City's latest final subdivision and partition plat checklist, the plat review fee, and a paper copy of the preliminary plat.
- Two (2) copies of any revised documents (in response to redlined comments) will be required for subsequent reviews, if necessary.
- The applicant shall submit, for the final City approval, seven (7) copies of the plans with two full sets wet signed in blue over the engineer's Professional Engineer Oregon stamp.
- Minimum Improvement Requirements. Applicant shall provide a surety on developments for uncompleted work including landscaping before a plat is recorded or a building sign off as required by a Compliance Agreement (available in hard copy or electronic version from City Development Services or on the City website). This occurs if the

applicant wishes to record the final plat before completion of all required improvements or occupy the new development prior to completion of the public improvements including landscaping. Surety shall be an escrow account, construction set-aside, performance guaranty, or in a form that is acceptable to the City Attorney (no bonds are allowed).

- Upon conditional acceptance of the public improvements by the City, the applicant shall provide a two-year maintenance guarantee as described in the Compliance Agreement. This Maintenance Guarantee shall be for fifteen (15) percent of the engineer's cost estimate or actual bids for the complete public improvements.
- The applicant shall submit a paper copy of the record (as-built) drawings, of field measured facilities, to the City Engineer for review before building permits are issued beyond the legal limit. Upon approval of the paper copy by the City Engineer, applicant shall submit a bond copy set and two 4-mil mylar record drawings sets as directed.
- The applicant shall submit one full set of the record (as-built) drawings, of field measured facilities, on AutoCAD files on CD-ROM, in a format acceptable to the City Engineer, and include all field changes.
- One AutoCAD file of the preliminary plat, if applicable, shall be furnished by the applicant to the City Addressing staff (in the Building Division) for addressing purposes. A sample of this format may be obtained from the City Geographical Information System Division. This information, and documents, shall be prepared at the applicant's cost.
- The applicant's surveyor shall also submit, at the time of recordation, a copy of the plat on a CD-ROM to the City in a format that is acceptable to the City's Geographic Information System Division.
- The City reserves the right to accept, or reject, record drawings that the City Engineer deems incomplete or unreadable that are submitted to meet this requirement. The applicant shall be responsible for all costs associated with meeting this condition. The applicant shall ensure their engineer submits the record drawings before the City will release final surety funds or residential building permits beyond the legal limit.
- Final Plat Requirements, if applicable. The final plat shall comply with ORS 92.010 through 92.190, and City Code. In addition the following requirements shall be required:
 - The applicant, and their surveyor, shall conform to the City's submittal and review procedures for the review and approval of plats, easements, agreements, and other legal documents associated with the division of this parcel.
 - Show the City Planning File Number on the final plat, preferably just below the title block.
 - A blackline copy of the final plat illustrating maximum building envelopes shall be submitted to the Planning Division concurrently with submittal of the plat to ensure setbacks and easements do not conflict.
 - Use recorded City control surveys for street centerline control, if applicable.
 - Show state plane coordinates on the Point of Beginning.
- The civil construction drawings, once approved by the City Development Services Division, shall have an approval period of one year in which to commence with construction. The plans and drawings shall be valid, once the City Engineer holds the preconstruction conference and construction activity proceeds, for as long as the construction takes. If the construction drawings expire before construction commences, the applicant shall ensure the civil construction documents and plans conform to the latest Standards, Specifications, and City Codes that are in place at the time of the update. The applicant shall bear the cost associated with bringing them into conformance, including additional technical plan check and review costs. [The applicant is reminded that the City Code requires that the final plat be submitted to the Development Services Division within two years after land use decision.](#)

- The applicant shall include a statement in proposed Conditions, Covenants, and Restrictions (CC & R's), plat restrictions, or some other means acceptable to the City Attorney for:
 - Maintaining surface runoff patterns established for each lot,
 - Maintaining any proposed private storm lines or detention, and
 - Conformance by individual lot owner to the City's erosion control standards when establishing or renovating landscaping.
 - The applicant shall submit the proposed method and statement to the Planning staff for review and approval, before final plat approval.
- Construction vehicles and other vehicles associated with the development shall only use the entrance as approved by the City Development Services Division to enter their site and these vehicles shall park or wait on the construction site. The applicant should provide a specified area of off street parking for the site's construction workers which meets the erosion/sedimentation control measures. Supplier vehicles and trailers (hauling vehicles) and actual construction vehicles shall not park, or wait, in such a manner that would block or hinder access for emergency vehicles. This includes private vehicles belonging to construction workers, supplier vehicles and trailers, and actual construction vehicles.
- Site construction activity is to only occur between 7:00 AM and 6:00 PM on Monday through Friday; between 9:00 AM and 6:00 PM on Saturday. No site improvement construction activity is allowed on Sunday. Construction activity includes all field maintenance of equipment, refueling, and pick up and delivery of equipment as well as actual construction activity.
- The applicant shall ensure that all applicable outside agencies are contacted and any appropriate approvals obtained for the construction of the project. The applicant shall supply copies of approvals to the City. Failure to do so shall be a justification for the City to prevent the issuance of a construction or building permit or to revoke an issued permit for this project.
- The applicant shall be responsible for paying all fees associated with the recording of documents such as non-remonstrance agreements, easements, and dedications.
- Should the applicant, or any assigns or heirs, fail to comply with any of the conditions set forth here, the City may take the appropriate legal action to ensure compliance. The applicant shall be responsible for any City legal fees and staff time associated with enforcing these conditions of approval.

I:\Engineering\Policy\EP00-01v6.doc

Pete Walter

From: Rick Givens [rickgivens@gmail.com]
Sent: Thursday, February 06, 2014 2:34 PM
To: Pete Walter
Subject: FW: Holcomb Elementary School Capacity

Hi Pete,

FYI, I'm forwarding you the reply I received from Ted Thonstad about school enrollment at Holcomb Elementary. It looks like there isn't any problem.

Rick Givens

-----Original Message-----

From: Ted Thonstad [<mailto:Ted.Thonstad@orecity.k12.or.us>]
Sent: Thursday, February 06, 2014 1:48 PM
To: Rick Givens
Subject: RE: Holcomb Elementary School Capacity

Hi Rick,

Holcomb has a preferred capacity (25 students per classroom) of 750 students. The current enrollment is 540 which means there is room for 210 additional students. Hence, we should be able to accommodate the 25 you are estimating.

FYI, our PSU Enrollment forecast indicates that the district actually gets about .48 students K-12 per single family dwelling.

You need to know that there is some internal push back to dedicating the piece of road without getting something in exchange from the developer. The conversation has not generated the "what," but I would guess it will in the near future. One idea I had was some assistance with the walking path.

Thanks,

Ted

-----Original Message-----

From: Rick Givens [<mailto:rickgivens@gmail.com>]
Sent: Wednesday, February 05, 2014 1:47 PM
To: Ted Thonstad
Subject: Holcomb Elementary School Capacity

Hi Ted,

At the neighborhood meeting on the Sunnybrook 2 subdivision several neighbors raised concerns about capacity at Holcomb Elementary School. While this isn't really an approval criterion, I was wondering if you could shed some light on this issue. Is the school at or near capacity and, if so, are there plans to address this issue?

The most recent planning data I've seen suggests that single-family homes generate about 0.8 elementary students, 0.3 junior high school students and 0.2 senior high school students per household. The subdivision proposes 29 single-family lots so we'd expect about 25 new elementary school students at full build-out.

Thanks for your help.

Rick Givens
Planning Consultant
18680 Sunblaze Drive.
Oregon City, OR 97045
PH: (503) 479-0097
Cell: (503) 351-8204
email: rickgivens@gmail.com

Sunnybrook II - ZC 14-01/ TP 14-01 Preliminary Plat Lot Calculations

<u>Lot</u>	<u>Size (sf)</u>	<u>Width (ft)</u>	<u>Depth (ft)</u>
R-10 Lots			
1	9061	80	106
2	9017	84	107
3	9143	87	107
4	9620	65	148
5	12952	89	148
6	9833	96	110
7	10118	107	87
8	10018	100	100.8
9	10248	102	100.8
Avg	10001	90	113
Min	9017	65	87
Max	12952	107	148
R-8 lots			
10	7466	74.6	101
11	7706	77	101
12	7706	77	101
13	7706	77	101
14	7706	77	101
15	7339	73.33	101
16	11370	100.8	115
17	9770	65	135
18	7266	65	105
19	7300	73	100
20	7340	75	100
21	8391	76	110
22	7930	72	110
23	7941	72	110
24	8073	74	108
25	7918	65	118
26	7788	66	118
27	7788	66	118
28	7788	66	118
29	8043	65	118
Avg	8017	73	109
Min	7266	65	100
Max	11370	101	135

Summary

Avg	8633	78	110
Min	7266	65	87
Max	12952	107	148



Oregon

John A. Kitzhaber, MD, Governor

Parks and Recreation Department

State Historic Preservation Office

725 Summer St NE, Ste C

Salem, OR 97301-1266

(503) 986-0690

Fax (503) 986-0793

www.oregonheritage.org



December 10, 2013

Ms. Kelly Moosbrugger
City of Oregon City Planning
PO Box 3040
Oregon City, OR 97045

RE: SHPO Case No. 13-1737
Oregon City community planning
Mixed: Cell tower, subdivision
City of Oregon City
Multiple, Oregon City, Clackamas County

Dear Ms. Moosbrugger:

I have recently received a request from your office to review the five projects referenced above for any known cultural resources. Your letter provided basic locational information on projects PA 13-32 thru 38. Our office believes that the potential future development of areas 13-32 thru 34 and PA 13-37 will have no effect on any known archaeological resources. However, project PA 13-38 has at least one known site with the proposed area (35CL236) and another in close proximity. It is important that you consult with a professional archaeologist before conducting any ground disturbing activities to insure that all known sites can be avoided. If you have additional information on the exact portion of the PA 13-38 project area to be developed our office would be happy to consult further with you regarding potential adverse effects. But to address the area as a whole, a professional archaeologist will need to be consulted.

If you have any questions about the above review or your project in general please feel free to contact us at your convenience. If during later project development within the approved project area, cultural resources are discovered (i.e., either prehistoric or historic artifacts), all work should stop immediately and a professional archaeologist contacted to assess the discovery. In order to help us track your project accurately, please be sure to reference the SHPO case number above in all correspondence.

Sincerely,

Dennis Griffin, Ph.D., RPA

State Archaeologist

(503) 986-0674

dennis.griffin@state.or.us



TRANSMITTAL FOR COMPLETENESS

February 6, 2014

IN-HOUSE DISTRIBUTION

- ✓ BUILDING OFFICIAL
- ✓ ENGINEER/CITY ENGINEER
- ✓ PUBLIC WORKS DIRECTOR
- ✓ TECHNICAL SERVICES (GIS)
- ✓ PARKS MANAGER
- ✓ ADDRESSING
- ✓ POLICE

MAIL-OUT DISTRIBUTION

- ✓ CCFD #1
- ✓ REPLINGER & ASSOCIATES (TRAFFIC)
- DAVID EVANS AND ASSOCIATES (WATER RESOURCES)
- ✓ KENNEDY / JENKS CONSULTANTS
- ✓ OREGON CITY SCHOOL DISTRICT
- ✓ TRIMET
- ✓ CLACKAMAS COUNTY TRANSP. & PLANNING
- ✓ ODOT – Division Review
- ✓ CRW – Clackamas River Water

FOR COMPLETENESS PURPOSES ONLY

DEADLINE: 03/07/14 – Please notify planner as early as possible of missing information
IN REFERENCE TO: ZC 14-01 Zone Change R-10 to R-8
TP 14-01: 29-Lot Subdivision
ZONING: [Chapter 17.08 - R-10 SINGLE-FAMILY DWELLING DISTRICT](#)
APPLICANT: ICON Construction and Development
REVIEWING PLANNER: Pete Walter, AICP, Phone: (503) 496-1568, Email: pwalter@orc.org
REPRESENTATIVE: Rick Givens, Planning Consultant
REQUEST: Zone Change R-10 to R-8 with 29-Lot Subdivision
LOCATION: 14591 Holcomb Blvd, No Address, and 14550 Ames St, Oregon City, OR 97045
Clackamas County Map 22E28AB01600, 22E21DC01300, 22E21DC01600

Per OCMC [17.50.070 Completeness review and one hundred twenty-day rule](#). This application material is referred to you for your information, study and official comments. Upon submission, the community development director shall date stamp the application form and verify that the appropriate application fee has been submitted. The community development director will then review the application and all information submitted with it and evaluate whether the application is complete enough to process. Within thirty days of receipt of the application, the community development director shall complete this initial review and issue to the applicant a written statement indicating whether the application is complete enough to process, and if not, what information must be submitted to make the application complete. Please determine if any additional issues need to be addressed for a complete application. This transmittal is for completeness purposes only. Please retain the information enclosed.

Please See Attached CRW Comments

Signed
Title

Bethy Apler
Engineering Associate



Date: February 11, 2014 **SENT VIA EMAIL**

To: Pete Walter
City of Oregon City

From: Betty Johnson, Engineering Associate
Clackamas River Water

Subject: Completeness Review: **File:** ZC 14-01& TP 14-01

Applicant: Mark Handris
Icon Construction & Development, LLC
1980 Willamette Falls Dr., Suite 200
West Linn, Oregon 97068

Site Address: 14591 Holcomb Blvd & 14550 Ames St, Oregon City, Oregon 97045

Legal Description: 22E28AB01600, 22E21DC01300 & 22E21DC01600

Completeness Review Comments:

1. Parcels 22E21DC01600 & 22E28AB01600 are currently within the Clackamas River Water District service boundary and within the city limits of Oregon City.
2. There are no available Clackamas River Water waterlines to serve these parcels. It is recommended that the parcels be served by Oregon City water infrastructure.
3. If the City requires this development to undergo an annexation process for city services the District would like to be included as part of the process to withdraw the parcels from the District's Service Boundary.

CRW has no objections to this application, however these comments are introductory and may change based on the preliminary/final design.

For further information regarding application please contact Betty Johnson, 503-723-2571.

cc: Applicant
file



NOTICE OF PUBLIC HEARING

Notice Mailed: March 27, 2014

HEARING DATES:	On Monday, May 12, 2014 , the City of Oregon City Planning Commission will conduct a public hearing at 7:00 p.m., and on Wednesday, June 4, 2014 , the City of Oregon City – City Commission will conduct a public hearing at 7:00 p.m. in the Commission Chambers at City Hall, 615 Center Street, Oregon City 97045 on the following Type IV Applications. Any interested party may testify at the public hearings or submit written testimony at or prior to the close of the City Commission hearing.
FILE NUMBER:	ZC 14-01: Zone Change from “R-10” to “R-8” Single Family Dwelling District TP 14-01: 29-Lot Subdivision
APPLICANT:	ICON Const. and Dev., 1980 Willamette Falls Dr., Ste. 200, West Linn, OR 97068
REPRESENTATIVE:	Rick Givens, 18680 Sunblaze Dr., Oregon City, OR 97045
OWNERS:	Renee and Terry Voss, 14550 Ames St, Oregon City, Oregon 97045 Steven Jones, 14591 Holcomb Blvd, Oregon City, Oregon 97045
REQUEST:	The applicant is seeking approval for a Zone Change from “R-10” Single-Family Dwelling District to “R-8” Single-Family Dwelling District, and a 29-Lot subdivision.
LOCATION: (SEE MAP ON OTHER SIDE)	2-2E-21DC-01600 / NO SITUS ADDRESS, 2-2E-21DC-01300 / 14550 AMES ST, and 2-2E-28AB-01600 / 14591 HOLCOMB BLVD
CONTACT PERSON:	Peter Walter, AICP, Associate Planner (503) 496-1568
NEIGHBORHOOD:	Park Place Neighborhood Association
REVIEW CRITERIA:	<ul style="list-style-type: none">• Chapter 12.04 - STREETS, SIDEWALKS AND PUBLIC PLACES• Chapter 12.08 - PUBLIC AND STREET TREES• Chapter 13.04 - WATER SERVICE SYSTEM• Chapter 13.08 - SEWER REGULATIONS• Chapter 13.12 - STORMWATER MANAGEMENT• Chapter 16.04 - GENERAL PROVISIONS AND ADMINISTRATION OF LAND DIVISIONS• Chapter 16.08 - SUBDIVISIONS—PROCESS AND STANDARDS• Chapter 16.12 - MINIMUM IMPROVEMENTS AND DESIGN STANDARDS FOR LAND DIVISIONS• Chapter 17.08 - R-10 SINGLE-FAMILY DWELLING DISTRICT• Chapter 17.10 - R-8 SINGLE-FAMILY DWELLING DISTRICT• Chapter 17.41 - TREE PROTECTION STANDARDS• Chapter 17.47 - EROSION AND SEDIMENT CONTROL• Chapter 17.50 - ADMINISTRATION AND PROCEDURES• Chapter 17.54 - SUPPLEMENTAL ZONING REGULATIONS AND EXCEPTIONS• Chapter 17.68 - ZONING CHANGES AND AMENDMENTS <p>The City Code Book is available on-line at www.oregoncity.org.</p>

This application and all documents and evidence submitted by or on behalf of the applicant are available for inspection at no cost at the Oregon City Planning Division, 221 Molalla Avenue, Suite 200 from 8:00 AM-5:00 PM, Monday - Thursday. The staff report, with all the applicable approval criteria, will also be available for inspection seven days prior to the hearing. Copies of these materials may be obtained for a reasonable cost in advance. Any interested party may testify at the public hearing and/or submit written testimony at or prior to the close of the City Commission hearing. Written comments must be received by close of business at City Hall 10 days before the scheduled hearing to be included in the staff report. Written comments received within 10 days of the hearing will be provided to the Commission at the hearing. The public record will remain open until the City Commission closes the public hearing. Please be advised that any issue that is intended to provide a basis for appeal must be raised before the close of the City Commission hearing, in person or by letter, with sufficient specificity to afford the Commission and the parties an opportunity to respond to the issue. Failure to raise an issue with sufficient specificity will preclude any appeal on that issue. Parties with standing may appeal the decision of the City Commission to the Land Use Board of Appeals. Any appeal will be based on the record. The procedures that govern the hearing will be posted at the hearing and are found in OCMC Chapter 17.50 and ORS 197.763.

A city-recognized neighborhood association requesting an appeal fee waiver following issuance of a land use decision pursuant to 17.50.290(C) must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal.



6605 SE Lake Road, Portland, OR 97222
PO Box 22109, Portland, OR 97269-2109
Phone: 503-684-0360 Fax: 503-620-3433
E-mail: legals@commnewspapers.com

AFFIDAVIT OF PUBLICATION

State of Oregon, County of Clackamas, SS
I, Charlotte Allsop, being the first duly sworn, depose
and say that I am Accounting Manager of *Clackamas
Review/Oregon City News and Estacada News*, a
newspaper of general circulation, published at
Clackamas, in the aforesaid county and state, as
defined by ORS 193.010 and 193.020, that

City of Oregon City
Notice of Public Hearing/ ZC14-01; TP14-01
CLK13027

a copy of which is hereto annexed, was published in
the entire issue of said newspaper for

1

week in the following issue:

April 2, 2014

Charlotte Allsop

Charlotte Allsop (Accounting Manager)

Subscribed and sworn to before me this
April 2, 2014.

Pete R. Muller

NOTARY PUBLIC FOR OREGON

My commission expires

Sept-11, 2016

PO: Pete Walter

Acct #500291

Attn: Pete Walter

City of Oregon City

PO Box 3040

Oregon City, OR 97045-0304

Size: 2 x 9"

Amount Due: \$213.30*

*Please remit to address above.



NOTICE OF PUBLIC HEARING

HEARING DATES: On Monday, May 12, 2014, the City of Oregon City Planning Commission will conduct a public hearing at 7:00 p.m., and on Wednesday, June 4, 2014, the City of Oregon City – City Commission will conduct a public hearing at 7:00 p.m. in the Commission Chambers at City Hall, 615 Center Street, Oregon City 97045 on the following Type IV Applications. Any interested party may testify at the public hearings or submit written testimony at or prior to the close of the City Commission hearing.

FILE NUMBER: ZC 14-01: Zone Change from "R-10" to "R-8" Single Family Dwelling District
TP 14-01: 29-Lot Subdivision

APPLICANT: ICON Const. and Dev., 1980 Willamette Falls Dr., Ste. 200, West Linn, OR 97068

REPRESENTATIVE: Rick Givens, 18680 Sunblaze Dr., Oregon City, OR 97045

OWNERS: Renee and Terry Voss, 14550 Ames St, Oregon City, Oregon 97045

Steven Jones, 14591 Holcomb Blvd, Oregon City, Oregon 97045

REQUEST: The applicant is seeking approval for a Zone Change from "R-10" Single-Family Dwelling District to "R-8" Single-Family Dwelling District, and a 29-Lot subdivision.

LOCATIONS:

Clackamas Map 2-2E-21DC-01600 / NO SITUS ADDRESS, 2-2E-21DC-01300 / 14550 AMES ST, and 2-2E-28AB-01600 / 14591 HOLCOMB BLVD

CONTACT PERSON: Peter Walter, AICP, Associate Planner (503) 496-1568

NEIGHBORHOOD: Park Place Neighborhood Association

REVIEW CRITERIA: Oregon City Municipal Code

Chapter 12.04 - STREETS, SIDEWALKS AND PUBLIC PLACES

Chapter 12.08 - PUBLIC AND STREET TREES

Chapter 13.04 - WATER SERVICE SYSTEM

Chapter 13.08 - SEWER REGULATIONS

Chapter 13.12 - STORMWATER MANAGEMENT

Chapter 16.04 - GENERAL PROVISIONS AND ADMINISTRATION OF LAND DIVISIONS

Chapter 16.08 - SUBDIVISIONS—PROCESS AND STANDARDS

Chapter 16.12 - MINIMUM IMPROVEMENTS AND DESIGN STANDARDS FOR LAND DIVISIONS

Chapter 17.08 - R-10 SINGLE-FAMILY DWELLING DISTRICT

Chapter 17.10 - R-8 SINGLE-FAMILY DWELLING DISTRICT

Chapter 17.41 - TREE PROTECTION STANDARDS

Chapter 17.47 - EROSION AND SEDIMENT CONTROL

Chapter 17.50 - ADMINISTRATION AND PROCEDURES

Chapter 17.54 - SUPPLEMENTAL ZONING REGULATIONS AND EXCEPTIONS

Chapter 17.68 - ZONING CHANGES AND AMENDMENTS

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A city-recognized neighborhood association requesting an appeal fee waiver following issuance of a land use decision pursuant to 17.50.290(C) must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal.

Publish 04/02/2014.

CHARTERED 1842 CLK13027

Pete Walter

From: Pete Walter
Sent: Monday, April 07, 2014 2:02 PM
To: 'Wes Rogers'; '(Chairman@HamletOfBeavercreek.org)'; Aleta Froman-Goodrich; 'allen.taylor@ieee.org'; baldwinb@tri-met.org; 'Betty Johnson'; Bob George; 'Boll, Heather'; Mike Boumann; 'Central Point/Leland Road CPO (johnbev@aracnet.com)'; 'Central Point/Leland Road CPO (militante@att.net)'; Chris Dunlop; Chris Wadsworth; Dawn (Haase) Hickson (dhaase@clackamas.us); Deana Mulder (deanam@co.clackamas.or.us); Denise Kai; Don Kemp (donk@co.clackamas.or.us); Gordon Munro; James Band; John Replinger (replinger-associates@comcast.net); Kattie Riggs; Kent, Ken; Mike Riseling (mike.riseling@orecity.k12.or.us); Samantha Vandagriff; Scott Archer; Tim Finlay (timfin@co.clackamas.or.us); Todd Martinez; Ugo DiLullo (ugodil@co.clackamas.or.us); 'Wes Rogers, OC School District'; Bob La Salle; Debbie Fuller
Subject: ZC 14-01 / TP 14-01 Transmittal for Comment
Attachments: ZC 14-01 Transmittal.pdf; ZC 14-01 Notice.pdf

COMMENTS DUE BY: **5:00 PM, May 2, 2014 (FOR INCLUSION IN STAFF REPORT)**

THE LAND USE RECORD WILL REMAIN OPEN UNTIL THE CLOSE OF THE CITY COMMISSION PUBLIC HEARING.

HEARING DATE: Planning Commission: May 12, 2014
City Commission: June 4, 2014
___ Staff Review; XX PC; XX CC

FILE NUMBER(s): ZC 14-01: Zone Change from "R-10" to "R-8" Single Family Dwelling District
TP 14-01: 29-Lot Subdivision

WEBSITE: <http://www.orecity.org/planning/landusecase/zc-14-01-tp-14-01-zone-change-and-29-lot-subdivision-between-ames-st-and-holcomb>

APPLICANT: ICON Const. and Dev., 1980 Willamette Falls Dr., Ste. 200, West Linn, OR 97068

REPRESENTATIVE: Rick Givens, 18680 Sunblaze Dr., Oregon City, OR 97045

OWNERS: Renee and Terry Voss, 14550 Ames St, Oregon City, Oregon 97045
Steven Jones, 14591 Holcomb Blvd, Oregon City, Oregon 97045

REQUEST: The applicant is seeking approval for a Zone Change from "R-10" Single-Family Dwelling District to "R-8" Single-Family Dwelling District, and a 29-Lot subdivision.

LOCATIONS: Clackamas Map 2-2E-21DC-01600 / NO SITUS ADDRESS, 2-2E-21DC-01300 / 14550 AMES ST, and 2-2E-28AB-01600 / 14591 HOLCOMB BLVD

REVIEWING PLANNER: Peter Walter, AICP, Associate Planner (503) 496-1568 pwalter@orecity.org



Pete Walter, AICP, Associate Planner
pwalter@orecity.org
Community Development Department
Planning Division
221 Molalla Avenue, Ste. 200
Oregon City, Oregon 97045
503-496-1568 Direct
503-722-3789 Front Desk
503-722-3880 Fax



Website: www.orcity.org

Hours: Counter/Walk-in: 8-5 Mon-Thurs.

Friday: Phone, Email and Appointment Only.

Need Zoning and other Tax Lot Information? - [Generate a Property Report](#)

Online Mapping is available at [OCWebMaps](#)



Please consider the environment before printing

PUBLIC RECORDS LAW DISCLOSURE: This e-mail is subject to the State Retention Schedule and may be made available to the public.



LAND USE APPLICATION TRANSMITTAL

March 24, 2014

IN-HOUSE DISTRIBUTION

- ☐ BUILDING OFFICIAL
- ✓ DEVELOPMENT SERVICES ENGINEERING
- ✓ PUBLIC WORKS DIRECTOR
- ✓ CITY ENGINEER
- ☐ TECHNICAL SERVICES (GIS)
- ☐ PARKS MANAGER
- ☐ ADDRESSING
- ✓ POLICE

TRAFFIC ENGINEER

- ✓ REPLINGER AND ASSOCIATES

Mailed Notice to County CPO's

- ✓ Central Pt-New Era-Leland / Holcomb-Outlook/Beavercreek

Mailed Notice

- ✓ Within 300'

MAIL-OUT DISTRIBUTION

- ✓ CITIZEN INVOLVEMENT COUNCIL (CIC)
- ✓ NEIGHBORHOOD ASSOCIATION: *PARK PLACE*
 - ✓ N.A. CHAIR
 - ✓ N.A. LAND USE CHAIR
- ☐ CLACKAMAS COUNTY TRANSP. & PLANNING
- ✓ CLACKAMAS FIRE DISTRICT #1
- ✓ ODOT – Division Review
- ✓ OREGON CITY SCHOOL DISTRICT
- ☐ TRI-MET
- ☐ METRO
- ☐ OREGON CITY POSTMASTER
- ☐ DLCD
- ☐ CITY ATTORNEY
- ☐ OTHER: _____

COMMENTS DUE BY:

5:00 PM, May 2, 2014

HEARING DATE:

Planning Commission: May 12, 2014

City Commission: June 4, 2014

___ Staff Review; XX PC; XX CC

FILE NUMBER(s):

ZC 14-01: Zone Change from "R-10" to "R-8" Single Family Dwelling District
TP 14-01: 29-Lot Subdivision

APPLICANT:

ICON Const. and Dev., 1980 Willamette Falls Dr., Ste. 200, West Linn, OR 97068

REPRESENTATIVE:

Rick Givens, 18680 Sunblaze Dr., Oregon City, OR 97045

OWNERS:

Renee and Terry Voss, 14550 Ames St, Oregon City, Oregon 97045
Steven Jones, 14591 Holcomb Blvd, Oregon City, Oregon 97045

REQUEST:

The applicant is seeking approval for a Zone Change from "R-10" Single-Family Dwelling District to "R-8" Single-Family Dwelling District, and a 29-Lot subdivision.

LOCATIONS:

Clackamas Map 2-2E-21DC-01600 / NO SITUS ADDRESS, 2-2E-21DC-01300 / 14550 AMES ST,
and 2-2E-28AB-01600 / 14591 HOLCOMB BLVD

REVIEWING PLANNER:

Peter Walter, AICP, Associate Planner (503) 496-1568 pwalter@orc.org

This application material is referred to you for your information, study and official comments. If extra copies are required, please contact the Planning Department. Your recommendations and suggestions will be used to guide the Planning staff when reviewing this proposal. If you wish to have your comments considered and incorporated into the staff report, please return the attached copy of this form to facilitate the processing of this application and ensure prompt consideration of your recommendations. **Please check the appropriate spaces below.**

_____ The proposal does not conflict with our interests.

_____ The proposal conflicts with our interests for the reasons stated below.

_____ The proposal would not conflict our interests if the changes noted below are included.

_____ The following items are missing and are needed for review:

Signed _____

Title _____

PLEASE RETURN YOUR COPY OF THE APPLICATION AND MATERIAL WITH THIS FORM.

Rick Givens

From: "Potter, Dan (Housing)" <dpotter@co.clackamas.or.us>
Date: Tuesday, May 06, 2014 10:59 AM
To: "Rick Givens" <rickgivens@gmail.com>
Subject: RE: Street Dedication Request - Oregon City View Manor

Rick,

I just sent a e-mail to my HUD contact to jog them on this topic. Preliminarily they had several questions on the impact of the dedication on Housing Authority property. I told them it had no impact and was seen by us a benefit to the property given the better site circulation and property value impacts. They indicated they would most likely expect some compensation for the dedication. I pushed back on this. I am waiting to hear their final approval process and where they are at on compensation. I hope to hear back shortly. I will let you know as soon as they respond. Part of the issue is the local HUD office has to deal with the Special Application Center (SAC) of HUD in Chicago.

Keep me posted on how it goes with the City of Oregon City.

Daniel Potter
Housing Asset Manager
Housing Authority of Clackamas County
503.650.3537

-----Original Message-----

From: Rick Givens [mailto:rickgivens@gmail.com]
Sent: Tuesday, May 06, 2014 9:26 AM
To: Potter, Dan (Housing)
Subject: Re: Street Dedication Request - Oregon City View Manor

Dan,

Just checking in to see if there's been any progress with HUD on the right-of-way dedication. We're scheduled for the public hearing before the Oregon City Planning Commission next Monday night and they're likely to ask me about this.

Thanks,

Rick

-----Original Message-----

From: Potter, Dan (Housing)

5/12/2014

Rick Givens

From: "Wes Rogers" <Wes.Rogers@orecity.k12.or.us>
Date: Friday, May 09, 2014 4:39 PM
To: "Rick Givens" <rickgivens@gmail.com>
Cc: "Larry Didway" <Larry.Didway@orecity.k12.or.us>
Subject: RE: Voice Mail

Rick, yes we have verbal agreement with the Superintendent and Board Chair. Written agreement will need to follow.

..wes

Wes Rogers, Director of Operations
Oregon City SD
503-785-8426

From: Rick Givens [mailto:rickgivens@gmail.com]
Sent: Friday, May 09, 2014 2:02 PM
To: Wes Rogers
Subject: Re: Voice Mail

Thanks, Wes.

On May 9, 2014 11:38 AM, "Wes Rogers" <Wes.Rogers@orecity.k12.or.us> wrote:
Rick, got your voice mail. I have a meeting with the Superintendent @ 3pm. I expect us to verbally agree to the proposal with a written agreement to follow. I'll let you know right away this afternoon.

..wes

Wes Rogers, Director of Operations
Oregon City School District 62
PO Box 2110
Oregon City, OR 97045
503-785-8426 phone
503-657-2518 fax
wes.rogers@orecity.k12.or.us

Rick Givens

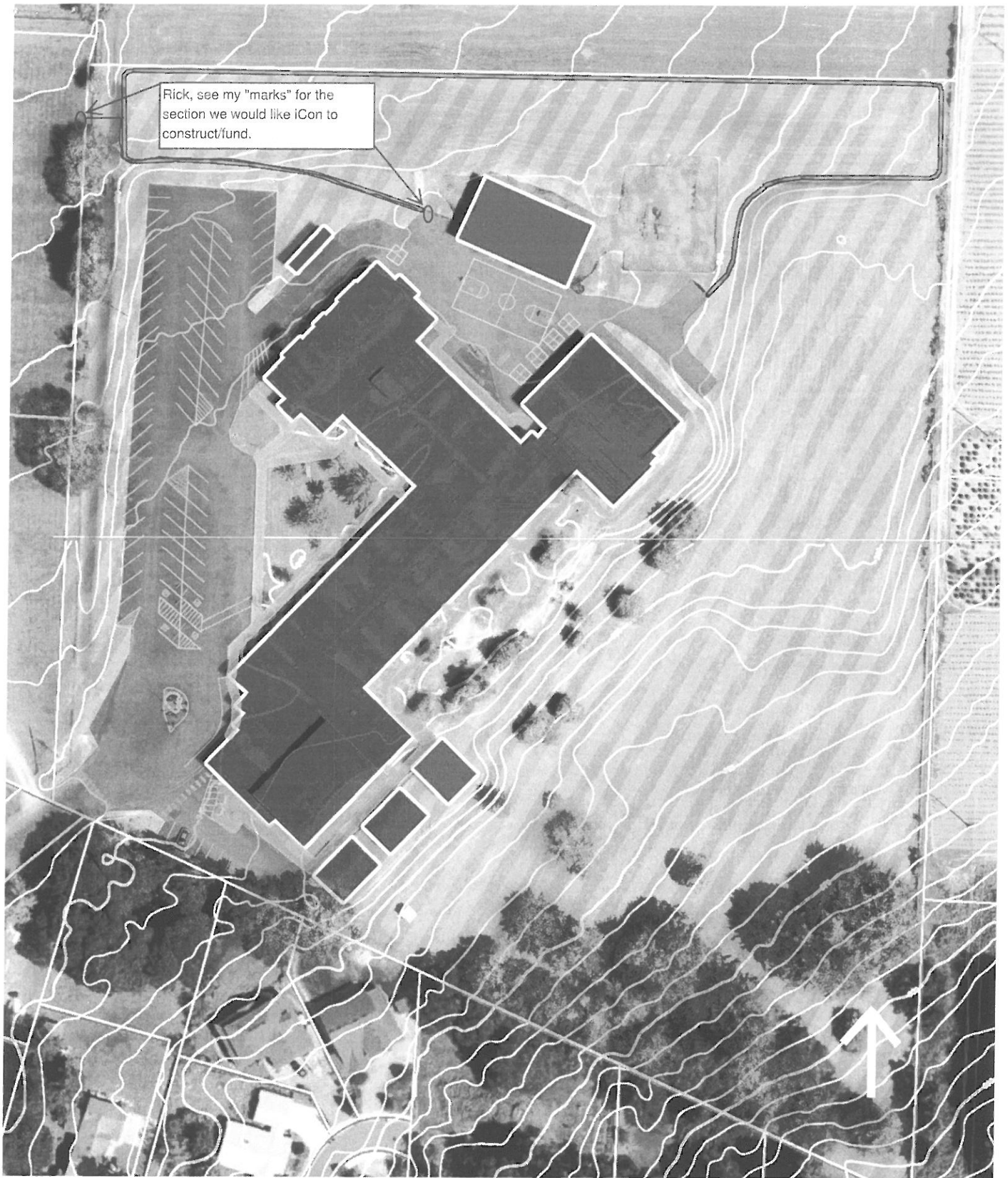
From: "Wes Rogers" <Wes.Rogers@orecity.k12.or.us>
Date: Wednesday, April 30, 2014 12:31 PM
To: <rickgivens@gmail.com>
Attach: Holcomb Elementary - Walking path concept-5 043014.pdf
Subject: FW: Holcomb Walking/Jogging Path Update

Rick, here are the latest plans with my markups. Please review with the developer and let me know.

..wes

Wes Rogers, Director of Operations
Oregon City SD
503-785-8426

5/12/2014



Holcomb Elementary - Walking Path Concept

Project Number: 2600-14 Date: 04-24-2014

Architecture
Greenbox
1309 John Adams St, Ste 106 Oregon City, Oregon 97045

[illegible]









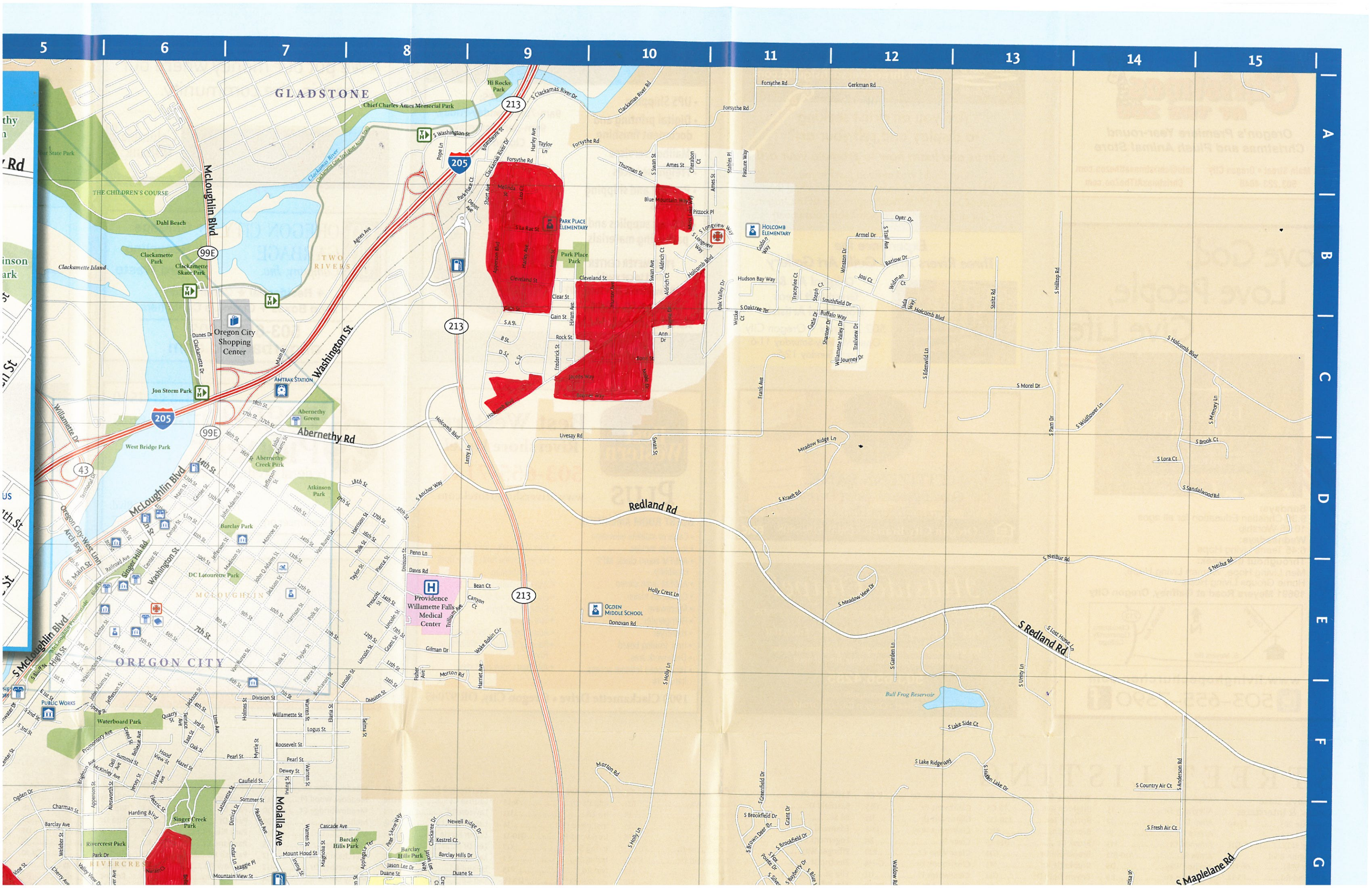




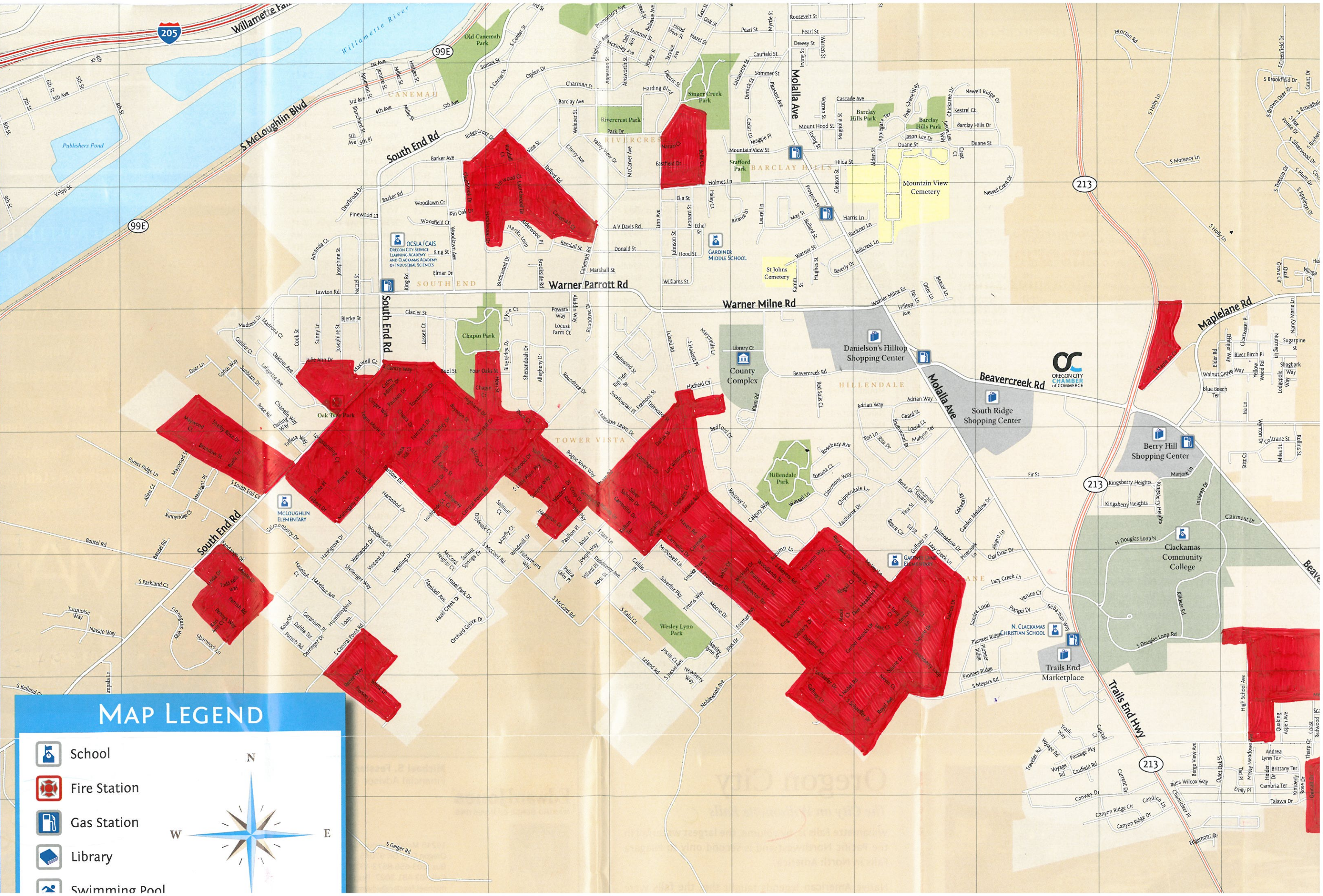











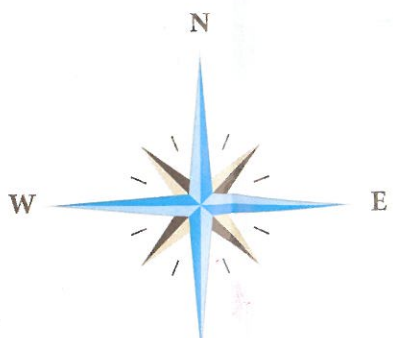


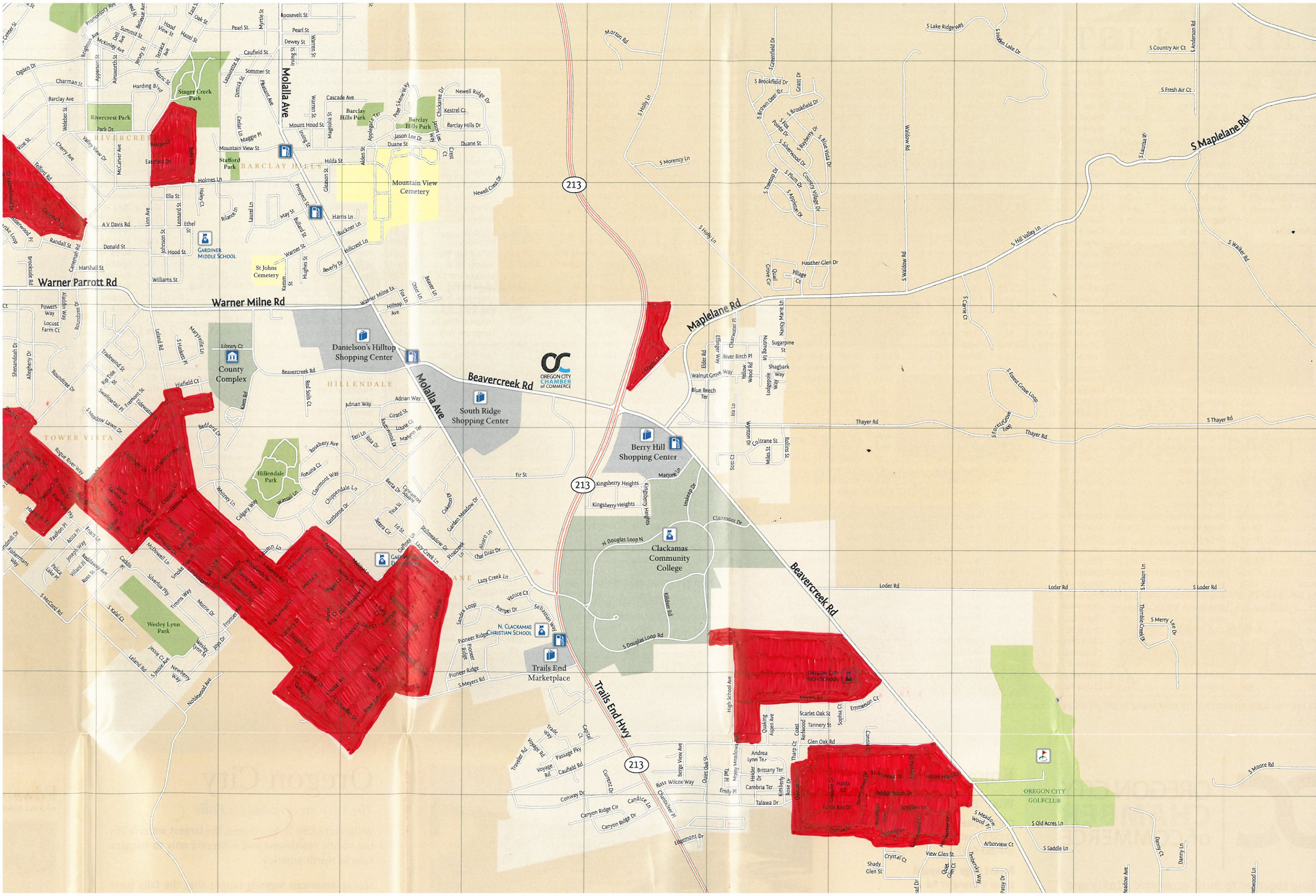
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MAP LEGEND

-  School
-  Fire Station
-  Gas Station
-  Library
-  Swimming Pool







City of Oregon City

625 Center Street
Oregon City, OR 97045
503-657-0891

Staff Report

File Number: PC 14-050

Agenda Date: 6/9/2014

Status: Agenda Ready

To: Planning Commission

Agenda #: 3c.

From: Community Development Director Tony Konkol

File Type: Planning Item

SUBJECT:

Proposed zone change from R-8 single-family to R-6 single-family and a 10-lot subdivision for properties located at 19751 and 19735 Meyer Road (Planning Files ZC 14-02 and TP 14-02)

RECOMMENDED ACTION (Motion):

Staff recommends that the Planning Commission recommend approval with conditions of this zone change and subdivision to the City Commission for their consideration at the June 18th, 2014 public meeting.

BACKGROUND:

The applicant has proposed a zone change from R-8 single-family to R-6 single-family and a 10-lot subdivision on a 2-acre property along Meyers Road. See staff report.



TYPE IV APPLICATION STAFF REPORT AND RECOMMENDATION

June 3, 2014

Planning Commission Public Hearing: June 9, 2014

FILE NO.: TP 14-02: 10-Lot Subdivision
ZC 14-02: Zone Change

OWNERS: Jason Melonuk, 19735 Meyers Rd, Oregon City, OR 97045
Wayne and Arminda Markham, 19751 Meyers Rd, Oregon City, OR 97045

APPLICANT: JECO Investments, PO Box 279, Boring, OR 97009

REPRESENTATIVES: Sisul Engineering, 375 Portland Ave, Gladstone, OR 97027

REQUEST: The Applicant is seeking approval for a Zone Change from “R-8” Single-Family Dwelling District to “R-6” Single-Family Dwelling District as well as a 10-lot subdivision.

LOCATION: 19751 Meyers Rd, Clackamas County Map 3-2E-08CA-00600
19735 Meyers Rd, Clackamas County Map 3-2E-08CA-00700

REVIEWER: Kelly Moosbrugger, Planner
Todd Martinez, P.E., Development Services

RECOMMENDATION: Staff recommends the Planning Commission recommend approval with conditions of Planning Files TP 14-02 and ZC 14-02 to the City Commission for their consideration at the June 18, 2014 public hearing.

PROCESS: Type IV decisions include only quasi-judicial plan amendments and zone changes. These applications involve the greatest amount of discretion and evaluation of subjective approval standards and must be heard by the city commission for final action. The process for these land use decisions is controlled by ORS 197.763. At the evidentiary hearing held before the planning commission, all issues are addressed. If the planning commission denies the application, any party with standing (i.e., anyone who appeared before the planning commission either in person or in writing) may appeal the planning commission denial to the city commission. If the planning commission denies the application and no appeal has been received within ten days of the issuance of the final decision then the action of the planning commission becomes the final decision of the city. If the planning commission votes to approve the application, that decision is forwarded as a recommendation to the city commission for final consideration. In either case, any review by the city commission is on the record and only issues raised before the planning commission may be raised before the city commission. The city commission decision is the city's final decision. The city's final decisions is appealable to the Land Use Board of Appeals (LUBA) within twenty-one days of when it becomes final.

IF YOU HAVE ANY QUESTIONS ABOUT THIS APPLICATION, PLEASE CONTACT THE PLANNING DIVISION OFFICE AT (503) 722-3789.

I. BACKGROUND AND PROPOSED DEVELOPMENT:

The applicant proposes a zone change from the current R-8 to R-6 zone designation and development of a 10-lot subdivision for single family detached dwellings on a site located on Meyers Road in the southerly portion of Oregon City.

The subject site is comprised of two separate but contiguous tax lots, each with an existing single-family dwelling that are located at 19735/19751 S. Meyers Road in the southerly portion of the city. Site size is approximately 79,745 square feet, or 1.83 acres. See Figure 1. The site has frontage on Meyers Road with no other frontage. Each of the existing dwellings has driveway access with Meyers Road. The balance of the site is vacant, with the exception of a couple of outbuildings. One of the homes is proposed to remain on a lot in the subdivision. All other structures will be removed.

Under the proposed subdivision plan, a short cul-de-sac street will intersect Meyers Road and provide access to all of the new lots. There will be no direct access from any of the lots to Meyers Road. The existing driveway on Meyers will be removed.



Figure 1. Vicinity Map

The property slopes slightly upward from north to south, with a 428 foot contour at the northerly corner, gently sloping upward to a 442-foot elevation near the center of the site, then gently downward to an approximately 436 foot elevation at the easterly corner. There are no outcrops, no water features, or other geologic or geographic features on the site that would impair overall

development opportunity. There are approximately 47 trees on the subject site, which are scattered throughout the site. It is estimated that 40% of the existing trees would be removed in order to develop the the subdivision, and for construction of the homes on the ten lots where homes will be built.



Figure 2: Aerial Photo of Site

Surrounding Uses and Zoning:

The subject property is bordered by "R-8" Single Family Residential zoning. The adjacent properties include a church and single family homes. Across Meyers Road, the single family dwellings are part of platted subdivisions. The immediately adjacent residential lots are not large enough to be subdivided but have the potential to be partitioned in the future. See Figures 3 and 4 for surrounding zoning maps.

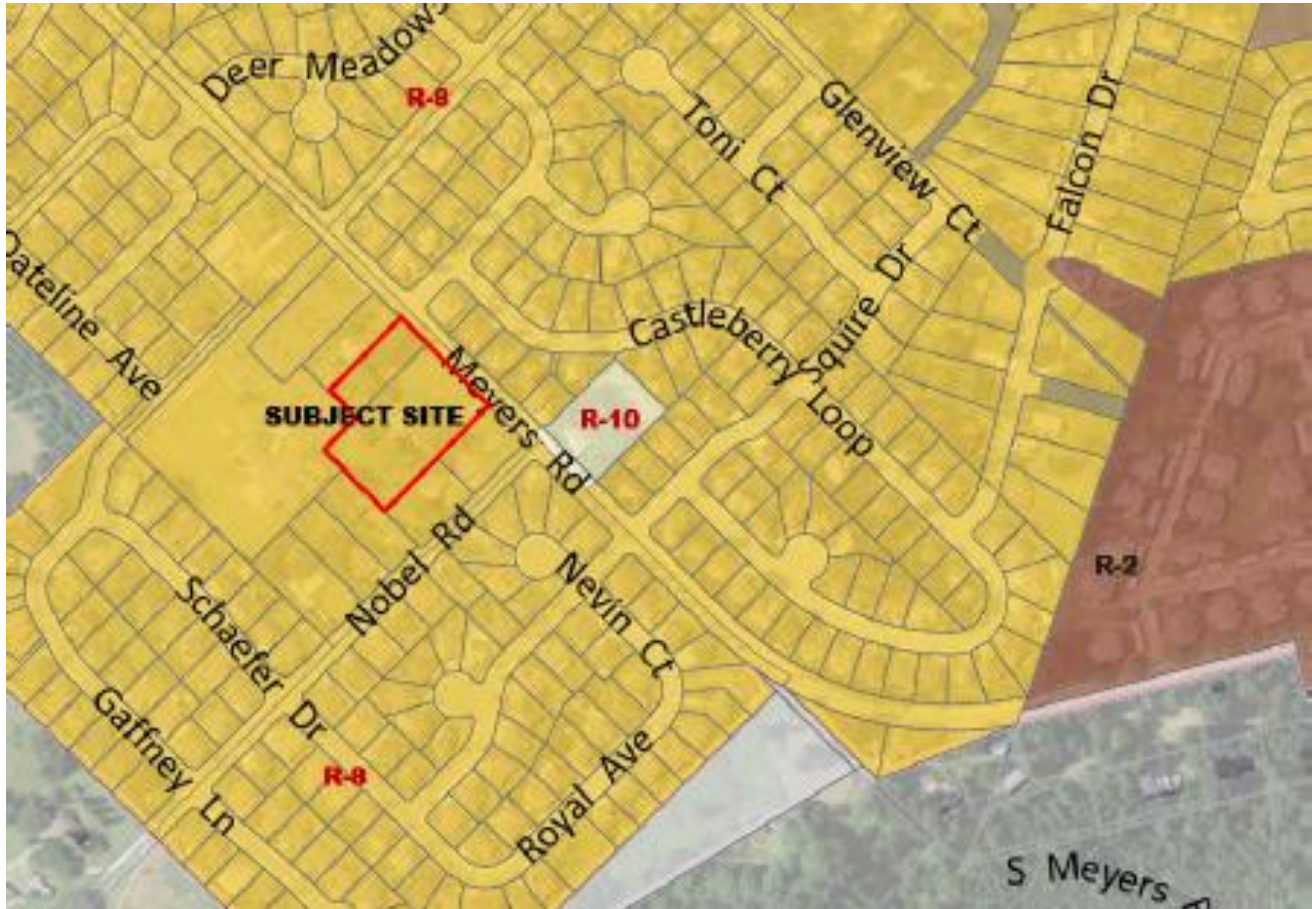


Figure 3. Surrounding zoning (zoomed in)

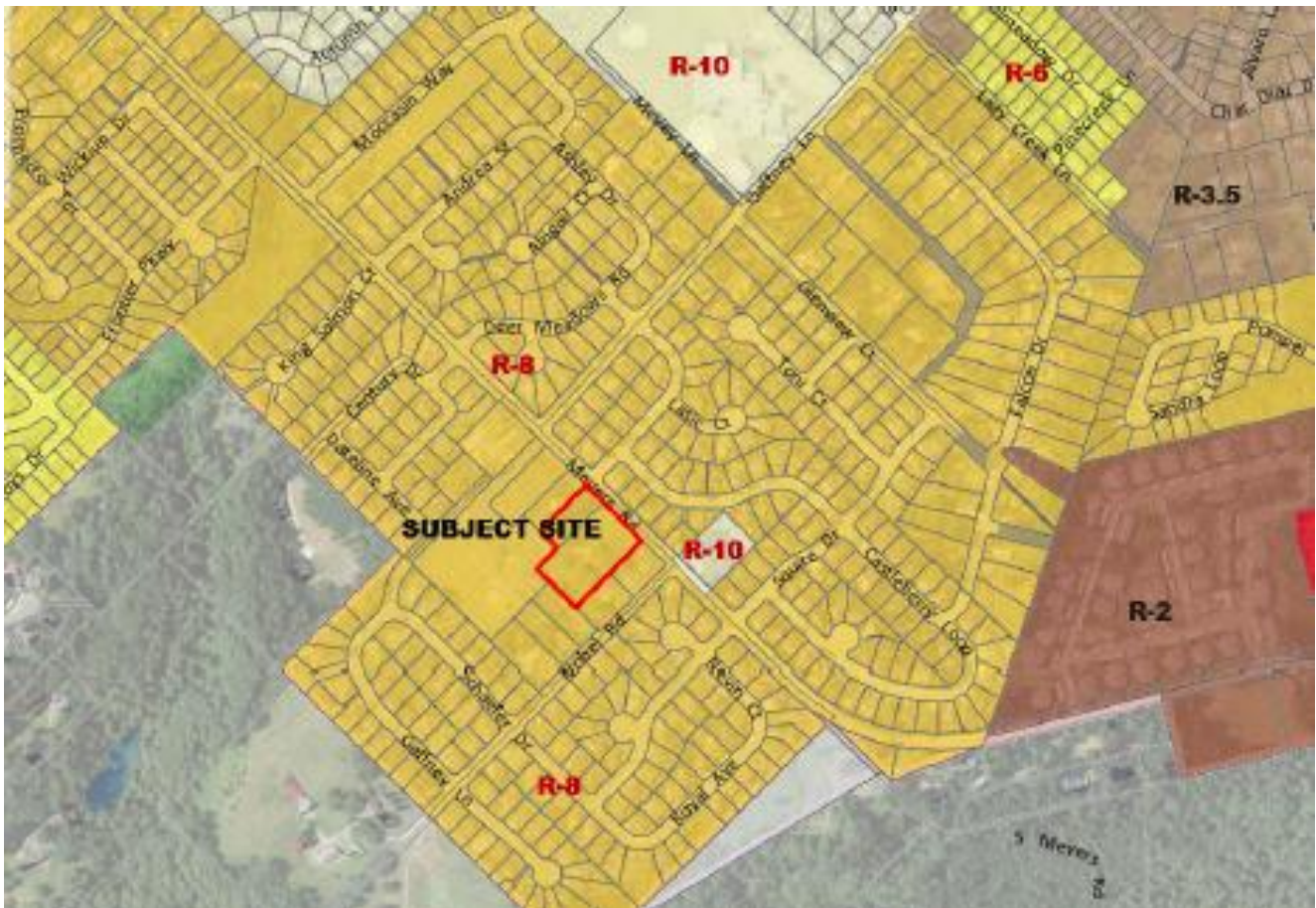


Figure 4. Surrounding zoning (zoomed out)

Subdivision Layout:

The applicant submitted a subdivision layout that conforms to City standards, and in addition, an alternative layout that includes a constrained right-of-way that does not meet City standards. The applicant explains this alternative proposal for the Planning Commission in Exhibit 4 and page 7 of Exhibit 3. Because the alternative layout does not meet City standards for right-of-way width, street design, pedestrian accessways, and cul-de-sac length, staff does not support it. However, the applicant wished to present the alternative to the Planning Commission for consideration. See Figures 5 and 6 below.

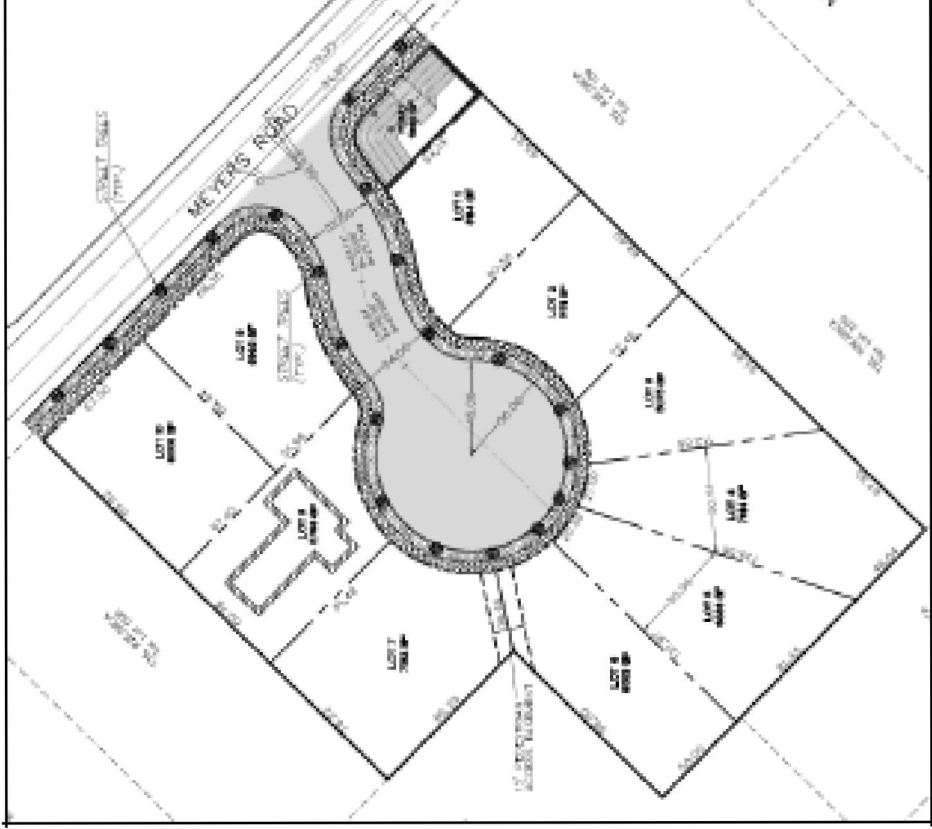
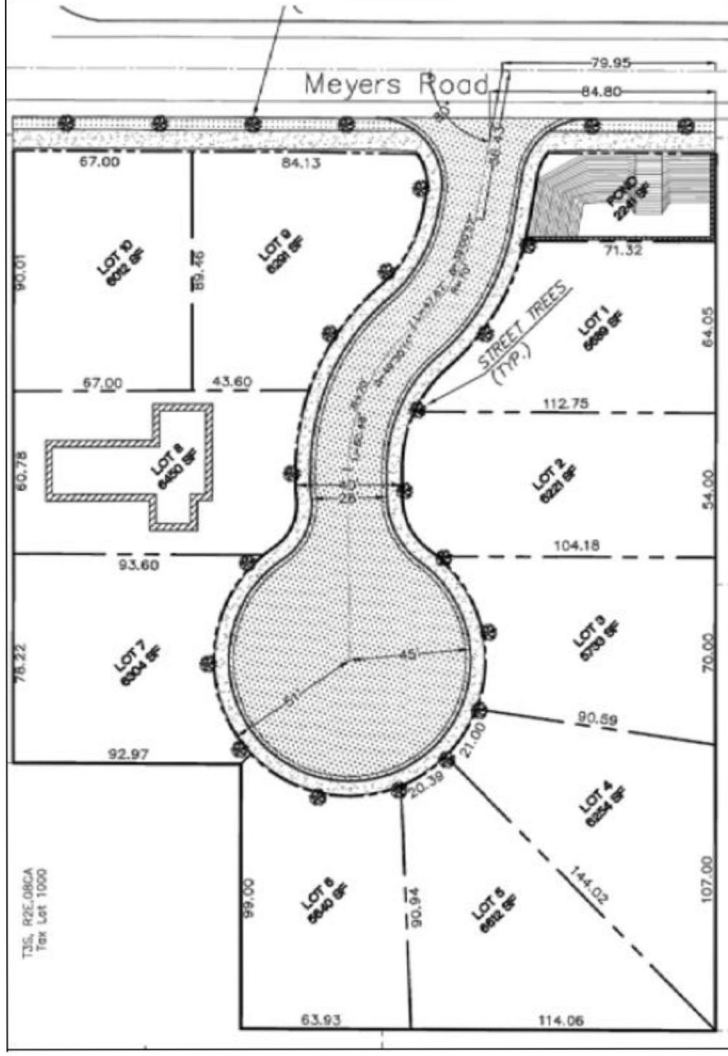


Figure 5 (left): The submitted layout that meets City code.

Figure 6 (below): Alternative layout that does not meet certain City code requirements but is before the Planning Commission and City Commission for consideration.



City/Public Comments:

Notice of the public hearings for this proposal was mailed to property owners within 300 feet of the subject site, the Gaffney Lane Neighborhood Association and the Citizen Involvement Council. The notice was advertised in the Oregon City News and the site was posted with land use notification signs. The notice requested comments and indicated that interested parties could testify at the public hearing or submit written comments prior to or at the hearing. The application was transmitted to the Clackamas River Water District, Oregon Department of Transportation, Clackamas County, Oregon City Police Department, City Engineer, Public Works Operations Manager, Development Services Manager, Oregon City School District, GIS Coordinator, and the City transportation consultant for comment. Comments from John Replinger, a City consultant for Replinger and Associates, have been incorporated into this staff report.

No public comments were received before the staff report was written.

II. DECISION-MAKING CRITERIA:Oregon City Municipal Code Standards and Requirements

Title 12: Streets, Sidewalks and Public Places:

Chapter 12.04, Street Design Standards

Chapter 12.08, Public and Street Trees

Title 13: Public Services

Chapter 13.12, Stormwater Management

Title 16: Land Division:

Chapter 16.08, Subdivisions-Process and Standards

Chapter 16.12, Minimum Improvements and Design Standards for Land Divisions

Title 17: Zoning:

Chapter 17.12, R-6 Single Family Dwelling District

Chapter 17.10, R-8 Single Family Dwelling District

Chapter 17.41, Tree Protection

Chapter 17.68, Zone Changes and Amendments

III. COMPLIANCE WITH APPROVAL CRITERIA**CHAPTER 17.68.020 ZONE CHANGES AND AMENDMENTS**

A. The proposal shall be consistent with the goals and policies of the comprehensive plan.

Goal 1: Citizen Involvement

Goal 1.2: Ensure that citizens, neighborhood groups and affected property owners are involved in all phases of the comprehensive planning program.

Finding: Complies as Proposed. Chapter 17.50 of the Oregon City Municipal Code includes provisions to ensure that citizens, neighborhood groups, and affected property owners have ample opportunity for participation in zone change applications. The Applicant met with the Gaffney Lane Neighborhood Association prior to submitting this application. Once the application was deemed complete, the City noticed the application to properties within 300 feet, the neighborhood association, Citizens Involvement Council,

and posted the application on the City's website. In addition, the Applicant posted public notice signs on the subject site. All interested persons have the opportunity to comment in writing or in person through the public hearing process. By following this process, the requirements of this policy are met.

Goal 2: Land Use

Goal 2.1: Ensure that property planned for residential, commercial, office and industrial uses is used efficiently and that land is developed following principles of sustainable development.

Finding: Complies as Proposed. The Applicant requested a zone change from "R-8" Single-Family Dwelling District to the "R-6" Single-Family Dwelling District. The zone change would allow additional dwellings to be constructed and the property to be utilized in an efficient manner, consistent with the adjacent properties. This standard has been met.

Goal 2.7: Maintain the Oregon City Comprehensive Plan Land-Use Map as the official long-range planning guide for land-use development of the city by type, density and location.

Finding: Complies as Proposed. The Oregon City Comprehensive Plan designates the subject property as within the "LR" Low Density Residential Development designation. The "LR" Low Density Residential Development designation includes the R-10, R-8 and R-6 zoning designations. The Applicant has not proposed to alter the Comprehensive Plan designation of the site.

Goal (5) Natural Resources

Policy 5.4.4: Consider natural resources and their contribution to quality of life as a key community value when planning, evaluating and assessing costs of City actions.

Finding: Complies as Proposed. This policy is implemented by the application of the Natural Resources Overlay District (NROD). The subject property is not located within the NROD boundary.

Goal 6: Quality of Air, Water and Land Resources

Goal 6.1.1: Promote land-use patterns that reduce the need for distance travel by single-occupancy vehicles and increase opportunities for walking, biking and/or transit to destinations such as places of employment, shopping and education.

Finding: Complies as Proposed. The proposed R-6 development pattern will be consistent with this policy by creation of a more compact land use pattern and reduction in the square footage of public street per dwelling, thereby reducing travel by single-occupancy vehicles and increasing use of alternative modes of transportation. Public sidewalks will be provided on all streets within this project. This standard has been met.

Policy 6.2.1 Prevent erosion and restrict the discharge of sediments into surface and groundwater by requiring erosion prevention measures and sediment control practices.

Finding: Complies as Proposed. This policy is implemented by development standards that require appropriate handling of storm water runoff. Standard erosion control measures will be implemented during construction. Storm runoff from the proposed development will be collected with a storm sewer system, as shown on the preliminary utility plan submitted with this application. The applicant has proposed to construct erosion control improvements at the existing outfall.

Prior to final plat approval, the Applicant shall provide an Erosion Prevention and Sedimentation Control Plan suitable to the Public Works Department to meet the Public Works requirements for erosion control. The Applicant shall provide a Preliminary Residential Lot Grading Plan to the City for review prior to the approval of construction plans. A final site Residential Lot Grading Plan shall be required as part of the final construction plans per the City's Residential Lot Grading Criteria and the International Building Code. If significant grading is required for the lots due to its location or the nature of the site, rough grading shall be required of the developer prior to the acceptance of the public improvements. There shall not be more than a maximum grade differential of two (2) feet at all subdivision boundaries. Grading shall in no way create

any water traps, or other ponding situations. **Staff has determined it is possible, likely and reasonable the applicant can meet this standard by complying with Condition of Approval 1.**

Goal 10: Housing

Goal 10.1.3: Designate residential land for a balanced variety of densities and types of housing, such as single-family attached and detached, and a range of multi-family densities and types, including mixed-use development.

Finding: Complies as Proposed. The proposed zone change will maintain the basic land use for this site as Low Density Residential, consistent with the Oregon City Comprehensive Plan. The increased density allowed by the R-6 zoning, as compared with the existing R-8 district will provide for a greater number of single-family homes on this site, thereby increasing the availability of more choices in the marketplace. This standard has been met.

Goal 11: Public Facilities

Goal 11.1: Serve the health, safety, education, welfare and recreational needs of all Oregon City residents through the planning and provision of adequate public facilities.

Finding: Complies as Proposed. All public facilities necessary to serve this project are available at adequate levels to meet the proposed R-6 zoning. Sanitary sewer is available from an existing 8-inch line that is installed in Gerber Wood Drive which will be extended along Meyers Road and onto the property. Water service is available from a 12-inch City line in Meyers Road that will be extended onto the property. Storm water service is provided by a 12-inch pipe in Meyers Road that will be extended along Meyers Road and onto the property. Oregon City Public Schools provides education services and has indicated adequate levels of service are available. Police and fire protection are provided by the City of Oregon City. The site is located approximately a half mile southwest of the future Glen Oak park site to meet recreational needs and is less than a mile from the athletic fields at Oregon City High School. Please refer to the findings within this report under Chapter 16.08.030.B.

Policy 11.1.4: Support development of underdeveloped or vacant buildable land within the city where public facilities and services are available or can be provided and where land use compatibility can be found relative to the environment, zoning and comprehensive plan goals.

Finding: Complies as Proposed. All public facilities necessary to serve this project are available at adequate levels to meet the proposed R-6 zoning. The proposed zone change will maintain the basic land use for this site as Low Density Residential, consistent with the Oregon City Comprehensive Plan. Please refer to the findings within this report.

Goal 12: Transportation

Goal 12.6: Develop and maintain a transportation system that has enough capacity to meet users' needs.

Finding: Complies as Proposed. A Traffic Assessment Letter (TAL) was prepared for this project, dated February 19, 2014, under the direction of Michael Ard of Lancaster Engineering (Exhibit 5). The TAL was reviewed by John Replinger of Replinger and Associates, a City transportation consultant, who concluded: "I find that the TAL meets city requirements and provides an adequate basis upon which impacts can be assessed. The subdivision will result in minimal additional traffic. There are no transportation-related issues associated with this subdivision requiring mitigation." (Exhibit 6).

B. That public facilities and services (water, sewer, storm drainage, transportation, schools, police and fire protection) are presently capable of supporting the uses allowed in the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.

Finding: Complies as Proposed. The public facilities and services have been addressed in the discussion of compliance with Goal 11, above and within this report. All the services are available and adequate to meet the needs of this property when developed to levels allowed by the R-6 zoning district.

C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.

Finding: Complies as Proposed. The proposed development would maintain the Comprehensive Plan designation of Low Density Residential. The proposed Zone Change would retain the use of the site as for single-family dwellings. A Traffic Assessment Letter (TAL) was prepared for this project, dated February 19, 2014, under the direction of Michael Ard of Lancaster Engineering (Exhibit 5). The TAL was reviewed by John Replinger of Replinger and Associates, a City transportation consultant, who concluded: "I find that the TAL meets city requirements and provides an adequate basis upon which impacts can be assessed. The subdivision will result in minimal additional traffic. There are no transportation-related issues associated with this subdivision requiring mitigation." (Exhibit 6).

D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.

Finding: Not Applicable. The comprehensive plan contains specific policies and provisions which control the zone change.

CHAPTER 17.12 "R-6" SINGLE-FAMILY DWELLING DISTRICT

17.12.040. A. Minimum lot area, six thousand square feet;

Finding: Complies as Proposed. Chapter 16.10.050 of the Oregon City Municipal Code allows lots that are up to 20% less than the required minimum lot area of the applicable zoning designation provided the subdivision, on average, meets the minimum site area requirement of the underlying zone. In the R-6 zone, the 20% standard would allow lots as small as 4,800 square feet. All proposed lots exceed 4,800 square feet – the smallest is 5,075 square feet and largest is 7,614 square feet. The average lot size for the entire subdivision is 6,036 square feet.

Lot	Size (Sq. Ft.)
1	5,184
2	5,151
3	5,075
4	7,614
5	6,336
6	6,053
7	7,182
8	5,796
9	5,965
10	6,008

17.12.040. B. Minimum lot width, fifty feet;

Finding: Complies as proposed. As demonstrated below, the proposed lot widths exceed the minimum lot width of 50 feet. This standard has been met.

Lot	Lot Width Ft.
1	66
2	69

3	66
4	50.5
5	51
6	50
7	78
8	61
9	66
10	67

17.12.040.C. Minimum lot depth, seventy feet;

Finding: Complies as Proposed. As demonstrated below, the proposed lot depths exceed the minimum lot depth of 70 feet. This standard has been met.

Lot	Lot Depth Ft.
1	80
2	75
3	85
4	140
5	125
6	122
7	90
8	90
9	90
10	90

17.12.040.D. Maximum building height: two and one-half stories, not to exceed thirty-five feet.

Finding: Not Applicable. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed. The Applicant did not propose to construct structures with the proposed development.

17.12.040.E

1. Front yard: ten feet minimum depth.

2. Front porch, five feet minimum setback,

3. Attached and detached garage, twenty feet minimum setback from the public right-of-way where access is taken, except for alleys. Detached garages on an alley shall be setback a minimum of five feet in residential areas.

4. Interior side yard, nine feet minimum setback for at least one side yard; five feet minimum setback for the other side yard,

5. Corner side yard, fifteen feet minimum setback,

6. Rear yard, twenty-foot minimum setback

7. Rear porch, fifteen-foot minimum setback.

Finding: Complies as Proposed. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed. The existing home, proposed to be located on lot 8 will have a ten foot front setback, five and nine foot side setbacks, and a 12 foot rear setback. The house is currently 12 feet from the property line and is not proposed to change. Due to this existing condition, the rear setback is considered legal nonconforming and is permitted to remain.

17.12.040.F. Garage standards: See Chapter 17.21—Residential Design Standards.

Finding: Complies with Condition. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are proposed. The existing structure does not have a garage that would face the front lot line; thus five design elements are required. Prior to final plat, the applicant shall ensure that the street facing façade of the existing home on Lot 8 contains five of the following design elements from Chapter 17.20:

1. The design of the dwelling includes dormers, which are projecting structures built out from a sloping roof housing a vertical window;
2. The roof design utilizes a:
 - a. Gable, which is a roof sloping downward in two parts from a central ridge, so as to form a gable at each end; or
 - b. Hip, which is a roof having sloping ends and sides meeting at an inclined projecting angle.
3. The building facade includes 2 or more offsets of 16-inches or greater;
4. A roof overhang of 16-inches or greater;
5. A recessed entry that is at least 2 feet behind the furthest forward living space on the ground floor, and a minimum of 8 feet wide;
6. A minimum 60 square-foot covered front porch that is at least 5 feet deep or a minimum 40 square-foot covered porch with railings that is at least 5 feet deep and elevated entirely a minimum of 18-inches;
7. A bay window that extends a minimum of 12-inches outward from the main wall of a building and forming a bay or alcove in a room within;
8. Windows and main entrance doors that occupy a minimum of 15% of the lineal length of the front façade (not including the roof and excluding any windows in a garage door);
9. Window trim (minimum 4-inches);
10. Window grids (excluding any windows in the garage door or front door).
11. Windows on all elevations include a minimum of 4-inch trim (worth 2 elements);
12. Windows on all of the elevations are wood, clad wood, or fiberglass (worth 2 elements);
13. Windows on all of the elevations are recessed a minimum of two inches from the façade (worth 2 elements);
11. A balcony that projects from the wall of the building and is enclosed by a railing or parapet;
14. Shakes, shingles, brick, stone or other similar decorative materials shall occupy a minimum of 60 square feet of the street façade;
15. All garage doors are a maximum 9-feet wide;
16. All garage doors wider than 9-feet are designed to resemble 2 smaller garage doors;
17. There are a minimum of two windows in each garage door;
15. A third garage door is recessed a minimum of 2 feet;
16. A window over the garage door that is a minimum of 12 square feet with window trim (minimum 4-inches);
17. There is no attached garage onsite;
18. The living space of the dwelling is within 5 feet of the front yard setback; or
19. The driveway is composed entirely of pervious pavers or porous pavement.

Staff has determined it is possible, likely and reasonable the applicant can meet this standard by complying with Condition of Approval 2.

G. Maximum lot coverage: The footprint of all structures two hundred square feet or greater shall cover a maximum of forty percent of the lot area. s

Finding: Complies as Proposed. Building height, setbacks, garage, and lot coverage standards will be reviewed at the time of building permit application. No variances to any dimensional standards are

proposed. The existing home, proposed to be located on Lot 8 has a lot size of 5,796 square feet and lot coverage of 40%. Thus, no additions or accessory structures over 200 square feet will be permitted in the future for this lot, unless approved through a variance process.

CHAPTER 16.08 – SUBDIVISIONS PROCESS AND STANDARDS

16.08.010

All subdivisions shall be in compliance with the policies and design standards established by this chapter and with applicable standards in the City's Public Facilities Master Plan and the City Design Standards and Specifications. The evidence contained in this record indicates that the proposed subdivision is in compliance with standards and design specifications listed in this document, subject to the conditions of approval.

Finding: Complies with Conditions. As demonstrated within this staff report the proposed project was reviewed by the appropriate agencies and will comply with the criterion in the Oregon City Municipal Code with the conditions of approval. **Staff has determined it is possible, likely and reasonable the applicant can meet this standard by complying with all of the Conditions of Approval .**

16.08.015 *Preapplication conference required.*

Finding: Complies as Proposed. The Applicant held a pre-application conference on December 4, 2013.

16.08.020 - *Preliminary subdivision plat application.*

Within six months of the preapplication conference, an Applicant may apply for preliminary subdivision plat approval. The applicant's submittal must provide a complete description of existing conditions, the proposed subdivision and an explanation of how the application meets all applicable approval standards. The following sections describe the specific submittal requirements for a preliminary subdivision plat, which include plan drawings, a narrative statement and certain tabular information. Once the application is deemed to be complete, the community development director shall provide notice of the application and an invitation to comment for a minimum of fourteen days to surrounding property owners in accordance with Section 17.50.090(A). At the conclusion of the comment period, the community development director will evaluate the application, taking into consideration all relevant, timely filed comments, and render a written decision in accordance with Chapter 17.50. The community development director's decision may be appealed to the city commission with notification to the planning commission.

Finding: Complies as Proposed. This application was submitted on February 25, 2014 within 6 months of the pre-application conference held on December 4, 2013. The application was reviewed and determined to be incomplete on March 12, 2014, and after the Applicant submitted additional materials, was deemed complete on April 21, 2014.

16.08.025 - *Preliminary subdivision plat—Required plans.*

The preliminary subdivision plat shall specifically and clearly show the following features and information on the maps, drawings, application form or attachments. All maps and site drawings shall be at a minimum scale of one inch to fifty feet.

A. Site Plan. A detailed site development plan showing the location and dimensions of lots, streets, pedestrian ways, transit stops, common areas, building envelopes and setbacks, all existing and proposed utilities and improvements including sanitary sewer, stormwater and water facilities, total impervious surface created (including streets, sidewalks, etc.) and an indication of existing and proposed land uses for the site. If required by staff at the pre-application conference, a subdivision connectivity analysis shall be prepared by a transportation engineer licensed by the State of Oregon that describes the existing and future vehicular, bicycle and pedestrian connections between the proposed subdivision and existing or planned land uses on adjacent properties. The subdivision connectivity analysis shall include shadow plats of adjacent properties

demonstrating how lot and street patterns within the proposed subdivision will extend to and/or from such adjacent properties and can be developed meeting the existing Oregon City Municipal Code design standards. **Finding: Complies as Proposed.** The development application included a preliminary site plan displaying the necessary submittal requirements. This standard is met.

B. Traffic/Transportation Plan. The applicant's traffic/transportation information shall include two elements: (1) A detailed site circulation plan showing proposed vehicular, bicycle, transit and pedestrian access points and connections to the existing system, circulation patterns and connectivity to existing rights-of-way or adjacent tracts, parking and loading areas and any other transportation facilities in relation to the features illustrated on the site plan; and (2) a traffic impact study prepared by a qualified professional transportation engineer, licensed in the state of Oregon, that assesses the traffic impacts of the proposed development on the existing transportation system and analyzes the adequacy of the proposed internal transportation network to handle the anticipated traffic and the adequacy of the existing system to accommodate the traffic from the proposed development. The City Engineer may waive any of the foregoing requirements if determined that the requirement is unnecessary in the particular case.

Finding: Complies as Proposed. The development application included a preliminary site plan as well as a Transportation Analysis Letter, dated February 19, 2014, under the direction of Michael Ard of Lancaster Engineering (Exhibit 5). This standard is met.

C. Natural Features Plan and Topography, Preliminary Grading and Drainage Plan. The applicant shall submit a map illustrating all of the natural features and hazards on the subject property and, where practicable, within two hundred fifty feet of the property's boundary. The map shall also illustrate the approximate grade of the site before and after development. Illustrated features must include all proposed streets and cul-de-sacs, the location and estimated volume of all cuts and fills, and all stormwater management features. This plan shall identify the location of drainage patterns and courses on the site and within two hundred fifty feet of the property boundaries where practicable. Features that must be illustrated shall include the following:

1. Proposed and existing street rights-of-way and all other transportation facilities;
2. All proposed lots and tracts;
3. All trees proposed to be removed prior to final plat with a diameter six inches or greater diameter at breast height (d.b.h);
4. All natural resource areas pursuant to Chapter 17.49, including all jurisdictional wetlands shown in a delineation according to the Corps of Engineers Wetlands Delineation Manual, January, 1987 edition, and approved by the Division of State Lands and wetlands identified in the City of Oregon Local Wetlands inventory, adopted by reference in the City of Oregon City comprehensive plan;
5. All known geologic and flood hazards, landslides or faults, areas with a water table within one foot of the surface and all flood management areas pursuant to Chapter 17.42
6. The location of any known state or federal threatened or endangered species;
7. All historic areas or cultural features acknowledged as such on any federal, state or city inventory;
8. All wildlife habitat or other natural features listed on any of the city's official inventories.

Finding: Complies as Proposed. The development application included preliminary site and drainage plans as well as the proposed lots, street, and trees proposed to be removed. The site does not contain wetlands or other natural or cultural features.

D. Archeological Monitoring Recommendation. For all projects that will involve ground disturbance, the applicant shall provide,

1. A letter or email from the Oregon State Historic Preservation Office Archaeological Division indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the Oregon State Historic Preservation Office and that the Oregon State Historic Preservation Office had not commented within forty-five days of notification by the applicant; and

2. A letter or email from the applicable tribal cultural resource representative of the Confederated Tribes of the Grand Ronde, Confederated Tribes of the Siletz, Confederated Tribes of the Umatilla, Confederated Tribes of the Warm Springs and the Confederated Tribes of the Yakama Nation indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the applicable tribal cultural resource representative and that the applicable tribal cultural resource representative had not commented within forty-five days of notification by the applicant.

If, after forty-five days notice from the applicant, the Oregon State Historic Preservation Office or the applicable tribal cultural resource representative fails to provide comment, the city will not require the letter or email as part of the completeness review. For the purpose of this section, ground disturbance is defined as the movement of native soils. The community development director may waive any of the foregoing requirements if the community development director determines that the requirement is unnecessary in the particular case and that the intent of this chapter has been met.

Finding: Complies as Proposed. A description of the proposed development was sent to the Oregon State Historic Preservation Office (SHPO) as well as various tribes for review.

16.08.030 – Preliminary Subdivision Plat – Narrative Statement

In addition to the plans required in the previous section, the applicant shall also prepare and submit a narrative statement that addresses the following issues:

A. Subdivision Description. A detailed description of the proposed development, including a description of proposed uses, number and type of residential units, allocation and ownership of all lots, tracts, streets, and public improvements, the structure of any homeowner's association, and each instance where the proposed subdivision will vary from some dimensional or other requirement of the underlying zoning district. For each such variance, a separate application will be required pursuant to Chapter 17.60, Variances;

Finding: Complies as Proposed. A detailed description of the proposed subdivision including the above listed information, as applicable, was submitted with this development application.

B. Timely Provision of Public Services and Facilities. The applicant shall explain in detail how and when each of the following public services or facilities is, or will be, adequate to serve the proposed development by the time construction begins:

1. Water

Finding: Complies with Conditions. There is an existing 12-inch Oregon City (City) water main in Meyers Road. The Applicant proposed the water line be installed in the proposed street connecting to the existing pipe with an 8-inch pipe.

All new water services shall be constructed with individual copper water laterals a minimum of 1-inch diameter in size connecting the water main to the water meter.

Staff concurs that sufficient water mains are installed. Prior to final plat, the Applicant shall submit the proposed development to Clackamas County Fire District No. 1 for review. In the event that fire hydrants are required by Clackamas County Fire District No. 1, staff finds there is adequate area available on the subject property for such installation. The Applicant has proposed a water system that appears to meet City code requirements with a few modifications. Although an eight-inch diameter main is the minimum standard size for new water mains, staff believes a six-inch diameter main as submitted is a reasonable modification to the standard given the limited number of services and no future opportunity for expansion. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. **Staff has**

determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 3, 4, 5, 6 and 7.

2. Sanitary Sewer

Finding: Complies with Condition. There is an existing 8-inch gravity sanitary sewer main in Gerber Wood Drive which is north of the proposed site along Meyers Road. A new 8-inch public sanitary sewer main will be installed from Gerber Wood Drive where it intersects with Meyers Road, along Meyers Road to the proposed site and in the proposed street. The Applicant has proposed to provide sanitary sewer laterals to all of the lots in the proposed development. The pipe in Meyers Road should be extended to the south edge of the proposed site.

The proposed sanitary sewer system will meet City code requirements with a few modifications. All new sanitary sewer laterals shall be constructed with individual laterals connecting to the sanitary sewer main. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 3, 4, 8 and 9.**

3. Storm Sewer and Storm Water Drainage

Finding: Complies with Condition. There are existing storm water facilities in Meyers Road which consist of a catch basin followed by a 12-inch pipe running to the north on Meyers Road.

Storm water detention and treatment is required. The applicant has submitted a preliminary storm report. It is proposed that storm water from the cul-de-sac will be collected and discharged to a detention pond that will also provide for treatment. The outlet from the pond will discharge to the public storm system on Meyers Road just north of the site. Storm run-off from the homes will be discharged on each home site through the use on on-site infiltrators.

The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 3, 4, 10, 11, 12 and 13.**

4. Parks and Recreation

Finding: Complies as Proposed. The site is located within a third of a mile of Wesley Lynn park, and two thirds of a mile from Hillendale Park. Park System Development Charges will be paid at the time building permits are issued for each lot in the subdivision.

5. Traffic and Transportation

Finding: Complies as Proposed. The site will be located off of Meyers Road, a minor arterial. A Traffic Assessment Letter (TAL) was prepared for this project, dated February 19, 2014, under the direction of Michael Ard of Lancaster Engineering (Exhibit 5). The TAL was reviewed by John Replinger of Replinger and Associates, a City transportation consultant, who concluded: "I find that the TAL meets city requirements and

provides an adequate basis upon which impacts can be assessed. The subdivision will result in minimal additional traffic. There are no transportation-related issues associated with this subdivision requiring mitigation.” (Exhibit 6).

6. Schools

Finding: Complies as Proposed. The Oregon City School District provides education services for the children of future residents. School funding is provided through a variety of sources including property taxes and surcharges that will be assessed with future building permits for the homes.

7. Fire and Police Services

Finding: Complies with Condition. Clackamas County Fire District No. 1 will provide fire services to the subject site. There are no noted concerns about fire services and property taxes will be paid by future property owners to fund fire protection services thereby ensuring funding for protection services. In the event that fire hydrants are required by Clackamas County Fire District No. 1 requirements, staff finds there is adequate area available on the subject property for such installation. Prior to final plat, the Applicant shall submit the proposed development plans to Clackamas County Fire District No. 1 for review and install any required fire hydrants.

The City of Oregon City Police Department will provide police services to the subject site. Property taxes will be paid by future property owners to fund police protection services, thereby ensuring funding for police services. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 7.**

Where adequate capacity for any of these public facilities and services is not demonstrated to be currently available, the Applicant shall describe how adequate capacity in these services and facilities will be financed and constructed before recording of the plat;

Finding: Not Applicable. As described above, all public facilities and services are available. Therefore, this standard does not apply to this application.

C. Approval Criteria and Justification for Variances. The applicant shall explain how the proposed subdivision is consistent with the standards set forth in Chapter 16.12, 12.04 and any other applicable approval standards identified in the municipal code. For each instance where the applicant proposes a variance from some applicable dimensional or other numeric requirement, the applicant shall address the approval criteria from Chapter 17.60.

Finding: Not Applicable. This application does not include any requests for variances.

D. Drafts of the proposed covenants, conditions and restrictions (CC&Rs), maintenance agreements, homeowner association agreements, dedications, deeds easements, or reservations of public open spaces not dedicated to the city, and related documents for the subdivision;

Finding: Not Applicable. The Applicant does not propose to have CC&Rs for the subdivision.

E. A description of any proposed phasing, including for each phase the time, acreage, number of residential units, amount of area for nonresidential use, open space, development of utilities and public facilities;

Finding: Complies as Proposed. The Applicant proposed to construct the subdivision in a single phase. This standard has been met.

F. Overall density of the subdivision and the density by dwelling type for each.

Finding: Complies as Proposed. The applicant submitted calculations for density. The proposed subdivision includes 10 lots for the future construction of single-family attached homes in the R-6 zone. The gross site area is 79,745 square feet in total area, or 1.83 acres. The net developable area is 60,364 sf, or 75.7

percent of the total area. The maximum density allowed on the site is 10 lots (60,364 / 6000 = 10.6). The proposed ten-lot subdivision achieves 100% of the maximum density.

16.08.035 - Notice and invitation to comment.

Upon the city's determination that an application for a preliminary subdivision plat is complete, pursuant to Section 17.50, the city shall provide notice of the application in accordance with requirements of Section 17.50 applicable to Type II decisions.

Finding: Complies as Proposed. The application was deemed complete and notice was transmitted for comment in accordance with Section 17.50. This standard is met.

16.08.040 - Preliminary subdivision plat—Approval standards and decision.

The minimum approval standards that must be met by all preliminary subdivision plats are set forth in Chapter 16.12, and in the dimensional and use requirements set forth in the chapter of this code that corresponds to the underlying zone. The community development director shall evaluate the application to determine that the proposal does, or can through the imposition of conditions of approval, meet these approval standards. The community development director's decision shall be issued in accordance with the requirements of Section 17.50.

Finding: Complies as Proposed. This staff report contains findings and conditions of approval to assure that the applicable approval criteria are met. These findings are supported by substantial evidence which includes preliminary plans, a Transportation Analysis Letter, and other written documentation.

16.08.045 - Building site—Frontage width requirement.

Each lot in a subdivision shall abut upon a cul-de-sac or street other than an alley for a width of at least twenty feet.

Finding: Complies as Proposed. As shown in the preliminary plans, each proposed lot's street frontage is in excess of twenty feet.

16.08.050 - Flag lots in subdivisions.

Flag lots shall not be permitted within subdivisions except as approved by the community development director and in compliance with the following standards.

Finding: Not Applicable. No flag lots are proposed.

CHAPTER 16.12 – MINIMUM IMPROVEMENTS AND DESIGN STANDARDS FOR LAND DIVISIONS

Chapter 16.12.015 - Street Design-Generally

Street design standards for all new development and land divisions shall comply with Chapter 12.04—Street Design Standards.

Finding: Please refer to the analysis in Chapter 12.04 of this report.

16.12.020 – Blocks - Generally

The length, width and shape of blocks shall take into account the need for adequate building site size, convenient motor vehicle, pedestrian, bicycle and transit access, control of traffic circulation, and limitations imposed by topography and other natural features.

Finding: Complies as Proposed. The proposed subdivision provides for a new cul-de-sac, which is necessary due to the shape of the site and the surrounding development patterns. The proposed street pattern provides for adequate building site size, as demonstrated by the site plan submitted with this application.

16.12.025 Blocks-Length

Block lengths for local streets and collectors shall not exceed five hundred feet between through streets, as measured between nearside right-of-way lines.

Finding: Complies as Proposed. The proposal does not create any blocks in excess of 500 feet.

16.12.030 Blocks-Width

The width of blocks shall ordinarily be sufficient to allow for two tiers of lots with depths consistent with the type of land use proposed.

Finding: Complies as proposed. The proposed development does not preclude the development of blocks with two tiers of lots. The cul-de-sac does not create new blocks, and the new blocks created on Meyers Road allow for two tiers of lots.

16.12.035 Blocks-Pedestrian and Bicycle Access

- A. *To facilitate the most practicable and direct pedestrian and bicycle connections to adjoining or nearby neighborhood activity centers, public rights-of-way, and pedestrian/bicycle accessways which minimize out-of-direction travel, subdivisions shall include pedestrian/bicycle access-ways between discontinuous street right-of-way where the following applies:*
 - 1. *Where a new street is not practicable;*
 - 2. *Through excessively long blocks at intervals not exceeding five hundred feet of frontage as measured between nearside right-of-way lines; or*
 - 3. *Where the lack of street continuity creates inconvenient or out of direction travel patterns for local pedestrian or bicycle trips.*
- B. *Pedestrian/bicycle accessways shall be provided:*
 - 1. *To provide direct access to nearby neighborhood activity centers, transit streets and other transit facilities;*
 - 2. *Where practicable, to provide direct access to other adjacent developments and to adjacent undeveloped property likely to be subdivided or otherwise developed in the future;*
 - 3. *To provide direct connections from cul-de-sacs and internal private drives to the nearest available street or neighborhood activity center;*
 - 4. *To provide connections from cul-de-sacs or local streets to arterial or collector streets.*
- C. *An exception may be made where the Community Development Director determines that construction of a separate accessway is not feasible due to physical or jurisdictional constraints. Such evidence may include but is not limited to:*
 - 1. *That other federal, state or local requirements prevent construction of an accessway;*
 - 2. *That the nature of abutting existing development makes construction of an accessway impracticable;*
 - 3. *That the accessway would cross an area affected by an overlay district in a manner incompatible with the purposes of the overlay district;*
 - 4. *That the accessway would cross topography consisting predominantly of slopes over twenty-five percent;*
 - 5. *That the accessway would terminate at the urban growth boundary and extension to another public right-of-way is not part of an adopted plan.*
- D. *Pedestrian/bicycle accessways shall comply with the development standards set out in Section 12.24 of this code, with the ownership, liability and maintenance standards in Section 12.24 of this code, and with such other design standards as the city may adopt*

Finding: Complies with condition. The proposal includes a 15' wide pedestrian access easement leading from the end of the cul-de-sac to the adjacent church property at 19691 Meyers Rd (Clackamas County Map 3-2E-08CA-01000) , situated between Lots 6 and 7 of the subdivision. The easement is required in order to comply with 16.12.035.B.2 and 3. The church property could either be developed in the future or could desire a connection as a "neighborhood activity center", thus, the pedestrian connection is required. The proposed cul-de-sac leads to indirect travel patterns; this pedestrian connection will limit out-of direction travel for pedestrians wishing to access the neighboring church property or Gaffney Lane. The Applicant shall dedicate to the City the 15' wide area that borders the side yards of Lots 6 and 7, shown on the site plan

as a pedestrian access easement, for use as a pedestrian accessway to the adjacent church property. The applicant shall construct the area as a pedestrian accessway according to the standards in Chapter 12.04. **The applicant can meet this standard through condition of approval 22.**

16.12.040--Building Sites

The size, width, shape and orientation of building sites shall be appropriate for the primary use of the land division, and shall be consistent with the residential lot size provisions of the zoning ordinance.

Finding: Complies as Proposed. The buildings sites proposed are appropriate in size, width, shape, and orientation for low-density residential development, exceeding the minimum lot size, lot depth and lot width and similar to other development within the "R-6" Single-Family Dwelling District. The Applicant is not requesting a variance to any dimensional standard.

16.12.045 Building Sites--Minimum Density

All subdivision layouts shall achieve at least 80% of the maximum density of the base zone for the net developable area as defined in Section 17.04.

Finding: Complies as Proposed. The proposed subdivision includes 10 lots for the future construction of single-family attached homes in the R-6 zone. The gross site area is 79,745 square feet in total area, or 1.83 acres. The net developable area is 60,364 sf, or 75.7 percent of the total area. The maximum density allowed on the site is 10 lots (60,364 / 6000 = 10.6). The proposed ten-lot subdivision achieves 100% of the maximum density.

16.12.050 Calculations of Lot Area.

A subdivision in the R-10, R-8, R-6, R-3.5 and R-2 Dwelling District may include lots that are up to 20% less than the required minimum lot area of the applicable zoning designation provided the entire subdivision on average meets the minimum site area requirement of the underlying zone.

Finding: Complies as Proposed. The proposed subdivision includes 10 single-family residential units in the R-6 zone, which requires a minimum lot size average of 6,000 square feet. This standard allows lots within 20 percent of the 6,000 square foot minimum lot size (4,800 square feet). The applicant has proposed a subdivision with lots ranging from 5,075 square feet to 7,614 square feet. The average lot size is approximately 6,036 square feet.

16.12.055 Building Sites -Through Lots

Through lots and parcels shall be avoided except where they are essential to provide separation of residential development from major arterials or to overcome specific disadvantages of topography.

Finding: Complies as Proposed. No through lots are proposed.

16.12.060 Building site--Lot and parcel side lines.

The lines of lots and parcels, as far as is practicable, shall run at right angles to the street upon which they face, except that on curved streets they shall be radial to the curve.

Finding: Complies as Proposed. The proposed lot lines and parcels run at right angles to the street upon which they face and are radial to the curve on the cul-de-sac portion of the street.

16.12.065 Building site--Grading.

Grading of building sites shall conform to the State of Oregon Structural Specialty Code, Chapter 18, any approved grading plan and any approved residential lot grading plan in accordance with the requirements of Chapter 15.48, 16.12 and the Public Works Stormwater and Grading Design Standards, and the erosion control requirements of Chapter 17.47.

Finding: Complies with Condition. The Applicant provided a preliminary grading plan demonstrating compliance with the City's Public Works requirements for grading standards. The Applicant shall submit an

erosion control plan and obtain an erosion control permit and field installation for review by the Public Works Department prior to start of construction.

The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements.

The Applicant shall provide an Erosion Prevention and Sedimentation Control Plan to the City for approval. The Applicant shall provide a Preliminary Residential Lot Grading Plan to the City for review prior to the approval of construction plans. A final site Residential Lot Grading Plan shall be required as part of the final construction plans per the City's Residential Lot Grading Criteria and the International Building Code. If significant grading is required for the lots due to its location or the nature of the site, rough grading shall be required of the developer prior to the acceptance of the public improvements. There shall not be more than a maximum grade differential of two (2) feet at all subdivision boundaries. Grading shall in no way create any water traps, or other ponding situations. The plan shall show the existing and proposed swales. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 3.**

16.12.070 Building site--Setbacks and building location.

This standard ensures that lots are configured in a way that development can be oriented toward streets to provide a safe, convenient and aesthetically pleasing environment for pedestrians and bicyclists. The objective is for lots located on a neighborhood collector, collector or minor arterial street locate the front yard setback on and design the most architecturally significant elevation of the primary structure to face the neighborhood collector, collector or minor arterial street.

A. The front setback of all lots located on a neighborhood collector, collector or minor arterial shall be orientated toward the neighborhood collector, collector or minor arterial street.

B. The most architecturally significant elevation of the house shall face the neighborhood collector, collector or minor arterial street.

C. On corner lots located on the corner of two local streets, the main façade of the dwelling may be oriented towards either street.

D. All lots proposed with a driveway and lot orientation on a collector or minor arterial shall combine driveways into one joint access per two or more lots unless the city engineer determines that:

- 1. No driveway access may be allowed since the driveway(s) would cause a significant traffic safety hazard; or*
- 2. Allowing a single driveway access per lot will not cause a significant traffic safety hazard.*

E. The community development director may approve an alternative design, consistent with the intent of this section, where the applicant can show that existing development patterns preclude the ability to practically meet this standard.

Finding: Complies with Condition. Lots 9 and 10 front Meyers Road, which is a minor arterial. The Applicant proposed that these two lots take access from the new cul-de-sac by a 20-foot wide combined driveway for lots 8, 9 and 10. All other lots in the subdivision front the new cul-de-sac, which will be a local street. The front setback and most architectural significant façade for Lots 9 and 10 shall face Meyers Road. This condition will be enforced at the time of building permit application for homes on these two lots. **The applicant can meet this standard through Condition of Approval 23.**

16.12.075 Building site--Division of lots.

Where a tract of land is to be divided into lots or parcels capable of redivision in accordance with this chapter, the community development director shall require an arrangement of lots, parcels and streets which facilitates future redivision. In such a case, building setback lines may be required in order to preserve future right-of-way or building sites.

Finding: Complies as Proposed. No lots have been proposed which are capable of redivision in accordance with this chapter.

16.12.080 Protection of trees.

Protection of trees shall comply with the provisions of Chapter 17.41--Tree Protection.

Finding: Please refer to the analysis in chapter 17.41 of this report.

16.12.085 Easements.

The following shall govern the location, improvement and layout of easements:

A. Utilities. Utility easements shall be required where necessary as determined by the city engineer. Insofar as practicable, easements shall be continuous and aligned from block-to-block within the land division and with adjoining subdivisions or partitions. Specific utility easements for water, sanitary or storm drainage shall be provided based on approved final engineering plans.

Finding: Complies with Conditions. The Applicant proposed public utility easements (PUE's) along all street frontages.

Ten-foot public utility easements along all street frontages and all easements required for the final engineering plans shall be dedicated to the public on the final plat. All existing and proposed utilities and easements shall be indicated on the construction plans. Any off-site utility easements required for this project, such as for work on the storm outfall, shall be obtained and submitted to the City prior to approval of the construction plans. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 14.**

B. Unusual Facilities. Easements for unusual facilities such as high voltage electric transmission lines, drainage channels and stormwater detention facilities shall be adequately sized for their intended purpose, including any necessary maintenance roads. These easements shall be shown to scale on the preliminary and final plats or maps. If the easement is for drainage channels, stormwater detention facilities or related purposes, the easement shall comply with the requirements of the Public Works Stormwater and Grading Design Standards.

Finding: Complies as proposed. There are no unusual facilities that require easements.

C. Watercourses. Where a land division is traversed or bounded by a watercourse, drainageway, channel or stream, a stormwater easement or drainage right-of-way shall be provided which conforms substantially to the line of such watercourse, drainageway, channel or stream and is of a sufficient width to allow construction, maintenance and control for the purpose as required by the responsible agency. For those subdivisions or partitions which are bounded by a stream of established recreational value, setbacks or easements may be required to prevent impacts to the water resource or to accommodate pedestrian or bicycle paths.

Finding: Not Applicable. There are no watercourses traversing or bounding the site.

D. Access. When easements are used to provide vehicular access to lots within a land division, the construction standards, but not necessarily width standards, for the easement shall meet city specifications. The minimum width of the easement shall be twenty feet. The easements shall be improved and recorded by the applicant and inspected by the city engineer. Access easements may also provide for utility placement.

Finding: Not Applicable. There are no vehicular access easements proposed or required with this development.

E. Resource Protection. Easements or other protective measures may also be required as the community development director deems necessary to ensure compliance with applicable review criteria protecting any unusual significant natural feature or features of historic significance.

Finding: Not Applicable. There are no identified significant natural features that require resource protection pursuant to this section.

16.12.090 Minimum improvements--Procedures.

In addition to other requirements, improvements installed by the applicant either as a requirement of these or other regulations, or at the applicant's option, shall conform to the requirements of this title and be designed to city specifications and standards as set out in the city's facility master plan and Public Works Stormwater and Grading Design Standards. The improvements shall be installed in accordance with the following procedure:

A. Improvement work shall not commence until construction plans have been reviewed and approved by the city engineer and to the extent that improvements are in county or state right-of-way, they shall be approved by the responsible authority. To the extent necessary for evaluation of the proposal, the plans may be required before approval of the preliminary plat of a subdivision or partition. Expenses incurred thereby shall be borne by the applicant and paid for prior to final plan review.

B. Improvements shall be constructed under the inspection and approval of the city engineer. Expenses incurred thereby shall be borne by the applicant and paid prior to final approval. Where required by the city engineer or other city decision-maker, the applicant's project engineer also shall inspect construction.

C. Erosion control or resource protection facilities or measures are required to be installed in accordance with the requirements of Chapter 17.49 and the Public Works Erosion and Sediment Control Standards.

Underground utilities, waterlines, sanitary sewers and storm drains installed in streets shall be constructed prior to the surfacing of the streets. Stubs for service connections for underground utilities and sanitary sewers shall be placed beyond the public utility easement behind to the lot lines.

D. As-built construction plans and digital copies of as-built drawings shall be filed with the city engineer upon completion of the improvements.

E. The city engineer may regulate the hours of construction and access routes for construction equipment to minimize impacts on adjoining residences or neighborhoods.

Finding: Complies with Condition. The Applicant indicated that construction plans for all required improvements will be presented to the city for review and approval prior to the commencement of any construction activities on the site. Inspection will be provided for as required by this standards and city policy. Erosion control measures will be provided and are depicted in conceptual form on the attached preliminary grading plans. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 3 and 4.**

16.12.095 Same--Public facilities and services.

The following minimum improvements shall be required of all applicants for a land division under Title 16, unless the decision-maker determines that any such improvement is not proportional to the impact imposed on the city's public systems and facilities:

A. Transportation System. Applicants and all subsequent lot owners shall be responsible for improving the city's planned level of service on all public streets, including alleys within the land division and those portions of public streets adjacent to but only partially within the land division. All applicants shall execute a binding agreement to not remonstrate against the formation of a local improvement district for street improvements that benefit the applicant's property. Applicants are responsible for designing and providing adequate vehicular, bicycle and pedestrian access to their developments and for accommodating future access to neighboring undeveloped properties that are suitably zoned for future development. Storm drainage facilities shall be installed and connected to off-site natural or man-made drainageways. Upon completion of the street improvement survey, the applicant shall reestablish and protect monuments of the type required by ORS 92.060 in monument boxes with covers at every public street intersection and all points of curvature and points of tangency of their center line, and at such other points as directed by the city engineer.

Finding: Complies as Proposed. A Traffic Assessment Letter (TAL) was prepared for this project, dated

February 19, 2014, under the direction of Michael Ard of Lancaster Engineering (Exhibit 5). The TAL was reviewed by John Replinger of Replinger and Associates, a City transportation consultant, who concluded: "I find that the TAL meets city requirements and provides an adequate basis upon which impacts can be assessed. The subdivision will result in minimal additional traffic. There are no transportation-related issues associated with this subdivision requiring mitigation." (Exhibit 6).

B. Stormwater Drainage System. *Applicants shall design and install drainage facilities within land divisions and shall connect the development's drainage system to the appropriate downstream storm drainage system as a minimum requirement for providing services to the applicant's development. The applicant shall obtain county or state approval when appropriate. All applicants shall execute a binding agreement to not remonstrate against the formation of a local improvement district for stormwater drainage improvements that benefit the applicant's property. Applicants are responsible for extending the appropriate storm drainage system to the development site and for providing for the connection of upgradient properties to that system. The applicant shall design the drainage facilities in accordance with city drainage master plan requirements, Chapter 13.12 and the Public Works Stormwater and Grading Design Standards.*

Finding: See section 16.08.030.B.3 of this report for a description of the storm drainage system.

C. Sanitary Sewer System. *The applicant shall design and install a sanitary sewer system to serve all lots or parcels within a land division in accordance with the city's sanitary sewer design standards, and shall connect those lots or parcels to the city's sanitary sewer system, except where connection is required to the county sanitary sewer system as approved by the county. All applicants shall execute a binding agreement to not remonstrate against the formation of a local improvement district for sanitary sewer improvements that benefit the applicant's property. Applicants are responsible for extending the city's sanitary sewer system to the development site and through the applicant's property to allow for the future connection of neighboring undeveloped properties that are suitably zoned for future development. The applicant shall obtain all required permits and approvals from all affected jurisdictions prior to final approval and prior to commencement of construction. Design shall be approved by the city engineer before construction begins.*

Finding: See section 16.08.030.B.2 of this report for a description of the sanitary sewer system.

D. Water System. *The applicant shall design and install a water system to serve all lots or parcels within a land division in accordance with the city public works water system design standards, and shall connect those lots or parcels to the city's water system. All applicants shall execute a binding agreement to not remonstrate against the formation of a local improvement district for water improvements that benefit the applicant's property. Applicants are responsible for extending the city's water system to the development site and through the applicant's property to allow for the future connection of neighboring undeveloped properties that are suitably zoned for future development.*

Finding: See section 16.08.030.B.1 of this report for a description of the water system.

E. Sidewalks. *The applicant shall provide for sidewalks on both sides of all public streets, on any private street if so required by the decision-maker, and in any special pedestrian way within the land division. Exceptions to this requirement may be allowed in order to accommodate topography, trees or some similar site constraint. In the case of major or minor arterials, the decision-maker may approve a land division without sidewalks where sidewalks are found to be dangerous or otherwise impractical to construct or are not reasonably related to the applicant's development. The decision-maker may require the applicant to provide sidewalks concurrent with the issuance of the initial building permit within the area that is the subject of the land division application. Applicants for partitions may be allowed to meet this requirement by executing a binding agreement to not remonstrate against the formation of a local improvement district for sidewalk improvements that benefit the applicant's property.*

Finding: Complies with Conditions. Meyers Road is classified as a minor arterial. The City's adopted Trails Master Plan (2004) and Transportation System Plan (2013) call for a shared-use path on the south side of Meyers Road. The path is identified as a regional trail, project R3, in the Trails Master Plan and is part of the Oregon City Loop Trail (Exhibit 7). The Trails Master Plan includes a standard for regional trails of 10-12 feet wide with two feet of soft shoulders on each side. Regional trails are meant to accommodate two-way bicycle and pedestrian traffic. The applicant did not propose to construct a shared use path to this standard. Meyers Road is currently developed with bicycle lanes on both sides, and there are seven-foot wide sidewalks on the north and south of the site on Meyers Road that abuts the proposed development. Staff consulted with the Community Services Department regarding the shared use path, and came to the conclusion that a seven foot sidewalk that matches the existing sidewalks on Meyers Road is acceptable instead of a full 10-12' shared use path. Because of existing development patterns, it is unlikely that the full shared use path could be constructed to the full standard along other portions of Meyers Road. Bicycle traffic will continue to use the bicycle lanes on Meyers Road. Staff does recommend that the sidewalk include a striped crosswalk at the mouth of the cul-de-sac in order to match the design standards for trail crossings in the adopted Trails Master Plan. The applicant shall provide this crosswalk in the final plan.

The proposed cul-de-sac would be classified as a local street and the code requires a 5-foot sidewalk. The Applicant has proposed to install 5- foot wide sidewalks on the proposed cul-de-sac

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 3, 16, 17 and 18.

F. Bicycle Routes. If appropriate to the extension of a system of bicycle routes, existing or planned, the decision-maker may require the installation of separate bicycle lanes within streets and separate bicycle paths.

Finding: Complies as Proposed. The City's adopted Trails Master Plan (2004) and Transportation System Plan (2013) call for a shared-use path on the south side of Meyers Road. The path is identified as a regional trail, project R3, in the Trails Master Plan and is part of the Oregon City Loop Trail. Meyers Road is currently constructed with bicycle lanes. See findings in Chapter 12.04.

G. Street Name Signs and Traffic Control Devices. The applicant shall install street name signs at all street intersections. The applicant shall install traffic control devices as directed by the city engineer. Street name signs and traffic control devices shall be in conformance with all applicable city regulations and standards.

Finding: Complies with Condition. The Applicant indicated it will comply with this section. **The Applicant can meet this standard through Condition of Approval 17.**

H. Street Lights. The applicant shall install street lights which shall be served from an underground source of supply. Street lights shall be in conformance with all city regulations.

Finding: Complies with Condition. As required in this criterion, the Applicant shall install street lights along the frontage of the project. A street lighting plan shall be provided as part of the design plans to be reviewed by the City. PGE owns, installs and maintains all new street lights within the City. The applicant shall coordinate directly with PGE for the design of street lights. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 3, 16, 17, 18 and 21.**

I. Street Trees.

Finding: Please refer to Chapter 12.08, Street Trees.

J. Bench Marks. At least one bench mark shall be located within the subdivision boundaries using datum plane specified by the city engineer.

Finding: Complies as Proposed. The Applicant's plans indicated compliance with this section.

K. Other. The Applicant shall make all necessary arrangements with utility companies or other affected parties for the installation of underground lines and facilities. Electrical lines and other wires, including but not limited to communication, street lighting and cable television, shall be placed underground.

Finding: Complies as Proposed. The application materials indicated compliance with this section.

L. Oversizing of Facilities. All facilities and improvements shall be designed to city standards as set out in the city's facility master plan, public works design standards, or other city ordinances or regulations. Compliance with facility design standards shall be addressed during final engineering. The city may require oversizing of facilities to meet standards in the city's facility master plan or to allow for orderly and efficient development. Where oversizing is required, the applicant may request reimbursement from the city for oversizing based on the city's reimbursement policy and funds available, or provide for recovery of costs from intervening properties as they develop.

Finding: Complies as Proposed. The Applicant indicated it will comply with this section.

M. Erosion Control Plan--Mitigation. The applicant shall be responsible for complying with all applicable provisions of Chapter 17.47 with regard to erosion control.

Finding: Complies with Condition. The Applicant provided a preliminary rough grading plan that indicates the Applicant will be able to meet the City's Public Works erosion control standards. The Applicant shall provide an Erosion Prevention and Sedimentation Control Plan suitable to the Public Works Department to meet the Public Works requirements for erosion control. The Applicant shall provide a Preliminary Residential Lot Grading Plan to the City for review prior to the approval of construction plans. A final site Residential Lot Grading Plan shall be required as part of the final construction plans per the City's Residential Lot Grading Criteria and the International Building Code. If significant grading is required for the lots due to its location or the nature of the site, rough grading shall be required of the developer prior to the acceptance of the public improvements. There shall not be more than a maximum grade differential of two (2) feet at all subdivision boundaries. Grading shall in no way create any water traps, or other ponding situations. The plan shall show the existing and proposed swales. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 1.**

16.12.100 Same--Road standards and requirements.

A. The creation of a public street and the resultant separate land parcels shall be in conformance with requirements for subdivisions or partitions and the applicable street design standards of Chapter 12.04.

Finding: Please refer to the findings in chapter 12.04 within this report.

16.12.105 Same--Timing requirements.

A. Prior to applying for final plat approval, the applicant shall either complete construction of all public improvements required as part of the preliminary plat approval or guarantee the construction of those improvements. Whichever option the applicant elects shall be in accordance with this section.

B. Construction. The applicant shall construct the public improvements according to approved final engineering plans and all applicable requirements of this Code, and under the supervision of the city engineer. Under this option, the improvement must be complete and accepted by the city engineer prior to final plat approval.

C. Financial Guarantee. The applicant shall provide the city with a financial guarantee in a form acceptable to the city attorney and equal to one hundred ten percent of the cost of constructing the public improvements in accordance with Oregon City Municipal Code Chapter 17.50. Possible forms of guarantee include an irrevocable or standby letter of credit, guaranteed construction loan set-aside, reserve account, or performance guarantee,

but the form of guarantee shall be specified by the city engineer and, prior to execution and acceptance by the city, must be reviewed and approved by the city attorney. The amount of the guarantee shall be based upon approved final engineering plans, equal to at least one hundred ten percent of the estimated cost of construction, and shall be supported by a verified engineering estimate and approved by the city engineer.

Finding: Complies as Proposed. The Applicant indicated compliance with this section and will submit the required performance guarantees or will perform the improvements required for this application. This standard is met.

16.12.110 - Minimum improvements—Financial guarantee.

When conditions of permit approval require a permittee to construct certain improvements, the city may, in its discretion, allow the permittee to submit a performance guarantee in lieu of actual construction of the improvement. Performance guarantees shall be governed by this section.

A. Form of Guarantee. Performance guarantees shall be in a form approved by the city attorney. Approvable methods of performance guarantee include irrevocable standby letters of credit to the benefit of the city issued by a recognized lending institution, certified checks, dedicated bank accounts or allocations of construction loans held in reserve by the lending institution for the benefit of the city. The form of guarantee shall be specified by the city engineer and, prior to execution and acceptance by the city shall be reviewed and approved by the city attorney. The guarantee shall be filed with the city engineer.

B. Timing of Guarantee. A permittee shall be required to provide a performance guarantee as follows:

1. After Final Approved Design by the City: A permittee may request the option of submitting a performance guarantee when prepared for temporary/final occupancy. The guarantee shall be one hundred twenty percent of the estimated cost of constructing the remaining public improvements as submitted by the permittee's engineer. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the city engineer.

2. Before Complete Design Approval and Established Engineered Cost Estimate: A permittee may request the option of submitting a performance guarantee before public improvements are designed and completed. The guarantee shall be one hundred fifty percent of the estimated cost of constructing the public improvements as submitted by the permittee's engineer and approved by the city engineer. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the city engineer. This scenario applies for a fee-in-lieu situation to ensure adequate funds for the future work involved in design, bid, contracting, and construction management and contract closeout. In this case, the fee-in-lieu must be submitted as cash, certified check, or other negotiable instrument as approved by the city attorney.

C. Duration of the Guarantee. The guarantee shall remain in effect until the improvement is actually constructed and accepted by the city. Once the city has inspected and accepted the improvement, the city shall release the guarantee to the permittee. If the improvement is not completed to the city's satisfaction within the time limits specified in the permit approval, the city engineer may, at their discretion, draw upon the guarantee and use the proceeds to construct or complete construction of the improvement and for any related administrative and legal costs incurred by the city in completing the construction, including any costs incurred in attempting to have the permittee complete the improvement. Once constructed and approved by the city, any remaining funds shall be refunded to the permittee. The city shall not allow a permittee to defer construction of improvements by using a performance guarantee, unless the permittee agrees to construct those improvements upon written notification by the city, or at some other mutually agreed-to time. If the permittee fails to commence construction of the required improvements within six months of being instructed to do so, the city may, without further notice, undertake the construction of the improvements and draw upon the permittee's performance guarantee to pay those costs.

Finding: Complies as Proposed. The Applicant indicated compliance with this section and will submit the required performance guarantees or will perform the improvements required for this application. This standard is met.

CHAPTER 12.04 – STREETS, SIDEWALKS AND PUBLIC PLACES

12.04.007 Modifications.

The review body may consider modification of this standard resulting from constitutional limitations restricting the City's ability to require the dedication of property or for any other reason, based upon the criteria listed below and other criteria identified in the standard to be modified. All modifications shall be processed through a Type II Land Use application and may require additional evidence from a transportation engineer or others to verify compliance. Compliance with the following criteria is required:

- A. The modification meets the intent of the standard;*
- B. The modification provides safe and efficient movement of pedestrians, motor vehicles, bicyclists and freight;*
- C. The modification is consistent with an adopted plan; and*
- D. The modification is complementary with a surrounding street design; or, in the alternative,*
- E. If a modification is requested for constitutional reasons, the applicant shall demonstrate the constitutional provision or provisions to be avoided by the modification and propose a modification that complies with the state or federal constitution. The City shall be under no obligation to grant a modification in excess of that which is necessary to meet its constitutional obligations.*

Finding: Complies with conditions: The applicant has requested that the minor arterial standards for Meyers Road be modified to match the existing improvements on Meyers Road. See section 16.12.095 E of this report for sidewalks, and section 12.04.180 for street description.

12.04.010 Construction specifications—Improved streets.

All sidewalks hereafter constructed in the city on improved streets shall be constructed to city standards and widths required in the Oregon City Transportation System Plan. The curb shall be constructed at the same time as the construction of the sidewalk and shall be located as provided in the ordinance authorizing the improvement of said street next proceeding unless otherwise ordered by the city commission. Both sidewalks and curbs are to be constructed according to plans and specifications provided by the city engineer.

Finding: Complies with conditions: See section 12.04.180 of this report.

12.04.020 Construction specifications—Unimproved streets.

Sidewalks constructed on unimproved streets shall be constructed of concrete according to lines and grades established by the city engineer and approved by the city commission. On unimproved streets curbs do not have to be constructed at the same time as the sidewalk.

Finding: Complies with conditions: See section 12.04.180 of this report.

12.04.025 - Street design—Driveway Curb Cuts.

- A. One driveway shall be allowed per frontage. In no case shall more than two driveways be allowed on any single or two-family residential property with multiple frontages.*
- B. With the exception of the limitations identified in 12.04.025.C, all driveway curb cuts shall be limited to the following dimensions.*

<i>Property Use</i>	<i>Minimum Driveway Width at sidewalk or property line</i>	<i>Maximum Driveway Width at sidewalk or property line</i>
<i>Single or Two-Family Dwelling with one Car Garage/Parking Space</i>	<i>10 feet</i>	<i>12 feet</i>
<i>Single or Two-Family Dwelling with two Car Garage/Parking Space</i>	<i>12 feet</i>	<i>24 feet</i>
<i>Single or Two-Family Dwelling with three or more Car Garages/Parking Space</i>	<i>18 feet</i>	<i>30 feet</i>

Non Residential or Multi-Family Residential Driveway Access	15 feet	40 feet
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The driveway width abutting the street pavement may be extended 3 feet on either side of the driveway to accommodate turn movements. Driveways may be widened onsite in locations other than where the driveway meets sidewalk or property line (for example between the property line and the entrance to a garage).

Finding: Complies as proposed. The applicant has proposed one driveway cut per lot.

C. The decision maker shall be authorized through a Type II process, unless another procedure applicable to the proposal applies, to minimize the number and size of curb cuts (including driveways) as far as practicable for any of the following purposes:

1. To provide adequate space for on-street parking;
2. To facilitate street tree planting requirements;
3. To assure pedestrian and vehicular safety by limiting vehicular access points; and
4. To assure that adequate sight distance requirements are met.
 - a. Where the decision maker determines any of these situations exist or may occur due to the approval of a proposed development for non-residential uses or attached or multi-family housing, a shared driveway shall be required and limited to twenty-four feet in width adjacent to the sidewalk or property line and may extend to a maximum of thirty feet abutting the street pavement to facilitate turning movements.
 - b. Where the decision maker determines any of these situations exist or may occur due to approval of a proposed development for detached housing within the "R-5" Single -Family Dwelling District or "R-3.5" Dwelling District, driveway curb cuts shall be limited to twelve feet in width adjacent to the sidewalk or property line and may extend to a maximum of eighteen feet abutting the street pavement to facilitate turning movements.

D. For all driveways, the following standards apply.

1. Each new or redeveloped curb cut shall have an approved concrete approach or asphalted street connection where there is no concrete curb and a minimum hard surface for at least ten feet and preferably twenty feet back into the lot as measured from the current edge of street pavement to provide for controlling gravel tracking onto the public street. The hard surface may be concrete, asphalt, or other surface approved by the city engineer.
2. Driving vehicles, trailers, boats, or other wheeled objects across a sidewalk or roadside planter strip at a location other than an approved permanent or city-approved temporary driveway approach is prohibited. Damages caused by such action shall be corrected by the adjoining property owner.
3. Placing soil, gravel, wood, or other material in the gutter or space next to the curb of a public street with the intention of using it as a permanent or temporary driveway is prohibited. Damages caused by such action shall be corrected by the adjoining property owner.
4. Any driveway built within public street or alley right-of-way shall be built and permitted per city requirements as approved by the city engineer.

E. Exceptions. The public works director reserves the right to waive this standard, if it is determined through a Type II decision including written findings; that it is in the best interest of the public to do so.

Finding: Complies as proposed. Each lot shall have a separate driveway, with the exception of Lots 8, 9, and 10, which will share a driveway with access on the new local street.

12.04.030 Maintenance and repair.

The owner of land abutting the street where a sidewalk has been constructed shall be responsible for maintaining said sidewalk and abutting curb, if any, in good repair.

Finding: Applicant acknowledges the requirement.

12.04.031 Liability for sidewalk injuries.

- A. The owner or occupant of real property responsible for maintaining the adjacent sidewalk shall be liable to any person injured because of negligence of such owner or occupant in failing to maintain the sidewalk in good condition.
- B. If the city is required to pay damages for an injury to persons or property caused by the failure of a person to perform the duty that this ordinance imposes, the person shall compensate the city for the amount of the damages paid. The city may maintain an action in a court of competent jurisdiction to enforce this section.

Finding: Applicant acknowledges the requirement.

12.04.032 Required sidewalk repair.

- A. When the public works director determines that repair of a sidewalk is necessary he or she shall issue a notice to the owner of property adjacent to the sidewalk.
- B. The notice shall require the owner of the property adjacent to the defective sidewalk to complete the repair of the sidewalk within ninety days after the service of notice. The notice shall also state that if the repair is not made by the owner, the city may do the work and the cost of the work shall be assessed against the property adjacent to the sidewalk.
- C. The public works director shall cause a copy of the notice to be served personally upon the owner of the property adjacent to the defective sidewalk, or the notice may be served by registered or certified mail, return receipt requested. If after diligent search the owner is not discovered, the public works director shall cause a copy of the notice to be posted in a conspicuous place on the property, and such posting shall have the same effect as service of notice by mail or by personal service upon the owner of the property.
- D. The person serving the notice shall file with the city recorder a statement stating the time, place and manner of service or notice.

Finding: Applicant acknowledges the requirement.

12.04.033 City may do work.

If repair of the sidewalk is not completed within ninety days after the service of notice, the public works director shall carry out the needed work on the sidewalk. Upon completion of the work, the public works director shall submit an itemized statement of the cost of the work to the finance director. The city may, at its discretion, construct, repair or maintain sidewalks deemed to be in disrepair by the public works director for the health, safety and general welfare of the residents of the city.

Finding: Applicant acknowledges the requirement.

12.04.034 Assessment of costs.

Upon receipt of the report, the finance director shall assess the cost of the sidewalk work against the property adjacent to the sidewalk. The assessment shall be a lien against the property and may be collected in the same manner as is provided for in the collection of street improvement assessment.

Finding: Applicant acknowledges the requirement.

12.04.040 Streets--Enforcement.

Any person whose duty it is to maintain and repair any sidewalk, as provided by this chapter, and who fails to do so shall be subject to the enforcement procedures of Chapters 1.16, 1.20 and 1.24. Failure to comply with the provisions of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Applicant acknowledges the requirement.

12.04.050 Retaining walls--Required.

Every owner of a lot within the city, abutting upon an improved street, where the surface of the lot or tract of land is above the surface of the improved street and where the soil or earth from the lot, or tract of land is liable to, or does slide or fall into the street or upon the sidewalk, or both, shall build a retaining wall, the outer side of which shall be on the line separating the lot, or tract of land from the improved street, and the wall shall be so constructed as to prevent the soil or earth from the lot or tract of land from falling or sliding into the street or upon the sidewalk, or both, and the owner of any such property shall keep the wall in good repair.

Finding: Complies with conditions. There is a proposed retaining wall along two sides of the storm water detention pond. This retaining wall will be publicly owned. The applicant shall provide a geotechnical report providing design criteria for the retaining wall. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 19.**

12.04.060 Retaining walls--Maintenance.

When a retaining wall is necessary to keep the earth from falling or sliding onto the sidewalk or into a public street and the property owner or person in charge of that property fails or refuses to build such a wall, such shall be deemed a nuisance. The violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Applicant acknowledges the requirement.

12.04.070 Removal of sliding dirt.

It shall be the duty of the owner of any property as mentioned in Section 12.04.050, and in case the owner is a nonresident, then the agent or other person in charge of the same, to remove from the street or sidewalk or both as the case may be, any and all earth or dirt falling on or sliding into or upon the same from the property, and to build and maintain in order at all times, the retaining wall as herein required; and upon the failure, neglect or refusal of the land owner, the agent or person in charge of the same to clean away such earth or dirt, falling or sliding from the property into the street or upon the sidewalk, or both, or to build the retaining wall, shall be deemed guilty of a misdemeanor.

Finding: Applicant acknowledges the requirement.

12.04.080 Excavations--Permit required.

It shall be unlawful for any person to dig up, break, excavate, disturb, dig under or undermine any public street or alley, or any part thereof or any macadam, gravel, or other street pavement or improvement without first applying for and obtaining from the engineer a written permit so to do.

Finding: Applicant acknowledges the requirement.

12.04.090 Excavations--Permit restrictions.

The permit shall designate the portion of the street to be so taken up or disturbed, together with the purpose for making the excavation, the number of days in which the work shall be done, and the trench or excavation to be refilled and such other restrictions as may be deemed of public necessity or benefit.

Finding: Applicant acknowledges the requirement.

12.04.100 Excavations – Restoration of Pavement

Whenever any excavation shall have been made in any pavement or other street improvement on any street or alley in the city for any purpose whatsoever under the permit granted by the engineer, it shall be the duty of the

person making the excavation to put the street or alley in as good condition as it was before it was so broken, dug up or disturbed, and shall remove all surplus dirt, rubbish, or other material from the street or alley.

Finding: Complies with conditions. The applicant has proposed cuts for utilities in Meyers Road. The pavement restoration shall be done in accordance with the City's Pavement Cut Standards. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 19.**

12.04.110 Excavations--Nuisance--Penalty.

Any excavation in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Applicant acknowledges the requirement.

12.04.120 Obstructions – Permit Required

A. Permanent Obstructions. It is unlawful for any person to place, put or maintain any obstruction, other than a temporary obstruction, as defined in subsection B of this section, in any public street or alley in the city, without obtaining approval for a right-of-way permit from the commission by passage of a resolution.

- 1. The city engineer shall provide applicants with an application form outlining the minimum submittal requirements.*
- 2. The applicant shall submit at least the following information in the permitting process in order to allow the commission to adequately consider whether to allow the placement of an obstruction and whether any conditions may be attached:*
 - a. Site plan showing right-of-way, utilities, driveways as directed by staff;*
 - b. Sight distance per Chapter 10.32, Traffic Sight Obstructions;*
 - c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);*
 - d. Alternative routes if necessary;*
 - e. Minimizing obstruction area; and*
 - f. Hold harmless/maintenance agreement.*
- 3. If the commission adopts a resolution allowing the placement of a permanent obstruction in the right-of-way, the city engineer shall issue a right-of-way permit with any conditions deemed necessary by the commission.*

B. Temporary Obstructions.

- 1. A "temporary obstruction" is defined as an object placed in a public street, road or alley for a period of not more than sixty consecutive days. A "temporary obstruction" includes, but is not limited to, moving containers and debris dumpsters.*
- 2. The city engineer, or designee, is authorized to grant a permit for a temporary obstruction.*
- 3. The city engineer shall provide applicants with an application form outlining the minimum submittal requirements.*
- 4. The applicant shall submit, and the city engineer, or designee, shall consider, at least the following items in the permitting process. Additional information may be required in the discretion of the city engineer:*
 - a. Site plan showing right-of-way, utilities, driveways as directed by staff;*
 - b. Sight distance per Chapter 10.32, Traffic Sight Obstructions;*
 - c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);*
 - d. Alternative routes if necessary;*
 - e. Minimizing obstruction area; and*
 - f. Hold harmless/maintenance agreement.*
- 5. In determining whether to issue a right-of-way permit to allow a temporary obstruction, the city engineer may issue such a permit only after finding that the following criteria have been satisfied:*

- a. The obstruction will not unreasonably impair the safety of people using the right-of-way and nearby residents;
- b. The obstruction will not unreasonably hinder the efficiency of traffic affected by the obstruction;
- c. No alternative locations are available that would not require use of the public right-of-way; and
- d. Any other factor that the city engineer deems relevant.

6. The permittee shall post a weatherproof copy of the temporary obstruction permit in plain view from the right-of-way.

C. Fees. The fee for obtaining a right-of-way permit for either a permanent obstruction or a temporary obstruction shall be set by resolution of the commission.

Finding: Not applicable.

12.04.130 Obstructions--Sidewalk sales.

- A. It is unlawful for any person to use the public sidewalks of the city for the purpose of packing, unpacking or storage of goods or merchandise or for the display of goods or merchandise for sale. It is permissible to use the public sidewalks for the process of expeditiously loading and unloading goods and merchandise.
- B. The city commission may, in its discretion, designate certain areas of the city to permit the display and sale of goods or merchandise on the public sidewalks under such conditions as may be provided.

Finding: Not applicable.

12.04.140 Obstructions--Nuisance--Penalty.

Any act or omission in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Not applicable.

12.04.150 Street and alley vacations--Cost.

At the time of filing a petition for vacation of a street, alley or any part thereof, a fee as established by city commission resolution shall be paid to the city.

Finding: Not applicable.

12.04.160 Street vacations--Restrictions.

The commission, upon hearing such petition, may grant the same in whole or in part, or may deny the same in whole or in part, or may grant the same with such reservations as would appear to be for the public interest, including reservations pertaining to the maintenance and use of underground public utilities in the portion vacated.

Finding: Not applicable.

12.04.170 Street Design - Purpose and General Provisions.

All development shall be in conformance with the policies and design standards established by this chapter and with applicable standards in the City's Public Facility Master Plan and City design standards and specifications. In reviewing applications for development, the City Engineer shall take into consideration any approved development and the remaining development potential of adjacent properties. All street, water, sanitary sewer, storm drainage and utility plans associated with any development must be reviewed and approved by the city engineer prior to construction. All streets, driveways or storm drainage connections to another jurisdiction's facility or right-of-way must be reviewed by the appropriate jurisdiction as a condition of the preliminary plat and when required by law or intergovernmental agreement shall be approved by the appropriate jurisdiction.

Finding: Complies with conditions. Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 3.

12.04.175 Street Design--Generally.

The location, width and grade of street shall be considered in relation to: existing and planned streets, topographical conditions, public convenience and safety for all modes of travel, existing and identified future transit routes and pedestrian/bicycle accessways, and the proposed use of land to be served by the streets. The street system shall assure an adequate traffic circulation system with intersection angles, grades, tangents and curves appropriate for the traffic to be carried considering the terrain. To the extent possible, proposed streets shall connect to all existing or approved stub streets that abut the development site. The arrangement of streets shall either:

- A. Provide for the continuation or appropriate projection of existing principal streets in the surrounding area and on adjacent parcels or conform to a plan for the area approved or adopted by the city to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical;*
- B. Where necessary to give access to or permit a satisfactory future development of adjoining land, streets shall be extended to the boundary of the development and the resulting dead-end street (stub) may be approved with a temporary turnaround as approved by the city engineer. Notification that the street is planned for future extension shall be posted on the stub street until the street is extended and shall inform the public that the dead-end street may be extended in the future. Access control in accordance with section 12.04 shall be required to preserve the objectives of street extensions.*

Finding: Complies as proposed. The applicant has proposed a cul-de-sac. A review of the surrounding development shows that this is the most viable way to serve the proposed development, and that an extension of the street beyond the boundaries of the proposed development is not reasonable.

12.04.180 Street Design.

All development regulated by this Chapter shall provide street improvements in compliance with the standards in Figure 12.04.180 depending on the street classification set forth in the Transportation System Plan and the Comprehensive Plan designation of the adjacent property, unless an alternative plan has been adopted. The standards provided below are maximum design standards and may be reduced with an alternative street design which may be approved based on the modification criteria in 12.04.007. The steps for reducing the maximum design below are found in the Transportation System Plan.

Table 12.04.180 Street Design

To read the table below, select the road classification as identified in the Transportation System Plan and the Comprehensive Plan designation of the adjacent properties to find the maximum design standards for the road cross section. If the Comprehensive Plan designation on either side of the street differs, the wider right-of-way standard shall apply.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscap e Strip	Bike Lane	Street Parkin g	Travel Lanes	Median
Major Arterial	<i>Mixed Use, Commercial or Public/Quasi Public</i>	116 ft.	94 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.
	<i>Industrial</i>	120 ft.	88 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	N/A	(5) 14 ft. Lanes	6 ft.
	<i>Residential</i>	126 ft.	94 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Minor Arterial	<i>Mixed Use, Commercial or Public/Quasi Public</i>	116 ft.	94 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.
	<i>Industrial</i>	118 ft.	86 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(5) 12 ft. Lanes	N/A
	<i>Residential</i>	100 ft.	68 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	6 ft.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Collector	<i>Mixed Use, Commercial or Public/Quasi Public</i>	86 ft.	64 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(3) 12 ft. Lanes	N/A
	<i>Industrial</i>	88 ft.	62 ft.	0.5 ft.	5 ft.	7.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	N/A
	<i>Residential</i>	85 ft.	59 ft.	0.5 ft.	5 ft.	7.5 ft.	6 ft.	7 ft.	(3) 11 ft. Lanes	N/A

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Local	<i>Mixed Use, Commercial or Public/Quasi Public</i>	62 ft.	40 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		N/A	8 ft.	(2) 12 ft. Lanes	N/A
	<i>Industrial</i>	60 ft.	38 ft.	0.5 ft.	5 ft.	5.5 ft.	(2) 19 ft. Shared Space			N/A
	<i>Residential</i>	54 ft.	32 ft.	0.5 ft.	5 ft.	5.5 ft.	(2) 16 ft. Shared Space			N/A

1. Pavement width includes, bike lane, street parking, travel lanes and median.
2. Public access, sidewalks, landscape strips, bike lanes and on-street parking are required on both sides of the street in all designations. The right-of-way width and pavement widths identified above include the total street section.
3. A 0.5'-foot curb is included in landscape strip or sidewalk width.
4. Travel lanes may be through lanes or turn lanes.
5. The 0.5'-foot public access provides access to adjacent public improvements.
6. Alleys shall have a minimum right-of-way width of 20 feet and a minimum pavement width of 16 feet. If alleys are provided, garage access shall be provided from the alley.

Finding: Complies with conditions. Meyers Road is classified as a minor arterial in a residential area which has a requirement for a 100-foot right-of-way, 68-foot pavement, curb & gutter, 10.5-foot sidewalk with 5-foot tree wells, 6-foot bike lane, 7-foot parking strip, three 12-foot travel lanes and a 6-foot median. In this location Meyers Road has a well established section which includes a 60-foot right-of-way, 36-foot pavement width that has two 6-foot bike lanes and curbs on both sides. The most recent improvements adjacent to the proposed development includes a 5-foot planter strip and 7-foot sidewalk.

Meyers Road is classified as a minor arterial. The City's adopted Trails Master Plan (2004) and Transportation System Plan (2013) call for a shared-use path on the south side of Meyers Road. The path is identified as a regional trail, project R3, in the Trails Master Plan and is part of the Oregon City Loop Trail.

The Trails Master Plan includes a standard for regional trails of 10-12 feet wide with two feet of soft shoulders on each side. Regional trails are meant to accommodate two-way bicycle and pedestrian traffic. The applicant did not propose to construct a shared use path to this standard. Meyers Road is currently developed with bicycle lanes on both sides, and there are seven-foot wide sidewalks on the north and south of the site on Meyers Road that abuts the proposed development. Staff consulted with the Community Services Department regarding the shared use path, and came to the conclusion that a seven foot sidewalk and five foot planter strip that matches the existing sidewalks on Meyers Road is acceptable instead of a full 10-12' shared use path. Because of existing development patterns, it is unlikely that the full shared use path could be constructed to the full standard along other portions of Meyers Road. Bicycle traffic will continue to use the bicycle lanes on Meyers Road. Staff does recommend that the sidewalk include a striped crosswalk at the mouth of the cul-de-sac in order to match the design standards for trail crossings in the adopted Trails Master Plan. The applicant shall provide this crosswalk in the final plan.

To construct these improvements a 1-foot right-of-way dedication will be required.

There will be trench patches for the full length of the development on Meyers Road on the half of the street closest to the proposed development. Restoration of Meyers Road to the city's current Pavement Cut Standard is required.

For the throat of the cul-de-sac, the applicant shall construct a local street in compliance with City standards with a 54-foot right-of-way, 32-foot pavement, curb and gutter, 5-foot planter strip (not including the curb), 5-foot sidewalk, street trees, street lighting, curb return radii, centerline monuments in boxes, and traffic control devices.

The Applicant shall construct the cul-de-sac that meets City standards with a 56-foot radius right-of-way, and improvements that include, but are not to limited to, base rock, paved street radius of 45 feet, curb and gutter, 5-foot landscape strip not including curb width, 5-foot concrete sidewalk (curb, landscape strip and sidewalk on both sides of the street), curb return radii, centerline monuments in boxes, traffic control devices, street trees, and street lights.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 3, 15, 16, 17 and 18.

12.04.185 Street Design--Access Control.

- A. A street which is dedicated to end at the boundary of the development or in the case of half-streets dedicated along a boundary shall have an access control granted to the City as a City controlled plat restriction for the purposes of controlling ingress and egress to the property adjacent to the end of the dedicated street. The access control restriction shall exist until such time as a public street is created, by dedication and accepted, extending the street to the adjacent property.*
- B. The City may grant a permit for the adjoining owner to access through the access control.*
- C. The plat shall contain the following access control language or similar on the face of the map at the end of each street for which access control is required: "Access Control (See plat restrictions)."*
- D. Said plats shall also contain the following plat restriction note(s): "Access to (name of street or tract) from adjoining tracts (name of deed document number[s]) shall be controlled by the City of Oregon City by the recording of this plat, as shown. These access controls shall be automatically terminated upon the acceptance of a public road dedication or the recording of a plat extending the street to adjacent property that would access through those Access Controls."*

Finding: Not applicable. There will be no half streets or streets that might be extended.

12.04.190 Street Design--Alignment.

The centerline of streets shall be:

- A. Aligned with existing streets by continuation of the centerlines; or
- B. Offset from the centerline by no more than five (5) feet, provided appropriate mitigation, in the judgment of the City Engineer, is provided to ensure that the offset intersection will not pose a safety hazard.

Finding: Not applicable. The proposed new street is not aligned with a street continuation.

12.04.194 Traffic Sight Obstructions

All new streets shall comply with the Traffic Sight Obstructions in Chapter 10.32.

Finding: The applicant acknowledges this requirement.

12.04.195 Spacing Standards.

- A. All new streets shall be designed as local streets unless otherwise designated as arterials and collectors in Figure 8 in the Transportation System Plan. The maximum block spacing between streets is 530 feet and the minimum block spacing between streets is 150 feet as measured between the right-of-way centerlines. If the maximum block size is exceeded, pedestrian accessways must be provided every 330 feet. The spacing standards within this section do not apply to alleys.
- B. All new development and redevelopment shall meet the minimum driveway spacing standards identified in Table 12.04.195.B.

Table 12.04.195.B Minimum Driveway Spacing Standards		
Street Functional Classification	Minimum Driveway Spacing Standards	Distance
Major Arterial Streets	Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings	175 ft.
Minor Arterial Streets	Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings	175 ft.
Collector Streets	Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings	100 ft.
Local Streets	Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings	25 ft.
<i>The distance from a street corner to a driveway is measured along the right-of-way from the edge of the intersection right-of-way to the nearest portion of the driveway and the distance between driveways is measured at the nearest portions of the driveway at the right-of-way.</i>		

Finding: Complies as proposed. The proposed new intersection on Meyers Road is approximately 180-feet (centerline to centerline) from Gerber Woods Drive. This meets the minimum requirement of 150-feet.

12.04.199 Pedestrian and Bicycle Accessways

Pedestrian/bicycle accessways are intended to provide direct, safe and convenient connections between residential areas, retail and office areas, institutional facilities, industrial parks, transit streets, neighborhood activity centers, rights-of-way, and pedestrian/bicycle accessways which minimize out-of-direction travel, and transit-orientated developments where public street connections for automobiles, bicycles and pedestrians are unavailable. Pedestrian/bicycle accessways are appropriate in areas where public street options are unavailable, impractical or inappropriate. Pedestrian and bicycle accessways are required through private property or as right-of-way connecting development to the right-of-way at intervals not exceeding three-hundred-and-thirty feet of frontage; or where the lack of street continuity creates inconvenient or out of direction travel patterns for local pedestrian or bicycle trips.

- A. Entry points shall align with pedestrian crossing points along adjacent streets and with adjacent street intersections.*
- B. Accessways shall be free of horizontal obstructions and have a nine-foot, six-inch high vertical clearance to accommodate bicyclists. To safely accommodate both pedestrians and bicycles, accessway right-of-way widths shall be as follows:

 - 1. Accessways shall have a fifteen-foot-wide right-of-way with a seven-foot wide paved surface between a five foot planter strip and a three foot planter strip.*
 - 2. If an accessway also provides secondary fire access, the right-of-way width shall be at least twenty-three feet wide with a fifteen-foot paved surface a five foot planter strip and a three foot planter strip.**
- C. Accessways shall be direct with at least one end point of the accessway always visible from any point along the accessway. On-street parking shall be prohibited within fifteen feet of the intersection of the accessway with public streets to preserve safe sight distance and promote safety.*
- D. To enhance pedestrian and bicycle safety, accessways shall be lighted with pedestrian-scale lighting. Accessway lighting shall be to a minimum level of one-half foot-candles, a one and one-half foot-candle average, and a maximum to minimum ratio of seven-to-one and shall be oriented not to shine upon adjacent properties. Street lighting shall be provided at both entrances.*
- E. Accessways shall comply with Americans with Disabilities Act (ADA).*
- F. The planter strips on either side of the accessway shall be landscaped along adjacent property by installation of the following:

 - 1. Within the three foot planter strip, an evergreen hedge screen of thirty to forty-two inches high or shrubs spaced no more than four feet apart on average;*
 - 2. Ground cover covering one hundred percent of the exposed ground. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees;*
 - 3. Within the five foot planter strip, two-inch minimum caliper trees with a maximum of thirty-five feet of separation between the trees to increase the tree canopy over the accessway;*
 - 4. In satisfying the requirements of this section, evergreen plant materials that grow over forty-two inches in height shall be avoided. All plant materials shall be selected from the Oregon City Native Plant List.**
- G. Accessways shall be designed to prohibit unauthorized motorized traffic. Curbs and removable, lockable bollards are suggested mechanisms to achieve this.*
- H. Accessway surfaces shall be paved with all-weather materials as approved by the city. Pervious materials are encouraged. Accessway surfaces shall be designed to drain stormwater runoff to the side or sides of the accessway. Minimum cross slope shall be two percent.*
- I. In parks, greenways or other natural resource areas, accessways may be approved with a five-foot wide gravel path with wooden, brick or concrete edgings.*
- J. The Community Development Director may approve an alternative accessway design due to existing site constraints through the modification process set forth in Section 12.04.007.*

Finding: Complies with conditions. The applicant has proposed sidewalks along all the streets and there is an existing striped bike lane on Meyers Road.

The proposal includes a 15' wide pedestrian access easement leading from the end of the cul-de-sac to the adjacent church property at 19691 Meyers Rd (Clackamas County Map 3-2E-08CA-01000) , situated between Lots 6 and 7 of the subdivision. The easement is required for this subdivision in order to comply with

16.12.035.B.2 and 3. The church property could either be developed in the future or could desire a connection as a “neighborhood activity center”, thus, the pedestrian connection is required. The Applicant shall dedicate to the City the 15’ wide area that borders the side yards of Lots 6 and 7, shown on the site plan as a pedestrian access easement, for use as a pedestrian accessway to the adjacent church property. The applicant shall construct the area as a pedestrian accessway according to the standards in Chapter 12.04. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 3, 15, 16, 17, 18, and 22.**

K. Ownership, liability and maintenance of accessways.

To ensure that all pedestrian/bicycle accessways will be adequately maintained over time, the hearings body shall require one of the following:

- 1 *Dedicate the accessways to the public as public right-of-way prior to the final approval of the development; or*
- 2 *The developer incorporates the accessway into a recorded easement or tract that specifically requires the property owner and future property owners to provide for the ownership, liability and maintenance of the accessway.*

Finding: Complies with Condition. The proposal includes a 15’ wide pedestrian access easement leading from the end of the cul-de-sac to the adjacent church property at 19691 Meyers Rd (Clackamas County Map 3-2E-08CA-01000) , situated between Lots 6 and 7 of the subdivision. The easement is required for this subdivision in order to comply with 16.12.035.B.2 and 3. The church property could either be developed in the future or could desire a connection as a “neighborhood activity center”, thus, the pedestrian connection is required. The Applicant shall dedicate to the City the 15’ wide area that borders the side yards of Lots 6 and 7, shown on the site plan as a pedestrian access easement, for use as a pedestrian accessway to the adjacent church property. The applicant shall construct the area as a pedestrian accessway according to the standards in Chapter 12.04. **The applicant can meet this standard through condition of approval 22.**

12.04.205 Mobility Standards.

Development shall demonstrate compliance with intersection mobility standards. When evaluating the performance of the transportation system, the City of Oregon City requires all intersections, except for the facilities identified in subsection D below, to be maintained at or below the following mobility standards during the two-hour peak operating conditions. The first hour has the highest weekday traffic volumes and the second hour is the next highest hour before or after the first hour. Except as provided otherwise below, this may require the installation of mobility improvements as set forth in the Transportation System Plan or as otherwise identified by the City Transportation Engineer.

- A. *For intersections within the Regional Center, the following mobility standards apply:*
 1. *During the first hour, a maximum v/c ratio of 1.10 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*
 2. *During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*
 3. *Intersections located on the Regional Center boundary shall be considered within the Regional Center.*
- B. *For intersections outside of the Regional Center but designated on the Arterial and Throughway Network, as defined in the Regional Transportation Plan, the following mobility standards apply:*
 1. *During the first hour, a maximum v/c ratio of 0.99 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*

2. *During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*
- C. *For intersections outside the boundaries of the Regional Center and not designated on the Arterial and Thoroughway Network, as defined in the Regional Transportation Plan, the following mobility standards apply:*
 1. *For signalized intersections:*
 - a. *During the first hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.*
 - b. *During the second hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.*
 2. *For unsignalized intersections outside of the boundaries of the Regional Center:*
 - a. *For unsignalized intersections, during the peak hour, all movements serving more than 20 vehicles shall be maintained at LOS "E" or better. LOS "F" will be tolerated at movements serving no more than 20 vehicles during the peak hour.*
- D. *Until the City adopts new performance measures that identify alternative mobility targets, the City shall exempt proposed development that is permitted, either conditionally, outright, or through detailed development master plan approval, from compliance with the above-referenced mobility standards for the following state-owned facilities:*
 - I-205 / OR 99E Interchange*
 - I-205 / OR 213 Interchange*
 - OR 213 / Beavercreek Road**State intersections located within or on the Regional Center Boundaries*
 1. *In the case of conceptual development approval for a master plan that impacts the above references intersections:*
 - a. *The form of mitigation will be determined at the time of the detailed development plan review for subsequent phases utilizing the Code in place at the time the detailed development plan is submitted; and*
 - b. *Only those trips approved by a detailed development plan review are vested.*
 2. *Development which does not comply with the mobility standards for the intersections identified in 12.04.205.D shall provide for the improvements identified in the Transportation System Plan (TSP) in an effort to improve intersection mobility as necessary to offset the impact caused by development. Where required by other provisions of the Code, the applicant shall provide a traffic impact study that includes an assessment of the development's impact on the intersections identified in this exemption and shall construct the intersection improvements listed in the TSP or required by the Code.*

Finding: Not Applicable. A Traffic Assessment Letter (TAL) was prepared for this project, dated February 19, 2014, under the direction of Michael Ard of Lancaster Engineering (Exhibit 5). The TAL was reviewed by John Replinger of Replinger and Associates, a City transportation consultant, who concluded: "I find that the TAL meets city requirements and provides an adequate basis upon which impacts can be assessed. The subdivision will result in minimal additional traffic. There are no transportation-related issues associated with this subdivision requiring mitigation." (Exhibit 6). No level of service upgrades are required.

12.04.210 Street design--Intersection Angles.

Except where topography requires a lesser angle, streets shall be laid out to intersect at angles as near as possible to right angles. In no case shall the acute angles be less than eighty degrees unless there is a special intersection design. An arterial or collector street intersecting with another street shall have at least one

hundred feet of tangent adjacent to the intersection unless topography requires a lesser distance. Other streets, except alleys, shall have at least fifty feet of tangent adjacent to the intersection unless topography requires a lesser distance. All street intersections shall be provided with a minimum curb return radius of twenty-five feet for local streets. Larger radii shall be required for higher street classifications as determined by the city engineer. Additional right-of-way shall be required to accommodate curb returns and sidewalks at intersections. Ordinarily, intersections should not have more than two streets at any one point.

Finding: Complies with conditions. The new intersection with Meyers Road is proposed to be constructed at a 90-degree angle. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 3 and 17.**

12.04.215 Street design--Off-Site Street Improvements.

During consideration of the preliminary plan for a development, the decision maker shall determine whether existing streets impacted by, adjacent to, or abutting the development meet the city's applicable planned minimum design or dimensional requirements. Where such streets fail to meet these requirements, the decision-maker shall require the applicant to make proportional improvements sufficient to achieve conformance with minimum applicable design standards required to serve the proposed development.

Finding: Complies with conditions. See section 12.04.180 of this report.

12.04.220 Street Design--Half Street.

Half streets, while generally not acceptable, may be approved where essential to the development, when in conformance with all other applicable requirements, and where it will not create a safety hazard. When approving half streets, the decision maker must first determine that it will be practical to require the dedication of the other half of the street when the adjoining property is divided or developed. Where the decision maker approves a half street, the applicant must construct an additional ten feet of pavement width so as to make the half street safe and usable until such time as the other half is constructed. Whenever a half street is adjacent to property capable of being divided or developed, the other half of the street shall be provided and improved when that adjacent property divides or develops. Access Control may be required to preserve the objectives of half streets.

When the remainder of an existing half-street improvement is made it shall include the following items: dedication of required right-of-way, construction of the remaining portion of the street including pavement, curb and gutter, landscape strip, sidewalk, street trees, lighting and other improvements as required for that particular street. It shall also include at a minimum the pavement replacement to the centerline of the street. Any damage to the existing street shall be repaired in accordance with the City's "Moratorium Pavement Cut Standard" or as approved by the City Engineer.

Finding: Not applicable. There are no half streets proposed.

12.04.225 Street Design--Cul-de-sacs and Dead-End Streets.

The city discourages the use of cul-de-sacs and permanent dead-end streets except where construction of a through street is found by the decision maker to be impracticable due to topography or some significant physical constraint such as geologic hazards, wetland, natural or historic resource areas, dedicated open space, existing development patterns, arterial access restrictions or similar situation as determined by the Community Development Director. When permitted, access from new cul-de-sacs and permanent dead-end streets shall be limited to a maximum of 25 dwelling units and a maximum street length of two hundred feet, as measured from the right-of-way line of the nearest intersecting street to the back of the cul-de-sac curb face. In addition, cul-de-sacs and dead end roads shall include pedestrian/bicycle accessways as required in this Chapter. This section is not intended to preclude the use of curvilinear eyebrow widening of a street where needed.

Where approved, cul-de-sacs shall have sufficient radius to provide adequate turn-around for emergency vehicles in accordance with Fire District and City adopted street standards. Permanent dead-end streets other than cul-de-sacs shall provide public street right-of-way / easements sufficient to provide turn-around space

with appropriate no-parking signs or markings for waste disposal, sweepers, and other long vehicles in the form of a hammerhead or other design to be approved by the decision maker. Driveways shall be encouraged off the turnaround to provide for additional on-street parking space.

Finding: Complies as Proposed. The applicant has proposed a cul-de-sac as it is the only reasonable way to serve the proposed development. It is less than 200-feet long and serves less than 25 homes. See section 12.04.180 for further information and conditions.

12.04.230 Street Design--Street Names.

Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of an existing street. Street names shall conform to the established standards in the City and shall be subject to the approval of the City.

Finding: The applicant has not proposed a street name for the new street. Prior to final plat, the applicant shall coordinate with the City to select an appropriate name for the new street. **The applicant can meet this standard through Condition of Approval 24.**

12.04.235 Street Design--Grades and Curves.

Grades and center line radii shall conform to the standards in the City's street design standards and specifications.

Finding: Complies as proposed. The proposed street grade is approximately 4-percent, which is acceptable. There are two horizontal curves which are very short and relatively minor. Further, the local street will be stop controlled.

12.04.240 Street Design--Development Abutting Arterial or Collector Street.

Where development abuts or contains an existing or proposed arterial or collector street, the decision maker may require: access control; screen planting or wall contained in an easement or otherwise protected by a restrictive covenant in a form acceptable to the decision maker along the rear or side property line; or such other treatment it deems necessary to adequately protect residential properties or afford separation of through and local traffic. Reverse frontage lots with suitable depth may also be considered an option for residential property that has arterial frontage. Where access for development abuts and connects for vehicular access to another jurisdiction's facility then authorization by that jurisdiction may be required.

Finding: Complies with conditions. The proposed development abuts a minor arterial. See section 12.04.180 of this report for improvements and conditions.

12.04.245 Street Design--Pedestrian and Bicycle Safety.

Where deemed necessary to ensure public safety, reduce traffic hazards and promote the welfare of pedestrians, bicyclists and residents of the subject area, the decision maker may require that local streets be so designed as to discourage their use by nonlocal automobile traffic.

All crosswalks shall include a large vegetative or sidewalk area which extends into the street pavement as far as practicable to provide safer pedestrian crossing opportunities. These curb extensions can increase the visibility of pedestrians and provide a shorter crosswalk distance as well as encourage motorists to drive slower. The decision maker may approve an alternative design that achieves the same standard for constrained sites or where deemed unnecessary by the City Engineer.

Finding: Not applicable. The proposed new street is short, a dead end and stop controlled, so there will not be nonlocal traffic.

12.04.255 Street design--Alleys.

Public alleys shall be provided in the following districts R-5, R-3.5, R-2, MUC-1, MUC-2 and NC zones unless other permanent provisions for private access to off-street parking and loading facilities are approved by the decision maker. The corners of alley intersections shall have a radius of not less than ten feet.

Finding: Not applicable. There are no alleys proposed.

12.04.260 Street Design--Transit.

Streets shall be designed and laid out in a manner that promotes pedestrian and bicycle circulation. The applicant shall coordinate with transit agencies where the application impacts transit streets as identified in 17.04.1310. Pedestrian/bicycle access ways shall be provided as necessary in Chapter 12.04 to minimize the travel distance to transit streets and stops and neighborhood activity centers. The decision maker may require provisions, including easements, for transit facilities along transit streets where a need for bus stops, bus pullouts or other transit facilities within or adjacent to the development has been identified.

Finding: Not applicable. There are no public transit stops.

12.04.265 Street design--Planter Strips.

All development shall include vegetative planter strips that are five feet in width or larger and located adjacent to the curb. This requirement may be waived or modified if the decision maker finds it is not practicable. The decision maker may permit constrained sites to place street trees on the abutting private property within 10 feet of the public right-of-way if a covenant is recorded on the title of the property identifying the tree as a city street tree which is maintained by the property owner. Development proposed along a collector, minor arterial, or major arterial street may use tree wells with root barriers located near the curb within a wider sidewalk in lieu of a planter strip, in which case each tree shall have a protected area to ensure proper root growth and reduce potential damage to sidewalks, curbs and gutters.

To promote and maintain the community tree canopy adjacent to public streets, trees shall be selected and planted in planter strips in accordance with Chapter 12.08, Street Trees. Individual abutting lot owners shall be legally responsible for maintaining healthy and attractive trees and vegetation in the planter strip. If a homeowners' association is created as part of the development, the association may assume the maintenance obligation through a legally binding mechanism, e.g., deed restrictions, maintenance agreement, etc., which shall be reviewed and approved by the city attorney. Failure to properly maintain trees and vegetation in a planter strip shall be a violation of this code and enforceable as a civil infraction.

Finding: Complies with conditions. See section 12.04.180 of this report.

12.04.270 Standard Construction Specifications.

The workmanship and materials for any work performed under permits issued per this chapter shall be in accordance with the edition of the "Standard Specifications for Public Works Construction," as prepared by the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the city, in effect at the time of application. The exception to this requirement is where this chapter and the Public Works Street Design Drawings provide other design details, in which case the requirements of this chapter and the Public Works Street Design Drawings shall be complied with. In the case of work within ODOT or Clackamas County rights-of-way, work shall be in conformance with their respective construction standards.

Finding: The applicant acknowledges this requirement.

12.04.280 Violation--Penalty.

Any act or omission in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: The applicant acknowledges this requirement.

CHAPTER 12.08 - PUBLIC AND STREET TREES

12.08.015 *Street tree planting and maintenance requirements.*

All new construction or major redevelopment shall provide street trees adjacent to all street frontages. Species of trees shall be selected based upon vision clearance requirements, but shall in all cases be selected from the Oregon City Street Tree List or be approved by a certified arborist. If a setback sidewalk has already been constructed or the Development Services determines that the forthcoming street design shall include a setback sidewalk, then all street trees shall be installed with a planting strip. If existing street design includes a curb-tight sidewalk, then all street trees shall be placed within the front yard setback, exclusive of any utility easement.

A. One street tree shall be planted for every thirty-five feet of property frontage. The tree spacing shall be evenly distributed throughout the total development frontage. The community development director may approve an alternative street tree plan if site or other constraints prevent meeting the placement of one street tree per thirty-five feet of property frontage.

B. The following clearance distances shall be maintained when planting trees:

- 1. Fifteen feet from streetlights;*
- 2. Five feet from fire hydrants;*
- 3. Twenty feet from intersections;*
- 4. A minimum of five feet (at mature height) below power lines.*

C. All trees shall be a minimum of two inches in caliper at six inches above the root crown and installed to city specifications.

D. All established trees shall be pruned tight to the trunk to a height that provides adequate clearance for street cleaning equipment and ensures ADA complaint clearance for pedestrians.

Finding: Complies with Condition. The applicant proposes street trees in a five-foot planter strip along Meyers Road and the new cul-de-sac. The Applicant submitted a street tree plan that includes 21 total street trees spaced evenly throughout the frontage of the site. The total street frontage in the plans is 723 feet, requiring 21 total trees ($723/35 = 20.6$). The plan did not identify the location of street lights, fire hydrants, or power lines or the size of the proposed street trees. Prior to final plat the Applicant shall submit a final Street Tree Plan for the frontage of the property that includes the number, location, size, and species of the trees. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 25.**

12.08.020 *Street tree species selection.*

The community development director may specify the species of street trees required to be planted if there is an established planting scheme adjacent to a lot frontage, if there are obstructions in the planting strip, or if overhead power lines are present.

Finding: Complies with Condition. The Applicant indicated that the street trees would be planted in accordance with Chapter 12.08 but did not indicate the species. Prior to final plat the Applicant shall submit a final Street Tree Plan for the frontage of the properties that includes the number, location, size, and species of the trees. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 25.**

12.08.035 - *Public tree removal.*

Existing street trees shall be retained and protected during construction unless removal is specified as part of a land use approval or in conjunction with a public facilities construction project, as approved by the community development director. A diseased or hazardous street tree, as determined by a registered arborist and verified by the City, may be removed if replaced. A non-diseased, non-hazardous street tree that is removed shall be replaced in accordance with the Table 12.08.035. All new street trees will have a minimum two-inch caliper trunk measured six inches above the root crown. The community development director may approve off-site installation of replacement trees where necessary due to planting constraints. The community development

director may additionally allow a fee in-lieu of planting the tree(s) to be placed into a city fund dedicated to planting trees in Oregon City in accordance with Oregon City Municipal Code 12.08.

Finding: Not Applicable. There are no existing street trees proposed to be removed with this development.

Chapter 17.41 TREE PROTECTION STANDARDS

17.41.010-040 Tree Protection.

New development shall be designed in a manner that preserves trees to the maximum extent practicable. As a requirement of any Type II land use application, the siting of structures, roadways and utility easements shall provide for the protection of tree resources to the maximum extent practicable. This applies to all subdivision, partition and site plan and design review applications.

Finding: Applicable. The Applicant has proposed a subdivision. Compliance with this section is required.

17.41.050 Same--Compliance options.

Applicants for review shall comply with these requirements through one of the following procedures:

- A. Option 1 - Mitigation. Retention and removal of trees, with subsequent mitigation by replanting pursuant to section 17.41.060 or 17.41.070. All replanted and saved trees shall be protected by a permanent restrictive covenant or easement approved in form by the city.*
- B. Option 2 – Dedicated Tract. Protection of trees or groves by placement in a tract within a new subdivision or partition plat pursuant to sections 17.41.080-100; or*
- C. Option 3 – Restrictive Covenant. Protection of trees or groves by recordation of a permanent restrictive covenant pursuant to section 17.41.110-120.; or*
- D. Option 4 - Cash-in-lieu of planting pursuant to Section 17.41.130.*

A regulated tree that has been designated for protection pursuant to this section must be retained or permanently protected unless it has been determined by a certified arborist to be diseased, dying or hazardous, pursuant to the following applicable provisions.

The community development director, pursuant to a Type II procedure, may allow a property owner to cut a specific number of trees within a regulated grove if preserving those trees would:

- 1.Preclude achieving eighty percent of minimum density with reduction of lot size; or*
- 2.Preclude meeting minimum connectivity requirements for subdivisions.*

Finding: Complies with Conditions. The subject site contains a total of 47 trees that are subject to the provisions of this section. The applicant proposed mitigation per Option 1. Nineteen of the trees are proposed to be removed and the remainder will be preserved and protected with a permanent restrictive covenant. The applicant proposed only 28 trees for planting on site under Option 1; while 33 are required. Prior to final plat, the Applicant shall submit a revised tree mitigation plan in accordance with OCMC 17.41, showing the tree locations relative to the construction area and including 33 mitigation trees.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 26.

17.41.060 Tree removal and replanting--Mitigation (Option 1).

A. Applicants for development who select this option shall ensure that all healthy trees shall be preserved outside the construction area as defined in Chapter 17.04 to the extent practicable. Compliance with these standards shall be demonstrated in a tree mitigation plan report prepared by a certified arborist, horticulturalist or forester or other environmental professional with experience and academic credentials in forestry or arboriculture. At the applicant's expense, the City may require the report to be reviewed by a consulting arborist. The number of replacement trees required on a development site shall be calculated

separately from, and in addition to, any public or street trees in the public right-of-way required under section 12.08 – Community Forest and Street Trees.

B. The applicant shall determine the number of trees to be mitigated on the site by counting all of the trees 6" DBH (minimum 4.5 feet from the ground) or larger on the entire site and either:

(1) Trees that are removed outside of the construction area, shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Trees that are removed within the construction area shall be replanted with the number of replacement trees required in Column 2; or

(2) Diseased or hazardous trees, when the condition is verified by a certified arborist to be consistent with the definition in Section 17.04.1360, may be removed from the tree replacement calculation. Regulated healthy trees that are removed outside of the construction area, shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Regulated healthy trees that are removed within the construction area shall be replanted with the number of replacement trees required in Column 2.

Table 17.41.060-1

Tree Replacement Requirements

<i>Size of tree removed (DBH)</i>	<i>Column 1 Number of trees to be planted. (If removed Outside of construction area)</i>	<i>Column 2 Number of trees to be planted. (If removed Within the construction area)</i>
<i>6 to 12"</i>	<i>3</i>	<i>1</i>
<i>13 to 18"</i>	<i>5</i>	<i>2</i>
<i>19 to 24"</i>	<i>8</i>	<i>3</i>
<i>25 to 30"</i>	<i>10</i>	<i>4</i>
<i>31 and over"</i>	<i>15</i>	<i>5</i>

Finding: Complies with Condition. The subject site contains a total of 47 trees that are subject to the provisions of this section. Nineteen trees are proposed to be removed per the table below:

DBH"	Species	In / Out Construction Area	# Mitigation Trees Required
8	Deciduous	In	1
8	Deciduous	In	1
8	Deciduous	In	1
8	Deciduous	In	1
8	Deciduous	In	1
8	Deciduous	In	1
8	Fruit	Out	3
8	Fruit	In	1
8	Fruit	In	1
10	Birch	In	1
12	Deciduous	In	1
12	Fir	In	1
12	Fir	In	1
12	Fruit	In	1

18	Fruit	In	2
18	Fruit	In	2
18	Fruit	In	2
24	Maple	In	3
24	Fir	Out	8
TOTAL			33

The applicant proposed only 28 trees for planting on site under Option 1; while 33 are required. Prior to final plat, the Applicant shall submit a revised tree mitigation plan in accordance with OCMC 17.41, showing the tree locations relative to the construction area and including 33 mitigation trees.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 26.

17.41.070 *Planting area priority for mitigation (Option 1).*

Development applications which opt for removal or trees with subsequent replanting pursuant to Section 17.41.050A. and shall be required to mitigate for tree cutting by complying with the following priority for replanting standards C.1.--4. below:

First Priority. Replanting on the development site. First priority for replacement tree locations shall be planting on-site.

Finding: Complies with Condition. The applicant proposed only 28 trees for planting on site under Option 1; while 33 are required. Prior to final plat, the Applicant shall submit a revised tree mitigation plan in accordance with OCMC 17.41, showing 33 mitigation trees. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 26.**

17.41.075 –125 *Tree Mitigation Options*

These code sections provide a variety of compliance options for land use applications, including preservation and mitigation of trees, the use of flexible lots sizes and setbacks, on-site density transfer, preservation tracts, and fee-in-lieu of planting.

Finding: Not Applicable. The Applicant did not seek compliance based on these options.

17.41.130. *Regulated Tree Protection Procedures During Construction.*

A. No permit for any grading or construction of public or private improvements may be released prior to verification by the Community Development Director that regulated trees designated for protection or conservation have been protected according to OCMC 17.41.130(B). No trees designated for removal shall be removed without prior written approval from the Community Development Director.

B. Tree protection shall be as recommended by a qualified arborist or, as a minimum, to include the following protective measures:

- 1. Except as otherwise determined by the Community Development Director, all required tree protection measures set forth in this section shall be instituted prior to any development activities, including, but not limited to clearing, grading, excavation or demolition work, and such measures shall be removed only after completion of all construction activity, including necessary landscaping and irrigation installation, and any required plat, tract, conservation easement or restrictive covenant has been recorded.*
- 2. Approved construction fencing, a minimum of 4 feet tall with steel posts placed no farther than ten feet apart, shall be installed at the edge of the tree protection zone or dripline, whichever is greater. An alternative may be used with the approval of the Community Development Director.*

3. *Approved signs shall be attached to the fencing stating that inside the fencing is a tree protection zone, not to be disturbed unless prior approval has been obtained from the Community Development Director.*
4. *No construction activity shall occur within the tree protection zone, including, but not limited to; dumping or storage of materials such as building supplies, soil, waste items; nor passage or parking of vehicles or equipment.*
5. *The tree protection zone shall remain free of chemically injurious materials and liquids such as paints, thinners, cleaning solutions, petroleum products, and concrete or dry wall excess, construction debris, or run-off.*
6. *No excavation, trenching, grading, root pruning or other activity shall occur within the tree protection zone unless directed by an arborist present on site and approved by the Community Development Director.*
7. *No machinery repair or cleaning shall be performed within 10 feet of the dripline of any trees identified for protection.*
8. *Digging a trench for placement of public or private utilities or other structure within the critical root zone of a tree to be protected is prohibited. Boring under or through the tree protection zone may be permitted if approved by the Community Development Director and pursuant to the approved written recommendations and on-site guidance and supervision of a Certified Arborist.*
9. *The City may require that a Certified Arborist be present during any construction or grading activities that may affect the dripline of trees to be protected.*
10. *The Community Development Director may impose conditions to avoid disturbance to tree roots from grading activities and to protect trees and other significant vegetation identified for retention from harm. Such conditions may include, if necessary, the advisory expertise of a qualified consulting arborist or horticulturist both during and after site preparation, and a special maintenance/management program to provide protection to the resource as recommended by the arborist or horticulturist.*

C. Changes in soil hydrology due to soil compaction and site drainage within tree protection areas shall be avoided. Drainage and grading plans shall include provision to ensure that drainage of the site does not conflict with the standards of this section. Excessive site run-off shall be directed to appropriate storm drainage facilities and away from trees designated for conservation or protection.

Finding: Complies with Condition. The proposal shows protection fencing around some of the trees on site. Prior to construction activities, the applicant shall ensure that 4 ft. tree protection fencing is placed around all trees greater than 6" caliper that are not removed and that the requirements in Chapter 17.41.130 are met. **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Condition of Approval 27.**

CHAPTER 13.12: STORMWATER CONVEYANCE, QUANTITY AND QUALITY

13.12.050 Pursuant to each of the subsections below, proposed activities may be required to meet the performance standards for stormwater conveyance, stormwater quantity or stormwater quality.

A. Stormwater Conveyance. The stormwater conveyance requirements of this chapter shall apply to all stormwater systems constructed with any development activity, except as follows:

1. The conveyance facilities are located entirely on one privately owned parcel;
 2. The conveyance facilities are privately maintained; and
 3. The conveyance facilities receive no stormwater runoff from outside the parcel's property limits.
- Those facilities exempted from the stormwater conveyance requirements by the above subsection will remain subject to the requirements of the Oregon Uniform Plumbing Code. Those exempted facilities shall be reviewed by the building official.

Finding: Complies with Condition. The applicant has proposed to install a storm water collection system within the street right-of-way that shall connect to an existing City owned storm water collection system. For a full description see section 16.08.030 B3 of this report **Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 3, 4, 11, 12 and 13.**

13.12.050.B. Stormwater Quantity Control. *The stormwater quantity control requirements of this chapter shall apply to the following proposed activities, uses or developments:*

1. *Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven-year period;*

Finding: Not applicable. The development is not in a Natural Resource Overlay District.

2. *Activities that create more than two thousand square feet of impervious surface, cumulated over any given seven year period; or*

Finding: Complies with Condition. The proposed development will create more than 2,000 square feet of new impervious area, so storm water quantity control is required. See section 16.08.030.B.3 of this report for a description of the storm drainage system and quantity control.

3. *Redevelopment of a commercial or industrial land use that will disturb more than five thousand square feet of existing impervious surface. This five thousand square foot measurement cumulates over any given seven year period;*

Finding: Not Applicable. The proposed work is not redevelopment.

4. *An exemption to the stormwater quantity control requirements of this chapter will be granted in the following circumstances:*

a. *The development site discharges to a stormwater quantity control facility approved by the city engineer to receive the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater, or,*

b. *The development site discharges to one of the following receiving bodies of water: Willamette River, Clackamas River or Abernethy Creek; and either lies within the one hundred year floodplain or is up to ten feet above the design flood elevation as defined in Chapter 17.42*

Finding: Not Applicable. An exemption is not required.

13.12.050.C. Stormwater Quality Control. *The stormwater quality control requirements of this chapter shall apply to the following proposed activities, uses or developments:*

1. *Category A. Activities subject to general water quality requirements of this chapter:*

a. *The construction of four or more single-family residences;*

b. *Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven year period; or*

c. *Activities that create more than eight thousand square feet of new impervious surface for other than a single-family residential development. This eight thousand square foot measurement will be considered cumulative for any given seven year period;*

d. *An exemption to the stormwater quantity control requirements of this subsection will be granted if the development site discharges to a stormwater quality control facility approved by the city engineer to receive*

the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater.

Finding: The applicant has proposed to construct more than four homes, therefore, storm water quality control is required. See section 16.08.030.B.3 of this report for a description of the storm drainage system and quality control.

2. *Category B. Uses Requiring Additional Management Practices. In addition to any other applicable requirements of this chapter, the following uses are subject to additional management practices as contained in the Public Works Stormwater and Grading Design Standards:*

- a. *Fuel dispensing facilities;*
- b. *Bulk petroleum storage in multiple stationary tanks;*
- c. *Solid waste storage areas for commercial, industrial or multi-family uses;*
- d. *Loading and unloading docks for commercial or industrial uses; or*
- e. *Covered vehicle parking for commercial or industrial uses.*

Finding: Not Applicable. The proposed work does not include these elements.

3. *Category C. Clackamas River Watershed. In addition to any other applicable requirements of this chapter, any development that creates new waste discharges and whose stormwater runoff may directly or indirectly flow into the Clackamas River is subject to additional requirements associated with Oregon Administrative Rules (OAR) 340-41-470 (Thee Basin Rule).*

Finding: Not Applicable. No new waste discharges or increased stormwater flow will flow into the Clackamas River with this development.

IV. CONCLUSION AND DECISION:

In conclusion, the proposed zone change and 10-lot subdivision located at 19751 Meyers Rd, Clackamas County Map 3-2E-08CA-00600, and 19735 Meyers Rd, Clackamas County Map 3-2E-08CA-00700, can meet the approval standards outlined in this Staff Report, subject to the Applicant's proposal and attached Conditions of Approval contained in this report. Therefore, the Community Development Director recommends approval of the application with Conditions.

V. EXHIBITS

The following exhibits are attached to this staff report.

- 1. Vicinity Map
- 2. Applicant's Submittal
- 3. Subdivision Map set
- 4. Applicant's letter to Planning Commission regarding an alternative layout
- 5. Applicant's Traffic Analysis Letter
- 6. Comments from John Replinger of Replinger and Associates
- 7. Trails Master Plan Map
- 8. Engineering Policy EP 00-01

**PROPOSED CONDITIONS OF APPROVAL
TP 14-02 and ZC 14-02**

1. Prior to final plat approval, the Applicant shall provide an Erosion Prevention and Sedimentation Control Plan suitable to the Public Works Department to meet the Public Works requirements for erosion control. The Applicant shall provide a Preliminary Residential Lot Grading Plan to the City for review prior to the approval of construction plans. A final site Residential Lot Grading Plan shall be required as part of the final construction plans per the City's Residential Lot Grading Criteria and the International Building Code. If significant grading is required for the lots due to its location or the nature of the site, rough grading shall be required of the developer prior to the acceptance of the public improvements. There shall not be more than a maximum grade differential of two (2) feet at all subdivision boundaries. Grading shall in no way create any water traps, or other ponding situations. (DS)
2. Prior to final plat, the applicant shall ensure that the street facing façade of the existing home on Lot 8 contains five of the following design elements from Chapter 17.20:
 1. The design of the dwelling includes dormers, which are projecting structures built out from a sloping roof housing a vertical window;
 2. The roof design utilizes a:
 - a. Gable, which is a roof sloping downward in two parts from a central ridge, so as to form a gable at each end; or
 - b. Hip, which is a roof having sloping ends and sides meeting at an inclined projecting angle.
 3. The building facade includes 2 or more offsets of 16-inches or greater;
 4. A roof overhang of 16-inches or greater;
 5. A recessed entry that is at least 2 feet behind the furthest forward living space on the ground floor, and a minimum of 8 feet wide;
 6. A minimum 60 square-foot covered front porch that is at least 5 feet deep or a minimum 40 square-foot covered porch with railings that is at least 5 feet deep and elevated entirely a minimum of 18-inches;
 7. A bay window that extends a minimum of 12-inches outward from the main wall of a building and forming a bay or alcove in a room within;
 8. Windows and main entrance doors that occupy a minimum of 15% of the lineal length of the front façade (not including the roof and excluding any windows in a garage door);
 9. Window trim (minimum 4-inches);
 10. Window grids (excluding any windows in the garage door or front door).
 11. Windows on all elevations include a minimum of 4-inch trim (worth 2 elements);
 12. Windows on all of the elevations are wood, clad wood, or fiberglass (worth 2 elements);
 13. Windows on all of the elevations are recessed a minimum of two inches from the façade (worth 2 elements);
 11. A balcony that projects from the wall of the building and is enclosed by a railing or parapet;
 14. Shakes, shingles, brick, stone or other similar decorative materials shall occupy a minimum of 60 square feet of the street façade;
 15. All garage doors are a maximum 9-feet wide;
 16. All garage doors wider than 9-feet are designed to resemble 2 smaller garage doors;
 17. There are a minimum of two windows in each garage door;
 15. A third garage door is recessed a minimum of 2 feet;

16. A window over the garage door that is a minimum of 12 square feet with window trim (minimum 4-inches);
 17. There is no attached garage onsite;
 18. The living space of the dwelling is within 5 feet of the front yard setback; or
 19. The driveway is composed entirely of pervious pavers or porous pavement. (P)
3. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. This includes attending a pre-design meeting with the City. (DS)
 4. Prior to final plat approval, the Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water and/or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. (DS)
 5. The applicant shall construct a new 8-inch water line into the proposed cul-de-sac with a blow-off at the end. (DS)
 6. All new water services shall be constructed with individual copper water laterals a minimum of 1-inch diameter in size connecting the water main to the water meter. (DS)
 7. Prior to final plat, the Applicant shall submit the proposed development plans to Clackamas County Fire District No. 1 for review and install any required fire hydrants. (F)
 8. The sanitary sewer main shall connect to the existing pipe at the corner of Gerber Woods Drive and Meyers Road. The existing clean-out shall be replaced with a manhole. The pipe shall be extended from Gerber Woods drive across the full frontage of the development along Meyers Road, and into the proposed cul-de-sac with a manhole at the end. (DS)
 9. All new sanitary sewer laterals shall be constructed with individual laterals connecting to the sanitary sewer main. (DS)
 10. Public storm sewer improvements shall be designed and constructed to collect and convey on-site and off-site storm drainage in a manner suitable to the Public Works Department. (DS)
 11. The storm system improvements shall include on-site infiltrators for each lot, a standard collection system in the street right-of-way, detention and treatment for run-off in the right-of-way. Discharge from the detention pond shall be to the existing public system on Meyers Road. (DS)
 12. The storm collection pipe on Meyers Road should be extended to the end of the proposed development along Meyers Road. (DS)
 13. A final storm water report shall be completed as part of the design. (DS)
 14. Ten-foot public utility easements along all street frontages and all easements required for the final engineering plans shall be dedicated to the public on the final plat. All existing and proposed utilities and easements shall be indicated on the construction plans. Any off-site utility easements required for this project, such as for work on the storm outfall, shall be obtained and submitted to the City prior to approval of the construction plans. (DS)
 15. The Applicant shall dedicate 1-foot of right-of-way along Meyers Road. (DS)
 16. The Applicant shall construct improvements on Meyers Road which include a 5-foot planter strip with street trees behind the existing curb, and a 7-foot wide sidewalk. The pavement shall be replaced to the centerline of the street, and the street restriped to match the existing striping including a 6-foot wide bike lane. The applicant shall provide a crosswalk for the 7 foot sidewalk as it cross the mouth of the cul-de-sac. (DS)
 17. The applicant shall construct a local street with a 54-foot right-of-way, and improvements that includes, but are not to limited to, base rock, paved street, 32-foot pavement, curb and gutter, 5-foot planter strip (not including the curb), 5-foot sidewalk, street trees, street lighting, curb return radii, centerline monuments in boxes, and traffic control devices. The centerline of the new street shall be a minimum of 150-feet from the centerline of Gerber Woods Drive. The intersection angle with Meyers Road shall be 90-degrees. (DS)

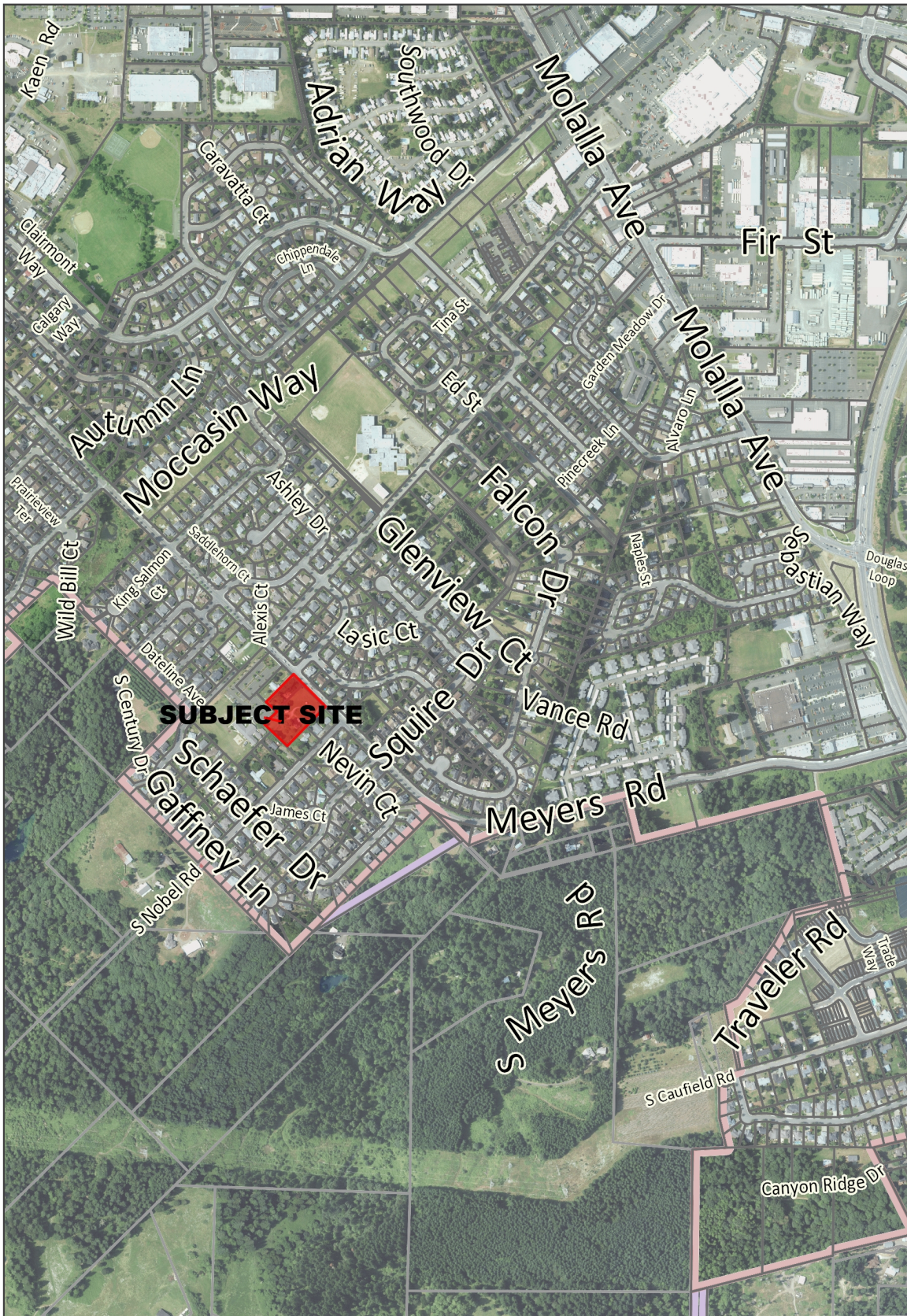
18. The Applicant shall construct the cul-de-sac with a 56-foot radius right-of-way, and improvements that include, but are not limited to, base rock, paved street radius of 45 feet, curb and gutter, 5-foot landscape strip not including curb width, 5-foot concrete sidewalk (curb, landscape strip and sidewalk on both sides of the street), curb return radii, centerline monuments in boxes, traffic control devices, street trees, and street lights. (DS)
19. The applicant shall provide a geotechnical report providing design criteria for the retaining wall that is proposed for two sides of the storm detention pond. (DS)
20. Where pavement cuts are made in existing streets for the installation of improvements, the restoration shall be done in accordance with the City of Oregon City Pavement Cut Standards. (DS)
21. With the submission of design plans, the Applicant must submit a street lighting plan and documentation from a lighting professional that confirms that the lighting meets the City's requirements under OCMC 16.12.090. (DS)
22. The Applicant shall dedicate to the City the 15' wide area that borders the side yards of Lots 6 and 7, shown on the site plan as a pedestrian access easement, for use as a pedestrian accessway to the adjacent church property. The applicant shall construct the area as a pedestrian accessway according to the standards in Chapter 12.04. (P, DS)
23. Prior to issuance of a building permits for Lots 9 and 10, the Applicant shall design the lots so that the front setback and most architectural significant façade for Lots 9 and 10 shall face Meyers Road. This condition will be enforced at the time of building permit application for homes on Lots 9 and 10. (P)
24. Prior to final plat, the Applicant shall coordinate with the City to select an appropriate name for the new street. (P)
25. Prior to final plat the Applicant shall submit a final Street Tree Plan for the frontage of the properties that includes the number, location, size, and species of the trees. The Applicant shall plant 21 street trees. (P)
26. Prior to final plat, the Applicant shall submit a revised tree mitigation plan in accordance with OCMC 17.41, showing the tree locations relative to the construction area and including 33 mitigation trees. (P)
27. Prior to construction activities, the applicant shall ensure that 4 foot tree protection fencing is placed around all trees greater than 6" caliper that are not removed and that the requirements in Chapter 17.41.130 are met. (P)

(P) = Verify that condition of approval has been met with the Planning Division.

(DS) = Verify that condition of approval has been met with the Development Services Division.

(F) = Verify that condition of approval has been met with the Clackamas County Fire Department.

TP 14-02 / ZC 14-02 Zone Change and 10-lot subdivision



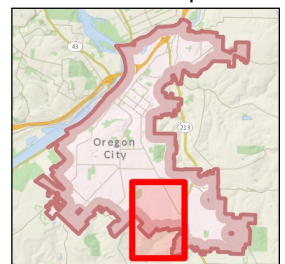
Legend

- Taxlots
- Taxlots (Outside UGB)
- Unimproved ROW
- City Limits
- UGB
- Aerial Photos - 2013

Notes

The proposal for this 1.8 acre site is a zone change from R-8 to R-6 and a 10-lot subdivision.

Overview Map



The City of Oregon City makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. This map is not suitable for legal, engineering, surveying or navigation purposes. Notification of any errors is appreciated.



0 931 Feet
1: 11,177

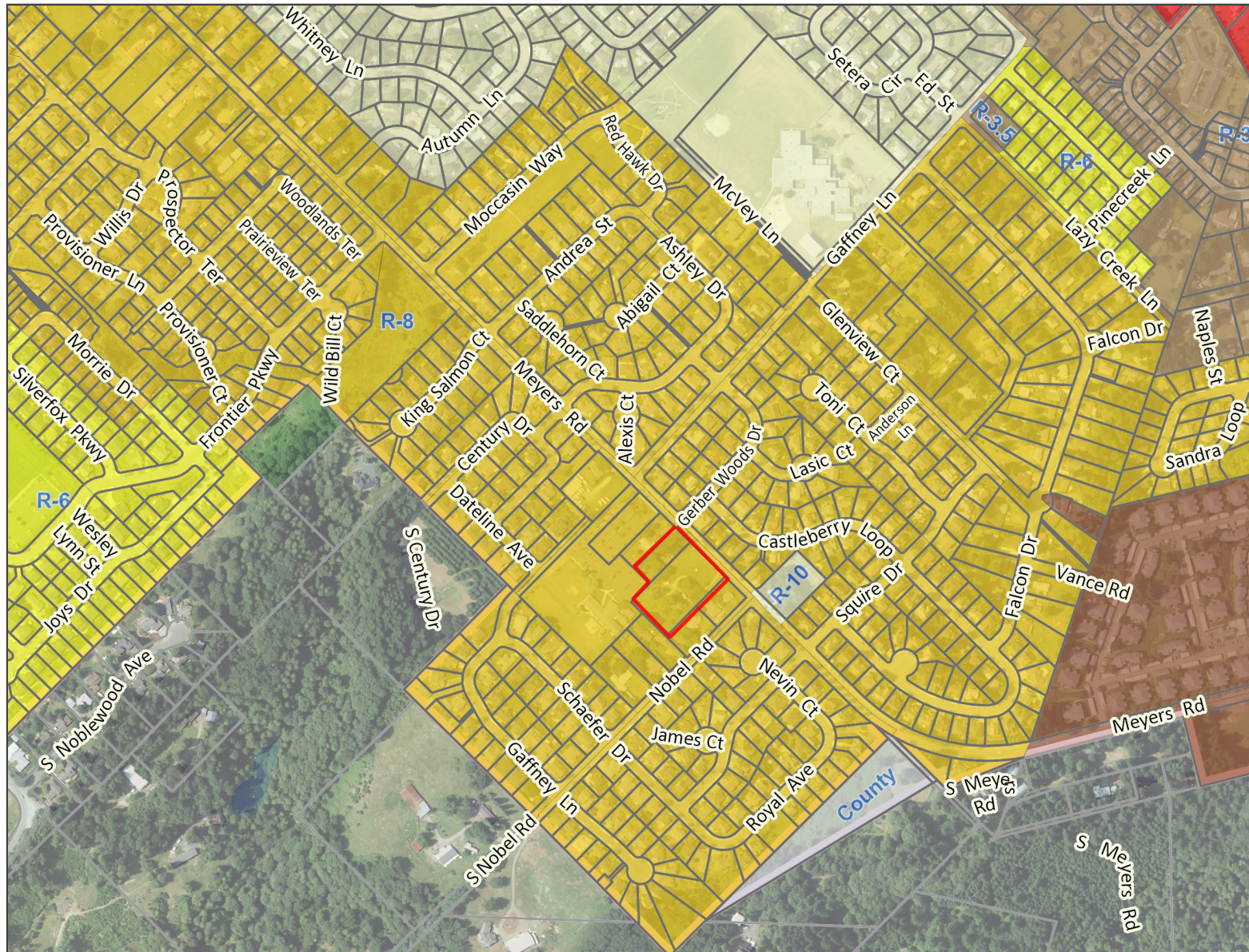
19735 and 19751 Meyers Rd.

Map created 4/22/2014



















City of Oregon City
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625 Center St
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Surrounding Zoning Map

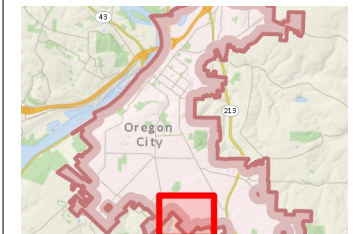


Legend

-  Taxlots
 -  Taxlots (Outside UGB)
 - Zoning**
 -  R-10 - Single Family Dwelling
 -  R-8 - Single Family Dwelling
 -  R-6 - Single Family Dwelling
 -  RC-4 - McLoughlin Conditional
 -  RD4-MDP - Manufactured Dwelling Pa
 -  R-3.5 - Medium Density Residential
 -  R-2 - Multi-Family Dwelling
 -  C - General Commercial
 -  MUC-2 - Mixed Use Corridor 2
 -  MUC-1 - Mixed Use Corridor 1
 -  LO - Limited Office
 -  NC - Neighborhood Commercial
 -  HC - Historic Commercial
 -  MUD - Mixed Use Downtown
 -  MUE - Mixed Use Employment
 -  CL - General Industrial

Notes

Overview Map



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0 617 1,235 Feet

1: 7,407

Map created 6/2/2014

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OREGON CITY

Community Development - Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)	Type II (OCMC 17.50.030.B)	Type III / IV (OCMC 17.50.030.C)
<input type="checkbox"/> Compatibility Review	<input type="checkbox"/> Extension	<input type="checkbox"/> Annexation
<input type="checkbox"/> Lot Line Adjustment	<input type="checkbox"/> Detailed Development Review	<input type="checkbox"/> Code Interpretation / Similar Use
<input type="checkbox"/> Non-Conforming Use Review	<input type="checkbox"/> Geotechnical Hazards	<input type="checkbox"/> Concept Development Plan
<input type="checkbox"/> Natural Resource (NROD) Verification	<input type="checkbox"/> Minor Partition (<4 lots)	<input type="checkbox"/> Conditional Use
	<input type="checkbox"/> Minor Site Plan & Design Review	<input type="checkbox"/> Comprehensive Plan Amendment (Text/Map)
	<input type="checkbox"/> Non-Conforming Use Review	<input type="checkbox"/> Detailed Development Plan
	<input type="checkbox"/> Site Plan and Design Review	<input type="checkbox"/> Historic Review
	<input checked="" type="checkbox"/> Subdivision (4+ lots)	<input type="checkbox"/> Municipal Code Amendment
	<input type="checkbox"/> Minor Variance	<input type="checkbox"/> Variance
	<input type="checkbox"/> Natural Resource (NROD) Review	<input checked="" type="checkbox"/> Zone Change

File Number(s): _____

Proposed Land Use or Activity: Zone Change and 10 lot subdivision

Project Name: Small Slope Number of Lots Proposed (If Applicable): 10

Physical Address of Site: 19735 and 19751 S. Meyers Road

Clackamas County Map and Tax Lot Number(s): 3 2E 08CA TL 600 and 700

Applicant(s):

Applicant(s) Signature: Connie Mueller, Pres

Applicant(s) Name Printed: Connie Mueller, JECO Investments, Inc. Date: 2-20-14

Mailing Address: PO Box 279, Boring, OR 97009

Phone: 503-663-1144 Fax: 503-663-6251 Email: cmuework@comcast.net

Property Owner(s):

Property Owner(s) Signature: Jason Melonuk

Property Owner(s) Name Printed: Jason Melonuk Date: 2/18/2014

Mailing Address: 19735 MYERS Rd OREGON CITY, OR 97045

Phone: 971-970-2894 Fax: _____ Email: _____

Representative(s):

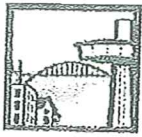
Representative(s) Signature: Thomas Sisul

Representative (s) Name Printed: Tom Sisul, Sisul Engineering Date: 2-15-2014

Mailing Address: 375 Portland Avenue

Phone: 503-657-0188 Fax: 503-657-5779 Email: tomsisul@sisulengineering.com

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.



OREGON CITY

Community Development - Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045

Ph (503) 722-3789 | Fax (503) 722-3880

LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)

- ☐ Compatibility Review
- ☐ Lot Line Adjustment
- ☐ Non-Conforming Use Review
- ☐ Natural Resource (NROD) Verification

Type II (OCMC 17.50.030.B)

- ☐ Extension
- ☐ Detailed Development Review
- ☐ Geotechnical Hazards
- ☐ Minor Partition (<4 lots)
- ☐ Minor Site Plan & Design Review
- ☐ Non-Conforming Use Review
- ☐ Site Plan and Design Review
- ☒ Subdivision (4+ lots)
- ☐ Minor Variance
- ☐ Natural Resource (NROD) Review

Type III / IV (OCMC 17.50.030.C)

- ☐ Annexation
- ☐ Code Interpretation / Similar Use
- ☐ Concept Development Plan
- ☐ Conditional Use
- ☐ Comprehensive Plan Amendment (Text/Map)
- ☐ Detailed Development Plan
- ☐ Historic Review
- ☐ Municipal Code Amendment
- ☐ Variance
- ☒ Zone Change

File Number(s): _____

Proposed Land Use or Activity: Zone Change and 10 lot subdivision

Project Name: Small Slope

Number of Lots Proposed (If Applicable): 10

Physical Address of Site: 19735 and 19751 S. Meyers Road

Clackamas County Map and Tax Lot Number(s): 3 2E 08CA TL 600 and 700

Applicant(s):

Applicant(s) Signature: Connie Mueller

Applicant(s) Name Printed: Connie Mueller, JECO Investments, Inc.

Date: 2-21-14

Mailing Address: PO Box 279, Boring, OR 97009

Phone: 503-663-1144

Fax: 503-663-6251

Email: cmuework@comcast.net

Property Owner(s):

Property Owner(s) Signature: Wayne R. Markham

Property Owner(s) Name Printed: WAYNE R. MARKHAM

Date: 2-20-2014

Mailing Address: 19751 MEYERS Rd., Oregon City, OR 97045

Phone: 503-657-9049

Fax: _____

Email: waynemarkham@comcast.net

Representative(s):

Representative(s) Signature: Thomas Sisul

Representative (s) Name Printed: Tom Sisul, Sisul Engineering

Date: 2-15-2014

Mailing Address: 375 Portland Avenue

Phone: 503-657-0188

Fax: 503-657-5779

Email: tomsisul@sisulengineering.com

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.

www.oregoncity.org/planning

April 16, 2014

City of Oregon City
Community Development – Planning
221 Molalla Avenue, Suite 200
Oregon City, OR 97045

Dear Planning Commission:

During the course of configuring a subdivision, we sometimes find there is a potential subdivision configuration that is more preferable but it is not the one chosen for the application submittal because the preferred one has some sort of regulatory flaw that prevents staff from supporting it. We feel this application may be one of those cases.

While the applicant is prepared to move forward with the 10 lot configuration as submitted, with the new public street (Small Court) meeting the City's standard street width requirements, we thought the Planning Commission might have some interest in at least seeing a possible alternative. This alternative plan is shown on Page 7 of the application plans. We feel this plan provides more desirable lots overall, however it does have flaws that prevents staff from supporting it. This lot configuration would require the use of a constrained street section. Because there is no compelling dimensional reason why the constrain street section is needed to develop the site, as evident by 10 lot configuration that is the formal subdivision plan, staff cannot support the use of a constrained street section.

Staff has noted two items in particular that are a problem with constrained streets and we would like to discuss them briefly here and if the Planning Commission is interested in this alternate plan we could discuss this in more detail at the public hearing. Those items are:

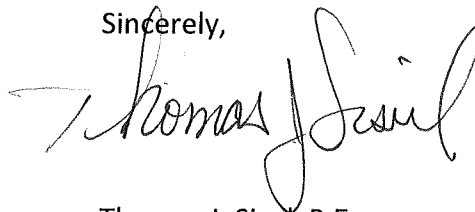
Lack of street planter strip: Our constrained street section indicated the sidewalks would be curb tight as per the detail for constrained street sections the City did permit for several years. Our intent was for the street trees to be planted on the back side of the sidewalk within the cul-de-sac street, (this was not intended for the Meyers Road frontage.) However, we would be open to other alternatives, such as possibly an 8 foot wide sidewalk with tree wells or something similar, or even the sidewalk moved back onto an easement on the lot frontages so a planter strip could be provided within the right-of-way. We also considered a meandering sidewalk around the trees, but had some concerns if this could create an ADA issue.

Street parking impacts: The constrained street section would only allow parking on one side. In most cases the loss of a parking on one side of the street means that half of the on street parking is lost. That would not be the case in this particular situation though. We are proposing Lots 8, 9 and 10 will all use the same access drive. This is being proposed as the present access to the existing garage on Lot 8 faces Meyers Road and Lots 9 and 10 will not be permitted to access directly to Meyers Road. By having an access easement across the rear portion of Lots 9 and 10 the garage door location for Lot 8 does not have to be changed and also provides for rear entry garages for Lots 9 and 10. Because of this, there will only be one driveway located along the northerly side of Small Court between the Meyers Road intersection and the driveway to Lot 7. On the constrained street section, as was originally proposed, this would allow 6 or 7 parking spaces on the north side depending upon where Lot 7's driveway was placed. On the south side of the street because of there will be separate driveways for Lots 1 and 2, not as many parking spaces would be possible.

The constrained street configuration does allow for better proportioned and slightly larger lots, on average, than does the standard street section and that is why the applicant finds it attractive. The Planning Commission has more discretionary powers than staff does when it comes to these types of nuances with City code. While City development code must reflect the dictates of both State and Metro requirements, what choices the City can make with respect to its code it tries to do so to make the City more livable. While City's development regulations attempt to address those evolving expectations, there will never be one set of regulations that is most appropriate in all cases. This may be one of those cases where the intent of making the development more desirable does not fit well with the current regulations.

As I noted earlier in the letter, if the Planning Commission decides that lot configuration plan reviewed by the staff, that uses the standard cul-de-sac street widths is the best configuration, the applicant will develop that plan. We did though want to give the Planning Commission the opportunity to least see an alternative.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas J. Sisul". The signature is fluid and cursive, with a large, stylized "T" and "S".

Thomas J. Sisul, P.E.

I. Introduction

The applicant, JECO Investments of Boring, Oregon propose to develop a 10-lot subdivision for single family detached dwellings on a site located on Meyers Road in the southerly portion of Oregon City. A zone change from the current R8 to R6 is also proposed. The proposed development of this subdivision will make more efficient use of the current parcels, and will remain in similar character to that area in the immediate neighborhood where single family detached dwellings predominate.

The subject site is comprised of two separate but contiguous tax lots, and is located at 19735/19751 S. Meyers Road in the southerly portion of the city, south of the city's main governmental area. The legal description is T3S, R2E, Section 08CA, Tax Lots 600 and 700. Site size is approximately 79,745 square feet, or 1.83 acres.

The site, i.e., both tax lots, has frontage on Meyers Road with no other frontage. At the present time, each of the two existing dwellings has driveway access with Meyers Road. Under the proposed subdivision plan, a short cul-de-sac street will intersect Meyers Road and provide access to all of the new lots. There will be no direct access from any of the lots to Meyers Road, thus organizing traffic access and traffic flow. A transportation analysis has been prepared by Lancaster Engineering and is part of this application narrative. This transportation analysis is presented as a "transportation analysis letter" by Lancaster Engineering and fulfills the requirement as set forth by the city for this type of project.

Generally speaking, most properties within the local neighborhood have already been developed to their maximum potential, with the exception of the two properties which comprise the subject site, and several other properties that immediately surround the subject site. The proposed development of this subject site will contribute to the development trend in the local neighborhood.

This narrative contains a complete addressing of the required requirements and criteria for the zone change to R6 and for the subdivision to create 10 lots based on the zone change.

II. The Site and the Surrounding Neighborhood

The subject site is slightly less than two acres in size, and is comprised of two tax lots. Together these two lots are almost rectangular in shape, although the property at 19751 is three to four times larger than the adjacent second property at 19735.

The site is on S. Meyers Road, between Nobel Road and Gaffney Lane, almost opposite Gerber Woods Drive. The site is approximately 79,745 square feet in size, or 1.83 acres in size, and is large enough to provide the basis of a reasonably sized residential subdivision. At the present time, the site is developed with two single family dwellings, one at each address on S. Meyers Road. Each residence is served by a separate driveway off S. Meyers Road. The balance of the site is vacant, with the exception of a couple of outbuildings.

The site is oriented on a northeasterly/southwesterly axis, as are most other properties in this local neighborhood. The site itself measures approximately 262 feet in width along the Meyers Road frontage, and 333 feet in depth along the easterly side and 235 feet in depth along the westerly side. The site is roughly rectangular in shape, with a "notch" out of the southwesterly corner adjacent to the Living Hope Church's parking lot. The property slopes slightly upward from north to south, with the 428 foot contour at the northerly corner, gently sloping upward to the 442-foot elevation near the center of the site, then gently downward to approximately 436 feet at the easterly corner. There are no outcrops, no water features, or other geologic or geographic features on the site that would impair overall development opportunity.

There are approximately 47 trees on the subject site, which are scattered throughout the site. These 47 trees are a variety of species, and range in size from large (with a trunk diameter of 15 inches or more), to small trees with trunk diameters of six inches or less. The majority of the trees are on the 19735 parcel, especially the larger trees. There is a row of large trees at the northerly corner of the 19735 parcel, between the dwelling and S. Meyers Road. It will be necessary to remove approximately 19 trees to construct the infrastructure for the proposed subdivision. Trees to be removed include two (2) 18 inch fruit trees in the proposed water quality/detention area, one (1) 24 inch Douglas fir and one (1) 24 inch maple, two (2) 12 inch Douglas firs, one (1) 10 inch birch, several deciduous trees of varying sizes, and five (5) fruit trees of varying sizes. The trees to be removed are illustrated on the Tree Removal Plan (Sheet 5). A total of seven (7) of the trees to be removed are fruit trees of varying sizes. However, depending on the final determination of the location of all trees, other trees may need to be removed to make way for the short cul-de-sac street, the sanitary sewer, water lines, easements, and other infrastructure, and the new homes. It is estimated that 40% of the existing trees would be removed in order to develop the basic framework of the subdivision, and for construction of the homes on the nine (9) lots where new homes will be built.

The site is surrounded by single family dwellings on individual lots on the north, northwesterly, east, and southeasterly sides, and the Living Hope Church directly adjacent to the southwest. Most of the single family dwellings in the general vicinity are part of platted subdivisions that have been developed in the last ten to twenty years. Several large lots, similar to the two lots that comprise the subject site, are located directly adjacent to the site, one to the west as well as several to the east along Nobel Road. There are relatively few undeveloped parcels within this local neighborhood, but there are some larger parcels that could be redeveloped to allow a slightly greater density. The church located directly adjacent to the southwest also includes a large parking area to the southwest, part of which is contiguous to the subject site.

South Meyers Road is a common thread among all of these local uses. It is a Minor Arterial that connects Hwy. 213 (a Major Arterial) to the east and Leland Road and Warner-Milne Road (both Minor Arterials) to the north. It serves as the major route into and out of the local neighborhood. Numerous local streets intersect with S. Meyers Road, including Squire Drive, Nobel Road, Gerber Woods Drive, and Gaffney Lane near the subject site. The proposed cul-de-sac within the proposed subdivision would also intersect with S. Meyers Road, between Nobel Road and Gerber Woods Drive.

III. The Gaffney Lane Neighborhood Association

The subject site, located at 19735 and 19751 S. Meyers Road, is within the Gaffney Lane Neighborhood. The recognized neighborhood organization in the local neighborhood is the Gaffney Lane Neighborhood Association.

The Gaffney Lane Neighborhood Association generally meets on the fourth Thursday of each month, with occasional exceptions. For January, the meeting was held on January 23rd at 7:00 PM. The current chair of the Gaffney Lane Neighborhood Association is Amy Willhite. At the meeting on January 23rd, the proposed zone change and subdivision was the only item of new business on the agenda. Because the Gaffney Lane neighborhood area is largely developed and built out, there appear to be few new development projects that come before the organization.

There were a total of 13 people at the meeting, including Ms. Willhite, Tom Sisul of Sisul Engineering (the project consultant and engineer), and Connie and Jeff Mueller, the Principal of JECO Investments, Inc., the project applicant. Ms. Willhite will send a copy of the attendance sign in sheet to city staff, as well as a summary of the meeting itself.

Of note, Tom Sisul and Connie Mueller made a presentation about the project, and answered a few questions. Mike Albin of the adjacent Living Hope Church stated he was in support of the project. No person spoke in opposition to the project. There were questions raised about:

- why the curve in the cul-de-sac street;
- why so many of the lots were between 5,400 and 6,000 square feet in area; and
- what would be the sizes of the proposed homes and their price ranges.

The response to the question about the curve in the cul-de-sac street was that we needed to account for sight distance at the intersection of the cul-de-sac street and S. Meyers Road.

With regard to the question about lot sizes, of the 10 lots shown on the proposed plan at the neighborhood meeting, 7 lots were in the range of 5,100 to 6,000 square feet. *It should be noted that this number has now been reduced to 5 lots.*

Regarding home size and price range, it was stated that the new homes would range between 1,800 and 2,200 square feet in floor area. Prices would range from \$275,000 to \$325,000.

IV. Facilities and Services

Based on the level of development surrounding the subject site, necessary facilities and services are available for the proposed development at the R6 zoning.

Water: There is a 12-inch water line located in S. Meyers Road. Water to serve 10 homes in the proposed subdivision will be provided when a 6-inch line is extended into the development in the new cul-de-sac street;

Sanitary Sewer: The nearest collection system is located at S. Meyers Road and Gerber Woods Drive. Existing line size in Meyers Road at Gerber Woods Drive is 8 inches. Extension across the frontage of the development would be required to the proposed cul-de-sac street to serve 10 homes with an 8-inch line;

Storm Drainage: Roof drains from homes within the subdivision will be directed to infiltration facilities on each individual lot. Street drainage will be directed to an onsite detention and water quality facility proposed along the frontage of S. Meyers Road, as illustrated on the Proposed Site Plan, including catch basins, manholes and main lines. The storm water quality facility is sized to accommodate the public right-of-way within the development site. The release point from the detention and water quality facility will be to the storm drain conveyance system at the intersection of S. Meyers Road and Gerber Woods Drive which drains back through the Castleberry subdivision. This existing storm drain line is 12 inches.

Fire Protection: Fire protection for the local neighborhood is currently provided by Clackamas Fire District No. 1, which serves all of Oregon City. Service to this site could come from either the Hilltop Fire Station or South End Fire Station. There is an existing fire hydrant in S. Meyers Road opposite where the proposed cul-de-sac would intersect S. Meyers Road. In addition, a new fire hydrant is proposed within the development on the new cul-de-sac as illustrated on the Proposed Site Plan;

Police Protection: Police protection is currently provided by the Oregon City Police Department, which would provide service to the proposed development;

Schools: The site is within the Oregon City School District. Students from this development would attend Gaffney Lane Elementary School, Ogden Middle School, and Oregon City High School. There are also several charter schools and private schools in the Oregon City area that students may choose to attend;

Private Utilities: Private utilities providing service for telephone, natural gas, cable, garbage and recycling collection, and electrical power are all available in the general neighborhood. These utilities generally operate on a franchise basis.

V. Zone Change Standards and Requirements

In order to change the zoning from the current R-8 on the subject site to the proposed R-6, appropriate chapters and sections of the Oregon City Municipal Code must be addressed. The primary chapter to be addressed is *Chapter 17.68, Zone Changes and Amendments*. Following this, *Chapter 17.10, R-8 Single Family Dwelling District*, and *Chapter 17.12, R-6 Single Family Dwelling District* must be addressed for purposes of the subdivision. Further, other chapters contained in *Title 17, Zoning* must also be addressed. These are done in **VI. Subdivision Standards** of this narrative.

Chapter 17.68 Zoning Changes and Amendments

17.68.010 Initiation of the Amendment

Finding: An amendment to the zoning map, as is proposed by this application, may be done by: “C. An application to the planning director on forms and accompanied by information prescribed by the planning commission”. Because the property owners’ agent is submitting the proposed application, and the property owners agree by and through their signature on the main application, and all the necessary and required information is included, this requirement is fulfilled. This application will be routed to a public hearing before the Oregon City Planning Commission.

17.68.020 Criteria

This subsection contains four (4) criteria that must be addressed and satisfied in order for a zone change application to be approved.

A. The proposal shall be consistent with the goals and policies of the comprehensive plan.

Finding: Nothing about the proposed zone change from R-8 to R-6 creates any inconsistency with the goals and policies of the Comprehensive Plan, as identified and discussed below.

Section (Goal) 1 – Citizen Involvement

The Oregon City Code includes various provisions to insure that citizen involvement is guaranteed for individual citizens, neighborhood organizations, property owners, and other special interest groups. As required, the applicant has met with the Gaffney Lane Neighborhood Association, and has talked with numerous neighbors. See section III. Gaffney Lane Neighborhood Association in this narrative. Further, once the application is complete, the City will send notices to surrounding property owners (within 300 feet), the local neighborhood association (Gaffney Lane NA), the Citizen Involvement Council, and will be posted for public notification on the city’s website. In addition, the site will be posted prior to the public hearing. Thus, citizens will be provided the opportunity to comment on the proposed zone change and subdivision in compliance with Goal 1.4. Also, in

keeping with Goal 1.7, the proposed zone change will retain the integrity of the local neighborhood plan, supporting Policies 1.7.1 and 1.7.2. Therefore, this Goal (Section) will be satisfied.

Section (Goal) 2 – Land Use

Goal 2.1 seeks to insure that properties planned for the various uses within the city are used efficiently and that land proposed for development is done so through the principles of sustainable development. The proposed zone change from R-8 to R-6 will allow for a slightly higher density, thus using the subject site more efficiently and effectively, which will be consistent with other development in the general vicinity. While the Comprehensive Plan designation will continue to be Low Density Residential, this Goal will be satisfied.

Goal 2.4 seeks to maintain and protect the viability of local neighborhoods, which will be done through the re-development of the subject site. Increasing the density slightly will not adversely impact the local neighborhood, its livability, or any local services and facilities. The Comprehensive Plan designation of LR will not be impacted.

Goal 2.7 seeks to utilize the Oregon City Comprehensive Plan Land Use Map as the official guiding document for land development throughout the city. The zone change from R-8 to R-6 will continue to be within the Low Density Residential designation of the Comprehensive Plan, with only the zoning being changed. The proposed R-6 zoning will be generally compatible with the local zoning throughout the Gaffney Lane Neighborhood, and will increase the density on the site by only a maximum of two (2) lots. This limited increase in density will be hardly noticeable on the ground, and will contribute to fulfilling this Goal.

Since the site is “isolated” in terms of its location relative to other undeveloped or re-developable parcels, its re-development as proposed through this project will contribute to the infill process in the neighborhood. The limited increase in overall density will also contribute to the city’s goal of maximizing such infill and re-developable parcels.

Section (Goal) 3 – Agricultural Lands and Section (Goal) 4 – Forest Lands are not applicable because the subject site is within the Urban Growth Boundary and the site is designated by the Comprehensive Plan as “Low Density Residential” (LR).

Section (Goal) 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources

This Goal (Section) is established and implemented by the *Natural Resources Overlay District* of the City’s Code. However, there are no identified open spaces, scenic and/or historic areas, or natural

resources within this site. As such, there are no overlays on this site. Therefore, this Goal (Section) is not applicable.

Section (Goal) 6 – Quality of Air, Water and Land Resources

This Goal (Section) contains Goal 6.1, Policy 6.1.1 which seeks to promote land use patterns that reduce travel by single occupancy vehicles and promote travel by walking, bicycling, and transit to various destinations. Because the subject site is located within a developed neighborhood where services and general destinations are well established, the creation of the proposed subdivision and the addition of up to two (2) additional dwellings will reduce travel than have density increased on sites at greater distances from these general destinations. Because the development pattern will be more compact using the R-6 zoning than the existing R-8 zoning, the square footage of street surface per dwelling will be reduced as well as the expected overall rate of trips per household to the various general destinations. Through these means, Policy 6.1.1 will be satisfied.

Policy 6.1.2 seeks to utilize development practices that meet or exceed regional, state and/or federal standards for air quality. Every effort will be made to utilize best management practices when it comes to site development, thus satisfying this policy.

Policy 6.1.4 emphasizes the use of the city's tree canopy to promote air quality. Of the estimated 47 trees existing on the subject site, only 19 trees will be removed to make way for infrastructure and homes for this subdivision. Of these 19 trees, 7 are fruit trees, while the remaining 12 trees are either conifers or deciduous trees. It is possible that additional trees may be removed to make way for individual dwellings on individual lots. However, as many existing trees as possible will be retained. And with the city's requirement for mitigation for lost trees, and the requirement for planting of new street trees, the tree canopy on this site will be well used to promote local air quality.

Goal 6.2, Water Quality, seeks to control erosion and sedimentation associated with land development, which will protect water quality. Using best management practices for construction of the infrastructure of the basic subdivision, then BMP's for new home construction once the subdivision have been established, local and regional water quality will be promoted and protected, thus fulfilling Goal 6.2 and Policy 6.2.1.

Goal 6.3, Nightlighting, seeks to reduce the impacts of local lighting at nighttime, and to use energy efficient lighting while continuing to provide night lighting that will be a factor in public safety without adversely impacting neighboring properties and homes. Because this will be a new development, only the most current energy efficient lighting will be used for public fixtures. And with new homes to be built on the individual lots, the same degree of

energy efficient lighting will be employed, thus satisfying this Goal and its related Policies.

Goal 6.4, Noise, seeks to prevent excessive noise that will adversely impact the health, welfare, safety, and enjoyment of the local lifestyle by the existing and future residents of the local neighborhood. The change of zoning from R-8 to R-6 should not increase the level of noise within or emanating from the subject site, thus protecting the local residents from any adverse impacts of site generated noise. As such, this Goal should be satisfied.

Section (Goal) 7 – Natural Hazards

Any natural hazards that exist on the subject, although none are identified that are site specific, will not be exacerbated by the change of zoning from R-8 to R-6. Any natural hazards such as flooding and/or seismic hazard will not be either increased or accelerated through a zone change that allows a slightly greater density of development on the subject site. Therefore, this Goal is largely inapplicable.

Section (Goal) 8 – Parks and Recreation

This Goal is designed to provide recreational opportunities and sites for all residents of Oregon City. The proposed zone change from R-8 to R-6 should not put significant additional burden on existing or planned parks and recreational facilities. The additional of a maximum of two (2) additional dwellings will result in approximately five (5) additional persons living on the subject site, once it is fully built out. These five persons will not add significantly to the use of facilities such that a change would have to be made in the *Oregon City Parks and Recreation Master Plan*. Therefore, this Goal will be satisfied.

Section (Goal) 9 – Economic Development

While the proposed subdivision, developed under the existing R-8 zoning, will provide for temporary construction jobs in building the infrastructure and the new homes, the additional two (2) homes will extend that local economic development. In addition, taxes levied on the new homes will increase slightly the local revenues for support of services and facilities. The addition of two lots (and homes) to the local inventory will provide a small but important increase in the variety and diversity of housing types, styles, and opportunities that will promote overall economic development in the City of Oregon City. Through the proposed zone change, the goal to improve economic development in the city will be contributed to, thus fulfilling this goal.

Section (Goal) 10 – Housing

Goal 10.1, Diverse Housing Opportunities, Policy 10.1.3 seeks to “*designate residential land for a balanced variety of densities and types of housing*”. This proposed zone change, and the proposed 10-lot subdivision, will continue to maintain the basic

Low Density Residential designation that is consistent with the Oregon City Comprehensive Plan. The change in the zoning from R-8 to R-6 will likely result in a maximum of two (2) additional lots, providing a slightly greater density on the subject site, thereby increasing the availability of housing choices in the marketplace.

The proposed zone change from R-8 to R-6 will maintain the basic land use for the subject site as Low Density Residential (LR), which remains consistent with the designation by the Comprehensive Plan. As such, there will be no adverse impact on the Comprehensive Plan.

It is proposed that the housing on the subject site will range in the \$275,000 to \$325,000 category, resulting in housing that may be affordable to a wider range of potential buyers. With this slightly greater density and range of price options, this Goal will be satisfied.

Goal 10.2 seeks to increase the supply of affordable housing in Oregon City. At a suggested price range of \$275,000 to \$325,000, there will likely be a larger pool of potential buyers who can afford to purchase a new home in today's marketplace. While this will not be low cost housing, it might be considered in the moderate price range, catering to buyers who might be in their first "move up" from their starter home. As such, with this greater density on the site as a result of the zone change from R-8 to R-6, prices will be more affordable, thus satisfying this Goal.

Section (Goal) 11 – Public Facilities

Goal 11.1 seeks to "*serve the health, safety, education and welfare of all Oregon City residents through the planning and provision of adequate public facilities*". Because most of the Gaffney Lane Neighborhood has already been developed, public facilities and services such as sanitary sewer, water, fire and police protection, educational facilities, library, etc. are already in place and capable of serving the additional five (5) residents of the two (2) additional lots that may result from the proposed zone change from the current R-8 to R-6. See IV. Facilities and Services in this narrative. Five additional residents will not place an undo or significant burden on public facilities and services provided by the City of Oregon City or Clackamas County.

Gaffney Lane Elementary School is nearby, and Gardiner Middle School will also serve the residents of the proposed subdivision. Oregon City High School is located at the Moss Campus a short distance to the east-southeast in the Beaver Creek Road area. Willamette Falls Hospital is a relatively short distance away, as are numerous other medical facilities and offices. As stated previously, five additional persons will not place undo or significant burdens on any of the local public facilities and services, thus fulfilling this Goal.

Policy 11.1.1 also seeks to “*ensure adequate public funding for . . . public facilities and services . . .*”. Additional taxes paid by all of the new homes and residents of the proposed subdivision will contribute to the funding of the facilities and services listed in this Goal. While only a small increment, the additional two homes will help to provide additional funding beyond what would be received from homes developed under the existing R-8 zoning.

Policies 11.1.2, 11.1.3, 11.1.4, 11.1.5, and 11.1.6 will be satisfied through the proposed development, including the upzoning to R-6. The provision of public facilities and services will be consistent with the goals, policies and implementing measures of the Comprehensive Plan, and, because the site is within the city limits, the integrity of local public facility plans will be maintained. The subject site is a re-development opportunity, retaining one existing dwelling and replacing the second existing dwelling with nine new dwellings without any adverse impact on local public facilities and services. Finally, the re-development of the subject site at the proposed R-6 density will retain the maximum potential level of development envisioned by the Low Density Residential designation of the Comprehensive Plan. Therefore, Goal 11.1 will be fulfilled.

Other Goals contained within Section (Goal) 11 will also be satisfied and fulfilled because the proposed upzoning to R-6 will do nothing to adversely impact any public facilities and services within the city. The following Goals and their associated Policies will all be fully satisfied and fulfilled without any undo or significant impact on these facilities and services as a result of the proposed zone change.

- 11.2, Wastewater
- 11.3, Water Distribution
- 11.4, Stormwater Management
- 11.5, Solid Waste
- 11.6, Transportation Infrastructure
- 11.7, Private Utility Operations
- 11.8, Health and Education
- 11.9, Fire Protection
- 11.10, Police Protection
- 11.11, Civic Facilities
- 11.12, Library

Section (Goal) 12 – Transportation

Goal 12.1, Land Use-Transportation Connection, seeks to “*ensure that the mutually supportive nature of land use and transportation is recognized in planning for the future of Oregon City*”. The various Policies contained within this Goal are supported by the proposed zone change and subdivision. This will be a walkable neighborhood, connected to and becoming a part of the Gaffney Lane Neighborhood. It will support the S. Meyers Road Shared

Use Path (Project S23), and recognizes that S. Meyers Road is a functional Minor Arterial. The new local street within the subdivision will be built with sidewalks which will connect to existing sidewalks along S. Meyers Road. Therefore, this particular Goal will be satisfied.

Goal 12.6, Capacity, seeks to “*develop and maintain as transportation system that has enough capacity to meet users’ needs*”. The *Traffic Analysis Letter* prepared by Lancaster Engineering indicates that the increase in site generated traffic as a result of the proposed zone change will be minimal, and will not create the need for any local traffic improvements. The *Analysis* indicates that the maximum development under the proposed R-6 zoning could result in 124 Peak Hour Trips, versus 86 Peak Hour Trips for the existing R-8 zoning, a potential increase of 38 trips, or 44%. However, with the proposed 10-lot subdivision the increase in Peak Hour Trips is only 96 trips, or 10 more than with the R-8 zoning. This increase of just over 11% is a minimal increase that will not create the need for mitigation. Therefore, this Goal will be met and satisfied.

It is noted in the *Analysis* that there may be a sight distance issue where the new subdivision street accesses S. Meyers Road if the intersection point is located at the traditional 90 degree point. However, that problem is adequately addressed by shifting the intersection point slightly to the east on S. Meyers Road. This requires a slightly revised redesign of the lotting pattern of the proposed development, but the same ultimate goal of 10 lots remains. Sight distance is discussed in the Lancaster *Traffic Analysis Letter* dated February 19, 2014, and is found on page 3 of that letter.

Section (Goal) 13 – Energy Conservation

As necessary and appropriate, the proposed zone change will satisfy this Section (Goal) because there will be an increase in local density on this re-development site. Street and sidewalk connectivity will be provided, and new homes on the subject site will contribute to energy efficiency by using energy efficient methods and materials. Where possible, new energy efficient sources and practices will be employed to the greater benefit of the general public and the City of Oregon City.

Section (Goal) 14 – Urbanization

This proposed zone change will contribute to achieving this Section (Goal) by increasing density within the limits of the Comprehensive Plan designation, and by utilizing a re-development opportunity. Through these measures, some pressure may be removed from the need to expand the urban growth boundary to include additional residential lands. Because the site is within the city limits of Oregon City, and is within a developed residential neighborhood, the upzoned property and

the following subdivision of 10 homes will contribute to the urbanization of the city. This is in keeping with Policies 14.1.1, 14.2.1, 14.2.2, 14.3.1, and 14.3.4. As such, this Section (Goal) and its related Goals and Policies are satisfied and fulfilled.

Section (Goal) 15 – Willamette River Greenway

Directly, this Section (Goal) does not apply because the subject site is not within the designated Willamette River Greenway. However, all development in Oregon City impacts the Willamette River in one or more ways. Through land development practices that are best management practices, through the maintaining of as much tree cover on the site as possible, through the control of runoff and stormwater management, and through proper land use development patterns, the re-development of the subject site will provide a positive influence on the Willamette River, thus meeting the spirit of the Willamette River Greenway Plan.

B. That public facilities and services (water, sewer, storm drainage, transportation, schools, police and fire protection) are presently capable of supporting the uses allowed in the zone, or can be made available prior to issuing certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.

Finding: The availability and level of facilities and services required for the proposed upzoned site have been discussed in section III., Facilities and Services of this narrative and Section (Goal) 11 – Public Facilities under Criterion A. above. All necessary facilities and services to serve the proposed development, whether 8 lots under the existing R-8 zoning, or 10 lots under the proposed R-6 zoning, are in place or can be made available to the subject site without difficulty. The re-development of the subject site is in the best interests of the City of Oregon City, and the local Gaffney Lane Neighborhood. The increase in density can be accommodated by all necessary and required facilities and services, thus satisfying this criterion.

C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.

Finding: Through the *Traffic Analysis Letter* prepared by Lancaster Engineering, it has been determined that the existing transportation system elements are in place and of sufficient function, capacity, and level of service to provide adequately for the proposed re-development site under the proposed R-6 zoning. Because the proposed R-6 zoning is within the Low Density Residential (LR) designation as currently exists for the existing R-8 zoning, the uses authorized by the R-6 zoning will be consistent with the Comprehensive Plan and the city's Transportation System Plan. Therefore, this criterion is fulfilled.

D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.

Finding: The city's Comprehensive Plan contains specific goals and policies, and other provisions which control the proposed zone change from the current R-8 to R-6. Therefore, the statewide planning goals need not be addressed, and this criterion is satisfied.

VI. Subdivision Standards

The proposed subdivision of the subject site, located at 119731/19755 S. Meyers Road in Oregon City is being submitted based on the proposed approval of the zone change from R-8 to R-6. There will be ten (10) lots proposed in this subdivision, on properties where there are currently two (2) single family dwellings. One dwelling, 19755 S. Meyers Road, will be removed, while the second dwelling, 19731 S. Meyers Road will be retained and incorporated into the subdivision. Therefore, there will be only nine (9) new homes built.

The local road serving the subdivision will be a cul-de-sac intersecting with S. Meyers Road. Based on development on the other three sides of the subject site, a street cannot be continued through the site to intersect with any other existing or proposed street in the local vicinity. As such, a cul-de-sac is the only alternative type of street that can serve the subdivision.

All access to each and every lot will be from the cul-de-sac street within the subdivision. There will be no direct access to S. Meyers Road, even though only Lots 9 and 10 will have direct frontage on S. Meyers Road. By deed restriction, Lots 9 and 10 will be prevented from taking any direct access to S. Meyers Road. Lot 1 will be separated from S. Meyers Road by the water quality facility and will have no direct frontage on, or access to S. Meyers Road.

Storm water will be managed by creation and use of a water quality detention facility constructed at the northeast corner of the site, directly adjacent to S. Meyers Road. This water quality facility will separate S. Meyers Road from Lot 1. It will ultimately be a public facility but will not be located within any portion of a public right of way.

All services, facilities and utilities will be contained within the right of way of the local cul-de-sac street. Individual service to each lot/dwelling will be taken from the service in the local street. While all other services are currently located within S. Meyers Road, sanitary sewer extends only as far as Gerber Woods Drive, and must be extended along S. Meyers Road to the street intersection with the cul-de-sac street where service will be directed to the southwest along the cul-de-sac street.

Chapter 16.04 – General Provisions and Administration of Land Divisions

16.04.010, Purpose

Finding: Within this section of the Code, there are nine (9) purpose statements that the city seeks to achieve as part of the land division process. Based on the proposed subdivision plan for 10 lots on the subject site, the proposed subdivision meets all of the purpose statements. By meeting all of these statements, the project will help the City of Oregon City to thrive, grow and develop.

16.04.015, Fees

Finding: All necessary and required fees have been or will be paid as part of the review and approval process. This includes the basic Filing Fees, Technical Plan Check and Inspection Fees, and all other fees identified by the city as being necessary and applicable to the completion of this project.

16.04.020, Conditions of land division approval

Finding: The applicant recognizes that the City of Oregon City may place any conditions upon the approval of this project, provided those conditions are reasonable, can be supported by provision of the Municipal Code, are for the general welfare of the public and wellbeing of the City of Oregon City, and do not cause undue harm and hardship to the project as proposed on the subject site.

16.04.025, Restrictions on sale of lots until process is complete

Finding: The applicant recognizes that lots proposed to be platted as part of this project cannot be sold until the local process is complete, all fees have been paid, and all appropriate signatures, stamps, and filings have been made.

Chapter 16.08 – Subdivisions-Process and Standards

16.08.010, Purpose and General Provisions

Finding: The applicant recognizes the applicability of the provisions of this chapter and any and all other chapters of the Municipal Code which may be applicable. Further, the applicant acknowledges that the review process for this subdivision project is a Type II process requiring public notification and the opportunity for comment. Within the parameters of the Type II process, the process will be as timely and complete as possible.

16.08.015, Preapplication conference required

Finding: A preapplication conference with city staff was held on December 4, 2013 for Project Number PA 13-38. City staff issued summary notes for this meeting setting forth the basic requirements for review and approval of the project, focusing in part on the rezoning from R-8 to R-6. Also included in the notes were issues regarding utilities such as streets, storm, water, and sanitary sewer.

16.08.020, Preliminary subdivision plat application

Finding: The appropriate application for subdivision plat preliminary approval has been submitted as part of this application package. The elements identified in this section of the Municipal Code have been provided.

16.08.025, Preliminary subdivision plat-Required plans

Finding: The required Site Plan, Traffic/Transportation Plan, and Natural Resources Plan and Topography have been prepared as part of the application package. The Archeological Monitoring Recommendation (16.08.025,D) is in process through city staff and will be included with the application package when received by city staff.

The nature of the proposed subdivision has been well discussed throughout this total application, including the portion related to the zone change. Street right of way and other transportation facilities, lots and tracts, and trees are illustrated on the preliminary plat map. Based on the list contained in 16.08.025,C., 1-8, there are no features that fall under items 4 through 8 (i.e., wetlands or other natural resources, hazard areas, T&E species, historic and/or cultural features, or habitat areas).

16.08.030, Preliminary subdivision plat-Narrative statement

Finding: (A.) Again, the nature of the proposed subdivision has been well discussed throughout this total application, including the portion related to the zone change. This includes the proposed uses, total number of lots and tracts, and streets and other public improvements. There may be a homeowner's association that will be formed once the project is approved, at the discretion of the developer. With regard to potential Variances, please see C. below.

B. Timely Provision of Public Services and Facilities – See section III., Facilities and Services, as part of this application package. Also, discussion of facilities and services is provided as part of the zone

change portion of the application package. See discussion under V. *Zone Change Standards and Requirements, Section (Goal) 11 – Public Facilities and Services*. There is no doubt that all necessary and required public facilities and services can be provided for the proposed 10-lot subdivision at the time of development.

C. Approval Criteria and Justification for Variances – It has been determined that no variances are necessary or required for the proposed 10-lot subdivision project.

D. Drafts of proposed CC&Rs, etc. – The applicant/developer is not planning to have CC&Rs because the project will be built out at one time. However, if the city requires CC&Rs for this project, drafts will be submitted once the zone change and preliminary subdivision plat are approved. It is suggested that these documents, if required, be made a condition of approval before time, effort and budget are spent to create these documents.

E. Phasing – There will be no true phasing of this project. All land development and construction of infrastructure will be done at one time, and dwellings will be done thereafter once the basic infrastructure is completed. While this could be considered as two phases (plating of the subdivision as the first phase and construction of the homes as the second phase), the applicant will plat the subdivision as a single phase.

F. Density – The subject site is approximately 79,745 square feet in total area, or 1.83 acres. The total square footage of the 10 lots will be 60,364 square feet, or 75.7% of the total lot. The remaining 19,381 square feet (24.3%) will be comprised of additional dedication area along the S. Meyers Road frontage, the new cul-de-sac street, and the water quality facility. Lot sizes will range from 5,075 square feet (Lot 3) at the least to 7,614 square feet (Lot 4) at the largest. Average lot size for the 10 lots will be 6,036 square feet, which is greater than the standard lot size for the R-6 zone. Lot 3, the smallest lot at 5,075 square feet, will be 84.6% of the 6,000 square foot standard for the R-6 zone.

The cul-de-sac street will be approximately 15,700 square feet in total area, and the water quality facility will be approximately 1,960 square feet. The cul-de-sac street will be in a dedicated right of way with a width of 54 feet and with a 55.5 foot radius of the bulb portion. Curb-to-curb constructed width of the street will be 32 feet, with a 45 foot radius of the bulb. The street will include curb, planting strip and sidewalk for its entire length. Street trees will be planted within the planting strip. Street trees along S. Meyers Road will be planted in the planting strip between the curb and the sidewalk.

16.08.040, Preliminary subdivision plat-Approval standards and decision Finding: The minimum approval standards are set forth in Chapter 16.12. Additional standards are contained in Chapter 17.12 R-6 Single Family Dwelling District. These are addressed separately in this narrative.

16.08.045, Building site-Frontage width requirement

Finding: Each lot is required to have at least twenty (20) feet of frontage on the cul-de-sac. Lots 4 and 5 will have 21.0 and 20.39 feet of frontage, respectively, on the cul-de-sac bulb. All other lots will each have considerably more frontage. As illustrated on the Preliminary Plat Map, each lot meets this standard.

16.08.050, Flag lots in subdivision

Finding: None of the 10 lots will be flag lots. Therefore, this section does not apply.

16.08.055, Final subdivision plat-Application requirements and approval standards

16.08.060, Filing and recording of final subdivision plat

16.08.065, Post-approval modification to approved plat

Finding: These three sections will be addressed once the zone change and preliminary subdivision plat have been approved.

Chapter 16.12 - Minimum Improvements and Design Standards for Land Divisions

There are a significant number of subsections of this chapter and not all are applicable to this project. The following will address only those that are appropriate and applicable.

16.12.015, Street design-Generally

Finding: Chapter 12.04 governs the design and development of streets, sidewalks, and public places. Chapter 12.04 is addressed separately elsewhere in this narrative.

16.12.040, Building sites

Finding: The proposed lotting pattern and the individual lots within the proposed subdivision meet the minimum size, width, shape and orientation as set forth in Chapter 17.12.

16.12.045, Building sites-Minimum density

Finding: Based on a development factor of 20% for streets, right of way, public facilities, open space, etc., the net developable area of the subject site is 63,796 square feet (80% of 79,745). In the R-6 zoning district, this would result in a maximum density of 10.63 lots, or rounded to 11 lots. With the proposed 10 lots, the requirement that layouts achieve 80% of the maximum density of the base zone is satisfied. In this case, 80% of 11 lots is 8.8 lots, or rounded up to 9 lots. With the 10 lots proposed for this subdivision, the requirement is met.

16.12.050, Calculations of lot area

Finding: This site will be in the R-6 zoning district, assuming the proposed zone change from R-8 to R-6 is approved. On that basis, the standard lot size for the R-6 zone is 6,000 square feet. However, lots may be up to 20% less in size, as long as the overall average lot size for the entire subdivision is 6,000 square feet. On that basis, lots may be as small as 4,800 square feet. As discussed in section 16.08.030.F, the subject site is approximately 79,745 square feet in total area, or 1.83 acres. The total square footage of the 10 lots will be 60,364 square feet, or 75.7% of the total lot. This total area of all lots is 94.62% of the net developable area. The remaining 19,381 square feet (24.3%) will be comprised of additional dedication area along the S. Meyers Road frontage, the new cul-de-sac street, and the water quality facility. Lot sizes will range from 5,075 square feet (Lot 3) at the least to 7,614 square feet (Lot 4) at the largest. Average lot size for the 10 lots will be 6,036 square feet, which is greater than the standard lot size for the R-6 zone. Lot 3, the smallest lot at 5,075 square feet, will be 84.6% of the 6,000 square foot standard for the R-6 zone.

16.12.070, Building site-Setbacks and building location

Finding: The building envelope of each of the nine (9) lots, keeping in mind that one lot, Lot 8, is already developed with a single family dwelling that will remain, has been determined and set out on the preliminary plat map. All lots will take direct access to the cul-de-sac, and no lots will access directly onto Meyers Road, even though Lots 9 and 10

have frontage on S. Meyers Road. Otherwise, all lots will meet all standards set forth in A. through E. of this section.

It should be noted that Lot 8 with the existing dwelling will have a less-than-standard setback for the new rear setback, at 12.17 feet. This is the same setback as currently exists for the dwelling, but is for a side yard setback. Changing it to a rear yard setback results from the orientation of the new lot configuration, and does not adversely impact the adjacent lots or properties.

Finally, on Lot 10, a 25 foot side yard setback is being proposed to preserve the large grouping of trees that exist on that lot along the property line. This will insure that these trees are not lost to home construction.

16.12.080, Protection of trees

Finding: As required, all trees will be protected in accordance with the provisions of Chapter 17.41, which is addressed separately elsewhere in this narrative. It should be noted that deed restrictions will be placed on Lot 10 and any other lots which have trees that will be preserved by Code requirement, or have mitigation trees that will be planted on them.

16.12.085, Easements

Finding: Any easements, whether for utilities, unusual facilities, or access are identified and illustrated on the preliminary plat map. There are no watercourses or other resources on the subject site; therefore, there are no easements for these features.

16.12.090, Minimum improvements-Procedures

Finding: Improvements within the project site that will be public improvements consist only of the cul-de-sac street and frontage improvements along S. Meyers Road. This cul-de-sac street and the frontage improvements on S. Meyers Road will be constructed in accordance with plans prepared by the project engineer, and reviewed, approved, and inspected by the City of Oregon City Public Works Department.

On site erosion control measures and the water quality facility will be private facilities under the control of the developer at initial construction. Once completed and proven as to usability and functionality, these facilities will be transferred to the city as a public facility. These facilities will be completed in accordance with Chapter 17.49 and the Public Works Erosion and Sediment Control Standards.

16.12.095, Minimum improvements-Public facilities and services

Finding: The various necessary and required public facility and service improvements for the transportation system, stormwater drainage system, sanitary sewer system, water system, sidewalks, street name signs and traffic control signs and devices, street lights, street trees, at least one bench mark, private utility lines and facilities, and mitigation measures as identified on the erosion control plan shall be identified,

reviewed, constructed and inspected in accordance with city standards and requirements. These items will be illustrated on the preliminary plat map and, as necessary and required, on the final plat that will be recorded.

16.12.100, Same, Road standards and requirements

Finding: In accordance with Chapter 12.04, which is addressed separately elsewhere in this narrative, the new cul-de-sac street within the project site, and the frontage improvements along S. Meyers Road, will meet the standards contained in that chapter.

16.12.105, Same-Timing requirements

Finding: The applicant will complete the cul-de-sac street and any other public improvements prior to filing of the final plat. The street will be constructed in two phases, with the second lift of asphalt being applied once the home construction has been completed. Any financial guarantees required of the developer will be provided in accordance with the requirements of subsection C., *Financial Guarantee* of this subchapter and subchapter 16.12.110.

16.12.110, Minimum improvements-Financial guarantee

Finding: In accordance with the requirements of the city, and accompanying the requirements of 16.12.105 above, the necessary and required financial guarantees will be made by the developer for this project. The Form of the Guarantee, the Timing of the Guarantee, and the Duration of the Guarantee will all conform to the various subsections of this subchapter.

Chapter 17.12 – R-6 Single Family Dwelling District

17.12.020, Permitted uses

Finding: In accordance with the list of permitted uses in the R-6 zone, the proposed single family dwellings on the nine (9) lots (an existing dwelling on Lot 8 will remain) conform to the allowed permitted uses.

17.12.040, Dimensional standards

Finding: The proposed lots within this 10-lot subdivision have been designed to meet the dimensional requirements of B., and C., with minimum required setbacks in accordance with 1 through 7 of E. As discussed earlier in 16.12.045 and 16.12.050, the lots range from 5,075 square feet to 7,614 square feet, with an average lot size of 6,036 square feet. These lots will meet all of the allowed dimensional requirements. Finally, all dwellings will cover a maximum of 40% of the lot area of each lot. This will be verified when building plans for each lot are submitted for review and permit.

The lot sizes are:

- Lot 1 5,184 sf
- Lot 2 5,151 sf
- Lot 3 5,075 sf
- Lot 4 7,614 sf
- Lot 5 6,336 sf
- Lot 6 6,053 sf
- Lot 7 7,182 sf
- Lot 8 5,796 sf (existing dwelling)
- Lot 9 5,965 sf
- Lot 10 6,008 sf

Chapter 17.20 - Residential design and landscaping standards

17.20.015, Street trees

Finding: Because a planting strip is proposed within the right of way, street trees will be planted within this planting strip, as required.

17.20.020, Residential design options

Findings: Design of the nine (9) single family dwelling on Lots 1-7, and 9-10 will meet these stated standards as appropriate and applicable. This will be confirmed during the plan review and permit issuance process. Lot 8, which will have the existing dwelling on it, will meet whatever standards are appropriate and applicable.

17.20.035, Corner lots and through lots

Finding: There are no lots in this project that are considered through lots. Only Lot 9 may be considered a corner lot and will be managed as such. Lot 1 is not a corner lot because it is separated from S. Meyers Road by the proposed water quality facility.

17.20.040, Residential design elements

Finding: Design of the nine (9) single family dwelling on Lots 1-7, and 9-10 will meet these stated standards as appropriate and applicable. This will be confirmed during the plan review and permit issuance process. Lot 8, which will have the existing dwelling on it, will meet whatever standards are appropriate and applicable with the exception of the now-rear setback of 12.17 feet. This setback, formerly a side yard setback, may be slightly less than standard, but will have no adverse impact on other lots in the development or adjacent properties.

17.20.050, Main entrances

Finding: Main entrances of homes designed and built on Lots 1-7, and 9-10 will meet whichever standard is appropriate and applicable. This will be confirmed during the plan review and permit issuance process.

17.20.060, Residential yard landscaping

Finding: Any and all trees to be removed from the subject site will be catalogued as to species and size, and will be identified whether the tree is in the proposed right of way, or on which proposed lot the tree is located. This catalog list will be provided during the plan review process for the individual house plans for construction on the individual lots. Other trees on the site will be preserved. They will also be catalogued in the same manner as the trees proposed for removal. See Tree Removal Plan, Sheet 5. The developer will follow the requirements of section 17.20.060(A), and will determine which option will be followed, whether Option 1., 2., or 3.as set forth in this section. Other landscaping requirements will be met as required in subsection [B.}. These requirements will be confirmed during the plan review and permit issuance process.

Chapter 17.41 – Tree Protection Standards

17.41.010, Protection of trees-Intent

Finding: It is the intent of the developer to protect as many trees as possible by removing as few trees as possible and saving as many as possible. Of the 47 trees on the subject site, it is estimated at this stage of the project that approximately 19 trees will need to be removed from proposed right of way areas and home construction areas on the individual lots. However, of these 19 trees, 7 are fruit trees, with the remaining 12 being either conifers or deciduous trees. Each lot will be managed separately for tree preservation based on the design of the proposed home for the specific lot and the existence of trees on that lot. Some lots may have no trees existing on them at the present time, or may have few trees to be protected. As discussed in the *Finding* for 17.20.060 above, the site will be catalogued in terms of all trees on the site.

The applicant/developer intends to place a deed restriction on any and all lots where existing trees will be preserved, or where mitigation trees will be planted. This deed restriction is intended to protect and preserve trees that remain after the development process, including home construction, and those that are planted as part of the final lot landscaping process.

Chapter 12.04 – Streets, Sidewalks and Public Places

12.04.007 - Modifications

Finding: This section contains five (5) criteria that must be suitably addressed in order for a modification of streets standards can be granted. However, because this particular cul-de-sac street meets the city's requirements for right of way width (54 feet), constructed width (32 feet), sidewalk width (5 feet), and width of landscape strip (5.5 feet including curb), the five criteria need not be addressed as no modification is required.

With the proposed zoning on the site of R-6, the minimum number of lots allowed is ten (see 16.12.045 earlier in this narrative). With the proposed ten lots in this project, a way must be found to include ten lots and the required infrastructure in a property of limited overall size. Because the cul-de-sac street will never be a through street, providing no through route or connectivity, the cul-de-sac street will serve only ten lots regardless of future land use changes. As such, with very limited local site generated traffic, a lesser right of way could be used without any adverse impact on the site or the local vicinity. Also, because of the reduced traffic levels for vehicles, bicycles, and pedestrians, these modes of traffic may be able to "fit together" on a lesser standard cul-de-sac. For estimated traffic volumes, see Lancaster's *Traffic Analysis Letter*. Length should have little impact on the character and usability of the street, and the proposed length of approximately 211.5 feet will not result in a loss of viable land area or an infringement on the lots themselves. Therefore, the proposed cul-de-sac street meets the intent of the standard because the same usefulness of the street will be achieved.

Pedestrians will always be able to use the sidewalk, while vehicles and bicycles may share the road. Speeds and volumes will be low, allowing vehicles and bicycles to meld together on this small local street section. With a total estimated daily volume of 96 vehicles, and peak hour traffic at 10 vehicles or less, there will be relatively little use of this street, except by the local residents. With sidewalks being standard width of 5 feet, there will be opportunities for sharing of the sidewalk space for bicycles. The only freight to travel on this street will likely be local freight in smaller town delivery vans or trucks that can navigate the street. Movement of motor vehicles, bicyclists, or pedestrians should not be impaired on this street, and will remain safe and efficient. As such, there will be no adverse impact on the local operations of the street.

Street trees will continue to be a part of this project, and they will be planted in the designated planting strip. This will provide for trees, but will leave a full unobstructed 5 feet of width for the sidewalk, thereby not constricting the activity area. This will make it more useful for dual use by pedestrians and bicycles when necessary. With the two lanes of travel, proper width of sidewalks, continuing use of street trees, and the uninhibited ability of vehicles to use the cul-de-sac street for its intended purposes, the proposed cul-de-sac street should remain consistent with the adopted TSP and comprehensive plan.

The street must be a cul-de-sac because it cannot go through to neighboring properties to the south. Living Hope Church occupies the greater part of the land directly adjacent to the south of the subject site, thereby limiting the ability to extend the street any further. Properties to the east, although oversized, cannot afford to have a right-of-way taken from those lot areas because the properties (Tax Lots 100 and/or 200) would be rendered small enough to be hampered in terms of future density. As such, the street must be either a hammerhead or a cul-de-sac. By agreement, the cul-de-sac street design is highly preferable, and therefore, has been used.

With the right-of-way at 54 feet and the constructed width (curb face to curb face) being 32 feet, the cul-de-sac is appropriate to its function and the number of lots it will serve. Street trees will be provided in a standard manner by placing the trees in the designated planting strip. By designing for street trees in this manner, it will insure that lot sizes and dimensions will be appropriate to the R-6 zone.

The only street serving the subdivision will be the new cul-de-sac street extending southerly from S. Meyers Road. This cul-de-sac will be approximately 211.5 feet in length from the frontage line of S. Meyers Road to the rear portion of the bulb portion of the cul-de-sac. Therefore, the proposed cul-de-sac street is similar to other local streets in this area, and is fully complementary to the pattern of the neighborhood.

The street intersection distance, required to be at least 150 feet, has been set at approximately 225 feet between the proposed cul-de-sac street and Gerber Woods Drive. This more than satisfies the city's requirement.

With regard to 12.04.235, because the city currently does not have adopted standards for horizontal and vertical curves of streets, the project engineer has used the guidelines contained in the AASHTO "*Guidelines for Geometric Design of Very Low Volume Local Roads (ADT < 400)*" for the horizontal and vertical curves of the proposed cul-de-sac street.

12.04.025 – Street Design-Driveway Curb Cuts

Finding: There will be only one driveway curb cut for each of the 10 proposed subdivision lots, and each will meet the requirements contained in this section with regard to width. Once the lots are developed and homes have been built, if any property owner wants an additional curb cut, or wishes to modify the existing curb cut, that request shall be handled individually by the property owner.

12.04.080 – Excavations-Permit Required

Finding: Appropriate permits for excavation will be applied for at the appropriate time in the construction and development process for work in any public right of way.

12.04.100 – Excavations-Restoration of Pavement

Finding: Any breaking of pavement in a public right of way, say for sanitary sewer, water service, and/or storm drainage improvements, will

be repaired in accordance with city requirements (i.e., Oregon City Public Works Pavement Cut Standard).

12.04.180 – Street Design

Finding: The proposed cul-de-sac street for this project will have a right of way width of 54 feet, a constructed curb-to-curb width of 32 feet, and a length of approximately 211.5 feet from the northerly right of way line of Meyers Road. The street will never be a through street, and will only be a cul-de-sac serving 10 single family lots in this project. It will carry less than 100 vehicles per day, according to the *Traffic Analysis Letter* dated February 19, 2014 by Lancaster Engineering. There will be 8 AM Peak Hour trips, and 10 PM Peak Hour trips generated on this site.

The reasons that this street will never go through the church property were discussed previously. The proposed constructed width will allow curbside parking on each side, with two travel lanes. The sidewalk will be separated from the street by the planting strip. Street trees will be planted within the planting strip.

12.04.185 – Street Design-Access Control

Finding: Because the proposed cul-de-sac street will not go through to the common property line with the church, Access Control as referred to in this section will not apply.

12.04.190 – Alignment

Finding: Because the proposed cul-de-sac street in the project will not align with any other street on the opposite side of S. Meyers Road, the standards contained in this section will not apply.

12.04.194 – Traffic Sight Obstructions

Finding: As part of Lancaster's *Traffic Analysis Letter*, no sight distance issues to the east or west were identified.

"Sight distance from the proposed driveway was measured and was found to be 393 feet to the southeast of the driveway, limited by a crest vertical curve. Based on the speed limit of 35 mph for Meyers Road, a minimum of 390 feet of intersection sight distance (ISD) is required to allow vehicles to turn onto Meyers Road without impeding the flow of through traffic."

Sight distance was measured to be in excess of 450 feet to the west of the driveway (past the all-way stop intersection of S Meyers Road at Gaffney Lane). Since vehicles must come to a full stop at the intersection, an assumed approach speed of 10 mph was used based on when drivers would be expected to notice vehicles accelerating from a stop at the intersection. This design speed requires a minimum of 115 feet of intersection sight distance for traffic approaching the site access from the west.

Intersection sight distance is met in both directions from the proposed access location. No mitigations are recommended."

Therefore, no sight distance issues exist and this section does not apply.

12.04.195 – Spacing Standards

Finding: According to Table 12.04.195.B, the distance from any street corner to a driveway on a local residential street is 25 feet. Only Lot 9 is on the street corner of the cul-de-sac street and S. Meyers Road, and the driveway will be at least 25 feet from the street corner. Lot 1 is separated from S. Meyers Road by the water quality facility, and thus it is not a corner lot. All other driveways are internal to the project site and are not at any street corners, and are, therefore, not governed by the 25 foot requirement.

12.04.199 – Pedestrian and Bicycle Accessways

Finding: Because of the very limited scope of this project (i.e., 10 lots), the actual need for a separated bicycle path may be also limited. With a total of only 96 trips per 24 hour day, the cul-de-sac street should be usable for both vehicles and bicycles at all times. And with a separate sidewalk, the ability may be there to utilize the sidewalk for careful bicycling. Because of the limited scope of this project, no bicycle facilities are provided, and a request is made by the applicant to forego separate bicycle facilities.

Even with AM Peak Hour expectations of 8 vehicles, and PM Peak Hour volume of 10 vehicles, the balance for the rest of the 22 hours is 3.5 trips per hour. On this basis, the street can easily serve as a bicycle route, and separated facilities are not needed.

Overhead street lighting will provide safety for vehicles, bicyclists, and pedestrians. The only planting there will be where trees are located in the landscape strip. As such, landscaping materials will not be in the way of bicyclists or pedestrians.

Finally, the street will be built to city standards and will be dedicated to the city as part of the final platting process.

12.04.205 – Mobility Standards

Finding: As an unsignalized intersection outside the boundaries of the Regional Center, (12.04.205.C.2.a), no standards apply to this intersection that would adversely impact Mobility Standards.

12.04.210 – Street Design-Intersection Angles

Finding: The intersection angle between the new cul-de-sac street and S. Meyers Road will be designed at 80 degrees. Since this is the only intersection within this project site, no other standards apply.

12.04.215 – Street Design-Off-site street improvements

Finding: S. Meyers Road currently meets all local requirements to function as a Minor Arterial. At present, S. Meyers Road is limited in its right-of-way, and the applicant will dedicate additional right of way width along the frontage of the subject site. While the applicant will abide by the recommendation of the Public Works Department (shown as item 3, page 2 of the “Pre-Application Meeting Notes” dated December 4, 2013. Otherwise, there are no other off-site improvements on S. Meyers Road or any other public road in this vicinity.

12.04.220 – Street Design-Half Street

Finding: Since the internal local street (cul-de-sac) will be fully constructed, and the frontage improvements will be constructed at the same time, there are no half street issues.

12.04.225 – Street Design-Cul-de-sacs and dead end streets

Finding: The use of anything other than a cul-de-sac in this location is impossible. The property to the south, the church, has fully developed that property for religious purposes, and may expand someday. Development patterns to the east and west preclude a through street to loop around to Nobel Road and/or toward Gaffney Lane. The length of the cul-de-sac is approximately 211.5 feet from the right of way line at S. Meyers Road, to the center of the cul-de-sac bulb.

The cul-de-sac street will serve only 10 units, far below the allowed maximum of 25 for such a street. And the street is designed and will be built to fire department satisfaction. Already planned is a hydrant somewhere on the cul-de-sac street.

12.04.230 – Street Design-Street names

Finding: No specific name has yet been selected for the new cul-de-sac street. The applicants will work on a name and will have something that is acceptable to the city by the time of final platting.

12.04.235 – Street Design-Grades and curves

Finding: As designed, the grades and centerline radii for the new cul-de-sac street will meet city requirements and standards.

12.04.240 – Street Design-Development abutting arterial or collector street

Finding: The project abuts an arterial (S. Meyers Road) and takes access to that road. The required frontage improvements should include a planting strip and a sidewalk to separate the nearest lots (Lots 1 and 9) from the major street. This buffer area will be protected by the fact that the 5.5 foot planting strip and 7 foot sidewalk are in the public right of way and will be protected as such. The single cul-de-sac street will replace the possibility of several individual driveways if the properties were simply partitioned.

12.04.245 – Street Design-Pedestrian and Bicycle Safety

Finding: While S. Meyers Road has a bike lane along the frontage of the subject site, it does have a 5.5 foot planter strip and a 7 foot sidewalk. The bike lane will be included as part of the frontage improvements on S. Meyers Road. With the wider sidewalk, both bicycle and pedestrian safety on S. Meyers Road will be provided.

For the internal cul-de-sac street, the separated sidewalk will provide a walking surface that is separated from the vehicular portion of the street. Because traffic volumes on the cul-de-sac street will be very low, the street can serve a dual purpose by providing a route to ride bicycles within the development.

12.04.255 – Street Design-Alleys

Finding: There are no alleys existing or proposed for this project. Therefore, this standard does not apply.

12.04.260 – Street Design-Transit

Finding: S. Meyers Road is not a designated transit route, even though it is a designated minor arterial by the city's Transportation System Plan (TSP). While there are bike lanes in S. Meyers Road, bike lanes will not be provided on the internal cul-de-sac based on the very low volume of anticipated traffic, thus allowing greater flexibility of operation for bicycles. Sidewalks on both S. Meyers Road and in the internal cul-de-sac street will promote pedestrian safety within the immediate vicinity.

12.04.265 – Street Design-Planter strips

Finding: It is proposed that a planting strip be included in the frontage improvements for S. Meyers Road, matching what already exists along S. Meyers Road at this point. These planting strip(s) will meet the requirements as stated in the Code. In addition, for the internal cul-de-sac street, it is proposed that street trees be planted in the designated planting strip.

Because the anticipated traffic volume on the internal cul-de-sac street will be very low. It is expected that there will be only 96 trips during any 24-hour period, thus leading to a street that has only local use since the street will not be a through street and does not have connectivity. And because the street will be so limited in its anticipated use, a lesser standard for street development may be reasonable. Street trees will be planted at spacings as required in order to have street trees as part of the development.

12.04.270 – Standard construction specifications

Finding: The street construction specifications for the City of Oregon City have been used by the project engineer in the design of the frontage improvements on S. Meyers Road, the entire length of the internal cul-de-sac, and all of the public improvements built and contained within this project. Specifications and materials will be reviewed and approved by city staff, and the project engineer will work closely with city staff to insure the proper specifications and materials are used. Inspection by city inspectors will also help assure that the frontage improvements, street construction, and public improvements are properly completed.

Chapter 12.08 - Public and Street Trees

Finding: Street trees will be provided along the frontage of S. Meyers Road, as required. Street trees will also be provided along the new cul-de-sac street, within the designated planting strip. By providing street trees in this manner, the size of the individual lots will be protected, thus meeting the requirements for lot sizes in the R-6 zone.

Trees will be planted within the area of the water quality facility. In addition, trees will be planted at the rear of almost every lot around the perimeter of the development site, where space and location permit. This will not include Lots 8 and 10 because, in the case of Lot 8, the rear yard setback is somewhat constricted, and in the case of Lot 10 there is already a grove of established trees that will remain. Most lots will have at least 2 trees planted at the rear. Lot 9 may be the exception because of its “interior” location within the project area. Because street trees will not suffice as mitigation for lost trees as a result of site development, a fee-in-lieu may be paid for the difference between trees planted in the water quality facility and on each individual lot, and the trees lost. This will be determined prior to the final plat stage of the subdivision process.

When homes are proposed for building, an individual lot landscape plan will be required and will be used to determine how many trees and what species are planted as mitigation for those lost on each lot as a result of construction. Trees planted in the front yard areas of lots will serve as mitigation trees for those lost during construction.

The applicant/developer intends to place a deed restriction on any and all lots where existing trees will be preserved, or where mitigation trees will be planted. This deed restriction is intended to protect and preserve trees that remain after the development process, including home construction, and those that are planted as part of the final lot landscaping process. While most of these trees will not be “public trees”, they will nonetheless be protected.

Chapter 13.04 – Water Service System

Finding: The basic water service system will be designed in accordance with all city standards set forth in this chapter. The system will be designed in two parts. First, the basic delivery system and connection with the existing 12-inch line in S. Meyers Road using a 6-inch line servicing the 10 homes in the proposed development. Fire hydrants will be located in accordance with Fire Department requirements. Stub outs for individual lot service will be provided as part of the first phase of design and construction. The design for all of these elements will be provided as part of the first phase of design and construction. This design will be reviewed during the plan review process and will be inspected by city personnel during construction.

As each home is designed and submitted for review and permits, the connection to the stub out and the interior plumbing will be reviewed and approved. This will be the second phase of design and construction.

All appropriate and applicable requirements of this chapter will be fulfilled and satisfied as part of the overall design and construction process for each of the two phases of design and construction (i.e., infrastructure and home development).

The developer understands all of the requirements of this chapter and agrees to abide by them during the development and construction of this project. Once the lots are sold to individual buyers, the responsibilities for compliance with city standards and requirements will transfer to the buyers.

Chapter 13.08 – Sewer Regulations

Finding: The entire project, including all 10 homes, will be serviced by the city's sanitary sewer system. At the present time, the system does not serve the site but is stubbed out nearby at Gerber Woods Drive. An 8-inch line will be extended on S. Meyers Road from the connection at Gerber Woods Drive to the intersection point of the proposed cul-de-sac and S. Meyers Road. The line will then be extended up the cul-de-sac street to a point where individual connections can be made for each individual lot. The design of this new collection system will be made by the project engineer, a registered engineer in the State of Oregon, and will be reviewed and approved by the City Engineer. All construction will be in accordance with approved plans and issued permits, and will be inspected by city personnel during the construction process. All design and all construction will be in accordance with the appropriate and applicable sections of this chapter.

Once individual homes are proposed for construction, the individual connections to the local collection system will be reviewed and approved, and will be constructed in accordance with city requirements. When the individual lots are sold, the responsibility for compliance with the appropriate and applicable sections of this chapter will transfer to the buyer. Lot 8, which is the existing dwelling, is currently on a subsurface septic system which will be removed from service and replaced by connection to the sanitary sewer collection system.

Chapter 13.12 – Stormwater Management

Finding: There is no local storm water system along S. Meyers Road in the immediate vicinity of the subject site. The nearest collection system is located to the west at the intersection of Gerber Woods Drive and to the east at Nobel Road, basically on each side of the subject site. However, because the collection system at Nobel Road is uphill, the only practical direction of flow is to the west, to Gerber Woods Drive.

The city requires both storm water treatment and detention. However, public underground detention is no longer allowed in the City of Oregon City. From a review of the local situation, the project engineer has determined that a local on-site water quality facility adjacent to S. Meyers Road may be the best method of managing on-site storm water. Because the project comes under 13.12.050.C.1 (Category A), the storm water quality control requirements of this chapter are required. Therefore, an on-site surface water quality facility has been designed to be located between Lot 1 and S. Meyers Road. It is sized to manage all of the on-site storm water before the storm water is directed westerly to the current collection point at Gerber Woods Road. The project engineer has done a study and has determined that the existing collection system is of sufficient size to accept the water from the on-site water quality facility. Under the provisions of 13.12.100, alternative systems are allowed, provided the design meets the requirements of the chapter, and have been reviewed and approved by the city engineer. The proposed system is sized to fit the scale of the proposed subdivision project. This facility will meet all of the requirements of this chapter.

The water quality facility will be a detention system designed only for the project on the subject site. For security purposes, it will be completely enclosed with a six-foot (6) chain link fence. The fencing material will be vinyl clad and will be green in color. The fence will be gated, and will be locked at all times, except during times of maintenance. The on-site facility will be a private facility under the control of the applicant/developer for the first two years. Once the system has proven to operate properly as designed, the city will assume control of the system in accordance with 13.12.140.

Chapter 13.20 – System Development Charge for Capital Improvements

Finding: No SDC credits are being requested as part of this project.

Response to Determination of Application Incompleteness for TP 14-02/ZC 14-02

The letter dated March 12, 2014 from Planner Kelly Moosbrugger indicated that the application for a small slope subdivision at 19735 and 19751 S. Meyers Road in Oregon City identified eleven (11) specific items that require addressing in order to make the application complete. The following is an addressing of each of the individual issues raised in the Determination of Application Incompleteness.

1. *Chapter 13.12: The time of concentration for the existing conditions looks short as there is significantly more than 180' of overland flow. It is suggested that the storm run-off from each home be discharged on-site. There needs to be some calculation that shows that this is reasonable based upon the infiltration rate.*

Finding: The preliminary calculations have been updated including addressing the time of concentration. Roof runoff from each home will be directed to infiltration chambers and the preliminary drainage calculations address the infiltration rate based on the geotechnical engineer's infiltration testing.

2. *On page 1 of the zone change under sanitary sewer facilities there needs to be an indication of the size of the existing sanitary sewer.*

Finding: On page 1 of section IV. Facilities and Services, the size of the existing sanitary sewer line that the project will connect to was inadvertently left blank. That size is **8** inch. Revised section III. Facilities and Services with the correct size filled in is attached.

3. *On page 1 of the zone change under storm drainage facilities there needs to be an indication of the size of the existing storm drainage system.*

Finding: On page 1 of section IV. Facilities and Services, the size of the existing storm drainage line that the project will connect to was inadvertently left blank. That size is **12** inch. Revised section III. Facilities and Services with the correct size filled in is attached.

4. *Page 5 Goal 11: The draft of the recent sanitary sewer master plan indicates that there may be capacity issues downstream of the proposed facility. The City is seeking comment from WES to indicate whether they can accept additional capacity from this development. No action from the applicant is required at this time.*

Finding: This issue has been addressed with city engineering staff and is no longer an issue.

5. *Chapter 17.41: Provide a list of trees to be removed and the size of each per the table in 17.41.060.B. If trees are in the construction area, you should consider them removed trees and plan to mitigate, unless you are certain they will not be removed.*

Finding: See Tree Removal Plan, Sheet 5, for all trees to be removed from the site for purposes of infrastructure construction and home construction.

6. *Chapter 16.12.095: Need to describe the proposed public facilities.*

Finding: In addition to the new internal cul-de-sac street, which will be constructed with full width paving, gutter, curb, planting strip with street trees, and sidewalk, there will be similar improvements to the frontage of S. Meyers Road for the full length of the site. These improvements will including street paving, gutter, curb, planting strip with trees, and sidewalk. The water quality facility, constructed initially as a private facility, will be constructed to city standards and will be turned over to the city at the end of a two year period. Within the public right of way for both the internal cul-de-sac street and S. Meyers Road, water service, sanitary sewer service, and storm drainage will be constructed as described in section IV. Facilities and Services.

7. *Chapter 12.04: The appropriate sections of the chapter should be addressed such as 025, 080, 100, and 180 through 270.*

Finding: The appropriate and applicable portions of Chapter 12.04 have been addressed, and are contained in the revised section VI. Subdivision Standards, pages 12 through 18. Revised section VI. Subdivision Standards with the correct information included in is attached.

8. *Chapter 12.04: Need to describe dedication and improvements for Meyers Road as well.*

Finding: Dedication of additional right of way along S. Meyers Road will be accomplished by final plat dedication. The public improvements that include sidewalk and street trees will be included in the public dedication. The water quality facility, adjacent to Lot 1, will be constructed as a private facility initially, and will be dedicated to the public (City of Oregon City) at the end of a two-year period to insure the facility is properly designed, sized, and operating.

9. *Chapter 12.08 Provide the total frontage length and number of street trees required .*

Finding: Total frontage along S. Meyers Road will be 200 feet. Based on tree spacing of 30 feet, there will be six (6) street trees provided in the planting strip that is between the curb and the sidewalk, as shown on the Site Plan. Based on the total frontage length of the internal cul-de-sac street, it is proposed that 15 street trees be planted in the planting strip. This is illustrated on the Site Plan.

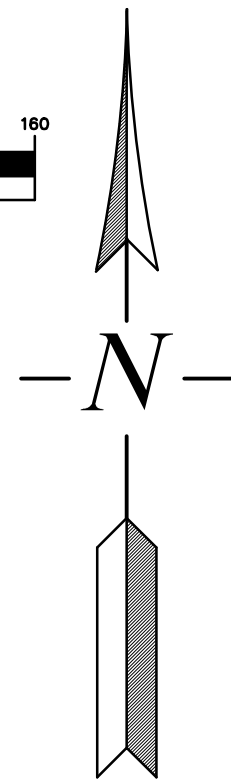
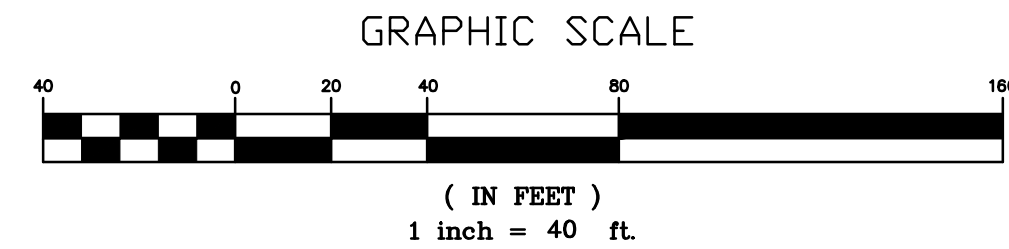
10. *Draft CC&Rs, if any will be used for the subdivision.*

Finding: As stated in section VI. Subdivision Standards in 16.08.030, D on page 4, there will be no CC&Rs for this project.

11. *Chapter 12.04.007 It appears that the applicant is requesting several modifications such as ROW width, pavement width, planter strip, length of cul-de-sac. Where modifications are being requested, the code requirement and the requested change should be shown, and grounds for the request must be provided per 12.04.007:*

Finding: Because modifications are no longer being requested, this item is
no longer at issue.

PRELIMINARY PLAT
OF
SMALL SLOPE



T3S, R2E, 08CA
Tax Lot 900

T3S, R2E, 08CA
Tax Lot 800

GERBER WOOD DR.

STREET TREES
(TYP.)

MEYERS ROAD

T3S, R2E, 08CA
Tax Lot 1000

15' PEDESTRIAN
ACCESS EASEMENT

T3S, R2E, 08CA
Tax Lot 100

NOBEL ROAD

T3S, R2E, 08CA
Tax Lot 300

T3S, R2E, 08CA
Tax Lot 200

SITE DATUM:

ADDRESS: 19731 & 19755 S. MEYERS RD

LEGAL: MAP 3 2E 08CA, TAX LOT 600 & 700

SITE AREA: 1.83 ACRES

ZONING: PRESENT R-8
PROPOSED R-6

EXISTING USE: 2 SINGLE FAMILY HOMES

PROPOSED USE: 10 SINGLE FAMILY HOMES

STREET AND PAVEMENT IMPERVIOUS AREA \approx 0.39 ACRES

REVISIONS BY

REVISED CONTRAINED STREET
TO STANDARD STREET SECTION
(4-11-14) JVM

PRELIMINARY PLAT OF
SMALL SLOPE
JECO INVESTMENTS, INC.

Lot Dimension
Plan

SISUL ENGINEERING

375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DATE FEB., 2014

SCALE 1" = 40'

DRAWN JVM

JOB SGL13-057

SHEET 1

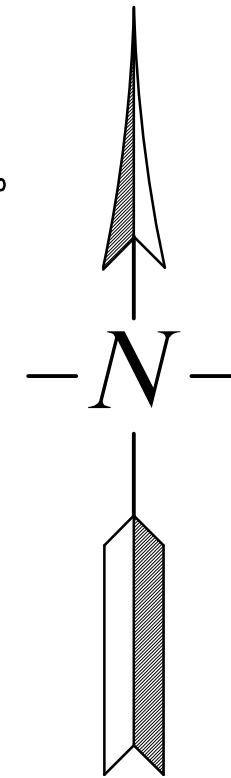
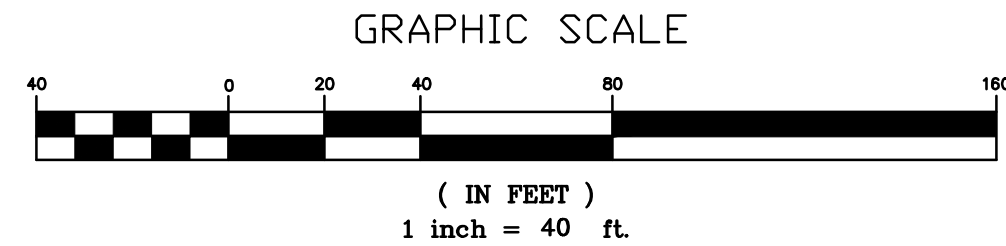
OF 7 SHEETS

PRELIMINARY PLAT
OF
SMALL SLOPE

* OWNED BY
LIVING HOPE
CHURCH

LIVING HOPE
CHURCH

GERBER WOOD DR.



T35, R2E, O8CA
Tax Lot 900

POSSIBLE LOT
DIVISION LINES

T35, R2E, O8CA
Tax Lot 600

Graded Inlet
Rm=425/2
12" IE Qd=421.52

S200
Rm=425/17
IE=417.0

EXISTING LIGHT POLE

EXISTING FIRE HYDRANT

EXISTING EDGE OF PAVEMENT

EXISTING LIGHT POLE

EXISTING POWER POLE

MEYERS ROAD

EXISTING GAZEBO
(TO BE REMOVED)

EXISTING LIGHT POLE

EXISTING SHED
(TO BE REMOVED)

EXISTING SHACK
(TO BE REMOVED)

EXISTING BUILDING
(TO BE REMOVED)

EXISTING WELL SYSTEM

EXISTING SEPTIC ACCESS?

EXISTING CONCRETE PAD

NOBEL ROAD

POSSIBLE LOT
DIVISION LINES

T35, R2E, O8CA
Tax Lot 300

T35, R2E, O8CA
Tax Lot 200

POSSIBLE LOT
DIVISION LINES

REVISIONS	BY

PRELIMINARY PLAT OF
SMALL SLOPE
JECO INVESTMENTS, INC.

Existing Conditions
Plan & Shadow Plat
of Surrounding Parcels

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DATE FEB., 2014

SCALE 1"=40'

DRAWN JVM

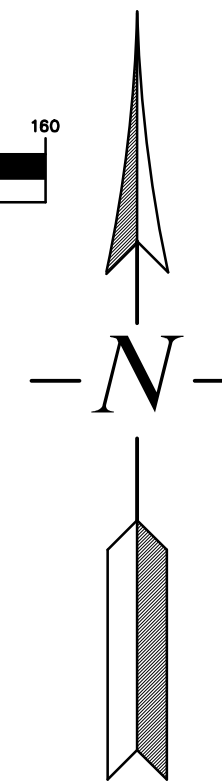
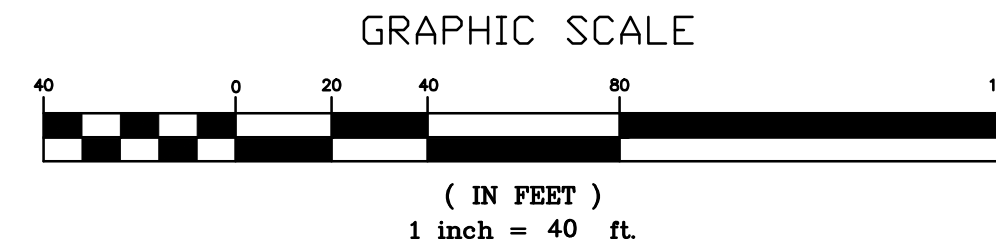
JOB SGL13-057

SHEET

2

OF 7 SHEETS

PRELIMINARY PLAT
OF
SMALL SLOPE



T35, R2E,08CA
Tax Lot 900

T35, R2E,08CA
Tax Lot 800

T35, R2E,08CA
Tax Lot 1000

T35, R2E,08CA
Tax Lot 100

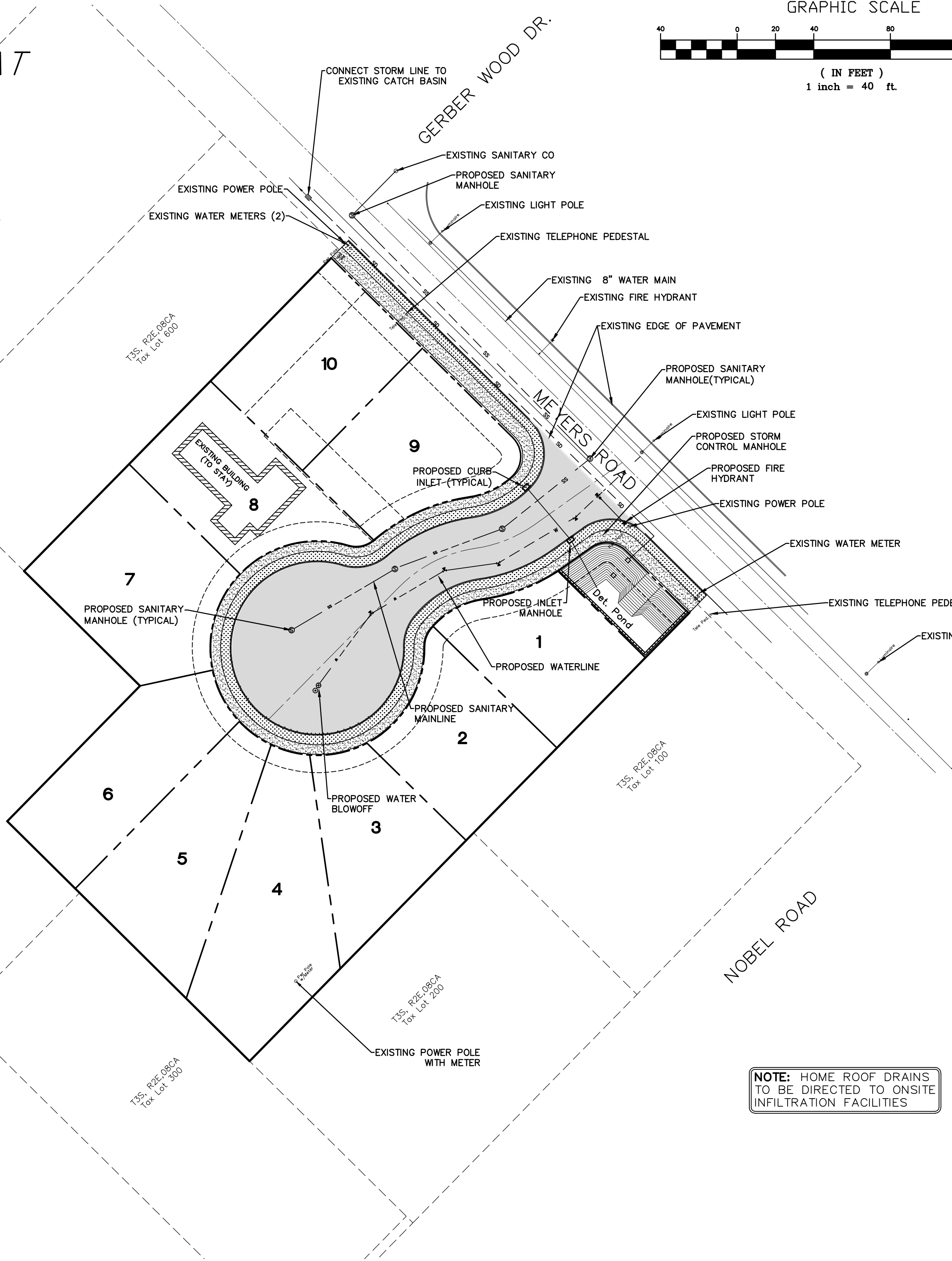
T35, R2E,08CA
Tax Lot 200

T35, R2E,08CA
Tax Lot 300

GERBER WOOD DR.

MEYERS ROAD

NOBEL ROAD



REVISIONS	BY
REVISED CONTRAINED STREET TO STANDARD STREET SECTION (4-11-14)	JVM

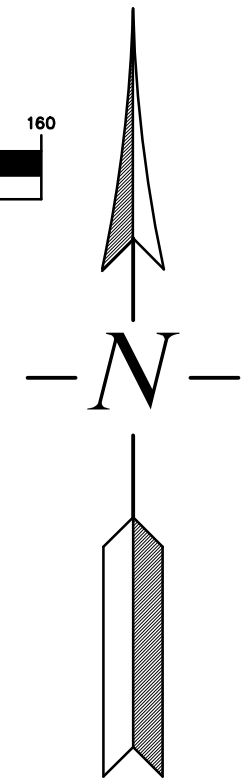
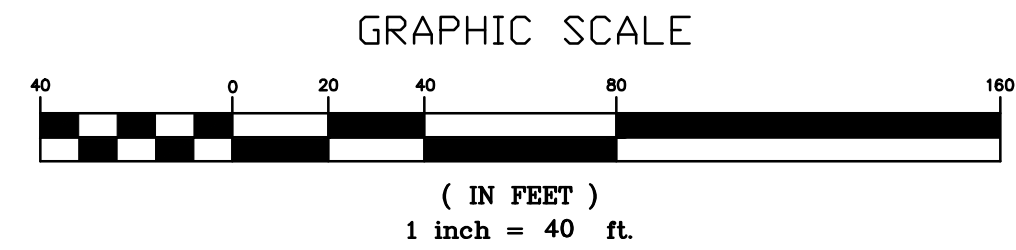
PRELIMINARY PLAT OF
SMALL SLOPE
JECO INVESTMENTS, INC.

Utility Plan

ISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DATE	FEB., 2014
SCALE	1" = 40'
DRAWN	JVM
JOB	SGL13-057
SHEET	3
OF	7 SHEETS

PRELIMINARY PLAT OF SMALL SLOPE



T3S, R2E,08CA
Tax Lot 900

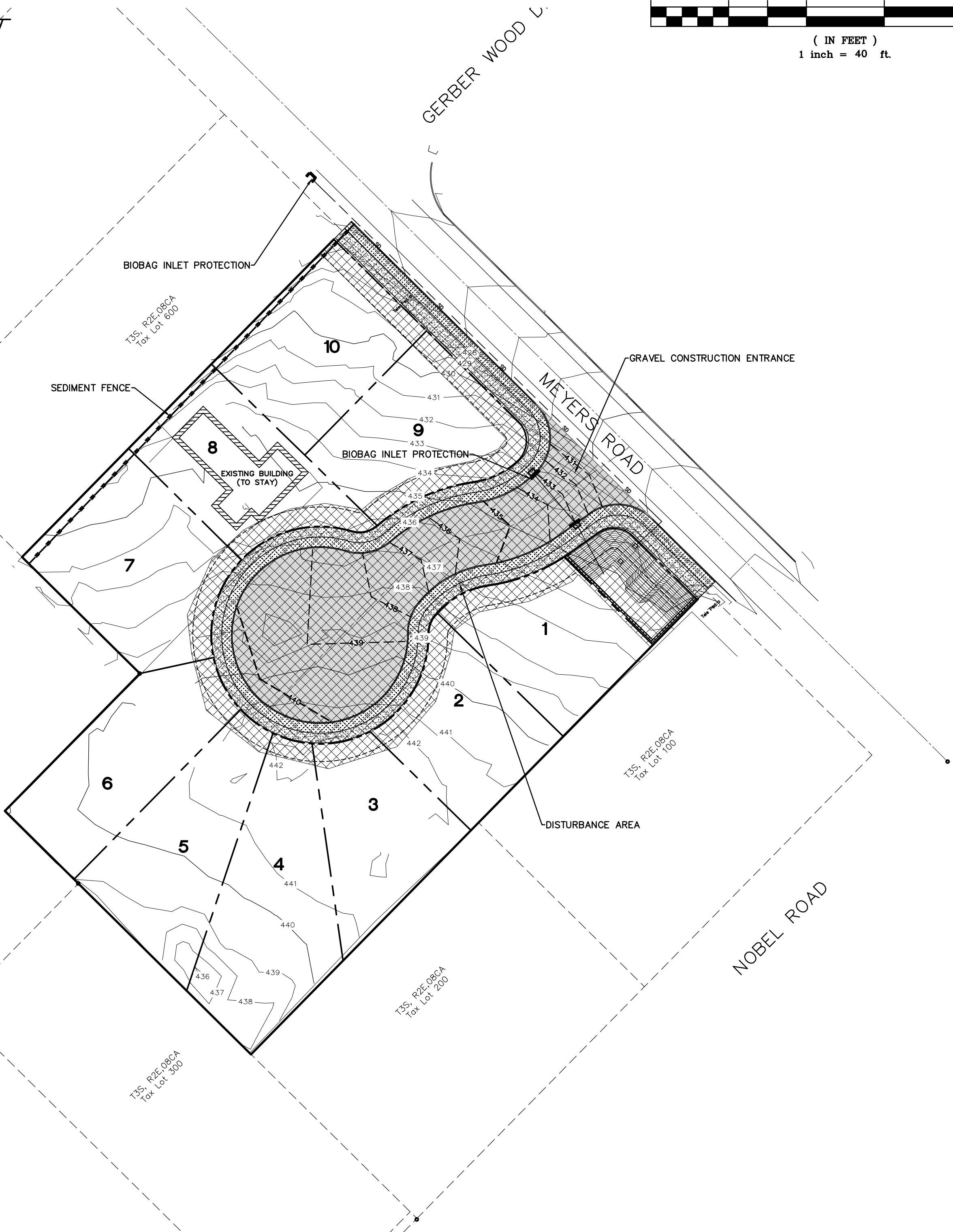
T3S, R2E,08CA
Tax Lot 600

T3S, R2E,08CA
Tax Lot 1000

T3S, R2E,08CA
Tax Lot 100

T3S, R2E,08CA
Tax Lot 200

T3S, R2E,08CA
Tax Lot 300



REVISIONS	BY
REVISED CONTRAINED STREET TO STANDARD STREET SECTION (4-11-14)	JVM

PRELIMINARY PLAT OF
SMALL SLOPE
JECO INVESTMENTS, INC.

Grading/Erosion
Control Plan

SISUL ENGINEERING

375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DATE FEB., 2014

SCALE 1"=40'

DRAWN JVM

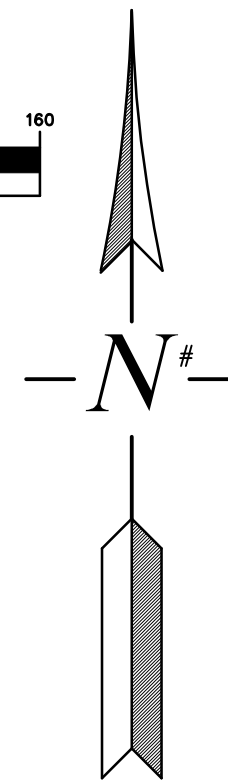
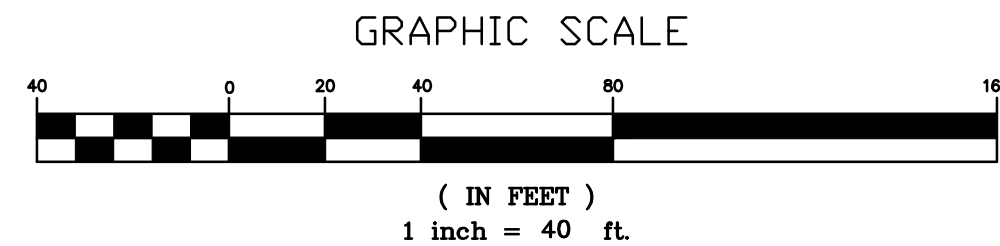
JOB SGL13-057

SHEET

4

OF 7 SHEETS

PRELIMINARY PLAT OF SMALL SLOPE



LEGEND

⊗ INDICATES TREE TO BE REMOVED

○ EXISTING TREE TO REMAIN WITH INFRASTRUCTURE DEVELOPMENT

T35, R2E,08CA
Tax Lot 900

T35, R2E,08CA
Tax Lot 600

T35, R2E,08CA
Tax Lot 1000

T35, R2E,08CA
Tax Lot 100

T35, R2E,08CA
Tax Lot 200

T35, R2E,08CA
Tax Lot 500

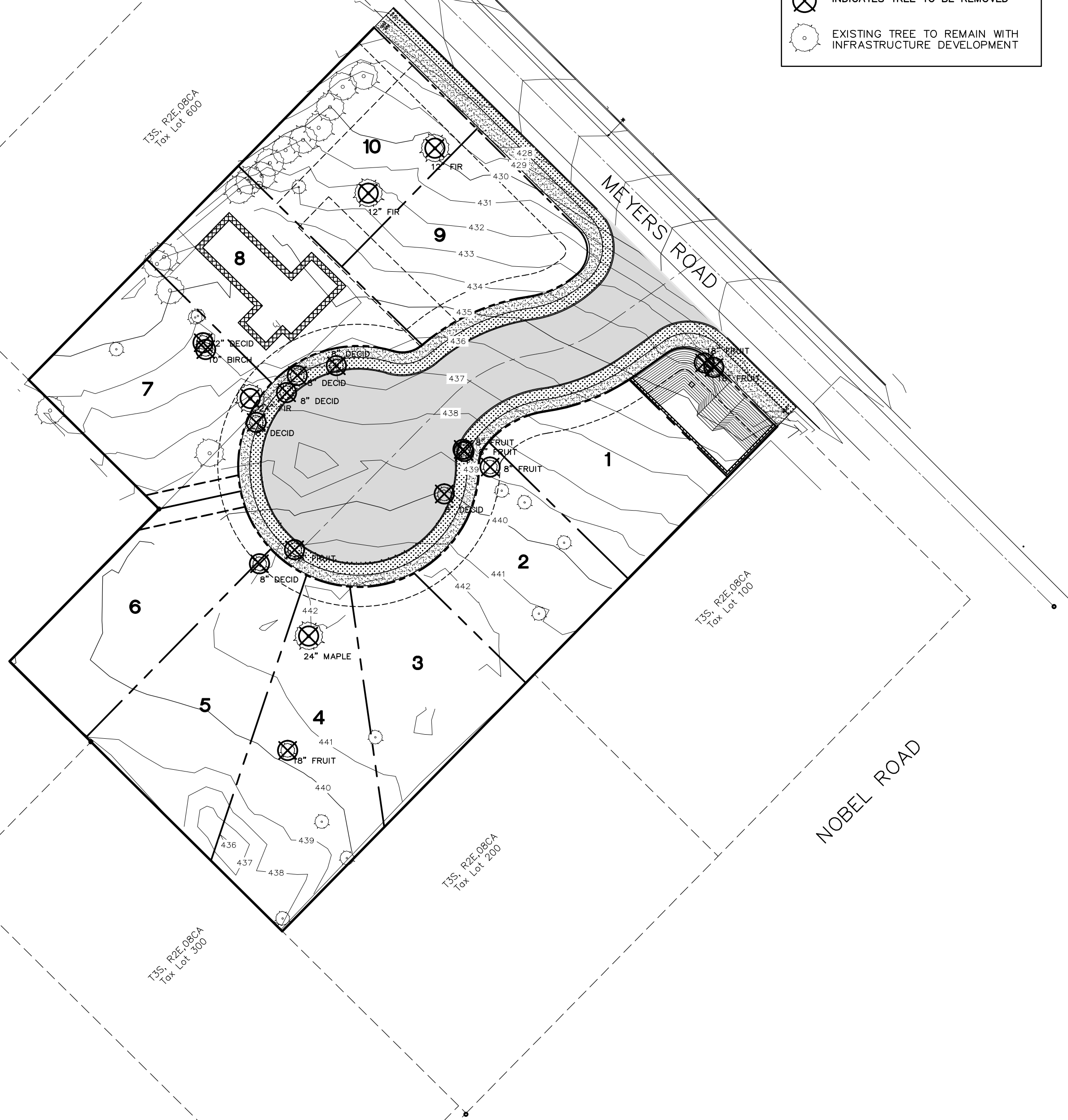
GERBER WOOD DR.

MEYERS ROAD

NOBEL ROAD

TREE REPLACEMENT TABLE		
SIZE	TYPE	REPLACEMENT #
8"	DECID	1
8"	DECID	1
8"	DECID	1
8"	DECID	1
8"	DECID	1
8"	DECID	1
8"	FRUIT	1
8"	FRUIT	1
8"	FRUIT	1
10"	BIRCH	1
12"	DECID	2
12"	FIR	2
12"	FIR	2
12"	FRUIT	2
18"	FRUIT	2
18"	FRUIT	2
18"	FRUIT	2
24"	MAPLE	2
24"	FIR	2

TOTAL REPLACEMENT TREES = 28



REVISIONS	BY
REVISED: CONTRAINED STREET TO STANDARD STREET SECTION (4-11-14)	JVM

PRELIMINARY PLAT OF
SMALL SLOPE
JECO INVESTMENTS, INC.

Tree Removal
Plan

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DATE FEB., 2014

SCALE 1"=40'

DRAWN JVM

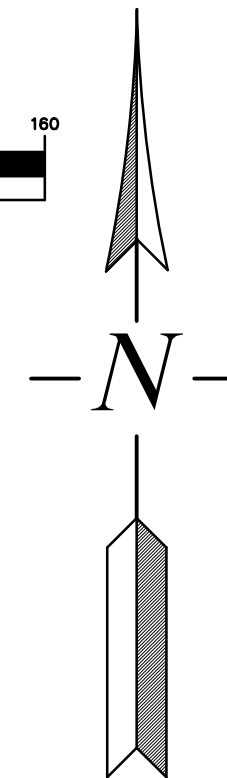
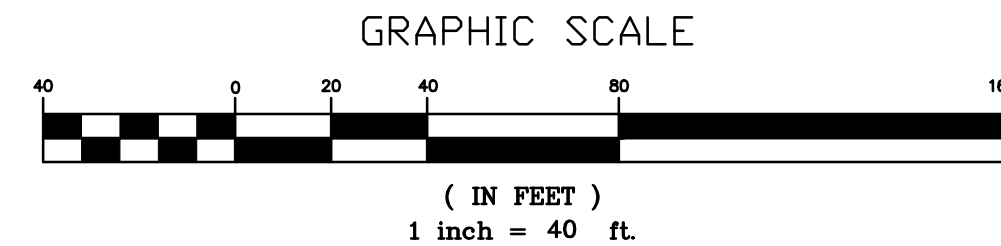
JOB SGL13-057

SHEET

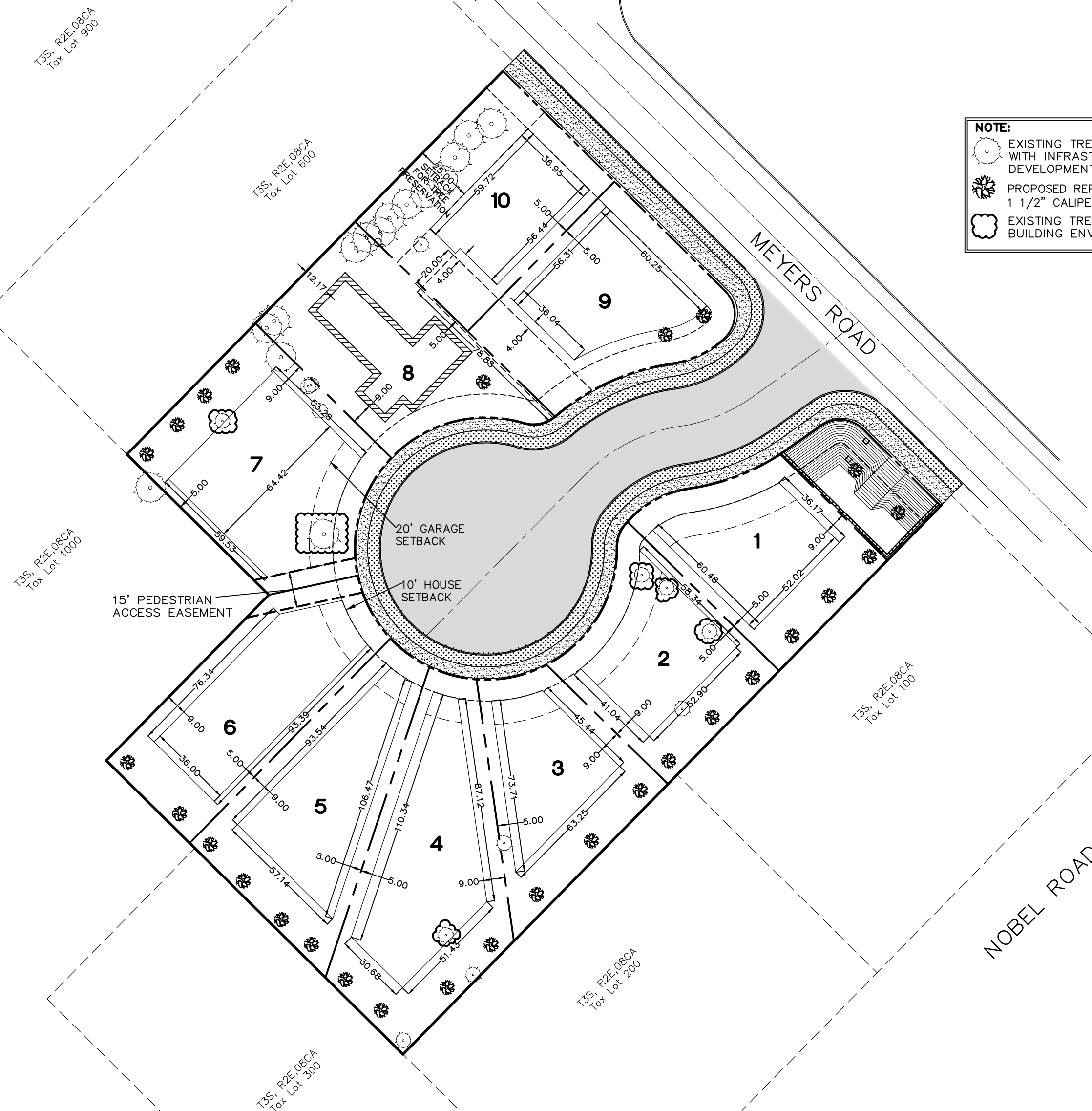
5

OF 7 SHEETS

PRELIMINARY PLAT
OF
SMALL SLOPE



- NOTE:**
- EXISTING TREES TO REMAIN WITH INFRASTRUCTURE DEVELOPMENT
 - PROPOSED REPLACEMENT TREE (28 SHOWN) 1 1/2" CALIPER, ROUGHLY 30' O.C.
 - EXISTING TREES NEAR POSSIBLE BUILDING ENVELOPE TO BE SAVED

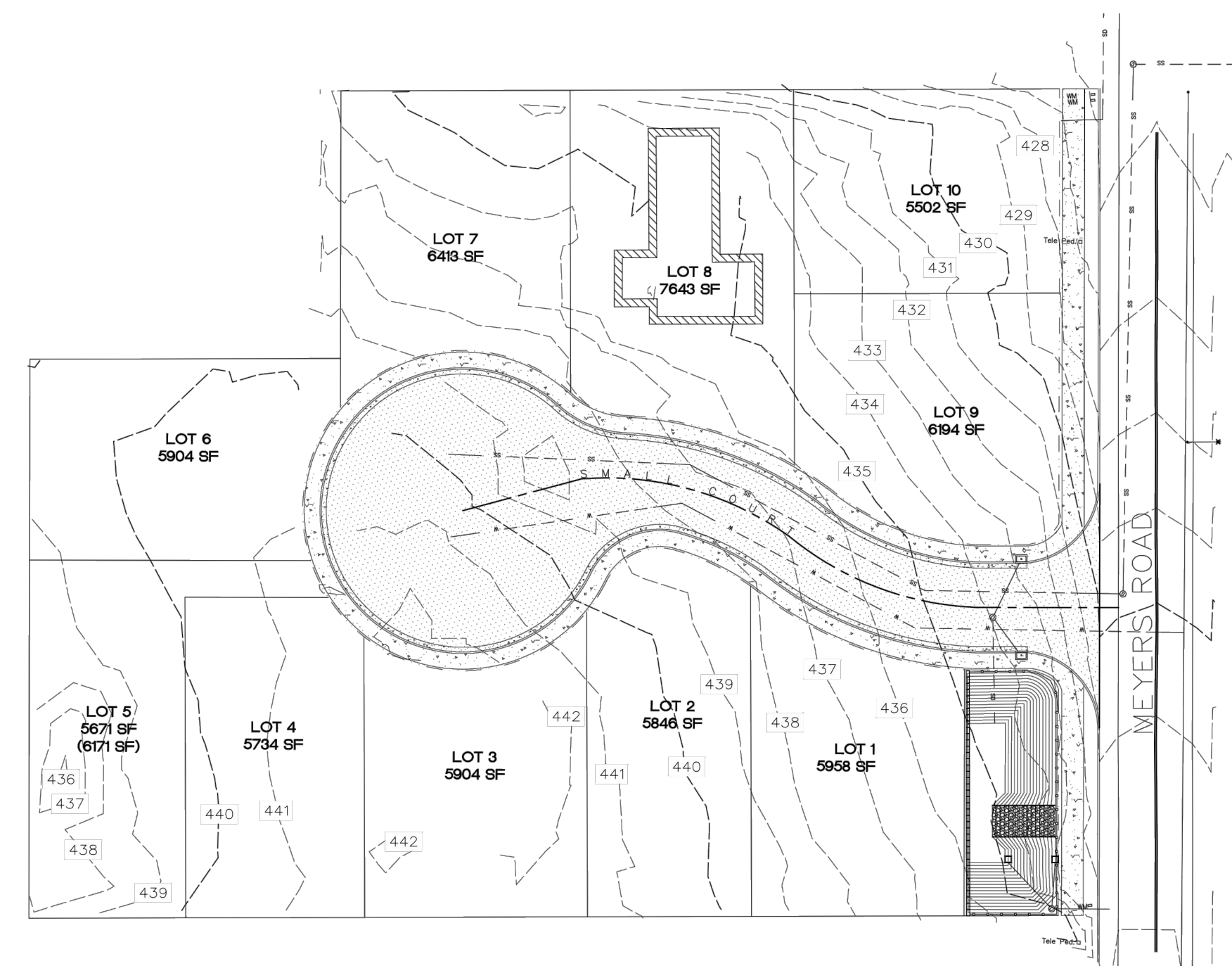


REVISIONS	BY
REVISED CONTRAINED STREET TO STANDARD STREET SECTION (4-11-14)	JVM
PRELIMINARY PLAT OF OF SMALL SLOPE JECO INVESTMENTS, INC.	
Lot Setbacks & Mitigation Plan	
SISUL ENGINEERING 375 PORTLAND AVENUE GLADSTONE, OREGON 97027 (503) 657-0188	
DATE	FEB., 2014
SCALE	1" = 40'
DRAWN	JVM
JOB	SGL13-057
SHEET	6
OF	7 SHEETS

PRELIMINARY PLAT OF OF SMALL SLOPE

PLAN SHOWN TO THE GAFFNEY
LANE NEIGHBORHOOD ASSOCIATION
AT NEIGHBORHOOD MEETING ON
JAN. 23, 2014

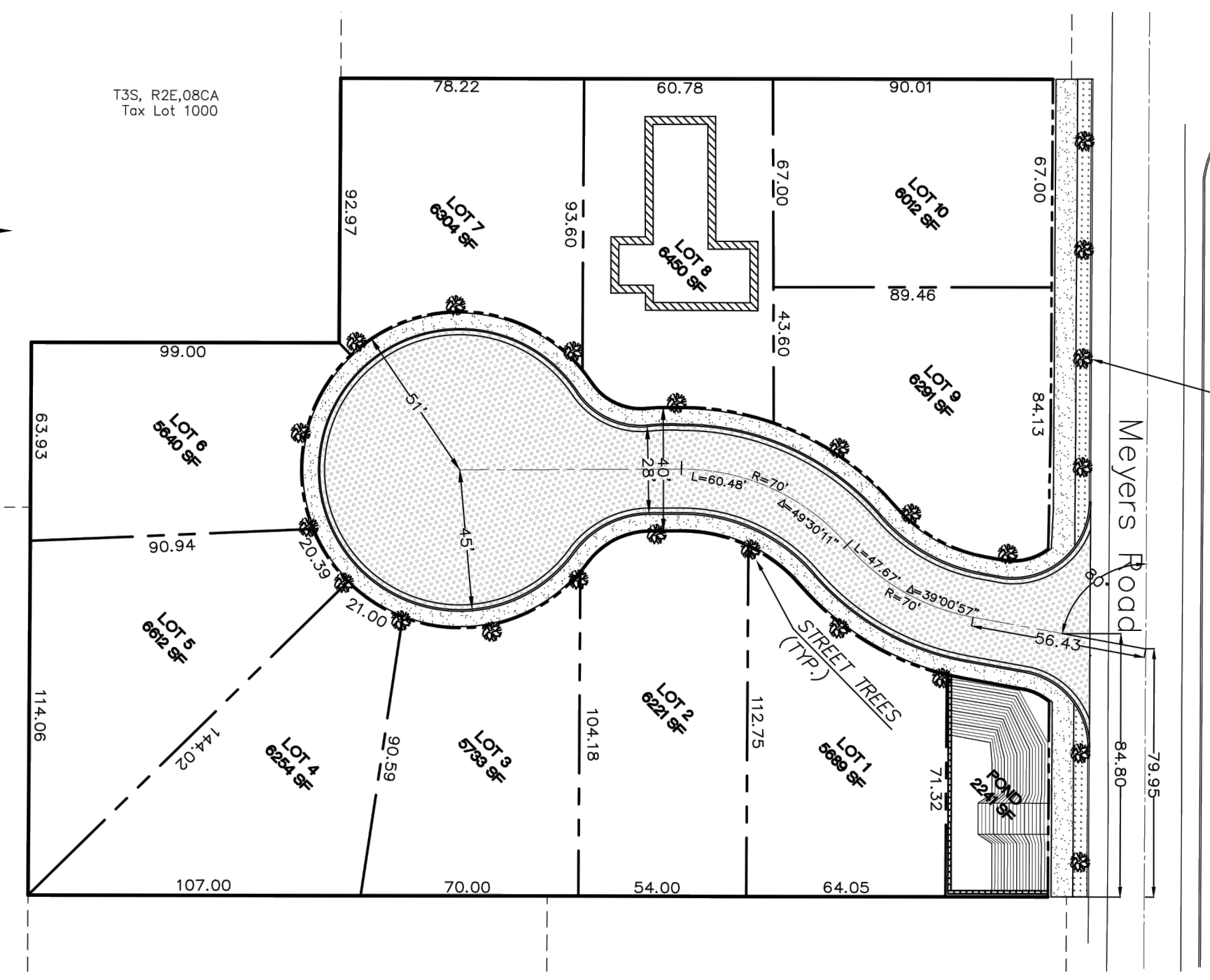
NEIGHBORHOOD CHAIR AMY WILLHITE
MAKES COMMENT SHE WOULD LIKE
LESS LOTS UNDER 6000 SF. (THIS
PLAN HAD 7 OF 10 LOTS UNDER
6000 SF.) PLAN SHOWED A
CONSTRAINED STREET SECTION PER
CITY DETAIL #503



ORIGINAL APPLICATION SUBMITTAL TO
THE CITY WITH CONSTRAINED STREET
SECTION.

DIFFERENCES FROM PLAN SHOWN TO
NEIGHBORHOOD ASSOCIATION.

- 1) ACCESS POINT TO MEYERS ROAD
SHIFTED FURTHER SOUTHEASTERLY
FOR SIGHT DISTANCE REASONS
- 2) 7 OF 10 LOTS ARE OVER 6000 SF.



REVISIONS	BY
<div> <div>PRELIMINARY PLAT OF SMALL SLOPE</div> <div>JECO INVESTMENTS, INC.</div> </div>	
<div> <div>Subdivision Configuration Progression</div> <div> <div>ISUL ENGINEERING</div> <div>375 PORTLAND AVENUE GLADSTONE, OREGON 97027 (503) 657-0188</div> </div> </div>	
DATE	FEB., 2014
SCALE	N.T.S.
DRAWN	JVM
JOB	SGL13-057
SHEET	7
OF 7 SHEETS	

Oregon City Conceptual Trails Map

Existing and Proposed Trails

LEGEND

METRO REGIONAL TRAILS

- EXISTING TRAIL
- PROPOSED TRAIL
- PROPOSED RIVER TRAIL

EXISTING AND PROPOSED TRAILS

- EXISTING COMMUNITY TRAIL
- PROPOSED COMMUNITY TRAIL
- EXISTING LOCAL TRAIL
- PROPOSED LOCAL TRAIL

TRAILHEADS

- EXISTING BOAT LAUNCH
- PROPOSED BOAT LAUNCH
- EXISTING TRAILHEAD
- PROPOSED TRAILHEAD

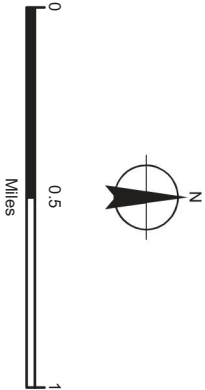
URBAN GROWTH BOUNDARY

OREGON CITY LIMITS

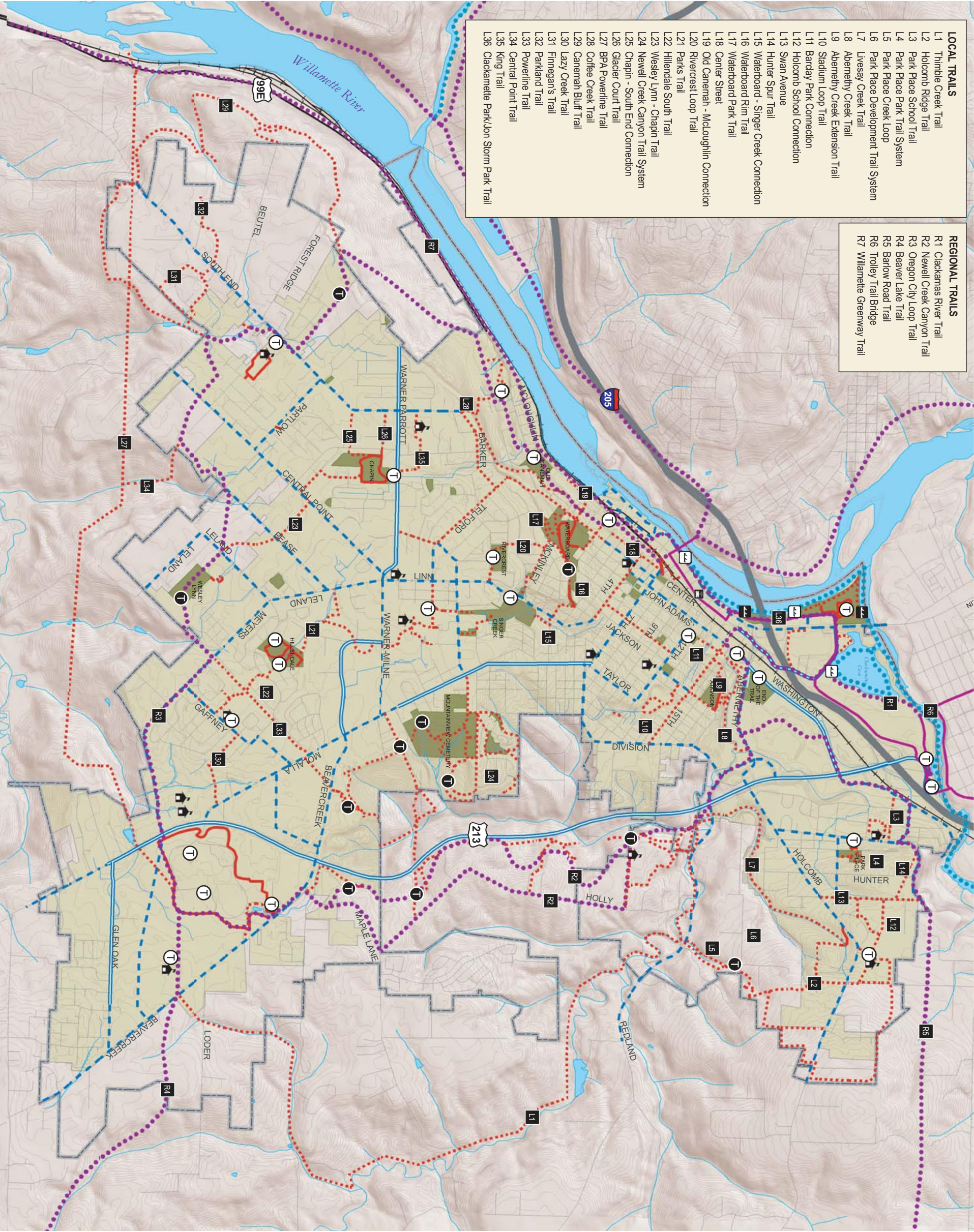
PARKS

SCHOOLS

TRANSIT CENTER



Source: Metro RUS Lite (2003)
Oregon City Geographic Information Systems



- #### REGIONAL TRAILS
- R1 Clackamas River Trail
 - R2 Newell Creek Canyon Trail
 - R3 Oregon City Loop Trail
 - R4 Beaver Lake Trail
 - R5 Barlow Road Trail
 - R6 Trolley Trail Bridge
 - R7 Willamette Greenway Trail

- #### LOCAL TRAILS
- L1 Thimble Creek Trail
 - L2 Holcomb Ridge Trail
 - L3 Park Place School Trail
 - L4 Park Place Park Trail System
 - L5 Park Place Creek Loop
 - L6 Park Place Development Trail System
 - L7 Livesey Creek Trail
 - L8 Abernethy Creek Trail
 - L9 Abernethy Creek Extension Trail
 - L10 Stadium Loop Trail
 - L11 Barclay Park Connection
 - L12 Holcomb School Connection
 - L13 Swan Avenue
 - L14 Hunter Spur Trail
 - L15 Waterboard - Singer Creek Connection
 - L16 Waterboard Rim Trail
 - L17 Waterboard Park Trail
 - L18 Center Street
 - L19 Old Canemah - McLoughlin Connection
 - L20 Rivercrest Loop Trail
 - L21 Parks Trail
 - L22 Hillendale South Trail
 - L23 Wesley Lynn - Chapin Trail
 - L24 Newell Creek Canyon Trail System
 - L25 Chapin - South End Connection
 - L26 Glacier Court Trail
 - L27 BPA Powerline Trail
 - L28 Coffee Creek Trail
 - L29 Canemah Bluff Trail
 - L30 Lazy Creek Trail
 - L31 Finnegan's Trail
 - L32 Parkland Trail
 - L33 Powerline Trail
 - L34 Central Point Trail
 - L35 King Trail
 - L36 Clackamette Park/Jon Storm Park Trail

February 19, 2014

Jeff Mueller
JECO Investments, Inc.
28890 SE Highway 212
Boring, OR 97009

*RE: 19735 & 19751 Meyers Road
Traffic Analysis Letter*

Dear Mr. Mueller,

We have completed our transportation analysis for the proposed zone change and subsequent 10-lot subdivision for the properties located at 19735 and 19751 S Meyers Road in Oregon City, Oregon. Based on our discussions of project scope with John Replinger, a transportation analysis letter is required to address criteria for the City of Oregon City.

PROJECT & LOCATION DESCRIPTION

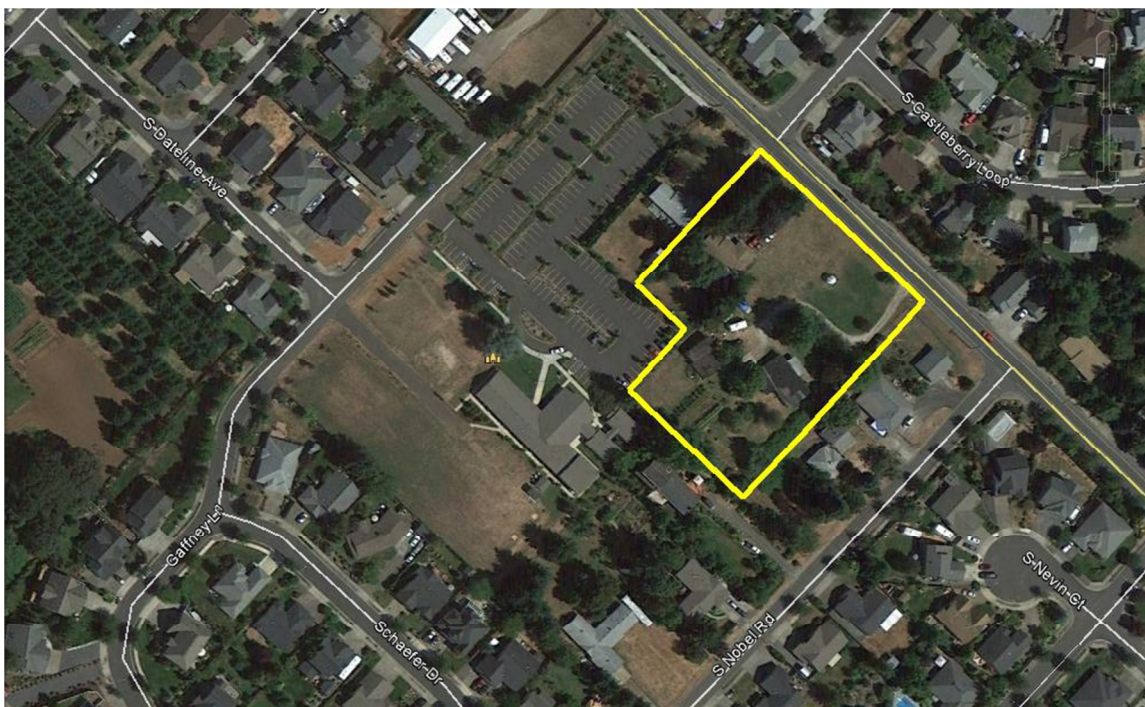
The properties located at 19735 and 19751 S Meyers Road are proposed for a zone change from R-8 to R-6 and the development of a 10-lot subdivision. The properties total approximately 2 acres, or 87,303 square feet, and are located on the south side of Meyers Road in a block bounded by S Nobel Road, Schaefer Drive, and Gaffney Lane.

The majority of the lots in the subdivision will take access from a cul-de-sac that connects to S Meyers Road approximately 130 feet east of S Gerber Woods Drive.

South Meyers Road is under the jurisdiction of Oregon City and is classified as a Minor Arterial. It is generally a two-lane facility with a posted speed limit of 35 mph. Curbs are installed on both sides of the roadway and sidewalks are provided along the north side of the street. Bike lanes are denoted on both sides of the roadway; however, no on-street parking areas are provided in the vicinity of the site.

An aerial view of the site and nearby vicinity is shown on the following page (image from Google Earth).





TRIP GENERATION ANALYSIS

To evaluate the effects of the proposed zone change, the reasonable worst-case scenario for the existing and the proposed zoning was examined. Under the current R-8 zoning, the two subject properties can be developed into lots with a minimum area of 8,000 square feet, or up to 9 lots total on the approximately 2 acres of property. The proposed zone change to R-6 will allow the property to accommodate lots with a minimum area of 6,000 square feet, or up to 13 lots in total.

To estimate the trip generation of the properties, trip rates from the manual *TRIP GENERATION*, Ninth Edition, published by the Institute of Transportation Engineers (ITE), were used. Trip rates for land-use code 210, *Single-Family Detached Housing*, based on the number of dwelling units, were referenced in comparing the trip generation between zoning scenarios as well as projecting the trip generation of the 10-lot subdivision.

The trip generation calculations show that the reasonable worst-case development scenario under the existing R-8 zoning will generate 7 trips during the morning peak hour and 9 trips during the evening peak hour. Under the proposed R-6 zoning designation with the reasonable worst-case development, the property would be projected to generate 10 trips during the morning peak hour and 13 trips during the evening peak hour. Given the reasonable worst-case scenarios, the change in zoning could allow an increase of 3 trips during the morning peak hour and 4 trips during the evening peak hour, as compared to the existing zoning.



Jeff Mueller
February 19, 2014
Page 3 of 5

With the proposed land-division of 10-lots, the property is projected to generate eight trips during the morning peak hour with two trips entering and six trips exiting the site. During the evening peak hour, the property is projected to generate ten trips with six trips entering and four trips exiting the site.

The following table offers a summary of the trip generation for both reasonable worst-case development scenarios as well as the proposed 10-lot subdivision. Detailed trip generation calculations are included in the technical appendix.

TRIP GENERATION SUMMARY								
		AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	Total
Reasonable Worst-Case Scenarios								
Under R-8 Zoning	9 lots	2	5	7	6	3	9	86
Under R-6 Zoning	13 lots	3	7	10	8	5	13	124
Net Difference		1	2	3	2	2	4	38
Proposed Development	10 lots	2	6	8	6	4	10	96

Since the change in zoning will lead to a maximum increase of only four trips during a peak period, site impacts will be minimal and no study area intersections require a detailed capacity analysis. Likewise, since the proposed 10-lot subdivision will only generate a maximum of ten trips during a peak period, no analysis of nearby intersections is required. The traffic impacts resulting from the possible increase in development density or the proposed 10-lot subdivision are projected to be negligible and no mitigations are recommended.

SIGHT DISTANCE

Intersection sight distance requirements were taken from *A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS*, published in 2011 by the American Association of State Highway and Transportation Officials (AASHTO). Sight distance requirements are based on an approaching driver's eye height of 3.5 feet above the road and an eye height of 3.5 feet with the driver's eye 15 feet behind the edge of the near-side travel lane.

Sight distance from the proposed driveway was measured and was found to be 393 feet to the southeast of the driveway, limited by a crest vertical curve. Based on the speed limit of 35 mph for Meyers Road, a minimum of 390 feet of intersection sight distance (ISD) is required to allow vehicles to turn onto Meyers Road without impeding the flow of through traffic.

Sight distance was measured to be in excess of 450 feet to the west of the driveway (past the all-way stop intersection of S Meyers Road at Gaffney Lane). Since vehicles must come to a full stop at the intersection, an assumed approach speed of 10 mph was used based on when drivers would be



Jeff Mueller
February 19, 2014
Page 4 of 5

expected to notice vehicles accelerating from a stop at the intersection. This design speed requires a minimum of 115 feet of intersection sight distance for traffic approaching the site access from the west.

Intersection sight distance is met in both directions from the proposed access location. No mitigations are recommended.

TRANSPORTATION PLANNING RULE

The Transportation Planning Rule (TPR) is in place to ensure that the transportation system is capable of supporting possible increases in traffic intensity that could result from changes to adopted plans and land use regulations. The applicable elements of the TPR are each quoted directly in *italics* below, with a response directly following.

660-012-0060

- (1) *If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:*
- (a) *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
 - (b) *Change standards implementing a functional classification system; or*
 - (c) *Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.*
 - (A) *Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
 - (B) *Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or*



Jeff Mueller
February 19, 2014
Page 5 of 5

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

In this case, subsections (A) and (B) are not triggered, since the proposed zone change will not impact or alter the functional classification of any existing or planned facility and the proposal does not include a change to any functional classification standards.

Subsection (C) is also not triggered since the impact of the proposed zone change on the adjacent area will be negligible. The addition of a maximum of four trips onto the street system during the peak period is not projected to degrade the performance of any nearby intersections.

Based on the analysis, the proposed zone change will not degrade the performance of any existing or planned transportation facility. Accordingly, the Transportation Planning Rule is satisfied.

CONCLUSIONS

The traffic that could result from the proposed zone change of the properties located at 19751 and 19735 Meyers Road in Oregon City will not cause any significant impact the nearby transportation system under the worst-case development scenarios. Additionally, the impact resulting from traffic generated by the proposed 10-lot subdivision is projected to be negligible.

The full development of the two properties under the proposed R-6 zoning is not projected to significantly affect existing or planned transportation facilities as defined under Oregon's Transportation Planning Rule. Accordingly, no mitigation is recommended.

Sight distance was measured at the location of the proposed driveway and found to be in excess of the required intersection sight distance standards.

If you have any questions, comments, or concerns regarding this report or if you need any further assistance, please don't hesitate to call.

Sincerely,

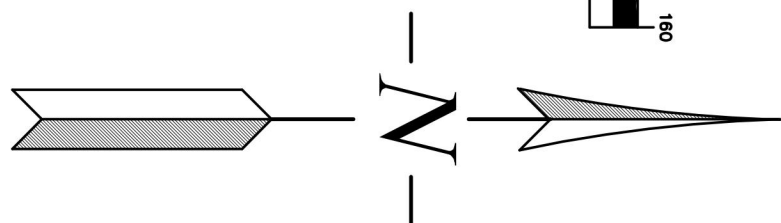
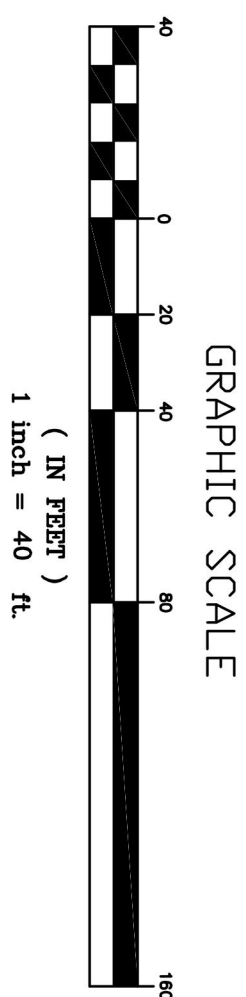
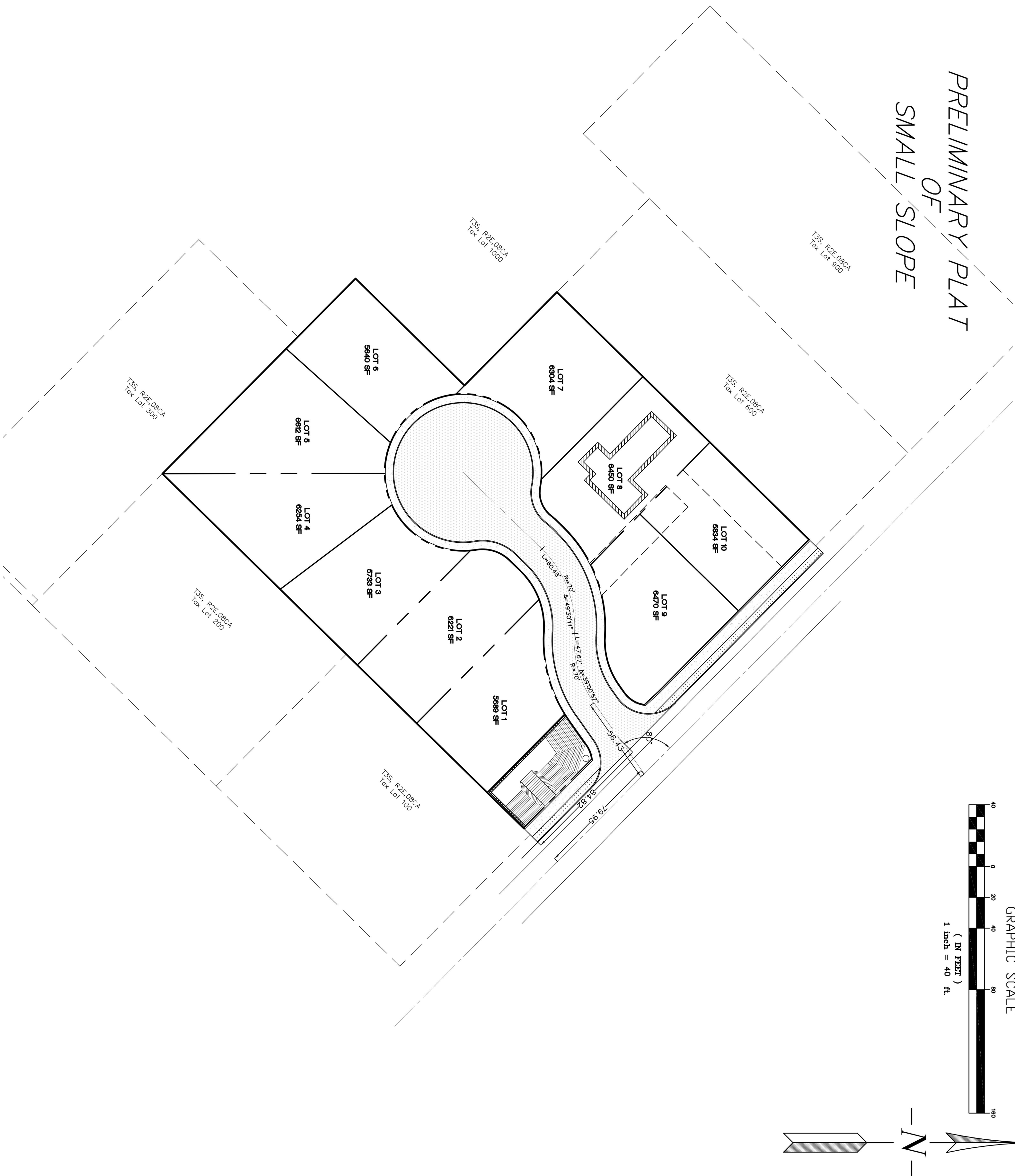


William Farley, EI
Transportation Analyst

2e

TECHNICAL APPENDIX

PRELIMINARY PLAT
OF
SMALL SLOPE



CENTERLINE INFORMATION
OF SMALL SLOPE
JECO INVESTMENTS, INC.

REVISIONS	BY

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DATE JAN., 2014

SCALE 1"=40'

DRAWN JMM

JOB SGL13-057

SHEET

1

OF 1 SHEETS

Whereas, the Oregon Department of Transportation, has been requested to perform an investigation pursuant to the provisions of ORS 810.180, has caused an engineering and traffic investigation to be made for the section(s) of state highway, county highway, city highway, or highway under the jurisdiction of a federal agency described below (highway means public way); and

Whereas, the State Traffic Engineer has been authorized to act on behalf of the Oregon Transportation Commission; and

Whereas, the data, facts, and information obtained in connection with said engineering and traffic investigation are on file in the office of the Traffic Management Section of the Oregon Department of Transportation in Salem, Oregon; and

Whereas, based upon said engineering and traffic investigation, the Traffic Engineer has found that the speed designated in ORS 811.105 or ORS 811.111 is greater than is reasonable under the conditions found to exist upon the section(s) of highway for which a lesser speed is herein designated or that the speed designated in said statute is less than is reasonable under the conditions found to exist upon the section(s) of highway for which a greater speed is herein designated; and

Whereas, the provisions of ORS 810.180 respecting notice and hearing have been complied with:

It is **Therefore Ordered** that the designated speed for the following section(s) of highway be as follows:

Name Meyers Road

LOCATION OF TERMINI

From	To	Designated Speed (Miles Per Hour)
Clairmont Way	Cascade Hwy South (OR 213)	35

School speed zones may be posted within the limits of this order as determined to be appropriate by the Road Authority, based on an engineering investigation as per the provisions of ORS 811.111, Subsection 1(e) and ORS 810.200.

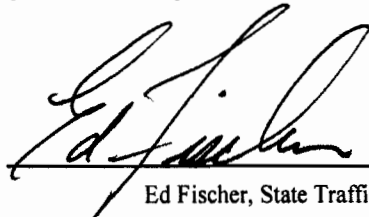
This rescinds SZRP Order 934D of 10/5/1993

Be it further ordered that the roadway authority or authorities responsible for the above section(s) of highway install appropriate signs giving notice of the designated speed(s) therefore as per ORS 810.180, Subsection 5(e).

Be it further ordered that signs installed pursuant to this order comply with the provisions of ORS 810.210 and 810.220.

Be it further ordered that any previous order made by the Department with respect to the designated speed for the above section(s) of highway which is in conflict with the provisions of this order is hereby rescinded.

Be it further ordered that the Traffic Engineer of the Oregon Department of Transportation is hereby delegated the authority to sign this order for and on behalf of the Department.


Ed Fischer, State Traffic Engineer



Speed Zone Order

Date **March 29, 2007**

Order No **J7933**

Jurisdiction(s)

Oregon City

TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Variable: Dwelling Units
Variable Value: 9

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	2	5	7

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	6	3	9

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	43	43	86

SATURDAY

Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	45	45	90



TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Variable: Dwelling Units
Variable Value: 13

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	3	7	10

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	8	5	13

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	62	62	124

SATURDAY

Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	64	64	128



TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Variable: Dwelling Units
Variable Value: 10

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	2	6	8

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	6	4	10

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	48	48	96

SATURDAY

Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	50	50	100

REPLINGER & ASSOCIATES LLC
TRANSPORTATION ENGINEERING

March 30, 2014

Ms. Kelly Moosbrugger
City of Oregon City
PO Box 3040
Oregon City, OR 97045

**SUBJECT: REVIEW OF TRANSPORTATION ANALYSIS LETTER – 19735 & 19751
 S MEYERS ROAD SUBDIVISION – TP14-02**

Dear Ms. Moosbrugger:

In response to your request, I have reviewed the Transportation Analysis Letter (TAL) submitted for the proposed 10-lot Meyers Road subdivision at 19735 and 19751 S Meyers Road. The site is located on the south side of Meyers Road near the intersection with S Gerber Woods Drive. The TAL, dated February 15, 2013, was prepared under the direction of Michael T. Ard, PE of Lancaster Engineering.

The proposal would create a new 10-lot subdivision by infilling within developed areas. The subdivision consists of a cul-de-sac intersecting S Meyers Road approximately 130 southeast of the intersection of S Meyers Road and S Gerber Woods Drive.

Overall

I find the TAL addresses the city's requirements and provides an adequate basis to evaluate impacts of the proposed subdivision.

Comments

- 1. Trip Generation.** The TAL presents information on trip generation from the construction of 10 single family dwellings on a site currently occupied by two. The trip generation rates were taken from the Institute of Transportation Engineers' *Trip Generation*. The subdivision is predicted to produce 8 AM peak hour trips; 10 PM peak hour trips; and 95 weekday trips.
- 2. Access Locations.** As explained in the TAL, nine lots have frontage on the cul-de-sac. One lot would have access on S Meyers Road. Ideally, no lot would have direct access onto S Meyers Road, a minor arterial street. There is, however, a driveway at this location today. I recommend that any lot taking direct access to S Meyers Road be developed such that vehicles can turn around on site instead of backing onto the street when exiting the property.

3. **Driveway Width.** The TAL does not indicate any impediments to meeting driveway width standards.
4. **Intersection Spacing.** The proposal will result in a new intersection where the proposed cul-de-sac will intersect with S Meyers Road. The proposed intersection would be located approximately 130 feet southeast of the intersection of S Meyers Road and S Gerber Woods Drive. Though it would be ideal for the cul-de-sac to align with S Gerber Woods Drive, this is impractical because of property boundaries and would make the adjacent parcel to the west uneconomical to develop. Topography of the area and sight distance considerations make the proposed site access the best compromise. As indicated in the TAL, a maximum of ten peak hour trips would be generated by the subdivision making conflicts with nearby intersections negligible. I concur with the engineer that the proposed location is acceptable and does not cause safety issues due to the proximity of the intersection with existing intersections.
5. **Sight Distance.** The engineer measured sight distance at the proposed intersection of the cul-de-sac with S Meyers Road. He found this location provided sight distance exceeds the needed sight distance of 390 feet associated with a posted speed of 35 mph. He did not recommend mitigation and I concur. He also measured sight distance at the proposed driveway and found it to be acceptable.
6. **Safety Issues.** The engineer did not identify any safety issues associated with the subdivision and notes that the traffic impacts will be negligible. I concur with the engineer's conclusion.
7. **Consistency with the Transportation System Plan (TSP).** Based on the materials submitted it appears that the cul-de-sac would be developed in accordance with city standards and would be consistent with the TSP.
8. **Transportation Planning Rule (TPR) Analysis.** Because the applicant is proposing to rezone the property from R-8 to R-6, a TPR analysis is also included. He provided an analysis of the maximum trip generation under R-6 and concluded the impact was negligible. The engineer states that the proposal does not change the functional classification of any existing or planned transportation facility; does not alter the standards for implementing the functional classification system; and does not alter the level of travel or degrade the performance of the transportation system such that it would not meet applicable performance standards. I concur.

Conclusion and Recommendations

I find that the TAL meets city requirements and provides an adequate basis upon which impacts can be assessed. The subdivision will result in minimal additional traffic. There are

Ms. Kelly Moosbrugger
March 30, 2014
Page 3

no transportation-related issues associated with this subdivision requiring mitigation. The proposed rezoning is not predicted to have a significant effect as defined under the Transportation Planning Rule.

Because of the property and topographic considerations, I recommend allowing the new intersection of the cul-de-sac with S Meyers Road to be permitted where proposed. For the single lot for which direct access is proposed to S Meyers Road, I recommend that it be developed such that vehicles can turn around on site instead of backing onto the street when exiting the property.

If you have any questions or need any further information concerning this review, please contact me at replinger-associates@comcast.net.

Sincerely,

A handwritten signature in black ink that reads "John Replinger". The signature is written in a cursive, flowing style.

John Replinger, PE
Principal

Small Slope Subdivision

Oregon City, OR

Developer: JECO Investments, Inc.

J.O. SGL 13-057

February 18, 2014
Revised April 10, 2014

PRELIMINARY STORM DRAIN DETENTION & WATER QUALITY CALCULATIONS

SISUL ENGINEERING

A Division of Sisul Enterprises, Inc.

375 Portland Avenue

Gladstone, OR 97027

phone: (503) 657-0188

fax: (503) 657-577

Narrative:

The site is currently developed with two single family dwellings. One is at address 19751 Meyers Road and the other at 19735 Meyers Road. The majority of the site is grass/lawn. The property fall towards the north at approximately 5%. The site is surrounded by single family dwellings on individual lots on the north, northernwestly, east and southeasterly sides. There is a church directly adjacent to the southwest.

The site is located in the Caufield Drainage Basin.

The site is proposed to be developed with a 10-lot R-6 single family dwelling subdivision. The house located at 19735 Meyers Road will be retained and is included in its own lot in the proposed subdivision layout. Stormwater detention and water quality facility for street runoff will be provided by a detention pond to be located on the northeast side of the development along the frontage of Meyers Road. The water quality requirement for the City of Oregon City is to have a minimum 48-hour retention time for 1/3 of a 2 year storm event. All of these requirements will be met with a detention/water quality pond. Roof drainage will be piped to infiltration facilities on each individual lot. A geotechnical infiltration test and report prepared by GeoPacific Engineering is included as a part of this report.

Detention Requirements:

2yr, 24-hour storm event must be controlled to 50% of the pre-developed runoff rate of a 2yr 24 hour storm event.

5yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 5yr 24-hour storm event.

25yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 10yr 24-hour storm event.

Site Conditions & Design Values - Pre Development:

Area:

Total Area = 1.83 Acres
Pervious Area = 1.53 acres
Impervious Area = 0.30 acres

Existing Use: The site is currently developed with two single family dwellings. The majority of the undeveloped portion of the site is grass/lawn.

Soil Type: This site has (2) soil types as identified by (Soil Survey Clackamas County Area, Oregon) (See Soil Survey Attachments)

Bornstedt silt loam 8B - Hydrologic Group 'C'
Jory silty clay loam 45B - Hydrologic Group 'C'

Runoff Curve Numbers: (per Table 4-3 MODIFIED CURVE NUMBERS, City of Oregon City Stormwater and Grading Design Standards)

Open Spaces, grass/lawns, good condition - Hydrologic Group 'C' => 86
Impervious Surfaces, AC, Roofs etc.-Hydrologic Group 'C' => 98

Rainfall Distribution: (per Table 4-1 TOTAL DEPTH, City of Oregon City Stormwater and Grading Design Standards)

2yr, 24-hour duration STD SCS Type 1A Storm => 2.6 inches
5yr, 24-hour duration STD SCS Type 1A Storm => 3.1 inches
10yr, 24-hour duration STD SCS Type 1A Storm => 3.4 inches

Time of Concentration – Pre Developed: (Design Values per Table 4-4 MANNING'S COEFFICIENTS/"K" FACTORS, City of Oregon City Stormwater and Grading Design Standards)

$$\text{Sheet Flow: } T_1 = \frac{0.42 (n_s L)^{0.8}}{(P_2)^{0.5} * (s_o)^{0.4}}$$

$$L = 181 \text{ ft.}$$

$$P_2 = 2.6 \text{ in.}$$

$$S_o = 0.046 \text{ ft./ft.}$$

$$n_s = 0.15$$

Total Time of Concentration: $T = \dots$

$$T_c = \frac{0.42 (0.15 * 181)^{0.8}}{(2.6)^{0.5} * (0.046)^{0.4}} = \dots$$

$$T_c = 12.52 = \underline{12.5 \text{ minutes}}$$

Update: Pre-developed time of concentration was recalculated per the reviewer's request. The new value came out to be 10.95 minutes. Given this value, 12.5 minutes would be considered more conservative therefore the remaining calculations were carried out with this value

Pre Development Hydrographs:

The pre developed hydrographs will be generated using the Santa Barbara Urban Hydrograph (SBUH) Method. (KING COUNTY DEPARTMENT OF PUBLIC WORKS Surface Water Management Division, HYDROGRAPH PROGRAMS Version 4.20)

2 year Runoff Rate – Pre Development

***** S.C.S. TYPE-1A DISTRIBUTION *****
***** 2-YEAR 24-HOUR STORM **** 2.60" TOTAL PRECIP. *****

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1
1.53,86,.3,98,12.5

DATA PRINT-OUT:

AREA (ACRES)	PERVIOUS	IMPERVIOUS	TC (MINUTES)
	A CN	A CN	
1.8	1.5 86.0	.3 98.0	12.5

PEAK-Q (CFS)	T-PEAK (HRS)	VOL (CU-FT)
<u>.63</u>	7.83	9929

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1357-2.und

5 year Runoff Rate – Pre Development

***** S.C.S. TYPE-1A DISTRIBUTION *****
***** 5-YEAR 24-HOUR STORM **** 3.10" TOTAL PRECIP. *****

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1
1.53,86,.3,98,12.5

DATA PRINT-OUT:

AREA (ACRES)	PERVIOUS	IMPERVIOUS	TC (MINUTES)
	A CN	A CN	
1.8	1.5 86.0	.3 98.0	12.5

PEAK-Q (CFS)	T-PEAK (HRS)	VOL (CU-FT)
<u>.84</u>	7.83	12817

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1357-5.und

10 year Runoff Rate – Pre Development

***** S.C.S. TYPE-1A DISTRIBUTION *****
***** 10-YEAR 24-HOUR STORM **** 3.40" TOTAL PRECIP. *****

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1
1.53, 86, .3, 98, 12.5

DATA PRINT-OUT:

AREA (ACRES)	PERVIOUS A CN	IMPERVIOUS A CN	TC (MINUTES)
1.8	1.5 86.0	.3 98.0	12.5
PEAK-Q (CFS)	T-PEAK (HRS)	VOL (CU-FT)	
.96	7.83	14593	

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1357-10.und

Site Conditions & Design Values - Post Development:

Area: These calculations are for the area of the proposed development that will drain into the detention pond.

Total Area = 1.83 Acres

Total Area = 1.83 acres

Pervious Area = 1.44 acres (as roof drains will be infiltrated, roof areas are counted as pervious areas)

Impervious Area = 0.39 acres (street, sidewalk and driveway areas)

Runoff Curve Numbers: (per Table 4-3 MODIFIED CURVE NUMBERS, City of Oregon City Stormwater and Grading Design Standards)

Open Spaces, grass/lawns, good condition - Hydrologic Group 'C' => 86
Impervious Surfaces, AC, Roofs etc.-Hydrologic Group 'C' => 98

Rainfall Distribution: (per Table 4-1 TOTAL DEPTH, City of Oregon City Stormwater and Grading Design Standards)

2yr, 24-hour duration STD SCS Type 1A Storm => 2.6 inches
5yr, 24-hour duration STD SCS Type 1A Storm => 3.1 inches
25yr, 24-hour duration STD SCS Type 1A Storm => 4.0 inches

Time of Concentration – Post Development:

Since a large portion of the site is impervious, the minimum time of concentration of 5 minutes will be used. Tc = 5 minutes

Post Developed Hydrographs:

The post developed hydrographs will be generated using the Santa Barbara Urban Hydrograph (SBUH) Method. (KING COUNTY DEPARTMENT OF PUBLIC WORKS Surface Water Management Division, HYDROGRAPH PROGRAMS Version 4.20)

2 year Runoff Rate – Post Development

***** S.C.S. TYPE-1A DISTRIBUTION *****
***** 2-YEAR 24-HOUR STORM **** 2.60" TOTAL PRECIP. *****

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1
1.44,86,.39,98,5

DATA PRINT-OUT:

AREA (ACRES)	PERVIOUS A CN	IMPERVIOUS A CN	TC (MINUTES)
1.8	1.4 86.0	.4 98.0	5.0
PEAK-Q (CFS)	T-PEAK (HRS)	VOL (CU-FT)	
<u>.75</u>	7.67	10284	

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1357-2.dev

5 year Runoff Rate – Post Development

***** S.C.S. TYPE-1A DISTRIBUTION *****
***** 5-YEAR 24-HOUR STORM **** 3.10" TOTAL PRECIP. *****

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1
1.44,86,.39,98,5

DATA PRINT-OUT:

AREA (ACRES)	PERVIOUS A CN	IMPERVIOUS A CN	TC (MINUTES)
1.8	1.4 86.0	.4 98.0	5.0
PEAK-Q (CFS)	T-PEAK (HRS)	VOL (CU-FT)	
<u>0.98</u>	7.67	13199	

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1357-5.dev

25 year Runoff Rate – Post Development

***** S.C.S. TYPE-1A DISTRIBUTION *****
***** 25-YEAR 24-HOUR STORM **** 4.00" TOTAL PRECIP. *****

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1
1.44, 86, .39, 98, 5

DATA PRINT-OUT:

AREA (ACRES)	PERVIOUS	IMPERVIOUS	TC (MINUTES)
	A CN	A CN	
1.8	1.4 86.0	.4 98.0	5.0
PEAK-Q (CFS)	T-PEAK (HRS)	VOL (CU-FT)	
<u>1.42</u>	7.67	18640	

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1357-25.dev

Detention Area Routing:

The detention area will be 4.25 feet deep with 3.61 feet of detention storage and 0.64 feet or 7.68" of freeboard during a 25 year storm event. The flow control structure for the detention pipe will have three orifices and an overflow riser. The attached spreadsheet shows the detention area routing data.

The routing will be performed using the Santa Barbara Urban Hydrograph (SBUH) Method. (KING COUNTY DEPARTMENT OF PUBLIC WORKS Surface Water Management Division, HYDROGRAPH PROGRAMS Version 4.20)

RESERVOIR ROUTING INFLOW/OUTFLOW ROUTINE

SPECIFY [d:] [path] filename [.ext] OF ROUTING DATA
1357.txt

ROUTING DATA:

STAGE (FT)	DISCHARGE (CFS)	STORAGE (CU-FT)	PERM-AREA (SQ-FT)
.00	.00	.0	.0
.25	.00	132.5	.0
.50	.00	279.9	.0
.75	.00	442.7	.0
1.00	.00	621.4	.0
1.25	.00	816.5	.0
1.50	.01	1028.2	.0
1.75	.01	1257.1	.0
2.00	.01	1503.5	.0
2.25	.01	1767.9	.0
2.50	.01	2050.5	.0
2.75	.01	2351.8	.0
3.00	.32	2672.2	.0
3.25	.69	3012.1	.0
3.50	.89	3371.8	.0

3.75	1.05	3751.8	.0
4.00	2.24	4152.2	.0
4.25	4.29	4573.7	.0

AVERAGE PERM-RATE: .0 MINUTES/INCH

2 year Detention Routing:

ENTER [d:] [path] filename [.ext] OF COMPUTED HYDROGRAPH:
1357-2.dev

INFLOW/OUTFLOW ANALYSIS:

PEAK-INFLOW (CFS)	PEAK-OUTFLOW (CFS)	OUTFLOW-VOL (CU-FT)
.75	.32	9572
INITIAL-STAGE (FT)	TIME-OF-PEAK (HRS)	PEAK-STAGE-ELEV (FT)
.00	8.17	3.00
PEAK STORAGE: 2670 CU-FT		

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1357-2.pnd

5 year Detention Routing:

ENTER [d:] [path] filename [.ext] OF COMPUTED HYDROGRAPH:
1357-5.dev

INFLOW/OUTFLOW ANALYSIS:

PEAK-INFLOW (CFS)	PEAK-OUTFLOW (CFS)	OUTFLOW-VOL (CU-FT)
0.98	.67	12367
INITIAL-STAGE (FT)	TIME-OF-PEAK (HRS)	PEAK-STAGE-ELEV (FT)
.00	8.00	3.24
PEAK STORAGE: 2990 CU-FT		

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1357-5.pnd

25 year Detention Routing:

ENTER [d:] [path] filename [.ext] OF COMPUTED HYDROGRAPH:
1357-25.dev

INFLOW/OUTFLOW ANALYSIS:

PEAK-INFLOW (CFS)	PEAK-OUTFLOW (CFS)	OUTFLOW-VOL (CU-FT)
1.42	.96	17787
INITIAL-STAGE (FT)	TIME-OF-PEAK (HRS)	PEAK-STAGE-ELEV (FT)
.00	8.00	3.61
PEAK STORAGE: 3540 CU-FT		

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1357-25.pnd

Detention Summary:

The detention requirements are to reduce the following design storm events:

2yr, 24-hour storm event must be controlled to 50% of the pre-developed runoff rate of a 2yr 24 hour storm event.

5yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 5yr 24-hour storm event.

25yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 10yr 24-hour storm event.

The detention requirements will be met with a detention pond. The detention area will be 4.25 feet deep with 3.61 feet of detention storage and 0.64 feet or 7.68" of freeboard during a 25 year storm event. The flow control structure will have three orifices and an overflow riser. The bottom orifice will be 1/2 inches in diameter, the middle orifice will be 4 3/4 inches and the top orifice will be 4 1/4 inches.

The following tables show that the detention requirements have been met.

Minimum Peak Rate Stormwater Runoff Control Requirements.

2yr, 24-hour storm event must be controlled to 50% of the pre-developed runoff rate of a 2yr 24 hour storm event.

2-year allowable release rate (1/2 of the 2 year pre dev. runoff)	2-year post development release rate
0.32 cfs	0.32 cfs

5yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 5yr 24-hour storm event.

5-year allowable release rate	5-year post development release rate
0.84 cfs	0.67 cfs

25yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 10yr 24-hour storm event.

25-year allowable release rate	25-year post development release rate
0.96 cfs	0.96 cfs

Water Quality Analysis:

The water quality requirements will be met by retaining the water quality storm event is 1/3 of a 2 year storm event for a minimum of 48 hours.

Water Quality – 1/3 of a 2 Year Storm Event:

 ***** S.C.S. TYPE-1A DISTRIBUTION *****
 ***** 1-YEAR 24-HOUR STORM **** .87" TOTAL PRECIP. *****

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1
 1.44,86,.39,98,5

DATA PRINT-OUT:

AREA (ACRES)	PERVIOUS A CN	IMPERVIOUS A CN	TC (MINUTES)
1.8	1.4 86.0	.4 98.0	5.0
PEAK-Q (CFS) <u>.08</u>	T-PEAK (HRS) 7.83	VOL (CU-FT) 1712	

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
 1357.wq

Water Quality – 1/3 of a 2 Year Storm Event:

ENTER [d:] [path] filename [.ext] OF COMPUTED HYDROGRAPH:
 1357-wq

INFLOW/OUTFLOW ANALYSIS:

PEAK-INFLOW (CFS) .08	PEAK-OUTFLOW (CFS) <u>.01</u>	OUTFLOW-VOL (CU-FT) 825
INITIAL-STAGE (FT) 0.00	TIME-OF-PEAK (HRS) 24.00	PEAK-STAGE-ELEV (FT) 1.84
PEAK STORAGE: 1340 CU-FT		

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
 1357-wq.pnd

Water Quality Summary:

The hydraulic residence time for the water quality storm is 48.50 hours. This meets the required 48 hour hydraulic residence time.

Home Roof Infiltration Facility Analysis:

Each lot is going to have the runoff from their roofs routed to infiltration facilities located on each lot. For preliminary calculations, a value of 2,000 square feet of roof area was used to determine the storage capacity of each infiltration facility on each individual lot. StormTech SC-310 storage chambers will be used for this project.

To adequately determine the storage capacity needed for the infiltration facilities, the 25-year, 24-hour storm runoff of 4.00 inches per The City of Oregon City Grading and Stormwater Standards was ran with SBUH with 2,000 square feet of impervious area. This value represented the roof area being used to determine adequate storage needed.

***** S.C.S. TYPE-1A DISTRIBUTION *****
***** 25-YEAR 24-HOUR STORM ***** 4.00" TOTAL PRECIP. *****

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1
0,0,.046,98,5

DATA PRINT-OUT:

AREA (ACRES)	PERVIOUS		IMPERVIOUS		TC (MINUTES)
	A	CN	A	CN	
.0	.0	.0	.0	98.0	5.0

PEAK-Q (CFS)	T-PEAK (HRS)	VOL (CU-FT)
.05	7.67	628

ENTER [d:] [path] filename [.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
13057-25

This storm was then routed through a preliminary model of the StormTech SC-310 given the product information provided in their design manual. A rate of 1 inch per hour for infiltration was used for preliminary calculations. The routed hydrograph of the 25 year event was routed with 1 chamber up to 4 chambers to be used for storage. For preliminary calculations, the storage area and thus storage volume were calculated at 3 inch interval. During final design, this value will be more accurate and not as conservative as it is shown now.

RESERVOIR ROUTING INFLOW/OUTFLOW ROUTINE

SPECIFY [d:] [path] filename [.ext] OF ROUTING DATA
123.TXT

DISPLAY ROUTING DATA (Y or N)?

Y

ROUTING DATA:

STAGE (FT)	DISCHARGE (CFS)	STORAGE (CU-FT)	PERM-AREA (SQ-FT)
.00	.00	.0	80.0
.25	.00	9.5	160.0
.50	.00	17.9	240.0
.75	.00	38.6	320.0
1.00	.00	57.2	400.0
1.25	.00	74.5	480.0
1.50	.00	89.9	560.0
1.75	.00	101.7	640.0
2.00	.00	111.4	720.0
2.25	.00	120.8	800.0
2.33	.00	124.0	880.0

AVERAGE PERM-RATE: 60.0 MINUTES/INCH

ENTER [d:] [path] filename [.ext] OF COMPUTED HYDROGRAPH:
13047-25

INFLOW/OUTFLOW ANALYSIS:

PEAK-INFLOW (CFS)	PEAK-OUTFLOW (CFS)	OUTFLOW-VOL (CU-FT)
.05	.00	0

INITIAL-STAGE (FT)	TIME-OF-PEAK (HRS)	PEAK-STAGE-ELEV (FT)
134.00	8.17	136.10

PEAK STORAGE: 110 CU-FT

INFILTRATED VOLUME: 576 CU-FT

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

Home Roof Infiltration Facility Summary:

Given the preliminary results, 4 chambers of the StormTech SC-10 model will be needed per 2,000 square feet of roof area per lot. This results again are more conservative than the final design results will be, therefore it is possible one less chamber per 2,000 square feet of roof area might work when final calculations are carried out.

Detention Pond Routing Data

Pond (4-10-14)

DETENTION POND ROUTING DATA

19735/51 Meyers Road Oregon City (SGL13-057)

[illegible]

Curve Numbers and Runoff Coefficients

Table 4-4 MANNING'S COEFFICIENTS/"K" FACTORS

"n" AND "k" Value Used in Time Calculations for Hydrographs		
"n," Sheet Flow Equation Manning's Values (for initial 300 ft. of travel)		n _s
Smooth surfaces (concrete, asphalt, gravel, or bare hand packed soil)		0.01
Fallow fields or loose soil surface (no residue)		0.05
Cultivated soil with residue cover (s # 0.20 ft/ft)		0.06
Cultivated soil with residue cover (s > 0.20 ft/ft)		0.17
Short prairie grass and lawns		0.15
Dense grasses		0.24
Bermuda grass		0.41
Range (natural)		0.13
Woods or forest with light underbrush		0.40
Woods or forest with dense underbrush		0.80
* Manning values for sheet flow only, from Overton and Meadows 1976 (See SCS's TR-55, 1986) "k" Values Used in Travel Time/Time of Concentration Calculations Shallow Concentrated Flow (After the initial 300 ft. of sheet flow, R = 0.1)		k _s
1.	Forest with heavy ground litter and meadows (n = 0.10)	3
2.	Brushy ground with some trees (n = 0.060)	5
3.	Fallow or minimum tillage cultivation (n=0.040)	8
4.	High grass (n=0.035)	9
5.	Short grass, pasture, and lawns (n=0.030)	11
6.	Nearly bare ground (n=0.025)	13
7.	Paved and gravel areas (n=0.012)	27
** Channel flow (intermittent) (At beginning of visible channels R=0.2)		k _c
1.	Forested swale with heavy ground litter (n=0.10)	5
2.	Forested drainage course/ravine with defined channel bed (n=0.050)	10
3.	Rock-lined waterway (n=0.035)	15
4.	Grassed waterway (n=0.030)	17
5.	Earth-lined waterway (n=0.025)	20
6.	CMP pipe (n=0.024)	21
7.	Concrete pipe (0.012)	42
8.	Other waterways and pipe 0.508/n	
Channel flow (Continuous stream, R=0.4)		k _c
9.	Meandering stream with some pools (n=0.040)	20
10.	Rock-lined stream (n=0.035)	23
11.	Grass-lined stream (n=0.030)	27
12.	Other streams, man-made channels and pipe 0.807/n **	
** See Table 6-3 for additional Mannings "n" values for open channels		

4.1.2.1 RAINFALL DISTRIBUTION

The rainfall distribution to be used within the City is the design storm of 24-hour duration based on the standard SCS Type 1A rainfall distribution (See Figure 4-2).

Table 4-1 below links the total depth per year of reoccurrence.

Table 4-1: TOTAL DEPTH	
Reoccurrence Year	Total Depth
2	2.6
5	3.1
10	3.4
25	4.0
50	4.4
100	4.5

Table 4-3 MODIFIED CURVE NUMBERS

SCS Western Washington Runoff Curve Numbers					
Runoff curve numbers for selected agricultural, suburban, and urban land use for Type 1A rainfall distribution, 24-hour storm duration. (Published by SCS in 1982)					
LAND USE DESCRIPTION		CURVE NUMBERS BY HYDROLOGIC SOIL GROUP			
		A	B	C	D
Cultivated land ¹	Winter Condition	86	91	94	95
Mountain Open Areas:	Low growing brush and grassland.	74	82	89	92
Meadow or pasture:		65	78	85	89
Wood or forest land:	Undisturbed	42	64	76	81
	Established second growth ²	48	68	78	83
	Young second growth or brush	55	72	81	86
Orchard:	With over crop	81	88	92	94
Open spaces, lawns, parks, golf courses, cemeteries, landscaping					
Good Condition:	Grass cover on > =75% of area	68	80	86	90
Fair Condition:	Grass cover on 50-75% of area	77	85	90	92
Gravel Roads and Parking Lots:		76	85	89	91
Dirt Roads and Parking Lots:		72	82	87	89
Impervious surfaces, pavement, roofs, etc.		98	98	98	98
Open water bodies: Lakes, wetlands, ponds, etc.		100	100	100	100
Single Family Residential ³ :		Select a separate curve number for pervious and impervious portions of the site or basin.			
Dwelling unit/gross acre	% Impervious ⁴				
1.0 DU/GA	15				
1.5 DU/GA	20				
2.0 DU/GA	25				
2.5 DU/GA	30				
3.0 DU/GA	34				
3.5 DU/GA	38				
4.0 DU/GA	42				
4.5 DU/GA	46				
5.0 DU/GA	48				
5.5 DU/GA	50				
6.0 DU/GA	52				
6.5 DU/GA	54				
7.0 DU/GA	56				
Planned Unit Developments, condominiums, apartments, commercial businesses & industrial areas ³		Select a separate curve number for pervious and impervious portions of the site or basin.			
Must be computed					

¹ For a more detailed description of agricultural land use curve numbers, refer to National Engineering Handbook, Sec. 4, Hydrology, Chapter 9, August 1972.

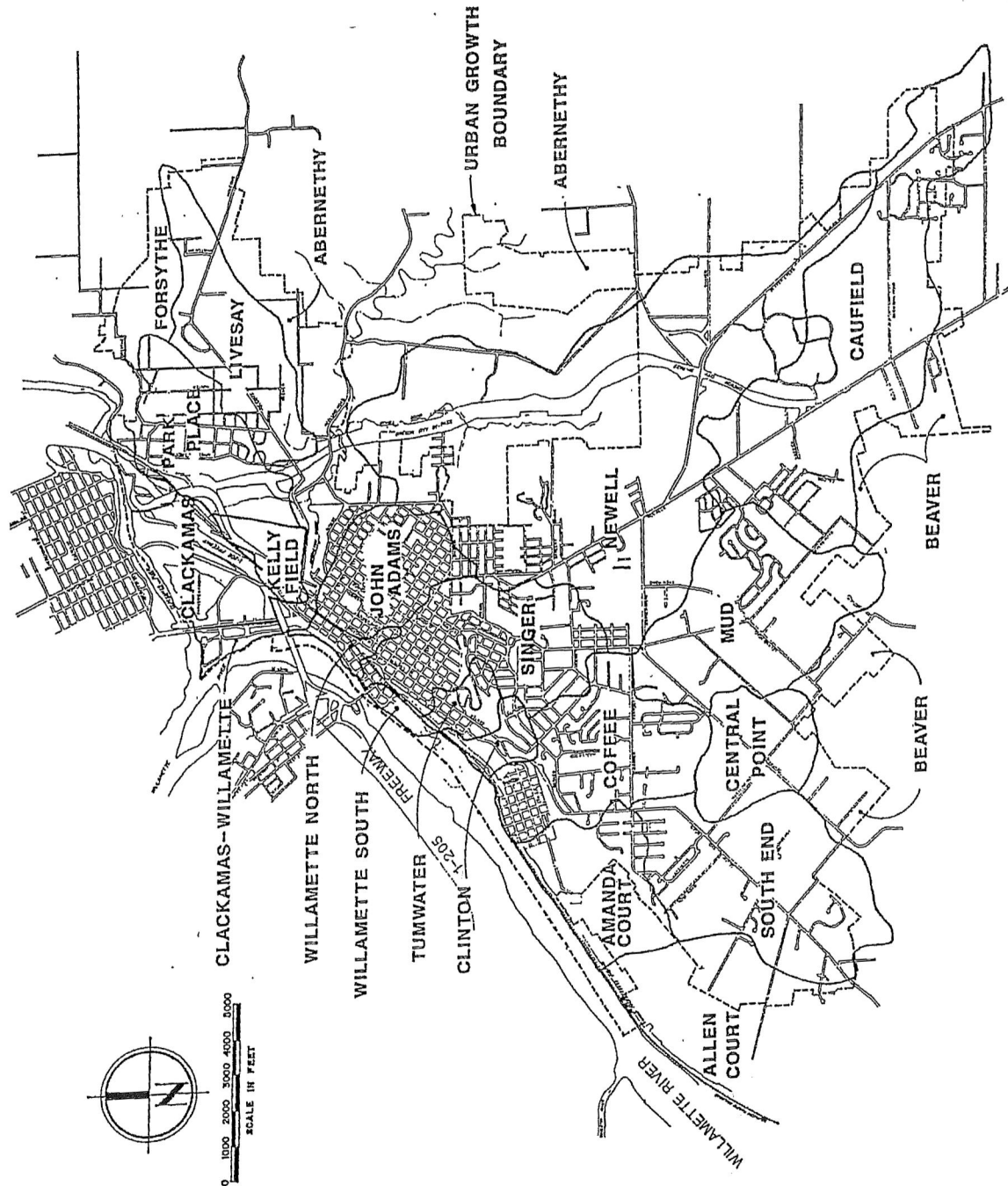
² Modified by KCFW, 1995.

³ Assumes roof and driveway runoff is directed into street/storm system.

⁴ The remaining pervious areas (lawn) are considered to be in good condition for these curve numbers.

FIGURE 4-1

DRAINAGE BASIN BOUNDARIES
THROUGHOUT THE OREGON CITY AREA

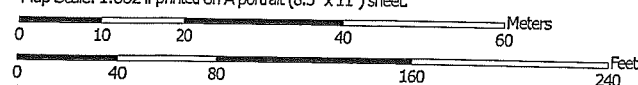


Soil Map and Soil Data

Soil Map—Clackamas County Area, Oregon



Map Scale: 1:862 if printed on A portrait (8.5" x 11") sheet.



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




Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey


Soil Map—Clackamas County Area, Oregon


MAP LEGEND


Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout


 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp


 Mine or Quarry

 Miscellaneous Water


 Perennial Water


 Rock Outcrop


 Saline Spot

 Sandy Spot


 Severely Eroded Spot


 Sinkhole


 Slide or Slip

 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other


 Special Line Features


Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

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: Clackamas County Area, Oregon
Survey Area Data: Version 7, 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 Unit Legend

Clackamas County Area, Oregon (OR610)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8B	Bornstedt silt loam, 0 to 8 percent slopes	0.2	9.3%
45B	Jory silty clay loam, 2 to 8 percent slopes	1.7	90.7%
Totals for Area of Interest		1.8	100.0%

Physical Soil Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (K_{sat}), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates in the table are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of organic matter in a soil can be maintained by returning crop residue to the soil.

Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and Ksat. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook."

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Reference:

United States Department of Agriculture, Natural Resources Conservation Service.
National soil survey handbook, title 430-VI. (<http://soils.usda.gov>)

Report—Physical Soil Properties

Physical Soil Properties—Clackamas County Area, Oregon														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	micro m/sec	In/In	Pct	Pct					
8B—Bornstedt silt loam, 0 to 8 percent slopes														
Bornstedt	0-8	- 9-	-67-	20-24- 27	1.30-1.50	4.00-14.00	0.15-0.17	0.0-2.9	3.0-4.0	.37	.37	5	6	48
	8-33	- 7-	-62-	27-31- 35	1.40-1.60	4.00-14.00	0.13-0.17	0.0-2.9	1.0-3.0	.37	.37			
	33-71	- 7-	-48-	40-45- 50	1.30-1.50	0.42-1.40	0.12-0.15	0.0-2.9	0.5-1.0	.32	.32			
45B—Jory silty clay loam, 2 to 8 percent slopes														
Jory	0-13	-19-	-48-	27-34- 40	1.20-1.30	4.00-14.00	0.18-0.21	0.0-2.9	3.0-6.0	.32	.32	5	6	48
	13-60	- 3-	-45-	45-53- 60	1.30-1.50	1.40-4.00	0.15-0.17	3.0-5.9	0.5-2.0	.24	.24			

Data Source Information

Soil Survey Area: Clackamas County Area, Oregon
 Survey Area Data: Version 7, Aug 20, 2012



Real-World Geotechnical Solutions
Investigation • Design • Construction Support

January 8, 2014

Project No. 13-3254

Jeco Investments, Inc.
P.O. Box 279
Boring, OR 97009
Phone 503-663-1144
Fax 503-663-6251 CC:

Tom Sisul Via email: tomsisul@sisulengineering.com

**SUBJECT: INFILTRATION TEST RESULTS
MEYERS ROAD SUBDIVISION
OREGON CITY, OREGON**

This letter presents an evaluation of slope hazard and the results of our soil infiltration testing for aid in design of an on-site stormwater infiltration system for the new subdivision located at 19751 Meyers Road in Oregon City, Oregon.

On December 19, 2013, GeoPacific Engineering, Inc.'s engineer, Jim Imbrie, observed the excavation of three test pits and conducted falling head infiltration tests. Test pits TP-1 and TP-3 were excavated to depths of 3 feet below existing grade, and test pit TP-2 was excavated to 5 feet below existing grade at the approximate locations indicated on the attached site plan (Figure 1). Infiltration tests were conducted in test pits TP-1 through TP-3 at these depths. Design of the stormwater infiltration system is to be completed by others.

SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The subject site is less than 2 acres in size and is located on the south side of Meyers Road in Oregon City, Oregon. Topography at the site is flat to gently sloping, mostly to the north with grades estimated to be less than 5 percent. The property is currently occupied by one home. Vegetation consists primarily of mostly lawn and sparse trees.

Based on the preliminary site plans provided, the proposed development consists of a 10-lot subdivision for single family homes, driveways, storm water facilities, and associated underground utilities. A grading plan has not been provided; however, we anticipate fills will be minimal and cuts will be on the order of up to 5 feet for the storm facilities.

Project No. 13-3254
Meyers Road Subdivision Infiltration

SOIL CONDITIONS

Soils in test pits generally consisted of a moderately organic topsoil horizon consisting of SILT (OL-ML) extending to a depth of about 6 inches. In test pits, the topsoil was underlain by light brown, Clayey SILT (ML). The silt was medium stiff to stiff and became very stiff at about 4 feet depth.

GROUNDWATER

On December 19, 2013, soils encountered were moist. Neither static groundwater nor groundwater seepage was encountered to a maximum depth of 5 feet. It is anticipated that groundwater conditions will vary depending on the season, local subsurface conditions, changes in site utilization, and other factors.

INFILTRATION TESTING PROCEDURES AND RESULTS

The open hole method of infiltration testing was performed. Soils in test pits were pre-saturated twice with 12-24 inches of water prior to beginning the infiltration test. The water level was measured at 15 minute to half hour intervals with reference to the ground surface. The results of our infiltration testing are presented in Table 1 and in the paragraph below.

Table 1. Summary of Infiltration Test Results

Exploration Designation	Depth (feet)	Soil Type	Infiltration Rate(in/hr)	Hydraulic Head Range (inches)
TP-1	3	Medium Stiff Clayey SILT	2	12-18
TP-2	5	Very Stiff Clayey SILT	0	12
TP-3	3	Medium Stiff Clayey SILT	2	12-18

In test pits TP-1 and TP-3, the measured vertical infiltration rate at a depth of 3 feet was 2 inches per hour under a falling head of 12 to 18 inches. The measured vertical infiltration in test pit TP-2 at a depth of 5 feet was 0 inches per hour under a head of 12 inches. The infiltration rates do not incorporate a factor of safety. For the design infiltration rate, the system designer should incorporate an appropriate factor of safety against slowing of the rate over time due to biological and sediment clogging.

Project No. 13-3254
Meyers Road Subdivision Infiltration

UNCERTAINTIES AND LIMITATIONS

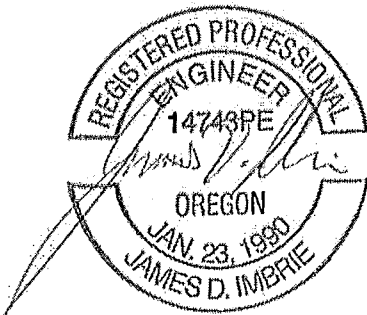
This scope of this study includes measuring infiltration rates only. Rates of infiltration that were affected by impermeable soils or groundwater seepage were not reported. This study did not include risk assessment for geologic hazards or flooding on the site. Environmental implications of stormwater disposal or Oregon City or ODEQ approval at this site are also beyond the scope of this report.

Infiltration test methods and procedures attempt to simulate the as-built conditions of the planned subsurface disposal system. However, due to natural variations in soil properties, actual infiltration rates may vary from the measured and/or recommended design rates. All systems should be constructed such that potential overflow is discharged in a controlled manner away from structures, and all systems should include an adequate factor of safety. Infiltration rates presented in this report should not be applied to inappropriate or complex hydrological models such as a closed basin without extensive further studies. This report presents infiltration test results only, and should not be construed as an approval of a system design.

Please call if you have any questions or need further information.

Sincerely,

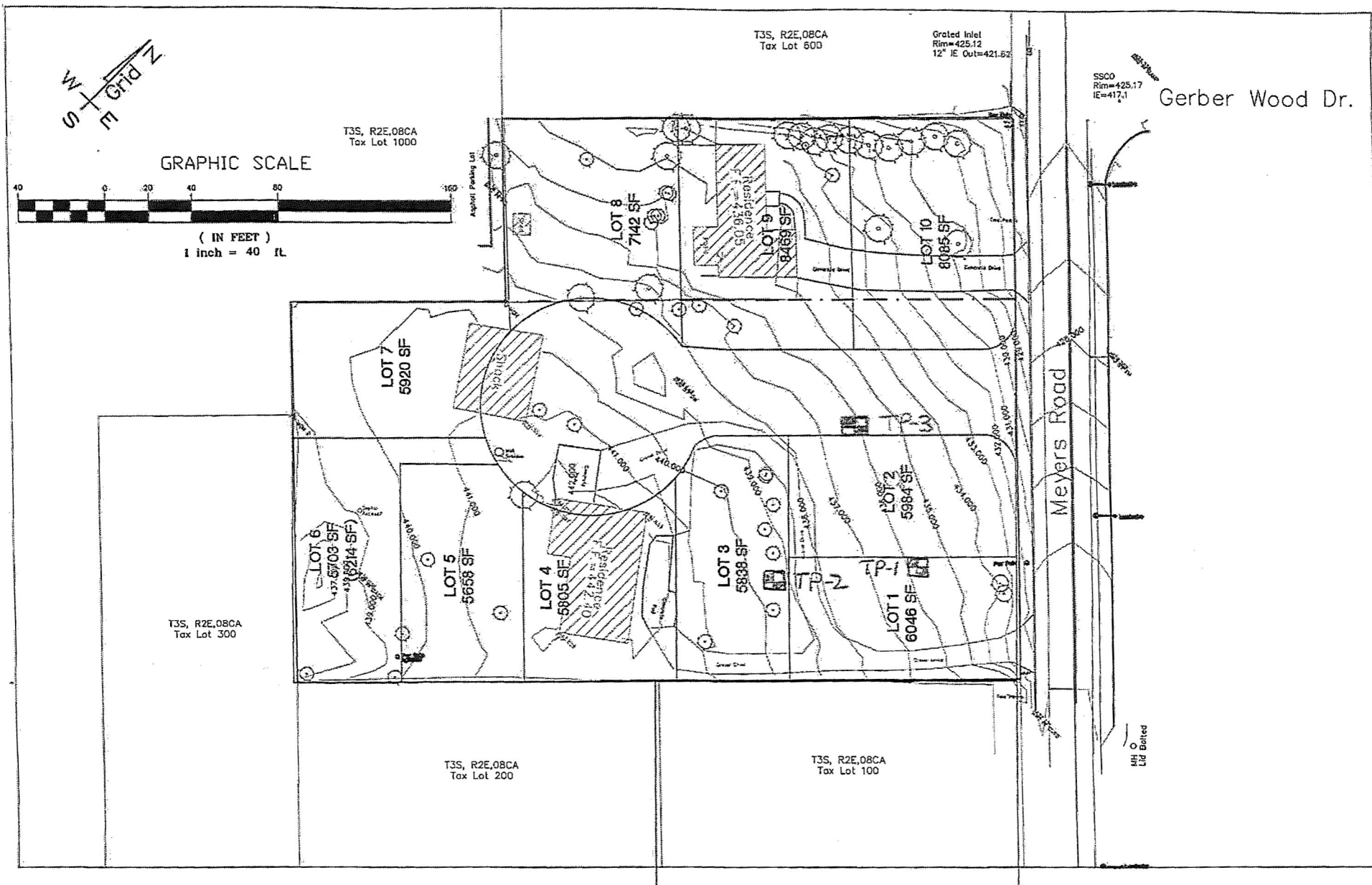
GeoPacific Engineering, Inc.



EXPIRES: 06/30/2015

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

Attachments: Figure1 – Site and Exploration Plan



Site and Exploration Plan-Figure 1

**First American**

503-659-0777
First American Title Company of Oregon
 121 SW Morrison St, Fl 3
 Portland, OR 97204
 Phn - (503)222-3651 (800)929-3651
 Fax - (877)242-3513

Order No.: 7072-2182096
 November 22, 2013

FOR QUESTIONS REGARDING YOUR CLOSING, PLEASE CONTACT:**DIANE HAMMONS**, Escrow Officer/Closer

Phone: (503)659-0069 - Fax: (866)902-9870- Email: dhammons@firstam.com

First American Title Company of Oregon

9200 SE Sunnybrook Blvd., Ste 400, Clackamas, OR 97015

FOR ALL QUESTIONS REGARDING THIS PRELIMINARY REPORT, PLEASE CONTACT:**Edmund Salvati**, Title Officer

Toll Free: (800)929-3651 - Direct: (503)790-7867 - Email: esalvati@firstam.com

Preliminary Title Report**County Tax Roll Situs Address:** 19751 Meyers Road, Oregon City, OR 97045**Proposed Insured Lender:** Clackamas County Bank**Proposed Borrower:** **Jeco Investment Inc**

2006 ALTA Owners Standard Coverage	Liability \$	290,000.00	Premium \$	925.00
2006 ALTA Owners Extended Coverage	Liability \$		Premium \$	
2006 ALTA Lenders Standard Coverage	Liability \$		Premium \$	
2006 ALTA Lenders Extended Coverage	Liability \$	289,000.00	Premium \$	377.00
Endorsement 9, 22 & 8.1			Premium \$	100.00
Govt Service Charge			Cost \$	
City Lien/Service District Search			Cost \$	
Other			Cost \$	

We are prepared to Issue Title Insurance Policy or Policies of First American Title Insurance Company, a California Corporation in the form and amount shown above, insuring title to the following described land:

The land referred to in this report is described in Exhibit A attached hereto.

and as of November 20, 2013 at 8:00 a.m., title to the fee simple estate is vested in:

Wayne R. Markham and Arminda Markham, as tenants by the entirety

Subject to the exceptions, exclusions, and stipulations which are ordinarily part of such Policy form and the following:

Preliminary Report

Order No.: 7072-2182096

Page 2 of 6

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; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. 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, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.
5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

The exceptions to coverage 1-5 inclusive as set forth above will remain on any subsequently issued Standard Coverage Title Insurance Policy.

In order to remove these exceptions to coverage in the issuance of an Extended Coverage Policy the following items are required to be furnished to the Company; additional exceptions to coverage may be added upon review of such information:

- A. Survey or alternative acceptable to the company
 - B. Affidavit regarding possession
 - C. Proof that there is no new construction or remodeling of any improvement located on the premises. In the event of new construction or remodeling the following is required:
 - i. Satisfactory evidence that no construction liens will be filed; or
 - ii. Adequate security to protect against actual or potential construction liens;
 - iii. Payment of additional premiums as required by the Industry Rate Filing approved by the Insurance Division of the State of Oregon
6. Taxes for the year 2013-2014
- | | | |
|--------------------|----|---|
| Tax Amount | \$ | 3,362.44 |
| Unpaid Balance: | \$ | 2,241.62, plus interest and penalties, if any |
| Code No.: | | 062-088 |
| Map & Tax Lot No.: | | 32E08CA00600 |
| Property ID No.: | | 00867930 |
7. City liens, if any, of the City of Oregon City.

Note: There are no liens as of November 20, 2013. All outstanding utility and user fees are not liens and therefore are excluded from coverage.

Preliminary Report

Order No.: 7072-2182096

Page 3 of 6

8. These premises are within the boundaries of the Clackamas River Water District and are subject to the levies and assessments thereof.
9. Line of Credit Trust Deed, including the terms and provisions thereof, given to secure an indebtedness of up to \$50,000.00
- Grantor: Wayne R. Markham and Arminda Markham, husband and wife
Beneficiary: Portland Teachers Credit Union
Trustee: Peter C. McCord
Dated: May 05, 2003
Recorded: May 06, 2003
Recording Information: 2003 056641

Modification and/or amendment by instrument:

Recording Information: June 27, 2011 as Fee No. 2011 036363

10. Easement Agreement and the terms and conditions thereof:
- Between: Alvin B. and Genevieve R. Bettis
And: Wayne R. and Arminda Markham
Recording Information: January 11, 2006 as Fee No. 2006 002923

- END OF EXCEPTIONS -

NOTE: We find no matters of public record against Jeco Investment Inc that will take priority over any trust deed, mortgage or other security instrument given to purchase the subject real property as established by ORS 18.165.

NOTE: According to the public record, the following deed(s) affecting the property herein described have been recorded within 24 months of the effective date of this report: NONE

THANK YOU FOR CHOOSING FIRST AMERICAN TITLE!
WE KNOW YOU HAVE A CHOICE!

RECORDING INFORMATION

Filing Address: **Clackamas County**
1710 Red Soll Ct, Suite 110
Oregon City, OR 97045

Recording Fees: \$ **5.00** E-Recording per document
\$ **5.00** per page
\$ **5.00** per document (GIS Fee)
\$ **10.00** per document (Public Land Corner Preservation Fund)
\$ **11.00** per document (OLIS Assessment & Taxation Fee)
\$ **17.00** per document (Oregon Housing Alliance Fee)
\$ **5.00** for each additional document title
\$ **20.00** non-standard fee

Preliminary Report

Order No.: 7072-2102096

Page 6 of 6

Exhibit "A"

Real property in the County of Clackamas, State of Oregon, described as follows:

Parcel I:

A tract of land in the Southwest quarter of Section 8, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, and being in the John Howland Donation Land Claim No. 45, described as follows:

Beginning at a point in the Northeasterly line of said Howland Donation Land Claim which is South 46°45' East 3815 feet from the most Northerly corner of said Donation Land Claim; thence South 43° West 25 feet to the true point of beginning of the tract herein to be described; said point being the most Northerly corner of tract described in deed to R.C. Smelser, Inc., recorded December 2, 1969 as Recorder's Fee No. 69-25091, Film Records; thence continuing South 43° West along the Northwestern line of said R.C. Smelser tract 167 feet to the most Westerly corner thereof; thence North 46° 45' West along the Northeasterly line of tract described in deed to Wendell Schwab, et al, recorded February 18, 1969 as Recorder's Fee No. 69-2775, Film Records, 15 feet to the most Northerly corner thereof; thence South 43° West along the Northwestern line of said Schwab tract, 167 feet to the most Westerly corner thereof and a point in the most Southerly Northeast line of tract described in contract of sale to Lamont Lalsher, recorded April 14, 1969, as Recorder's Fee No. 69-6247, Film Records; thence North 46°45' West 163 feet, more or less, to an angle corner of said Lalsher tract; thence North 43° East along the most Northerly Southeast line of said Lalsher tract, 334 feet to the Southwesterly line of County Road No. 1690; thence Southeasterly along said Southwesterly line, 178 feet, more or less, to the true point of beginning.

Parcel II:

A portion of the Southwest quarter of Section 8, Township 3 South, Range 2 East, Willamette Meridian, being in the John Howland Donation Land Claim No. 45, described as follows:

Beginning at the most Southerly point of that certain tract of property described in deed to Wayne R. Markham and Armlinda Markham, recorded November 9, 1972 as Recorder's Fee No. 72-34284, Film Records; thence South 46°45' East 15 feet; thence North 43° East parallel to the Southeasterly line of the aforesaid Markham tract, 167 feet to a point on the Southerly line of the said Markham tract; thence North 46°45' West along a jog in the Southeasterly line of the afore-described Markham tract a distance of 15 feet; thence South 43° West along the Southeasterly line of said Markham tract, 167 feet to the point of beginning.

NOTE: This legal description was created prior to January 1, 2008.


First American

First American Title Company of Oregon
 121 SW Morrison St, FL 3
 Portland, OR 97204
 Phn - (503)222-3651 (800)929-3651
 Fax - (877)242-3513

Order No.: 7072-2182100
 November 22, 2013

FOR QUESTIONS REGARDING YOUR CLOSING, PLEASE CONTACT:

DIANE HAMMONS, Escrow Officer/Closer
 Phone: (503)659-0069 - Fax: (866)902-9870- Email: dhammons@firstam.com
 First American Title Company of Oregon
 9200 SE Sunnybrook Blvd., Ste 400, Clackamas, OR 97015

FOR ALL QUESTIONS REGARDING THIS PRELIMINARY REPORT, PLEASE CONTACT:

Edmund Salvati, Title Officer
 Toll Free: (800)929-3651 - Direct: (503)790-7867 - Email: esalvati@firstam.com

Preliminary Title Report

County Tax Roll Situs Address: 19735 Meyers Road, Oregon City, OR 97045

Proposed Insured Lender: Clackamas County Bank

Proposed Borrower: Jeco Investment Inc.

2006 ALTA Owners Standard Coverage	Liability \$	225,000.00	Premium \$	572.00	STR
2006 ALTA Owners Extended Coverage	Liability \$		Premium \$		
2006 ALTA Lenders Standard Coverage	Liability \$		Premium \$		
2006 ALTA Lenders Extended Coverage	Liability \$	224,000.00	Premium \$	328.00	
Endorsement 9, 22 & 8.1			Premium \$	100.00	
Govt Service Charge			Cost \$		
City Lien/Service District Search			Cost \$		
Other			Cost \$		

We are prepared to Issue Title Insurance Policy or Policies of First American Title Insurance Company, a California Corporation in the form and amount shown above, Insuring title to the following described land:

Lot 3, Block 1, JOHN ARTHUR ADDITION, in the City of Oregon City, County of Clackamas and State of Oregon.

and as of November 20, 2013 at 8:00 a.m., title to the fee simple estate is vested in:

Jason Melonuk

Subject to the exceptions, exclusions, and stipulations which are ordinarily part of such Policy form and the following:

This report is for the exclusive use of the parties herein shown and is preliminary to the issuance of a title insurance policy and shall become void unless a policy is issued, and the full premium paid.

Preliminary Report

Order No.: 7072-2182100

Page 2 of 6

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; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. 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, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.
5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

The exceptions to coverage 1-5 inclusive as set forth above will remain on any subsequently issued Standard Coverage Title Insurance Policy.

In order to remove these exceptions to coverage in the issuance of an Extended Coverage Policy the following items are required to be furnished to the Company; additional exceptions to coverage may be added upon review of such information:

- A. Survey or alternative acceptable to the company
 - B. Affidavit regarding possession
 - C. Proof that there is no new construction or remodeling of any improvement located on the premises. In the event of new construction or remodeling the following is required:
 - I. Satisfactory evidence that no construction liens will be filed; or
 - II. Adequate security to protect against actual or potential construction liens;
 - III. Payment of additional premiums as required by the Industry Rate Filing approved by the Insurance Division of the State of Oregon
6. City liens, if any, of the City of Oregon City.
- Note: There are no liens as of November 20, 2013. All outstanding utility and user fees are not liens and therefore are excluded from coverage.
7. These premises are within the boundaries of the Clackamas River Water District and are subject to the levies and assessments thereof.
8. Covenants, conditions, restrictions and/or easements; but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, family status, or national origin to the extent such covenants, conditions or restrictions violate Title 42, Section 3604(c), of the United States Codes:

Recording Information: September 24, 1975 as Fee No. 75027610

Preliminary Report

Order No.: 7072-2182100

Page 3 of 6

9. Deed of Trust and the terms and conditions thereof.
- | | |
|------------------------|---|
| Grantor/Trustor: | Jason Melonuk, a Married man |
| Grantee/Beneficiary: | Mortgage Electronic Registration Systems, Inc., MERS solely as a nominee for U.S. Bank N.A., Its successors and assigns |
| Trustee: | Fidelity National Title Insurance |
| Amount: | \$219,450.00 |
| Recorded: | February 23, 2011 |
| Recording Information: | 2011 012548 |
10. The Corporation Division of the State of Oregon has no record of Jeco Investment Inc..

- END OF EXCEPTIONS -

NOTE: Any conveyance or encumbrance by Jeco Investment Inc., should be executed pursuant to a proper resolution of the shareholders voted on at a duly called meeting of the shareholders in accordance with the By-Laws or other authority of the corporation.

Certified copies of the resolution authorizing the conveyance and encumbrances and of the minutes of the meeting of the shareholders and copies of the By-Laws or other authority for such conveyance or encumbrance should be furnished for examination.

The resolution should specify the officers authorized to sign on behalf of the corporation.

NOTE: We find no matters of public record against Jeco Investment Inc. that will take priority over any trust deed, mortgage or other security instrument given to purchase the subject real property as established by ORS 18.165.

NOTE: Taxes for the year 2013-2014 PAID IN FULL

Tax Amount:	\$3,060.27
Map No.:	32E08CA00700
Property ID:	00868001
Tax Code No.:	062-088

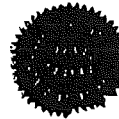
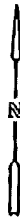
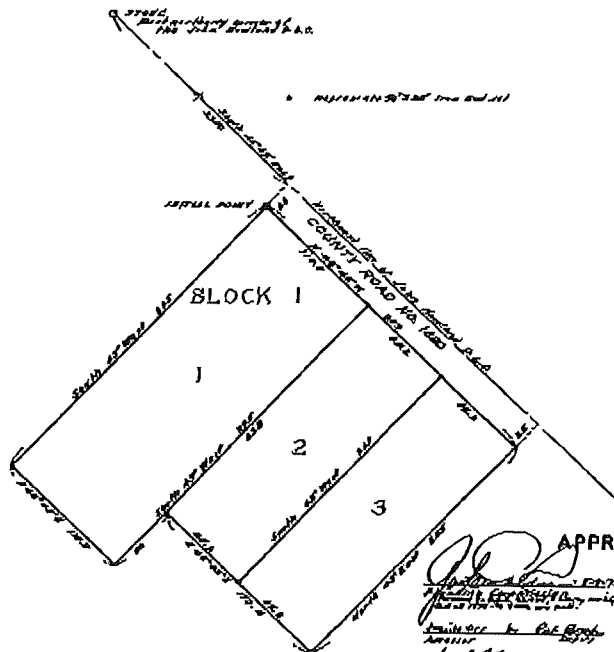
NOTE: According to the public record, the following deed(s) affecting the property herein described have been recorded within 24 months of the effective date of this report: NONE

THANK YOU FOR CHOOSING FIRST AMERICAN TITLE!
WE KNOW YOU HAVE A CHOICE!

JOHN ARTHUR ADDITION

A PART OF THE JOHN S. HOWLAND D.L.C.
IN SECTION 8, T35, R2E, W.M.

SCALE 1" = 50'



SURVEYOR'S CERTIFICATE

[illegible]

Ben-Haim Manna
Subscribed and sworn to before me this 11th day of July
1975.
Alvin B. Thomas
Notary Public for Oregon
My commission expires June 12, 1978

DEDICATION

[illegible]

2000 1111 2nd day of July, 1915.
Joseph W. Black Laura E. Black

State of Oregon
County of Clatsop) ss.

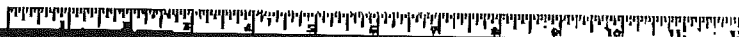
On this _____ day of _____ 1925 before me appeared
John H. Black and John E. Black, both of the county of
Clatsop, and stated that the signing of the form
attached hereto was their free and voluntary act,
and they acknowledged the same before me and attested
my hand this day and year first above written.

Edmund R. Treman

Notary Public for Oregon

My commission expires _____
Jan - 17, 1927

APPROVALS

[illegible]

2117

132-450-38

DECLARATION OF CONDITIONS AND RESTRICTIONS

FOR

JOHN ARTHUR

TO THE PUBLIC

DEED RECORDS

1. The undersigned do hereby certify and declare that the following reservations, conditions, covenants and agreements shall become and hereby are made a part of all conveyances of property owned by the above-named persons or corporation within the Plat of JOHN ARTHUR, as the same appears in Plat recorded in Book Page of Plats in Clackamas County, Oregon, of which conveyances and agreements shall become a part by reference hereto and to which it shall thereupon apply as fully and with the same effect as if set forth at large therein.
2. No lot shall be used except for residential purposes. No building shall be erected, altered, placed, or permitted to remain on any lot other than one detached single family dwelling not to exceed two stories in height and a private garage for not more than two cars.
3. No dwelling shall be erected or placed on any residential lot which has a width of less than 50 feet at the front building setback line; those lots fronting on cul de sacs or curves are excepted.
4. The ground floor area of the main structure, exclusive of one-story open porches and garages shall be not less than 900 square feet for a one-story dwelling, nor less than 800 square feet for a dwelling of more than one story.
5. No dwelling or other building shall be erected within 25 feet of the front lot line, or nearer than 15 feet to any side street line. No building shall be located nearer than 5 feet to an interior lot line, except that in side yards shall be required for a garage or other permitted accessory building located 25 feet or more from the minimum front building setback line. No dwelling shall be located on any interior lot nearer than 25 feet to the rear lot line. For the purpose of this covenant, eaves, steps and open porches which protrude past any setback line shall not be construed as a violation of said setback lines.
6. An easement over and across all land situated within 5 feet of front, rear, and side lines of each lot or residential building tract for the installation and maintenance of utilities and drainage facilities is hereby reserved.
7. No noxious or offensive activity shall be carried on upon any lot, nor shall anything be done thereon which may be or may become an annoyance or nuisance to the neighborhood.
8. No structure of a temporary character, trailer, basement, tent, shack, garage, barn or other outbuilding shall be used on any lot at any time as a residence either temporarily, or permanently.
9. No sign of any kind shall be displayed to the public view on any lot except one professional sign of not more than one square foot, one sign of not more than five square feet advertising the property for sale or rent, or signs used by a builder to advertise the property during the construction and sales period. An appropriate entrance marker is excepted herefrom.
10. No animals, livestock, or poultry of any kind shall be raised, bred, or kept on any lot, except that dogs, cats or other household pets may be kept provided that they are not kept, bred, or maintained for any commercial purpose.
11. These covenants are to run with the land and shall be binding on all

Recorded by
Pioneer National
Title Insurance Company

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-2-

parties and all persons claiming under them for a period of thirty years from the date these covenants are recorded, after which time said covenants shall be automatically extended for successive periods of 10 years unless an instrument signed by a majority of the then owners of the lots has been recorded, agreeing to change said covenants in whole or in part.

12. Enforcement shall be by proceedings at law or in equity against any person or persons violating or attempting to violate any covenants either to restrain violation or to recover damages.

13. Invalidatio of any one of these covenants by judgment or court order shall in no wise affect any of the other provisions which shall remain in full force and effect.

Joseph W. Black
Joseph W. Black

Laura E. Black
Laura E. Black

State of Oregon
County of _____

On this 19 day of July, 1979, before me, the undersigned, a Notary Public in and for the said County and State, personally appeared the within named Joseph W. Black and Laura E. Black who are known to me to be the identical individuals described in and who executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

Ellen B. Mason
Notary Public for Oregon

Jan. 19, 1979
My Commission expires



STATE OF OREGON
County of Clatsop
I, George B. Brown, County Clerk, do hereby certify that the within instrument was duly recorded in the records of said county at _____
1975 SEP 24 PM 4 18



2

Gaffney Lane Neighborhood Association (GLNA)
January 23, 2014

1. Call to Order: Amy Willhite, Chair 7:14 pm
2. In Attendance
 - Ed Turpin
 - Ellen Nelson
 - Ken Hanson
 - Sharon Hare
 - Joan Schultze
 - Ed Warmoth
 - Mike Albin
 - Sgt. Cynthia Gates
 - Amy Willhite, Chair
 - Justin Young, OCPD
 - Tom Sisul
 - Connie Mueller
 - Nick Mueller
 - Jeff Mueller
3. Old Business: Amy
 - reminded group of our vacant Officer Positions
 - reminded group we are looking for another CIC Representative
 - reminded group we are looking for a representative for the Chiefs Advisory Group
 - informed members that the best action to take for getting changes made to the intersection of Garden Meadow Dr and Mollala Ave would be to present to the TAC. Amy will email John Lewis to get on their agenda for an upcoming meeting.
4. New Business
 - Amy passed along information from the latest CIC and CAG meetings regarding vacancies on boards/commissions and upcoming press release regarding Officer Libke.
 - Det. Sgt. Young shared information regarding April shred event, congestion/parking on local streets, 2013 statistics, locking vehicles and the May 10th Safety Patrol Picnic.
 - Tom Sisul, Sisul Engineering, showed proposed plans for culdesac and proposed zone change for the parcels at 19735 and 19751 Meyers Rd. Rezoning from R-8 to R-6 would allow for 10 lots. 3 of the 10 lots exceed 6,000 sq ft to meet the city's allowed average lot size. He explained that 2 of the homes were required to face Meyers Rd, however all driveways would be on the culdesac. They hope to have application in to the city in the next week or two.
 - Connie Mueller, JECO Investments, explained that the new homes would be 2 story, 3 bedroom 2.5 baths, approx 1700-2000 sq ft and most likely range from \$270,000-\$310,000 in price. The siding would be Hardy Plank. They would leave one of the existing homes in place.
5. Comments/Concerns
 - Chris Wadsworth, OCPD Community Outreach, was holding a Neighborhood Watch Informational meeting tonight also, and members would like to invite her to present this information at an upcoming meeting.
 - Ed Warmoth invited members to an Open House at Berry Hill, Thurs 2/20 3-6pm, to show off their new upgrades.
6. Meeting Adjourned: 8:04 pm

Gaffney Lane Neighborhood Assoc.

[illegible]

PRE-APPLICATION MEETING NOTES

Project Number: PA 13-38
Project Name: Meyers Road 8-lot Subdivision / Zone Change R-8 to R-6
Meeting Date: December 4, 2013

Proposed Project:

The applicant has proposed an 8-lot subdivision and potential zone change from R-8 to R-6.

General Information:

- Location: 19751 and 19735 Meyers Road
- Zoning: “R-8” Single Family Dwelling District
- Applicable Overlay Districts: None
- Transportation System Plan: Adopted August 2013
 - Functional Classification: Meyers – Minor Arterial

<u>Road Classification</u>	<u>Comprehensive Plan Designation</u>	<u>Right-of-Way Width</u>	<u>Pavement Width</u>	<u>Public Access</u>	<u>Sidewalk</u>	<u>Landscape Strip</u>	<u>Bike Lane</u>	<u>Street Parking</u>	<u>Travel Lanes</u>	<u>Median</u>
<u>Minor Arterial</u>	<u>Mixed Use, Commercial or Public/Quasi Public</u>	<u>116 ft.</u>	<u>94 ft.</u>	<u>0.5 ft.</u>	<u>10.5 ft. sidewalk including 5 ft.x5 ft. tree wells</u>		<u>6 ft.</u>	<u>8 ft.</u>	<u>(5) 12 ft. Lanes</u>	<u>6 ft.</u>
	<u>Industrial</u>	<u>118 ft.</u>	<u>86 ft.</u>	<u>0.5 ft.</u>	<u>5 ft.</u>	<u>10.5 ft.</u>	<u>6 ft.</u>	<u>7 ft.</u>	<u>(5) 12 ft. Lanes</u>	<u>N/A</u>
	<u>Residential</u>	<u>100 ft.</u>	<u>68 ft.</u>	<u>0.5 ft.</u>	<u>5 ft.</u>	<u>10.5 ft.</u>	<u>6 ft.</u>	<u>7 ft.</u>	<u>(3) 12 ft. Lanes</u>	<u>6 ft.</u>

- Pedestrian System:
 - Oregon City Loop Trail – Regional Transportation Plan (RTP) project
 - Meyers Road Shared Use Path – Project S23
 - Project Type: Shared-Use Path Solution
 - Description: Meyers Road Shared-Use Path
 - Extent: Meyers road-Beavercreek Road Shared-Use Path to OR 213
 - Funding: Not Likely
 - Pedestrian System Plan: Hunter – Sidewalks needed on both sides of street
- Applications anticipated: Subdivision
- Feasibility of rezoning request to R-6: To be discussed at the pre-application conference.

See attached OCMAP .pdf files for Water, Sewer, Stormwater, Contours, and Transportation

PLANNING COMMENTS

Subdivision

The proposed R-8 subdivision layout generally demonstrated compliance with the subdivision criteria. Please note the following:

- A nonbinding shadow plat is required to demonstrate the layout is appropriate for land divisions on all adjacent properties that can be redeveloped pursuant to adopted standards.
- A street tree plan including one for every 35' of frontage is required in accordance with OCMC 12.08.
- Mitigation is required for all removed trees greater than 6" caliper. A tree mitigation plan including the caliper of the trees to be removed as well as the species, caliper and location of the mitigation trees is required. Mitigation or preserved trees must be protected by a covenant or easement.
- Parcels abutting Meyers Road are required to orient their front yard setbacks onto Meyers Road.

Rezoning

Rezoning to R-6 from the current R-8 zoning is reviewed pursuant to a Type III application before the Planning Commission at a public hearing. Staff is generally supportive of the proposed R-6 proposal and subdivision layout for the following reasons.

- ⇒ The parcel is somewhat isolated and landlocked
- ⇒ R-6 is a low-density residential zone district per Code.
- ⇒ Rezoning would not require a comprehensive plan amendment, will remain LR.
- ⇒ Addition of two additional lots would be efficient use of infill parcel and would not have a significant impact on the adjacent neighborhood or services.
- ⇒ Rear yards setbacks abutting adjacent development would be the same as R-8.
- ⇒ Extension of water, sewer lines into the development would benefit adjacent parcels.

Approval Criteria for Rezoning: See OCMC 17.68.020 Criteria.

The criteria for a zone change are set forth as follows:

- A. The proposal shall be consistent with the goals and policies of the comprehensive plan.*
 - ⇒ Applicable comprehensive plan goals and policies can be emailed to you.
- B. That public facilities and services (water, sewer, storm drainage, transportation, schools, police and fire protection) are presently capable of supporting the uses allowed by the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.*
 - ⇒ See Public Works / Engineering comments.
- C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.*
 - ⇒ Transportation Analysis is required, see Page 5.
- D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.*
 - ⇒ Comprehensive Plan contains specific policies or provisions which control the amendment.

The following are 2012-2013 Zone Change applications that may serve as a useful reference. You can request electronic copies of the Staff Reports for these applications:

- ⇒ ZC 12-01 / TP 12-04 - R-10 to R-6 (Approved) - Pavilion Park II
- ⇒ ZC 13-01 / TP 13-02 R-10 to R-6 (Approved) - Kinslie Heights
- ⇒ ZC 13-03 / TP 13-03 Central Pt and White Lane (In process – public hearings in 2014)

PUBLIC WORKS / ENGINEERING COMMENTS

Transportation / Streets

1. The existing right-of-way (ROW) on Meyers Road is 60-feet, and it is classified as a minor arterial. The existing street improvements include 36-feet of pavement (2 travel lanes and 2 bike lanes) and curbs on both sides of the street. On the south side there is a 6-foot curb tight sidewalk and street lighting. It appears that the street has recently been chip sealed. West of the project there is a 7-foot sidewalk and 5-foot planter strip on the north side of the street (in front of the church property). To the east of the project there is a 7-foot sidewalk with 2 x 2 tree wells. This is an older standard that is not used anymore.
2. The ROW requirement for a minor arterial is 100-feet, and the street section requirement is 68 feet of pavement (including two bike lanes and two parking lanes), curbs, 10.5 foot landscape strip, 5-foot sidewalk, street trees and street lights.
3. Matching the development of Meyers Road in the area would be reasonable. The improvements would include a 5-foot wide planter strip with street trees, and a 7-foot wide sidewalk. A ROW dedication of 1-foot would be required.
4. The ROW for the new local streets (internal) should be 54-feet wide, and the pavement should be 32-feet wide. There should be curb and gutter, a 5.5-foot planter strip and a 5-foot sidewalk. Street trees and streetlights will be required.
5. The ROW for a cul-de-sac should be 56-foot radius, and the pavement width should be -45 foot radius. There should be curb and gutter, a 5.5-foot planter strip and a 5-foot sidewalk. Street trees and street lights will be required.
6. It is noted that the proposed ROW for the new local street is 40-feet, which is constrained. While this may be allowable, the applicant will need to show a compelling need why the standard cannot be met.
7. It is noted that the proposed ROW for the new cul-de-sac is 51-feet, which is constrained. While this may be allowable, the applicant will need to show a compelling need why the standard cannot be met. The applicant will also need to show that the turning radius is sufficient to meet the Fire Department requirements.
8. The City does not like to have cul-de-sacs and considers them the last option, however due to the surrounding development it appears reasonable.
9. The applicant has asked if a hammerhead can be used instead of a cul-de-sac. Hammerheads are typically used at the end of private driveways, or temporary dead-end street. In this instance, a cul-de-sac is more appropriate. Staff would not support a hammerhead.

10. The minimum intersection spacing is 150-feet from center line to center line of ROW's. It is not clear that the spacing between Gerber Woods Drive and the proposed cul-de-sac meets the spacing requirement. While this may be allowable, the applicant will need to show a compelling need why the standard cannot be met.
11. TSP indicates a shared use path for the Meyer's Road frontage – see notes on Page 1. If pathway matches what is on the Church Property to the north this standard can be met through the Modification section of OCMC 12.04.

Storm Drainage

12. There are no storm drainage facilities (collection, ponds, treatment, etc) along the frontage of the proposed subdivision. Storm drainage collection system is located on Meyers Road at the intersections of Gerber Woods Drive, and Nobel Road. Nobel Road is uphill, so the drainage would need to be sent to the west. Both storm water treatment and detention will be required.
13. Public underground detention is not allowed in the City anymore. Small storm water facilities are not encouraged. It is suggested that an investigation of the storm facilities be conducted to determine if there is existing capacity in the existing downstream detention and treatment systems, or if there are ways to expand the existing systems. LID methods such as on-site infiltration may be investigated as well.
14. If infiltration is proposed as part of the storm water system then an on-site infiltration test will be required.

Water

15. There is a 12-inch water line on Meyers Road. The extension into the development should be an 8-inch pipe.
16. Fire hydrants should be located per the Fire Department directions.

Sanitary Sewer

17. There is no sanitary sewer service adjacent to the proposed development. The nearest collection system is at the intersection of Meyers Road and Gerber Woods Drive. There is an existing cleanout that is approximately 9-feet deep. The pipe would need to be extended across the frontage of the development on Meyers Road.
18. The pipe on Meyers Road and in the development should be 8-inch.

Transportation Impact Analysis

The applicant will need to have a traffic engineer conduct a transportation study in conformance with the City's *Guidelines for Transportation Impact Analyses* available on the Oregon City website. See <http://www.oregoncity.org/publicworks/guidelines-transportation-impact-analysis-tia>

Based on the information provided by the applicant, it appears the transportation analysis associated with this development proposal can be satisfied by submittal of a Transportation Analysis Letter (TAL). This may suffice for the rezoning as well. This option is available when specific criteria are met. These include a determination that the development generates 24 or fewer

AM and PM peak hour trips and fewer than 250 daily trips. Details for a TAL can be found in Section 3.1 of the *Guidelines*. It is the applicant's responsibility to verify the trip generation characteristics of the proposed development.

The applicant's traffic engineer is welcome to contact the city's traffic engineering consultant, John Replinger, at Replinger-Associates@comcast.net or at 503-719-3383.

System Development Charges

Please contact Todd Martinez, P.E. at tmartinez@ci.oregon-city.or.us

Clackamas County Fire

Your pre-application has not been reviewed by Clackamas County Fire District #1. You may contact Mike Boumann, Deputy Fire Marshall at (503)742-2660 or michaelbou@ccfd1.com.

Erosion Control

A separate Erosion Control permit is required for the site at all times. Contact John Burrell, Associate Engineer, at jburrell@orc.org or (503) 495-1556.

Neighborhood Association

- A neighborhood meeting is required with the Gaffney Lane NA.
- Amy Willhite, Chair Email awillhit@yahoo.com

Tribal Notification

The planning department will provide notice of your proposed development to the State Historic Preservation Office (SHPO) and all affected tribes per OCMC chapter 17.62.040.H. This notice applies to any project that involves ground disturbance involving movement of native soils.

Oregon City Municipal Code Criteria:

The following chapters of the Oregon City Municipal Code (OCMC) may be applicable to this proposal:

[Chapter 12.04 - STREETS, SIDEWALKS AND PUBLIC PLACES](#)

[Chapter 12.08 - PUBLIC AND STREET TREES](#)

[Chapter 13.04 - WATER SERVICE SYSTEM](#)

[Chapter 13.08 - SEWER REGULATIONS](#)

[Chapter 13.12 - STORMWATER MANAGEMENT](#)

[Chapter 13.20 - SYSTEM DEVELOPMENT CHARGE FOR CAPITAL IMPROVEMENTS](#)

[Chapter 16.04 - GENERAL PROVISIONS AND ADMINISTRATION OF LAND DIVISIONS](#)

[Chapter 16.08 - SUBDIVISIONS—PROCESS AND STANDARDS](#)

[Chapter 16.12 - MINIMUM IMPROVEMENTS AND DESIGN STANDARDS FOR LAND DIVISIONS](#)

[Chapter 16.16 - MINOR PARTITIONS—PROCESS AND STANDARDS](#)

[Chapter 17.10 - R-8 SINGLE-FAMILY DWELLING DISTRICT](#)

[Chapter 17.12 - R-6 SINGLE-FAMILY DWELLING DISTRICT](#)

[Chapter 17.20 - RESIDENTIAL DESIGN AND LANDSCAPING STANDARDS](#)

[Chapter 17.41 - TREE PROTECTION STANDARDS](#)

[Chapter 17.50 - ADMINISTRATION AND PROCEDURES](#)

[Chapter 17.68 - ZONING CHANGES AND AMENDMENTS](#)

Please contact me if you would like me to email you MS-Word versions of the code.

Anticipated Planning Review and Application Fees:

- The 2013 Planning applications and fees include
 - Subdivision: \$3,966 plus \$330 per Lot
 - Zone Change \$2,683
 - Transportation Study: \$1,047 - Base Fee - Residential 0-50 units
 \$1,962 – Zone Change
 \$3,009
 - Mailing Labels: \$15 – Optional

Pre-application conferences are required by Section 17.50.050 of the City Code, as follows:

A. Preapplication Conference. Prior to submitting an application for any form of permit, the applicant shall schedule and attend a preapplication conference with City staff to discuss the proposal. To schedule a preapplication conference, the applicant shall contact the Planning Division, submit the required materials, and pay the appropriate conference fee. At a minimum, an applicant should submit a short narrative describing the proposal and a proposed site plan, drawn to a scale acceptable to the City, which identifies the proposed land uses, traffic circulation, and public rights-of-way and all other required plans. The purpose of the preapplication conference is to provide an opportunity for staff to provide the applicant with information on the likely impacts, limitations, requirements, approval standards, fees and other information that may affect the proposal. The Planning Division shall provide the applicant(s) with the identity and contact persons for all affected neighborhood associations as well as a written summary of the preapplication conference. Notwithstanding any representations by City staff at a preapplication conference, staff is not authorized to waive any requirements of this code, and any omission or failure by staff to recite to an applicant all relevant applicable land use requirements shall not constitute a waiver by the City of any standard or requirement.

B. A preapplication conference shall be valid for a period of six months from the date it is held. If no application is filed within six months of the conference or meeting, the applicant must schedule and attend another conference before the City will accept a permit application. The community development director may waive the preapplication requirement if, in the Director's opinion, the development does not warrant this step. In no case shall a preapplication conference be valid for more than one year.

NOTICE TO APPLICANT: A property owner may apply for any permit they wish for their property. **HOWEVER, THERE ARE NO GUARANTEES THAT ANY APPLICATION WILL BE APPROVED.** No decisions are made until all reports and testimony have been submitted. This form will be kept by the Community Development Department. A copy will be given to the applicant. **IF the applicant does not submit an application within six (6) months from the Pre-application Conference meeting date, a NEW Pre-Application Conference will be required.**