

AGENDA
Veneta Planning Commission
TUESDAY – August 2, 2016 – 6:30 p.m.
Veneta City Hall

1. REVIEW AGENDA

2. PUBLIC COMMENT

If you wish to address the Planning Commission; state your name, address, and limit your comments to 3 minutes. Maximum time 20 minutes. The Planning Commission will not engage in any discussion or make any decisions based on public comment at this time; however, they may take comments under advisement for discussion and action at a future Planning Commission meeting.

3. APPROVAL OF MINUTES

- a. June 7, 2016

4. LEGISLATIVE PUBLIC HEARING – PROPOSED COMPREHENSIVE PLAN DIAGRAM AND ZONING MAP AMENDMENTS, FILE #CP-ZC-1-16 SARTO VILLAGE

1. Open Hearing
2. Declaration of Conflict of Interest or Ex-Parte Contacts
3. Staff Report (Lisa Garbett)
4. Applicant/Proponents
5. Opponents
6. Neutral testimony
7. Applicant rebuttal
8. Questions from the Planning Commission
9. Close of Public Hearing
10. Deliberation and Decision

5. SIGN CODE AMENDMENTS – UPDATE (CLAUDIA DENTON)

- a. Sign Code Revisions

6. ADMINISTRATIVE DECISIONS

7. OTHER

8. ADJOURN

Location is wheelchair accessible (WCA). Communication interpreter, including American Sign Language (ASL) interpretation, is available with 48 hours' notice. Contact Darci Henneman; Phone (541) 935-2191, FAX (541) 935-1838 or by TTY Telecommunications Relay Service 1-800-735-1232.
THIS MEETING WILL BE DIGITALLY RECORDED.

The Planning Commission considers all public comments, staff reports, and City ordinances in arriving at a final decision. **Staff reports are available for review at Veneta City Hall - 88184 8th Street - Veneta, Oregon.**

LAND USE DECISIONS - Veneta Municipal Code Chapter 18.05

Whenever this chapter is in effect, the following procedures or procedure similar thereto shall be followed by the city staff and applicable decision-making body: (1) Preparation of brief statement setting forth the criteria and standards considered relevant to the decision of the city staff. Such shall utilize criteria and standards found in the applicable ordinance, the comprehensive plan, and other ordinances and rules and regulations now in effect as from time to time adopted by the city council and appropriate decision-making body.

PUBLIC HEARINGS - Please observe the following rules.

WRITTEN TESTIMONY:

Written comments received seven (7) days prior to the meeting have been incorporated in the staff report. All comments, including those received up until the meeting, are presented to the Planning Commission members to be considered in their decision.

ORAL TESTIMONY:

If you wish to testify with regard to a matter which has been set for *Public Hearing* please observe the following rules:

1. **State your name and address.**
2. **Indicate if you are in favor of or opposed to the proposal.**
3. **Limit your testimony to three (3) minutes. Testimony must be specific to the issue at hand. Keep your comments brief and to the point.**

The Planning Commission considers all public comments, staff reports, and City ordinances in arriving at a final decision. **Staff reports are available for review at Veneta City Hall - 88184 8th Street - Veneta, Oregon.**

Minutes of the Veneta Planning Commission

June 7, 2016

Present: James Eagle Eye, Len Goodwin, Kevin Conlin

Absent: Lily Rees

Others: Kay Bork, Community Development Director; Lisa Garbett, Associate Planner; Ric Ingham, City Administrator; Claudia Denton, Economic Development Specialist; Darci Henneman, City Recorder, Jeff Schlageter, Herb Vloedman

I. REVIEW AGENDA

Chair James Eagle Eye opened the Veneta Planning Commission meeting at 6:32 p.m. and reviewed the agenda.

II. PUBLIC COMMENT

None

III. APPROVAL OF MINUTES

MOTION: Len Goodwin made a motion to approve the April 4, 2016 minutes. Kevin Conlin seconded the motion which passed with a vote of 3-0.

IV. (QUASI-JUDICIAL) PUBLIC HEARING – LIMITED LAND USE DECISION

a. Conditional Use Permit – High Lights Garden Supply

- Chair James Eagle Eye opened the Public Hearing at 6:32 p.m.
- Commission members declaration of potential conflicts of interest; disclosure of “ex-parte” contact
None
- Staff report
Garbett said the applicant is proposing a 650 sq. ft. outside fenced, storage area where he will store two (2) eight (8) ft. by forty (40) ft. storage containers for storing bulk landscape materials and a forklift. The area will also have a detached canopy, all of which is in the Greenway-Open Space Subzone behind the existing building at West Lane Shopping Center. He is requesting approval of a conditional use permit for the outside storage exceeding 180 days in the Highway Commercial zone and approval of a conditional use permit for development within the Greenway Open Space Subzone. Notice was mailed to all property owners and tenants, posted on site on May 2, and published in the Fern Ridge Review on May 11, 2016. No comments were received.
- Testimony from the applicant
Jeff Schlageter, Veneta, OR
Mr. Schlageter said he and his brother own High Lights Garden Supply which is 800 sq. ft. of retail space in the shopping center. He said they have a lot of sizable bulk materials and the only way their business can stay viable is to have outside storage. He said it’s not really a viable option to have offsite storage at another location because it would require them to hire another employee to bring bulk materials to their retail space. He said the storage area he is proposing is in the same shopping center. He said he will do what it takes to make it acceptable. He said placement will be out of sight and all of the materials are benign but he will place grates over the storm water drains to prevent leakage. He said he appreciates having the opportunity to come before the Planning Commission.

- Testimony in support of the application
None
- Testimony opposed to the application
None
- Testimony neither in support of nor opposed to the application
None
- Summation by staff
None
- Rebuttal from the applicant
None

In response to a question from Len Goodwin, Garbett said the fenced area is adjacent to the forklift – to the east of where they want to construct the detached canopy and it would not include the storage containers. She said she believes the power pole will not be in fenced area but within a few feet.

Len Goodwin said we don't want a situation where someone can put a ladder to the container and climb the pole. He said we need to make sure that there's no way to get to the pole from the top of the storage containers.

Bork suggested the storage containers could be slightly in front of the building. The goal is to maintain the 20 ft. access but still provide enough distance between the pole and the container.

In response to questions from Len Goodwin, Garbett said pallets and trash receptacles are stored on the north side of the shopping center. She said the containers be viewed as permanent and the applicant has submitted a building permit for the detached canopy and storage containers.

Len Goodwin said we need to make sure that all the tenants of the shopping center go through the same process that Mr. Schlageter has gone through.

In response to a question from Len Goodwin, Ingham said the retaining wall height varies from four to seven feet.

Len Goodwin asked the applicant if he would like to respond to some of the comments made by the Planning Commission.

Mr. Schlageter said he wouldn't want to have anything unsightly behind the building and he also plans to install a video surveillance system for the storage containers. He said he had some product stolen in the past.

Bork said staff will include language in the final order that the containers will be located in a way to avoid or prevent access from the container rooftops to the power pole.

- Chair James Eagle Eye closed the public hearing at 7:02 p.m.
- Planning Commission decision; possible questions to staff or public
Len Goodwin said he would like to see more specifics regarding what the exemptible and

undue hardship is. He said the next time someone comes in and claims exception and undue hardship, there's a reason that we require conditional use permits and he doesn't want to water that reason down and he would like to see some better language explaining "exceptional and undue hardship".

James Eagle Eye said he agrees with Len Goodwin and it's a good location but he's concerned about protecting the greenway. He suggested we look at the boundaries and make sure we're not creating a hardship as far as the greenway boundary map.

Kevin Conlin said we have a lot of uncertainties with respect to those requirements but we have a definite need. He would feel uncomfortable denying or setting aside a definite need in favor of this kind of thing that we may be in some kind of violation. He said if there is some ambiguity about the greenway we should determine that first. He said it could be argued that denying someone this kind of conditional use, given the fact that we're not actually taking away any language, the development is already there and the real question is whether or not the proper safety standards can be accommodated. He said we need to articulate what constitutes undue hardship. He said he is leaning toward approval.

James Eagle Eye said we believe that this use is acceptable at this location but we don't want to lessen the bar for future greenway conditional uses so we want to make sure that any approval includes the proper verbiage and that this is a limited exception.

Len Goodwin agreed with respect to the greenway but he said he would not have that level of flexibility with regard to the floodplain. He would not be supportive of any flexibility if there are issues with granting a floodplain approval.

Bork said this approval would not give any flexibility to the floodplain. She said right now we would apply the floodplain ordinance. In regards to the greenway and the conditions on the land, it's the fact that it's already a developed site so the proposal is expanding an existing use in the greenway and it's not creating any new impervious surfaces. Plus the denial is not protecting the greenway. She said it's harder for the Planning Commission to give more options or more findings about undue hardship other than what Mr. Schlageter said - there's no other viable place for his storage.

Bork said in talking with legal counsel, it was okay to address the greenway issues because the Planning Commission is not setting a precedence by approving it because it's already developed and they're not proposing any development on vacant or bare land. She said we could also add that the greenway boundary may be different and may impact the site different once delineation was complete or the greenway would need to be amended.

In response to a question from James Eagle Eye, Bork said it really addresses all the concerns and it makes it different enough from a vacant site where development could impact a resource, where this one doesn't.

MOTION: Len Goodwin made a motion to approve with a condition of approval providing placement of the storage containers is adequate to prevent access to the utility poles. Kevin Conlin seconded the motion which passed with a vote of 3-0.

V. PROPOSED SIGN CODE AMENDMENTS, DOWNTOWN

Claudia Denton, Economic Development Specialist, introduced herself to the Planning Commission. She said she's been working on economic incentives and the urban renewal program and was asked to review the sign code which hasn't been updated for several years. She said the Economic Development Committee is working toward distributing some funds to various Veneta businesses for signage. She said her first recommendation is to create a downtown district separate from other

commercial districts. She consulted with a sign manufacturer and they talked about different materials to use. In addition to the code update, she created a sign code guide as a resource for downtown area businesses interested in updating signs. She reviewed the updates.

Len Goodwin suggested blade sign size standards should be included; higher than 10 inches but shorter than 10 feet and also include a definition for sign cabinets.

In response to a question from Len Goodwin, Bork said staff didn't investigate different types of signs but a few years ago the owner of Dairy Queen submitted an application for a flashing sign which the Planning Commission denied.

In response to a question from James Eagle Eye, Denton said she considered naming five districts and after a brief discussion, it was the consensus of the Planning Commission to have four districts rather than five.

In response to a question from Len Goodwin, Bork said a vehicle could be used as a sign as long as the truck was operable and used in the course of a business.

Herb Vloedman said where there are multi-tenant buildings and turn over, we should have low burden signage like cabinet signs so they can spend their start-up funds on other things.

Denton suggested using a different material for the cabinet signage and maybe ban plastic.

Len Goodwin said he's not certain plastic material should be banned. If so, any LED display would be prohibited because it's plastic.

Denton said she was under the impression that more signs were made of plastic. She said Our Daily Bread's sign is made from the aluminum composite material (ACM).

Kevin Conlin said resin products vary widely and can look like any one of the proposed alternatives. He said we need to be careful that when we apply definitions and address specific materials, that we don't inadvertently create problems. He said we should look to promote a certain aesthetic, define what we want to encourage, and think in those terms and not necessarily focus on specific materials.

James Eagle Eye said plastic signs do have a life span and when they age they start looking poorly and crack. He said we should regulate aesthetics more than regulate the materials used.

Denton said we can do more research on aesthetics and how to write a sign code that promotes a certain aesthetic.

In response to a question from Len Goodwin, Denton said signs that have stick on letters would be prohibited but it was her intention that electronic message boards would be allowed.

Len Goodwin said the code should clearly state that.

Denton said prohibiting roof signs is not district specific but would be overall. She said she interpreted that as no free standing signs, including roof signs that projects more than six inches above the building, would be allowed.

Bork clarified that free standing signs would not be included. This would only apply to a sign that was affixed to a façade or roof.

Len Goodwin said what about a false façade being used as a sign – the whole second story façade would be a prohibited roof sign under that definition.

James Eagle Eye suggested those types of signs would be covered in the building code.

Bork suggested using an architectural term to define false façades.

Len Goodwin said he wonders if the American flag flown at the shopping center is legal because it's certainly larger than 20 sq. ft. He said we may want to look into that to increasing the size requirements for the Highway Commercial zone.

Bork said our code doesn't have a height restriction for antennae or flag poles.

In response to a question from Len Goodwin, Denton said she thought she included the portable sign size restrictions into Multi-Family Residential zones but she missed that. She will make sure that is carried over.

Ingham said we may decide to include in the Redevelopment Tool Kit that we wouldn't fund or contribute to signs that has some of those prohibited elements. He said the West Broadway District is more distinct and pedestrian friendly.

In response to a question from an audience member, Denton said we're not excluding electronic illuminating signs but just some plastic materials. She said illuminated signs are allowed: Halo lighting and internal illumination can be achieved without using plastic.

A member of the audience said the Planning Commission needs to be careful because the sign examples Ms. Denton provided are very expensive.

James Eagle Eye said all sign designers will have their own preferences and recommendations and he suggested we focus on the aesthetics we're looking for and not so much on materials.

Herb Vloedman said he and the other audience member are not opposed to what the Planning Commission is trying to do, he's just concerned about how the code will read.

Bork said she understands that the Planning Commission wants to focus more on aesthetics rather than materials, but we still need to make sure there's a balance and that we're not defining it too much.

The Planning Commission thanked Denton for her work and she said she will provide an update at the next meeting.

VI. INTERPRETATION REQUEST – VENETA LAND DEVELOPMENT ORDINANCE NO. 493, SECTION 4.15(5)

Garbett said staff is asking for an interpretation as to whether or not the addition of a street should require a minor or major amendment. The code currently addresses minor amendments categorized when a street is shifted up to 100 feet in any direction but the addition of a new street doesn't have any clarification. She said a major amendment is required when development standards change or a street shifts more than 100 feet.

James Eagle Eye said it seems to him that if a site plan calls for storm water flows, drainage and wetland it should be a major amendment from the site perspective and not just looking at a specific street.

Len Goodwin said adding a new street changes traffic circulation patterns and could change traffic impacts to nearby streets. He agreed adding a new street should be a major amendment.

Kevin Conlin said he would find it embarrassing that eliminating a street requires a more involved process than adding a street. He said the code should be evened out and the Planning Commission will exercise the appropriate discretion.

**VENETA PLANNING COMMISSION
STAFF REPORT**

**Sarto Village
ZONE CHANGE (CP/ZC-1-16)**

Application Received: April 5, 2016
Supplemental Info Received: April 15, 2016
Additional Info Received: May 13, 2016
Application Complete: May 27, 2016
Notice Posted and Mailed: June 17, 2016
Notice Published: June 22, 2016

Staff Report Date: July 19, 2016
Prepared By: Lisa Garbett, Associate Planner

Planning Commission Hearing Date: August 2, 2016
City Council Hearing Date: TBD

Referrals: Department of Land Conservation & Development (DLCD)
Lane Branch, P.E., City Engineer (Branch Engineering)
Kyle Schauer, City Public Works Director
Oregon Department of Transportation, Region 2
Lane County Assessor
Lane County Land Management
Lane County Public Works

BASIC DATA

Applicant: Jerome Poulin, for Sarto Village Project
Society of Saint Piux X Southwest District, Inc.
11485 N. Farley Road
Platte City, MP 64079

Property Owner: Society of Saint Piux X Southwest District, Inc.
11485 N. Farley Road
Platte City, MP 64079

Assessors Map/ Tax Lot No.: 17-05-31-00-00400
17-05-31-00-00501
17-05-31-34-00602

Area: Approximately +/-50.78 acres (three tax lots combined)

Plan Designation: Map/ Tax Lot No. 17-05-31-00-00400
Rural Residential (RR), Open Space/Greenway Overlay
Zone (/OS) and 100-Year Floodplain

Map/Tax Lot No. 17-05-31-00-00501
R-Rural Residential & OS – Open Space/ Greenway
Map/Tax Lot No. 17-05-31-34-00602
R-Rural Residential & L-Low Density Residential (split
Plan Designation) & OS-Open Space/ Greenway

Zoning:

Map/ Tax Lot No. 17-05-31-00-00400
Rural Residential (RR), Greenway Overlay Zone (GW) and
100-Year Floodplain
Map/Tax Lot No. 17-05-31-00-00501
Rural Residential (RR) & Greenway Overlay Zone (GW)
Map/ Tax Lot No. 17-05-31-34-00602
Rural Residential (RR) and Single-Family Residential
(SFR) split zoning & Greenway Overlay Zone (GW)

REQUEST

The applicant is requesting a Zone and Comprehensive Plan designation (map only) amendment of approximately +/-50.78 acres, including three (3) tax lots, from R-Rural Residential and L - Low Density Residential Comprehensive Plan Designation to Medium Density Residential Plan Designation and accompanying zone change from Rural Residential and Single Family residential to General Residential.

BACKGROUND

The subject site (comprised of three tax lots) is approximately 50.78 acres in size. Tax Lot No.'s 00400 & 00501 are both zoned Rural Residential (R) and Tax Lot No. 00602 is zoned Single Family Residential (SFR) to the west and Rural Residential (RR) to the east. The overall subject site is largely undeveloped with mature vegetation including significant trees and natural resources. Tax Lot No. 00602 does not have any improvements on site, while Tax Lot No.'s 00400 & 00501 each contain a single-family dwelling. The project site has access to E. Hunter Road to the north and east (formerly known as Baker Lane to the east), Trinity Street to the west and Erdman Way to the south.

The applicant is proposing a Comprehensive Plan Amendment and zone change with desire to construct a senior living project, consisting of a mix of housing options for seniors who are 55+ in age. The applicant states that the senior living project is anticipated to consist of detached and attached Single Family Residential units and a Residential Facility consisting of Independent, Assisted and Memory Care units. The applicant states that the senior living project is anticipated to consist of assisted living, 100 beds; congregate care, 100 units, and 130 to 150 senior adult housing (single family detached and attached).

The existing Open Space/ Greenway Overlay, 100-Year Floodplain Overlay Comp Plan Designations and existing Greenway-Open Space Subzone and 100-Year Floodplain Subzone zone designations will not change.

The following is a table depicting the current and proposed zoning and Comprehensive Plan designations.

Assessor's Map and Tax Lot No.	Approximate Acres	Existing Comprehensive Plan Designation	Existing Zoning	Proposed Comprehensive Plan Designation	Proposed Zoning
17-05-31-00-00400	21.84	R-Rural Residential, OS-Open Space/ Greenway Overlay* and 100-Year Floodplain Overlay*	Rural Residential (RR), Greenway-Open Space Subzone (GW)* and 100-Year Floodplain Subzone (FP)*	M-Medium Density Residential	General Residential (GR)
17-05-31-00-00501	8.76	R-Rural Residential, OS-Open Space/ Greenway Overlay*	Rural Residential (RR), Greenway-Open Space Subzone (GW)*	M- Medium Density Residential	General Residential (GR)
17-05-31-34-00602	19.90	R-Rural Residential (east side), L-Low Density Residential (west side), OS-Open Space/ Greenway Overlay*	Rural Residential (RR), Single Family Residential (SFR) and Greenway-Open Space Subzone*	M- Medium Density Residential	General Residential (GR)

* The existing Open Space/ Greenway Overlay, 100-Year Floodplain Overlay Comp Plan Designations and existing Greenway-Open Space Subzone and 100-Year Floodplain Subzone zone designations will not change.

APPROVAL CRITERIA

Veneta Comprehensive Plan, Ordinance 523, Chapter V. Implementation and Updates to the Plan and Land Development Ordinance No. 493, Article 11 - Amendments.

AGENCY COMMENTS

The following agencies/jurisdictions had an opportunity to review this proposal and did not respond at the time the staff report was prepared: Veneta Public Works Department, Lane County Land Management, Lane County Public Works Department, Lane County Assessor, Oregon Department of Transportation, Region 2 and Department of Land Conservation and Development (DLCD).

However, Lane County Public Works Department did respond to the applicant's conceptual development diagram submitted with a Pre-Development Conference request which was held on June 22, 2016 (Exhibit K).

Comments were received from the Veneta City Engineer, Lane Branch, P.E. of Branch Engineering (Exhibit J).

PUBLIC COMMENT

Four written public comments were received from the following property owners; 1. Mr. Ryan Thomas (Exhibit C), 2. Mr. Jim Eagle Eye (Exhibit D), 3. Mrs. Andrea Larson (Exhibit E) and 4. Mr. and Mrs. Melissa and Jim Ratzlaff (Exhibit F).

Ryan Thomas (25274 Jake St)

Mr. Thomas expressed concern with the proposal to rezone/ re-designate the subject site to General Residential zone/ Medium Density Residential Plan Designation due to; 1) Potential increased traffic, 2) Potential adverse effect on property values for existing homeowners of the Trinity Terrace subdivision and quality of life in the neighborhood. In summary, Mr. Thomas believes that a change to the Medium Density Plan Designation is too drastic for the area given the existing Trinity Terrace subdivision and its current relative seclusion. Although, the retirement, elder care community, he feels would be less of an impact. Mr. Thomas has expressed that he is not in favor of the proposal but if it is approved, he requested that the approval is conditioned to limit retirement and elder care perpetually, with no other General Residential use types permitted.

Jim Eagle Eye (25456 E Hunter Rd)

Mr. Eagle Eye expressed concern with the proposal to rezone/ re-designate the subject site to General Residential zone/ Medium Density Residential Plan Designation due to; increased traffic along E. Hunter Road which will exacerbate an existing public safety issue. Mr. Eagle Eye is a resident who drives E. Hunter Road daily and parent of a child who walks and bikes the road; daily hazards occur when pedestrians and bicyclists share a lane of travel with vehicles. He expressed that the unsafe conditions have increased, as smaller subdivisions have been built along E. Hunter Road or in relative proximity to E. Hunter Road. He understands the limitation of city funding to help upgrade E. Hunter Road. The City Transportation System Plan classifies E. Hunter Road as a Major Collector which is defined as containing a sixty (60) feet right-of-way with a thirty-four (34) feet paved width, including eleven (11) feet traffic lanes, six (6) feet bike lanes, sidewalks and no parking on either side. No portion of E. Hunter Road is built to this standard and is not likely to be built in the near future. Mr. Eagle Eye expressed that it is important to consider the importance of public safety in determining the criteria of city services being available and perhaps low density zoning instead of medium density would lessen the impact on public safety and would better align with the neighboring and abutting properties that are zoned low density and rural residential.

Mr. Eagle Eye's secondary concern relates to wastewater and future pump stations which will be necessary to serve future developments become city owned and maintained facilities. He would like to ensure that these wastewater facilities (pump stations) are built to the appropriate sizes, locations, and quantities to best serve the city. Mr. Eagle Eye questions the Commission whether or not the City is willing to accept a pump station from any and every possible development, no

matter the size, location, and ultimate number of stations requiring attention. The applicant states that the pump station will be sized for the needs of the project. Mr. Eagle Eye expressed that the pump station should be sized for the potential build-out of the property, should there be any potential for further development (other than that proposed) to ensure that once a pump station becomes City owned, it is of the appropriate capacity.

Andrea Larson (25456 E Hunter Rd)

Mrs. Larson expressed concern with the proposal to rezone/ re-designate the subject site to General Residential zone/ Medium Density Residential Plan Designation due to; the impact of increased traffic along E. Hunter Road with an increase in density. Mrs. Larson described the existing issue with pedestrian and bicycle safety on E. Hunter Road, which appears to be increasing in spite of the fact that there has been limited development along the road over the last few years. The existing issue along E. Hunter is described as having to navigate around pedestrians or bicyclists, vehicles stopping in the road to accommodate pedestrians and bicyclists and excessive vehicular speed. In summary, Mrs. Larson is extremely concerned that increasing traffic on E. Hunter Road will eventually result in tragedy if the reality of how much the road is used by pedestrians and bicyclists of all ages, and school age children in particular, is not considered.

Melissa & Jim Ratzlaff (25450 E Hunter)

Mr. and Mrs. Ratzlaff expressed that although they like the idea of a senior development in a park like setting, they have the following concerns; 1) proposed intent to develop triplex units and multi-story buildings (they would prefer single family homes with a minimum 1/3 acre parcels such as the Fern Meadows Subdivision in order to maintain the aesthetics of the area), 2) Request for sidewalks to be added on E. Hunter Road from Territorial to Huston for pedestrian safety, 3) Consider requiring other arterials provide connectivity beyond the use of Baker Lane and Erdman (include adding additional exits from Sarto Village to East Hunter and extending Trinity to Josee Lane for exit onto Huston to reduce the traffic on E. Hunter Road), 4) Increased traffic, 5) Non-Profit status of the development will cause additional taxes for the citizens of Veneta and not provide additional revenue, 6) Adjacent properties being required to connect to city services (i.e. sewer and water). The Ratzlaff's also request a study be conducted to see if the development will affect current wells in the area downstream from the development.

STAFF RESPONSE TO PUBLIC COMMENT:

Public comment issues are summarized below in italics, followed by staff response in regular font.

- 1) *Potential impact of increased traffic along E. Hunter Road with increasing density proposed with the rezone request.*
- 2) *Existing pedestrian and bicycle safety on E. Hunter Road which seems to be increasing in spite of the fact that there has been limited development along the road over the last few years. Also, that there are existing difficulties with utilizing E. Hunter Road including; navigating around pedestrians or bicyclists, vehicles stopping in the road to accommodate pedestrians and bicyclists and excessive vehicular speed.*

- 3) *Extremely concerned that increasing traffic on E. Hunter Road will eventually result in tragedy if the reality of how much the road is used by pedestrians and bicyclists of all ages, and school age children in particular is not considered.*
- 4) *Existing E. Hunter Road is classified as a Major Collector per the Veneta TSP but not built to the standard.*
- 5) *Request for sidewalks to be added on E. Hunter Road from Territorial to Huston for pedestrian safety.*
 - E. Hunter is designated a major collector in the Veneta Transportation System Plan. A Major Collector serves traffic from local streets or minor collectors to the arterial system. E. Hunter has not been improved to urban standards with curb, gutter, sidewalks, and bike lanes. E. Hunter Road street improvements are included in the City's Capital Improvement Plan for future construction. The Veneta City Council determines when and what funding source will be used to construct the improvements. At the time of development, the applicant will be required to construct local streets and bike and pedestrian ways to serve the development. At the time of development, the applicant will be required to improve E. Hunter Road with curb, gutter, and sidewalks, along the proposed development frontage or sign an irrevocable development agreement for future improvements.
 - Specific bicycle and pedestrian connections will be addressed at the time of development. The Veneta Transportation System Plan Map Plan (Map 15 - Proposed Bicycle/Pedestrian Network) shows proposed multi-use paths through the subject site which will provide safe pedestrian and bicycle access to connecting streets.
 - Sidewalk projects that are not part of a new development proposal are funded through a Local Improvement District. A Local Improvement District is initiated by City Council and sidewalk construction costs are assessed to property owners along the street frontages where sidewalks are constructed. A sidewalk Local Improvement District has not been initiated by the City Council. The 2016/2017 Work Plan includes a task to prioritize sidewalk projects and a Local Improvement District could be identified.
- 6) *Potential adverse effect on property values for existing homeowners of adjacent subdivision (Trinity Terrace) and quality of life.*
 - At the time of development, the applicant shall submit required land use applications, which shall comply with the Veneta Land Development and Land Division Ordinances. Regulations in these Ordinances establish standards and procedures for the orderly development of land within the City of Veneta; to assist in implementing the Veneta Comprehensive Plan and to promote the public health, safety and general welfare. Development impact issues, such as traffic impacts, residential design standards, landscaping, parking, stormwater, Greenway and wetland protections,

street connectivity, and bicycle, and pedestrian improvements, will be addressed at the time of development review.

- 7) *Changes to Medium Density Plan Designation is too drastic.*
- 8) *Proposed intent to develop triplex units and multi-story buildings (prefer single family homes with a minimum 1/3 acre parcels such as the Fern Meadows Subdivision in order to maintain the aesthetics of the area).*
 - Lands designated Rural Residential in the Veneta Comprehensive Plan are intended to be developed to urban densities when City services become available. A Comprehensive Plan Designation change to either Low Density (L) or Medium Density Residential (M) and applicable zoning map change are permitted per Veneta Comprehensive Plan, Chapter IV - Comprehensive Plan Map and Land Use Designations, Rural Residential (R).
 - Low density Residential (L) allows a maximum of 7 units per net acre and Medium Density Residential (M) allows a maximum density of 15 units per net acre. The net acres calculated for the subject site is approximately 28.7 acres. At these allowed densities, the Low density Residential plan designation would allow 200 units and Medium Density Residential plan designation would allow 430 units.
 - As a condition of approval for the Plan Designation and Zone Change, the City Engineer is recommending a trip cap on any future development to 97 PM peak hour trips, which is equivalent to 97 single family dwelling units.
 - The site is abutting Trinity Terrace Subdivision, which has been built to urban standards in terms of density and improvements.
- 9) *If approved, limit future development to retirement and elder care perpetually, with no other General Residential use types permitted.*
 - The City cannot restrict development types that are allowed in an approved Zoning District. However as stated above, the City Engineer is recommending a trip cap on any future development to 97 PM peak hour trips, which is equivalent to traffic generated by 97 single family dwelling units.
 - The General Residential Zone permits single family detached and duplex units outright. Site Plan review approval is required for multi-family dwellings and a Conditional Use permit for Residential Facilities.
 - The Single Family Residential Zone permits single family detached and duplex units outright. A Conditional Use permit is required for multi-family (3 or more attached units on the same lot) and Residential Facilities.

10) *Asks the PC to consider the importance of public safety in determining the criteria of city services being available and indicates that perhaps low density zoning instead of medium density would lessen the impact on public safety and would better align with the neighboring and abutting properties that are zoned low density and rural residential.*

- The Veneta Comprehensive Plan policies dictate the criteria to be applied to Plan and Zone change requests. Public safety is not a criteria applied to the proposed amendments. Additional findings of fact addressing applicable criteria for converting Rural Residential to Low Density Residential and Medium Density Residential plan designations are presented in the Planning Commission Final Order:

“A. Growth Management Element Policies

6. Make the following findings of fact in order to permit conversion of rural residential lands to other plan designations:

- (a) Water: The City water supply and distribution system are adequate to provide service to the property proposed for conversion to urban densities.*
- (b) Sewer: The City sewer treatment and collection system are adequate to provide service to the property for conversion to urban densities.*
- (c) Streets: The neighborhood streets and drainage system are adequate to handle additional traffic and storm drainage.”*

11) *Wastewater and future pump stations (ensure future wastewater facilities (pump stations) are built to the appropriate sizes, locations, and quantities to best serve the city.*

- During the development of the Public Improvement plans, the applicant will be required to show that all properties within their development can be served by City sewer. The applicant will have to prove that the collection system they are installing, including any lift stations, will be adequately sized to serve their need. The City Engineer will check their calculations and approve their proposed improvements.

12) *Is the city willing to accept a pump station from any and every possible development, no matter the size, location, and ultimate number of stations requiring attention? The applicant states that the pump station will be sized for the needs of the project and Mr. Eagle Eye contends it should be sized for the potential build-out of the property should there be any potential for further development other than that proposed and this consideration should apply to any further pump station to ensure that once they become City owned they are of appropriate capacity.*

- Public sewer lift stations are generally only allowed if there are no other feasible options to provide City sewer to a development. The City currently operates only two lift stations. If a sewer lift station will be required for this development, the

developer is only required to build it to the capacity that adequately serves their need. The City cannot force them to pay for the development of a larger system. The City can however, have our engineer look at the surrounding area to determine a potential service area. If the lift station can serve a larger area, the City may decide to assist the developer in designing the lift station and piping to a capacity that would also serve the additional service area. The City would be responsible to pay the difference in cost for the additional sizing.

13) Consider requiring other arterials provide connectivity beyond the use of Baker Lane and Erdman (include adding additional exits from Sarto Village to East Hunter and extending Trinity to Josee Lane for exit onto Huston to reduce the traffic on East Hunter).

- At the time of development, the proposal will be evaluated for street, bicycle and pedestrian connectivity. Street and bicycle connections can only be required within the development area. The City's Transportation System Plan, Map 9, Proposed Streets, shows required future street connections through the site to Baker (E. Hunter), Trinity Street, and Corky Lane. Map 15 - Proposed Bicycle/Pedestrian Network, shows required connections roughly following the Greenway, north, south, east and west, connecting the site to Baker, Trinity, and E. Bolton (via Erdman Way).
- Trinity Street is planned to eventually connect to Josee Lane per the Veneta Transportation Plan once development is proposed on adjacent property. However, this connection area is currently outside the Sarto Village proposal site and also outside Sarto Village ownership.

14) Concerns about the Non-Profit Status of the development.

- While this is a concern, it is not applicable to the land use decision process.

15) Potential future utility (water and sewer) connections for adjacent properties.

- When sewer becomes available along the street frontage of a property, the City requires sewer connection (Veneta Municipal Code 13.10.290). Properties are required to be connected within one year after the date of official notice from the city to connect. The City may grant time extensions after considering certain criteria such as location of property, condition of private disposal, and length of extension (Veneta Municipal Code 13.10.350). There are no such requirements for water connections. A property owner may choose to connect to available water service.

16) Request to conduct a study to see if the development will affect current wells in the area downstream from the development.

- All development is evaluated for impacts to surrounding areas, especially stormwater runoff which shall show no impacts to off-site properties. The City requires stormwater be detained and treated (with vegetation) before it is released into the City's storm drainage system. City regulations require the proposed future development hook up to City sewer and water. Well construction is regulated by DEQ who makes sure they are properly constructed so as to prevent contamination of Oregon's ground water. If wells were being constructed the City would coordinate with the Department of Environment and Quality during development review.

ISSUES

Establishment of Need

The applicant is required to demonstrate an "established need" for the plan change in accordance with the adopted Comprehensive Plan, Chapter V. Section B - Updating the Plan. The establishment of the need ultimately rests with the City Council, however, the most common practice in Oregon is for the City Council and Planning Commission to require the applicant to submit the documentation for establishing the changes in the Comprehensive Plan cannot be arbitrary or capricious but must be based on a demonstrated need.

The applicant contests that the need to rezone the parcels to M-Medium Density Plan Designation/ General Residential (GR) zone designation with intent to develop a Senior Living Project (55 and older), is established with the rapidly growing population and changing demographics in Veneta, particularly those over age 55. The applicant documented that the request is in support of the goals in the Veneta Comprehensive Plan (Ordinance No. 523) as described in the applicants' letter addressed to the Planning Commission and City Council. Specifically, the supporting facts, including anticipated population growth and aging demographics in Veneta as documented in 'Populations Projections and Assumptions' (pg. 14 of the Comprehensive Plan), 'Population and Demographic Characteristics' (page 19 of the Comprehensive Plan), and the goals listed in the 'Residential Land and Housing Element' (page 25 of the Comprehensive Plan).

The following is not a comprehensive list of the Veneta Comprehensive Plan, Ordinance No. 523, goals, referenced by the applicant, but staff's summarization of the most relevant facts and goals which are met with the proposed zone change with intent to develop a Senior Living project (55 and older):

Supporting Facts:

- Veneta's population is projected to increase from 4,635 in 2013 to 10,505 people by the year 2035. (Chapter II – Planning Framework, C. Population and Employment Projections, page 14)
- Adequate land area must be allocated to support the residential needs of this projected growth, as well as for supporting functions such as commercial and public use. (Chapter II – Planning Framework, C. Population and Employment Projections, page 14)
- The aging of the baby boom generation, accompanied by increases in life expectancy is increasing the number of people age 65 and older. This national trend will more than

double the senior population by 2050 in the US. This trend can be seen in Oregon, where the share of workers 65 years and older grew 2.9 percent of the workforce in 2000 to 4.1 percent of the workforce in 2010, an increase of 41 percent.(Appendix A, page 39)

- The median age of Veneta residents is increasing. The average age of Veneta residents in 2012 was 34.9 years old, compared with 32.7 in 2000. By comparison, Lane County’s median age was 36.6 years old in 2012 and 38.8 in 2000. Individuals aged 65 and older in Veneta increased faster than any other age between 2000 and 2012 (409 people, an increase of 199 percent). The Oregon Office of Economic Analysis forecasts that Lane County’s percent of people 65 years and older will increase from 13 percent in 2000 to 20 percent in 2030.(Appendix A – Economic Opportunity Analysis, page 19)

Supporting Goals:

- Provide an adequate supply of residential land and encourage land use regulations that allow a variety of housing types that will be able to meet the housing needs of a range of age groups, income levels, and family types.(Chapter III, Section C – Residential Land and Housing Element, page 25)
- Encourage land use patterns that provide livable neighborhoods; allow mixed uses, and allow a variety of housing types. (Chapter III, Section C – Residential Land and Housing Element, page 25)
- Encourage land use patterns that protect and enhance Veneta’s natural resources. (Chapter III, Section C – Residential Land and Housing Element, page 25)

Conversion (+/-7.17 acres) of L-Low Density Residential to M-Medium Density Residential

The proposal involves +/-7.17 acres of property which is currently located in the Low Density Residential Plan Designation/ Single Family Residential zone. The applicants states that there are significant wetlands that will buffer the transition between the proposed M- Medium Density Residential plan designation and General residential zoning.

Comparing land use process by plan designation/ zone for multi-family housing and Residential Facilities

In comparing the General Residential zone versus the Single Family Residential zone; Residential Facilities in both zones would be required to comply with the following conditional use standards listed in Veneta Land Development Ordinance No. 493, Section 8.11(20) – Standards for residential facilities:

“(20) Standards for residential facilities

(a) Parking shall be in accordance with Sections 5.20 and 5.21. Bicycle parking may be reduced to provide for only employee bicycle parking where it is demonstrated that residents’ disabilities preclude bicycle transportation.

(b) Landscaping shall be in accordance with multi-family developments as outlined in Section 5.12 and.

(c) Where such facilities have more than fifteen (15) residents, density shall not exceed 30 beds per acre and the facility must be served by City water and sewer.”

Multi-family dwelling units in the Single Family Residential Zone would be required to comply with the following conditional use standards listed in Veneta Land Development Ordinance No. 493, Section 8.11(11):

“(11) Standards for multi-family in Single-Family Residential Zone. The Planning Commission may allow more than one dwelling on a legal lot if the proposed use meets the following standards.

(a) Minimum legal lot size is 18,000 square feet.

(b) Existing lot is incapable of division to City standards.

(c) Shall minimize detrimental impacts on neighboring properties, such as obstruction of views, limiting solar access, and intrusion on privacy. Planning Commission may impose conditions such as maximum height of structure, minimum setbacks, and required buffering in order to limit detrimental impacts.”

Future development proposed by the applicant includes three-unit townhomes. These structures are considered multi-family per VLDO 493-Definitions which states: “Multi-Family Dwelling - Attached housing where each dwelling unit is not located on a separate lot.”

The applicant would not be able to comply with subsection (11)(b) above since the site is capable of being subdivided if development area is zoned Single Family Residential.

The Planned Development Subzone process is available to the applicant for either zone (SFR or GR zone). A Planned Development Subzone could potentially allow greater overall density and a variety of housing types per Veneta Land Development Ordinance No. 493, Section 4.14 (1) Purpose and 4.14 (7)(e) - Density. The Planned Development process could also address compatibility with surrounding neighborhood per the required development standards per Veneta Land Development Ordinance No. 493, Section 4.14(7)(b) – Compatibility with Neighborhood.

Density comparison

The indicated trip generation potential of the site fully developed with single family residences under the proposed zoning scenario could result in construction of two-hundred and twenty-seven (227) single-family residences, according to the applicant. The applicant estimates that the intended dwelling unit calculation includes two-hundred (200) units for a ‘Residential Facility’ consisting of Independent, Assisted and Memory Care units. The remaining one-hundred and twenty-seven (127) potential dwelling units are intended to consist of detached and attached single family dwelling for those 55 and older.

The majority (+/-43.61 acres) of the subject site is located in the Rural Residential zone, which allows minimum one (1) acre lots. This could equate to a potential of approximately forty-three (43) dwelling units for +/-43.61 acre of the subject site, if the designation of Rural Residential remained as is.

Whereas, approximately +/-7.17 acres of the subject site, is located in the Single Family Residential zone. The Single Family Residential zone requires a minimum lot area of 6,000

square feet for single family dwellings, except 7,500 square feet is required for duplex lots and 18,000 square feet for multifamily lots, not to exceed eight (8) dwelling units per acre. This equates to a maximum of fifty-seven (57) dwelling units on +/-7.17 acres of the subject site, if the designation of Single Family Residential remained as is. In summary, a total of 100 dwelling units are possible if the zoning designation remained as is.

In comparison, the requested change to the General Residential zone allows a minimum 6,000 square feet per single family dwellings or two dwellings per 7,500 square feet plus 2,000 square feet for each additional dwelling unit, but not to exceed 15 units per net acre and 20 units in planned developments. Considering net acres, the applicant states that the site is likely reduced to approximately 28.57 acres due to potential new right-of-way extensions and existing wetlands/buffers based on the applicants' preliminary analysis. Therefore, with the proposed zone change to General Residential, the 28.57 acre site could potentially yield two-hundred and seven (207) dwelling units (i.e. 28.57 net acres divided by 6,000 square foot single family lot) or one-hundred and sixty-five (165) attached single family dwelling lots which equates to three-hundred thirty-three dwelling units (i.e. 28.57 net acres divided by 7,500 square foot). Or, if considering the site is developed with three attached units on one lot a total of 9,500 square feet lots would be necessary in the General Residential zone which would equate to one-hundred and thirty-one lots with three-hundred and ninety-three (393) dwelling units (i.e. 28.57 net acres divided by 9,500 square feet).

The proposal will convert approximately forty-three (43) acres of R-Rural Residential designated land and seven (7) acres of L-Low Density Residential land to M-Medium Density Residential designated land.

Availability of Services

Water Supply

The applicant states that based on flow projection criteria in the City Water Master Plan, the potential increased population within the proposal results in an additional 87,285 gallons of water per day and 234,876 gallons per day for maximum day demand. The applicant also states that intended development of the property will include an interconnected water distribution system that connects into the existing distribution system on Hunter Road, Trinity Street and Jake Street.

The City Engineer finds that the supply and distribution systems have adequate capacity, as planned in the Water System Master Plan (WSMP), to meet the increased demands of the proposed re-zone area. However, distribution capacity to meet fire flow needs in the proposed project area is dependent on the completion of looped piping through the project area from Baker Lane to Bolton Road and Jake Street, as identified in the WSMP. Under current conditions, the City has an existing storage volume surplus of approximately 1.0 MG.

The City Engineer states that there is adequate capacity today to serve development permitted within the proposed zoning. However, per the Water System Master Plan, the City will ultimately have a storage volume deficit of 1.6 MG at build-out within the UGB, without considering the proposed increased development density. The storage volume deficit would be

increased to 1.84 MG with these proposed density increases. The Capital Improvement Plan (CIP) includes the recommended construction of a new 1.6 MG reservoir in the southwest corner of the City's urban growth boundary in order to meet the projected deficit. This improvement is recommended to be complete by approximately the year 2020.

In summary, the City Engineer states public water is available to the site with adequate capacity to serve development permitted within the proposed zoning based on the findings stated in the Technical Memorandum. (Exhibit J)

Sewer Availability

The applicant states that the intended future development of the property will include construction of a gravity piped system that collects and conveys wastewater to a central location near the east side of the property, where a pump station is intended to be installed.

The City Engineer commented that according to the City's wastewater engineer, the wastewater treatment plant has capacity to serve 6,220 residents. Current population served is roughly 4,800 residents. Public gravity sewer pipes exist in Hunter and Trinity near the western limits of the site. Due to the existing topography of the area, these pipes are likely too shallow to gravity serve the site. In addition, the capacity of portions of the existing gravity pipe in Hunter appears insufficient to accommodate the potential development density proposed based on comments received from the City's Wastewater Engineer. A wastewater lift station will be required to pump the wastewater from the project area to the existing gravity collection system on Hunter Road. The pipe in Hunter, between Pine Street and Lindsay Lane, likely will not have the available capacity to handle the flow from the proposed development unless that section of the gravity system is reconstructed with a larger diameter pipe.

In summary, the City Engineer finds that although public wastewater service has been extended to the project site, the capacity of the existing downstream system may be insufficient to serve development of the site. Any future development on the subject site will be required to address wastewater capacity of the existing downstream system, and upsize the system as necessary to accommodate the proposed development.

Stormwater Management

The applicant states that surface water currently flows off site to the northeast within three intermittent drainages that transect the property. Detailed stormwater management plans are intended to be developed during subsequent development and land use application requests.

Per the City Engineer, any future development proposed for the project site will be required to adhere to Veneta's stormwater treatment and detention standard, which limit peak flow rates for new development to existing (pre-development) rates. Increasing the development density potential will have minimal, if any, impact to the downstream system according to the City Engineer.

Transportation

The applicant states that the development of the property is intended to be age restricted housing (55 and older) in order to mitigate potential traffic conditions identified in future year traffic

scenarios. The applicant has provided a Sarto Village Zone Change Traffic Impact Analysis (TIA) prepared by Access Engineering, Inc., dated April 15, 2016. The applicant states that based on the analysis provided in the TIA, the proposed Zone Change from Rural Residential to General Residential, developed as age-restricted housing with assisted living and congregate care facilities, will result in no significant impact to the operation of the transportation system per OAR 660-012-0060(1).

The City Engineer has reviewed the TIA and provided findings detailed in the Technical Memorandum (Exhibit J). Specifically, the applicants TIA proposes to stipulate development on the site with a trip cap of 97 PM peak hour trips during the peak hour of street traffic to ensure that traffic generated by the site does not cause facilities to worsen already failing facilities. Based on the findings by the City Engineer listed in Exhibit J, the nearby roadway system has adequate vehicle capacity to accommodate the potential increase in vehicular traffic resulting from the proposed zone change; however, the area is found to have limited bicycle and pedestrian facilities available.

The City Engineer states that approval of the zone change should include the proposed trip cap mitigation, which will allow 97 PM peak hour trips from the site. A conditional of approval is recommended that the applicant shall record a restrictive covenant for Assessor's Map/ Tax Lot No. 17-05-31-00-00400, 17-05-31-00-00501 and 17-05-31-34-00600, in a form acceptable to the City Attorney, stipulating any future development on the property is subject to a trip cap of 97 peak hour trips.

STAFF RECOMMENDATION

Based on the information above, staff finds that the proposal can meet all of Veneta's requirements for a change to the Veneta Comprehensive Plan map and Veneta Zoning map. Staff recommends that the Planning Commission recommend approval to the Veneta City Council.

POSSIBLE ACTIONS BY THE PLANNING COMMISSION

The Planning Commission shall review the plan and the reports of the appropriate officials and agencies. The Planning Commission may:

1. Recommend approval of the findings as stated in the Final Order (Exhibit A) to the City Council.
2. Recommend denial of the findings as stated in the Final Order (Exhibit A) to the City Council. Additional findings will need to be generated to support denial.
3. If more research is needed, the Commission may direct staff to conduct the needed research and bring revised findings to the Planning Commission at a specified date. If this is done, staff recommends leaving the public hearing open to allow public comment on the revisions.
4. Continue the public hearing to a date and time certain.

EXHIBITS

- A. Proposed Final Order
- B. Applicant's Submittal
- C. Public Comment, Email dated 7/7/16 (Ryan Thomas)
- D. Public Comment, Email dated 7/12/16 (Jim Eagle Eye)
- E. Public Comment, Email dated 7/12/16 (Andrea Larson)
- F. Public Comment, Email dated 7/12/16 (Melissa & Jim Ratzlaff)
- G. Map of proposed Comprehensive Plan Diagram
- H. Map of proposed Zoning and Floodplain Map
- I. Updates to Land Development Ordinance No. 493
- J. City Engineer, Technical Memorandum
- K. Lane County Email Response on Conceptual Plan dated 6/15/16

**EXHIBIT A
FINAL ORDER
VENETA PLANNING COMMISSION**

**SARTO VILLAGE
AMENDMENT (REZONE, MAP ONLY)
File (CP/ZC-1-16)**

A. The Veneta Planning Commission finds the following:

1. The Planning Commission held a public hearing on August 2, 2016 on the proposed amendments after providing the required notice per Section 2.11 of Veneta's Land Development Ordinance No. 493.
2. The Veneta Planning Commission recommended approval of the proposed amendments as presented in Exhibit A, Proposed Comprehensive Map Designation Amendment and Exhibit B, Proposed Zoning Map Amendment attached to and incorporated herein to the Final Order, CP/ZC-1-16.
3. The proposed amendments are in conformance with applicable Statewide Planning Goals and the Veneta Comprehensive Plan Ordinance No. 416.

B. IT IS HEREBY ORDERED THAT the Veneta Planning Commission recommends approval of the proposed amendments, as shown in Exhibit A and B, to the Veneta City Council based on the following findings of fact:

FINDINGS

Applicable Comprehensive Plan provisions are set forth in *italics*, below. Findings showing compliance with the applicable criteria and standards are in **bold**.

FINDINGS OF CONSISTENCY FOR COMPREHENSIVE PLAN NO. 523

I. INTRODUCTION

C. CITIZEN INVOLVEMENT

RESPONSIBILITIES RELATED TO CITIZEN INVOLVEMENT

City Council

1. *The City Council makes all major decisions related to land use planning and community development for the City of Veneta. Decisions requiring City Council action include but are not limited to the following:*
 - A. *Adoption of a Program for Citizen Involvement.*
 - B. *Amendment to the Veneta Comprehensive Land Use Plan.*
 - C. *Adopted of an amendment to ordinances implementing the Comprehensive Plan.*
2. *The City Council will provided a written record for public dissemination of the rationale used in all land use and other planning policy decisions.*

FINDINGS:

1. **The City Council, with approval of an ordinance, will make the final decision regarding the requested rezone.**

Planning Commission

1. *The Planning Commission is appointed by the City Council to review land use planning issues and to make recommendations to the City Council on these issues.*
2. *The Planning Commission makes recommendations to the City Council on such issues as:*
 - A. *The Program for Citizen Involvement*
 - B. *Updating or amending the Comprehensive Plan*
 - C. *Updating or amending the zoning, subdivision, and other implementation ordinances.*
3. *The Planning Commission will provide a written record for public dissemination of the rationale in recommending land use and other planning policy decisions.*

FINDINGS:

1. **The Planning Commission is being asked to make a recommendation to the City Council regarding the rezone request. These findings constitute the required rationale for this land use decision.**

III. PLAN ELEMENTS AND POLICIES

A. GROWTH MANAGEMENT ELEMENT

GOAL:

Provide sufficient buildable lands and open space areas to allow Veneta to develop as the retail and service center for the Fern Ridge area and to develop a commercial and light industrial employment base.

POLICIES:

4. *Designate the Urban Service Development Area as the primary development area within Veneta. When water and sewer services become available, facilitate an easy transition of plan designations from rural residential to residential, commercial, industrial, or public/semi-public.*
5. *Allow either the City of Veneta or the property owner to initiate a plan designation change and zoning map amendments when services become available.*

FINDINGS:

1. **Lands with a plan designation of Rural Residential are slated for eventual transition to other designations which allow development within the UGB to occur at urban densities. The applicant wishes to develop the site with a mix of single family detached and attached single family dwellings (age restricted 55+) and a senior assisted living facility at higher densities than the current Rural Residential Plan Designation and Zoning permits.**
2. **City water, sewer, stormwater, and streets are available to the site as illustrated in the findings below.**

6. *Make the following findings of fact in order to permit conversion of rural residential lands to other plan designations:*
 - (a) *Water: The City water supply and distribution system are adequate to provide service to the property proposed for conversion to urban densities.*
 - (b) *Sewer: The City sewer treatment and collection system are adequate to provide service to the property for conversion to urban densities.*
 - (c) *Streets: The neighborhood streets and drainage system are adequate to handle additional traffic and storm drainage.*

FINDINGS:

1. **The proposal is consistent with this standard in that adequacy of water, sewer, and streets are adequate to provide service to the property proposed for conversion to urban densities based on the following:**

Water

- i. **The applicant provided a memorandum prepared by MSA, dated May 11, 2016 was provided with the rezone request, which was reviewed by the City Engineer.**
- ii. **Increased water demands associated with the potential additional dwelling units are estimated at 87,285 gallons per day (gpd) for average day demands (ADD), and 234,876 gpd for maximum day demand (MDD). The supply and distribution systems have adequate capacity, as planned in the Water System Master Plan, to meet the increased demands of the proposed re-zoned area per the City Engineer. Distribution system capacity to meet fire flow needs in the proposed project area is dependent on the completion of looped piping through the project area from E. Hunter Road (formerly known as Baker Lane) to Bolton Road and Jake Street, as identified in the Water System Master Plan (WSMP).**
- iii. **Public water lines exist adjacent to the site in Hunter Road and Trinity.**
- iv. **The combined increase in water storage needed to accommodate the proposed increased development density is 237,000 gallons, or 0.24 million gallons. Under current conditions, the City has an existing storage volume surplus of approximately 1.0 MG. There is adequate storage capacity today to serve the proposed increased development density according to the City Engineer.**
- v. **Per the Water System Master Plan (WSMP), the City will ultimately have a storage volume deficit of 1.6 MG at build-out within the UGB, without considering the proposed increased development density. The storage volume deficit would be increased to 1.84 MG with these proposed density increases. The Capital Improvement Plan (CIP) includes the recommended construction of a new 1.6 MG reservoir in the southwest corner of the City's urban growth boundary in order to meet the projected deficit. This improvement is recommended to be complete by approximately the year 2020.**

- vi. **Public water is available to the site with adequate capacity to serve development permitted within the proposal according to the City Engineer.**
- vii. **Based on the findings above, the City Engineer states public water is available to the site with adequate capacity to serve development permitted with the proposed amendment.**

Sewer

- i. **Per the City's wastewater engineer, the wastewater treatment plant has capacity to serve 6,220 residents. Current population served is roughly 4,800 residents.**
- ii. **Public gravity sewer pipes exist in Hunter and Trinity near the western limits of the site. Due to the existing topography of the area, these pipes are likely too shallow to gravity serve the site. In addition, the capacity of portions of the existing gravity pipe in Hunter appears insufficient to accommodate the potential development density proposed based on comments received from the City's Wastewater Engineer.**
- iii. **According to the City's wastewater engineer, a lift station will be required to pump the wastewater from the project area to the existing gravity collection system on Hunter Road. The pipe in Hunter, between Pine Street and Lindsay Lane, likely will not have the available capacity to handle the flow from the proposed development unless that section of the gravity system is reconstructed with a larger diameter pipe.**
- iv. **Although public wastewater service has been extended to the project site, the capacity of the existing downstream system may be insufficient to serve development of the site. Any future development on the subject site will be required to address wastewater capacity of the existing downstream system, and upsize the system as necessary to accommodate the proposed development.**

Streets

- i. **The applicant provided a Traffic Impact Analysis (TIA), prepared by Access Engineering, Inc., dated April 15, 2016 in order to satisfy Goal 12, Oregon Administrative Rules (OAR 660-012- 0060). The traffic impact and TPR analyses are prepared by a qualified professional engineer per the City Engineer.**
- ii. **The transportation planning rule is satisfied with the development proposal and mitigation to include a required trip cap of 97 PM peak hour trips, as described in findings listed below (Goal 12: Transportation Planning Rule).**
- iii. **The subject site is adjacent to E. Hunter Road, classified as a Major Collector per the Veneta Transportation System Plan.**
- iv. **Street frontage improvements are reviewed and conditioned with development review.**
- v. **Development of property is subject to City of Veneta Land Development Ordinance 493, Article 5, Section 5.27, which requires a traffic impact**

analysis if a development generates 100 or more AM or PM peak hour trips.

Stormwater

- i. Any future development proposal for the project site will be required to adhere to Veneta’s stormwater treatment and detention standard, which limit peak flow rates for new development to existing (pre-development) rates.**
- ii. Increasing the development density potential will have minimal, if any, impact to the downstream system, according to the City Engineer.**

III. PLAN ELEMENTS AND POLICIES

C. RESIDENTIAL LAND AND HOUSING ELEMENT

GOALS:

- 1. Provide an adequate supply of residential land and encourage land use regulations that allow a variety of housing types that will be able to meet the housing needs of a range of age groups, income levels, and family types.*
- 2. Encourage efficient land development patterns that minimize service and infrastructure costs.*
- 3. Encourage land use patterns that provide livable neighborhoods; allow mixed uses, and allow a variety of housing types.*
- 4. Encourage land use patterns that protect and enhance Veneta’s natural resources.*
- 5. Maintain an attractive residential community in an appealing rural setting.*

POLICIES:

- 4. Control further subdivision of land in the rural residential area to allow for easy conversion of rural residential properties to urban densities in the future when full city services become available.*
- 7. Locate multi-family housing where traffic circulation problems and safety hazards are minimized.*

FINDINGS:

- 1. The proposal would convert approximately forty-three (43) acres of R-Rural Residential designated land and seven (7) acres of L-Low Density Residential land (50 acres) to M-Medium Density Residential land. The same parcels would be rezoned to General Residential.**
- 2. The intended use of the property is for an age restricted 55+ community with a variety of housing types; detached and attached single family dwellings, and a Senior Residential Care Facility.**

3. **Approximately 7.17 acres of the subject property is located in the Single Family Residential zone. The Single Family Residential zone does not allow multi-family housing except with conditional use permit approval which would require the applicant to prove the, “Existing lot is incapable of division to City standards” per Veneta Land Development Ordinance No. 493, Section 8.11(11)(b) – Standards for multi-family in Single-Family Residential zone.**
4. **An adequate supply of residential land will be maintained with approval of the Comprehensive Plan designation and Zoning Map amendment request. The City’s 20-year Buildable Land Inventory assumes all Rural Residential Land will be built out to urban densities (a minimum of 6.2 units per net acre). The conversion of Rural Residential and Single Family Residential land to General Residential will not negatively impact the supply of residential land.**
5. **The applicant has submitted a Traffic Impact Analysis prepared by Access Engineering, Inc. which addresses traffic impacts. Findings and recommended conditions of approval are addressed (Goal 12 – Transportation).**
6. **The net site area is likely reduced to approximately 28.57 acres due to potential new right-of-way extensions and preservation of existing wetlands/buffers according to the applicant’s preliminary analysis.**
7. **In order to develop the property; the property owner/ applicant will be required to comply with Veneta Land Development Ordinance No. 493 and Veneta Land Division Ordinance No. 494.**

III. PLAN ELEMENTS AND POLICIES

E. UTILITIES

GOAL:

1. *Upgrade and develop adequate water, sewer, storm drainage and other appropriate utilities to serve the planning population (Other utilities could potentially include telecommunications, electric, cable, solid waste, etc.)*

POLICIES:

2. *Protect groundwater from the potential of contamination through improperly abandoned wells and protect city water from contamination by private wells by requiring proof of proper abandonment/isolation of private wells at the time of any development action on property with one or more private wells.*
3. *Encourage use of city water and wastewater services by requiring all new development to connect to the city water supply when practical.*
12. *Determine if oversizing of infrastructure is needed in light of future potential development (based on development at urban densities).*
15. *Allow rural properties until such time as the conversion to urban densities is feasible and needed.*

FINDINGS:

- 1. City water and sewer are available to the site and extension of City services is preferable over development with wells and septic systems as would be required for a majority (+/-43.61 acres) of the site under the current Rural Residential zone designation.**
- 2. Approving the requested rezone encourages new development to connect to city services.**
- 3. Future development will be required to extend and connect to public water and sewer services.**
- 4. Oversizing of sewer infrastructure will be evaluated at the time of development proposal.**

V. IMPLEMENTATION AND UPDATES TO THE PLAN

B. UPDATING THE PLAN

“...Comprehensive Plan amendments, however, can be initiated by private citizens. The procedure will be exactly the same as the procedure used for a zone change as outlined in the Veneta Land Development Ordinance. The applicant makes the initial request for a plan amendment to the Planning Commission. The City notifies LCDC of the proposal prior to the first hearing date, per ORS 197.610. The Planning Commission holds a public hearing and makes its recommendation to the City Council. The City Council holds a final public hearing. If the amendment is approved, the City would instruct the city attorney to prepare an ordinance to that effect and the ordinance could be adopted at the next regularly scheduled Council meeting.”

“For a plan amendment to be legally adopted, there must be documentation of an "established need" for the plan change. The establishment of this need rests ultimately with the City Council. However, the most common practice in Oregon is for the City Council and Planning Commission to require the applicant to submit the documentation for establishing that changes in the Comprehensive Plan cannot be arbitrary or capricious but must be based on a demonstrated need.”

FINDINGS:

- 1. The property owner submitted an application for the Comprehensive Plan designation and zone change request (Map only), accompanied by a letter addressed to the Planning Commission and City Council demonstrating need for the change, consistent with the Comprehensive Plan, Ordinance 523, V., B. Updating the Plan.**
- 2. The City notified the Department of Land Conservation and Development (DLCD) of the proposal on June 17, 2016, more than 35 days prior to the first evidentiary hearing. The Planning Commission will review the proposed change and make a recommendation to the Veneta City Council. The City Council will make the final decision.**
- 3. The establishment of need for the rezone with the applicants intent to develop of a Senior Living Project (55 and older), has been documented by the applicant, given the intended development aligns with the following**

- Comprehensive Plan goals; 1) Rapidly growing population and changing demographics in Veneta, particularly those over age 55, 2) Veneta's population is projected to increase from 4,635 in 2013 to 10,505 people by the year 2035, 3) Adequate land area must be allocated to support the residential needs of this projected growth, 4) Aging of the baby boom generation, accompanied by increases in life expectancy; increasing the number of people age 65 and older and 5) Median age of Veneta residents is increasing and the Oregon Office of Economic Analysis forecasts that Lane County's percent of people 65 years and older will increase from 13 percent in 2000 to 20 percent in 2030.
4. The requested Comprehensive Plan Diagram amendment from R-Rural Residential & L-Low Density Residential to M-Medium Density Residential is consistent with the Comprehensive Plan as shown in the included findings and as summarized as follows: 1) **Utilities**: Increasing the density within the City makes for efficient use of public utilities reducing initial and long-term maintenance costs for the City and Residents, 2) **Transportation**: Increasing the density within the City makes for efficient use of public transportation systems and reduces initial and long-term maintenance costs for the City and residents, 3) **Parks and Open space**: The increased density will support development of a variety of public neighborhood parks, open space areas, and recreational facilities for use by the residents of Veneta and 4) **Natural Resources**: Allows for preservation of significant natural resources within the City while maintaining density levels as the demand for population growth within the City continues.

IV. COMPREHENSIVE PLAN MAP AND LAND USE DESIGNATIONS PLAN DESIGNATIONS:

MEDIUM DENSITY GENERAL RESIDENTIAL (M)

Purpose of Plan Designation:

- *Provide areas suitable and desirable for a variety of housing types and densities with provisions for associated public service uses, planned developments and other uses under controlled conditions.*
- *Ensure that sufficient lands are available for development of a variety of housing types by allowing an intermix of housing types within a medium density residential area. Allow densities up to fifteen (15) living units per net acre. Planned Development (PD) may qualify for density bonuses up to twenty (20) living units per net acre.*
- *Require a minimum lot size of 6,000 square feet per single-family detached dwelling unit. The minimum lot size for single-family attached or multi-family units is 7,500 square feet minimum for duplex and 2,000 square feet per unit thereafter. Undersized lots, existing prior to 1980, may be developed as single family residential lots.*
- *Allow mobile home parks in the General Residential (GR) Zone. Concentrate medium-density housing in and around the downtown area. Typical housing densities would be approximately 6-14 units per net acre.*

- *Use the medium-density housing to transition from higher intensity uses to low-density residential.*
- *Allow for residential care facilities for more than 15 people. Allow up to 30 units per acre.*

LOW DENSITY RESIDENTIAL (L)

Purpose of Plan Designation:

- *Provide areas suitable and desirable for primarily single-family uses with provisions for associated public service uses, planned developments, and limited multiple-family use under controlled conditions on lots incapable of division to city standards.*
- *Ensure that residents are provided with a low density single-family residential area.*
- *Allow up to seven (7) units per net acre. Planned Developments may qualify for a density bonus of up to fifteen (15) living units per net acre in the Single Family Residential (SFR) zone.*
- *Require minimum lot sizes shall of 6,000 square feet and 8,000 square feet on steep slopes. Larger lots may be established by the Planning Commission if it determines that development hazards or constraints exist or if the Planning Commission finds larger lot sizes will be more compatible with surrounding residential areas.*
- *Allow multi-family uses in this designation area if there is no feasible alternative which would allow division of the large lot into smaller single-family lots.*
- *Allow for residential care facilities for more than 15 people. Allow up to 30 units per acre.*

RURAL RESIDENTIAL (R)

Purpose of Plan Designation:

- *Allow the City of Veneta or the property owner to initiate a plan designation change to either Low Density or Medium Density Residential, and applicable zoning map amendments, when development to urban uses and densities and services become available.*

FINDINGS:

- 1. The applicant states that the conversion of the subject parcels to M-Medium Density Residential is consistent with surrounding properties (both in terms of plan designation and zoning). Staff notes that there are several instances within the Veneta city limits where Medium Density Residential abuts Low and Rural Density Residential similarly to the subject site. The surrounding properties (to the west) are within the Low Density Residential plan designation/ Single Family Residential zone. The surrounding properties to the east and north are within the Rural Residential plan designation.**
- 2. Approximately 43.61 acres of the subject site are located in the Rural Residential plan designation and in reserve for future plan change designation to either Low Density or Medium Density residential; when urban uses, densities and services become available as described in the**

- purpose of the Rural Residential plan designation (Ordinance 523 – Comprehensive Plan). A portion of the property, approximately 7.17 acres is currently located in the Low Density Residential plan designation/ Single Family Residential zone. The applicant states, there are significant wetlands and greenway that will buffer the transition between the proposed M-Medium Density Residential plan designation and adjacent L – Low Density Residential.
3. The Rural Residential zone requires one-acre lot minimums. The majority (+/-43.61 acres) of the subject site is located in the Rural Residential zone, which equates to a potential of approximately forty-three (43) dwelling units, if the designations remained as is. Approximately 7.17 acres of the subject site, is located in the Single Family Residential zone, which currently allows similar size lots as the General Residential zone. The Single Family Residential zone allows a net density not to exceed eight (8) dwelling units per acre versus the General Residential zone which allows a net density not to exceed fifteen (15) dwelling units per net acre.
 4. For comparison, with the proposed zone change to General Residential and an assumed 28.57 net acre site, there is a potential yield of two-hundred and seven (207) dwelling units (i.e. 28.57 net acres divided by 6,000 square foot single family lot) or one-hundred and sixty-five (165) attached single family dwelling lots, which equates to three-hundred thirty-three dwelling units (i.e. 28.57 net acres divided by 7,500 square foot). Or, if considering the site is developed with three attached units on one lot a total of 9,500 square feet lots are required in the General Residential zone which would equate to one-hundred and thirty-one lots with three-hundred and ninety-three (393) dwelling units (i.e. 28.57 net acres divided by 9,500 square feet).
 5. The proposal will convert approximately forty-three (43) acres of R-Rural Residential designated land, seven (7) acres of L-Low Density Residential land and add a total of approximately fifty (50) acres of M-Medium Density Residential land and adjacent Low Density Residential plan designation.
 6. The Medium Density Residential (M) plan designation is intended to be concentrated in and around the downtown area according to the Comprehensive Plan. However, there are several instances where Medium Density Residential is not concentrated in the downtown area including south of Perkins Road (Perkins Country Estates Subdivision), Applegate Landing Subdivision in southwest Veneta and east of Territorial Road (Lawler Subdivision).
 7. The applicant has expressed intent to develop multi-family housing (townhomes – 3 or more units on one lot). The Low Density Residential (L) plan designation does not allow multi-family uses except through conditional use permit approval. The purpose of the Low Density Residential plan designation is to allow multi-family uses if there are no feasible alternative which would allow division of the large lot into smaller single-family lots.
 8. The proposal is consistent with the change from Rural Residential to Medium Density Residential as the Rural Residential plan designation is

intended to allow the property owner to initiate a plan designation change to Medium Density Residential.

FINDINGS OF CONSISTENCY LAND DEVELOPMENT ORDINANCE NO. 493

“PURPOSE OF LAND DEVELOPMENT ORDINANCE NO. 493: The purpose of this ordinance is to establish standards and procedures for the orderly development of land within the City of Veneta; to assist in implementing the Veneta Comprehensive Plan and to promote the public health, safety and general welfare.”

FINDINGS:

- 1. The amendments to the Land Development Ordinance No. 493, Article 3, Section 3.03 – Location of Zones, does not affect the stated purpose of the Land Development Ordinance.**

SECTION 11.01 AUTHORIZATION TO INITIATE AMENDMENTS

“An amendment to the text of this ordinance may be initiated by the City Council, the City Planning Commission or by application of a property owner or city resident. An amendment to the zoning map may be initiated by the City Council, the City Planning Commission or by application of a property owner. The request by an application for an amendment shall be accomplished by filing an application with the Building and Planning Official using forms prescribed pursuant to Section 2.06. A filing fee in accordance with the provisions of Section 2.08 and a narrative statement explaining the reasons for the amendment shall accompany an application by a property owner.”

FINDINGS:

- 1. The property owner is requesting by application the initiation of a Zone Change (map only) which is consistent with this criteria. The applicant has submitted the required application form, filing fee, and narrative statement explaining the reasons for the amendment.**

THE STATEWIDE PLANNING GOALS AND GUIDELINES ADOPTED UNDER OREGON REVISED STATUTES CHAPTER 197

The City’s Comprehensive Plan incorporated the Statewide Planning Goals and was acknowledged by the state as being in compliance with state law; therefore, the Statewide Goals are addressed under the Comprehensive Plan Policies Sections. The following Statewide Planning Goals are applicable: Goal 1: Citizen Involvement; Goal 2: Land Use Planning; Goal 10: Housing; Goal 12: Transportation.

GOAL 1: CITIZEN INVOLVEMENT

OAR 660-015-0000(1)

To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

FINDINGS:

- 1. The City, through the Veneta Land Development Ordinance No. 493, has created proper procedures to ensure citizens have the opportunity to have**

input on any proposed map amendment. Opportunities for public input have been made available through the public comment process and public hearings procedures, prior to action on this proposal. Notification of this proposal and public hearing schedule was mailed to all property owners located within five-hundred (500) feet of the subject parcels. Notice was also published in the Fern Ridge Review on June 22, 2016. The City has met its obligation of providing for citizen involvement under Statewide Planning Goal 1, as defined through the City's adopted procedures.

GOAL 2: LAND USE PLANNING

OAR 660-015-0000(2)

To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.

FINDINGS:

- 1. The proposed Comprehensive Plan/Zone amendment (map only) has been evaluated using criteria found within the City's and policies found within the City's Comprehensive Plan and Land Development Ordinance No. 493. The proposed amendments are subject to a public hearing before the Planning Commission and City Council. Therefore, a well-established planning process and policy framework exists within the City. The proposal is consistent with Statewide Planning Goal 2 – Land Use Planning.**

GOAL 10: HOUSING

OAR 660-015-0000(10)

To provide for the housing needs of citizens of the state. Buildable lands for residential use shall be inventoried and plans shall encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density.

FINDINGS:

- 1. The project site was identified as vacant or partially vacant land (buildable) in the Veneta Residential Land Use Classifications Map (adopted with the Comprehensive Plan Amendment, September 14, 2015) and Buildable Lands Study.**
- 2. As noted in the September 14, 2015 adopted amendment to the Veneta Comprehensive Plan, the majority of buildable residential land acres is designated Rural Residential and Low Density Residential totaling 347.6 acres and the remaining 128 acres is designated Medium Density Residential.**
- 3. Veneta will need to provide 2,120 new dwelling units between the years 2013-2033, plus an additional sixty three (63) group quarter units in order to accommodate the forecasted population according to the adopted Comprehensive Plan.**

4. **Group quarter population is forecasted to double by 2033. An additional 3.3 acres will be needed to accommodate projected new group quarter facilities. The intent to develop senior congregate care facility on approximately five (5) acres is aligned with the projected need for group quarters within city limits.**
5. **The long term national trend is the aging of the baby boom generation, accompanied by increases in life expectancy. The number of people aged 65 and older will more than double by 2050.**
6. **The intent of the Sarto Village project is to develop single family attached and detached lots for those 65 and older. The applicant has expressed the intent to develop individual lots with one owner.**
7. **Based on the above findings, the proposal is consistent with Goal 10: Housing.**

GOAL 12: TRANSPORTATION PLANNING RULE

OAR Section 660-12-0060

Plan and Land Use Regulation Amendments

(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) As measured by the end of the planning period identified in the adopted transportation system plan (TSP):

(A) Allow land uses or levels of development that would result in types or levels of travel 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 below the minimum acceptable performance standard identified in the TSP or comprehensive plan;

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan:

FINDINGS:

1. **The applicant has provided a Sarto Village Zone Change Traffic Impact Analysis (TIA) prepared by Access Engineering, Inc., dated April 15, 2016.**
2. **The TIA refers to the General Residential (GR) zone, which is consistent with the land use application proposal, which would allow a maximum**

- development density of up to 15 dwellings units/acre. In either zoning scenario, the minimum lot size of 6,000 square feet (Veneta Land Development Ordinance No. 493), was applied to the site acreage to determine a reasonable worst case development scenario.
3. The indicated trip generation potential of the site fully developed with single family detached housing units under the proposed zoning scenario could result in a worst case development scenario that could include up to 227 single-family residences. The worst case development scenario would generate up to 217 new PM peak hour trips (per Table 7, page 8 of the Transportation Planning Rule Analysis/Traffic Impact Analysis) on the transportation system with area deductions to account for wetland and unsuitable building areas and street right-of-way dedications for new transportation, sewer, water and stormwater infrastructure. The TPRA/TIA applied a trip generation rate for the reasonable worst case development scenario based on the ITE's fitted curve trip generation equation (logarithmic) for single family detached housing in lieu of the average linear rate of 1.00 trips/unit during the pm peak hour of street traffic. The result is a lower trip generation than application of the ITE's average rate applied to the potential for 227 single family residential units (217 PM peak hour trips vs 227 with the average rate). Based on the range of data, the number of studies, and the coefficient of determination (R^2 value greater than 0.75), either the average rate or the fitted curve equation derived from the data source are acceptable to estimate trip generation for single family detached housing land use. The TPR concluded that the site's area subject to the zone change could support up to 227 single family residences and referenced the development density of the residential neighborhood directly to the east. The number of units analyzed for the worst case development scenario also considered to the City's minimum lot size standards and development density allowed with the proposed zoning. The TPR's reasonable worst case development scenario is intended as a theoretical development scenario, and does not represent the proposed development conditions.
 4. The applicant is proposing to develop age restricted housing to include 100 beds for assisted living (ITE Code 254); 100 units of congregate care facility (ITE Code 253), and 140 units for senior adult housing (ITE Code 251). Table 10 on page 12 of the TIA includes this information and the trip generation of the site in detail, including the site's total trip generation of 97 PM peak hour trips. The applicant's TIA for the proposed development included an analysis of the traffic conditions resulting from the proposed development of the site with the unit total for these land uses shown on Table 10 (page 12) of the TIA. The applicant's proposed trip cap as mitigation to limit development on the site to age restricted housing with 97 PM peak hour trips is based on the total trip generation as concluded in Table 10. The Transportation Planning Rule (TPR) considers the reasonable worst case development scenario that the proposed zoning could support and is intended to provide an analysis of the transportation system if developed to the development density identified during the planning horizon year of the

- applicable transportation system plan if at the time of development the developer made a change of the land use approved for the zone change to another land use also supported by the proposed zoning od comprehensive plan designation that the code allows with an increased trip generation potential. The TPR considers potential impacts and not necessarily the impacts associated with the actual development proposal. The proposal to mitigate traffic conditions by stipulated development limited to 97 total trips is consistent with the objectives of the TIA.
5. The traffic analysis indicates that the applicant/owner is proposing to limit development on the site to age restricted housing which mitigates potential traffic conditions identified in future year traffic scenarios.
 6. Enforcement of mitigation for traffic impacts by the proposed restriction of development on the site will need to be enforced by encumbrances recorded on the property deed(s) or other mechanism(s) that will ensure development is limited to maintain the level of traffic resulting from the development proposal associated with the proposed development conditions. Alternately, traffic conditions with development other than that identified with the development stipulation's restrictions analyzed with this application could be reviewed for impacts prior to build-out. The latter would need to look at the site as a whole for build-out of each parcel assuming the worst case development scenario consistent with the criteria of the transportation planning rule and City of Veneta Land Ordinance 5.27 - Traffic Impact Analysis and Mitigation.
 7. All v/c ratios reported for the existing conditions are within the acceptable performance standard identified for the corresponding road authorities with performance standards.
 8. The southbound approach movement at Huston Road and Highway 126 is reported to operate at LOS E in the current conditions and worse with background and build conditions for future year analysis scenarios. The northbound approach is also projected to operate at LOS E or less in future background and build condition scenarios. The City of Veneta does not currently identify with a mobility standard for transportation system performance, such as level of service (LOS), volume to capacity ratio (v/c) or delay. LOS E is generally considered the worst acceptable performance measure for performance based on delay at non-signalized intersections in municipalities with adopted delay based LOS standards. To address ODOT's v/c standard at Huston Road and other ODOT intersections, the applicant's TIA proposes to stipulate development on the site with a trip cap of 97 PM peak hour trips during the peak hour of street traffic to ensure that traffic generated by the site does not cause facilities to fail or worsen already failing facilities.
 9. The provided traffic signal warrant analysis utilized the ODOT Preliminary Signal Warrant Analysis worksheet, which converts peak hour traffic volumes to daily traffic volumes utilizing a "K" factor and is consistent with the current ODOT Analysis Procedures Manual methodology. The volume used in the warrant included 210 approaching vehicles on the northbound

- approach with no right-turn discounts. According to the Lane County Maps GIS, the ADT on Huston Road was determined to be at 2,400 vehicles per day just south of Highway 126 in 2011.
10. The criterion of the transportation planning rule is discussed in section IV of the traffic study on pages 13-14. The TPR analysis concludes that the transportation planning rule (OAR 660-012-0060) is satisfied with the development proposal and the proposed mitigation to include stipulated development for age restricted housing and to put a trip cap of 97 PM peak hour trips on development at the site. Safety is not identified as a part of the criteria for transportation planning rule analysis.
 11. City of Veneta Land Development Ordinance No. 493, Section 6.05 discusses Approval Criteria for site review processes. Section 6.05(1)(b) includes protecting pedestrian, bicycle and vehicular safety, while (d) stipulates that adequate water, sewer and other required facilities for the proposed use are available. The existing conditions on Hunter Road west of the site to Territorial Road do not currently include improvements that are consistent with the City of Veneta's standard for the identified minor arterial functional classification. The roadway is adequate for vehicular capacity, but does not feature shoulders, bike lanes or sidewalks and features open conveyance (ditches) for storm water drainage.
 12. Based on the above findings, the City Engineer finds that the nearby roadway system has adequate vehicle capacity to accommodate the potential increase in vehicular traffic resulting from the proposed zone change; however, the area has limited bicycle and pedestrian facilities available.
 13. The City Engineer finds that approval of the requested amendment should include a proposed trip cap mitigation, which will allow up to 97 PM peak hour trips from the site. A restrictive covenant should be recorded for the property, in a form acceptable to the City Attorney, stipulating any future development on the property is subject to a trip cap of 97 peak hour trips.
 14. A conditional of approval is recommended that the applicant shall record a restrictive covenant for Assessor's Map/ Tax Lot No. 17-05-31-00-00400, 17-05-31-00-00501 and 17-05-31-34-00600, in a form acceptable to the City Attorney, stipulating any future development on the property is subject to a trip cap of 97 peak hour trips.

POSSIBLE ACTIONS BY THE PLANNING COMMISSION

The Planning Commission shall review the plan and the reports of the appropriate officials and agencies. The Planning Commission may:

1. Close the public hearing. Recommend approval of the findings as stated in the Final Order to the City Council.
2. Close the public hearing. Recommend denial of the proposal. Additional findings will need to be generated to support denial.

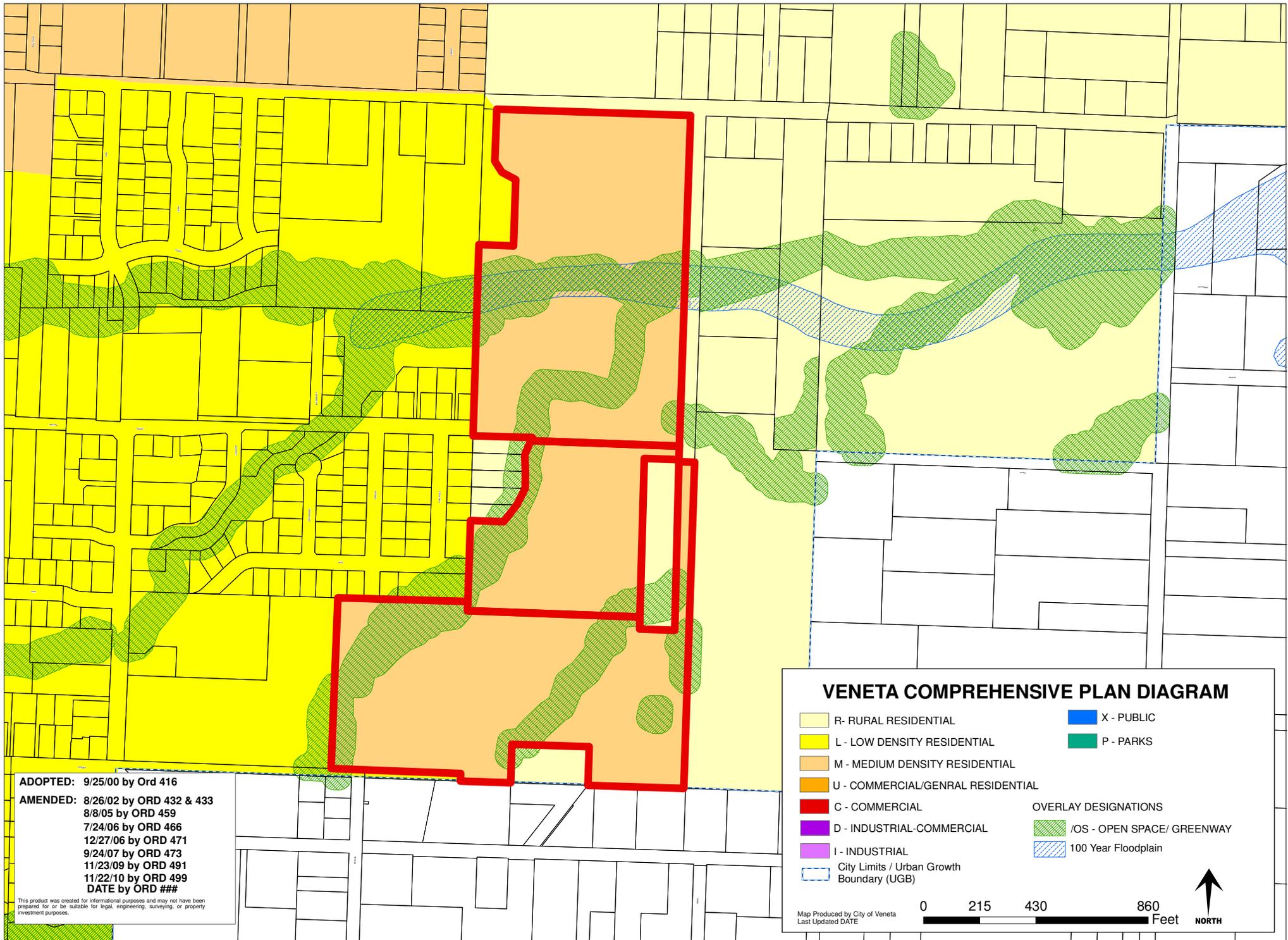
3. If more research is needed, the Commission may direct staff to conduct the needed research and bring revised findings to the Planning Commission at a specified date. If this is done, staff recommends leaving the public hearing open to allow public comment on the revisions.
4. Continue the public hearing to a date and time certain.

CONCLUSIONARY FINDINGS

Based on the information and findings stated above, the proposed amendments to the Veneta Comprehensive Plan Diagram and Veneta Zoning Map, complies with all applicable Statewide Planning Goals and polices of the Veneta Comprehensive Plan. The Veneta Planning Commission hereby approves the proposed amendments and these findings of fact and recommends approval and adoption by the City Council.

XXXXXXXXXXXXXXXXXXXX
Len Goodwin, Planning Commission, Vice Chair

Date



ADOPTED: 9/25/00 by Ord 416
 AMENDED: 8/26/02 by ORD 432 & 433
 8/8/05 by ORD 459
 7/24/06 by ORD 466
 12/27/06 by ORD 471
 9/24/07 by ORD 473
 11/23/09 by ORD 491
 11/22/10 by ORD 499
 DATE by ORD ###

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VENETA COMPREHENSIVE PLAN DIAGRAM

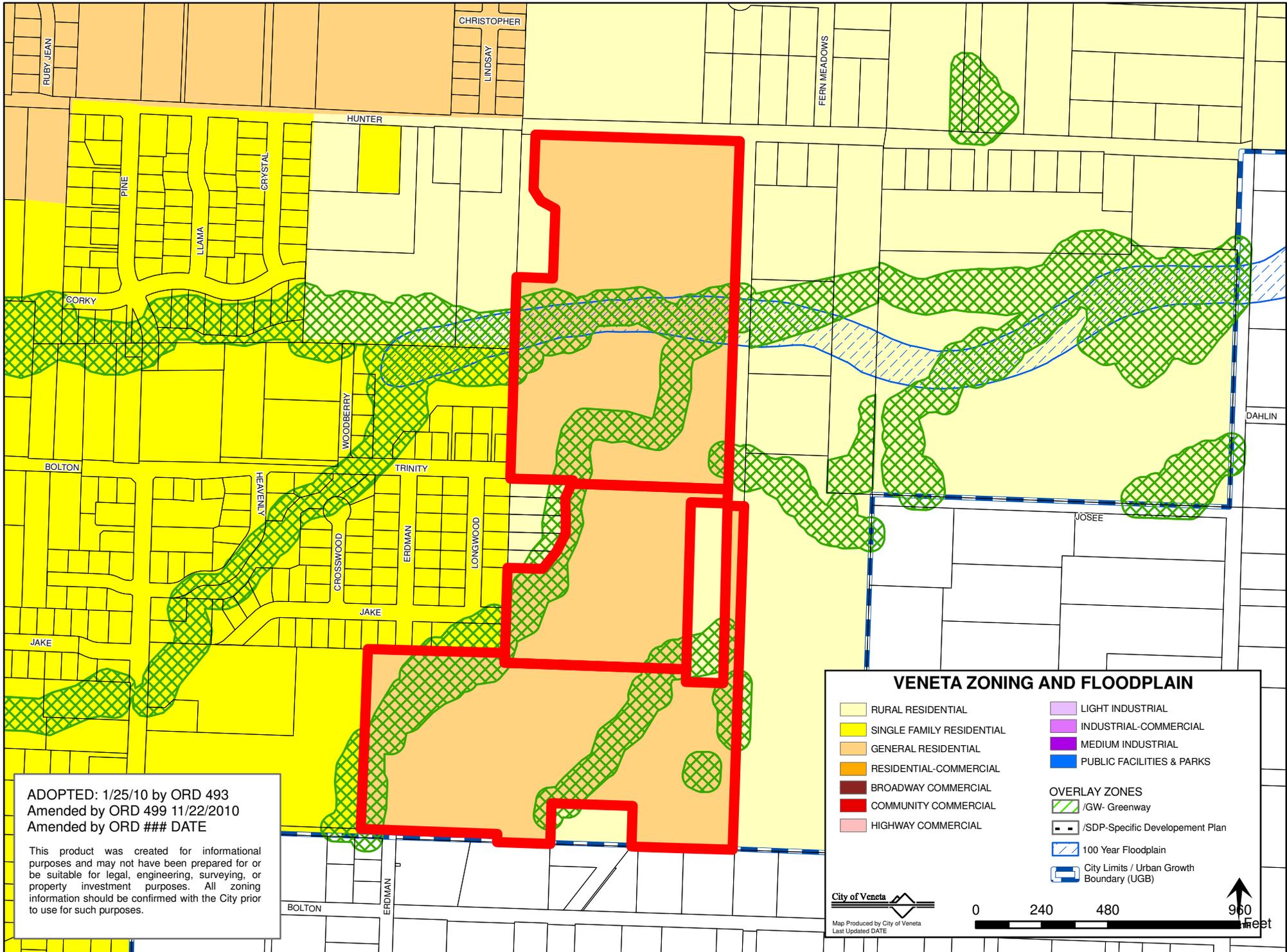
<ul style="list-style-type: none"> R - RURAL RESIDENTIAL L - LOW DENSITY RESIDENTIAL M - MEDIUM DENSITY RESIDENTIAL U - COMMERCIAL/GENERAL RESIDENTIAL C - COMMERCIAL D - INDUSTRIAL-COMMERCIAL I - INDUSTRIAL City Limits / Urban Growth Boundary (UGB) 	<ul style="list-style-type: none"> X - PUBLIC P - PARKS <p>OVERLAY DESIGNATIONS</p> <ul style="list-style-type: none"> /OS - OPEN SPACE/ GREENWAY 100 Year Floodplain
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Map Produced by City of Veneta
Last Updated DATE

0 215 430 860

Feet

NORTH



ADOPTED: 1/25/10 by ORD 493
 Amended by ORD 499 11/22/2010
 Amended by ORD ### DATE

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VENETA ZONING AND FLOODPLAIN

RURAL RESIDENTIAL	LIGHT INDUSTRIAL
SINGLE FAMILY RESIDENTIAL	INDUSTRIAL-COMMERCIAL
GENERAL RESIDENTIAL	MEDIUM INDUSTRIAL
RESIDENTIAL-COMMERCIAL	PUBLIC FACILITIES & PARKS
BROADWAY COMMERCIAL	
COMMUNITY COMMERCIAL	OVERLAY ZONES
HIGHWAY COMMERCIAL	/GW- Greenway
	/SDP-Specific Development Plan
	100 Year Floodplain
	City Limits / Urban Growth Boundary (UGB)

City of Veneta

Map Produced by City of Veneta
 Last Updated DATE

0 240 480 960 feet



June 16, 2016

City of Veneta – City Council and Planning Commission
C/O Lisa Garbett, Associate Planner
88184 8th St
PO Box 458
Veneta, OR 97487

RE: Memorandum – Establishment of Need for Zone Change & Comprehensive Plan Amendment
Project Name: Sarto Village Zone Change
Project #151820

Dear Veneta Planning Commission and City Council,

Sarto Village is requesting a Zone Change & Comprehensive Plan Amendment to accommodate the proposed Sarto Village Senior Living project. The community is planned to accommodate a mix of housing options for Seniors who are 55+ in age. The project is anticipated to consist of detached and attached Single Family Residential units and a Residential Facility consisting of Independent, Assisted and Memory Care units. This growing and valuable need in Veneta will providing desirable housing options for area residents to age in place and stay in Veneta and bring a variety of desirable job opportunities to serve this community.

The need for this request is in support of the goals outlined in the **Veneta Comprehensive Plan** (Ordinance 523) with amendments dated September 14, 2015 as follows:

1. Anticipated population growth and aging demographics in Veneta as follows:
 - a. Population Projections and Assumptions -
 - i. Veneta's population is projected to increase from 4,635 in 2013 to 10,505 people by the year 2035.
 - ii. The "coordinated" 2035 population projection for Veneta is 10,505. This projection is based on the parameters of the county population in 2035 and the projected growth of other cities in the region.
 - iii. Adequate land area must be allocated to support the residential needs of this projected growth, as well as for supporting functions such as commercial and public use.
 - iv. Veneta is likely to face pressure for residential growth as land becomes more constrained within the Eugene-Springfield area.
 - v. Veneta should continue to allow various housing types and residential neighborhoods so the market is able to provide housing choices to Veneta residents.
 - b. Population and Demographic Characteristics
 - i. The aging of the baby boom generation, accompanied by increases in life expectancy is increasing the number of people age 65 and older. This national trend will more than double the Senior population by 2050 in the US. This trend can be seen in Oregon, where the share of workers 65 years and older grew 2.9 percent of the workforce in 2000 to 4.1 percent of the workforce in 2010, an increase of 41 percent.

Memorandum – Establishment of Need for Zone Change

Project Name: Sarto Village Zone Change

Project #151820

June 16, 2016

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- ii. The median age of Veneta residents is increasing. The average age of Veneta residents in 2012 was 34.9 years old, compared with 32.7 in 2000. By comparison, Lane County’s median age was 36.6 years old in 2012 and 38.8 in 2000. Individuals aged 65 and older in Veneta increased faster than any other age between 2000 and 2012 (409 people, an increase of 199 percent). The Oregon Office of Economic Analysis forecasts that Lane County’s percent of people 65 years and older will increase from 13 percent in 2000 to 20 percent in 2030.
- iii. The Table below shows the change in age distribution for Veneta between 2000 and 2012. Population increased in all age groups. The age group that increased the most was people aged 65 and older, which tripled in size (an increase of 409 people). This age group’s proportion of the total population increased from 7 percent to 14 percent during this time period. Veneta’s younger population grew quickly too, with people under 5 years accounting for 10 percent of the City’s population in 2012, up from 7 percent in 2000.

Age Group	Year 2000		Year 2012		Change		
	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	195	7%	454	10%	259	133%	3%
5-17	713	26%	778	17%	65	9%	-9%
18-24	213	8%	275	6%	62	29%	-2%
25-44	841	31%	1,228	27%	387	46%	-3%
45-64	587	21%	1,146	25%	559	95%	4%
65 and over	206	7%	615	14%	409	199%	6%
Total	2,755	100	4,496	100	1,741	63%	0

Table - Change in age distribution, Veneta, 2000, 2008-2012
 Source: 2000 U.S. Census, Table P12; 2008-2012 American Community Survey, Table B01001.

- c. Residential Land and Housing Element –
 - i. Provide an adequate supply of residential land and encourage land use regulations that allow a variety of housing types that will be able to meet the housing needs of a range of age groups, income levels, and family types.
 - ii. Encourage efficient land development patterns that minimize service and infrastructure costs.
 - iii. Encourage land use patterns that provide livable neighborhoods; allow mixed uses, and allow a variety of housing types.
 - iv. Encourage land use patterns that protect and enhance Veneta’s natural resources.
 - v. Facilitate new housing starts to ensure there is adequate opportunity and choice to acquire safe, sanitary, and affordable housing.
 - vi. Maintain an attractive residential community in an appealing rural setting.
2. The requested increase of housing from R-Rural Residential & L-Low Density Residential to M-Medium Density Residential consistent with the Comp Plan as follows:

Memorandum – Establishment of Need for Zone Change

Project Name: Sarto Village Zone Change

Project #151820

June 16, 2016

Page 3 of 4

- a. Utilities – Increasing the density within the City makes for efficient use of public utilities reducing initial and long-term maintenance costs for the City and Residents.
 - b. Transportation – Increasing the density within the City makes for efficient use of public transportation systems and reduces initial and long-term maintenance costs for the City and residents.
 - c. Parks and Open space – The increased density will support development of a variety of public neighborhood parks, open space areas, and recreational facilities for use by the residents of Veneta.
 - d. Natural Resources - Allows for preservation of significant natural resources within the City while maintaining density levels as the demand for population growth within the City continues.
3. The proposed rezoning and comprehensive plan changes for these parcels to increase housing is consistent with the purpose of each zoning designation as follows:
 - a. The Rural Residential Plan Designation is intended to “allow the City of Veneta or the property owner to initiate a plan designation change to either Low Density or Medium Density Residential, and applicable zoning map amendments, when development to urban uses and densities and services become available”.
 - b. It is our understanding the City does currently have capacity to serve the proposed zone change in this area along with necessary improvements by the property owner to serve the requested urban residential use conversion from a Rural & Low to Medium Residential Density.
4. The conversion of the subject parcels to M-Medium Density Residential Plan Designation and General Residential (GR) zone is consistent with surrounding properties both in terms of plan designation and zoning as follows:
 - a. The majority of the surrounding properties are within the Low Density Residential Plan Designation/ Single Family Residential zone (to the southwest) or are Rural Residential (to the east, north and northwest) and are in reserve for future plan change designation to M-Medium Density when urban uses, densities and services become available.
 - b. Regarding the L-Low Density Residential Areas to the west of the subject property – there are significant wetlands that will buffer the transition between the proposed M- Medium Density Residential proposed.
5. The proposal will change 43 acres of R-Rural Residential designated land and 7.50 acres of L-Low Density Residential land to M-Medium Density Residential Plan & General Residential zone designation.
6. The potential number of residential units could increase up to approximately 654 units with the Comprehensive Plan designation amendment from R & L to M – Medium Density Plan Designation and General Residential zone based on a gross site area calculation of 50.50 acres. However based on preliminary concepts the net site areas is reduced to approximately 28.57 acres due to new right-of-way extensions and existing wetlands/buffers. Therefore the

Memorandum – Establishment of Need for Zone Change

Project Name: Sarto Village Zone Change

Project #151820

June 16, 2016

Page 4 of 4

potential number of residential units based on this scenario could increase up to approximately 327 units.

I trust this Memorandum substantiates that due to the rapidly growing population and changing demographics in Veneta, in particular those over age 55, that this request for a Zone Change & Comprehensive Plan Amendment to increase the allowed densities and diverse of housing will be a great benefit to the Residents of the City of Veneta.

Please let me know if you have any questions or comments.

Sincerely,

MYHRE GROUP ARCHITECTS, INC.



Raymond Yancey, AIA, NCARB

Principal

End of Document



**APPLICANT'S STATEMENT AND FINDINGS OF FACT FOR A ZONE
CHANGE (MAP ONLY) & COMPREHENSIVE PLAN AMENDMENT
FOR
TAX LOT 00400 TAX MAP 17-05-31-00
TAX LOT 00501 TAX MAP 17-05-31-00
TAX LOT 00602 TAX MAP 17-05-31-34
IN THE
CITY OF VENETA, OREGON**

APPLICATION DATE: April 1, 2016 (revised May 16, 2016)

APPLICANT: Jerome Poulin, for Sarto Village Project
Society of Saint Piux X Southwest District, Inc.
11485 N. Farley Road
Platte City, MO, 64079

PROPERTY OWNER: Society of Saint Piux X Southwest District, Inc.
11485 N. Farley Road
Platte City, MO, 64079

LOCATION: Tax Lot 00400, Assessor's Map 17-05-31-00
Tax Lot 00501, Assessor's Map 17-05-31-00
Tax Lot 00602, Assessor's Map 17-05-31-34

REQUEST: Official Zone Change (Map Only) & Comprehensive Plan Amendment

I. Background

Tax lots 00400 & 00501 as shown on tax assessor's map 17-05-31-00 and Tax Lot 00602 as shown on tax assessor's map 17-05-31-34 are located inside of the City of Veneta's Urban Growth Boundary and have previously been annexed into the corporate limits of the City.

A. Site Information

1. Location and Description

The project site, located within the City of Veneta, is approximately 50 Acres consisting of 3 parcels. Tax lots 00400 & 00501 are both currently zoned Rural Residential (R) and Tax lot 00602 is currently split zoned as Single Family Residential (SFR) to the West and Rural Residential (RR) to the East. The overall subject site is largely undeveloped with mature native landscape with a number of significant trees and includes several wetland areas on site. Tax lot 00602 does not have any improvements on site, while Tax lots 00400 & 00501 each have single-family residential dwelling and support

structures on site. The project site has access to East Hunter Road to the North, Baker Lane to the East and Trinity Street & Erdman Way to the West.

2. Zoning

The subject parcel for this request are Tax lots 00400 & 00501 as shown on tax assessor’s map 17-05-31-00 and Tax Lot 00602 as shown on tax assessor’s map 17-05-31-34. These parcels are located inside the City of Veneta’s corporate limits and within the Urban Growth Boundary. The following table was developed from the City of Veneta’s ‘Veneta Zoning and Floodplain Map adopted 10/22/2010’ and ‘Veneta Comprehensive Plan Diagram adopted 11/22/2010’:

Table 1 Existing & Proposed Zoning Summary

Map Number	Tax Lot	Area	Existing Comprehensive Plan Designation	Existing Zoning Designation	Proposed Zone Designation
17-05-31-00	00400	21.84 acres	R-Rural Residential, OS-Open Space/Greenway & 100-Year Floodplain	Rural Residential (RR), Greenway Overlay Zone (GW) & 100-Year Floodplain	General Residential (GR)
17-05-31-00	00501	8.76 acres	R-Rural Residential & OS-Open Space/Greenway	Rural Residential (RR) & Greenway Overlay Zone (GW)	General Residential (GR)
17-05-31-34	00602	19.90 acres	R-Rural Residential & L-Low Density Residential (split zoning) & OS-Open Space/Greenway	Rural Residential (RR) & Single Family Residential (SFR) (split zoning) & Greenway Overlay Zone (GW)	General Residential (GR)

The Rural Residential Plan Designation is intended to “allow the City of Veneta or the property owner to initiate a plan designation change to either Low Density or Medium Density Residential, and applicable zoning map amendments, when development to urban uses and densities and series become available” Per pg. 74 of Ordinance No. 523 – Veneta Comprehensive Plan. Therefore the applicate is requesting a zoning map amendment (map only) along with a Comprehensive Plan designation amendment to M-Medium Density Residential for Tax lots 00400, 00501 & 00602 as indicated in Table 1 above. The applicant is requesting that these three Tax lots be re-zoned to General Residential (GR) as indicated in

Table 1 above which is compatible with the proposed zoning district (GR) which allows up to fifteen (15) units per net acre per Veneta Land Development Ordinance No. 493, Section 4.03(1) and Ordinance No. 523 – Veneta Comprehensive Plan (pg. 73).

II. APPROVAL CRITERIA AND ANALYSIS

Changes to the official zoning map for the City of Veneta are controlled by the *Veneta Land Development Ordinance (VLDO) No. 493* Article 11. The following sections include the applicable review criteria for VLDO 493, Article 11 as shown in the grey text boxes. Sections following each of the review criteria indicate narratives on how the applicant has or intends to meet each requirement.

A. Veneta Land Development Ordinance 493

SECTION 11.01 AUTHORIZATION TO INITIATE AMENDMENTS

An amendment to the text of this ordinance may be initiated by the City Council, the City Planning Commission or by application of a property owner or city resident. An amendment to the zoning map may be initiated by the City Council, the City Planning Commission or by application of a property owner.

The property owner is requesting by application the initiation of the Zone Change (map only) and Comprehensive Plan Amendment.

The request by an application for an amendment shall be accomplished by filing an application with the Building and Planning Official using forms prescribed pursuant to Section 2.06...

This application includes the required form, *City of Veneta Land Use Application*, pursuant to Section 2.06.

A filing fee in accordance with the provisions of Section 2.08...

This application includes the application fee in the form of a check in the amount of \$1,350. This amount is based on the required \$350 deposit for *Technical Review/Public Notice* and \$600 fee for *Zone Change (map only)* and \$400 for the Comprehensive Plan Amendment per the *City of Veneta Land Use Application*.

and a narrative statement explaining the reasons for the amendment shall accompany an application by a property owner.

The subject parcel for this request consists of Tax lot's 00400 & 00501 as shown on assessor's map 17-05-31-00 and Tax lot 00602 as shown on assessor's map 17-05-31-34. These parcels are located inside the City of Veneta's corporate limits and within the Urban Growth Boundary and Urban Service Boundary. The subject parcel has a Comprehensive Plan designation of Rural Residential (RR)/Low

Density Residential (L) and a zoning of Rural Residential (RR)/Single Family Residential (SFR). The current zoning does not allow the density and level of service provided by the underlying Comprehensive Plan Designation.

The applicant is requesting that Tax Lot 00400, 00501 and 00602 be re-zoned to General Residential (GR) consistent with the current applicable Comprehensive Plan Designation.

B. Conformance with the Adopted Comprehensive Plan

This request to change the zoning of the subject property is consistent with the *Veneta Comprehensive Plan*. Per the current comprehensive plan map the subject property has a plan designation of both Rural Residential (RR) and Low Density Residential (LR). The current zoning of the subject property is both Rural Residential (RR) and Single Family Residential (SFR). Changing the zoning of the subject property from Rural Residential (RR)/Single Family Residential (SFR) to General Residential (GR) makes the parcels consistent with the underlying Comprehensive Plan designation.

C. Availability of Public Services

The City of Veneta can provide the type and range of urban series for the subject property that are required by the Comprehensive Plan. Specifically the City can provide public Wastewater disposal, water supply, transportation access and stormwater management of the site. This zone change request is the first step in the required land use process for developing the site. Below is a summary of the availability of service to the site. Refinements for the required series will occur during the Tentative Subdivision process and subsequent construction plan review and approval process.

1. Public Wastewater Disposal

The City of Veneta's Wastewater master plan includes population projections to year 2030 based on current zoning of land inside the UGB. This subject property calculates a development density of 227 dwelling units based on the proposed re-zone designation of (GR). Current zoning of the parcels (RR) allow one acre lots, or approximately 32 dwelling units, for a net increase of 195 dwelling units.

The City of Veneta's Wastewater master plan projected wastewater flows based on 70 gallons per person per day. Proposed re-zone designation could increase wastewater flows by approximately 37,000 gallons per day on average. The wastewater master plan evaluated five alternatives for capital improvement that will correct the projected deficiencies in the collection system that were identified for the 2030 projected flows. The preferred alternative relies primarily on pressure system improvements and adds two pump stations, one being east of the subject site to service lower elevations in eastern sections of Veneta (including the subject site). A new pressure pipe would bypass much of the existing gravity system by re-routing all current and new pump stations around the central city core and directly to the wastewater treatment facility. It is not anticipated that the increased wastewater flow will impact the proposed collection system improvements since they have not yet been designed or constructed and pressure pipe sizes can be increased if needed to accommodate increased flows.

Proposed development of the property will include construction of a public wastewater collection system. With these proposed improvements, the City's wastewater collection and treatment system are adequate to provide service to the property. The City of Veneta Wastewater System Master Plan and Capital Improvement Plan (wastewater master plan) was prepared in 2009 to provide planning guidance and define capital improvements required to provide for the City's wastewater collection and treatment system through to year 2030. The wastewater master plan was adopted by the City Council on May 11, 2009 (Resolution 1001). Recommendations were presented in the wastewater master plan to ensure the City's wastewater collection and treatment system is adequate to provide service to properties inside Veneta's Urban Growth Boundary.

A public gravity wastewater collection main is currently available at the intersection of Lindsay Lane and Hunter Road approximately 200 feet west from the northwesterly corner of the project property. The wastewater pipe slopes to the west along Hunter Road. The general topography of the area to the east of Lindsay Lane, including the project property, slopes to the northeast. Due to the shallowness of the end of the wastewater pipe in Hunter Road and the lower topography of the area to the east, this gravity wastewater pipe cannot be extended any further east. There are currently no wastewater services available to the eastern sections of Veneta. The City's wastewater master plan shows that eastern sections of Veneta will require a pump station to service lower elevations.

Proposed development of the property will include construction of a gravity piped system that collects and conveys wastewater to a central location near the east side of the property where a pump station will be installed. A wastewater forced main will then be constructed from the new pump station to the gravity collection main that currently ends in Hunter Road at Lindsay Lane. The pump station and forced main will be sized for full build-out of the project property. Proposed wastewater collection and pumping systems will be constructed as public infrastructure.

The applicant did inquire with Veneta's wastewater engineer, Civil West Engineering Services, Inc. Matt Wadlington, P.E. with Civil West Engineering Services, Inc, indicates that the treatment plant currently has capacity to support the proposed rezone and that the downstream conveyance system can accommodate the increased flow although some off-site improvements may be needed to increase the size of a portion of the gravity pipe system. Matt's email response is as follows:

"Based on our analysis of the Wastewater Treatment Plant, the Plant has capacity to serve 6,220 residents. Current population served is roughly 4,800 residents. Therefore, based on our analysis, the plant has the capacity to support the proposed rezoning.

The collection system capacity is completely dependent on where the connection to the existing system is made. Based on the location of the proposed rezoning, it appears likely that a lift station will be required to pump the wastewater into the existing gravity collection system on Hunter Road. The existing collection system on Hunter Road extends to the intersection of Hunter Road and Lindsay Lane. It is unclear, but likely, that the portion of the existing system between Pine Street and Lindsay Lane will not have the available capacity to handle the flow from the proposed development unless that section of the gravity system is reconstructed with larger diameter pipe. When development occurs, a condition of approval may be that the developer include this offsite work prior to connection.

-Matt"

This section of gravity pipe is identified in the wastewater master plan as being deficient which is the reason for the preferred alternative in the master plan to bypass the city core with a pressure pipe system to accommodate future growth in east Veneta.

2. Public Water Supply

The City of Veneta's Water System Master Plan (WSMP) includes population projections to year 2030 based on current zoning of land inside the UGB. This subject property calculates a development density of 227 dwelling units based on the proposed re-zone designation of (GR). Current zoning of the parcels (RR) allow one acre lots, or approximately 32 dwelling units, for a net increase of 195 dwelling units.

Based on the WSMP, the population projections are based on 2.85 persons per dwelling unit and a vacancy rate of 4.8 percent. Population could be increased by 529 based on maximum lot density of the proposed re-zone designation. Based on flow projection criteria in the water master plan, this increased population results in an additional 87,285 gallons per day (gpd) average water demand on the water system and 234,876 gpd for maximum day demand. Source of water is from EWEB and the City purchases water on demand, so the only question to answer is if the City's storage and distribution system can accommodate the increased demand. The WSMP recommends system upgrades to provide for water demand to year 2030 based on current zoning. Some of these improvements have been implemented, such as replacing a 6-inch water pipe in Hunter Road with a 12-inch pipe to increase fire flow in this section of pipe. The applicant has inquired with Murray, Smith & Associates (MSA) regarding the WSMP as it relates to this proposed zone change for the subject property. They have evaluated the system as provided in the attached City of Veneta – Water System Capacity Analysis: Sarto Village Development Memorandum dated May 11, 2016 to address Public Water Supply.

The applicant believes based on their memorandum that the City water supply and distribution system are adequate to provide service to the subject property. A 24-inch diameter water supply pipeline was constructed in 2012 that connects from the EWEB water distribution system to Veneta's water system at the City's Public Works Yard Reservoir located at the east end of East Broadway Avenue. A portion of the pipeline was installed in Hunter Road adjacent to the north side of the project property. An existing 6-inch diameter water pipe located in Hunter Road was replaced with a 12-inch diameter pipe as part of the EWEB water pipeline project to increase fire flow capacity in this area. Connection points to the City distribution system are also available where Trinity Street and Jake Street terminate at the west side of the property. The City's water system master plan recommends that an 8-inch diameter waterline be installed on Baker Lane from Hunter Road to both Trinity Street and Jake Street to provide for adequate fire flows in the area. Proposed development of the property will include an interconnected water distribution system that connects into the existing distribution system on Hunter Road, Trinity Street and Jake Street.

3. Transportation Access

The subject property is adjacent to Baker Lane, Erdman Way and Trinity Street. It is anticipated that these will be connected and utilized for transportation access to the proposed property. Internal to the

site, as part of the Tentative Subdivision and construction plan approval processes, a public street network will be designed to provide access to the future residential lots and the adjacent existing and proposed streets. Detailed plans will be developed during subsequent development and land use applications to address transportation access to the subject property.

4. Stormwater Management

Control and treatment of stormwater runoff from proposed impervious surfaces can be accommodated on the property. Surface water currently flows off the site to the northeast within three intermittent drainages that transect the property. The drainages are subject to the Greenway and Open Space subzone due to the presence of wetlands in the drainages. There is currently no public stormwater infrastructure available to serve the property. Stormwater detention and treatment facilities that discharge to the existing natural drainages can be designed and constructed in conformance with the requirements of Veneta Land Development Ordinance 493 Section 5.16 Stormwater Detention and Treatment. The City encourages the use of swales and other natural methods to control, treat, and convey stormwater run-off to the greatest extent possible. Greenway areas adjacent to the on-site drainages provide ample opportunity for incorporating natural systems into stormwater management of the property. Detailed stormwater management plans will be developed during subsequent development and land use applications.

D. Conclusion

This request meets the relevant approval criteria and should be approved by the City of Veneta.

III. Attachments

1. City of Veneta Land Use Application
2. Lane county Tax Assessor's Maps 17-05-31-00 & 17-05-31-34
3. *Regional Land and Information Database* Property Reports for TL's 00400 & 00501 Map 17-05-31-00 and TL 00602 Map 17-05-31-34
4. *Veneta Comprehensive Plan Diagram* Amended on 11/22/10
5. *Veneta Zoning and Floodplain* Amended on 11/22/10
6. *Sarto Village Zone Change – Goal 12 Traffic Impact Analysis, dated April 15, 2016*
7. *MSA Memorandum – City of Veneta Water System Capacity Analysis, Dated May 11, 2016*

**GENERAL
LAND USE APPLICATION**

Receipt # _____ Letter of Intent Received _____
 Submission Date _____ Associated File # _____
 Planning File # _____

Print Property Owner Name: Society of Saint Pius X Southwest District, Inc. Phone: 816-753-0073
 Mailing Address: 11485 N. Farley Road, Platte City, MO 64079
 Print Applicant (If not owner): Jerome Poulin, for Sarto Village Project Phone: 418-952-0014
 Mailing Address: P.O. Box 876, Veneta, OR 97487
 Print Agent: Myhre Group Architects, Inc. - Raymond Yancey, Principal Phone: 503-236-6000
 Mailing Address: 620 SW 5th Avenue, Suite 500 Portland, Oregon 97204

Assessor's Map Number (Township, Range, Section, Quarter Section)	Tax Lot(s)	Acres	Zone
Tax Map 17-05-31-00	00400 & 00501	21.84/8.76	RR
Tax Map 17-05-31-34	00602	19.90	RR/SFR

Subject property address(es): (TL 00400) 25412 E Hunter Rd, (TL 00501) 25444 E Hunter Rd & (TL 00602) None
 Subzone (if applicable): _____

Check all applicable APPLICATIONS and DEPOSITS below

Technical Review/Public Notice Deposit (for ALL applications except Property Line Adjustments) \$350

APPLICATION DEPOSITS (Application fees are calculated by ACTUAL PROCESSING COSTS)

SITE PLAN REVIEW		PLANNED DEVELOPMENTS	
_____ Site Plan Review/Major Amendment	\$1,350	_____ Conceptual Plan	\$350
_____ Site Plan Minor Amendment (Administrative)	\$350	_____ General Development Plan	\$550+25/unit
_____ Site Plan Minor Amendment (Planning Commission)	\$450	_____ Final Development Plan	\$300

OTHER APPLICATIONS PROCESSED WITH DEPOSITS

_____ Conditional Use Permits (Note: Some Conditional Use Permits also require a Site Plan Review)	\$775
_____ Specific Area Plan Amendment – NE Employment Center & Southwest Area Plan (/SDP)	\$7,500
_____ Variance to the Veneta Wetland Protection Ordinance (Veneta Municipal Code Chapter 18.10)	\$700

APPLICATIONS WITH FIXED FEES (These are non-refundable)

_____ Appeals	\$525	_____ Amendments (except Specific Area Plan above)	
_____ Variance	\$425	_____ Comprehensive Plan (text only)	\$800
		_____ Ordinance (text only)	\$200
		<input checked="" type="checkbox"/> Zone Change (map only)	\$600
		_____ Plan Designation & Zoning Map	\$1,000

I HEREBY STATE THAT THE FACTS RELATED IN THE ABOVE APPLICATION AND THE PLANS AND DOCUMENTS SUBMITTED HERewith ARE TRUE, COMPLETE, CORRECT, AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

* Property Owner Signature: _____
 Applicant Signature: _____

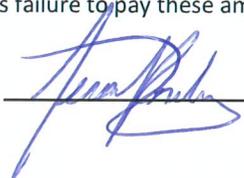
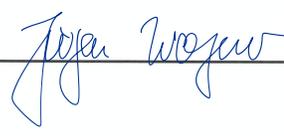
APPLICATION FEES & DEPOSITS

Fees and deposits are intended to cover the full cost for processing applications. They are not intended to cover the cost for interpretation of ordinances or for long-range planning. Applicants seeking development which requires more than one type of review (such as site plans and conditional use permits) must pay all applicable fees and deposits. Applicant acknowledges and agrees that Applicant's failure to pay City costs over the base fee amounts, as charged monthly by the City, may result in the City pursuing any or all legal remedies available, including but not limited to liening Property in the amount owed; prosecution for violation of the City's current fee resolution and City land development or division ordinances; issuance of a stop work order, non-issuance of building permits for Property, or cessation of related proceedings; set-off against any reimbursement owed; and turning amounts owed over to a collection agency.

Application Deposits: Certain application fees are represented by a deposit amount. Applicants shall be charged for actual processing costs incurred by the City. City staff time shall be monitored for applications which require a deposit in lieu of a non-refundable fee. Any unused portion of the deposit shall be returned to Applicant upon completion of the application process, conditions of approval, and any ensuing appeals. Any additional costs incurred beyond the deposit amount shall be charged to and paid by Applicant on a monthly basis. Applicant agrees that Applicant's failure to pay these amounts triggers City's option to pursue any or all remedies, as listed above.

Application Fees: Fixed fees are non-refundable and are based on average application processing costs rounded to the nearest \$25.

Technical Review/Publication Deposit: The actual costs charged to the City for technical review of land use applications, including but are not limited to City's planning, public works, engineering, administration, legal, wetland specialists, geologists, biologists, arborist, and any other services provided in processing Application, shall be charged to Applicant, at the rate(s) charged to the City. In addition, the actual costs of preparing and mailing notices to abutting property owners or others required to be notified, the costs of publishing notices in newspapers, and any other mandated costs shall be charged to Applicant. Such costs shall be adjusted as soon as the specific amounts are known. Applicant agrees that any deficiencies shall be collected from Applicant, and that Applicant's failure to pay these amounts triggers City's option to pursue any or all remedies, as listed above.

Applicant  * Owner(s) 

REQUEST FOR CONSOLIDATION OF LAND DEVELOPMENT AND/OR LAND DIVISION APPLICATIONS

I hereby request that my applications be consolidated. I understand that by consolidating these applications, any limited land use action (site review, partition, subdivision) that is combined with a quasi-judicial action (variance, conditional use permit, or other action requiring a public hearing) may be subject to a public hearing and the 14-day limitation for written comments will be waived. Wetland Variances requiring a joint decision by the City Council and Veneta Planning Commission may not be combined with any other land use hearing.

Applicant  * Owner(s) 

GENERAL INFORMATION FOR LAND USE APPLICATIONS

- (1) Petitions, applications and appeals provided for in this ordinance shall be made on forms prescribed by the City.
- (2) An applicant shall be advised that all permits or zone changes necessary for a development project may be merged into a consolidated review process. Zone changes and permits required through the application of the overlay district and discretionary permit procedures shall be available for a consolidated permit process. For purposes of this ordinance, a consolidated permit process shall mean that the hearing body shall, to the greatest extent possible, apply concurrent notice, public hearing and decision making procedures to the permits and zone changes which have been consolidated for review.
- (3) Applications shall be accompanied by plans and specifications drawn to scale, showing the actual shape and dimensions of the lot to be built upon; the sizes and locations on the lot of all existing and proposed structures; the intended use of each structure; the number of families, if any, to be accommodated thereon; the relationship of the property to the surrounding area and such other information as is needed to determine conformance with this ordinance.
- (4) The failure to raise an issue in person or by letter filed in a timely manner precludes appeal and the failure to specify to which criterion the comment is directed, precludes appeal based on that criterion.
- (5) Approval or denial of a land use regulation or limited land use application shall be based upon and accompanied by a brief statement that explains the criteria and standards considered relevant to the decision, states the facts relied upon and explains the justification for the decision based on the criteria standards and facts set forth.
- (6) The decision of the Planning Commission will be issued with a Final Order. If a written Notice of Appeal is not filed within 15 days from the date the Final Order of the Planning Commission is mailed, the decision becomes final.

NOTE: Other permits may be necessary depending on the nature of your application. Required permits may include:

TREE PERMITS: For developments which require the cutting of trees for streets, utilities and/or buildings, a tree removal permit must be submitted at the time of the development application.

RIGHT-OF-WAY PERMITS: Anyone wishing to occupy, encroach on, or construct within a City right-of-way must have an approved right-of-way permit.

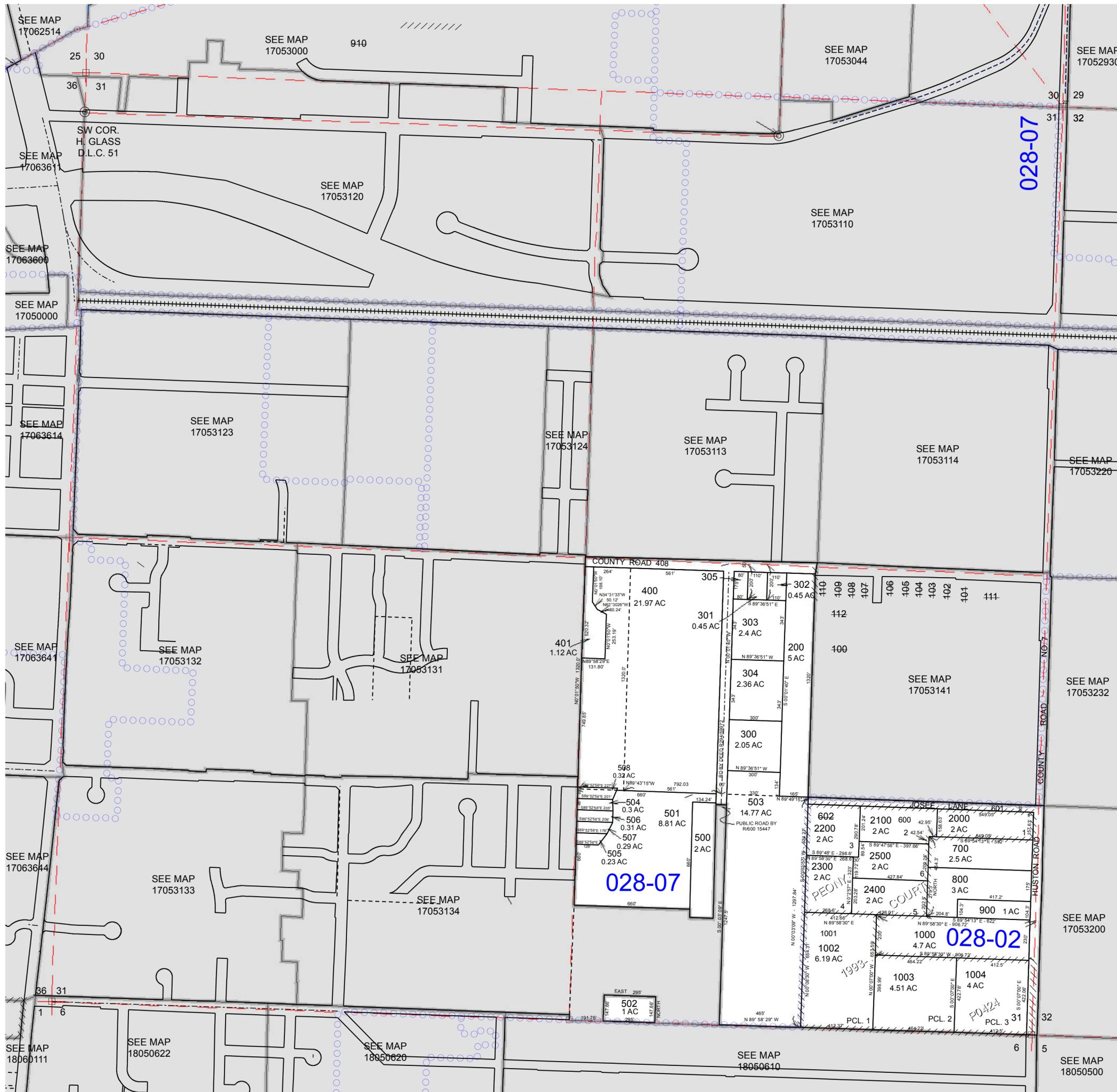
COMPLETENESS REVIEW: Upon receipt of a Land Use Application, City planning staff will review the application for completeness within 30 days. If your application is deemed incomplete you will be given 30 days to submit the required information to make it complete. Once the application is complete it will be scheduled for review by the Veneta Planning Commission and public notices will be sent.

BUILDING PERMITS: Building permits are issued by the City of Veneta; 88184 8th Street; Veneta, Oregon (541) 935-2191. If a Site Review is required it must be approved prior to issuance of a building permit.

APPEALS: Any land use decision may be appealed. Planner decisions may be appealed to the Planning Commission. Planning Commission decisions may be appealed by the City Council. Council decisions may be appealed to the State Land Use Board of Appeals.

PRIOR TO PREPARING AN APPLICATION, applicants should check with City Staff to make sure they have the most updated versions of the Veneta Comprehensive Plan, Land Development Ordinance, and Land Division Ordinance. Ordinances are available on the City website, www.venetaoregon.gov.

SECTION 31 T.17S. R.5W. W.M.
Lane County
1" = 400'



- CANCELLED
- 100
- 102
- 101
- 1001
- 103
- 104
- 105
- 106
- 107
- 108
- 109
- 110
- 111
- 112
- 600
- 601
- 602

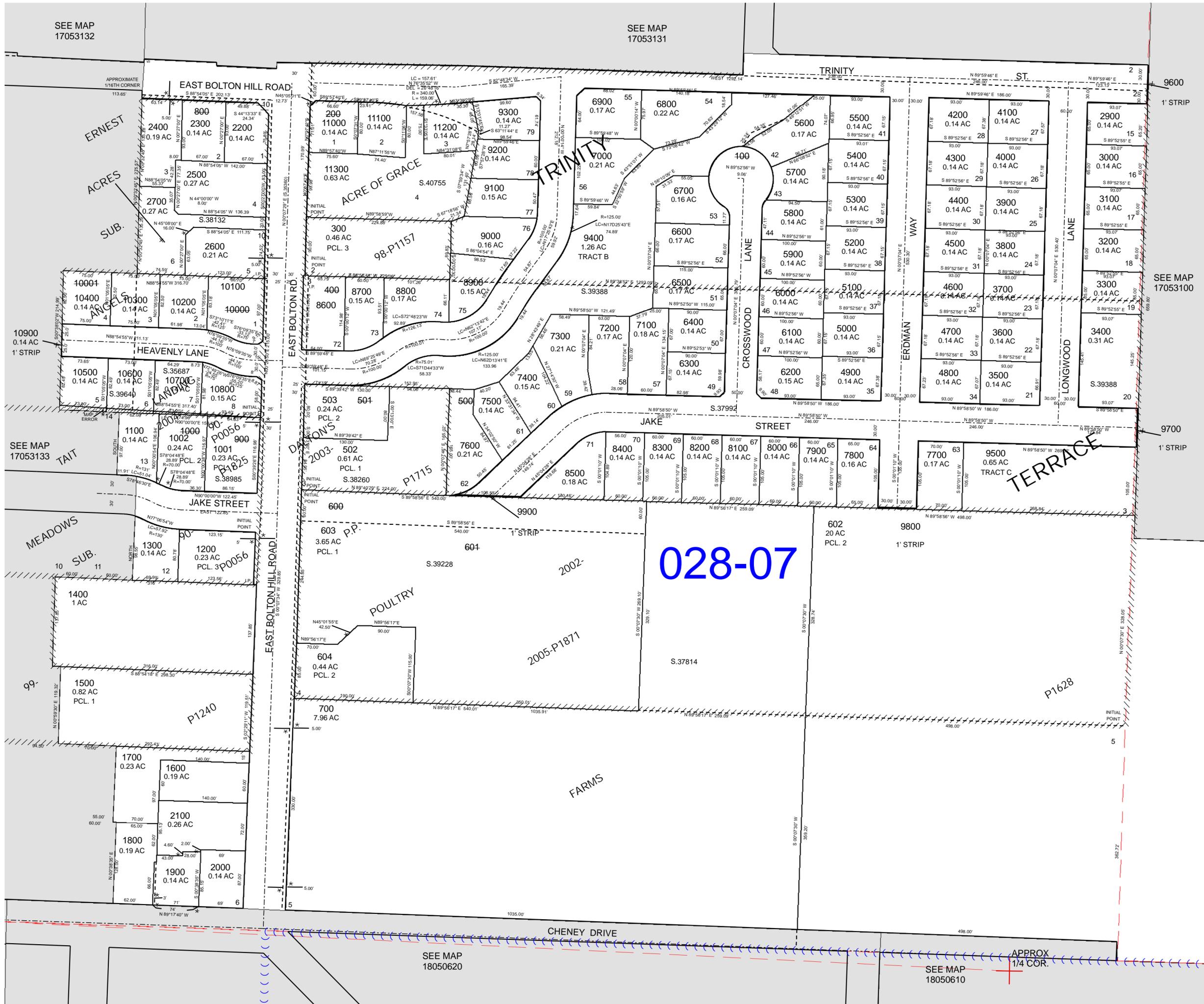
REVISIONS
 07/16/2007 - LCAT155 - CONVERT MAP TO GIS
 08/05/2009 - LCAT174 - LLA BETWEEN TL 400 & 401
 01/16/2014 - LCAT142 - DIV TL'S 504, 505, 506, 507 O.O. 501
 02/19/2014 - LCAT142 - DIV TL 508 O.O. TL 501 & 400

FOR ASSESSMENT AND TAXATION ONLY

S.E.1/4 S.W.1/4 SEC.31 T.17S. R.5W. W.M.
Lane County
1" = 100'

REVISIONS:
10/23/2006 - LCAT115 - CONVERT MAP TO GIS
2/28/2007 - LCAT142 - LLA BTW 200 & 300
2/28/2007 - LCAT142 - LLA BTW 5600 & 9400
10/26/2007 - LCAT140 - CANG. TL 200 INTO ACRE OF GRACE

GIS DATA
11/1/2007 9:28:48 AM : lcatbea



CANCELLED:
100
400
500
501
600
601
800
900
1000
10000
10001
200

028-07

VENETA
17053134

Detailed Property Report

Site Address 25412 E HUNTER RD Veneta, OR 97487-9645
Map & Taxlot# 17-05-31-00-00400
SIC N/A
Tax Account# 0501252 ^a
^a Additional site address(es) are associated with this tax account

Property Owner 1
 ATR LAND LLC
 PO BOX 518
 CRESWELL, OR 97426
 Tax account acreage 21.97
 Mapped taxlot acreage[†] 21.84

[†] Mapped Taxlot Acreage is the estimated size of a taxlot as derived from the county GIS taxlot layer, and is not to be used for legal purposes.

Map & Taxlot # 17-05-31-00-00400

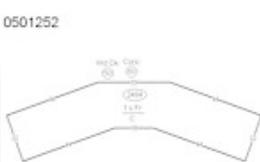


Business Information

RLID does not contain any business data for this address

Improvements

Dwelling 1 / Building Type » Class 3 dwelling
Assessor Photo sss Assessor Sketch



Click to enlarge photo

Inspection Date	02/17/1995	Bedrooms	3	Roof Style	Flat or Shed
Building Class	3+	Full Bath(s)	1	Roof Cover	Built-up
Year Built	1956	Half Bath(s)	1	Masonry Fireplace(s)	Yes
Effective Year Built	1952	Depreciation	25%	Improvement Complete	100 %
				Heat	Baseboard

Floor Characteristics

	<u>Base Sq Ft</u>	<u>Finished Sq Ft</u>	<u>Exterior</u>
1st Floor	2464	2464	Shingle-wood
Total Sq Ft	2464	2464	

Other Square Footage

Detached	N/A	Attached	N/A
Garage		Garage	
Basement	N/A	Carport	N/A
Garage			
Paved Patio	60	Paved Driveway	N/A

Site Address Information

25412 E HUNTER RD VENETA, OR 97487-9645					
House #	25412	Suffix	N/A	Pre-directional	E
Street Name	HUNTER	Street Type	RD	Unit type / #	N/A
Mail City	VENETA	State	OR	Zip Code	97487
Zip + 4	9645	Create Date	Sep 25, 1986	Update Date	Apr 29, 2011
Land Use 1111 Single Family Housing USPS Carrier Route R004					
Additional site address(es) attached to this tax account					
• 25430 E HUNTER RD					

General Taxlot Characteristics

<p>▣ Geographic Coordinates</p> <p>X 4175123 Y 880509 (State Plane X,Y) Latitude 44.0479 Longitude -123.3383</p> <hr/> <p>▣ Zoning</p> <p>Zoning Jurisdiction Veneta Veneta</p> <table border="0"> <tr> <td>Parent Zone</td> <td>RR</td> <td>RURAL RESIDENTIAL</td> </tr> <tr> <td><u>Overlay</u></td> <td>FP</td> <td>Floodplain</td> </tr> <tr> <td><u>Overlay</u></td> <td>GW</td> <td>Greenway - Open Space</td> </tr> </table> <hr/> <p>▣ Land Use</p> <p>General Land Use</p> <table border="0"> <tr> <td>Code</td> <td>Description</td> </tr> <tr> <td>S</td> <td>Single Family</td> </tr> <tr> <td>T</td> <td>Timber</td> </tr> <tr> <td>V</td> <td>Vacant</td> </tr> </table> <p>Detailed Land Use</p> <table border="0"> <tr> <td>Code</td> <td>Description</td> </tr> <tr> <td>1111</td> <td>Single Family Housing</td> </tr> <tr> <td>8310</td> <td>Timberlands</td> </tr> <tr> <td>9100</td> <td>Vacant, Unused, Undeveloped Land</td> </tr> </table>	Parent Zone	RR	RURAL RESIDENTIAL	<u>Overlay</u>	FP	Floodplain	<u>Overlay</u>	GW	Greenway - Open Space	Code	Description	S	Single Family	T	Timber	V	Vacant	Code	Description	1111	Single Family Housing	8310	Timberlands	9100	Vacant, Unused, Undeveloped Land	<p>Taxlot Characteristics</p> <table border="0"> <tr> <td>Incorporated City Limits</td> <td>VENETA</td> </tr> <tr> <td>Urban Growth Boundary</td> <td>Veneta</td> </tr> <tr> <td>Year Annexed</td> <td>N/A</td> </tr> <tr> <td>Annexation #</td> <td>N/A</td> </tr> <tr> <td>Approximate Taxlot Acreage</td> <td>21.84</td> </tr> <tr> <td>Approx Taxlot Sq Footage</td> <td>951,350</td> </tr> <tr> <td>2010 Census Tract</td> <td>0903</td> </tr> <tr> <td>2010 Census Block Group</td> <td>3</td> </tr> <tr> <td>Plan Designation</td> <td>RURAL RESIDENTIAL</td> </tr> <tr> <td>Eugene Neighborhood</td> <td>N/A</td> </tr> <tr> <td>Metro Area Nodal Dev Area</td> <td>No</td> </tr> <tr> <td>Historic Property Name</td> <td>N/A</td> </tr> <tr> <td>City Historic Landmark?</td> <td>No</td> </tr> <tr> <td>National Historical Register?</td> <td>No</td> </tr> </table>	Incorporated City Limits	VENETA	Urban Growth Boundary	Veneta	Year Annexed	N/A	Annexation #	N/A	Approximate Taxlot Acreage	21.84	Approx Taxlot Sq Footage	951,350	2010 Census Tract	0903	2010 Census Block Group	3	Plan Designation	RURAL RESIDENTIAL	Eugene Neighborhood	N/A	Metro Area Nodal Dev Area	No	Historic Property Name	N/A	City Historic Landmark?	No	National Historical Register?	No
Parent Zone	RR	RURAL RESIDENTIAL																																																				
<u>Overlay</u>	FP	Floodplain																																																				
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Historic Property Name	N/A																																																					
City Historic Landmark?	No																																																					
National Historical Register?	No																																																					

Service Providers

Fire Protection Provider	Lane County FD #1
Ambulance Provider	Lane Rural Fire/ Rescue Ambulance
Ambulance District	NC
Ambulance Service Area	Northwest/Central
LTD Service Area?	Yes
LTD Ride Source?	Yes
Soil Water Cons. Dist/Zone	UPPER WILLAMETTE / data not available
Emerald People's Utility District	2

Environmental Data

FEMA Flood Hazard Zone	
Code	Description
A	Areas of 100-year flood, no base flood elevations determined.
X	Areas determined to be outside of 500-year flood.

FIRM Map Number	41039C1087F			
Community Number	410128			
Post-FIRM Date	02/01/1984			
Panel Printed?	Yes			
Soils				
Soil Map Unit#	Soil Type Description	% of Taxlot	Ag Class	Hydric %
128B	Veneta loam, 0 to 7 percent slopes	53%	2	3
98	Noti loam	30%	4	94
73	Linslaw loam	17%	3	8

Schools

	Code	Name
School District	28J	FERN RIDGE
Elementary School	566	Veneta
Middle School	564	Fern Ridge
High School	567	Elmira

Political Districts

Election Precinct	4900	State Representative District	8
City Council Ward	N/A	State Representative	Paul R. Holvey
City Councilor	N/A	State Senate District	4
County Commissioner District	1 (West)	State Senator	Floyd Prozanski
County Commissioner	Jay Bozievich		
EWEB Commissioner	N/A		
LCC Board Zone	1		

Liens

RLID does not contain any lien data for this jurisdiction

Building Permits

RLID does not contain any building permit data for this jurisdiction

Land Use Applications

RLID does not contain any landuse application data for this jurisdiction

Petitions

RLID does not contain any petition data for this jurisdiction

Tax Statements (current and previous tax years)

ACCOUNT#: 0501252
View tax statement(s) for: [2015](#) [2014](#)

Owner/Taxpayer

<u>Owners</u>		
Owner	Address	City/State/Zip
ATR LAND LLC	PO BOX 518	CRESWELL, OR 97426
<u>Taxpayer</u>		
Party Name	Address	City/State/Zip
ATR LAND LLC	PO BOX 518	CRESWELL, OR 97426

Data source: Lane County Assessment and Taxation

Account Status**Status** Active Account Current Tax Year

Account Status none
 Remarks none
 Special Assessment Program N/A

Data source: Lane County Assessment and Taxation

General Tax Account Information

Tax Account Acreage 21.97
 Fire Acres N/A
 Property Class 101 RESIDENTIAL, IMPROVED
 Statistical Class 130 CLASS 3 SINGLE FAMILY DWELLING
 Neighborhood Code 281500
 Category Land and Improvements

Data source: Lane County Assessment and Taxation

Township-Range-Section / Subdivision Data

Subdivision Type N/A Subdivision Name N/A Subdivision Number N/A
 Phase N/A Lot/Tract/Unit # TL 00400 Recording Number N/A

Data source: Lane County Assessment and Taxation

Property Values & Taxes

The values shown are the values certified in October unless a value change has been processed on the property. Value changes typically occur as a result of appeals, clerical errors and omitted property. The tax shown is the amount certified in October. This is the full amount of tax for the year indicated and does not include any discounts offered, payments made, interest owing or previous years owing. It also does not reflect any value changes.

Year	Real Market Value (RMV)			Total Assessed Value	Tax
	Land	Improvement	Total		
2015	\$516,519	\$125,573	\$642,092	\$571,757	\$10,494.31
2014	\$615,586	\$103,315	\$718,901	\$555,104	\$10,257.38
2013	\$586,401	\$86,385	\$672,786	\$441,017	\$8,216.19
2012	\$548,206	\$92,964	\$641,170	\$428,172	\$7,839.57
2011	\$540,569	\$113,262	\$653,831	\$415,701	\$7,655.51
2010	\$586,401	\$124,760	\$711,161	\$403,593	\$7,366.66
2009	\$515,540	\$137,430	\$652,970	\$237,505	\$4,247.73
2008	\$409,495	\$140,810	\$550,305	\$230,587	\$4,138.05
2007	\$369,808	\$178,120	\$547,928	\$223,871	\$3,979.26
2006	\$310,624	\$170,120	\$480,744	\$217,350	\$3,958.18
2005	\$197,521	\$156,500	\$354,021	\$211,019	\$3,898.30
2004	\$167,391	\$151,940	\$319,331	\$204,873	\$3,780.62
2003	\$146,835	\$143,340	\$290,175	\$198,906	\$3,726.78
2002	\$139,843	\$133,960	\$273,803	\$193,113	\$3,622.14
2001	\$124,860	\$142,510	\$267,370	\$187,488	\$3,516.17
2000	\$115,610	\$143,950	\$259,560	\$182,027	\$3,422.87
1999	\$109,070	\$138,410	\$247,480	\$176,725	\$3,316.90
1998	\$104,870	\$133,090	\$237,960	\$171,578	\$3,166.36
1997	\$99,880	\$138,640	\$238,520	\$166,581	\$2,669.54
1996	\$92,480	\$117,490	\$209,970	\$209,970	\$2,970.62
1995	\$81,120	\$103,970	\$185,090	\$185,090	\$2,706.55

Current Year Assessed Value \$571,757

Less Exemption Amount *	N/A
Taxable Value	\$571,757
* Frozen Assessed Value	

Data source: Lane County Assessment and Taxation

Tax Code Area & Taxing Districts

Tax Code Area (Levy Code) for current tax year 02807	
Taxing Districts for TCA 02807	CITY OF VENETA EMERALD PEOPLES UTILITY DISTRICT FERN RIDGE LIBRARY DISTRICT FERN RIDGE SCHOOL DISTRICT 28J LANE COMMUNITY COLLEGE LANE COUNTY LANE COUNTY FIRE DISTRICT #1 LANE EDUCATION SERVICE DISTRICT VENETA URBAN RENEWAL AGENCY

Data source: Lane County Assessment and Taxation

Sales & Ownership Changes

Sale Date	Sale Price	Doc #	Image	Analysis Code	Multiple Accts?	Grantor(s)	Grantee(s)
02/28/2006	\$0	2006-15954		K	No	EEC HOLDING LLC	MCDUGAL NORMAN N
10/27/2005	\$0	2007-36060		K	No	MCDUGAL NORMAN & MELVIN MCDUGAL	ATR LAND LLC
10/25/2005	\$695,000	2005-84960		V	No	STANLEY ROBERT E & ARDITH A	EEC HOLDING LLC
12/01/1992	\$0	1992-72807		6	No	MAHARRY, NELL A	XX
12/01/1992	\$0	1992-72808		I	No	MAHARRY, NELL A	XX
12/01/1992	\$27,000	1994-76885		C	No	MAHARRY REVO TR	XX

Data source: Lane County Assessment and Taxation

Detailed Property Report

Site Address 25444 E HUNTER RD Veneta, OR 97487-9645
Map & Taxlot# 17-05-31-00-00501
SIC N/A
Tax Account# 0501286

Property Owner 1
 LEELYNN INC
 PO BOX 518
 CRESWELL, OR 97426

See [Owner/Taxpayer section](#) for additional owners

Tax account acreage 8.81
 Mapped taxlot acreage[†] 8.76

[†] Mapped Taxlot Acreage is the estimated size of a taxlot as derived from the county GIS taxlot layer, and is not to be used for legal purposes.

Map & Taxlot # 17-05-31-00-00501



Business Information

RLID does not contain any business data for this address

Improvements

Dwelling 1 / Building Type » Class 4 dwelling

Assessor Photo sss Assessor Sketch_

0501286

image not available



Inspection Date	02/17/1995	Bedrooms	2	Roof Style	Gable
Building Class	4-	Full Bath(s)	2	Roof Cover	Comp shingle medium
Year Built	1976	Half Bath(s)	0	Masonry Fireplace(s)	No
Effective Year Built	1976	Depreciation	18%	Improvement Complete	100 %
				Heat	Hot water; Radiant - ceiling

Floor Characteristics

	<u>Base Sq Ft</u>	<u>Finished Sq Ft</u>	<u>Exterior</u>
1st Floor	1318	1318	Wood siding
Total Sq Ft	1318	1318	

Other Square Footage

Detached	N/A	Attached	609
Garage		Garage	
Basement	N/A	Carport	N/A
Garage			
Paved Patio	196	Paved Driveway	320

Site Address Information

25444 E HUNTER RD VENETA, OR 97487-9645					
House #	25444	Suffix	N/A	Pre-directional	E
Street Name	HUNTER	Street Type	RD	Unit type / #	N/A
Mail City	VENETA	State	OR	Zip Code	97487
Zip + 4	9645	Create Date	Sep 25, 1986	Update Date	Jan 12, 2011
Land Use 1111 Single Family Housing USPS Carrier Route R004					

General Taxlot Characteristics

<p>□ Geographic Coordinates X 4174916 Y 879211 (State Plane X,Y) Latitude 44.0443 Longitude -123.3389</p> <hr/> <p>□ Zoning Zoning Jurisdiction Veneta Veneta Parent Zone RR RURAL RESIDENTIAL Parent Zone RR RURAL RESIDENTIAL <u>Overlay</u> GW Greenway - Open Space</p> <hr/> <p>□ Land Use General Land Use Code Description S Single Family V Vacant</p> <p>Detailed Land Use Code Description 1111 Single Family Housing 9100 Vacant, Unused, Undeveloped Land</p>	<p>Taxlot Characteristics Incorporated City Limits VENETA Urban Growth Boundary Veneta Year Annexed N/A Annexation # N/A Approximate Taxlot Acreage 8.76 Approx Taxlot Sq Footage 381,586 2010 Census Tract 0903 2010 Census Block Group 3 Plan Designation RURAL RESIDENTIAL Eugene Neighborhood N/A Metro Area Nodal Dev Area No Historic Property Name N/A City Historic Landmark? No National Historical Register? No</p>
--	--

Service Providers

Fire Protection Provider	Lane County FD #1
Ambulance Provider	Lane Rural Fire/ Rescue Ambulance
Ambulance District	NC
Ambulance Service Area	Northwest/Central
LTD Service Area?	Yes
LTD Ride Source?	Yes
Soil Water Cons. Dist/Zone	UPPER WILLAMETTE / data not available
Emerald People's Utility District	2

Environmental Data

FEMA Flood Hazard Zone	
Code	Description
X	Areas determined to be outside of 500-year flood.
FIRM Map Number	41039C1087F
Community Number	410128
Post-FIRM Date	02/01/1984
Panel Printed?	Yes

Soils				
Soil Map Unit#	Soil Type Description	% of Taxlot	Ag Class	Hydric %
128B	Veneta loam, 0 to 7 percent slopes	76%	2	3
98	Noti loam	24%	4	94

Schools

Code Name		
School District	28J	FERN RIDGE
Elementary School	566	Veneta
Middle School	564	Fern Ridge
High School	567	Elmira

Political Districts

Election Precinct	4900	State Representative District	8
City Council Ward	N/A	State Representative	Paul R. Holvey
City Councilor	N/A	State Senate District	4
County Commissioner District	1 (West)	State Senator	Floyd Prozanski
County Commissioner	Jay Bozievich		
EWEB Commissioner	N/A		
LCC Board Zone	1		

Liens

RLID does not contain any lien data for this jurisdiction

Building Permits

RLID does not contain any building permit data for this jurisdiction

Land Use Applications

RLID does not contain any landuse application data for this jurisdiction

Petitions

RLID does not contain any petition data for this jurisdiction

Tax Statements (current and previous tax years)

ACCOUNT#: 0501286
View tax statement(s) for: [2015](#) [2014](#)

Owner/Taxpayer

<u>Owners</u>			
No.	Owner	Address	City/State/Zip
1	LEELYNN INC	PO BOX 518	CRESWELL, OR 97426
2	ATR LAND LLC	PO BOX 518	CRESWELL, OR 97426
3	WILEY MT INC	PO BOX 518	CRESWELL, OR 97426
<u>Taxpayer</u>			
Party Name	Address	City/State/Zip	
ATR LAND LLC	PO BOX 518	CRESWELL, OR 97426	

Data source: Lane County Assessment and Taxation

Account Status

Status Active Account Current Tax Year

Account Status none
 Remarks none
 Special Assessment Program N/A

Data source: Lane County Assessment and Taxation

General Tax Account Information

Tax Account Acreage 8.81
 Fire Acres N/A
 Property Class 191 RESIDENTIAL, POTENTIAL DEVELOPMENT, IMPROVED
 Statistical Class 140 CLASS 4 SINGLE FAMILY DWELLING
 Neighborhood Code 281500
 Category Land and Improvements

Data source: Lane County Assessment and Taxation

Township-Range-Section / Subdivision Data

Subdivision Type N/A Subdivision Name N/A Subdivision Number N/A
 Phase N/A Lot/Tract/Unit # TL 00501 Recording Number N/A

Data source: Lane County Assessment and Taxation

Property Values & Taxes

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Year	Real Market Value (RMV)			Total Assessed Value	Tax
	Land	Improvement	Total		
2015	\$352,380	\$149,858	\$502,238	\$411,220	\$7,547.74
2014	\$419,985	\$132,536	\$552,521	\$399,243	\$7,377.33
2013	\$416,256	\$116,193	\$532,449	\$268,369	\$4,999.74
2012	\$389,126	\$123,114	\$512,240	\$260,552	\$4,770.55
2011	\$383,701	\$141,585	\$525,286	\$252,963	\$4,658.54
2010	\$416,255	\$153,550	\$569,805	\$245,595	\$4,482.77
2009	\$431,540	\$148,610	\$580,150	\$238,442	\$4,264.49
2008	\$342,571	\$156,530	\$499,101	\$231,497	\$4,154.38
2007	\$309,261	\$211,610	\$520,871	\$224,754	\$3,994.96
2006	\$259,614	\$193,580	\$453,194	\$218,208	\$3,973.81
2005	\$165,216	\$214,520	\$379,736	\$211,852	\$3,913.69
2004	\$140,014	\$208,270	\$348,284	\$205,682	\$3,795.55
2003	\$122,820	\$200,260	\$323,080	\$199,691	\$3,741.49
2002	\$116,972	\$155,240	\$272,212	\$193,875	\$3,636.44
2001	\$104,440	\$122,240	\$226,680	\$188,228	\$3,530.05
2000	\$96,700	\$123,470	\$220,170	\$182,746	\$3,436.39
1999	\$91,230	\$118,720	\$209,950	\$177,423	\$3,330.00
1998	\$87,720	\$114,150	\$201,870	\$172,255	\$3,178.84
1997	\$83,540	\$113,280	\$196,820	\$167,238	\$2,680.08
1996	\$77,350	\$111,580	\$188,930	\$188,930	\$2,672.94
1995	\$67,850	\$117,970	\$185,820	\$185,820	\$2,717.22

Current Year Assessed Value \$411,220
 Less Exemption Amount * N/A
 Taxable Value **\$411,220**

* Frozen Assessed Value

Data source: Lane County Assessment and Taxation

Tax Code Area & Taxing Districts

Tax Code Area (Levy Code) for current tax year 02807

Taxing Districts for TCA 02807

CITY OF VENETA
 EMERALD PEOPLES UTILITY DISTRICT
 FERN RIDGE LIBRARY DISTRICT
 FERN RIDGE SCHOOL DISTRICT 28J
 LANE COMMUNITY COLLEGE
 LANE COUNTY
 LANE COUNTY FIRE DISTRICT #1
 LANE EDUCATION SERVICE DISTRICT
 VENETA URBAN RENEWAL AGENCY

Data source: Lane County Assessment and Taxation

Sales & Ownership Changes

Sale Date	Sale Price	Doc #	Image	Analysis Code	Multiple Accts?	Grantor(s)	Grantee(s)
06/13/2006	\$0	2007-36065		K	No	LEELYNN INC & WILEY MT INC	ATR LAND LLC
06/07/2006	\$588,000	2006-40173		Y	No	LUXFORD DENNIS & CAROL	LEELYNN INC & WILEY MT INC

Data source: Lane County Assessment and Taxation

Detailed Property Report

Site Address N/A
Map & Taxlot# 17-05-31-34-00602
SIC N/A
Tax Account# 1703865

Property Owner 1
 ATR SERVICES INC
 PO BOX 518
 CRESWELL, OR 97426
 Tax account acreage 20.00
 Mapped taxlot acreage[†] 19.90

[†] Mapped Taxlot Acreage is the estimated size of a taxlot as derived from the county GIS taxlot layer, and is not to be used for legal purposes.

Map & Taxlot # 17-05-31-34-00602



Business Information

RLID does not contain any business data for this address

Improvements

No assessor photos, assessor sketches or building characteristic information is available for this tax account.

Site Address Information

No site address associated with this tax account number

General Taxlot Characteristics

▣ Geographic Coordinates

X 4174715 **Y** 878590 (State Plane X,Y)
Latitude 44.0426 **Longitude** -123.3396

▣ Zoning

Zoning Jurisdiction Veneta

Veneta		
Parent Zone	RR	RURAL RESIDENTIAL
Parent Zone	RR	RURAL RESIDENTIAL
Overlay	GW	Greenway - Open Space
Parent Zone	SFR	SINGLE-FAMILY RESIDENTIAL
Parent Zone	SFR	SINGLE-FAMILY RESIDENTIAL
Overlay	GW	Greenway - Open Space

Taxlot Characteristics

Incorporated City Limits	VENETA
Urban Growth Boundary	Veneta
Year Annexed	N/A
Annexation #	N/A
Approximate Taxlot Acreage	19.90
Approx Taxlot Sq Footage	866,844
2010 Census Tract	0903
2010 Census Block Group	3
Plan Designation	RURAL RESIDENTIAL
Eugene Neighborhood	N/A
Metro Area Nodal Dev Area	No
Historic Property Name	N/A
City Historic Landmark?	No
National Historical Register?	No

□ Land Use

General Land Use

Code Description

V Vacant

Detailed Land Use

Code Description

9100 Vacant, Unused, Undeveloped Land

Service Providers

Fire Protection Provider	Lane County FD #1
Ambulance Provider	Lane Rural Fire/ Rescue Ambulance
Ambulance District	NC
Ambulance Service Area	Northwest/Central
LTD Service Area?	Yes
LTD Ride Source?	Yes
Soil Water Cons. Dist/Zone	UPPER WILLAMETTE / data not available
Emerald People's Utility District	2

Environmental Data

FEMA Flood Hazard Zone

Code Description

X Areas determined to be outside of 500-year flood.

FIRM Map Number 41039C1087F

Community Number 410128

Post-FIRM Date 02/01/1984

Panel Printed? Yes

Soils

Soil Map Unit#	Soil Type Description	% of Taxlot	Ag Class	Hydric %
128B	Veneta loam, 0 to 7 percent slopes	81%	2	3
98	Noti loam	19%	4	94

Schools

	Code	Name
School District	28J	FERN RIDGE
Elementary School	566	Veneta
Middle School	564	Fern Ridge
High School	567	Elmira

Political Districts

Election Precinct	4900	State Representative District	8
City Council Ward	N/A	State Representative	Paul R. Holvey
City Councilor	N/A	State Senate District	4
County Commissioner District 1 (West)		State Senator	Floyd Prozanski
County Commissioner	Jay Bozievich		
EWEB Commissioner	N/A		
LCC Board Zone	1		

Liens

RLID does not contain any lien data for this jurisdiction

Building Permits

RLID does not contain any building permit data for this jurisdiction

Land Use Applications

RLID does not contain any landuse application data for this jurisdiction

Petitions

RLID does not contain any petition data for this jurisdiction

Tax Statements (current and previous tax years)

ACCOUNT#: 1703865
View tax statement(s) for: [2015 2014](#)

Owner/Taxpayer

<u>Owners</u>		
Owner	Address	City/State/Zip
ATR SERVICES INC	PO BOX 518	CRESWELL, OR 97426
<u>Taxpayer</u>		
Party Name	Address	City/State/Zip
ATR SERVICES INC	PO BOX 518	CRESWELL, OR 97426
Data source: Lane County Assessment and Taxation		

Account Status

Status	Active Account Current Tax Year	
Account Status	none	
Remarks	none	
Special Assessment Program	N/A	
Data source: Lane County Assessment and Taxation		

General Tax Account Information

Tax Account Acreage	20.00
Fire Acres	N/A
Property Class	190 RESIDENTIAL, POTENTIAL DEVELOPMENT, VACANT
Statistical Class	N/A
Neighborhood Code	281500
Category	Land and Improvements
Data source: Lane County Assessment and Taxation	

Township-Range-Section / Subdivision Data

Subdivision Type	Partition Plat	Subdivision Name	2002-P1628	Subdivision Number	N/A
Phase	N/A	Lot/Tract/Unit #	Parcel 2 TL 00602	Recording Number	2002-095797
Data source: Lane County Assessment and Taxation					

Property Values & Taxes

The values shown are the values certified in October unless a value change has been processed on the property. Value changes typically occur as a result of appeals, clerical errors and omitted property. The tax shown is the amount certified in October. This is the full amount of tax for the year indicated and does not include any discounts offered, payments made, interest owing or previous years owing. It also does not reflect any value changes.

Real Market Value (RMV)				Total Assessed Value	Tax
Year	Land	Improvement	Total		
2015	\$472,800	\$0	\$472,800	\$233,871	\$4,292.59
2014	\$564,538	\$0	\$564,538	\$227,059	\$4,195.66
2013	\$536,311	\$0	\$536,311	\$220,446	\$4,106.93
2012	\$501,027	\$0	\$501,027	\$214,025	\$3,918.67
2011	\$493,970	\$0	\$493,970	\$207,791	\$3,826.66
2010	\$536,310	\$0	\$536,310	\$201,739	\$3,682.28
2009	\$557,300	\$0	\$557,300	\$195,863	\$3,502.97
2008	\$441,381	\$0	\$441,381	\$190,158	\$3,412.52
2007	\$397,912	\$0	\$397,912	\$184,619	\$3,281.57
2006	\$333,265	\$0	\$333,265	\$179,242	\$3,264.19
2005	\$124,614	\$0	\$124,614	\$68,882	\$1,272.51
2004	\$103,196	\$0	\$103,196	\$70,899	\$1,308.33
2003	\$90,523	\$0	\$90,523	\$68,834	\$1,289.70

Current Year Assessed Value \$233,871
 Less Exemption Amount * N/A
 Taxable Value **\$233,871**
 * Frozen Assessed Value

Data source: Lane County Assessment and Taxation

Tax Code Area & Taxing Districts

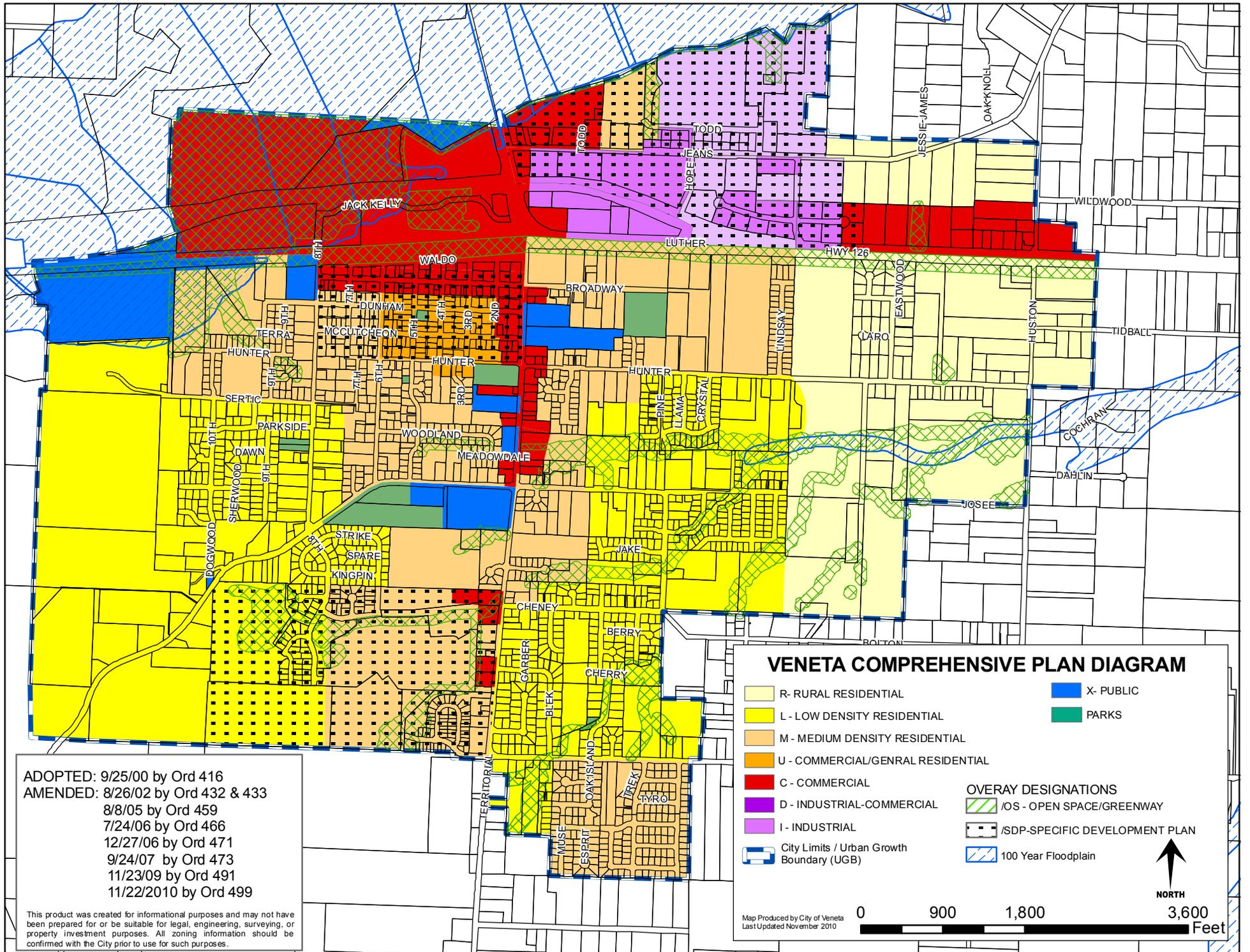
Tax Code Area (Levy Code) for current tax year 02807
 Taxing Districts for TCA 02807
 CITY OF VENETA
 EMERALD PEOPLES UTILITY DISTRICT
 FERN RIDGE LIBRARY DISTRICT
 FERN RIDGE SCHOOL DISTRICT 28J
 LANE COMMUNITY COLLEGE
 LANE COUNTY
 LANE COUNTY FIRE DISTRICT #1
 LANE EDUCATION SERVICE DISTRICT
 VENETA URBAN RENEWAL AGENCY

Data source: Lane County Assessment and Taxation

Sales & Ownership Changes

Sale Date	Sale Price	Doc #	Image	Analysis Code	Multiple Accts?	Grantor(s)	Grantee(s)
11/13/2008	\$0	2008-62414		8	No	DEMERS GREG	ATR SERVICES INC
03/13/2007	\$0	2007-17425		L	Yes	DEMERS GREG	DEMERS GREG
12/19/2003	\$0	2003-123270		9	No	SIMMERMAN JAMES R & KATHLEEN R	DEMERS GREG

Data source: Lane County Assessment and Taxation



ADOPTED: 9/25/00 by Ord 416
 AMENDED: 8/26/02 by Ord 432 & 433
 8/8/05 by Ord 459
 7/24/06 by Ord 466
 12/27/06 by Ord 471
 9/24/07 by Ord 473
 11/23/09 by Ord 491
 11/22/2010 by Ord 499

This product was created for informational purposes and may not have been prepared for or be suitable for legal, engineering, surveying, or property investment purposes. All zoning information should be confirmed with the City prior to use for such purposes.

VENETA COMPREHENSIVE PLAN DIAGRAM

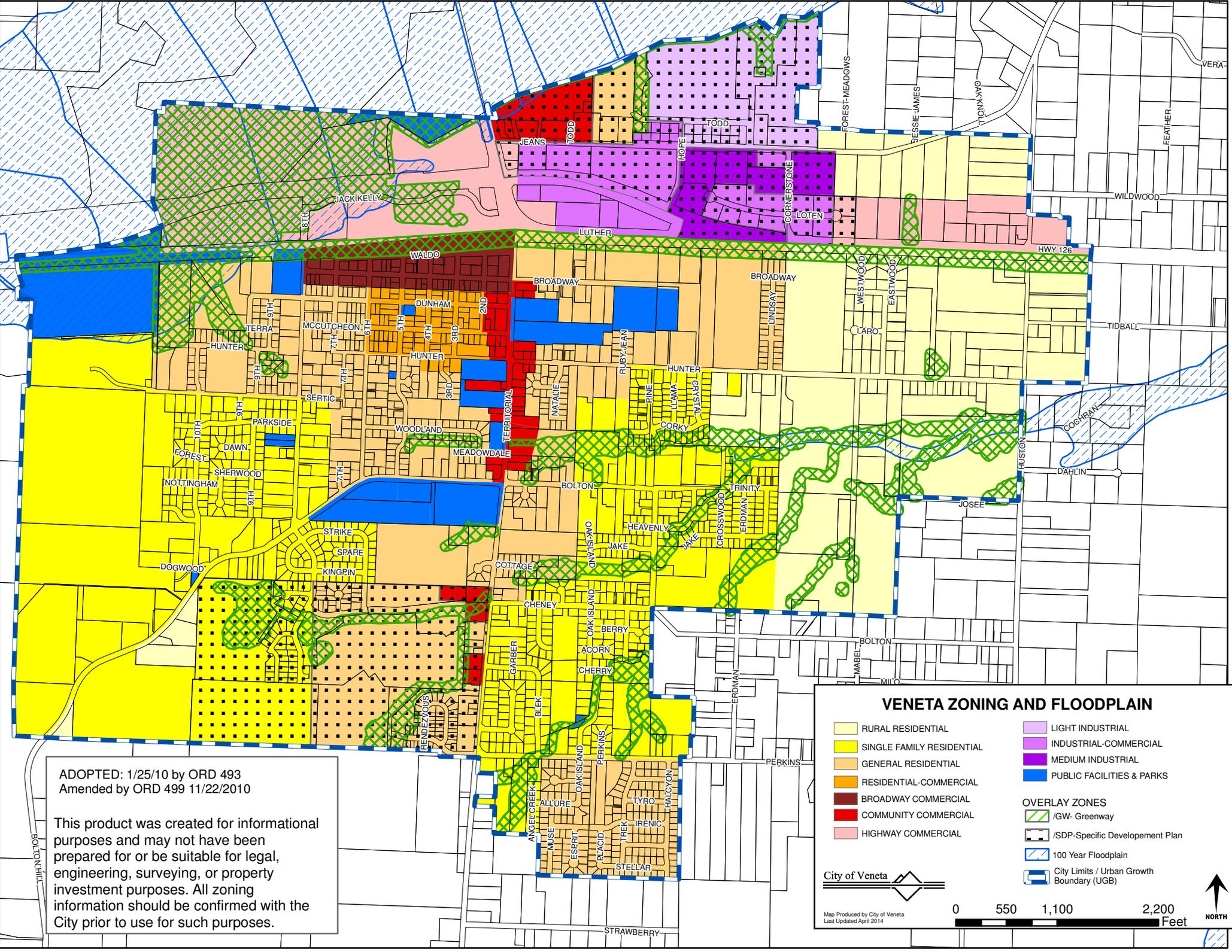
<ul style="list-style-type: none"> R - RURAL RESIDENTIAL L - LOW DENSITY RESIDENTIAL M - MEDIUM DENSITY RESIDENTIAL U - COMMERCIAL/GENERAL RESIDENTIAL C - COMMERCIAL D - INDUSTRIAL-COMMERCIAL I - INDUSTRIAL City Limits / Urban Growth Boundary (UGB) 	<ul style="list-style-type: none"> X - PUBLIC PARKS /OS - OPEN SPACE/GREENWAY /SDP - SPECIFIC DEVELOPMENT PLAN 100 Year Floodplain
---	--

OVERLAY DESIGNATIONS
 /OS - OPEN SPACE/GREENWAY
 /SDP - SPECIFIC DEVELOPMENT PLAN
 100 Year Floodplain

Map Produced by City of Veneta
 Last Updated November 2010

0 900 1,800 3,600
 Feet

NORTH



ADOPTED: 1/25/10 by ORD 493
 Amended by ORD 499 11/22/2010

This product was created for informational purposes and may not have been prepared for or be suitable for legal, engineering, surveying, or property investment purposes. All zoning information should be confirmed with the City prior to use for such purposes.

VENETA ZONING AND FLOODPLAIN

<ul style="list-style-type: none"> RURAL RESIDENTIAL SINGLE FAMILY RESIDENTIAL GENERAL RESIDENTIAL RESIDENTIAL-COMMERCIAL BROADWAY COMMERCIAL COMMUNITY COMMERCIAL HIGHWAY COMMERCIAL 	<ul style="list-style-type: none"> LIGHT INDUSTRIAL INDUSTRIAL-COMMERCIAL MEDIUM INDUSTRIAL PUBLIC FACILITIES & PARKS <p>OVERLAY ZONES</p> <ul style="list-style-type: none"> /GW- Greenway /SDP-Specific Development Plan 100 Year Floodplain City Limits / Urban Growth Boundary (UGB)
---	--

City of Veneta

Map Produced by City of Veneta
Last Updated April 2014

0 550 1,100 2,200

Feet

NORTH



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Phone & Fax

541-485-3215

info@accesseng.com

Transportation Engineering

Traffic Design

Trip Generation

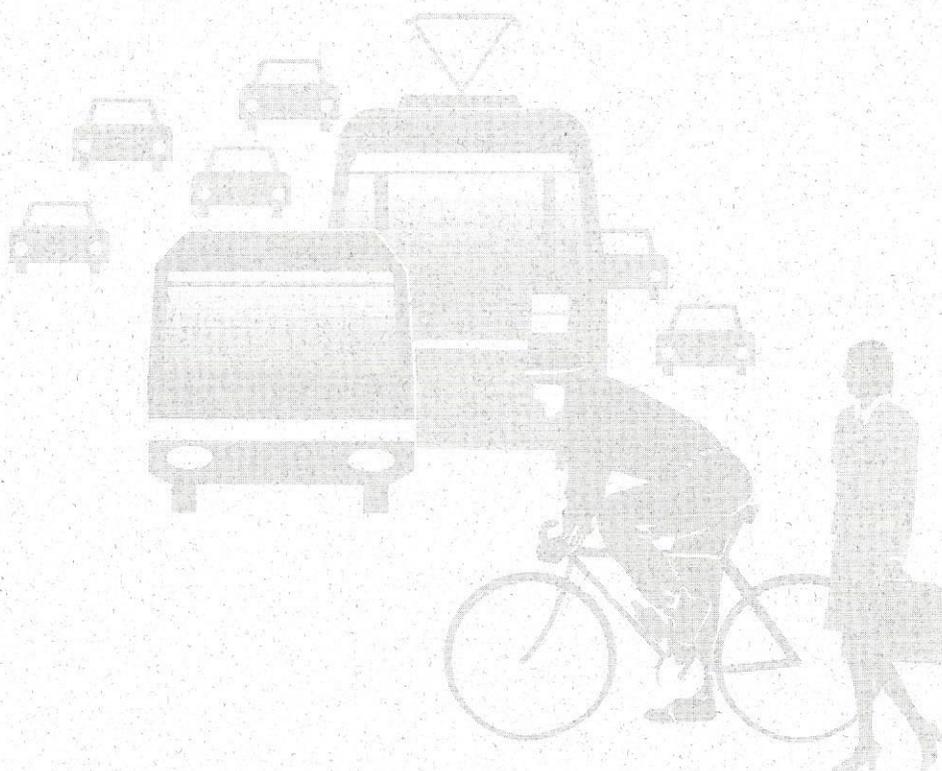
Access Management

Traffic Counts

Street Lighting

Sarto Village Zone Change Goal 12 Traffic Impact Analysis

Veneta, Oregon



April 15, 2016

Sarto Village Zone Change Goal 12 Traffic Impact Analysis

Veneta, Oregon



RENEWS 6/30/16

April 15, 2016

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Sarto Village Zone Change Traffic Impact Analysis

I. Executive Summary

This study evaluates the long-term traffic impacts associated with the Sarto Village proposed plan amendment and zone change on three large parcels of land in Veneta, Oregon. The study addresses the requirements of the Transportation Planning Rule (TPR) for changes to plan designations and zoning as set out in OAR 660-12-0060. The study compares the worst-case development for the proposed zoning (GR - General Residential) to the worst-case development of the existing zoning (RR - rural residential). A transportation facility is significantly affected if trips from the proposal

- (a) Change the functional classification of an existing or planned transportation facility;
- (b) Change standards implementing a functional classification system;
- (c) As measured by the end of the planning period identified in the adopted transportation system plan :
 - (A) Allow land uses or levels of development that would result in types or levels of travel that are inconsistent with the functional classification of an existing or planned transportation facility;
 - (B) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan;
 - (C) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

All of the study area intersections currently operate at acceptable performance levels during the PM peak hour. Of the 50.78 total acres, there are approximately 7.17 acres that are currently zoned SFR in the southwest corner of the site leaving ~43.61 acres to be re-zoned. There are also designated wetlands that further reduce the build-able area of the zone change. Based on a minimum lot size of 6000 square feet, the worst-case GR development will result in 227 residences and 217 new PM peak hour trips. Those trips are compared to the three trips generated by the single RR dwellings allowed on the three tax lots making up the site.

An analysis of the study area intersections in 2016 with the proposed zoning in place shows that all intersections will remain well above the performance standards. By 2026, all study area intersections are forecast to remain well above the performance standards except the Oregon 126 at Huston Road intersection where the northbound v/c is 0.84 while the performance standard is 0.85. While this is not a failure because the movement has not reached the maximum allowable v/c, it is within the error tolerance of the data.

Since the property owner is planning age-restricted housing with assisted living and congregate care facilities, that plan is analyzed as if it were mitigation to the worst-case development above. The actual development proposal consists of assisted living, 100 beds; congregate care, 100 units, and 130 to 150 senior adult housing. This plan will generate 97 PM peak hour trips compared to the three peak hour trips for the worst-case existing zoning. When this plan is analyzed all intersections are now well within the performance standards and satisfies the requirements of the Transportation Planning Rule. Based on this analysis, we recommend approval of the zone change to develop the age-restricted housing plan.

II. Background

1. Introduction

The purpose of this report is to provide a Traffic Impact Analysis for the proposed zone change on three parcels in Veneta, Oregon in order to comply with the Statewide Planning Goal 12, the Transportation Planning Rule. This report will compare the traffic impacts of the reasonable worst-case development allowed under the proposed City General Residential zone to the traffic impacts of the reasonable worst-case development allowed under the existing City Rural Residential zone to determine if the change will significantly impact the area's transportation system. A mitigation plan will be prepared for any intersection that is significantly impacted.

According to the definitions in the Oregon Administrative Rule 660-12-0060 Transportation Planning Rule (TPR) analyses have a 20 year "Planning Period" from the date of adoption of the latest Transportation System Plan (TSP) update. The Veneta TSP expired in 2015 and has not been updated. However in 2006 the Veneta Southwest Area Specific Plan Amendment was adopted which can be considered an update of the TSP since the scope included the major streets in Veneta. This would make the new horizon year, 2026, replacing the stated 2015 analysis year identified in the TSP.

2. Location and Vicinity Map

The site consists of three tax lots, 400 and 501 on assessor's map 17-05-31-1 and tax lot 602 on map 17-05-31-34. The site contains a total of 50.78 acres. The properties lie south of Hunter Road and west of Baker Road abutting both streets and extend south to approximately 300 feet north of E. Bolton Road. Figure 1 in Appendix A shows the location of the site in eastern Veneta.

3. Land Uses and Intensity

The site currently contains one dwelling located on tax lot 400 with a driveway access on Hunter Road 330 feet west of Baker Road and one dwelling on tax lot 501 with a driveway access on Baker Road 1275 feet south of Hunter Road. Tax lot 602 is currently vacant. Both the Veneta Zoning and Comprehensive Plan Maps show the western portion of tax lot 602 (~7.17 acres) is currently zoned SFR. This portion of the site will not be included in the TPR analysis since that zoning has been included in the existing Veneta Transportation System Plan (TSP). Figure 2 in Appendix A shows the site boundaries and connections to the surrounding street system based on Map 9 in the Veneta TSP. The site also contains six designated wetland areas totaling 3.04 acres. These wetland areas are shown in Figure 2 and are taken from a 2009 Wetland Boundary map by EGR & Associates, Inc.

The TPR analysis will compare the traffic impacts of a reasonable worst-case development under the proposed zoning to the impacts of a reasonable worst-case development under the existing zoning. For the existing zoning, Rural Residential (RR), the Veneta Development Ordinance 493 allows outright a farm use and/or one single-family dwelling per parcel. The proposed General Residential (GR) zone allows one single-family dwelling per lot or one duplex per corner lot provided the driveway access is taken from an alley or two local streets. The net density in the GR zone is 8 dwelling units per acre.

4. Study Area

- a. Limits of Traffic Study. The Initial study area includes the following intersections surrounding the site:

Oregon 126 @ Territorial Hwy.	Hunter Road @ Huston Road
Oregon 126 @ Huston Road	E. Bolton Road @ Trinity St./Pine St.
Territorial Hwy. @ Hunter Road	E. Bolton Road @ Cheney Drive
Territorial Hwy. @ E. Bolton Road	

- b. Existing Zoning and Land Uses. All properties north and east of the site within the Veneta city limits are zoned RR. North of Hunter Road and west of the site are properties zoned GR - General Residential. Properties immediately west of tax lot 400 from Hunter Road to 800 feet south are zoned RR. All properties southwest of there are zoned SFR.

- c. Existing Transportation Facilities. Table 1 shows the characteristics of the existing streets in the initial study area.

Table 1: Existing Study Area Street Characteristics

Street	Segment	Jurisdiction & Functional Classification	Road Width (ft)	Posted Speed	Travel Lanes*	Bike Lanes	Curbs/Shoulders	Parking	Sidewalks
Oregon 126	East of M.P. 47.03 West of M.P. 47.03	ODOT Major Arterial	26'	55 45	2	None	/8'	None	None
Territorial Hwy	N/o Waldo Lane Waldo to Hunter S/o Hunter	ODOT Minor Arterial	26' 50' 50'	35 35** 45	2	Both Sides	Curbs	None	Both Sides
Hunter Road	W/o Territorial Hwy Territorial to Huston	City Major Collector	30' 22'	25	2	None	Curbs /0	None	None
Huston Road	N/o Ore 126 to Hunter S/o Hunter	City Major Collector County U-Mn Collector	22'	35 45	2	None	/0	None	None
Bolton Hill Road	W/o Territorial Hwy	City Major Collector	34'	35	2	Both Sides	Curbs	None	Both Sides
E. Bolton Road	Territorial to Pine Pine to Cheney Cheney to Huston	City Minor Collector City Minor Collector County Rural Local	20'	30 30** 35	2	None	/0	S/s 350' E/o T Hwy	S/s 350' E/o T Hwy
Trinity Street		City Minor Collector	38'	25	2	Both Sides	Curbs	South Side	Both Sides
Pine Street		City Minor Collector	38'	25	2	Both Sides	Curbs	West Side	Both Sides
Baker Road		City Local	12'-20'	N/A	1/2	None	Gravel	None	None
Erdman Way	N/o E Bolton Rd S/o E Bolton Rd	County Local	12' 20'	25***	2	None	Gravel /0'	None	None

* - Number of through lanes only. ** - School 20 MPH Zone *** - Basic Rule

Oregon 126 is the principal arterial running through Veneta. Oregon 126 is known as the Florence-Eugene Highway (Highway #62) in the Oregon Department of Transportation (ODOT) highway system and is classified as a Statewide Highway by the 1999 Oregon Highway Plan (OHP), amended.

Territorial Highway is a state highway (Highway #200) running as a major arterial north-south through Veneta. The OHP classifies Territorial Highway as District Highway.

- d. Existing Intersection Controls. At the signalized intersection of Oregon 126 with Territorial Highway, all approaches have left-turn and right-turn pockets with protected left-turn phases. The intersection is an isolated, fully actuated traffic signal. The northbound right-turn lane is controlled by an overlap with the westbound left-turn phase.

All streets intersecting Territorial Highway in the study area are controlled by two-way Stop signs for the minor street.

The Oregon 126 at Huston Road intersection is controlled by Stop signs for Huston Road. Oregon 126 has left-turn pockets and right-turn flared approaches in both eastbound and westbound directions. The Coos Bay Rail Link crosses Huston Road only 50 feet south of the northbound Stop line.

Hunter Road is controlled by a Stop sign at the Huston Road T-intersection.

The intersection of E. Bolton Road (west and south legs) with Trinity Street (east leg) and Pine Street (north leg) is controlled by an All-way Stop.

The intersection of E Bolton Road with Cheney Drive is controlled by a Stop sign for Cheney Dr.

5. Existing Traffic Conditions

Vehicle classification turning movement counts were taken at the seven study area intersections during the PM peak hours on March 29, 30, and 31, 2016. The two Oregon 126 intersections were counted on March 29th from 3:30 to 6:30 PM. The PM peak hour was 4:00-5:00 at the Oregon 126 at Territorial Highway intersection and 3:45-4:45 at the Oregon 126 at Huston Road intersection. Since the Oregon 126 at Territorial Highway intersection has the highest traffic level, that peak hour was used to determine the two-hour PM count period for the remaining five intersections. On March 30th and 31st the remaining peak hour counts were conducted. The PM peak hour at all other intersection was 4:00 to 5:00 PM. The actual peak hour volumes were used in the analysis at each intersection. Summary sheets for the traffic counts can be found in Appendix B.

5a. Seasonal Factor

For analysis of state highway intersections, ODOT guidelines call for the use of design hour volumes (DHV). Design hour volumes are the 30th highest hour volume for a given year. Chapter 4 of ODOT's "Analysis Procedure Manual" provides for three methods for determining season factors that are used to convert peak hour traffic to DHV's. Seasonal factors were calculated for three types of travel in the area; the coastal destination trend on Oregon 126 and Territorial Highway north of Oregon 126, and the commuter trend on the remaining intersections. Seasonal factor calculations can be found in Appendix B.

For Oregon 126, there is an Automatic Traffic Recorder (ATR 20-005 Noti) located 3.06 miles west of Territorial Highway. Using the On Site ATR Method, the seasonal factor for all through traffic on Oregon 126 was found to be 1.20 based on five years of traffic count data.

For Territorial Highway north of Oregon 126, there is an ATR (20-023 Fern Ridge) located 5.97 miles north of Oregon 126. Using the On Site ATR Method, the seasonal factor for all traffic on Territorial Hwy. North of Oregon 126 was found to be 1.24 based on five years of traffic count data.

For Territorial Highway south of Oregon 126 the commuter and summer seasonal trends were combined to describe the type of traffic during the PM peak hour. The 2014 Seasonal Trend Table was consulted to establish a seasonal factor. The seasonal factor was found to be 1.18 based on the late March traffic count period. All other city streets were adjusted using the commuter seasonal trend alone. The calculations can be found in Appendix B.

The seasonally adjusted traffic volumes at the study area intersections calculated using the seasonal factors above are found in Figure 3 in Appendix A.

5b. Intersection Operations - General Procedures

For state highway intersections, ODOT uses a mobility standard based on the ratio of the volume of traffic using an intersection or an approach compared to the capacity of the intersection or approach, v/c. As the volume of traffic nears capacity the ratio approaches 1.0. Table 6 in the Updated 1999 Oregon Highway Plan lists the maximum allowable v/c for various highway classifications, locations, and speeds.

- For Oregon 126, a statewide highway not in a metropolitan area with a posted speed equal to or greater than 45 MPH, the maximum allowed v/c is 0.80
- For Territorial Highway, a district highway not in a metropolitan area with a posted speed equal to 35 MPH, the maximum allowed v/c is 0.95 at Hunter Road and for a posted speed of 45 MPH, the maximum allowed v/c is 0.90 at E Bolton Road.
- The remaining intersections are inside the city limits. The expired TSP gives no guidance on mobility standards for city streets other than to avoid congestion. Since most of these streets were originally County roads, will use Lane County's mobility standards found in Table 4 of Section 15.697 of the Lane Code. For county roads inside an Urban Growth Boundary but outside the Eugene-Springfield Metro area, the maximum allowed v/c for speeds less than 45 MPH is 0.85

5c. Existing 2014 Intersection Operational Analysis

A capacity analysis was performed on the intersections in the study area for the weekday existing 2016 design hour volumes (DHV) shown in Figure 3 in Appendix A. The Synchro program is used to evaluate the operation of all intersections in the study area. For unsignalized intersections, only the most critical (highest) v/c along with the corresponding movement at the intersection are reported. For the signalized intersections the overall v/c is reported. The saturation flow rate was set to the ODOT standard 1750 vehicles per hour for intersection approaches. The existing Peak Hour Factors (PHF's) and heavy vehicle percentages from the traffic counts were used. The Synchro reports are in Appendix D. Table 2 shows that the v/c levels at the study area intersections are well above the appropriate mobility standards.

Table 2: Existing 2016 Operational Analysis

Intersection Movement (Controlled)	Mobility Standard	PM Peak Hour		
		V/C	Delay (sec.)	LOS
Oregon 126 @ Territorial Road	0.80	0.66	29.5	C
Oregon 126 @ Huston Road Westbound Ore. 126 Southbound Movements	0.80 0.85	0.44 0.22	0.0 40.2	A E
Territorial Road @ Hunter Road Eastbound Approach Southbound Thru + Right	0.85 0.95	0.13 0.26	14.6 0.0	B A
Territorial Road @ Bolton Hill/E. Bolton Road Eastbound Left turn Southbound Thru + Right	0.85 0.90	0.09 0.22	12.8 0.0	B A
E. Bolton Road @ Pine Street/Trinity Street Southbound Movements	0.85	0.04	7.2	A
E. Bolton Road @ Cheney Drive Eastbound Movements	0.85	0.02	8.6	A
Huston Road @ Hunter Road Eastbound Movements	0.90	0.06	9.8	A
Hunter Road @ Baker Lane Northbound Movements	0.90	0.00	8.7	A
E. Bolton Road @ Erdman Way Northbound Movements	0.90	0.01	8.8	A
Huston Road @ Josee Lane Eastbound Movements	0.90	0.0	9.0	A

6. Crash History

Crash records for the Oregon 126 and Territorial Highway intersections in the study area for the three year period 2012 through 2014 were obtained from the ODOT Crash Analysis and Reporting Unit. Tables 3 through 6 list the crashes crash rates at these intersections. The detail crash reports are in Appendix C.

Table 3: Crash History - Oregon 126 @ Territorial Highway

Year	Collision Types							ADT	Crash Rate (mev)	Severity	
	Turn	Rear End	Angle	Sideswipe	Fixed Obj	Backing	Total			PDO	Injury
2012	0	0	1	0	0	1	2	22,400	0.24	1	1
2013	2	1	0	0	0	0	3	22,900	0.36	1	2
2014	2	0	0	1	1	0	4	24,100	0.45	1	2
Total	4	1	1	1	1	1	9	69,400	0.36	3	5

Table 4: Crash History - Oregon 126 @ Huston Road

Year	Collision Types						ADT	Crash Rate (mev)	Severity	
	Turn	Rear End	Angle	Sideswipe	Animal	Total			PDO	Injury
2012	0	2	0	0	1	3	14,100	0.58	3	0
2013	0	0	0	0	0	0	14,200	0.00	0	0
2014	0	0	1	0	0	1	14,800	0.19	0	1
Total	0	2	1	0	1	4	43,100	0.25	3	1

Table 5: Crash History - Territorial Hwy. @ Hunter Road

Year	Collision Types						ADT	Crash Rate (mev)	Severity	
	Turn	Rear End	Angle	Sideswipe	Animal	Total			PDO	Injury
2012	0	0	0	0	0	0	8,200	0.00	0	0
2013	0	0	0	0	0	0	8,550	0.00	0	0
2014	2	1	0	0	0	3	9,125	0.90	1	2
Total	2	1	0	0	0	3	25,875	0.36	1	2

Table 6: Crash History - Territorial Hwy. @ Bolton Road

Year	Collision Types						ADT	Crash Rate (mev)	Severity	
	Turn	Rear End	Angle	Sideswipe	Animal	Total			PDO	Injury
2012	0	0	0	0	0	0	6,750	0.00	0	0
2013	1	0	1	0	0	2	7,000	0.78	1	1
2014	0	0	0	0	0	0	7,700	0.00	0	0
Total	1	0	1	0	0	2	21,450	0.26	1	1

There were no crashes reported at the remaining study area intersections during the three-year period. The crash rate is in units of number of crashes per one million entering vehicles (mev). The crash analysis does not reveal any specific problem areas or types of collision. The three crashes at Territorial Highway at Hunter Road in 2014 involved a southbound left turn, a northbound left turn and a southbound rear-end involving a right turn. These crashes and the two at Territorial Highway at Bolton Road appear to be anomalous but should bear monitoring in the future.

7. Trip Generation

The first step in the analysis of a zone change is to determine the PM peak hour trip generation of a reasonable worst-case development in the existing Rural Residential zone compared to a reasonable worst-case development in the proposed General Residential zone to determine if there is a net increase or decrease in trips.

The Veneta RR zone allows farming use or one single family dwellings per tax lot. There are three existing tax lots two of which have an existing dwelling. We are assuming three total dwelling units for the RR zoning.

The Veneta GR zone allows one single family dwellings per buildable legal lot. The GR zone is selected because the SFR zone does not allow outright the proposed assisted living or congregate care facilities. Both zones have the same minimum lot areas; 6,000 square feet for single-family homes or 7,500 square feet for duplexes. The total site acreage is 50.78 acres, however the western portion of tax lot 602 (found by extending the western boundary of tax lot 401 due south) is currently zoned SFR so this ~7.17 acres is not a part of the zone change. In addition, there are designated wetlands on the site as shown in Figure 2. Of the total 3.04 acres designated as wetlands (see Figure 6A Wetland Delineation Report in Appendix B), approximately 1.04 acres lies on the portion of tax lot 602 that is already zoned SFR. Therefore 2.0 acres of wetlands exist in the zone change area. The total buildable acres in the zone change area 50.78 less 9.17 = 41.61 acres.

For the worst-case scenario, we assume there are no further impediments to full development of the zone change area. Most new residential streets in Veneta have been constructed on either 50 or 60-foot rights-of-way. Taking the developed subdivision immediately west of the site between Trinity and Jake Streets as a sample, the street right-of-way is ~25% of the developed area. Subtracting 25% of the 41.61 buildable acres for streets leaves 31.2 acres or ~1,360,000 square feet available for housing units. At the minimum 6,000 square feet per dwelling unit that amounts to 227 dwelling units.

Table 7 compares the trips generated by the uses selected above. The Ninth Edition of the ITE Trip Generation Manual was consulted for the daily and PM peak hour trips generated by Land Use Code 210 - Single-Family Detached Housing. Trips for both the worst-case RR zoning are computed and compared to the worst-case GR zoning in Table 7. The results show that the zone change from RR to GR will generate an additional 217 peak hour trips.

Table 7: Trip Generation Comparison

Land Use (ITE Code)	Size Unit	Daily		PM Peak Hour			
		Rate	Total	Rate	Total	In	Out
Existing - Rural Residential (210)	3 Dwelling Units	13.9*	42	1.49*	3	2	1
Proposed - General Residential (210)	227 Dwelling Units	9.79*	2222	0.97*	220	139	81
Net Trips: Proposed - Existing			2180		217	137	80

* - Trip rate is based on the fitted curve equation.

8. Trip Distribution and Assignment

The expired TSP's projected average daily traffic (ADT) for 2015 is unreliable. The 2015 projected volumes overestimated actual traffic counts in 2014 on Oregon 126 by 17% at Territorial Hwy. and 45% east of Huston Road. Territorial Highway and Huston Road ADT's were similarly overestimated south of Oregon 126. TIA's for the four out of nine phases of the Southwest Area Specific Plan that have been completed all having different percentages of trips leaving the city limits/urban growth boundary. For these reasons we have developed the following trip distribution.

The distribution of trips generated by the site during the PM peak hour will predominantly follow work/shopping-to-home patterns. The Sarto Village site is only 12 miles from downtown Eugene. The Eugene-Springfield metropolitan area would easily be the largest employer and provide the greatest shopping opportunities. The secondary employment and shopping areas would be downtown Veneta and the commercial areas along Oregon 126 especially the commercial area surrounding the Oregon 126/Territorial Highway intersection. These areas will account for 70% of trip origins and destinations; Oregon 126 east of Huston Road - 45%, downtown Veneta - 10%, Oregon 126/Territorial Highway area - 15%. The remaining 30% of trips area distributed 10% to Perkins Road connecting to Oregon 126 via Central Road; 10% to Territorial Road north of Oregon 126; 5% to Bolton Hill Road to the east; 3% to Territorial Highway south of Perkins Road and 2% to Huston Road north of Oregon 126.

Currently access to the site is only available from Hunter Road which border the site on the north and Baker Lane which borders the northern half of the east boundary. Two streets currently approach the west boundary of the site, Trinity Street and Jake Street, but have a one-foot strip barrier at the border. Map 9 in the Veneta TSP shows several proposed streets connecting to the site:

- Trinity Street is proposed to run west to east through the site and connect with Josee Lane which appears to be a gravel, local access road or private access easement just outside the Veneta UGB in Lane County. The area north of Josee Lane is in the city and undeveloped.
- Corky Lane is proposed to run west to east through the site and end to Baker Lane.
- Jake Street is an existing street that is shown to reach the west site boundary.
- Baker Lane is shown to be extended south from Trinity Street to E. Bolton Road.

One major wetland greenway passes through the site from the southwest corner to the to the east boundary creating an impediment to through streets connections. We have assumed the only the Trinity Street/Josee Lane east-west connection to be made through the center of the site. In addition, Baker Lane cannot connect to E. Bolton Road because the area between the site south boundary and E. Bolton Road has been developed with single-family homes and no right-of-way exists for Baker lane. There is, however, a right-of-way that connects to E. Bolton Road near the southwest corner of the site which is an extension of Erdman Way. Figure 4 in Appendix A shows the assignment of trips between the four site accesses and the study area intersections.

III. Transportation Planning Rule (TPR) Operational Analysis

Since all study area intersections currently operate above the ODOT, City and County mobility standards, a significant impact occurs when an intersection’s mobility standard is exceeded by the new trips from the proposed zone change.

1. Year of Opening, 2016, Intersection Operational Analysis

The development under the proposed zoning is assumed to be completed in 2016. The study area traffic levels for the proposed zoning scenario are shown on Figure 5 in Appendix A. The worst-case development traffic levels in Figure 4 are added to the existing traffic volumes shown in Figure 3. The Synchro program is used to evaluate the operation of the study area intersections. The PHF’s, truck and pedestrian percentages from the traffic counts are used in the analysis. Table 8 shows the results of the level-of-service (LOS) analysis. The Synchro reports can be found in Appendix D.

Table 8: Existing 2016 Operational Analysis

Intersection Movement (Controlled)	Mobility Standard	Existing Zoning			Proposed Zoning		
		V/C	Delay (sec.)	LOS	V/C	Delay (sec.)	LOS
Oregon 126 @ Territorial Road	0.80	0.66	29.5	C	0.67	30.1	C
Oregon 126 @ Huston Road							
Westbound Ore. 126	0.80	0.44	0.0	A	0.44	0.0	A
Southbound Movements	0.85	0.22	40.2	E	0.34	61.1	F
Northbound Movements	0.85	0.36	31.7	D	0.57	42.9	E
Territorial Road @ Hunter Road							
Eastbound Approach	0.85	0.13	14.6	B	0.15	16.2	C
Southbound Thru + Right	0.95	0.26	0.0	A	0.28	0.0	A
Territorial Road @ Bolton Hill/E. Bolton Road							
Eastbound Left turn	0.85	0.09	12.8	B	0.10	13.6	B
Southbound Thru + Right	0.90	0.22	0.0	A	0.22	0.0	A
E. Bolton Road @ Pine Street/Trinity Street							
Eastbound Movements	0.85	0.03	7.1	A	0.07	7.3	A
E. Bolton Road @ Cheney Drive							
Eastbound Movements	0.85	0.02	8.6	A	0.03	8.7	A
Huston Road @ Hunter Road							
Eastbound Movements	0.90	0.06	9.8	A	0.09	10.5	B
Hunter Road @ Baker Lane							
Northbound Movements	0.90	0.00	8.7	A	0.04	9.1	A
E. Bolton Road @ Erdman Way							
Northbound Movements	0.90	0.01	8.8	A	0.01	9.0	A
Huston Road @ Josee Lane							
Eastbound Movements	0.90	0.0	9.0	A	0.03	9.5	A

All intersection critical movements are above the appropriate mobility standard, so no mitigation is required. The north- and southbound movements on Huston Road at Oregon 126 will experience long

delays which are increased by the worst-case development. A check of signal warrants for the intersection is made following the procedures in ODOT’s Analysis Procedures Manual (APM). The results indicate that a signal is not warranted at this time. The calculation is in Appendix B.

2. Horizon Year, 2026, Background Traffic Growth

Traffic growth for Oregon 126 and Territorial Highway for the horizon year, 2026, was estimated using ODOT’s 2034 Future Highway Volume Table. The calculations are found in Appendix B. The annual growth rate for Oregon 126 was found to be 1.0% per year or a growth factor of 1.10 over ten years. The annual growth rate for Territorial Highway shows a significant difference in the area near Oregon 126 (0.34%) compared to the area south of Broadway (0.99%). A growth factor of 1.034 was applied to Territorial Highway approaches to Oregon 126 and a growth factor of 1.10 was applied to Territorial Highway south of Broadway and the remaining City and County streets in the study area. Figure 6 in Appendix A shows the No-build and Build traffic levels in the study area.

3. Horizon Year, 2026, Intersection Operational Analysis

The Synchro program was rerun for the 2026 data using the same PHF’s as in 2016. Table 9 shows the results of the level-of-service (LOS) analysis. The Synchro reports can be found in Appendix E.

Table 9: Horizon Year, 2026, Operational Analysis

Intersection Movement (Controlled)	Mobility Standard	Existing Zoning			Proposed Zoning		
		V/C	Delay (sec.)	LOS	V/C	Delay (sec.)	LOS
Oregon 126 @ Territorial Road	0.80	0.70	31.7	C	0.72	32.6	C
Oregon 126 @ Huston Road							
Westbound Ore. 126	0.80	0.48	0.0	A	0.48	0.0	A
Southbound Movements	0.85	0.37	63.2	F	0.56	110.1	F
Northbound Movements	0.85	0.55	53.6	F	0.84	93.6	F
Territorial Road @ Hunter Road							
Eastbound Approach	0.85	0.17	16.3	C	0.20	18.3	C
Southbound Thru + Right	0.95	0.29	0.0	A	0.30	0.0	A
Territorial Road @ Bolton Hill/E. Bolton Road							
Eastbound Left turn	0.85	0.11	13.6	B	0.12	14.5	B
Southbound Thru + Right	0.90	0.24	0.0	A	0.24	0.0	A
E. Bolton Road @ Pine Street/Trinity Street							
Eastbound Movements	0.85	0.05	7.1	A	0.07	7.3	A
E. Bolton Road @ Cheney Drive							
Eastbound Movements	0.85	0.03	8.6	A	0.03	8.7	A
Huston Road @ Hunter Road							
Eastbound Movements	0.90	0.07	10.0	A	0.10	10.7	B
Hunter Road @ Baker Lane							
Northbound Movements	0.90	0.00	8.7	A	0.04	9.2	A
E. Bolton Road @ Erdman Way							
Northbound Movements	0.90	0.01	8.8	A	0.01	9.1	A
Huston Road @ Josee Lane							
Eastbound Movements	0.90	0.0	9.1	A	0.03	9.5	A

The intersection operational analysis in Table 9 above shows that the northbound movements on Hunter Road approaching Oregon 126 will reach a v/c of 0.84 just under the maximum v/c allowed, 0.85. In addition, both the north- and southbound movements will experience long delays and a LOS = F. While this does not technically result in reducing the performance of an existing facility below the minimum acceptable performance standard (0.85), it is close enough to warrant analyzing the actual proposed development as mitigation.

4. Stipulated Development as Mitigation

The developer will stipulate the following which is the actual development plan for the site:

Phase 1: Age-restricted (55+) senior housing, 140 units to be completed by 2018 on tax lots 501, 602, and the southern portion of tax lot 400.

Phase 2: Congregate Senior Housing - 100 units of Independent Living and 100 units of Assisted Living to be completed by 2020 on the northern portion of tax lot 400.

The Ninth Edition of the ITE Trip Generation Manual was consulted for the daily and PM peak hour trips generated by Land Use Codes 251 - Senior Adult Housing Detached, 253 - Congregate Care Facility, and 254 - Assisted Living. Trips for both the worst-case RR zoning are computed and compared to the stipulated development in Table 10. The results show that the zone change from RR to GR will generate a net additional 94 trips PM peak hour trips.

Table 10: Mitigation Trip Generation Comparison

Land Use (ITE Code)	Size Unit	Daily		PM Peak Hour			
		Rate	Total	Rate	Total	In	Out
Proposed Senior Adult Housing Detached (251)	140 Dwelling Units	4.56*	638	0.41*	58	35	23
Proposed Congregate Care Facility (253)	100 Dwelling Units	2.02	202	0.17	17	9	8
Proposed Assisted Living (254)	100 Beds	2.66	266	0.22	22	10	12
Proposed -Development			1106		97	54	43
Existing - Rural Residential (210)	3 Dwelling Units	13.9*	42	1.49*	3	2	1
Net Trips: Proposed - Existing			1064	94	52	42	

* - Trip rate is based on the fitted curve equation.

The distribution and assignment of those trips will be the same as previously determined for the worst-case development. Figure 7 in Appendix A shows the new trips generated by the mitigation plan. The resulting trip impact on the study area is shown in Figure 8 in Appendix A.

Table 11 on the following page shows the results of the level-of-service (LOS) analysis. The Synchro reports can be found in Appendix F.

Table 11: Horizon Year, 2026, Operational Analysis w/ Mitigation

Intersection Movement (Controlled)	Mobility Standard	Existing Zoning			Proposed Zoning with Mitigation		
		V/C	Delay (sec.)	LOS	V/C	Delay (sec.)	LOS
Oregon 126 @ Territorial Road	0.80	0.70	31.7	C	0.71	32.0	C
Oregon 126 @ Huston Road							
Westbound Ore. 126	0.80	0.48	0.0	A	0.48	0.0	A
Southbound Movements	0.85	0.37	63.2	F	0.44	76.8	F
Northbound Movements	0.85	0.55	53.6	F	0.66	62.6	F
Territorial Road @ Hunter Road							
Eastbound Approach	0.85	0.17	16.3	C	0.17	17.0	C
Southbound Thru + Right	0.95	0.29	0.0	A	0.29	0.0	A
Territorial Road @ Bolton Hill/E. Bolton Road							
Eastbound Left turn	0.85	0.11	13.6	B	0.12	13.9	B
Southbound Thru + Right	0.90	0.24	0.0	A	0.24	0.0	A
E. Bolton Road @ Pine Street/Trinity Street							
Eastbound Movements	0.85	0.05	7.1	A	0.06	7.1	A
E. Bolton Road @ Cheney Drive							
Eastbound Movements	0.85	0.03	8.6	A	0.03	8.7	A
Huston Road @ Hunter Road							
Eastbound Movements	0.90	0.07	10.0	A	0.08	10.3	B
Hunter Road @ Baker Lane							
Northbound Movements	0.90	0.00	8.7	A	0.04	9.2	A
E. Bolton Road @ Erdman Way							
Northbound Movements	0.90	0.01	8.8	A	0.01	9.1	A
Huston Road @ Josee Lane							
Eastbound Movements	0.90	0.0	9.1	A	0.02	9.3	A

The results of the intersection operational analysis shows that the v/c for the northbound Huston Road movements at Oregon 126 is now well within the allowable range. All other intersections show a reduced traffic impact as well.

IV. Conclusions and Recommendations

The above analysis of the Transportation Planning Rule for the proposed plan amendment and zone change from Rural Residential to General Residential has found that the full development of the site to 227 single-family homes could result in the Oregon 126 at Huston Road intersection reaching the maximum allowable v/c ratio. While the worst-case development does not technically exceed the performance standard it is too close to ignore. The mitigation would be to lower the number of single-family dwellings and therefore peak hour trips.

However, since the owner is planning to develop the site as age-restricted (55+) housing with assisted living and congregate care facilities, that plan was analyzed as the mitigation. Since the potential for exceeding the performance standard occurred only in the designated horizon year, 2026, only that year is analyzed. The analysis shows that the Oregon 126 at Huston Road intersection will function within the performance standard.

Based on this analysis, we find that the proposed Zone Change from Rural Residential to General Residential, developed as age-restricted housing with assisted living and congregate care facilities, will result in no significant impact to the operation of the transportation system following the directives of OAR 660-012-0060(1):

- (a) Change the functional classification of an existing or planned transportation facility; - **NO**
- (b) Change standards implementing a functional classification system; - **NO**
- (c) As measured by the end of the planning period identified in the adopted transportation system plan (TSP):
 - (A) Allow land uses or levels of development that would result in types or levels of travel that are inconsistent with the functional classification of an existing or planned transportation facility; - **NO**
 - (B) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan: - **NO**
 - (C) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan: - **NO**

Therefore we recommend approval of the plan amendment and zone change conditioned on the proposed development of 140 units of age-restricted housing with 100 beds of assisted living and 100 units of congregate care facilities.

Appendix A

Figures

Figure 1
Sarto Village Zone Change Traffic Impact Study
Vicinity Map

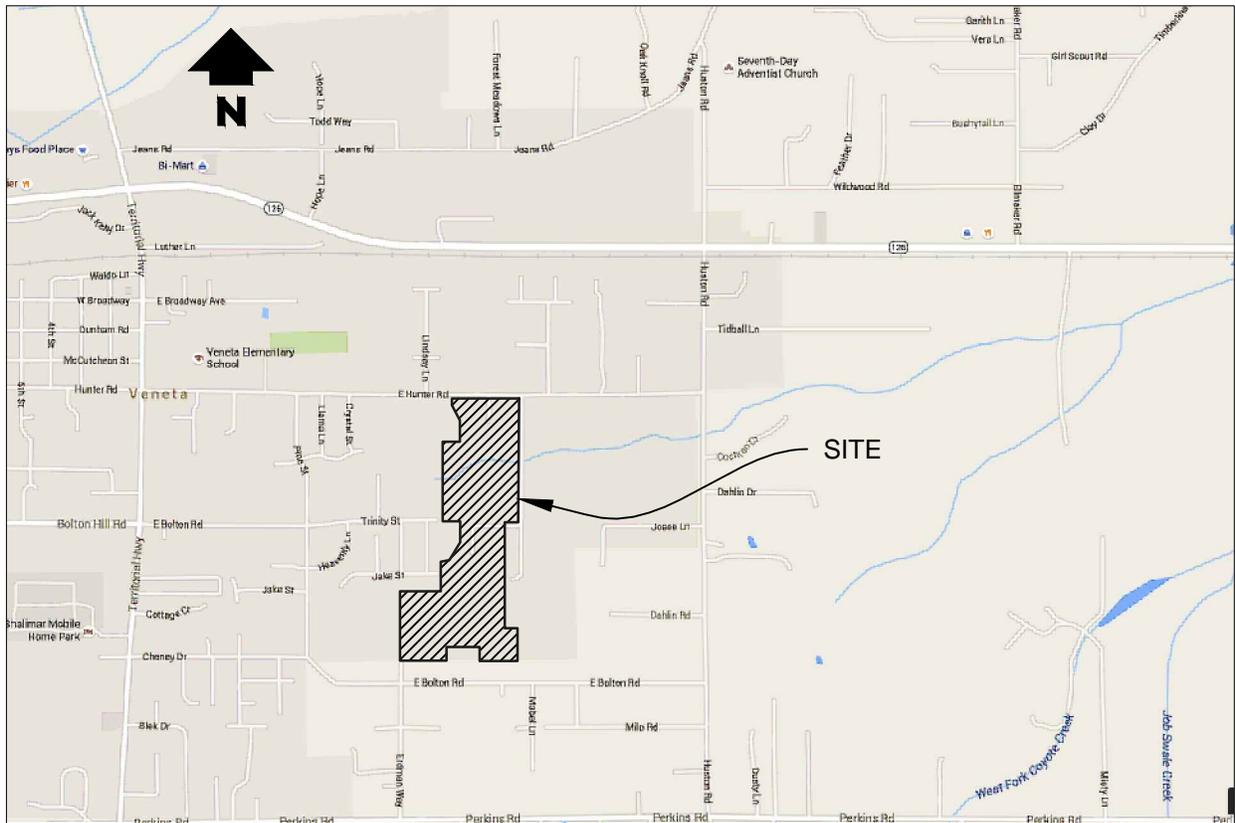


Figure 2

Sarto Village Zone Change Traffic Impact Study Site Plan

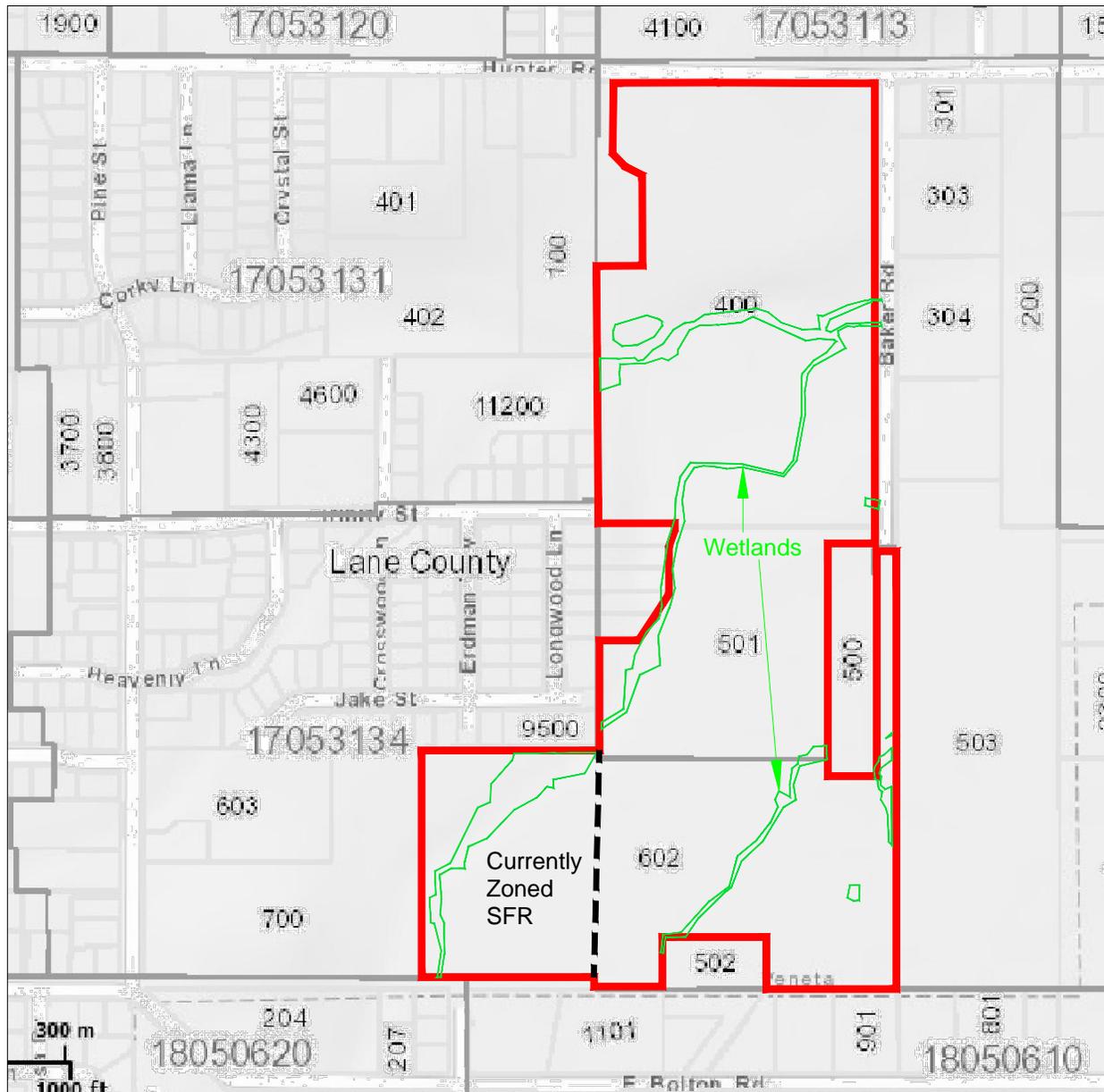


Figure 3

Sarto Village Zone Change Traffic Impact Study Existing DHV

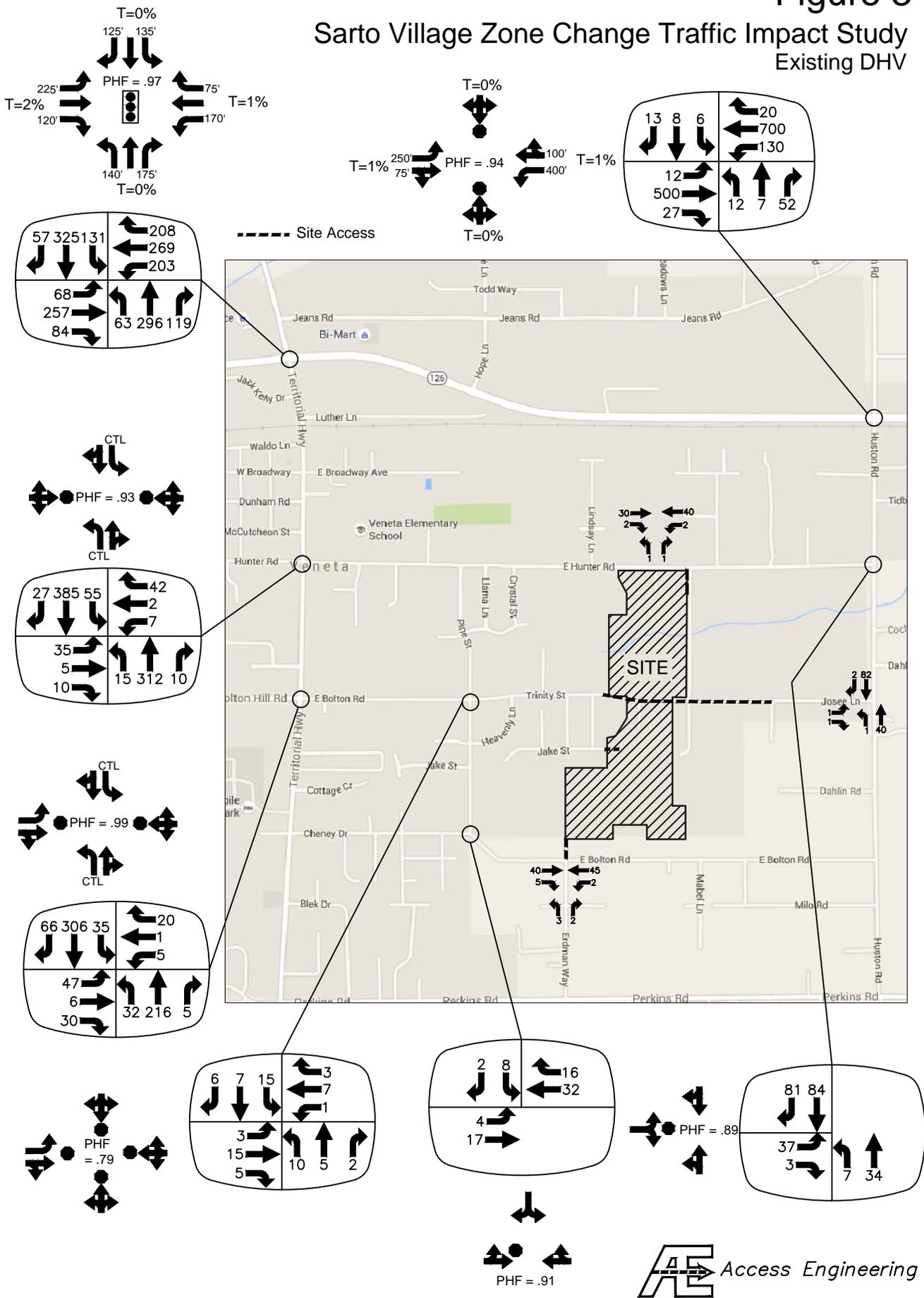


Figure 5

Sarto Village Zone Change Traffic Impact Study 2016 Build

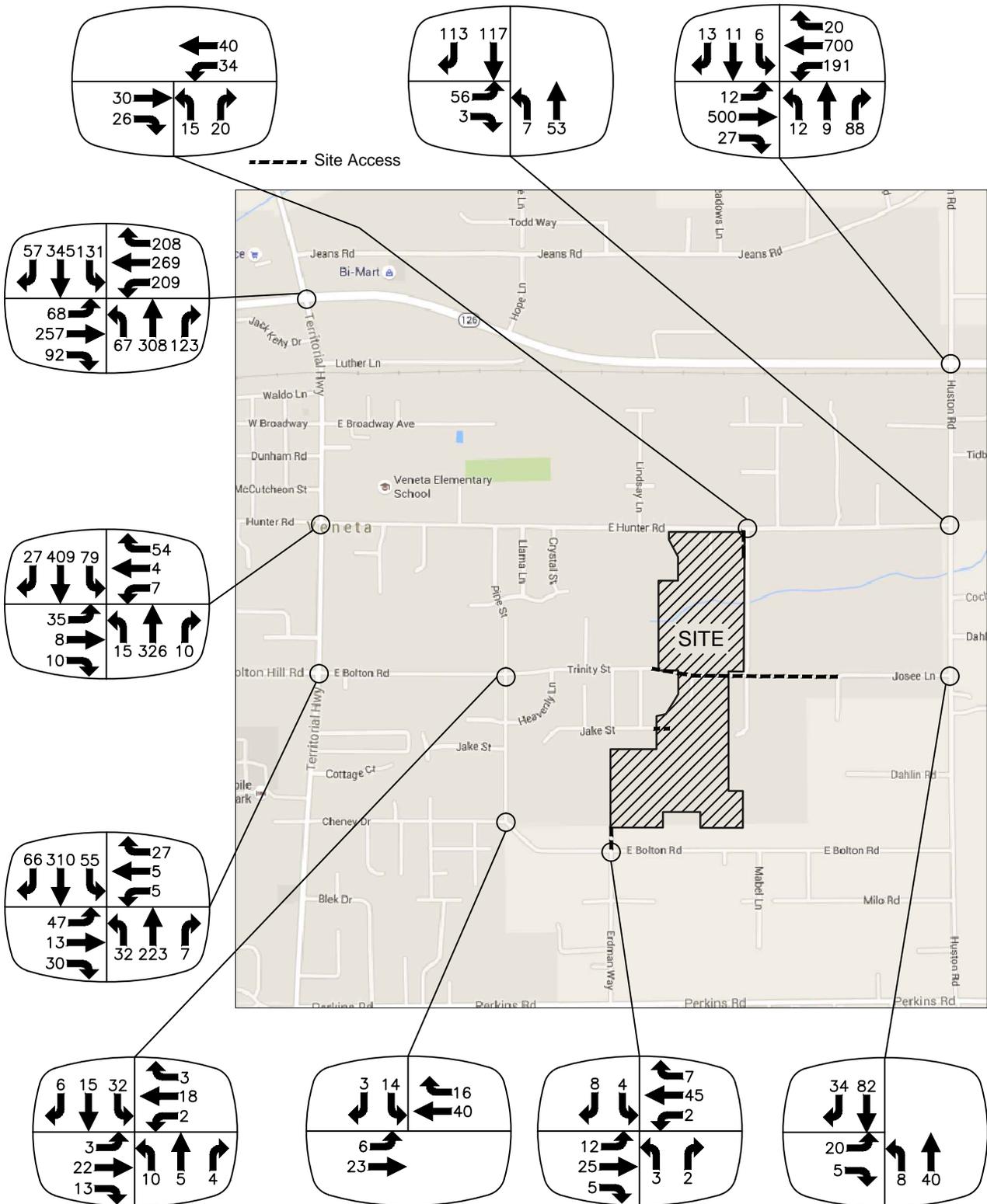


Figure 6

Sarto Village Zone Change Traffic Impact Study

2026 DHV's

LEGEND

- XX - No Build
- (XX) - Build (where different)

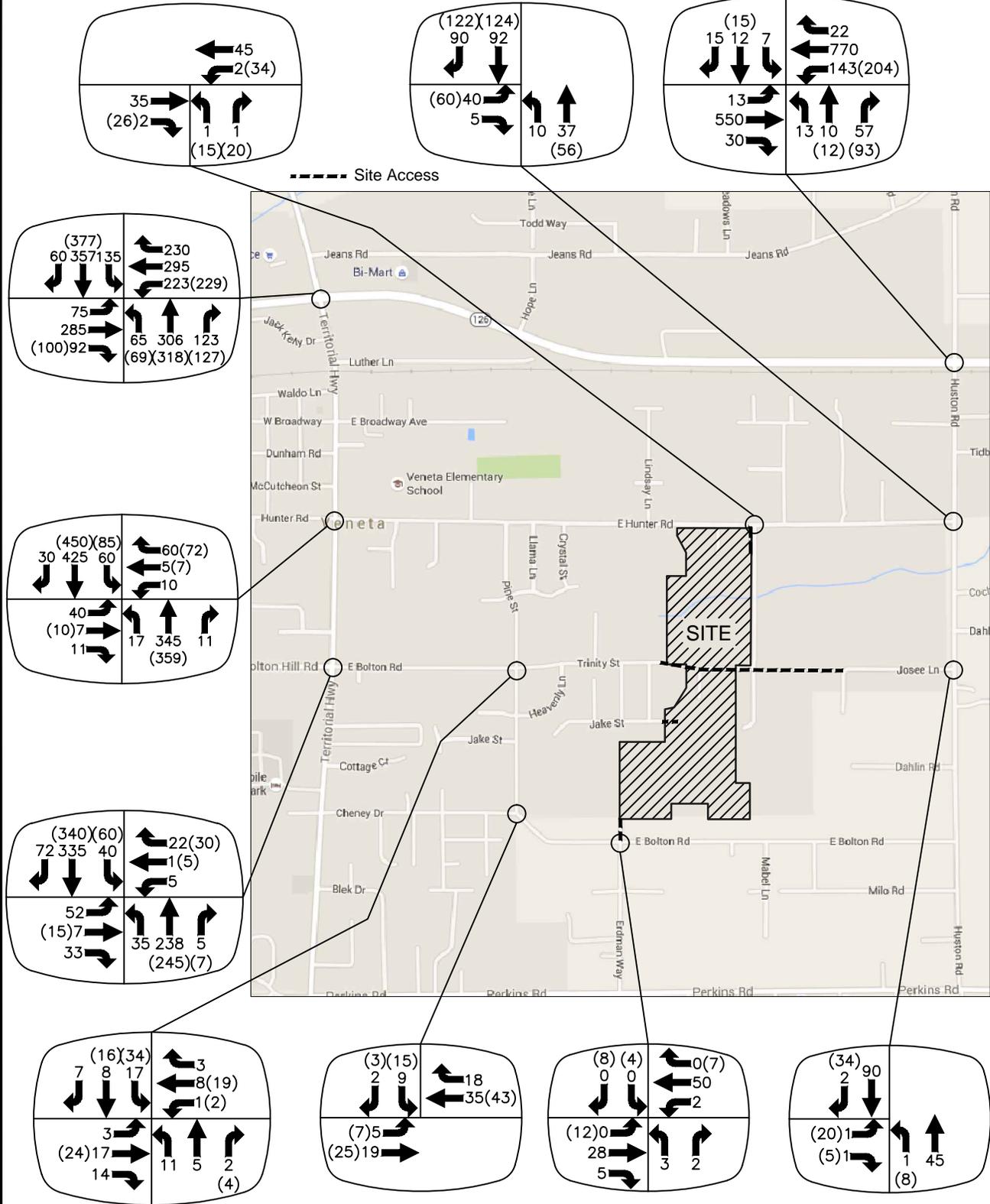


Figure 7

Sarto Village Zone Change Traffic Impact Study Mitigation Trip Assingment

----- Site Access

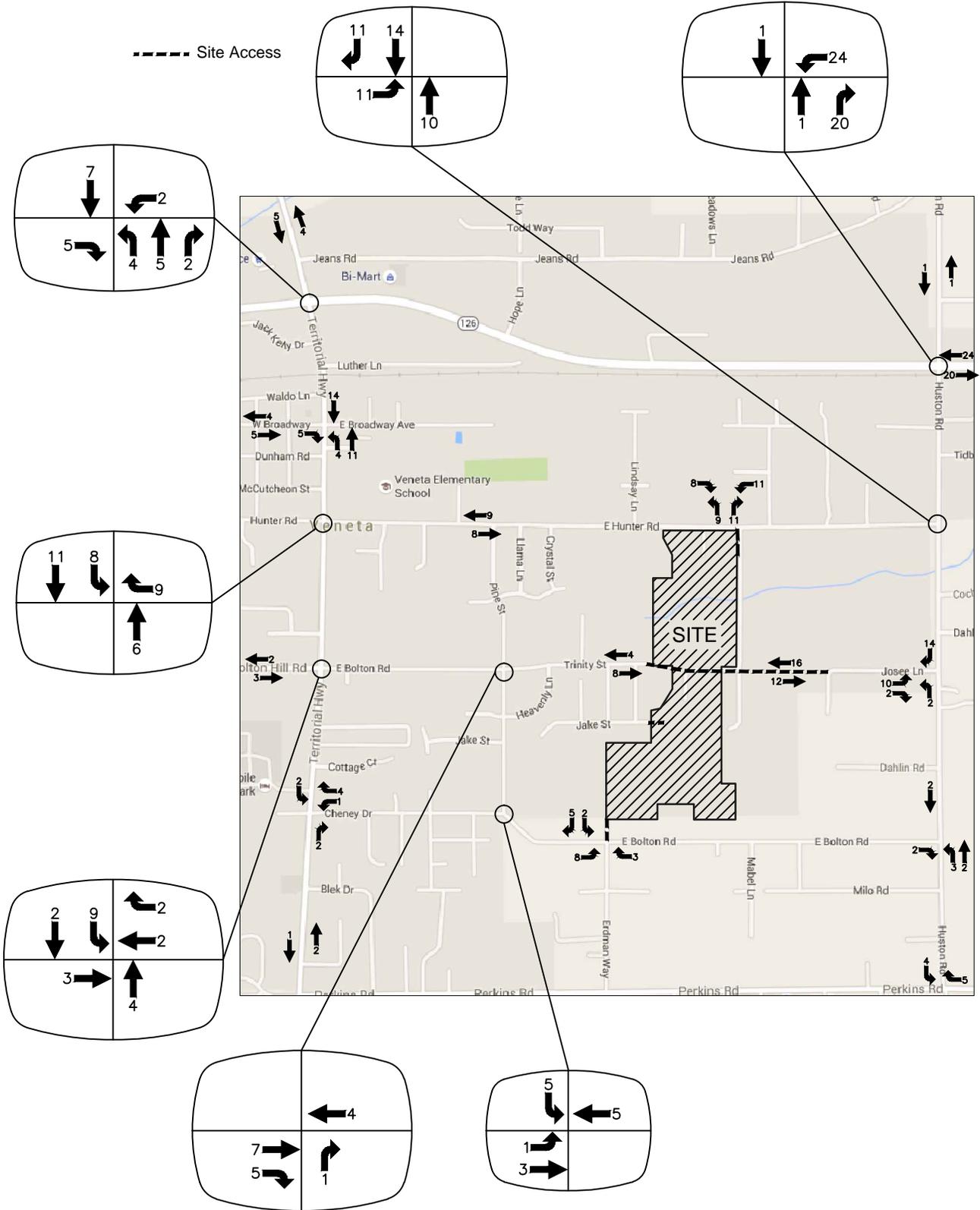
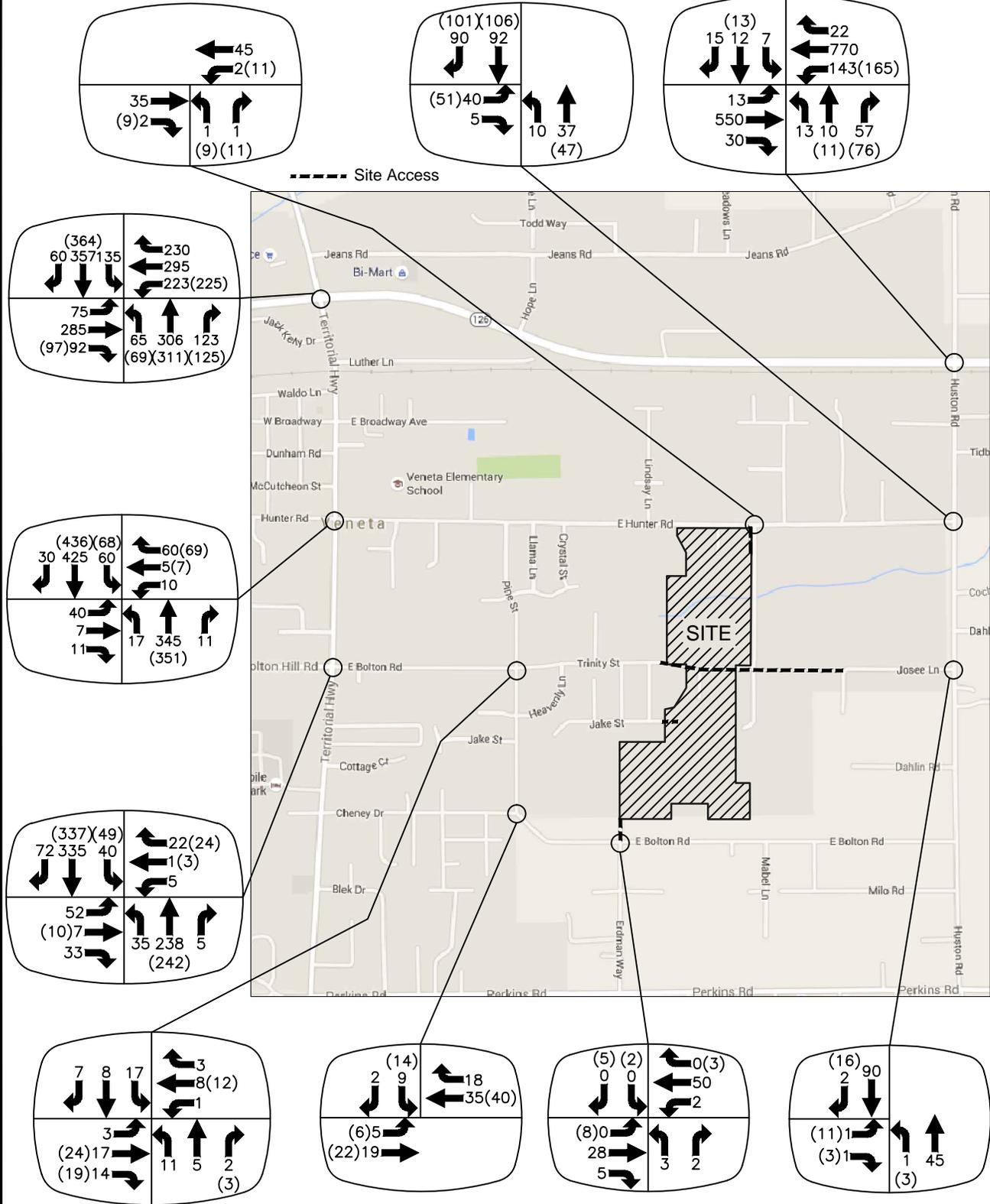


Figure 8

Sarto Village Zone Change Traffic Impact Study 2026 DHV's with Mitigation

LEGEND

- XX - No Build
- (XX) - Build Mitigation (where different)



Appendix B

Traffic Data & Calculations

ACCESS ENGINEERING

Peak Hour Intersection Turning Movement Count & Classification Summary

N/S Street:
E/W Street:

Territorial Hwy.
Oregon 126

Counted By:
Date:

GTD
3/29/16

Time Period From-To PM	Northbound Territorial Hwy.					Southbound Territorial Hwy.					Eastbound Oregon 126					Westbound Oregon 126					ALL
	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	
3:30-3:45	6	54	17	77	0	19	71	7	97	0	10	53	22	85	2	55	47	42	144	1	403
3:45-4:00	15	56	21	92	0	27	53	16	96	1	14	42	24	80	2	31	62	38	131	0	399
Hour Total:	21	110	38	169	0	46	124	23	193	1	24	95	46	165	4	86	109	80	275	1	802
4:00-4:15	10	56	34	100	0	22	70	9	101	0	16	53	11	80	3	52	46	33	131	0	412
4:15-4:30	13	69	20	102	0	26	64	15	105	0	17	54	12	83	2	39	67	42	148	2	438
4:30-4:45	13	55	18	86	0	36	57	8	101	1	11	56	24	91	0	36	56	53	145	1	423
4:45-5:00	15	59	24	98	0	22	71	14	107	0	13	51	23	87	2	42	55	45	142	0	434
Hour Total:	51	239	96	386	0	106	262	46	414	1	57	214	70	341	7	169	224	173	566	3	1707
5:00-5:15	13	57	18	88	0	13	52	7	72	1	16	49	28	93	0	39	60	36	135	0	388
5:15-5:30	13	50	14	77	0	16	65	9	90	0	13	40	12	65	0	41	69	43	153	1	385
5:30-5:45	8	57	16	81	0	21	70	8	99	0	11	50	24	85	0	45	65	47	157	0	422
5:45-6:00	5	66	28	99	0	24	83	13	120	0	4	43	17	64	1	45	56	36	137	0	420
Hour Total:	39	230	76	345	0	74	270	37	381	1	44	182	81	307	1	170	250	162	582	1	1615
6:00-6:15	11	57	19	87	0	12	61	15	88	0	5	53	22	80	0	35	48	26	109	2	364
6:15-6:30	7	50	20	77	0	11	51	13	75	0	11	30	16	57	1	34	54	33	121	1	330
Hour Total:	18	107	39	164	0	23	112	28	163	0	16	83	38	137	1	69	102	59	230	3	694
Grand Total:	129	686	249	1064	0	249	768	134	1151	3	141	574	235	950	13	494	685	474	1653	8	4124
PM Peak Hr. 4:00-5:00 PHF % Trucks	51	239	96	386	0	106	262	46	414	1	57	214	70	341	7	169	224	173	566	3	1707
				0.946					0.967					0.937					0.956		0.974
				0%					0%					2%					1%		
Seasonal Factor (x 1.24)											Seasonal Factor (x 1.20)										
Adj. PHV	63	296	119	478		131	325	57	513		68	257	84	409		203	269	208	680		2080

Pedestrians:

Peak Hour

1	4:00-4:15
1	4:30-4:45
2	4:45-5:00
2	5:00-5:15
1	5:30-5:45

1	3:30-3:45
3	3:45-4:00
3	4:00-4:15
4	4:15-4:30
10	4:30-4:45
5	4:45-5:00

2	5:00-5:15
3	5:15-5:30
4	5:30-5:45
3	5:45-6:00
6	6:00-6:15
8	6:15-6:30

2	4:00-4:15
2	4:45-5:00
1	5:30-5:45

ACCESS ENGINEERING

Peak Hour Intersection Turning Movement Count & Classification Summary

N/S Street:
E/W Street:

Huston Road
Oregon 126

Counted By:
Date:

GTD
3/29/16

Time Period From-To PM	Northbound Huston Road					Southbound Huston Road					Eastbound Oregon 126					Westbound Oregon 126					ALL
	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	
3:30-3:45	0	0	7	7	0	3	2	5	10	0	1	92	6	99	2	17	136	7	160	1	276
3:45-4:00	3	3	9	15	0	1	0	5	6	0	3	105	1	109	1	27	163	4	194	1	324
Hour Total:	3	3	16	22	0	4	2	10	16	0	4	197	7	208	3	44	299	11	354	2	600
4:00-4:15	1	3	10	14	0	2	2	1	5	0	2	108	9	119	3	17	126	2	145	0	283
4:15-4:30	3	1	14	18	0	2	4	3	9	0	2	96	3	101	2	31	162	4	197	2	325
4:30-4:45	3	0	12	15	0	1	1	3	5	0	3	106	7	116	0	20	133	5	158	1	294
4:45-5:00	2	1	9	12	0	4	1	2	7	0	3	93	4	100	2	35	154	3	192	0	311
Hour Total:	9	5	45	59	0	9	8	9	26	0	10	403	23	436	7	103	575	14	692	3	1213
5:00-5:15	4	2	11	17	0	4	2	2	8	0	0	83	5	88	0	32	136	5	173	0	286
5:15-5:30	4	1	8	13	0	1	2	4	7	0	0	73	6	79	0	43	162	6	211	1	310
5:30-5:45	4	3	9	16	0	2	3	3	8	0	0	88	2	90	0	31	166	7	204	0	318
5:45-6:00	2	2	8	12	0	1	2	3	6	0	3	90	5	98	1	22	132	7	161	0	277
Hour Total:	14	8	36	58	0	8	9	12	29	0	3	334	18	355	1	128	596	25	749	1	1191
6:00-6:15	2	2	7	11	0	2	2	3	7	0	2	83	11	96	0	35	128	9	172	2	286
6:15-6:30	2	1	10	13	0	3	1	4	8	0	4	68	4	76	1	37	125	2	164	1	261
Hour Total:	4	3	17	24	0	5	3	7	15	0	6	151	15	172	1	72	253	11	336	3	547
Grand Total:	30	19	114	163	0	26	22	38	86	0	23	1085	63	1171	12	347	1723	61	2131	9	3004
PM Peak Hr. 3:45-4:45 PHF % Trucks	10	7	45	62	0	6	7	12	25	0	10	415	20	445	6	95	584	15	694	4	1226
				0.861					0.694					0.935					0.881		0.943
				0%					0%					1%					1%		
Seasonal Factor (x 1.06)										Seasonal Factor (x 1.20)											
Adj. PHV	11	7	48	66		6	7	13	26		12	498	24	534		114	701	18	833		1459

Pedestrians: 1 5:45-6:00

Peak Hour

2	4:30-4:45
2	4:45-5:00

ACCESS ENGINEERING

Peak Hour Intersection Turning Movement Count & Classification Summary

N/S Street:
E/W Street:

Territorial Hwy.
Hunter Road

Counted By:
Date:

GTD
3/30/16

Time Period From-To PM	Northbound Territorial Hwy.					Southbound Territorial Hwy.					Eastbound Hunter Road					Westbound Hunter Road					ALL	
	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks		
3:30-3:45	4	54	5	63		6	66	3	75		1	3	4	8		0	0	9	9		155	
3:45-4:00	6	61	2	69		10	79	7	96		6	1	0	7		1	1	8	10		182	
Period Total:	10	115	7	132	0	16	145	10	171	0	7	4	4	15	0	1	1	17	19	0	337	
4:00-4:15	2	70	1	73		15	88	6	109		4	1	2	7		2	1	13	16		205	
4:15-4:30	3	66	1	70		10	65	7	82		6	1	2	9		4	1	4	9		170	
4:30-4:45	4	65	1	70		10	90	7	107		9	0	1	10		0	0	13	13		200	
4:45-5:00	3	63	4	70		11	83	3	97		10	2	3	15		0	0	6	6		188	
Hour Total:	12	264	7	283	0	46	326	23	395	0	29	4	8	41	0	6	2	36	44	0	763	
5:00-5:15	4	63	1	68		12	89	6	107		2	0	1	3		0	1	9	10		188	
5:15-5:30	5	59	0	64		11	85	6	102		2	0	2	4		3	1	10	14		184	
Period Total:	9	122	1	132	0	23	174	12	209	0	4	0	3	7	0	3	2	19	24	0	372	
Grand Total:	31	501	15	547	0	85	645	45	775	0	40	8	15	63	0	10	5	72	87	0	1472	
PM Peak Hr.																						
4:00-5:00	12	264	7	283	0	46	326	23	395	0	29	4	8	41	0	6	2	36	44	0	763	
PHF				0.969					0.906					0.683					0.688		0.930	
% Trucks				0%					0%					0%					0%			
Seasonal Factor (x 1.18)																						
Adj. PHV	14	312	8	334		54	385	27	466		34	5	9	48		7	2	42	51		899	

Pedestrians:
Peak Hour

3 3:45-4:00
2 4:00-4:15
6 4:15-4:30
 3 5:00-5:15

4 3:30-3:45
 5 3:45-4:00
2 4:15-4:30
5 4:30-4:45
5 4:45-5:00
 3 5:00-5:15
 5 5:15-5:30

5 3:30-3:45
 2 3:45-4:00
6 4:15-4:30
2 4:30-4:45
5 4:45-5:00
 1 5:00-5:15
 4 5:15-5:30

1 4:15-4:30

ACCESS ENGINEERING

Peak Hour Intersection Turning Movement Count & Classification Summary

N/S Street:
E/W Street:

Territorial Hwy.
Bolton Hill Road/E. Bolton Road

Counted By:
Date:

GTD
3/30/16

Time Period From-To PM	Northbound Territorial Hwy.					Southbound Territorial Hwy.					Eastbound Bolton Hill Road					Westbound E. Bolton Road					ALL
	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	
3:30-3:45	2	44	2	48	0	6	48	10	64	0	10	2	5	17	0	1	1	2	4	0	133
3:45-4:00	4	40	1	45	0	5	56	15	76	0	11	0	4	15	0	0	4	7	11	0	147
Period Total:	6	84	3	93	0	11	104	25	140	0	21	2	9	32	0	1	5	9	15	0	280
4:00-4:15	10	51	0	61	0	4	73	12	89	0	9	0	2	11	0	0	1	9	10	0	171
4:15-4:30	7	51	1	59	0	3	57	14	74	0	10	0	2	12	0	0	3	1	4	0	149
4:30-4:45	8	48	0	56	0	10	55	19	84	0	10	3	3	16	0	1	0	4	5	0	161
4:45-5:00	6	49	2	57	0	9	66	7	82	0	9	1	8	18	0	1	0	3	4	0	161
Hour Total:	31	199	3	233	0	26	251	52	329	0	38	4	15	57	0	2	4	17	23	0	642
5:00-5:15	7	42	1	50	0	8	72	5	85	0	10	0	8	18	0	1	0	7	8	0	161
5:15-5:30	6	44	1	51	0	2	66	25	93	0	11	1	6	18	0	1	0	1	2	0	164
Period Total:	13	86	2	101	0	10	138	30	178	0	21	1	14	36	0	2	0	8	10	0	325
Grand Total:	50	369	8	427	0	47	493	107	647	0	80	7	38	125	0	5	9	34	48	0	1247
PM Peak Hr. 4:30-5:30 PHF % Trucks	27	183	4	214 0.939 0%	0	29	259	56	344 0.925 0%	0	40	5	25	70 0.972 0%	0	4	0	15	19 0.594 0%	0	647 0.986
Seasonal Factor (x 1.18)																					
Adj. PHV	32	216	5	253		34	306	66	406		47	6	30	83		5	0	18	23		765

Pedestrians:
Peak Hour

2 3:45-4:00
2 4:00-4:15
1 5:15-5:30

2 3:30-3:45
1 3:45-4:00
2 4:15-4:30
2 4:30-4:45
1 4:45-5:00
1 5:00-5:15
2 5:15-5:30

2 3:45-4:00
1 4:00-4:15
1 4:30-4:45
2 5:00-5:15

1 4:00-4:15

ACCESS ENGINEERING

Peak Hour Intersection Turning Movement Count & Classification Summary

N/S Street:
E/W Street:

E. Bolton Road/Pine Street
E. Bolton Road/Trinity Street

Counted By:
Date:

GTD
3/30/16

Time Period From-To PM	Northbound E. Bolton Road					Southbound Pine Street					Eastbound E. Bolton Road					Westbound Trinity Street					ALL
	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	
3:30-3:45	2	1	0	3	0	0	1	0	1	0	2	3	4	9	0	0	2	0	2	0	15
3:45-4:00	4	1	0	5	0	1	0	2	3	0	0	2	1	3	0	0	3	1	4	0	15
Period Total:	6	2	0	8	0	1	1	2	4	0	2	5	5	12	0	0	5	1	6	0	30
4:00-4:15	5	2	0	7	0	2	4	1	7	0	0	2	0	2	0	1	2	1	4	0	20
4:15-4:30	1	0	0	1	0	5	0	1	6	0	1	2	0	3	0	0	3	0	3	0	13
4:30-4:45	0	2	1	3	0	4	2	2	8	0	1	5	3	9	0	0	2	1	3	0	23
4:45-5:00	3	0	1	4	0	2	1	2	5	0	1	4	2	7	0	0	0	1	1	0	17
Hour Total:	9	4	2	15	0	13	7	6	26	0	3	13	5	21	0	1	7	3	11	0	73
5:00-5:15	3	1	0	4	0	1	1	2	4	0	2	3	2	7	0	0	0	0	0	0	15
5:15-5:30	0	0	1	1	0	3	1	2	6	0	1	2	1	4	0	0	2	2	4	0	15
Period Total:	3	1	1	5	0	4	2	4	10	0	3	5	3	11	0	0	2	2	4	0	30
Grand Total:	18	7	3	28	0	18	10	12	40	0	8	23	13	44	0	1	14	6	21	0	133
PM Peak Hr. 4:00-5:00 PHF % Trucks	9	4	2	15	0	13	7	6	26	0	3	13	5	21	0	1	7	3	11	0	73
				0.536					0.813					0.583					0.688		0.793
				0%					0%					0%					0%		
Seasonal Factor (x 1.06)																					
Adj. PHV	10	4	2	16		14	7	6	27		3	14	5	22		1	7	3	11		76

Pedestrians:

1 3:30-3:45

2 5:15-5:30

4 3:30-3:45

Peak Hour

4 4:15-4:30

1 3:45-4:00

1 4:00-4:15

1 4:45-5:00

ACCESS ENGINEERING

Peak Hour Intersection Turning Movement Count & Classification Summary

N/S Street:
E/W Street:

E Bolton Road
Cheney Drive/E.Bolton Road

Counted By:
Date:

GTD
3/31/16

Time Period From-To PM	Northbound					Southbound E Bolton Road					Eastbound Cheney Drive					Westbound E. Bolton Road					ALL
	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	
3:30-3:45				0		4	0		4		2		3	5		4	1		5		14
3:45-4:00				0		1	2		3		1		5	6		0	1		1		10
Period Total:	0	0	0	0	0	0	5	2	7	0	3	0	8	11	0	4	2	0	6	0	24
4:00-4:15				0		1	0		1		0		2	2		1	4		5		8
4:15-4:30				0		3	1		4		1		3	4		1	4		5		13
4:30-4:45				0		1	1		2		0		3	3		9	3		12		17
4:45-5:00				0		3	1		4		2		3	5		5	4		9		18
Hour Total:	0	0	0	0	0	0	8	3	11	0	3	0	11	14	0	16	15	0	31	0	56
5:00-5:15				0		3	0		3		2		3	5		7	5		12		20
5:15-5:30				0		1	0		1		0		7	7		9	4		13		21
Period Total:	0	0	0	0	0	0	4	0	4	0	2	0	10	12	0	16	9	0	25	0	41
Grand Total:	0	0	0	0	0	0	17	5	22	0	8	0	29	37	0	36	26	0	62	0	121
PM Peak Hr.																					
4:30-5:30	0	0	0	0	0	0	8	2	10	0	4	0	16	20	0	30	16	0	46	0	76
PHF				N/A					0.625					0.714					0.885		0.905
% Trucks									0%					0%					0%		
Seasonal Factor (x 1.06)																					
Adj. PHV	0	0	0	0		0	8	2	10		4	0	17	21		32	17	0	49		80

Pedestrians:
Peak Hour

None

3 4:15-4:30

None

None

ACCESS ENGINEERING

Peak Hour Intersection Turning Movement Count & Classification Summary

N/S Street:
E/W Street:

Huston Road
Hunter Road

Counted By:
Date:

GTD
3/31/16

Time Period From-To PM	Northbound Huston Road					Southbound Huston Road					Eastbound Hunter Road					Westbound Hunter Road					ALL
	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	Left	Thru	Right	Total	Trucks	
3:30-3:45	0	8		8			18	3	21		4		1	5					0		34
3:45-4:00	4	7		11			8	13	21		2		2	4					0		36
Period Total:	4	15	0	19	0	0	26	16	42	0	6	0	3	9	0	0	0	0	0	0	70
4:00-4:15	2	9		11			16	11	27		7		2	9					0		47
4:15-4:30	0	9		9			9	15	24		5		2	7					0		40
4:30-4:45	1	8		9			22	20	42		8		1	9					0		60
4:45-5:00	2	6		8			21	17	38		5		0	5					0		51
Hour Total:	5	32	0	37	0	0	68	63	131	0	25	0	5	30	0	0	0	0	0	0	198
5:00-5:15	3	8		11			22	17	39		12		1	13					0		63
5:15-5:30	1	10		11			19	27	46		10		1	11					0		68
Period Total:	4	18	0	22	0	0	41	44	85	0	22	0	2	24	0	0	0	0	0	0	131
Grand Total:	13	65	0	78	0	0	135	123	258	0	53	0	10	63	0	0	0	0	0	0	399
PM Peak Hr. 4:30-5:30	7	32	0	39	0	0	84	81	165	0	35	0	3	38	0	0	0	0	0	0	242
PHF				0.886					0.897					0.731					N/A		0.890
% Trucks				0%					0%					0%							
Seasonal Factor (x 1.06)																					
Adj. PHV	7	34	0	41		0	89	86	175		37	0	3	40		0	0	0	0		256

Pedestrians:
Peak Hour

None

None

None

None

Tax lot and study area boundary: 50.78 acres

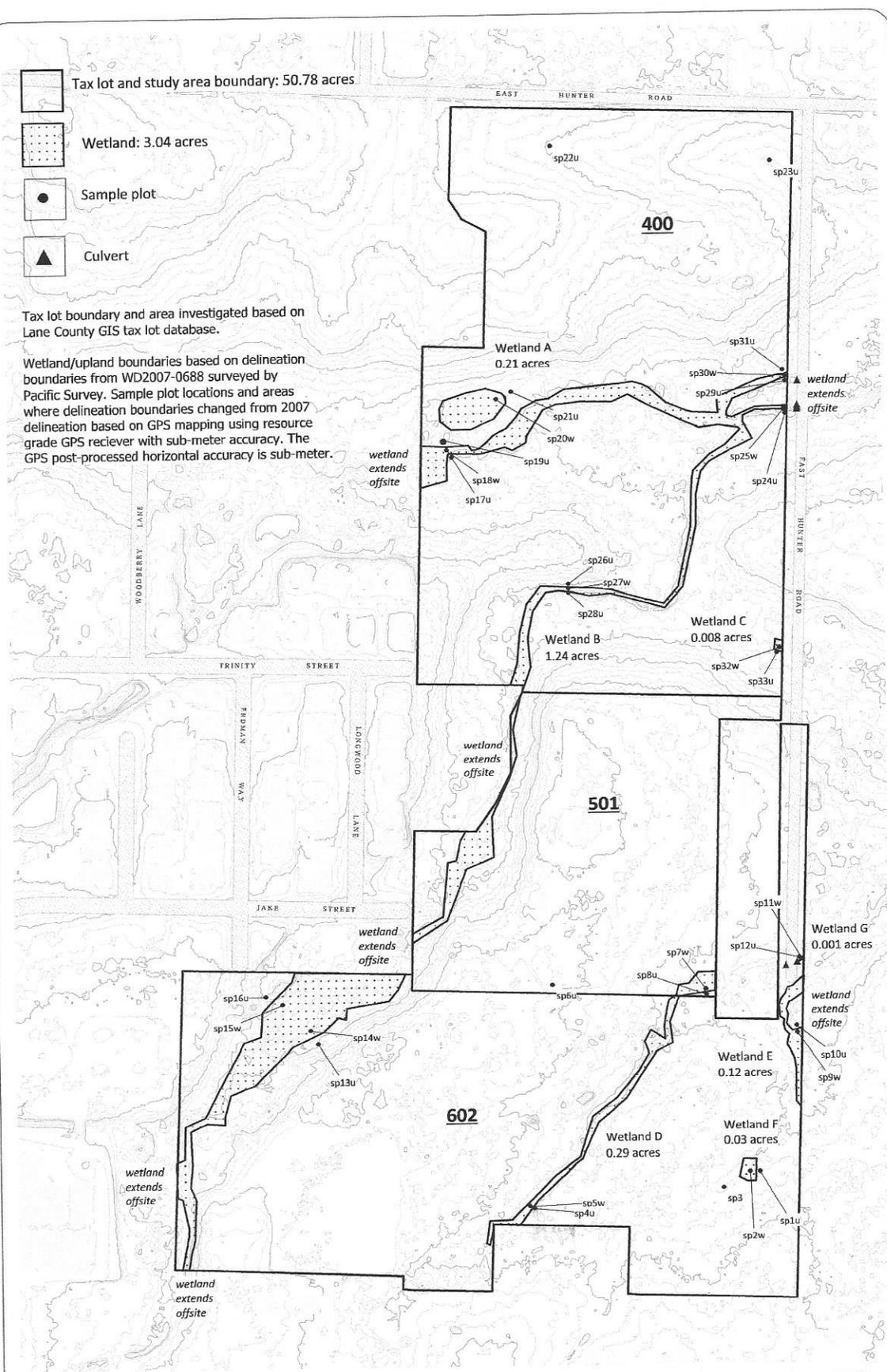
Wetland: 3.04 acres

Sample plot

Culvert

Tax lot boundary and area investigated based on Lane County GIS tax lot database.

Wetland/upland boundaries based on delineation boundaries from WD2007-0688 surveyed by Pacific Survey. Sample plot locations and areas where delineation boundaries changed from 2007 delineation based on GPS mapping using resource grade GPS receiver with sub-meter accuracy. The GPS post-processed horizontal accuracy is sub-meter.



Lane County Tax Lots 17 05 31 400 & 501
Lane County Tax Lot 17 05 31 34 602
Veneta, Oregon 97487



FIGURE 6A: WETLAND MAP

Scale: 1" = 200'
Source: Lane County GIS tax lot database
DOGAMI OLC Lane Delivery Area 5
Vertical datum: NAVD 88
Drafted: 3/03/16
NORTH

Sarto Village Zone Change

Seasonal Factor Calculation

ATR # 20-005 (Noti) OR 126 MP 43.86; 3.06 miles west of Territorial Highway

Oregon 126	2014	2013	2012	2011	2010	Average	Factor
Peak Month (July or August)	118	118	119	116	117	117.67	1.20
Count Month (March/April)	91	92	103	102	100	98.00	

ATR # 20-023 (Fern Ridge) Territorial Hwy. MP 13.54; 5.97 miles north of Oregon 126

Territorial Highway North of Ore. 126	2014	2013	2012	2011	2010	Average	Factor
Peak Month (July)	118	117	117	117	118	117.33	1.24
Count Month (March/April)	98	99	87	93	92	94.33	

Source: ATR Trend Summaries 2010-2014, ODOT Transportation Development

Seasonal Trend Table 2014

	Trend	Mar 15	Apr 1	Mar 30	Peak	Factor	Average
Territorial Hwy south of Oregon 126	Commute	0.9838	0.9651	0.9673	0.9136	1.059	1.18
	Summer	1.0838	1.0548	1.0582	0.8101	1.306	
City Streets & Huston Road	Commute	0.9838	0.9651	0.9663	0.9136	1.06	

Source: 2014 Seasonal Trend Table, ODOT Transportation Development

Growth Rate Calculations

Oregon 126

Location	M.P.	2012	2034	RSQ	22 Year Factor	Annual Rate
ATR # 20-005 (Noti)	43.86	5700	6800	0.2928	1.193	0.88%
0.05 mile East of 8th St.	46.56	6500	6700	0.4503	1.031	0.14%
0.10 miles east of Territorial Hwy	47.02	12400	13700	0.5190	1.105	0.48%
0.13 miles east of Huston Road	47.97	13100	16000	0.7350	1.221	1.01%
Average						1.00%
Annual Growth Rate:		1.00%				
Annual Growth Factor		1.010				
Years		10				
Growth Factor		1.100				

Territorial Road

Location	M.P.	2012	2034	RSQ	22 Year Factor	Annual Rate
0.02 miles south of Suttle Road	18.68	7600	8000	0.0315	1.053	0.26%
0.02 miles south of Oregon 126	19.51	10000	10200	0.1009	1.020	0.10%
0.02 miles south of Broadway	19.72	9000	10200	0.5852	1.133	0.67%
0.02 miles south of Hunter Road	19.89	7100	8100	0.4813	1.141	0.70%
0.02 miles north of Bolton Hill Road	20.10	6500	8100	0.6850	1.246	1.23%
0.02 miles south of Bolton Hill Road	20.14	5300	6400	0.8079	1.208	1.04%
Average		North of Broadway		South of Broadway		
Annual Growth Rate:		0.34%		0.99%		
Annual Growth Factor		1.003		1.010		
Years		10		10		
Growth Factor		1.034		1.100		

Source: 2034 Future Volumes Table, ODOT Transportation Planning & Analysis Unit

Oregon Department of Transportation Transportation Development Branch Transportation Planning Analysis Unit					
Preliminary Traffic Signal Warrant Analysis					
Major Street: Oregon 126			Minor Street: Huston Road		
Project: Sarto Village Zone Change			City/County: Veneta/Lane		
Year: 2016			Alternative: Build Max. Residential		
Preliminary Signal Warrant Volumes					
Number of Approach lanes		ADT on Major Street approaching from both directions		ADT on Minor Street, highest approaching volume	
Major Street	Minor Street	% of Standard Warrants 100 70		% of Standard Warrants 100 70	
Case A: Minimum Vehicular Traffic					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
Case B: Interruption of Continuous Traffic					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250
5.65% of the above ADT volumes is equal to the MUTCD vehicles per hour (vph)					
		100 % of standard warrants			
X		70 % of standard warrants			
Preliminary Signal Warrant Calculation					
	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	6,200	14,500	NO
	Minor	1	1,850	210	
Case B	Major	1	9,300	14,500	NO
	Minor	1	950	210	
Analyst and Date:		cmw 4/7/16		Reviewer and Date: mcw 4/17/16	

NB RT discount for shared left-thru-right lane:

85% of shared lane capacity= $0.85 \times 207 = 176$ RT discount= $88 - 176 = 0$ LT+Th+RT= $12 + 9 + 0 = 21 / 0.1 = 210$

Appendix C

Crash Data

062: FLORENCE-EUGENE

Highway 062 MAINLINE AND CONNECTIONS, MP 46.82 to 47.02 01/01/2012 to 12/31/2014, Both Add and Non-Add mileage

Total crash records: 7

SER#	E L G H R DAY	CITY	MLG TYP	FIRST STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G E LICNS	PED	ACT	EVENT	CAUSE				
INVEST	D C S L K TIME	URBAN AREA	MILEPNT	SECOND STREET	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E X RES	LOC	ERROR	000	000	00	
												PRVTE	E -W										
												PSNGR CAR		01	DRVR	NONE	59 M	OR-Y		000			00
																							OR<25

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF VENETA, LANE COUNTY

HUSTON RD at FLORENCE-EUGENE HY, City of Veneta, Lane County, 01/01/2012 to 12/31/2014

Total crash records: 2

SER#	INVEST	S D	P R S W	E A U C O DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	SPCL USE	TRLR QTY	MOVE	A S	E L G H R DAY	DIST	FIRST STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G E LICNS	PED	ERROR	ACT	EVENT	CAUSE		
02710	N N N N N			07/13/2012	07	HUSTON RD	INTER	CROSS		N	N	CLR	S-1STOP	01 NONE	0	STRGHT																				07		
COUNTY				FR	0	FLORENCE-EUGENE HY	S			STOP SIGN	N	DRY	REAR	PRVTE		S -N																			000	00		
				6P			06	0			N	DAY	PDO	PSNGR CAR														01	DRVR	NONE	21	M	SUSP	026	000	07		
														01 NONE	0	STRGHT																						
														PRVTE		S -N																				000	00	
														PSNGR CAR														02	PSNG	NO<5	01	M		000	000	00		
														02 NONE	0	STOP																						
														PRVTE		S -N																				011	00	
														PSNGR CAR														01	DRVR	NONE	24	M	OR-Y	000	000	00		
00050	N N N N N			01/07/2014	02	HUSTON RD	INTER	CROSS		N	N	RAIN	ANGL-OTH	01 NONE	0	STRGHT																					02	
STATE				TU		FLORENCE-EUGENE HY	CN			STOP SIGN	N	WET	ANGL	PRVTE		N -S																				015	00	
				4P			01	0			N	DUSK	INJ	PSNGR CAR														01	DRVR	INJC	52	F	OR-Y	028	000	02		
														02 NONE	0	STRGHT																						
														PRVTE		E -W																					000	00
														PSNGR CAR														01	DRVR	NONE	17	M	OR-Y	000	000	00		
														02 NONE	0	STRGHT																						
														PRVTE		E -W																					000	00
														PSNGR CAR														02	PSNG	INJB	18	M		000	000	00		

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

200: TERRITORIAL

Highway 200 ALL ROAD TYPES, MP 19.82 to 19.92 01/01/2012 to 12/31/2014, Both Add and Non-Add mileage

Total crash records: 3

SER#	S D P R S W E A U C O DATE E L G H R DAY INVEST D C S L K TIME	COUNTY CITY URBAN AREA	RD# FC COMPNT CONN# MLG TYP FIRST STREET MILEPNT SECOND STREET	RD CHAR DIRECT LOCTN	INT-TYPE (MEDIAN) INT-REL LEGS TRAF- (#LANES) CONTL	OFFRD WTHR RDNDBT SURF DRVWY LIGHT	CRASH COLL SVRTY	SPCL USE TRLR QTY OWNER V# TYPE	MOVE FROM TO	A S G E LICNS E X RES	PED LOC	ERROR	ACT	EVENT	CAUSE				
03348	N Y N N N 10/19/2014	LANE	1 06	INTER	CROSS	N	N CLR	O-1 L-TURN	01 NONE 0	STRGHT				010,001	02				
STATE	SU	VENETA	MN 0 HUNTER AVE	CN	STOP SIGN	N	DRY	TURN	PRVTE	N -S			000	000 010	00				
	8P		19.87 TERRITORIAL HY	01	0	N	DLIT	INJ	MTRCYCLE			01 DRVR	INJA	43 M	OR-Y OR<25	000	000 001	00	
									02 NONE 0	TURN-L				000	00				
									PRVTE	S -W				000	00				
									PSNGR CAR			01 DRVR	INJC	42 F	OR-Y OR<25	004,028	000	002	
01373	N N N N N 05/10/2014	LANE	1 06	INTER	CROSS	N	N CLD	ANGL-STP	01 NONE 0	TURN-L				010	08				
NONE	SA	VENETA	MN 0 HUNTER RD	CN	STOP SIGN	N	DRY	TURN	PRVTE	N -E			000	000	00				
	4P		19.87 TERRITORIAL HY	03	0	N	DAY	INJ	PSNGR CAR			01 DRVR	NONE	57 F	OR-Y OR<25	002	000	008	
									02 NONE 0	STOP				012 010	00				
									PRVTE	E -W				000	00				
									MTRCYCLE			01 DRVR	INJC	20 M	OR-Y OR<25	000	000	000	
01598	N N N N N 05/31/2014	LANE	1 06	ALLEY		N	N CLR	S-STRGHT	01 NONE 0	STRGHT					07				
NO RPT	SA	VENETA	MN 0 TERRITORIAL HY	S	(NONE)	UNKNOWN	N	DRY	REAR	PRVTE	S -N			000	00				
	8A		19.91 HUNTER RD	04			N	DAY	PDO	PSNGR CAR			01 DRVR	NONE	52 M	OR-Y OR<25	042	000	007
					(02)				02 NONE 1	TURN-R				019	00				
									PRVTE	S -E				000	00				
									PSNGR CAR			01 DRVR	NONE	32 M	OR-Y OR<25	000	000	000	

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

200: TERRITORIAL

Highway 200 ALL ROAD TYPES, MP 20.07 to 20.17 01/01/2012 to 12/31/2014, Both Add and Non-Add mileage

Total crash records: 2

SER#	INVEST	D C S L K	DATE	COUNTY	RD# FC	COMPNT	CONN#	RD CHAR	INT-TYPE	INT-REL	OFFRD	WTHR	CRASH	SPCL USE	MOVE	A	S	E	LICNS	PED	ACT	EVENT	CAUSE
MLG TYP	FIRST STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	RES	LOC	ERROR							
MILEPNT	SECOND STREET	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE		
00590	N N N N N	02/27/2013	LANE	1 06	INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE	0	STRGHT									02
COUNTY	WE	VENETA	MN 0	BOLTON RD	CN		STOP SIGN	N	WET	ANGL		PRVTE		N -S								000	00
	7P	TERRITORIAL HY	20.12		02	0		N	DLIT	INJ		PSNGR	CAR		01	DRVR	NONE	31	F	OR-Y		000	00
																							OR<25
																						000	00
																						000	00
																						015	00
																						028	000
																						015	00
																						000	00
03443	N N N N N	10/28/2013	LANE	1 06	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE	0	STRGHT									02
NONE	MO	VENETA	MN 0	BOLTON RD	CN		STOP SIGN	N	DRY	TURN		PRVTE		N -S								000	00
	1P	TERRITORIAL HY	20.12		03	0		N	DAY	PDO		PSNGR	CAR		01	DRVR	NONE	45	F	OR-Y		000	00
																							OR<25
																						015	00
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Appendix D

2016 Synchro Reports

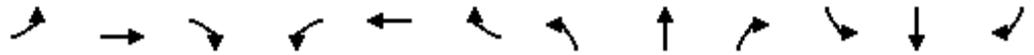
Lanes, Volumes, Timings
1: Territorial Hwy & Oregon 126

Sarto Village Zone Change
2016 Existing DHVs

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	257	84	203	269	208	63	296	119	131	325	57
Future Volume (vph)	68	257	84	203	269	208	63	296	119	131	325	57
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	225		120	170		75	140		175	135		125
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	135			200			140			25		
Satd. Flow (prot)	1630	1716	1458	1646	1733	1473	1662	1750	1488	1662	1750	1488
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1630	1716	1415	1646	1733	1473	1662	1750	1444	1662	1750	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177			144			123			145
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		634			5854			1994			407	
Travel Time (s)		9.6			88.7			38.8			7.9	
Confl. Peds. (#/hr)			4						4			52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	265	87	209	277	214	65	305	123	135	335	59
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		16			16			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	20		15	20		15
Number of Detectors	2	2	1	2	2	1	2	2	1	2	2	1
Detector Template												
Leading Detector (ft)	78	323	83	78	323	53	78	223	143	78	223	78
Trailing Detector (ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Position(ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Size(ft)	20	6	6	20	6	6	20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	72	317		72	317		72	217		72	217	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	6
Switch Phase												

Lanes, Volumes, Timings
1: Territorial Hwy & Oregon 126

Sarto Village Zone Change
2016 Existing DHVs

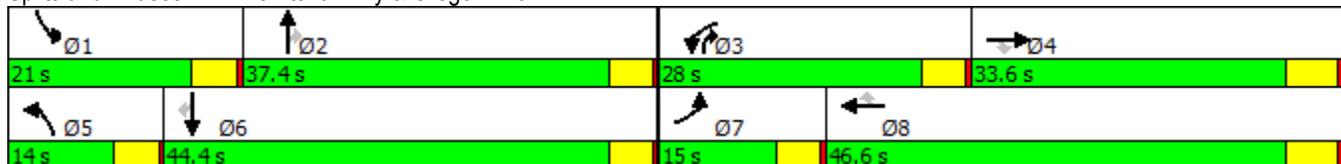


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	6.0
Minimum Split (s)	13.0	30.4	30.4	13.0	30.4	30.4	13.0	29.5	13.0	13.0	29.5	29.5
Total Split (s)	15.0	33.6	33.6	28.0	46.6	46.6	14.0	37.4	28.0	21.0	44.4	44.4
Total Split (%)	12.5%	28.0%	28.0%	23.3%	38.8%	38.8%	11.7%	31.2%	23.3%	17.5%	37.0%	37.0%
Maximum Green (s)	10.5	28.2	28.2	23.5	41.2	41.2	9.5	32.9	23.5	16.5	39.9	39.9
Yellow Time (s)	4.0	4.7	4.7	4.0	4.7	4.7	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.5	0.7	0.7	0.5	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	-0.5	-1.4	-1.4	-0.5	-1.4	-1.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Gap (s)	2.0	2.7	2.7	2.0	2.7	2.7	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	8.0	8.0	8.0	8.0	8.0
Time To Reduce (s)	4.0	13.0	13.0	4.0	13.0	13.0	4.0	4.0	4.0	4.0	4.0	4.0
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0	18.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)		4	4		0	0		4			52	52
Act Effct Green (s)	9.1	19.7	19.7	15.4	29.2	29.2	8.6	20.0	35.3	12.6	27.1	27.1
Actuated g/C Ratio	0.11	0.23	0.23	0.18	0.34	0.34	0.10	0.24	0.41	0.15	0.32	0.32
v/c Ratio	0.40	0.67	0.19	0.71	0.47	0.36	0.39	0.74	0.18	0.55	0.60	0.12
Control Delay	50.2	41.9	0.9	50.0	28.3	11.2	50.7	44.4	3.6	48.2	33.0	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	41.9	0.9	50.0	28.3	11.2	50.7	44.4	3.6	48.2	33.0	0.5
LOS	D	D	A	D	C	B	D	D	A	D	C	A
Approach Delay		34.9			29.6			35.0			33.2	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 85.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 32.8
 Intersection Capacity Utilization 66.3%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 1: Territorial Hwy & Oregon 126



Lanes, Volumes, Timings
2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2016 Existing DHVs

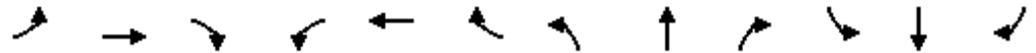
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	5	10	7	2	42	15	312	10	55	385	27
Future Volume (vph)	35	5	10	7	2	42	15	312	10	55	385	27
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	12	12	12	12	12	14	12	12
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1611	0	0	1516	0	1630	1707	0	1739	1699	0
Flt Permitted		0.966			0.993		0.950			0.950		
Satd. Flow (perm)	0	1611	0	0	1516	0	1630	1707	0	1739	1699	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		593			3765			1344			1994	
Travel Time (s)		16.2			102.7			26.2			38.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	55	0	16	346	0	59	443	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			14			14	
Link Offset(ft)		-10			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.02	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 3: Territorial Hwy & Bolton Hill Road/E Bolton Road

Sarto Village Zone Change
 2016 Existing DHVs



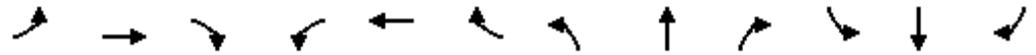
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	6	30	5	1	20	32	216	5	35	306	66
Future Volume (vph)	47	6	30	5	1	20	32	216	5	35	306	66
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	300		0	0		0	100		0	100		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	250			25			75			75		
Satd. Flow (prot)	1630	1501	0	0	1522	0	1630	1711	0	1630	1669	0
Flt Permitted	0.950				0.990		0.950			0.950		
Satd. Flow (perm)	1630	1501	0	0	1522	0	1630	1711	0	1630	1669	0
Link Speed (mph)		35			30			35			35	
Link Distance (ft)		756			1656			860			1344	
Travel Time (s)		14.7			37.6			16.8			26.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	36	0	0	26	0	32	223	0	35	376	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			14			14	
Link Offset(ft)		-6			6			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	20		15	20		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
2016 Existing DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	3	15	5	1	7	3	10	5	2	15	7	6
Future Volume (vph)	3	15	5	1	7	3	10	5	2	15	7	6
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1656	0	0	1642	0	0	1636	0	0	1621	0
Flt Permitted		0.993			0.996			0.971			0.974	
Satd. Flow (perm)	0	1656	0	0	1642	0	0	1636	0	0	1621	0
Link Speed (mph)		30			25			30			25	
Link Distance (ft)		1656			1314			1319			463	
Travel Time (s)		37.6			35.8			30.0			12.6	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	14	0	0	22	0	0	36	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			6			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
5: E Bolton Road & Cheney Drive

Sarto Village Zone Change
2016 Existing DHVs



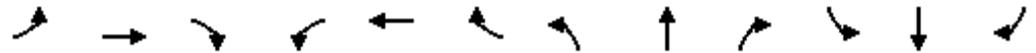
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	17	32	16	8	2
Future Volume (vph)	4	17	32	16	8	2
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1510	0	0	1661	1673	0
Flt Permitted	0.991			0.968		
Satd. Flow (perm)	1510	0	0	1661	1673	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	276			1033	1319	
Travel Time (s)	7.5			20.1	30.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	0	53	11	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
6: Huston Road & Oregon 126/Hwy 126

Sarto Village Zone Change
2016 Existing DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	500	27	130	700	20	12	7	52	6	8	13
Future Volume (vph)	12	500	27	130	700	20	12	7	52	6	8	13
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	250		75	400		100	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	300			300			25			25		
Satd. Flow (prot)	1646	1733	1473	1646	1733	1473	0	1563	0	0	1620	0
Flt Permitted	0.950			0.950				0.991			0.990	
Satd. Flow (perm)	1646	1733	1473	1646	1733	1473	0	1563	0	0	1620	0
Link Speed (mph)		55			55			35			35	
Link Distance (ft)		5854			492			1428			324	
Travel Time (s)		72.6			6.1			27.8			6.3	
Confl. Peds. (#/hr)						4			4			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	532	29	138	745	21	0	75	0	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		14			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			10			10	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.2%
Analysis Period (min)	15
	ICU Level of Service B

Lanes, Volumes, Timings
7: Huston Road & Hunter Road

Sarto Village Zone Change
2016 Existing DHVs



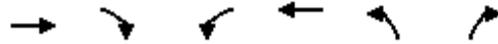
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	3	7	34	84	81
Future Volume (vph)	37	3	7	34	84	81
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1624	0	0	1700	1602	0
Flt Permitted	0.955			0.991		
Satd. Flow (perm)	1624	0	0	1700	1602	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	1803			1328	1428	
Travel Time (s)	41.0			25.9	27.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	46	185	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.2%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
8: Baker Lane & Hunter Road

Sarto Village Zone Change
2016 Existing DHVs



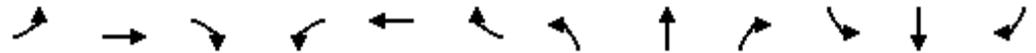
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	30	2	2	40	1	1
Future Volume (vph)	30	2	2	40	1	1
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	10	10
Satd. Flow (prot)	1702	0	0	1712	1457	0
Flt Permitted				0.998	0.976	
Satd. Flow (perm)	1702	0	0	1712	1457	0
Link Speed (mph)	25			25	20	
Link Distance (ft)	3765			1803	629	
Travel Time (s)	102.7			49.2	21.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	47	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.21	1.21
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.1%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
9: Erdman Way & E Bolton Road

Sarto Village Zone Change
2016 Existing DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	25	5	2	45	0	3	0	2	0	0	0
Future Volume (vph)	0	25	5	2	45	0	3	0	2	0	0	0
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1680	0	0	1712	0	0	1576	0	0	1716	0
Flt Permitted					0.998			0.971				
Satd. Flow (perm)	0	1680	0	0	1712	0	0	1576	0	0	1716	0
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		1033			2778			225			318	
Travel Time (s)		20.1			54.1			5.1			8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	51	0	0	5	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		5			5			16			5	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
10: Huston Road & Josee Lane

Sarto Village Zone Change
2016 Existing DHVs



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	1	1	40	82	2
Future Volume (vph)	1	1	1	40	82	2
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Width (ft)	10	12	12	12	12	12
Satd. Flow (prot)	1457	0	0	1714	1711	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1457	0	0	1714	1711	0
Link Speed (mph)	20			45	45	
Link Distance (ft)	1300			1453	1328	
Travel Time (s)	44.3			22.0	20.1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	46	94	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	5			5	5	
Two way Left Turn Lane						
Headway Factor	1.21	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM Signalized Intersection Capacity Analysis
1: Territorial Hwy & Oregon 126

Sarto Village Zone Change
2016 Existing DHVs

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	68	257	84	203	269	208	63	296	119	131	325	57	
Future Volume (vph)	68	257	84	203	269	208	63	296	119	131	325	57	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.89	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1630	1716	1419	1646	1733	1473	1662	1750	1464	1662	1750	1327	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1630	1716	1419	1646	1733	1473	1662	1750	1464	1662	1750	1327	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	70	265	87	209	277	214	65	305	123	135	335	59	
RTOR Reduction (vph)	0	0	66	0	0	96	0	0	71	0	0	40	
Lane Group Flow (vph)	70	265	21	209	277	119	65	305	52	135	335	19	
Confl. Peds. (#/hr)			4						4			52	
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	3	1	6		
Permitted Phases			4			8			2			6	
Actuated Green, G (s)	6.8	19.7	19.7	14.8	27.7	27.7	6.4	20.9	35.7	12.1	26.6	26.6	
Effective Green, g (s)	7.3	21.1	21.1	15.3	29.1	29.1	6.9	21.4	36.7	12.6	27.1	27.1	
Actuated g/C Ratio	0.08	0.24	0.24	0.18	0.34	0.34	0.08	0.25	0.42	0.15	0.31	0.31	
Clearance Time (s)	4.5	5.4	5.4	4.5	5.4	5.4	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	137	419	346	291	583	496	132	433	689	242	548	416	
v/s Ratio Prot	0.04	c0.15		c0.13	0.16		0.04	c0.17	0.01	c0.08	0.19		
v/s Ratio Perm			0.01			0.08			0.02			0.01	
v/c Ratio	0.51	0.63	0.06	0.72	0.48	0.24	0.49	0.70	0.08	0.56	0.61	0.04	
Uniform Delay, d1	37.8	29.2	25.1	33.5	22.6	20.7	38.1	29.6	14.8	34.3	25.2	20.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.4	3.5	0.1	7.7	0.8	0.3	2.1	4.8	0.0	2.2	1.7	0.0	
Delay (s)	40.2	32.7	25.2	41.2	23.5	21.0	40.2	34.4	14.8	36.5	26.9	20.7	
Level of Service	D	C	C	D	C	C	D	C	B	D	C	C	
Approach Delay (s)		32.4			28.0			30.3			28.7		
Approach LOS		C			C			C			C		
Intersection Summary													
HCM 2000 Control Delay			29.5		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.66										
Actuated Cycle Length (s)			86.4		Sum of lost time (s)					16.0			
Intersection Capacity Utilization			66.3%		ICU Level of Service					C			
Analysis Period (min)			15										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis

2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2016 Existing DHVs

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	5	10	7	2	42	15	312	10	55	385	27
Future Volume (Veh/h)	35	5	10	7	2	42	15	312	10	55	385	27
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	38	5	11	8	2	45	16	335	11	59	414	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	960	924	428	918	934	340	443			346		
vC1, stage 1 conf vol	546	546		372	372							
vC2, stage 2 conf vol	413	378		546	561							
vCu, unblocked vol	960	924	428	918	934	340	443			346		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	99	98	98	100	94	99			95		
cM capacity (veh/h)	395	418	626	416	418	702	1117			1213		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	54	55	16	346	59	443						
Volume Left	38	8	16	0	59	0						
Volume Right	11	45	0	11	0	29						
cSH	429	624	1117	1700	1213	1700						
Volume to Capacity	0.13	0.09	0.01	0.20	0.05	0.26						
Queue Length 95th (ft)	11	7	1	0	4	0						
Control Delay (s)	14.6	11.3	8.3	0.0	8.1	0.0						
Lane LOS	B	B	A		A							
Approach Delay (s)	14.6	11.3	0.4		1.0							
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.1									
Intersection Capacity Utilization			46.8%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 3: Territorial Hwy & Bolton Hill Road/E Bolton Road

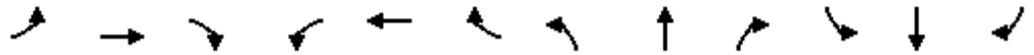
Sarto Village Zone Change
 2016 Existing DHVs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	6	30	5	1	20	32	216	5	35	306	66
Future Volume (Veh/h)	47	6	30	5	1	20	32	216	5	35	306	66
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	47	6	30	5	1	20	32	218	5	35	309	67
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	715	700	342	696	730	220	376			223		
vC1, stage 1 conf vol	412	412		284	284							
vC2, stage 2 conf vol	302	287		412	446							
vCu, unblocked vol	715	700	342	696	730	220	376			223		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	99	96	99	100	98	97			97		
cM capacity (veh/h)	506	501	700	489	479	819	1182			1346		
Direction, Lane #												
	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2					
Volume Total	47	36	26	32	223	35	376					
Volume Left	47	0	5	32	0	35	0					
Volume Right	0	30	20	0	5	0	67					
cSH	506	657	708	1182	1700	1346	1700					
Volume to Capacity	0.09	0.05	0.04	0.03	0.13	0.03	0.22					
Queue Length 95th (ft)	8	4	3	2	0	2	0					
Control Delay (s)	12.8	10.8	10.3	8.1	0.0	7.7	0.0					
Lane LOS	B	B	B	A		A						
Approach Delay (s)	12.0		10.3	1.0		0.7						
Approach LOS	B		B									
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			44.7%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
 2016 Existing DHVs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	3	15	5	1	7	3	10	5	2	15	7	6
Future Volume (vph)	3	15	5	1	7	3	10	5	2	15	7	6
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	4	19	6	1	9	4	13	6	3	19	9	8

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	29	14	22	36
Volume Left (vph)	4	1	13	19
Volume Right (vph)	6	4	3	8
Hadj (s)	-0.06	-0.12	0.07	0.01
Departure Headway (s)	4.0	3.9	4.1	4.0
Degree Utilization, x	0.03	0.02	0.03	0.04
Capacity (veh/h)	886	897	857	881
Control Delay (s)	7.1	7.0	7.2	7.2
Approach Delay (s)	7.1	7.0	7.2	7.2
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.1	
Level of Service		A	
Intersection Capacity Utilization	13.3%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
5: E Bolton Road & Cheney Drive

Sarto Village Zone Change
2016 Existing DHVs



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	17	32	16	8	2
Future Volume (Veh/h)	4	17	32	16	8	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	4	19	35	18	9	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	98	10	11			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	98	10	11			
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	98			
cM capacity (veh/h)	881	1071	1608			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	23	53	11			
Volume Left	4	35	0			
Volume Right	19	0	2			
cSH	1033	1608	1700			
Volume to Capacity	0.02	0.02	0.01			
Queue Length 95th (ft)	2	2	0			
Control Delay (s)	8.6	4.9	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.6	4.9	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			5.2			
Intersection Capacity Utilization			19.5%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
6: Huston Road & Oregon 126/Hwy 126

Sarto Village Zone Change
2016 Existing DHVs

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	500	27	130	700	20	12	7	52	6	8	13
Future Volume (Veh/h)	12	500	27	130	700	20	12	7	52	6	8	13
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	13	532	29	138	745	21	13	7	55	6	9	14
Pedestrians					4						4	
Lane Width (ft)					12.0						12.0	
Walking Speed (ft/s)					3.5						3.5	
Percent Blockage					0						0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	749			532			1584	1583	536	1590	1583	749
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	749			532			1584	1583	536	1590	1583	749
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 %	98			87			82	93	90	91	90	97
cM capacity (veh/h)	861			1041			70	93	546	65	93	414
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	13	532	29	138	745	21	75	29				
Volume Left	13	0	0	138	0	0	13	6				
Volume Right	0	0	29	0	0	21	55	14				
cSH	861	1700	1700	1041	1700	1700	208	131				
Volume to Capacity	0.02	0.31	0.02	0.13	0.44	0.01	0.36	0.22				
Queue Length 95th (ft)	1	0	0	11	0	0	39	20				
Control Delay (s)	9.2	0.0	0.0	9.0	0.0	0.0	31.7	40.2				
Lane LOS	A			A			D	E				
Approach Delay (s)	0.2			1.4			31.7	40.2				
Approach LOS							D	E				
Intersection Summary												
Average Delay			3.1									
Intersection Capacity Utilization		60.2%		ICU Level of Service	B							
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis
7: Huston Road & Hunter Road

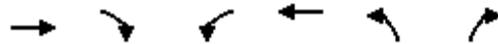
Sarto Village Zone Change
2016 Existing DHVs



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	3	7	34	84	81
Future Volume (Veh/h)	37	3	7	34	84	81
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	42	3	8	38	94	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	194	140	94			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	194	140	94			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	100	99			
cM capacity (veh/h)	791	909	1500			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	45	46	185			
Volume Left	42	8	0			
Volume Right	3	0	91			
cSH	798	1500	1700			
Volume to Capacity	0.06	0.01	0.11			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.8	1.3	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.8	1.3	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			20.2%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
8: Baker Lane & Hunter Road

Sarto Village Zone Change
2016 Existing DHVs



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	30	2	2	40	1	1
Future Volume (Veh/h)	30	2	2	40	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	34	2	2	45	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			36		84	35
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			36		84	35
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)			1575		916	1038
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	36	47	2			
Volume Left	0	2	1			
Volume Right	2	0	1			
cSH	1700	1575	973			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.3	8.7			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.3	8.7			
Approach LOS			A			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			14.1%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

9: Erdman Way & E Bolton Road

Sarto Village Zone Change
2016 Existing DHVs

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	25	5	2	45	0	3	0	2	0	0	0
Future Volume (Veh/h)	0	25	5	2	45	0	3	0	2	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	5	2	49	0	3	0	2	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	49			32			82	82	30	84	85	49
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	49			32			82	82	30	84	85	49
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)	1558			1580			904	807	1045	899	804	1020
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	32	51	5	0								
Volume Left	0	2	3	0								
Volume Right	5	0	2	0								
cSH	1558	1580	956	1700								
Volume to Capacity	0.00	0.00	0.01	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	0.0	0.3	8.8	0.0								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	0.3	8.8	0.0								
Approach LOS			A	A								
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			14.3%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 10: Huston Road & Josee Lane

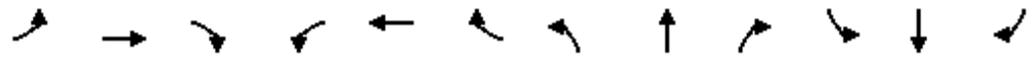
Sarto Village Zone Change
 2016 Existing DHVs



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	1	1	40	82	2
Future Volume (Veh/h)	1	1	1	40	82	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	1	1	1	45	92	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	140	93	94			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	140	93	94			
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)	852	964	1500			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	2	46	94			
Volume Left	1	1	0			
Volume Right	1	0	2			
cSH	905	1500	1700			
Volume to Capacity	0.00	0.00	0.06			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.0	0.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.0	0.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			14.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
1: Territorial Hwy & Hwy 126

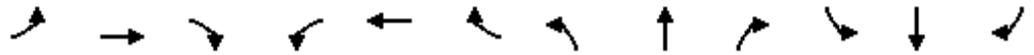
Sarto Village Zone Change
2016 DHV Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	257	92	209	269	208	67	308	123	131	345	57
Future Volume (vph)	68	257	92	209	269	208	67	308	123	131	345	57
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	225		120	170		75	140		175	135		125
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	135			200			140			25		
Satd. Flow (prot)	1630	1716	1458	1646	1733	1473	1662	1750	1488	1662	1750	1488
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1630	1716	1415	1646	1733	1473	1662	1750	1444	1662	1750	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177			141			127			145
Link Speed (mph)		45			45			35				35
Link Distance (ft)		634			5854			1994				407
Travel Time (s)		9.6			88.7			38.8				7.9
Confl. Peds. (#/hr)			4						4			52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	265	95	215	277	214	69	318	127	135	356	59
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		16			16			14				14
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		10			10			10				10
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	20		15	20		15
Number of Detectors	2	2	1	2	2	1	2	2	1	2	2	1
Detector Template												
Leading Detector (ft)	78	323	83	78	323	53	78	223	143	78	223	78
Trailing Detector (ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Position(ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Size(ft)	20	6	6	20	6	6	20	6	6	20	6	6
Detector 1 Type	Cl+Ex											
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	72	317		72	317		72	217		72	217	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex										
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	6
Switch Phase												

Lanes, Volumes, Timings
1: Territorial Hwy & Hwy 126

Sarto Village Zone Change
2016 DHV Build

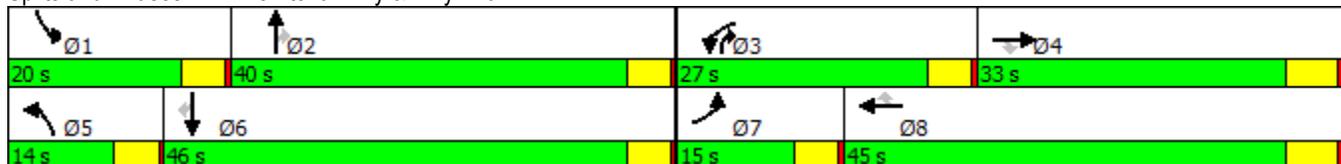


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	6.0
Minimum Split (s)	13.0	30.4	30.4	13.0	30.4	30.4	13.0	29.5	13.0	13.0	29.5	29.5
Total Split (s)	15.0	33.0	33.0	27.0	45.0	45.0	14.0	40.0	27.0	20.0	46.0	46.0
Total Split (%)	12.5%	27.5%	27.5%	22.5%	37.5%	37.5%	11.7%	33.3%	22.5%	16.7%	38.3%	38.3%
Maximum Green (s)	10.5	27.6	27.6	22.5	39.6	39.6	9.5	35.5	22.5	15.5	41.5	41.5
Yellow Time (s)	4.0	4.7	4.7	4.0	4.7	4.7	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.5	0.7	0.7	0.5	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	-0.5	-1.4	-1.4	-0.5	-1.4	-1.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Gap (s)	2.0	2.7	2.7	2.0	2.7	2.7	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	8.0	8.0	8.0	8.0	8.0
Time To Reduce (s)	4.0	13.0	13.0	4.0	13.0	13.0	4.0	4.0	4.0	4.0	4.0	4.0
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0	18.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)		4	4		0	0		4			52	52
Act Effct Green (s)	9.1	19.7	19.7	15.6	29.3	29.3	8.8	20.6	36.1	12.5	27.5	27.5
Actuated g/C Ratio	0.11	0.23	0.23	0.18	0.34	0.34	0.10	0.24	0.42	0.15	0.32	0.32
v/c Ratio	0.40	0.67	0.21	0.72	0.47	0.36	0.41	0.76	0.18	0.56	0.63	0.12
Control Delay	50.2	42.4	1.0	51.0	28.6	11.6	51.0	44.6	3.4	49.0	33.9	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	42.4	1.0	51.0	28.6	11.6	51.0	44.6	3.4	49.0	33.9	0.5
LOS	D	D	A	D	C	B	D	D	A	D	C	A
Approach Delay		34.5			30.2			35.3			34.0	
Approach LOS		C			C			D			C	

Intersection Summary

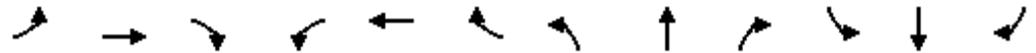
Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 85.6
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 33.2
 Intersection LOS: C
 Intersection Capacity Utilization 67.2%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Territorial Hwy & Hwy 126



Lanes, Volumes, Timings
2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2016 DHV Build



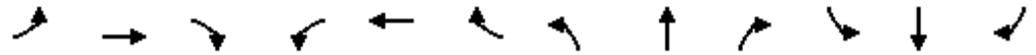
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	
Traffic Volume (vph)	35	8	10	7	4	54	15	326	10	79	409	27
Future Volume (vph)	35	8	10	7	4	54	15	326	10	79	409	27
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	12	12	12	12	12	14	12	12
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1618	0	0	1514	0	1630	1707	0	1739	1700	0
Flt Permitted		0.968			0.994		0.950			0.950		
Satd. Flow (perm)	0	1618	0	0	1514	0	1630	1707	0	1739	1700	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		593			3765			1344			1994	
Travel Time (s)		16.2			102.7			26.2			38.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	70	0	16	362	0	85	469	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			14			14	
Link Offset(ft)		-10			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.02	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.4%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 3: Territorial Hwy & Bolton Hill Road/E Bolton Road

Sarto Village Zone Change
 2016 DHV Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	13	30	5	5	27	32	223	7	55	310	66
Future Volume (vph)	47	13	30	5	5	27	32	223	7	55	310	66
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	300		0	0		0	100		0	100		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	250			25			75			75		
Satd. Flow (prot)	1630	1536	0	0	1535	0	1630	1707	0	1630	1671	0
Flt Permitted	0.950				0.993		0.950			0.950		
Satd. Flow (perm)	1630	1536	0	0	1535	0	1630	1707	0	1630	1671	0
Link Speed (mph)		35			30			35			35	
Link Distance (ft)		756			1656			860			1344	
Travel Time (s)		14.7			37.6			16.8			26.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	43	0	0	37	0	32	232	0	56	380	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			14			14	
Link Offset(ft)		-6			6			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	20		15	20		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
2016 DHV Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	3	36	11	2	18	3	10	5	4	15	7	6
Future Volume (vph)	3	36	11	2	18	3	10	5	4	15	7	6
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1659	0	0	1676	0	0	1624	0	0	1621	0
Flt Permitted		0.997			0.995			0.974			0.974	
Satd. Flow (perm)	0	1659	0	0	1676	0	0	1624	0	0	1621	0
Link Speed (mph)		30			25			30			25	
Link Distance (ft)		1656			1314			1319			463	
Travel Time (s)		37.6			35.8			30.0			12.6	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	0	30	0	0	24	0	0	36	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			6			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.6%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
5: E Bolton Road & Cheney Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	23	40	16	14	3
Future Volume (vph)	6	23	40	16	14	3
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1519	0	0	1657	1676	0
Flt Permitted	0.989			0.966		
Satd. Flow (perm)	1519	0	0	1657	1676	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	276			1024	1319	
Travel Time (s)	7.5			19.9	30.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	0	62	18	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.0%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
6: Huston Road & Hwy 126

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	500	27	191	700	20	12	9	88	6	11	13
Future Volume (vph)	12	500	27	191	700	20	12	9	88	6	11	13
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	250		100	400		100	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	300			300			25			25		
Satd. Flow (prot)	1646	1733	1473	1646	1733	1473	0	1552	0	0	1632	0
Flt Permitted	0.950			0.950				0.994			0.991	
Satd. Flow (perm)	1646	1733	1473	1646	1733	1473	0	1552	0	0	1632	0
Link Speed (mph)		55			55			35			35	
Link Distance (ft)		5854			492			1428			324	
Travel Time (s)		72.6			6.1			27.8			6.3	
Confl. Peds. (#/hr)							4		4			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	532	29	203	745	21	0	117	0	0	32	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		14			14			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			10			10	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.5%
Analysis Period (min)	15
	ICU Level of Service B

Lanes, Volumes, Timings
7: Huston Road & Hunter Road

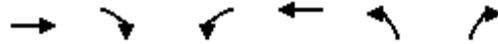


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	3	7	53	116	113
Future Volume (vph)	56	3	7	53	116	113
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1627	0	0	1705	1601	0
Flt Permitted	0.954			0.994		
Satd. Flow (perm)	1627	0	0	1705	1601	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	1803			1328	1428	
Travel Time (s)	41.0			25.9	27.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	0	68	257	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.4%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
8: Baker Lane & Hunter Road



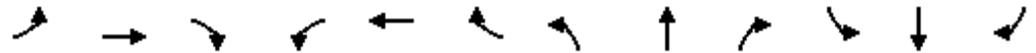
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	30	26	34	40	15	20
Future Volume (vph)	30	26	34	40	15	20
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	10	10
Satd. Flow (prot)	1609	0	0	1678	1449	0
Flt Permitted				0.978	0.979	
Satd. Flow (perm)	1609	0	0	1678	1449	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	3765			1803	629	
Travel Time (s)	102.7			49.2	17.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	83	39	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.21	1.21
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.0%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
9: Erdman Way & E Bolton Road

Sarto Village Zone Change
2016 DHV Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	12	25	5	2	45	7	3	0	2	4	0	8
Future Volume (vph)	12	25	5	2	45	7	3	0	2	4	0	8
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1666	0	0	1681	0	0	1576	0	0	1533	0
Flt Permitted		0.986			0.998			0.971			0.985	
Satd. Flow (perm)	0	1666	0	0	1681	0	0	1576	0	0	1533	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1024			2778			460			318	
Travel Time (s)		19.9			54.1			12.5			8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	59	0	0	5	0	0	13	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		5			5			16			5	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.0%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
25: Huston Road & Josee Lane



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	5	8	40	82	34
Future Volume (vph)	20	5	8	40	82	34
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1603	0	0	1702	1649	0
Flt Permitted	0.962			0.992		
Satd. Flow (perm)	1603	0	0	1702	1649	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	1300			1453	1328	
Travel Time (s)	35.5			22.0	20.1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	54	130	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	5			5	5	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.4%
Analysis Period (min)	15
	ICU Level of Service A

HCM Signalized Intersection Capacity Analysis
1: Territorial Hwy & Hwy 126

Sarto Village Zone Change
2016 DHV Build

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	257	92	209	269	208	67	308	123	131	345	57
Future Volume (vph)	68	257	92	209	269	208	67	308	123	131	345	57
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.89
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1630	1716	1419	1646	1733	1473	1662	1750	1464	1662	1750	1326
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1630	1716	1419	1646	1733	1473	1662	1750	1464	1662	1750	1326
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	70	265	95	215	277	214	69	318	127	135	356	59
RTOR Reduction (vph)	0	0	72	0	0	94	0	0	72	0	0	40
Lane Group Flow (vph)	70	265	23	215	277	120	69	318	55	135	356	19
Confl. Peds. (#/hr)			4						4			52
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.9	19.7	19.7	15.0	27.8	27.8	6.5	21.5	36.5	12.0	27.0	27.0
Effective Green, g (s)	7.4	21.1	21.1	15.5	29.2	29.2	7.0	22.0	37.5	12.5	27.5	27.5
Actuated g/C Ratio	0.08	0.24	0.24	0.18	0.34	0.34	0.08	0.25	0.43	0.14	0.32	0.32
Clearance Time (s)	4.5	5.4	5.4	4.5	5.4	5.4	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	138	415	343	292	580	493	133	442	697	238	552	418
v/s Ratio Prot	0.04	c0.15		c0.13	0.16		0.04	c0.18	0.01	c0.08	0.20	
v/s Ratio Perm			0.02			0.08			0.02			0.01
v/c Ratio	0.51	0.64	0.07	0.74	0.48	0.24	0.52	0.72	0.08	0.57	0.64	0.04
Uniform Delay, d1	38.1	29.6	25.4	33.9	22.9	21.0	38.4	29.7	14.6	34.8	25.6	20.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	3.6	0.1	8.8	0.8	0.4	2.5	5.2	0.0	2.5	2.3	0.0
Delay (s)	40.2	33.2	25.5	42.6	23.8	21.3	41.0	34.9	14.7	37.3	27.9	20.7
Level of Service	D	C	C	D	C	C	D	C	B	D	C	C
Approach Delay (s)		32.6			28.8			30.7			29.4	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM 2000 Control Delay			30.1									C
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			87.1						16.0			
Intersection Capacity Utilization			67.2%									C
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2016 DHV Build



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (veh/h)	35	8	10	7	4	54	15	326	10	79	409	27
Future Volume (Veh/h)	35	8	10	7	4	54	15	326	10	79	409	27
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	38	9	11	8	4	58	16	351	11	85	440	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1068	1018	454	1014	1028	356	469			362		
vC1, stage 1 conf vol	624	624		388	388							
vC2, stage 2 conf vol	443	394		626	639							
vCu, unblocked vol	1068	1018	454	1014	1028	356	469			362		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	98	98	98	99	92	99			93		
cM capacity (veh/h)	344	378	606	368	379	688	1093			1197		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	58	70	16	362	85	469						
Volume Left	38	8	16	0	85	0						
Volume Right	11	58	0	11	0	29						
cSH	380	600	1093	1700	1197	1700						
Volume to Capacity	0.15	0.12	0.01	0.21	0.07	0.28						
Queue Length 95th (ft)	13	10	1	0	6	0						
Control Delay (s)	16.2	11.8	8.3	0.0	8.2	0.0						
Lane LOS	C	B	A		A							
Approach Delay (s)	16.2	11.8	0.4		1.3							
Approach LOS	C	B										
Intersection Summary												
Average Delay			2.4									
Intersection Capacity Utilization			48.4%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
3: Territorial Hwy & Bolton Hill Road/E Bolton Road

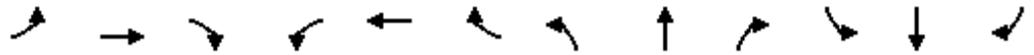
Sarto Village Zone Change
2016 DHV Build



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	13	30	5	5	27	32	223	7	55	310	66
Future Volume (Veh/h)	47	13	30	5	5	27	32	223	7	55	310	66
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	47	13	30	5	5	27	32	225	7	56	313	67
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							TWLTL			TWLTL		
Median storage (veh)							2			2		
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	777	754	346	754	784	228	380			232		
vC1, stage 1 conf vol	458	458		292	292							
vC2, stage 2 conf vol	318	296		462	492							
vCu, unblocked vol	777	754	346	754	784	228	380			232		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	97	96	99	99	97	97			96		
cM capacity (veh/h)	466	470	697	449	451	811	1178			1336		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2					
Volume Total	47	43	37	32	232	56	380					
Volume Left	47	0	5	32	0	56	0					
Volume Right	0	30	27	0	7	0	67					
cSH	466	608	666	1178	1700	1336	1700					
Volume to Capacity	0.10	0.07	0.06	0.03	0.14	0.04	0.22					
Queue Length 95th (ft)	8	6	4	2	0	3	0					
Control Delay (s)	13.6	11.4	10.7	8.1	0.0	7.8	0.0					
Lane LOS	B	B	B	A		A						
Approach Delay (s)	12.5		10.7	1.0		1.0						
Approach LOS	B		B									
Intersection Summary												
Average Delay			2.7									
Intersection Capacity Utilization			44.9%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
 2016 DHV Build



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	3	36	11	2	18	3	10	5	4	15	7	6
Future Volume (vph)	3	36	11	2	18	3	10	5	4	15	7	6
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	4	46	14	3	23	4	13	6	5	19	9	8

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	64	30	24	36
Volume Left (vph)	4	3	13	19
Volume Right (vph)	14	4	5	8
Hadj (s)	-0.08	-0.03	0.02	0.01
Departure Headway (s)	4.0	4.1	4.2	4.1
Degree Utilization, x	0.07	0.03	0.03	0.04
Capacity (veh/h)	886	866	836	848
Control Delay (s)	7.3	7.2	7.3	7.3
Approach Delay (s)	7.3	7.2	7.3	7.3
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.3	
Level of Service		A	
Intersection Capacity Utilization	13.6%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 5: E Bolton Road & Cheney Drive

Sarto Village Zone Change
 2016 DHV Build



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	23	40	16	14	3
Future Volume (Veh/h)	6	23	40	16	14	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	7	25	44	18	15	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	122	16	18			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	122	16	18			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	97			
cM capacity (veh/h)	849	1063	1599			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	32	62	18			
Volume Left	7	44	0			
Volume Right	25	0	3			
cSH	1007	1599	1700			
Volume to Capacity	0.03	0.03	0.01			
Queue Length 95th (ft)	2	2	0			
Control Delay (s)	8.7	5.3	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.7	5.3	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			5.4			
Intersection Capacity Utilization			20.0%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
6: Huston Road & Hwy 126

Sarto Village Zone Change
2016 DHV Build



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	500	27	191	700	20	12	9	88	6	11	13
Future Volume (Veh/h)	12	500	27	191	700	20	12	9	88	6	11	13
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	13	532	29	203	745	21	13	10	94	6	12	14
Pedestrians					4						4	
Lane Width (ft)					12.0						12.0	
Walking Speed (ft/s)					3.5						3.5	
Percent Blockage					0						0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	749			532			1715	1713	536	1722	1713	749
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	749			532			1715	1713	536	1722	1713	749
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 %	98			80			74	86	83	86	83	97
cM capacity (veh/h)	861			1041			51	72	546	44	72	414

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	13	532	29	203	745	21	117	32
Volume Left	13	0	0	203	0	0	13	6
Volume Right	0	0	29	0	0	21	94	14
cSH	861	1700	1700	1041	1700	1700	207	95
Volume to Capacity	0.02	0.31	0.02	0.20	0.44	0.01	0.57	0.34
Queue Length 95th (ft)	1	0	0	18	0	0	77	33
Control Delay (s)	9.2	0.0	0.0	9.3	0.0	0.0	42.9	61.1
Lane LOS	A			A			E	F
Approach Delay (s)	0.2			1.9			42.9	61.1
Approach LOS							E	F

Intersection Summary

Average Delay		5.3						
Intersection Capacity Utilization		62.5%		ICU Level of Service			B	
Analysis Period (min)		15						

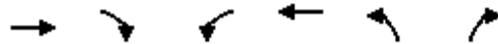
HCM Unsignalized Intersection Capacity Analysis
7: Huston Road & Hunter Road

Sarto Village Zone Change
2016 DHV Build



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	56	3	7	53	116	113
Future Volume (Veh/h)	56	3	7	53	116	113
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	63	3	8	60	130	127
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	270	194	130			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	270	194	130			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	100	99			
cM capacity (veh/h)	716	848	1455			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	66	68	257			
Volume Left	63	8	0			
Volume Right	3	0	127			
cSH	721	1455	1700			
Volume to Capacity	0.09	0.01	0.15			
Queue Length 95th (ft)	8	0	0			
Control Delay (s)	10.5	0.9	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.5	0.9	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			1.9			
Intersection Capacity Utilization			24.4%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
8: Baker Lane & Hunter Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↔	↔
Traffic Volume (veh/h)	30	26	34	40	15	20
Future Volume (Veh/h)	30	26	34	40	15	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	34	29	38	45	17	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			63		170	48
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			63		170	48
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		98	98
cM capacity (veh/h)			1540		800	1020
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	63	83	39			
Volume Left	0	38	17			
Volume Right	29	0	22			
cSH	1700	1540	911			
Volume to Capacity	0.04	0.02	0.04			
Queue Length 95th (ft)	0	2	3			
Control Delay (s)	0.0	3.5	9.1			
Lane LOS		A	A			
Approach Delay (s)	0.0	3.5	9.1			
Approach LOS			A			
Intersection Summary						
Average Delay			3.5			
Intersection Capacity Utilization			21.0%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 9: Erdman Way & E Bolton Road

Sarto Village Zone Change
 2016 DHV Build



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	12	25	5	2	45	7	3	0	2	4	0	8
Future Volume (Veh/h)	12	25	5	2	45	7	3	0	2	4	0	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	27	5	2	49	8	3	0	2	4	0	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	57			32			122	116	30	114	115	53
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	57			32			122	116	30	114	115	53
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 %	99			100			100	100	100	100	100	99
cM capacity (veh/h)	1547			1580			840	766	1045	854	768	1014
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	45	59	5	13								
Volume Left	13	2	3	4								
Volume Right	5	8	2	9								
cSH	1547	1580	911	959								
Volume to Capacity	0.01	0.00	0.01	0.01								
Queue Length 95th (ft)	1	0	0	1								
Control Delay (s)	2.2	0.3	9.0	8.8								
Lane LOS	A	A	A	A								
Approach Delay (s)	2.2	0.3	9.0	8.8								
Approach LOS			A	A								
Intersection Summary												
Average Delay			2.2									
Intersection Capacity Utilization			18.0%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 25: Huston Road & Josee Lane



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	5	8	40	82	34
Future Volume (Veh/h)	20	5	8	40	82	34
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	22	6	9	45	92	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	174	111	130			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	174	111	130			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	811	942	1455			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	28	54	130			
Volume Left	22	9	0			
Volume Right	6	0	38			
cSH	836	1455	1700			
Volume to Capacity	0.03	0.01	0.08			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	9.5	1.3	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.5	1.3	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.6			
Intersection Capacity Utilization			19.4%	ICU Level of Service	A	
Analysis Period (min)			15			

Appendix E

2026 Synchro Reports

Lanes, Volumes, Timings
1: Territorial Hwy & Oregon 126

Sarto Village Zone Change
2026 No-Build DHVs

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	285	92	223	295	230	65	306	123	135	357	60
Future Volume (vph)	75	285	92	223	295	230	65	306	123	135	357	60
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	225		120	170		75	140		175	135		125
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	135			200			140			25		
Satd. Flow (prot)	1630	1716	1458	1646	1733	1473	1662	1750	1488	1662	1750	1488
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1630	1716	1415	1646	1733	1473	1662	1750	1444	1662	1750	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177			146			127			145
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		634			5854			1994			407	
Travel Time (s)		9.6			88.7			38.8			7.9	
Confl. Peds. (#/hr)			4						4			52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	294	95	230	304	237	67	315	127	139	368	62
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		16			16			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	20		15	20		15
Number of Detectors	2	2	1	2	2	1	2	2	1	2	2	1
Detector Template												
Leading Detector (ft)	78	323	83	78	323	53	78	223	143	78	223	78
Trailing Detector (ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Position(ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Size(ft)	20	6	6	20	6	6	20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex						
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	72	317		72	317		72	217		72	217	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	6
Switch Phase												

Lanes, Volumes, Timings
1: Territorial Hwy & Oregon 126

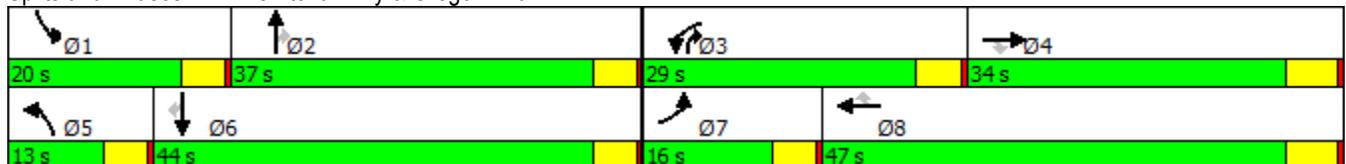
Sarto Village Zone Change
2026 No-Build DHVs

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	6.0
Minimum Split (s)	13.0	30.4	30.4	13.0	30.4	30.4	13.0	29.5	13.0	13.0	29.5	29.5
Total Split (s)	16.0	34.0	34.0	29.0	47.0	47.0	13.0	37.0	29.0	20.0	44.0	44.0
Total Split (%)	13.3%	28.3%	28.3%	24.2%	39.2%	39.2%	10.8%	30.8%	24.2%	16.7%	36.7%	36.7%
Maximum Green (s)	11.5	28.6	28.6	24.5	41.6	41.6	8.5	32.5	24.5	15.5	39.5	39.5
Yellow Time (s)	4.0	4.7	4.7	4.0	4.7	4.7	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.5	0.7	0.7	0.5	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	-0.5	-1.4	-1.4	-0.5	-1.4	-1.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Gap (s)	2.0	2.7	2.7	2.0	2.7	2.7	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	8.0	8.0	8.0	8.0	8.0
Time To Reduce (s)	4.0	13.0	13.0	4.0	13.0	13.0	4.0	4.0	4.0	4.0	4.0	4.0
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0	18.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)		4	4		0	0		4			52	52
Act Effct Green (s)	9.7	21.2	21.2	16.8	31.6	31.6	8.4	20.7	37.5	12.8	28.3	28.3
Actuated g/C Ratio	0.11	0.24	0.24	0.19	0.36	0.36	0.09	0.23	0.42	0.14	0.32	0.32
v/c Ratio	0.44	0.72	0.20	0.74	0.49	0.38	0.43	0.77	0.18	0.58	0.66	0.12
Control Delay	52.1	44.8	1.0	52.3	28.9	12.4	55.0	47.9	3.4	51.8	36.0	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	44.8	1.0	52.3	28.9	12.4	55.0	47.9	3.4	51.8	36.0	0.5
LOS	D	D	A	D	C	B	D	D	A	D	D	A
Approach Delay		37.1			30.8			37.8			36.0	
Approach LOS		D			C			D			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 88.8
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 34.9
 Intersection LOS: C
 Intersection Capacity Utilization 69.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Territorial Hwy & Oregon 126



Lanes, Volumes, Timings
2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2026 No-Build DHVs

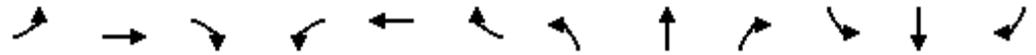
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	7	11	10	5	60	17	345	11	60	425	30
Future Volume (vph)	40	7	11	10	5	60	17	345	11	60	425	30
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	12	12	12	12	12	14	12	12
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1616	0	0	1520	0	1630	1707	0	1739	1699	0
Flt Permitted		0.967			0.993		0.950			0.950		
Satd. Flow (perm)	0	1616	0	0	1520	0	1630	1707	0	1739	1699	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		593			3765			1344			1994	
Travel Time (s)		16.2			102.7			26.2			38.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	81	0	18	383	0	65	489	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			14			14	
Link Offset(ft)		-10			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.02	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 3: Territorial Hwy & Bolton Hill Road/E Bolton Road

Sarto Village Zone Change
 2026 No-Build DHVs



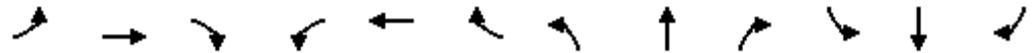
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	7	33	5	1	22	35	238	5	40	335	72
Future Volume (vph)	52	7	33	5	1	22	35	238	5	40	335	72
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	300		0	0		0	100		0	100		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	250			25			75			75		
Satd. Flow (prot)	1630	1503	0	0	1520	0	1630	1711	0	1630	1669	0
Flt Permitted	0.950				0.991		0.950			0.950		
Satd. Flow (perm)	1630	1503	0	0	1520	0	1630	1711	0	1630	1669	0
Link Speed (mph)		35			30			35			35	
Link Distance (ft)		756			1656			860			1344	
Travel Time (s)		14.7			37.6			16.8			26.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	40	0	0	28	0	35	245	0	40	411	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			14			14	
Link Offset(ft)		-6			6			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	20		15	20		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.0%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
2026 No-Build DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	3	17	14	1	8	3	11	5	2	17	8	7
Future Volume (vph)	3	17	14	1	8	3	11	5	2	17	8	7
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1613	0	0	1649	0	0	1634	0	0	1621	0
Flt Permitted		0.995			0.997			0.970			0.974	
Satd. Flow (perm)	0	1613	0	0	1649	0	0	1634	0	0	1621	0
Link Speed (mph)		30			25			30			25	
Link Distance (ft)		1656			1314			1319			463	
Travel Time (s)		37.6			35.8			30.0			12.6	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	15	0	0	23	0	0	41	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			6			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
5: E Bolton Road & Cheney Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	19	35	18	9	2
Future Volume (vph)	5	19	35	18	9	2
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1513	0	0	1661	1676	0
Flt Permitted	0.990			0.968		
Satd. Flow (perm)	1513	0	0	1661	1676	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	276			1033	1319	
Travel Time (s)	7.5			20.1	30.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	0	0	58	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
6: Huston Road & Oregon 126/Hwy 126

Sarto Village Zone Change
2026 No-Build DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	550	30	143	770	22	13	10	57	7	12	15
Future Volume (vph)	13	550	30	143	770	22	13	10	57	7	12	15
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	250		75	400		100	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	300			300			25			25		
Satd. Flow (prot)	1646	1733	1473	1646	1733	1473	0	1569	0	0	1629	0
Flt Permitted	0.950			0.950				0.992			0.990	
Satd. Flow (perm)	1646	1733	1473	1646	1733	1473	0	1569	0	0	1629	0
Link Speed (mph)		55			55			35			35	
Link Distance (ft)		5854			492			1428			324	
Travel Time (s)		72.6			6.1			27.8			6.3	
Confl. Peds. (#/hr)							4		4			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	585	32	152	819	23	0	86	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		14			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			10			10	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.9% ICU Level of Service C

Analysis Period (min) 15

Lanes, Volumes, Timings
7: Huston Road & Hunter Road

Sarto Village Zone Change
2026 No-Build DHVs

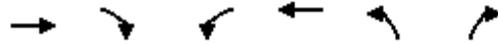


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	40	5	10	37	92	90
Future Volume (vph)	40	5	10	37	92	90
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1617	0	0	1699	1601	0
Flt Permitted	0.958			0.990		
Satd. Flow (perm)	1617	0	0	1699	1601	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	1803			1328	1428	
Travel Time (s)	41.0			25.9	27.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	0	53	204	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
8: Baker Lane & Hunter Road



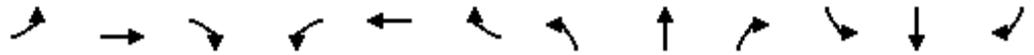
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	35	2	2	45	1	1
Future Volume (vph)	35	2	2	45	1	1
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	10	10
Satd. Flow (prot)	1704	0	0	1712	1457	0
Flt Permitted				0.998	0.976	
Satd. Flow (perm)	1704	0	0	1712	1457	0
Link Speed (mph)	25			25	20	
Link Distance (ft)	3765			1803	629	
Travel Time (s)	102.7			49.2	21.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	0	53	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.21	1.21
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 9: Erdman Way & E Bolton Road

Sarto Village Zone Change
 2026 No-Build DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	28	5	2	50	0	3	0	2	0	0	0
Future Volume (vph)	0	28	5	2	50	0	3	0	2	0	0	0
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1683	0	0	1712	0	0	1576	0	0	1716	0
Flt Permitted					0.998			0.971				
Satd. Flow (perm)	0	1683	0	0	1712	0	0	1576	0	0	1716	0
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		1033			2778			225			318	
Travel Time (s)		20.1			54.1			5.1			8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	56	0	0	5	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		5			5			16			5	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.6%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 10: Huston Road & Josee Lane



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	1	1	45	90	2
Future Volume (vph)	1	1	1	45	90	2
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Width (ft)	10	12	12	12	12	12
Satd. Flow (prot)	1457	0	0	1714	1711	0
Flt Permitted	0.976			0.999		
Satd. Flow (perm)	1457	0	0	1714	1711	0
Link Speed (mph)	20			45	45	
Link Distance (ft)	1300			1453	1328	
Travel Time (s)	44.3			22.0	20.1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	52	103	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	5			5	5	
Two way Left Turn Lane						
Headway Factor	1.21	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.3%
Analysis Period (min)	15
	ICU Level of Service A

HCM Signalized Intersection Capacity Analysis
1: Territorial Hwy & Oregon 126

Sarto Village Zone Change
2026 No-Build DHVs

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	75	285	92	223	295	230	65	306	123	135	357	60	
Future Volume (vph)	75	285	92	223	295	230	65	306	123	135	357	60	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.89	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1630	1716	1419	1646	1733	1473	1662	1750	1465	1662	1750	1321	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1630	1716	1419	1646	1733	1473	1662	1750	1465	1662	1750	1321	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	77	294	95	230	304	237	67	315	127	139	368	62	
RTOR Reduction (vph)	0	0	71	0	0	95	0	0	72	0	0	43	
Lane Group Flow (vph)	77	294	24	230	304	142	67	315	55	139	368	19	
Confl. Peds. (#/hr)			4						4			52	
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	3	1	6		
Permitted Phases			4			8			2			6	
Actuated Green, G (s)	7.3	21.1	21.1	16.3	30.1	30.1	6.1	21.6	37.9	12.2	27.7	27.7	
Effective Green, g (s)	7.8	22.5	22.5	16.8	31.5	31.5	6.6	22.1	38.9	12.7	28.2	28.2	
Actuated g/C Ratio	0.09	0.25	0.25	0.19	0.35	0.35	0.07	0.25	0.43	0.14	0.31	0.31	
Clearance Time (s)	4.5	5.4	5.4	4.5	5.4	5.4	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	141	428	354	306	605	514	121	429	697	234	547	413	
v/s Ratio Prot	0.05	c0.17		c0.14	0.18		0.04	0.18	0.01	c0.08	c0.21		
v/s Ratio Perm			0.02			0.10			0.02			0.01	
v/c Ratio	0.55	0.69	0.07	0.75	0.50	0.28	0.55	0.73	0.08	0.59	0.67	0.05	
Uniform Delay, d1	39.5	30.6	25.8	34.7	23.1	21.1	40.3	31.3	15.1	36.3	26.9	21.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.4	4.9	0.1	9.5	0.9	0.4	4.3	6.0	0.0	3.4	3.0	0.0	
Delay (s)	42.8	35.5	25.9	44.2	24.0	21.5	44.7	37.3	15.1	39.6	29.9	21.6	
Level of Service	D	D	C	D	C	C	D	D	B	D	C	C	
Approach Delay (s)		34.8			29.3			32.8			31.4		
Approach LOS		C			C			C			C		
Intersection Summary													
HCM 2000 Control Delay			31.7		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.70										
Actuated Cycle Length (s)			90.1		Sum of lost time (s)					16.0			
Intersection Capacity Utilization			69.6%		ICU Level of Service					C			
Analysis Period (min)			15										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis

2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2026 No-Build DHVs

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	7	11	10	5	60	17	345	11	60	425	30
Future Volume (Veh/h)	40	7	11	10	5	60	17	345	11	60	425	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	43	8	12	11	5	65	18	371	12	65	457	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1078	1022	473	1016	1032	377	489			383		
vC1, stage 1 conf vol	603	603		413	413							
vC2, stage 2 conf vol	474	419		603	619							
vCu, unblocked vol	1078	1022	473	1016	1032	377	489			383		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	98	98	97	99	90	98			94		
cM capacity (veh/h)	345	387	591	377	386	670	1074			1175		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	63	81	18	383	65	489						
Volume Left	43	11	18	0	65	0						
Volume Right	12	65	0	12	0	32						
cSH	381	582	1074	1700	1175	1700						
Volume to Capacity	0.17	0.14	0.02	0.23	0.06	0.29						
Queue Length 95th (ft)	15	12	1	0	4	0						
Control Delay (s)	16.3	12.2	8.4	0.0	8.2	0.0						
Lane LOS	C	B	A		A							
Approach Delay (s)	16.3	12.2	0.4		1.0							
Approach LOS	C	B										
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			49.8%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 3: Territorial Hwy & Bolton Hill Road/E Bolton Road

Sarto Village Zone Change
 2026 No-Build DHVs



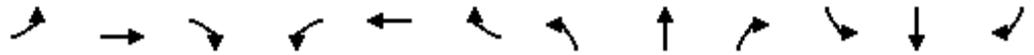
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	7	33	5	1	22	35	238	5	40	335	72
Future Volume (Veh/h)	52	7	33	5	1	22	35	238	5	40	335	72
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	53	7	33	5	1	22	35	240	5	40	338	73
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	787	770	374	767	804	242	411			245		
vC1, stage 1 conf vol	454	454		312	312							
vC2, stage 2 conf vol	332	315		454	491							
vCu, unblocked vol	787	770	374	767	804	242	411			245		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	99	95	99	100	97	97			97		
cM capacity (veh/h)	473	473	672	453	450	796	1148			1321		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	53	40	28	35	245	40	411
Volume Left	53	0	5	35	0	40	0
Volume Right	0	33	22	0	5	0	73
cSH	473	626	685	1148	1700	1321	1700
Volume to Capacity	0.11	0.06	0.04	0.03	0.14	0.03	0.24
Queue Length 95th (ft)	9	5	3	2	0	2	0
Control Delay (s)	13.6	11.1	10.5	8.2	0.0	7.8	0.0
Lane LOS	B	B	B	A		A	
Approach Delay (s)	12.5		10.5	1.0		0.7	
Approach LOS	B		B				

Intersection Summary		
Average Delay		2.4
Intersection Capacity Utilization	47.0%	ICU Level of Service
Analysis Period (min)	15	A

HCM Unsignalized Intersection Capacity Analysis
 4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
 2026 No-Build DHVs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	3	17	14	1	8	3	11	5	2	17	8	7
Future Volume (vph)	3	17	14	1	8	3	11	5	2	17	8	7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	4	22	18	1	10	4	14	6	3	22	10	9

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	44	15	23	41
Volume Left (vph)	4	1	14	22
Volume Right (vph)	18	4	3	9
Hadj (s)	-0.19	-0.11	0.08	0.01
Departure Headway (s)	3.9	4.0	4.1	4.1
Degree Utilization, x	0.05	0.02	0.03	0.05
Capacity (veh/h)	911	887	845	870
Control Delay (s)	7.1	7.0	7.3	7.2
Approach Delay (s)	7.1	7.0	7.3	7.2
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.2	
Level of Service		A	
Intersection Capacity Utilization	13.3%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 5: E Bolton Road & Cheney Drive

Sarto Village Zone Change
 2026 No-Build DHVs



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	19	35	18	9	2
Future Volume (Veh/h)	5	19	35	18	9	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	5	21	38	20	10	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	107	11	12			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	107	11	12			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	98			
cM capacity (veh/h)	869	1070	1607			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	26	58	12			
Volume Left	5	38	0			
Volume Right	21	0	2			
cSH	1025	1607	1700			
Volume to Capacity	0.03	0.02	0.01			
Queue Length 95th (ft)	2	2	0			
Control Delay (s)	8.6	4.8	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.6	4.8	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			5.3			
Intersection Capacity Utilization			19.8%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 6: Huston Road & Oregon 126/Hwy 126

Sarto Village Zone Change
 2026 No-Build DHVs

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	550	30	143	770	22	13	10	57	7	12	15
Future Volume (Veh/h)	13	550	30	143	770	22	13	10	57	7	12	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	14	585	32	152	819	23	14	11	61	7	13	16
Pedestrians					4						4	
Lane Width (ft)					12.0						12.0	
Walking Speed (ft/s)					3.5						3.5	
Percent Blockage					0						0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	823			585			1742	1740	589	1750	1740	823
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	823			585			1742	1740	589	1750	1740	823
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 %	98			85			72	85	88	85	82	96
cM capacity (veh/h)	808			995			50	73	510	46	73	375
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	14	585	32	152	819	23	86	36				
Volume Left	14	0	0	152	0	0	14	7				
Volume Right	0	0	32	0	0	23	61	16				
cSH	808	1700	1700	995	1700	1700	155	96				
Volume to Capacity	0.02	0.34	0.02	0.15	0.48	0.01	0.55	0.37				
Queue Length 95th (ft)	1	0	0	13	0	0	70	37				
Control Delay (s)	9.5	0.0	0.0	9.3	0.0	0.0	53.6	63.2				
Lane LOS	A			A			F	F				
Approach Delay (s)	0.2			1.4			53.6	63.2				
Approach LOS							F	F				
Intersection Summary												
Average Delay			4.8									
Intersection Capacity Utilization		64.9%		ICU Level of Service							C	
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Huston Road & Hunter Road

Sarto Village Zone Change
2026 No-Build DHVs



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	5	10	37	92	90
Future Volume (Veh/h)	40	5	10	37	92	90
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	45	6	11	42	103	101
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	218	154	103			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	218	154	103			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	99	99			
cM capacity (veh/h)	765	892	1489			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	51	53	204			
Volume Left	45	11	0			
Volume Right	6	0	101			
cSH	778	1489	1700			
Volume to Capacity	0.07	0.01	0.12			
Queue Length 95th (ft)	5	1	0			
Control Delay (s)	10.0	1.6	0.0			
Lane LOS	A	A				
Approach Delay (s)	10.0	1.6	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.9			
Intersection Capacity Utilization			21.5%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
8: Baker Lane & Hunter Road

Sarto Village Zone Change
2026 No-Build DHVs



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	↗
Traffic Volume (veh/h)	35	2	2	45	1	1
Future Volume (Veh/h)	35	2	2	45	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	39	2	2	51	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			41		95	40
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			41		95	40
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)			1568		903	1031
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	41	53	2			
Volume Left	0	2	1			
Volume Right	2	0	1			
cSH	1700	1568	963			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.3	8.7			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.3	8.7			
Approach LOS			A			
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			14.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
9: Erdman Way & E Bolton Road

Sarto Village Zone Change
2026 No-Build DHVs

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	28	5	2	50	0	3	0	2	0	0	0
Future Volume (Veh/h)	0	28	5	2	50	0	3	0	2	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	30	5	2	54	0	3	0	2	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	54			35			90	90	32	92	93	54
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	54			35			90	90	32	92	93	54
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)	1551			1576			893	799	1041	889	796	1013
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	35	56	5	0								
Volume Left	0	2	3	0								
Volume Right	5	0	2	0								
cSH	1551	1576	947	1700								
Volume to Capacity	0.00	0.00	0.01	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	0.0	0.3	8.8	0.0								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	0.3	8.8	0.0								
Approach LOS			A	A								
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			14.6%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 10: Huston Road & Josee Lane

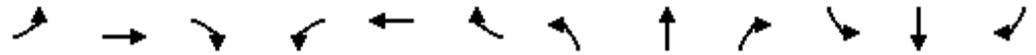
Sarto Village Zone Change
 2026 No-Build DHVs



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	1	1	45	90	2
Future Volume (Veh/h)	1	1	1	45	90	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	1	1	1	51	101	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	155	102	103			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	155	102	103			
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)	836	953	1489			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	2	52	103			
Volume Left	1	1	0			
Volume Right	1	0	2			
cSH	891	1489	1700			
Volume to Capacity	0.00	0.00	0.06			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.1	0.1	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.1	0.1	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			15.3%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
1: Territorial Hwy & Oregon 126

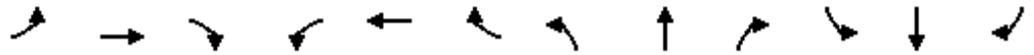
Sarto Village Zone Change
2026 Build DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	285	100	229	295	230	69	318	127	135	377	60
Future Volume (vph)	75	285	100	229	295	230	69	318	127	135	377	60
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	225		120	170		75	140		175	135		125
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	135			200			140			25		
Satd. Flow (prot)	1630	1716	1458	1646	1733	1473	1662	1750	1488	1662	1750	1488
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1630	1716	1415	1646	1733	1473	1662	1750	1444	1662	1750	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177			146			131			145
Link Speed (mph)		45			45			35				35
Link Distance (ft)		634			5854			1994				407
Travel Time (s)		9.6			88.7			38.8				7.9
Confl. Peds. (#/hr)			4						4			52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	294	103	236	304	237	71	328	131	139	389	62
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		16			16			14				14
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		10			10			10				10
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	20		15	20		15
Number of Detectors	2	2	1	2	2	1	2	2	1	2	2	1
Detector Template												
Leading Detector (ft)	78	323	83	78	323	53	78	223	143	78	223	78
Trailing Detector (ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Position(ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Size(ft)	20	6	6	20	6	6	20	6	6	20	6	6
Detector 1 Type	Cl+Ex											
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	72	317		72	317		72	217		72	217	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex										
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	6
Switch Phase												

Lanes, Volumes, Timings
1: Territorial Hwy & Oregon 126

Sarto Village Zone Change
2026 Build DHVs

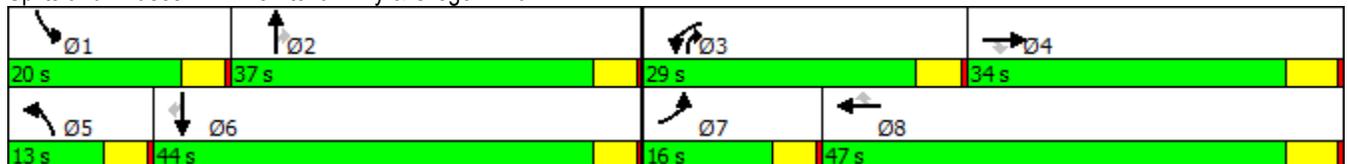


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	6.0
Minimum Split (s)	13.0	30.4	30.4	13.0	30.4	30.4	13.0	29.5	13.0	13.0	29.5	29.5
Total Split (s)	16.0	34.0	34.0	29.0	47.0	47.0	13.0	37.0	29.0	20.0	44.0	44.0
Total Split (%)	13.3%	28.3%	28.3%	24.2%	39.2%	39.2%	10.8%	30.8%	24.2%	16.7%	36.7%	36.7%
Maximum Green (s)	11.5	28.6	28.6	24.5	41.6	41.6	8.5	32.5	24.5	15.5	39.5	39.5
Yellow Time (s)	4.0	4.7	4.7	4.0	4.7	4.7	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.5	0.7	0.7	0.5	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	-0.5	-1.4	-1.4	-0.5	-1.4	-1.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Gap (s)	2.0	2.7	2.7	2.0	2.7	2.7	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	8.0	8.0	8.0	8.0	8.0
Time To Reduce (s)	4.0	13.0	13.0	4.0	13.0	13.0	4.0	4.0	4.0	4.0	4.0	4.0
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0	18.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)		4	4		0	0		4			52	52
Act Effct Green (s)	9.7	21.4	21.4	17.2	32.2	32.2	8.5	21.4	38.6	12.8	28.9	28.9
Actuated g/C Ratio	0.11	0.24	0.24	0.19	0.36	0.36	0.09	0.24	0.43	0.14	0.32	0.32
v/c Ratio	0.44	0.72	0.22	0.75	0.49	0.38	0.46	0.79	0.19	0.59	0.69	0.12
Control Delay	53.0	45.6	1.1	53.5	29.1	12.5	56.5	49.2	3.4	52.8	37.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	45.6	1.1	53.5	29.1	12.5	56.5	49.2	3.4	52.8	37.4	0.5
LOS	D	D	A	D	C	B	E	D	A	D	D	A
Approach Delay		37.1			31.4			38.8			37.2	
Approach LOS		D			C			D			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 90.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 35.6
 Intersection LOS: D
 Intersection Capacity Utilization 70.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Territorial Hwy & Oregon 126



Lanes, Volumes, Timings
2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2026 Build DHVs

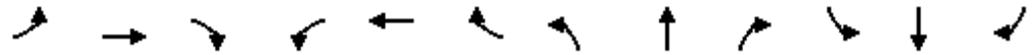
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	10	11	10	7	72	17	359	11	85	450	30
Future Volume (vph)	40	10	11	10	7	72	17	359	11	85	450	30
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	12	12	12	12	12	14	12	12
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1619	0	0	1521	0	1630	1707	0	1739	1700	0
Flt Permitted		0.968			0.994		0.950			0.950		
Satd. Flow (perm)	0	1619	0	0	1521	0	1630	1707	0	1739	1700	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		593			3765			1344			1994	
Travel Time (s)		16.2			102.7			26.2			38.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	96	0	18	398	0	91	516	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			14			14	
Link Offset(ft)		-10			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.02	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.4%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 3: Territorial Hwy & Bolton Hill Road/E Bolton Road

Sarto Village Zone Change
 2026 Build DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	15	33	5	5	30	35	245	7	60	340	72
Future Volume (vph)	52	15	33	5	5	30	35	245	7	60	340	72
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	300		0	0		0	100		0	100		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	250			25			75			75		
Satd. Flow (prot)	1630	1539	0	0	1533	0	1630	1709	0	1630	1671	0
Flt Permitted	0.950				0.994		0.950			0.950		
Satd. Flow (perm)	1630	1539	0	0	1533	0	1630	1709	0	1630	1671	0
Link Speed (mph)		35			30			35			35	
Link Distance (ft)		756			1656			860			1344	
Travel Time (s)		14.7			37.6			16.8			26.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	48	0	0	40	0	35	254	0	61	416	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			14			14	
Link Offset(ft)		-6			6			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	20		15	20		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.3%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
2026 Build DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	3	38	12	2	19	3	11	5	4	17	8	7
Future Volume (vph)	3	38	12	2	19	3	11	5	4	17	8	7
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1659	0	0	1678	0	0	1624	0	0	1621	0
Flt Permitted		0.997			0.995			0.973			0.974	
Satd. Flow (perm)	0	1659	0	0	1678	0	0	1624	0	0	1621	0
Link Speed (mph)		30			25			30			25	
Link Distance (ft)		1656			1314			1319			463	
Travel Time (s)		37.6			35.8			30.0			12.6	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	31	0	0	25	0	0	41	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			6			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
5: E Bolton Road & Cheney Drive



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	25	43	18	15	3
Future Volume (vph)	7	25	43	18	15	3
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1520	0	0	1657	1680	0
Flt Permitted	0.989			0.966		
Satd. Flow (perm)	1520	0	0	1657	1680	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	276			1033	1319	
Travel Time (s)	7.5			20.1	30.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	0	67	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
6: Huston Road & Oregon 126/Hwy 126

Sarto Village Zone Change
2026 Build DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	550	30	204	770	22	13	12	93	7	15	15
Future Volume (vph)	13	550	30	204	770	22	13	12	93	7	15	15
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	250		75	400		100	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	300			300			25			25		
Satd. Flow (prot)	1646	1733	1473	1646	1733	1473	0	1555	0	0	1639	0
Flt Permitted	0.950			0.950				0.994			0.991	
Satd. Flow (perm)	1646	1733	1473	1646	1733	1473	0	1555	0	0	1639	0
Link Speed (mph)		55			55			35			35	
Link Distance (ft)		5854			492			1428			324	
Travel Time (s)		72.6			6.1			27.8			6.3	
Confl. Peds. (#/hr)							4		4			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	585	32	217	819	23	0	126	0	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		14			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			10			10	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 67.2% ICU Level of Service C

Analysis Period (min) 15

Lanes, Volumes, Timings
7: Huston Road & Hunter Road

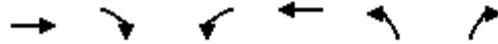


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	5	10	56	124	122
Future Volume (vph)	60	5	10	56	124	122
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1622	0	0	1704	1601	0
Flt Permitted	0.956			0.993		
Satd. Flow (perm)	1622	0	0	1704	1601	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	1803			1328	1428	
Travel Time (s)	41.0			25.9	27.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	73	0	0	74	276	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	25.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
8: Baker Lane & Hunter Road



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	35	26	34	45	15	20
Future Volume (vph)	35	26	34	45	15	20
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	10	10
Satd. Flow (prot)	1616	0	0	1680	1449	0
Flt Permitted				0.979	0.979	
Satd. Flow (perm)	1616	0	0	1680	1449	0
Link Speed (mph)	25			25	20	
Link Distance (ft)	3765			1803	629	
Travel Time (s)	102.7			49.2	21.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	0	0	89	39	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.21	1.21
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 9: Erdman Way & E Bolton Road

Sarto Village Zone Change
 2026 Build DHVs



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	12	28	5	2	50	7	3	1	2	4	1	8
Future Volume (vph)	12	28	5	2	50	7	3	1	2	4	1	8
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1670	0	0	1683	0	0	1599	0	0	1544	0
Flt Permitted		0.987			0.998			0.976			0.986	
Satd. Flow (perm)	0	1670	0	0	1683	0	0	1599	0	0	1544	0
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		1033			2778			225			318	
Travel Time (s)		20.1			54.1			5.1			8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	64	0	0	6	0	0	14	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		5			5			16			5	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.4%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 10: Huston Road & Josee Lane



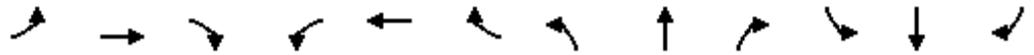
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	5	8	45	90	34
Future Volume (vph)	20	5	8	45	90	34
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Width (ft)	10	12	12	12	12	12
Satd. Flow (prot)	1496	0	0	1704	1652	0
Flt Permitted	0.962			0.993		
Satd. Flow (perm)	1496	0	0	1704	1652	0
Link Speed (mph)	20			45	45	
Link Distance (ft)	1300			1453	1328	
Travel Time (s)	44.3			22.0	20.1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	60	139	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	5			5	5	
Two way Left Turn Lane						
Headway Factor	1.21	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.0%
Analysis Period (min)	15
	ICU Level of Service A

HCM Signalized Intersection Capacity Analysis
 1: Territorial Hwy & Oregon 126

Sarto Village Zone Change
 2026 Build DHVs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	285	100	229	295	230	69	318	127	135	377	60
Future Volume (vph)	75	285	100	229	295	230	69	318	127	135	377	60
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.89
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1630	1716	1419	1646	1733	1473	1662	1750	1464	1662	1750	1319
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1630	1716	1419	1646	1733	1473	1662	1750	1464	1662	1750	1319
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	77	294	103	236	304	237	71	328	131	139	389	62
RTOR Reduction (vph)	0	0	77	0	0	95	0	0	74	0	0	42
Lane Group Flow (vph)	77	294	26	236	304	142	71	328	57	139	389	20
Confl. Peds. (#/hr)			4						4			52
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.4	21.4	21.4	16.7	30.7	30.7	6.2	22.3	39.0	12.3	28.4	28.4
Effective Green, g (s)	7.9	22.8	22.8	17.2	32.1	32.1	6.7	22.8	40.0	12.8	28.9	28.9
Actuated g/C Ratio	0.09	0.25	0.25	0.19	0.35	0.35	0.07	0.25	0.44	0.14	0.32	0.32
Clearance Time (s)	4.5	5.4	5.4	4.5	5.4	5.4	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	140	427	353	309	607	516	121	435	703	232	552	416
v/s Ratio Prot	0.05	c0.17		c0.14	0.18		0.04	0.19	0.02	c0.08	c0.22	
v/s Ratio Perm			0.02			0.10			0.02			0.01
v/c Ratio	0.55	0.69	0.07	0.76	0.50	0.28	0.59	0.75	0.08	0.60	0.70	0.05
Uniform Delay, d1	40.1	31.2	26.3	35.3	23.4	21.4	41.1	31.8	15.1	37.0	27.6	21.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	5.0	0.1	10.2	0.9	0.4	5.9	6.9	0.0	3.5	3.8	0.0
Delay (s)	43.8	36.1	26.4	45.5	24.3	21.8	47.0	38.7	15.1	40.5	31.4	21.8
Level of Service	D	D	C	D	C	C	D	D	B	D	C	C
Approach Delay (s)		35.3			30.0			34.0			32.5	
Approach LOS		D			C			C			C	

Intersection Summary		
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.72	C
Actuated Cycle Length (s)	91.6	Sum of lost time (s)
Intersection Capacity Utilization	70.6%	16.0
Analysis Period (min)	15	ICU Level of Service
		C

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2026 Build DHVs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (veh/h)	40	10	11	10	7	72	17	359	11	85	450	30
Future Volume (Veh/h)	40	10	11	10	7	72	17	359	11	85	450	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	43	11	12	11	8	77	18	386	12	91	484	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1185	1116	500	1112	1126	392	516			398		
vC1, stage 1 conf vol	682	682		428	428							
vC2, stage 2 conf vol	503	434		684	698							
vCu, unblocked vol	1185	1116	500	1112	1126	392	516			398		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	97	98	97	98	88	98			92		
cM capacity (veh/h)	299	349	571	333	350	657	1050			1161		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	66	96	18	398	91	516						
Volume Left	43	11	18	0	91	0						
Volume Right	12	77	0	12	0	32						
cSH	336	554	1050	1700	1161	1700						
Volume to Capacity	0.20	0.17	0.02	0.23	0.08	0.30						
Queue Length 95th (ft)	18	16	1	0	6	0						
Control Delay (s)	18.3	12.8	8.5	0.0	8.4	0.0						
Lane LOS	C	B	A		A							
Approach Delay (s)	18.3	12.8	0.4		1.3							
Approach LOS	C	B										
Intersection Summary												
Average Delay			2.8									
Intersection Capacity Utilization			51.4%	ICU Level of Service		A						
Analysis Period (min)			15									

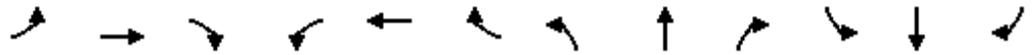
HCM Unsignalized Intersection Capacity Analysis
3: Territorial Hwy & Bolton Hill Road/E Bolton Road

Sarto Village Zone Change
2026 Build DHVs

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	15	33	5	5	30	35	245	7	60	340	72
Future Volume (Veh/h)	52	15	33	5	5	30	35	245	7	60	340	72
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	53	15	33	5	5	30	35	247	7	61	343	73
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	851	826	380	826	858	250	416			254		
vC1, stage 1 conf vol	502	502		320	320							
vC2, stage 2 conf vol	350	324		506	538							
vCu, unblocked vol	851	826	380	826	858	250	416			254		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	97	95	99	99	96	97			95		
cM capacity (veh/h)	433	444	667	413	423	788	1143			1311		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2	TWLTL		TWLTL		
Volume Total	53	48	40	35	254	61	416	2		2		
Volume Left	53	0	5	35	0	61	0					
Volume Right	0	33	30	0	7	0	73					
cSH	433	577	645	1143	1700	1311	1700					
Volume to Capacity	0.12	0.08	0.06	0.03	0.15	0.05	0.24					
Queue Length 95th (ft)	10	7	5	2	0	4	0					
Control Delay (s)	14.5	11.8	10.9	8.2	0.0	7.9	0.0					
Lane LOS	B	B	B	A		A						
Approach Delay (s)	13.2		10.9	1.0		1.0						
Approach LOS	B		B									
Intersection Summary												
Average Delay			2.8									
Intersection Capacity Utilization			47.3%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
 2026 Build DHVs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	3	38	12	2	19	3	11	5	4	17	8	7
Future Volume (vph)	3	38	12	2	19	3	11	5	4	17	8	7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	4	48	15	3	24	4	14	6	5	22	10	9

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	67	31	25	41
Volume Left (vph)	4	3	14	22
Volume Right (vph)	15	4	5	9
Hadj (s)	-0.09	-0.02	0.03	0.01
Departure Headway (s)	4.0	4.1	4.2	4.1
Degree Utilization, x	0.07	0.04	0.03	0.05
Capacity (veh/h)	882	860	831	844
Control Delay (s)	7.3	7.2	7.3	7.3
Approach Delay (s)	7.3	7.2	7.3	7.3
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.3	
Level of Service		A	
Intersection Capacity Utilization	13.8%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
5: E Bolton Road & Cheney Drive

Sarto Village Zone Change
2026 Build DHVs



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	25	43	18	15	3
Future Volume (Veh/h)	7	25	43	18	15	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	8	27	47	20	16	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	132	18	19			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	132	18	19			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	97	97			
cM capacity (veh/h)	837	1061	1597			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	35	67	19			
Volume Left	8	47	0			
Volume Right	27	0	3			
cSH	1000	1597	1700			
Volume to Capacity	0.03	0.03	0.01			
Queue Length 95th (ft)	3	2	0			
Control Delay (s)	8.7	5.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.7	5.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			5.4			
Intersection Capacity Utilization			20.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
6: Huston Road & Oregon 126/Hwy 126

Sarto Village Zone Change
2026 Build DHVs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗		↕			↕	
Traffic Volume (veh/h)	13	550	30	204	770	22	13	12	93	7	15	15
Future Volume (Veh/h)	13	550	30	204	770	22	13	12	93	7	15	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	14	585	32	217	819	23	14	13	99	7	16	16
Pedestrians					4						4	
Lane Width (ft)					12.0						12.0	
Walking Speed (ft/s)					3.5						3.5	
Percent Blockage					0						0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	823			585			1874	1870	589	1880	1870	823
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	823			585			1874	1870	589	1880	1870	823
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 %	98			78			59	77	81	76	71	96
cM capacity (veh/h)	808			995			34	56	510	30	56	375
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	14	585	32	217	819	23	126	39				
Volume Left	14	0	0	217	0	0	14	7				
Volume Right	0	0	32	0	0	23	99	16				
cSH	808	1700	1700	995	1700	1700	151	69				
Volume to Capacity	0.02	0.34	0.02	0.22	0.48	0.01	0.84	0.56				
Queue Length 95th (ft)	1	0	0	21	0	0	137	59				
Control Delay (s)	9.5	0.0	0.0	9.6	0.0	0.0	93.6	110.1				
Lane LOS	A			A			F	F				
Approach Delay (s)	0.2			2.0			93.6	110.1				
Approach LOS							F	F				
Intersection Summary												
Average Delay			9.9									
Intersection Capacity Utilization			67.2%	ICU Level of Service				C				
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Huston Road & Hunter Road

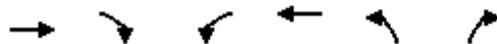
Sarto Village Zone Change
2026 Build DHVs



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	5	10	56	124	122
Future Volume (Veh/h)	60	5	10	56	124	122
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	67	6	11	63	139	137
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	292	208	139			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	292	208	139			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	99	99			
cM capacity (veh/h)	693	833	1445			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	73	74	276			
Volume Left	67	11	0			
Volume Right	6	0	137			
cSH	703	1445	1700			
Volume to Capacity	0.10	0.01	0.16			
Queue Length 95th (ft)	9	1	0			
Control Delay (s)	10.7	1.2	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.7	1.2	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			25.8%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
8: Baker Lane & Hunter Road

Sarto Village Zone Change
2026 Build DHVs



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	→
Traffic Volume (veh/h)	35	26	34	45	15	20
Future Volume (Veh/h)	35	26	34	45	15	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	39	29	38	51	17	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			68		180	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			68		180	54
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		98	98
cM capacity (veh/h)			1533		789	1014
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	68	89	39			
Volume Left	0	38	17			
Volume Right	29	0	22			
cSH	1700	1533	902			
Volume to Capacity	0.04	0.02	0.04			
Queue Length 95th (ft)	0	2	3			
Control Delay (s)	0.0	3.3	9.2			
Lane LOS		A	A			
Approach Delay (s)	0.0	3.3	9.2			
Approach LOS			A			
Intersection Summary						
Average Delay			3.3			
Intersection Capacity Utilization			21.3%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 9: Erdman Way & E Bolton Road

Sarto Village Zone Change
 2026 Build DHVs

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	28	5	2	50	7	3	1	2	4	1	8
Future Volume (Veh/h)	12	28	5	2	50	7	3	1	2	4	1	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	30	5	2	54	8	3	1	2	4	1	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	62			35			130	124	32	123	123	58
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	62			35			130	124	32	123	123	58
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 %	99			100			100	100	100	100	100	99
cM capacity (veh/h)	1541			1576			828	759	1041	843	760	1008
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	48	64	6	14								
Volume Left	13	2	3	4								
Volume Right	5	8	2	9								
cSH	1541	1576	874	934								
Volume to Capacity	0.01	0.00	0.01	0.01								
Queue Length 95th (ft)	1	0	1	1								
Control Delay (s)	2.0	0.2	9.1	8.9								
Lane LOS	A	A	A	A								
Approach Delay (s)	2.0	0.2	9.1	8.9								
Approach LOS			A	A								
Intersection Summary												
Average Delay			2.2									
Intersection Capacity Utilization			18.4%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 10: Huston Road & Josee Lane

Sarto Village Zone Change
 2026 Build DHVs



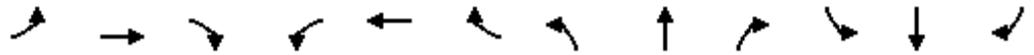
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	5	8	45	90	34
Future Volume (Veh/h)	20	5	8	45	90	34
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	22	6	9	51	101	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	189	120	139			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	189	120	139			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	795	931	1445			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	28	60	139			
Volume Left	22	9	0			
Volume Right	6	0	38			
cSH	821	1445	1700			
Volume to Capacity	0.03	0.01	0.08			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	9.5	1.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.5	1.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			20.0%	ICU Level of Service	A	
Analysis Period (min)			15			

Appendix F

2026 Mitigation Synchro Reports

Lanes, Volumes, Timings
1: Territorial Hwy & Oregon 126

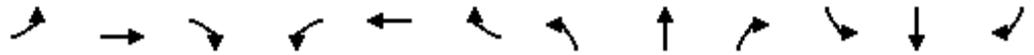
Sarto Village Zone Change
2026 Build DHVs w/ Mitigation



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	285	97	225	295	230	69	311	125	135	364	60
Future Volume (vph)	75	285	97	225	295	230	69	311	125	135	364	60
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	225		120	170		75	140		175	135		125
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	135			200			140			25		
Satd. Flow (prot)	1630	1716	1458	1646	1733	1473	1662	1750	1488	1662	1750	1488
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1630	1716	1415	1646	1733	1473	1662	1750	1444	1662	1750	1276
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177			146			129			145
Link Speed (mph)		45			45			35				35
Link Distance (ft)		634			5854			1994				407
Travel Time (s)		9.6			88.7			38.8				7.9
Confl. Peds. (#/hr)			4						4			52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	294	100	232	304	237	71	321	129	139	375	62
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		16			16			14				14
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		10			10			10				10
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	20		15	20		15
Number of Detectors	2	2	1	2	2	1	2	2	1	2	2	1
Detector Template												
Leading Detector (ft)	78	323	83	78	323	53	78	223	143	78	223	78
Trailing Detector (ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Position(ft)	2	157	77	2	157	47	2	107	137	2	107	72
Detector 1 Size(ft)	20	6	6	20	6	6	20	6	6	20	6	6
Detector 1 Type	Cl+Ex											
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	72	317		72	317		72	217		72	217	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex										
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	6
Switch Phase												

Lanes, Volumes, Timings
1: Territorial Hwy & Oregon 126

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation

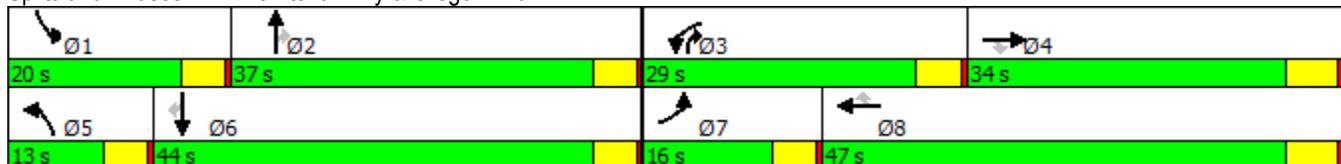


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	6.0
Minimum Split (s)	13.0	30.4	30.4	13.0	30.4	30.4	13.0	29.5	13.0	13.0	29.5	29.5
Total Split (s)	16.0	34.0	34.0	29.0	47.0	47.0	13.0	37.0	29.0	20.0	44.0	44.0
Total Split (%)	13.3%	28.3%	28.3%	24.2%	39.2%	39.2%	10.8%	30.8%	24.2%	16.7%	36.7%	36.7%
Maximum Green (s)	11.5	28.6	28.6	24.5	41.6	41.6	8.5	32.5	24.5	15.5	39.5	39.5
Yellow Time (s)	4.0	4.7	4.7	4.0	4.7	4.7	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.5	0.7	0.7	0.5	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	-0.5	-1.4	-1.4	-0.5	-1.4	-1.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Gap (s)	2.0	2.7	2.7	2.0	2.7	2.7	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	8.0	10.0	10.0	8.0	10.0	10.0	8.0	8.0	8.0	8.0	8.0	8.0
Time To Reduce (s)	4.0	13.0	13.0	4.0	13.0	13.0	4.0	4.0	4.0	4.0	4.0	4.0
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0	18.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)		4	4		0	0		4			52	52
Act Effct Green (s)	9.7	21.3	21.3	17.0	31.9	31.9	8.5	20.9	37.9	12.8	28.5	28.5
Actuated g/C Ratio	0.11	0.24	0.24	0.19	0.36	0.36	0.10	0.23	0.42	0.14	0.32	0.32
v/c Ratio	0.44	0.72	0.21	0.74	0.49	0.38	0.45	0.78	0.19	0.59	0.67	0.12
Control Delay	52.5	45.1	1.0	52.8	29.0	12.4	55.8	48.5	3.4	52.2	36.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	45.1	1.0	52.8	29.0	12.4	55.8	48.5	3.4	52.2	36.5	0.5
LOS	D	D	A	D	C	B	E	D	A	D	D	A
Approach Delay		37.0			31.0			38.4			36.4	
Approach LOS		D			C			D			D	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 89.3
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 35.2
 Intersection LOS: D
 Intersection Capacity Utilization 70.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Territorial Hwy & Oregon 126



Lanes, Volumes, Timings
2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	7	11	10	5	69	17	351	11	68	436	30
Future Volume (vph)	40	7	11	10	5	69	17	351	11	68	436	30
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	12	12	12	12	12	14	12	12
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
Satd. Flow (prot)	0	1616	0	0	1516	0	1630	1707	0	1739	1699	0
Flt Permitted		0.967			0.994		0.950			0.950		
Satd. Flow (perm)	0	1616	0	0	1516	0	1630	1707	0	1739	1699	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		593			3765			1344			1994	
Travel Time (s)		16.2			102.7			26.2			38.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	90	0	18	389	0	73	501	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			14			14	
Link Offset(ft)		-10			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.02	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.4%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 3: Territorial Hwy & Bolton Hill Road/E Bolton Road

Sarto Village Zone Change
 2026 Build DHVs w/ Mitigation



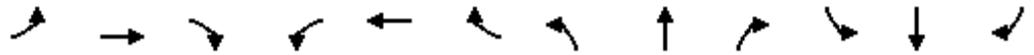
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	10	33	5	3	24	35	242	5	49	337	72
Future Volume (vph)	52	10	33	5	3	24	35	242	5	49	337	72
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	300		0	0		0	100		0	100		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	250			25			75			75		
Satd. Flow (prot)	1630	1518	0	0	1530	0	1630	1711	0	1630	1669	0
Flt Permitted	0.950				0.992		0.950			0.950		
Satd. Flow (perm)	1630	1518	0	0	1530	0	1630	1711	0	1630	1669	0
Link Speed (mph)		35			30			35			35	
Link Distance (ft)		756			1656			860			1344	
Travel Time (s)		14.7			37.6			16.8			26.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	43	0	0	32	0	35	249	0	49	413	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			14			14	
Link Offset(ft)		-6			6			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	20		15	20		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.1%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	3	24	19	1	12	3	11	5	3	17	8	7
Future Volume (vph)	3	24	19	1	12	3	11	5	3	17	8	7
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1615	0	0	1666	0	0	1629	0	0	1621	0
Flt Permitted		0.997			0.998			0.972			0.974	
Satd. Flow (perm)	0	1615	0	0	1666	0	0	1629	0	0	1621	0
Link Speed (mph)		30			25			30			25	
Link Distance (ft)		1656			1314			1319			463	
Travel Time (s)		37.6			35.8			30.0			12.6	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	20	0	0	24	0	0	41	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			6			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
5: E Bolton Road & Cheney Drive

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	22	40	18	14	2
Future Volume (vph)	6	22	40	18	14	2
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1519	0	0	1659	1688	0
Flt Permitted	0.989			0.967		
Satd. Flow (perm)	1519	0	0	1659	1688	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	276			1033	1319	
Travel Time (s)	7.5			20.1	30.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	0	64	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.1% ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings
6: Huston Road & Oregon 126/Hwy 126

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	550	30	165	770	22	13	11	76	7	13	15
Future Volume (vph)	13	550	30	165	770	22	13	11	76	7	13	15
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	250		75	400		100	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	300			300			25			25		
Satd. Flow (prot)	1646	1733	1473	1646	1733	1473	0	1562	0	0	1634	0
Flt Permitted	0.950			0.950				0.994			0.991	
Satd. Flow (perm)	1646	1733	1473	1646	1733	1473	0	1562	0	0	1634	0
Link Speed (mph)		55			55			35			35	
Link Distance (ft)		5854			492			1428			324	
Travel Time (s)		72.6			6.1			27.8			6.3	
Confl. Peds. (#/hr)							4		4			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	585	32	176	819	23	0	107	0	0	37	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		14			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			10			10	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	20		15	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 66.1% ICU Level of Service C

Analysis Period (min) 15

Lanes, Volumes, Timings
7: Huston Road & Hunter Road



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	51	5	10	47	106	101
Future Volume (vph)	51	5	10	47	106	101
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	1621	0	0	1700	1602	0
Flt Permitted	0.957			0.991		
Satd. Flow (perm)	1621	0	0	1700	1602	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	1803			1328	1428	
Travel Time (s)	41.0			25.9	27.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	64	232	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.8%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
8: Baker Lane & Hunter Road



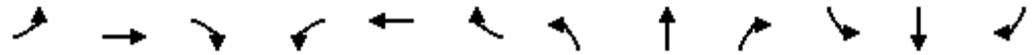
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	35	26	34	45	15	20
Future Volume (vph)	35	26	34	45	15	20
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	12	12	12	10	10
Satd. Flow (prot)	1616	0	0	1680	1449	0
Flt Permitted				0.979	0.979	
Satd. Flow (perm)	1616	0	0	1680	1449	0
Link Speed (mph)	25			25	20	
Link Distance (ft)	3765			1803	629	
Travel Time (s)	102.7			49.2	21.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	0	0	89	39	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	10	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.11	1.11	1.21	1.21
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.3%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 9: Erdman Way & E Bolton Road

Sarto Village Zone Change
 2026 Build DHVs w/ Mitigation



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	8	28	5	2	50	3	3	1	2	2	1	5
Future Volume (vph)	8	28	5	2	50	3	3	1	2	2	1	5
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Satd. Flow (prot)	0	1673	0	0	1700	0	0	1599	0	0	1553	0
Flt Permitted		0.990			0.998			0.976			0.988	
Satd. Flow (perm)	0	1673	0	0	1700	0	0	1599	0	0	1553	0
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		1033			2778			225			318	
Travel Time (s)		20.1			54.1			5.1			8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	59	0	0	6	0	0	8	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		5			5			16			5	
Two way Left Turn Lane												
Headway Factor	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 10: Huston Road & Josee Lane

Sarto Village Zone Change
 2026 Build DHVs w/ Mitigation



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	3	3	45	90	16
Future Volume (vph)	11	3	3	45	90	16
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Width (ft)	10	12	12	12	12	12
Satd. Flow (prot)	1499	0	0	1711	1681	0
Flt Permitted	0.962			0.997		
Satd. Flow (perm)	1499	0	0	1711	1681	0
Link Speed (mph)	20			45	45	
Link Distance (ft)	1300			1453	1328	
Travel Time (s)	44.3			22.0	20.1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	54	119	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	5			5	5	
Two way Left Turn Lane						
Headway Factor	1.21	1.11	1.11	1.11	1.11	1.11
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.2%
Analysis Period (min)	15
	ICU Level of Service A

HCM Signalized Intersection Capacity Analysis
1: Territorial Hwy & Oregon 126

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	75	285	97	225	295	230	69	311	125	135	364	60	
Future Volume (vph)	75	285	97	225	295	230	69	311	125	135	364	60	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.89	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1630	1716	1419	1646	1733	1473	1662	1750	1465	1662	1750	1320	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1630	1716	1419	1646	1733	1473	1662	1750	1465	1662	1750	1320	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	77	294	100	232	304	237	71	321	129	139	375	62	
RTOR Reduction (vph)	0	0	75	0	0	95	0	0	73	0	0	43	
Lane Group Flow (vph)	77	294	25	232	304	142	71	321	56	139	375	19	
Confl. Peds. (#/hr)			4						4			52	
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	3	1	6		
Permitted Phases			4			8			2			6	
Actuated Green, G (s)	7.3	21.2	21.2	16.4	30.3	30.3	6.2	21.9	38.3	12.2	27.9	27.9	
Effective Green, g (s)	7.8	22.6	22.6	16.9	31.7	31.7	6.7	22.4	39.3	12.7	28.4	28.4	
Actuated g/C Ratio	0.09	0.25	0.25	0.19	0.35	0.35	0.07	0.25	0.43	0.14	0.31	0.31	
Clearance Time (s)	4.5	5.4	5.4	4.5	5.4	5.4	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	2.5	4.0	4.0	2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	140	428	353	307	606	515	122	432	700	232	548	413	
v/s Ratio Prot	0.05	c0.17		c0.14	0.18		0.04	0.18	0.01	c0.08	c0.21		
v/s Ratio Perm			0.02			0.10			0.02			0.01	
v/c Ratio	0.55	0.69	0.07	0.76	0.50	0.28	0.58	0.74	0.08	0.60	0.68	0.05	
Uniform Delay, d1	39.7	30.8	26.0	34.9	23.2	21.2	40.6	31.4	15.0	36.6	27.2	21.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.7	4.9	0.1	9.7	0.9	0.4	5.7	6.4	0.0	3.5	3.2	0.0	
Delay (s)	43.4	35.7	26.1	44.6	24.1	21.6	46.3	37.9	15.1	40.0	30.4	21.7	
Level of Service	D	D	C	D	C	C	D	D	B	D	C	C	
Approach Delay (s)		34.9			29.5			33.4			31.8		
Approach LOS		C			C			C			C		
Intersection Summary													
HCM 2000 Control Delay			32.0									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.71										
Actuated Cycle Length (s)			90.6									Sum of lost time (s)	16.0
Intersection Capacity Utilization			70.0%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

2: Territorial Hwy & Hunter Road

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	7	11	10	5	69	17	351	11	68	436	30
Future Volume (Veh/h)	40	7	11	10	5	69	17	351	11	68	436	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	43	8	12	11	5	74	18	377	12	73	469	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1120	1056	485	1050	1066	383	501			389		
vC1, stage 1 conf vol	631	631		419	419							
vC2, stage 2 conf vol	490	425		631	647							
vCu, unblocked vol	1120	1056	485	1050	1066	383	501			389		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	98	98	97	99	89	98			94		
cM capacity (veh/h)	326	373	582	362	373	664	1063			1170		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	63	90	18	389	73	501						
Volume Left	43	11	18	0	73	0						
Volume Right	12	74	0	12	0	32						
cSH	362	580	1063	1700	1170	1700						
Volume to Capacity	0.17	0.16	0.02	0.23	0.06	0.29						
Queue Length 95th (ft)	16	14	1	0	5	0						
Control Delay (s)	17.0	12.3	8.4	0.0	8.3	0.0						
Lane LOS	C	B	A		A							
Approach Delay (s)	17.0	12.3	0.4		1.1							
Approach LOS	C	B										
Intersection Summary												
Average Delay			2.6									
Intersection Capacity Utilization			50.4%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 3: Territorial Hwy & Bolton Hill Road/E Bolton Road

Sarto Village Zone Change
 2026 Build DHVs w/ Mitigation



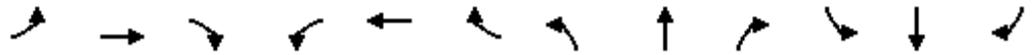
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	10	33	5	3	24	35	242	5	49	337	72
Future Volume (Veh/h)	52	10	33	5	3	24	35	242	5	49	337	72
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	53	10	33	5	3	24	35	244	5	49	340	73
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	814	794	376	792	828	246	413			249		
vC1, stage 1 conf vol	474	474		316	316							
vC2, stage 2 conf vol	340	319		476	511							
vCu, unblocked vol	814	794	376	792	828	246	413			249		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	98	95	99	99	97	97			96		
cM capacity (veh/h)	456	460	670	436	438	792	1146			1317		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	53	43	32	35	249	49	413
Volume Left	53	0	5	35	0	49	0
Volume Right	0	33	24	0	5	0	73
cSH	456	606	658	1146	1700	1317	1700
Volume to Capacity	0.12	0.07	0.05	0.03	0.15	0.04	0.24
Queue Length 95th (ft)	10	6	4	2	0	3	0
Control Delay (s)	13.9	11.4	10.7	8.2	0.0	7.8	0.0
Lane LOS	B	B	B	A		A	
Approach Delay (s)	12.8		10.7	1.0		0.8	
Approach LOS	B		B				

Intersection Summary			
Average Delay		2.6	
Intersection Capacity Utilization	47.1%		ICU Level of Service A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
 4: E Bolton Road & Trinity Street & Pine Street

Sarto Village Zone Change
 2026 Build DHVs w/ Mitigation



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	3	24	19	1	12	3	11	5	3	17	8	7
Future Volume (vph)	3	24	19	1	12	3	11	5	3	17	8	7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	4	30	24	1	15	4	14	6	4	22	10	9

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	58	20	24	41
Volume Left (vph)	4	1	14	22
Volume Right (vph)	24	4	4	9
Hadj (s)	-0.20	-0.08	0.05	0.01
Departure Headway (s)	3.9	4.0	4.2	4.1
Degree Utilization, x	0.06	0.02	0.03	0.05
Capacity (veh/h)	911	874	839	858
Control Delay (s)	7.1	7.1	7.3	7.3
Approach Delay (s)	7.1	7.1	7.3	7.3
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.2	
Level of Service		A	
Intersection Capacity Utilization	13.7%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
5: E Bolton Road & Cheney Drive

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	22	40	18	14	2
Future Volume (Veh/h)	6	22	40	18	14	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	7	24	44	20	15	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	124	16	17			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	124	16	17			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	97			
cM capacity (veh/h)	847	1063	1600			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	31	64	17			
Volume Left	7	44	0			
Volume Right	24	0	2			
cSH	1005	1600	1700			
Volume to Capacity	0.03	0.03	0.01			
Queue Length 95th (ft)	2	2	0			
Control Delay (s)	8.7	5.1	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.7	5.1	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			5.3			
Intersection Capacity Utilization			20.1%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
6: Huston Road & Oregon 126/Hwy 126

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	550	30	165	770	22	13	11	76	7	13	15
Future Volume (Veh/h)	13	550	30	165	770	22	13	11	76	7	13	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	14	585	32	176	819	23	14	12	81	7	14	16
Pedestrians					4						4	
Lane Width (ft)					12.0						12.0	
Walking Speed (ft/s)					3.5						3.5	
Percent Blockage					0						0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	823			585			1791	1788	589	1798	1788	823
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	823			585			1791	1788	589	1798	1788	823
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 %	98			82			68	82	84	82	79	96
cM capacity (veh/h)	808			995			44	66	510	39	66	375
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	14	585	32	176	819	23	107	37				
Volume Left	14	0	0	176	0	0	14	7				
Volume Right	0	0	32	0	0	23	81	16				
cSH	808	1700	1700	995	1700	1700	162	85				
Volume to Capacity	0.02	0.34	0.02	0.18	0.48	0.01	0.66	0.44				
Queue Length 95th (ft)	1	0	0	16	0	0	94	45				
Control Delay (s)	9.5	0.0	0.0	9.4	0.0	0.0	62.6	76.8				
Lane LOS	A			A			F	F				
Approach Delay (s)	0.2			1.6			62.6	76.8				
Approach LOS							F	F				
Intersection Summary												
Average Delay			6.3									
Intersection Capacity Utilization		66.1%		ICU Level of Service							C	
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Huston Road & Hunter Road

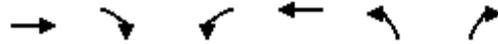
Sarto Village Zone Change
2026 Build DHVs w/ Mitigation



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	51	5	10	47	106	101
Future Volume (Veh/h)	51	5	10	47	106	101
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	57	6	11	53	119	113
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	250	176	119			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	250	176	119			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	99	99			
cM capacity (veh/h)	732	868	1469			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	63	64	232			
Volume Left	57	11	0			
Volume Right	6	0	113			
cSH	744	1469	1700			
Volume to Capacity	0.08	0.01	0.14			
Queue Length 95th (ft)	7	1	0			
Control Delay (s)	10.3	1.3	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.3	1.3	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			2.0			
Intersection Capacity Utilization			22.8%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 8: Baker Lane & Hunter Road

Sarto Village Zone Change
 2026 Build DHVs w/ Mitigation



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻			↻	↻	
Traffic Volume (veh/h)	35	26	34	45	15	20
Future Volume (Veh/h)	35	26	34	45	15	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	39	29	38	51	17	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			68		180	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			68		180	54
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		98	98
cM capacity (veh/h)			1533		789	1014
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	68	89	39			
Volume Left	0	38	17			
Volume Right	29	0	22			
cSH	1700	1533	902			
Volume to Capacity	0.04	0.02	0.04			
Queue Length 95th (ft)	0	2	3			
Control Delay (s)	0.0	3.3	9.2			
Lane LOS		A	A			
Approach Delay (s)	0.0	3.3	9.2			
Approach LOS			A			
Intersection Summary						
Average Delay			3.3			
Intersection Capacity Utilization			21.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

9: Erdman Way & E Bolton Road

Sarto Village Zone Change
2026 Build DHVs w/ Mitigation



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	8	28	5	2	50	3	3	1	2	2	1	5
Future Volume (Veh/h)	8	28	5	2	50	3	3	1	2	2	1	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	30	5	2	54	3	3	1	2	2	1	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	57			35			116	112	32	112	112	56
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	57			35			116	112	32	112	112	56
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 %	99			100			100	100	100	100	100	100
cM capacity (veh/h)	1547			1576			851	773	1041	858	772	1011
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	44	59	6	8								
Volume Left	9	2	3	2								
Volume Right	5	3	2	5								
cSH	1547	1576	890	933								
Volume to Capacity	0.01	0.00	0.01	0.01								
Queue Length 95th (ft)	0	0	1	1								
Control Delay (s)	1.5	0.3	9.1	8.9								
Lane LOS	A	A	A	A								
Approach Delay (s)	1.5	0.3	9.1	8.9								
Approach LOS			A	A								
Intersection Summary												
Average Delay			1.8									
Intersection Capacity Utilization			15.9%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 10: Huston Road & Josee Lane

Sarto Village Zone Change
 2026 Build DHVs w/ Mitigation



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	3	3	45	90	16
Future Volume (Veh/h)	11	3	3	45	90	16
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	12	3	3	51	101	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	167	110	119			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	167	110	119			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	822	943	1469			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	15	54	119			
Volume Left	12	3	0			
Volume Right	3	0	18			
cSH	844	1469	1700			
Volume to Capacity	0.02	0.00	0.07			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	9.3	0.4	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.3	0.4	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			16.2%	ICU Level of Service	A	
Analysis Period (min)			15			



MEMORANDUM

DATE: May 11, 2016

PROJECT: ***

TO: Clint Beecroft, P.E.
EGR & Associates, Inc.

FROM: Brian Ginter, PE
Murray, Smith & Associates, Inc.

RE: City of Veneta – Water System Capacity Analysis: Sarto Village Development

Introduction and Purpose

At the request of EGR & Associates, Inc., Murray, Smith & Associates, Inc. (MSA) has prepared this memorandum documenting an analysis of the impact on distribution system hydraulic capacity and storage requirements associated with the proposed Sarto Village development in southeast Veneta.

In 2012, MSA completed an update of the 2009 Water System Master Plan (WSMP) for the City of Veneta, Oregon. As part of the WSMP, an analysis of future water demands was developed based on projected population growth rates in the City and consideration of saturation development demands based on maximum development densities under current land use zoning designations. These forecasted water demands are used to assess the required distribution system pipe sizes to transmit domestic service and fire suppression flows. They are also used to assess the required volume of storage to meet emergency, equalizing and fire suppression needs.

The proposed development plans assume a change to the land use zoning for the parcels which increases the density of dwelling units beyond what was anticipated in the WSMP. An analysis of the capacity of the existing and planned system to serve the increased demands of the higher density development is presented below.

Increased Water Demand Calculations

EGR & Associates, Inc. provided MSA with their calculation of increased water demands associated with the increased densities that would be allowed by the requested zoning change. The analysis was based on water use characteristics presented in the WSMP. A summary of these calculations is presented below:

- For the 50.78 acre project area, a net increase in developed dwelling units of 195 is possible with the requested re-zoning
- Increased water demands associated with the additional dwelling units are estimated at:
 - 87,285 gallons per day (gpd) for average day demands (ADD)
 - 234,876 gpd for maximum day demand (MDD)

Distribution System Analysis

The City's computerized water system hydraulic model was used to determine the impact on the capacity of the distribution system (both existing and with planned improvements) to meet domestic and fire flow demands. The analysis was performed under future maximum day demand conditions with a residential fire flow event occurring within the proposed project area. The results of this analysis indicate that the system has adequate capacity, as planned, to meet the increased demands of the proposed re-zoned area. Distribution system capacity to meet fire flow needs in the proposed project area is dependent on the completion of looped piping through the project area from Baker Lane to Bolton Road and Jake Street, as identified in the WSMP.

Storage Capacity Analysis

The proposed re-zoning results in a small increase in required storage capacity in the system. Both operational and emergency storage needs increase and fire suppression storage is not affected. Operational storage is based on 25 percent of MDD; therefore, the increased storage volume required for this component is approximately 62,000 gallons. For emergency storage, the storage volume calculation is 2 times ADD; therefore, the increased storage volume required for this component is approximately 175,000 gallons. The combined increase in storage to accommodate the proposed increased development density is 237,000 gallons, or 0.24 million gallons.

Under current conditions, the City has an existing storage volume surplus of approximately 1.0 MG. There is adequate storage capacity today to serve the proposed increased development density.

The City will ultimately face a storage volume deficit of 1.6 MG at build-out conditions, without considering the proposed increased development density. The storage volume deficit would be increased to 1.84 MG with these proposed density increases. The WSMP Capital

Improvement Plan (CIP) includes the recommended construction of a new 1.6 MG reservoir in the southwest corner of the City's urban growth boundary in order to meet the projected deficit. This improvement is recommended to be complete by approximately the year 2020. It is recommended that the City plan to increase the size of this reservoir to 1.9 MG, if the re-zoning occurs. Furthermore, if the proposed development, occurs in the next 2 to 3 years, the may need to accelerate the timing of the reservoir project to avoid experiencing a storage deficit.

Summary

Based on our analysis, the City's water system has adequate capacity to support the proposed re-zoning. Future storage improvements planned for the system will need to be increased in size in order to provide adequate storage capacity to meet the increased build-out water needs of the system.



July 1, 2016

City of Veneta – City Council and Planning Commission
C/O Lisa Garbett, Associate Planner
88184 8th St
PO Box 458
Veneta, OR 97487

RE: Memorandum – Sarto Village in-process Master Plan Concept
Project Name: Sarto Village Zone Change
Project #151820

Dear Veneta City Council and Planning Commission,

We thought it might be helpful for you to see the attached in-process Master Plan Concept dated May 26, 2016 for the Sarto Village Senior Living project. Last week we had a Pre-Development Conference with the City to discuss this initial concept and did receive insightful input from City Staff that is being addressed as we continue our work to finalize the development of this Masterplan. It is anticipated that ultimately the final Master Plan will be submitted for review through the City of Veneta Subdivision process.

This initial 50.50 acre concept consist of a Senior Living Community with a mix of housing that will include single-family attached, detached and a residential facility for those 55+ in age. It is anticipated the project will be developed in two phases. Currently the anticipated phasing is as follows: Phase I - attached/detached units and Phase II – Residential Facility. The project will also include a central area for a public park dedication, extensions of Trinity Street/Baker Lane/Erdman Way, bicycle/pedestrian ways and a considerable effort to preserve significant portions of the existing wetlands and natural features.

We hope this package gives you a better understanding of the anticipated project. Sarto Village believes this will be a wonderful addition to the area and of great benefit to the Residents of the City of Veneta.

Please let me know if you have any questions or comments.

Sincerely,
MYHRE GROUP ARCHITECTS, INC.

A handwritten signature in blue ink that reads 'Raymond Yancey'. The signature is stylized and cursive.

Raymond Yancey, AIA, NCARB
Principal

Attachments: Sarto Village Master Plan Concept dated May 26, 2016 (9 pages)

End of Document



SARTO VILLAGE MASTER PLAN CONCEPT
MAY 26, 2016




Sarto Village

we live a grateful life

MGA
MYHRE GROUP ARCHITECTS





RR (RURAL RESIDENTIAL)
 21.84 ACRES
 TAX LOT 00400

RR (RURAL RESIDENTIAL)
 8.76 ACRES
 TAX LOT 00501

**RR/SFR (RURAL RESIDENTIAL/
 SINGLE FAMILY RESIDENTIAL)**
 19.90 ACRES
 TAX LOT 00602

TRINITY STREET

JAKE STREET

Longwood Lane

Erdman Way

Crosswood Lane

St. Thomas
 Becket Church
 and Academy

E HUNTER ROAD

E BOLTON ROAD



SARTO VILLAGE MASTERPLAN - Property Diagram

Veneta, Oregon
 1"=200'-0"
 May 26, 2016

No. 151820

620 SW 5th Avenue, Suite 500
 Portland, Oregon 97204
 503.236.6000
 www.myhregroup.com

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- Legend:**
- Wetland Area (Approx.)
 - Wetland Setback Area (50'-0" Setback, Approx.)



SARTO VILLAGE MASTERPLAN - Wetland Delineation Diagram

Veneta, Oregon
 1"=200'-0"
 May 26, 2016

No. 151820

620 SW 5th Avenue, Suite 500
 Portland, Oregon 97204
 503.236.6000
 www.myfiregroup.com

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Project Data:

Site Area: ± 2,199,849 gsf (± 50.50 acres)
 Net Site Area: ± 1,244,611 gsf (± 28.57 acres)¹
 Park Area:
 Required: 35 Units x 3 x 0.0084 = 0.88 acres
 91 Units x 2 x 0.0084 = 1.53 acres
 200 Units x 1.5 x 0.0084 = 2.52 acres
TOTAL: = 4.93 acres
 Provided: = 5.44 acres

Unit Breakdown:

Phase I:
 Detached Single Family (Cottages) 35 Units
 Attached Single Family (Cottages) 91 Units
PHASE I SUB-TOTAL 126 UNITS

Phase II:
 Residential Facility (IL/AL/MC) 200 Units
TOTAL UNITS 326 Units

- Legend:**
- Wetland Area
 - Detached Single-Family (Age 55+ Cottages)
 - Attached Single-Family (Age 55+ Cottages)
 - Residential Facility (Senior Housing - IL/AL/MC)
 - Pedestrian/Bicycle Circulation



¹ Net area excludes wetland, wetland setback, right-of-ways and dedications.

3

MGA
MYHRE GROUP ARCHITECTS

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SARTO VILLAGE MASTERPLAN - Final Build-Out Concept

Veneta, Oregon
 1"=200'-0"
 May 26, 2016

No. 151820









SARTO VILLAGE MASTERPLAN - Precedent Concepts

Veneta, Oregon
1"=200'-0"
May 26, 2016

No. 151820

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MYHRE GROUP ARCHITECTS



Lisa Garbett

From: Ryan Thomas <rthomasconst@yahoo.com>
Sent: Wednesday, July 06, 2016 4:59 PM
To: Lisa Garbett
Subject: Land Use Change Application CP/ZC-1-16

Lisa,

Please have the following included in the staff report and record for the above-referenced land use change proposal.

I received the notice of a land use change application for property that adjoins the Trinity Terrace subdivision where a house I own is located. Trinity Terrace is a very nice, quiet neighborhood, one of the nicest in Veneta. My concern with this proposed land use change to medium density residential, also assuming some of the existing streets in Trinity Terrace would be extended through to connect this development, is that the traffic through Trinity Terrace will increase tremendously. This increased traffic, serving a greater density of people in the new development, will fundamentally change the character and livability of Trinity Terrace. I am also concerned this could adversely affect property values for homeowners in Trinity Terrace by adversely affecting quality of life in this neighborhood.

I would much rather see a like neighborhood of nice, low density/rural residential development as currently designated, be developed on this property. I believe changing it to medium density is too drastic a zoning change for this particular subdivision and its current relative seclusion. This being said, I am somewhat relieved to hear that the proposed development is currently intended to be a retirement and elder care community, which I feel would be less of an impact than other allowable development within a medium density designation. However, what is the guarantee that once (if) this proposed land use change is adopted the actual initial development will continue as retirement/elder care, be fully developed as such or remain as such in the future once developed? Once the medium density designation is made I would assume any allowable development for that density would be permissible including low income, multi-family housing and apartment complexes.

My first desire would be against this proposed land use change and leaving it as is. If the city decides to allow the change, I request and urge that the city make this allowance conditional on a specific medium density use, limited to retirement and elder care perpetually with no other medium density use types allowed for the property.

Sincerely,
Ryan Thomas

Lisa Garbett

From: Jim Eagle Eye <j.eagleeye@yahoo.com>
Sent: Tuesday, July 12, 2016 4:30 PM
To: Lisa Garbett
Subject: Comments on Zoning and Comprehensive Plan Amendment Request

Comments on Zoning and Comprehensive Plan Amendment Request
Tax Lots 00400 – 00501 – 00602

My primary concern with allowing property along Hunter Road to be rezoned to be developed at a higher density is how the increased traffic along Hunter will exacerbate the already existing public safety issue by increasing cars on the road. As a resident who drives Hunter daily and as the parent of a child who walks and bikes the road, I see daily the hazards that occur when pedestrians and bikes have to be in a lane of travel with vehicles swerving into opposing traffic lanes to avoid them or having to stop in their lane because another vehicle is coming in the opposing lane. These conditions have continually worsened as smaller subdivisions have been built along Hunter or in relative proximity to Hunter, and drivers determine that the drive time is less than using Territorial, especially when they exceed the posted speed limit of 25 miles per hour.

I know that there have been several factors that have made it unfeasible to upgrade Hunter Road, including limited city funding. As the City and Planning Commission have looked at requests for approving development along Hunter, the City Transportation Plan calls Hunter Road a major collector and we have used this classification to determine traffic capacity. However, the TSP definition of a major collector is a 60' right of way with 34' paved, including 11' traffic lanes, 6' bike lanes, and sidewalks and no parking on either side. No portion of Hunter is built to this standard and is not likely to be built in the near future.

It is important to be sure that we are considering the importance of public safety in determining the criteria of city services being available. Perhaps low density zoning instead of medium density would lessen the impact on public safety and would better align with the neighboring and abutting properties that are zoned low density and rural residential.

As the eastern area of the City is developed, it will require the installation of pump stations, and as these facilities will become city owned and maintained, it is important that the City ensure that these facilities are built to the appropriate sizes, locations, and quantities to best serve the city. Is the City willing to accept a pump station from any and every possible development, no matter the size, location, and ultimate number of stations requiring attention? The applicant states that the pump station will be sized for the needs of the project. I believe it should be sized for the potential build-out of the property should there be any potential for further development other than that proposed. This consideration should apply to any further pump station to ensure that once they become City owned they are of appropriate capacity.

Jim Eagle Eye

Lisa Garbett

From: Andrea Larson <adl3738@gmail.com>
Sent: Tuesday, July 12, 2016 5:03 PM
To: Lisa Garbett
Subject: Rezoning Request for Tax Lots 00400 – 00501 – 00602

Rezoning Request for Tax Lots 00400 – 00501 – 00602

I am writing to express my concern about how the rezoning request for tax lots 00400, 00501, and 00602 will impact traffic along Hunter Road. There is already an issue with pedestrian and bicycle safety on Hunter which seems to continue to get worse in spite of the fact that there has been limited development along the road over the last few years. By allowing for denser housing, you will be increasing cars on the road. As it is, every trip that I take along Hunter requires at least one instance of having to navigate around pedestrians or bicyclists, and often having to stop in the road to allow another car to go by before going around the walker or biker. I regularly see drivers going much faster than the speed limit, and faster than anyone should be driving on this type of road. I also see drivers make bad decisions about school buses and other vehicles that are obeying the posted speed. With increased vehicular traffic, these instances will only increase.

My daughter walks and rides her bike along the road, as do many other young people. Numerous school age youth wait for buses along Hunter in the mornings, and walk home from their stops in the afternoons. As a school board member, I argued against a proposed bus drop-off route for Veneta Elementary that would have significantly increased bus traffic along Hunter Road because I was concerned about the safety of our students and the nearby residents, and I am extremely concerned that increasing traffic on Hunter will eventually result in tragedy if we do not consider the reality of how much the road is used by pedestrians and bicyclists of all ages, and school age children in particular.

Thank you for considering the needs and safety of your existing residents and tax payers over those of the development group making this request.

Andrea Larson

25456 E Hunter Road

Veneta, Oregon 97487

Lisa Garbett

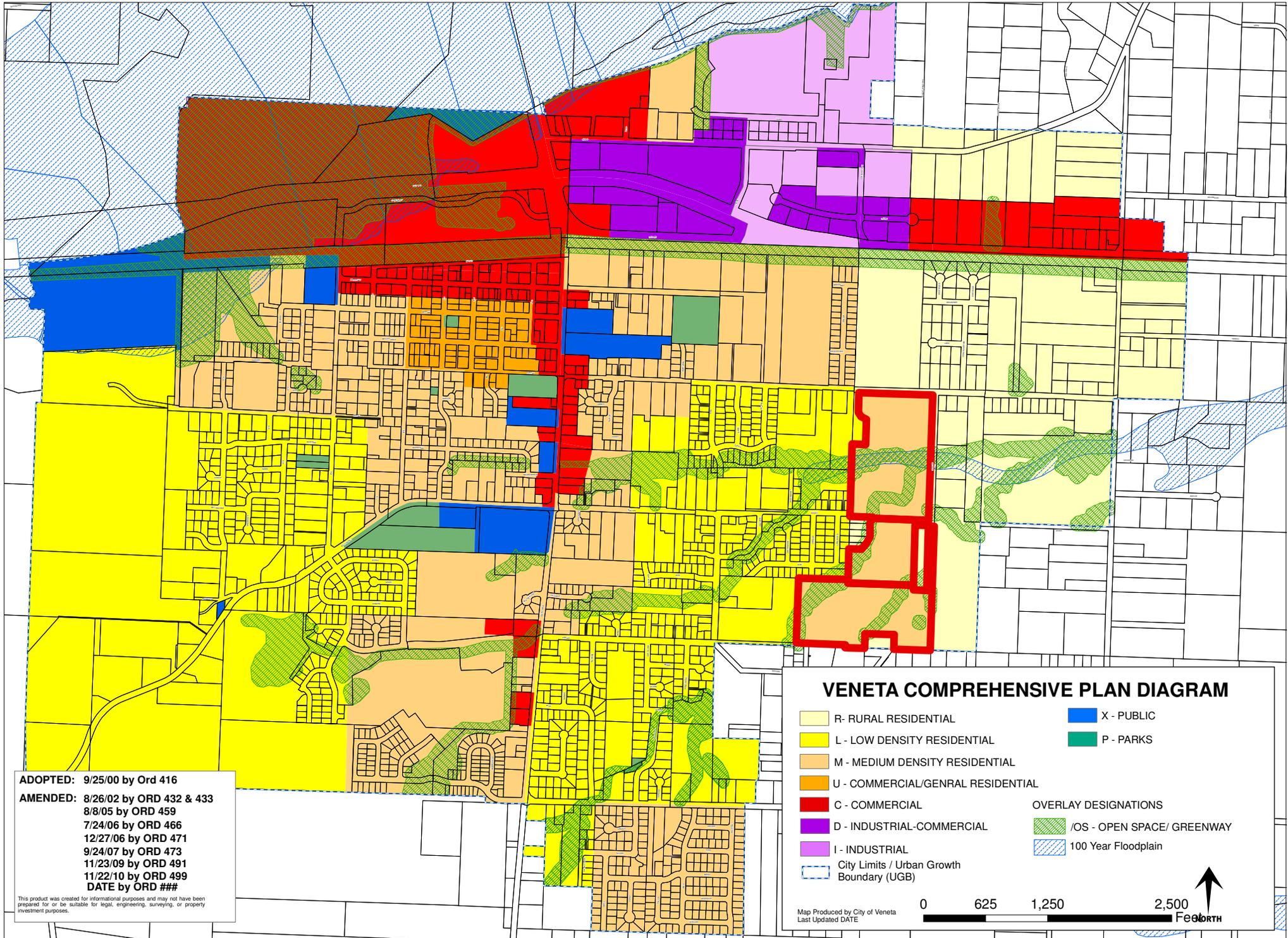
From: Melissa Ratzlaff <windfall.ratzlaff@gmail.com>
Sent: Tuesday, July 12, 2016 10:21 PM
To: Lisa Garbett
Subject: Regarding the Sarto Village Development

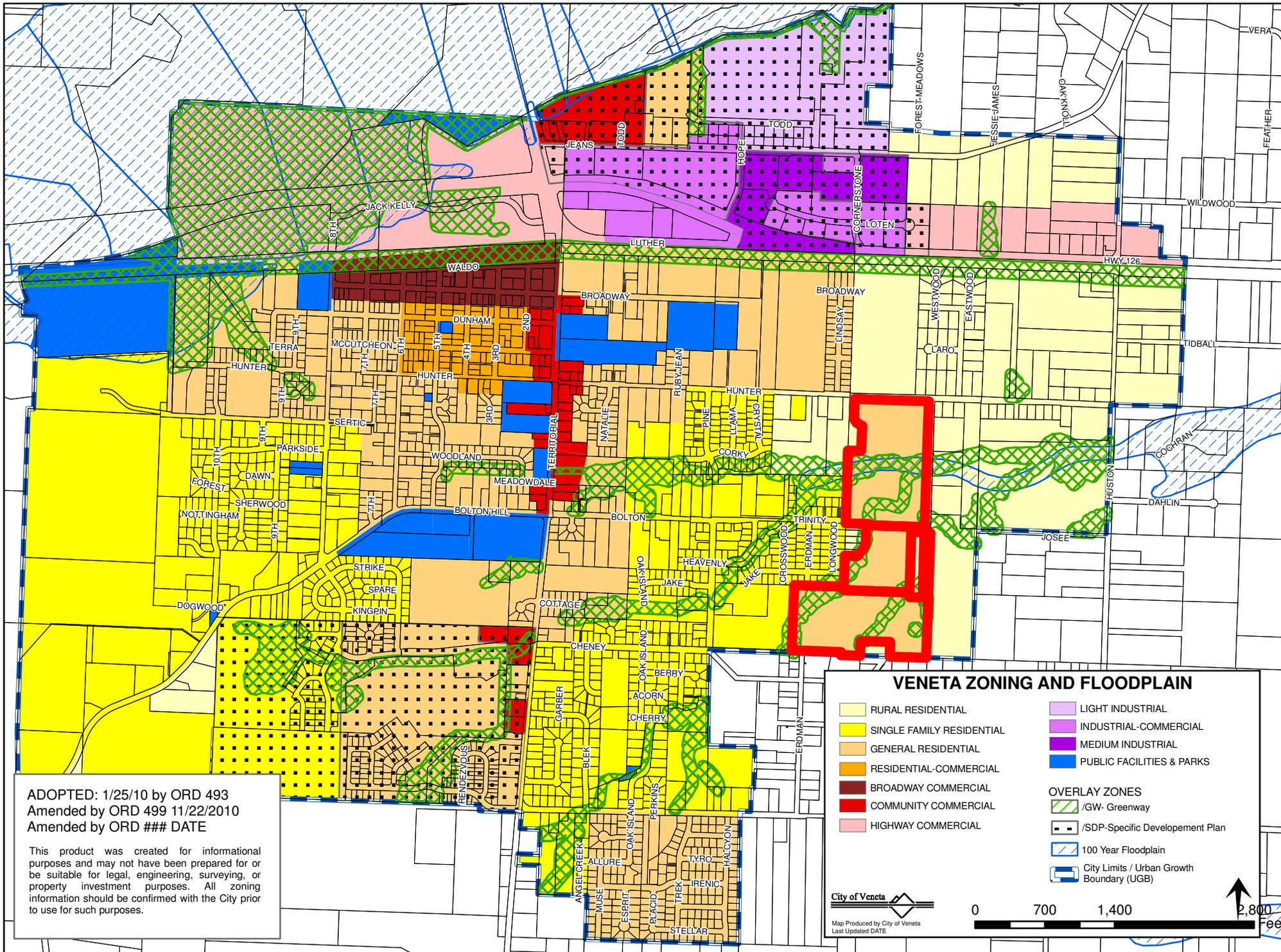
We would like to provide our comments regarding the proposed Sarto Village Development. We live directly across from the proposed development on E Hunter, known previously as Baker Lane. We like the idea of a senior development in a park like setting. However, we have the following comments/concerns:

1. The current parcel size is 1-2 acres and the development is asking for triplex units and multi-story buildings. This greatly exceeds the current use. We would like to see single family homes with a minimum 1/3 acre parcels such as Fern Meadows to maintain the aesthetics of the area. The parcels sizes and forested nature of the area were some of the reasons we moved to Veneta.
2. We would ask that sidewalks be added on East Hunter Road from Territorial to Huston for pedestrian safety. Traffic has dramatically increased with a significant percentage of vehicles travel faster than the stated speeds. Likewise, there are a lot of pedestrian traffic on the road with minimal shoulders. With the increase of residents and workers, the likelihood of an accident increases.
3. We would request that other arterials be considered beyond the use of Baker Lane and Erdman. This would include adding additional exits from Sarto Village to East Hunter and extending Trinity to Josee Lane for exit onto Huston to reduce the traffic on East Hunter. Based on the Sarto Village property diagram, residents from Jake Street, Trinity and surrounding residences would most likely travel down Baker to East Hunter as the fastest way to get to Huston since Baker will not have an outlet onto East Bolton. The increase of traffic will be a detriment to the current residents on Baker.
4. We are concerned that the Non-Profit status of the development will cause additional taxes for the citizens of Veneta and not provide additional revenue.
5. We are concerned that the development will require us to connect to sewer and water. We would like to be advised if this is the case for residents that are adjacent to new street development. Also, we request a study to be conducted if the development will affect current wells in the area downstream from the development.

Thank you,

Melissa & Jim Ratzlaff
25450 E Hunter (formerly Baker Lane)





ADOPTED: 1/25/10 by ORD 493
 Amended by ORD 499 11/22/2010
 Amended by ORD ### DATE

This product was created for informational purposes and may not have been prepared for or be suitable for legal, engineering, surveying, or property investment purposes. All zoning information should be confirmed with the City prior to use for such purposes.

City of Veneta

Map Produced by City of Veneta
 Last Updated DATE

0 700 1,400 2,800 Feet

VENETA LAND DEVELOPMENT ORDINANCE No. 493

ARTICLE 3 – ESTABLISHMENT OF ZONES

SECTION 3.03 LOCATION OF ZONES

The boundaries for Specific Development Plan sub-zones are indicated on the Veneta Zoning Map, dated ~~November 23, 2009~~, **(Insert adoption date here)** which is hereby adopted by reference and made a part of this ordinance. The Northeast Employment Center Map dated August 26, 2002 is hereby adopted by reference and made a part of this ordinance. The Flood Hazard Zone is delineated from the Federal Emergency Management Agency's Lane County, Oregon and Incorporated Areas Flood Insurance Rate Map. The Greenway – Open Space sub-zone and Flood Hazard sub-zone are shown on the Veneta Zoning Map.

TECHNICAL MEMORANDUM



DATE: July 26, 2016

PROJECT: Sarto Village Zone Change (CP/ZC-1-16)

TO: Lisa Garbett, Associate Planner
City of Veneta

FROM: Lane Branch, Branch Engineering

RE: Engineering Review Comments

Thank you for the opportunity to assist the City and provide findings and conditions for the Sarto Village Zone Change. The following is a summary of findings and recommendations for the City's consideration:

Traffic Impact Analysis

Item Reviewed

Sarto Village Zone Change TIA prepared by Access Engineering, Inc., dated April 15, 2016.

Comments:

- TIA1. City of Veneta Land Development Ordinance 493, Article 5, Section 5.27 requires a traffic impact analysis if a development generates 100 or more AM or PM peak hour trips. The Sarto Village development plan would not require a traffic impact analysis triggered by trip generation exceeding 100 or more peak hour trips; however, a Transportation Planning Rule Analysis is required to satisfy Goal 12 of the Oregon Administrative Rules (OAR 660-012-0060) because a change of land use designation is proposed that will change or alter the City's land use designation as described in text and/or maps associated with the adopted comprehensive plan and use designations (zoning) relating to traffic on the City transportation system.
- TIA2. The transportation planning rule analysis references single family residential (SFR) zoning, which would allow 8 single-family dwelling units/acre. The traffic study also refers to general residential (GR) zoning, which is consistent with the land use application proposal, that would allow a maximum development density of up to 15 dwelling units/acre. In either zoning scenario, the minimum lot size of 6,000 square feet from Veneta's Land Development Ordinance 493 was applied to the site acreage to determine a reasonable worst case development scenario.
- TIA3. The indicated trip generation potential of the site fully developed with single family detached housing units under the proposed zoning scenario could result in a worst case

development scenario that could include up to 227 single-family residences. The worst case development scenario would generate up to 217 new PM peak hour trips (per Table 7, page 8 of the Transportation Planning Rule Analysis/Traffic Impact Analysis) on the transportation system with area deductions to account for wetland and unsuitable building areas and street right-of-way dedications for new transportation, sewer, water and stormwater infrastructure. The TPRA/TIA applied a trip generation rate for the reasonable worst case development scenario based on the ITE's fitted curve trip generation equation (logarithmic) for single family detached housing in lieu of the average linear rate of 1.00 trips/unit during the pm peak hour of street traffic. The result is a lower trip generation than application of the ITE's average rate applied to the potential for 227 single family residential units (217 PM peak hour trips vs 227 with the average rate). Based on the range of data, the number of studies, and the coefficient of determination (R^2 value greater than 0.75), either the average rate or the fitted curve equation derived from the data source are acceptable to estimate trip generation for single family detached housing land use. The TPR concluded that the site's area subject to the zone change could support up to 227 single family residences and referenced the development density of the residential neighborhood directly to the east. The number of units analyzed for the worst case development scenario also considered to the City's minimum lot size standards and development density allowed with the proposed zoning. The TPR's reasonable worst case development scenario is intended as a theoretical development scenario, and does not represent the proposed development conditions.

- TIA4. The traffic analysis indicates that the applicant/owner is proposing to limit development on the site to age restricted housing to mitigate potential traffic conditions identified in future year traffic scenarios.
- TIA5. Enforcement of mitigation for traffic impacts by the proposed restriction of development on the site will need to be enforced by encumbrances recorded on the property deed(s) or other mechanism(s) that will ensure development is limited to maintain the level of traffic resulting from the development proposal associated with the proposed development conditions. Alternately, traffic conditions with development other than that identified with the development stipulation's restrictions analyzed with this application could be reviewed for impacts prior to build-out. The latter would need to look at the site as a whole for build-out of each parcel assuming the worst case development scenario consistent with the criteria of the transportation planning rule and City of Veneta Land Ordinance 5.27.
- TIA6. The applicant is proposing to develop age restricted housing to include 100 beds for assisted living (ITE Code 254); 100 units of congregate care facility (ITE Code 253), and 140 units for senior adult housing (ITE Code 251). Table 10 on page 12 of the TIA includes this information and the trip generation of the site in detail, including the site's total trip generation of 97 PM peak hour trips. The applicant's TIA for the proposed development included an analysis of the traffic conditions resulting from the proposed development of the site with the unit total for these land uses shown on Table 10 (page 12) of the TIA. The applicant's proposed trip cap as mitigation to limit development on the site to age restricted housing with 97 PM peak hour trips is based on the total trip generation as concluded in Table 10. The Transportation Planning Rule (TPR) considers the reasonable worst case development scenario that the proposed zoning could support and is intended to provide an analysis of the transportation system if developed to the development density identified during the planning horizon year of the applicable transportation system plan if at the time of development the developer made a change of the land use approved for the zone change

to another land use also supported by the proposed zoning od comprehensive plan designation that the code allows with an increased trip generation potential. The TPR considers potential impacts and not necessarily the impacts associated with the actual development proposal. The proposal to mitigate traffic conditions by stipulated development limited to 97 total trips is consistent with the objectives of the TIA.

- TIA7. All v/c ratios reported for the existing conditions are within the acceptable performance standard identified for the corresponding road authorities with performance standards.
- TIA8. The southbound approach movement at Huston Road and Highway 126 is reported to operate at LOS E in the current conditions and worse with background and build conditions for future year analysis scenarios. The northbound approach is also projected to operate at LOS E or less in future background and build condition scenarios. The City of Veneta does not currently identify with a mobility standard for transportation system performance, such as level of service (LOS), volume to capacity ratio (v/c) or delay. LOS E is generally considered the worst acceptable performance measure for performance based on delay at unsignalized intersections in municipalities with adopted delay based LOS standards. To address ODOT's v/c standard at Huston Road and other ODOT intersections, the applicant's TIA proposes to stipulate development on the site with a trip cap of 97 PM peak hour trips during the peak hour of street traffic to ensure that traffic generated by the site does not cause facilities to fail or worsen already failing facilities.
- TIA9. Map 9 of the Veneta TSP shows through street connections of Trinity Street, Corky Lane, Jake Street and Baker Road. The TIA cites wetlands as a reason for not accommodating all of the street connections identified. Wetlands are generally identified on Figure 2 of the report.
- TIA10. Baker Lane is proposed to extend through the site to the south property boundary. Currently there are single-family residences constructed south of the site on property owned by others. Baker Road will not provide a through street connection to E. Bolton Road, but would be expected to be improved with frontage improvements with the proposed development.
- TIA11. Erdman Way is proposed to be extended from E. Bolton Road into the site. An additional connection from Baker Road is proposed to provide a connection from the east and to Hunter Road. These connections would need to be improved to City standards for the corresponding street classifications.
- TIA12. The Trinity Street connection from Map 9 is included and is proposed to connect to Josee Lane through the site and provide access to Huston Road. The Trinity Street extension is shown on Map 12 of the TSP as a future minor collector street.
- TIA13. The traffic analysis included an analysis of ODOT traffic signal warrants for year of opening and year 2026 traffic conditions at the intersection of Huston Road and Highway 126 and found that a traffic signal is not warranted with the traffic increase resulting from proposed development.
- TIA14. The provided traffic signal warrant analysis utilized the ODOT Preliminary Signal Warrant Analysis worksheet, which converts peak hour traffic volumes to daily traffic volumes utilizing a "K" factor and is consistent with the current ODOT Analysis Procedures Manual methodology. The volume used in the warrant included 210 approaching vehicles on the northbound approach with no right-turn discounts. According to the Lane County Maps GIS,

the ADT on Huston Road was determined to be at 2,400 vehicles per day just south of Highway 126 in 2011.

- TIA15. The traffic impact and TPR analyses are prepared by a qualified professional engineer.
- TIA16. The criterion of the transportation planning rule is discussed in section IV of the traffic study on pages 13-14. The TPR analysis concludes that the transportation planning rule (OAR 660-012-0060) is satisfied with the development proposal and the proposed mitigation to include stipulated development for age restricted housing and to put a trip cap of 97 PM peak hour trips on development at the site. Safety is not identified as a part of the criteria for transportation planning rule analysis.
- TIA17. City of Veneta Land Development Ordinance No. 493, Section 6.05 discusses *Approval Criteria* for site review processes. Section 6.05(1)(b) includes protecting pedestrian, bicycle and vehicular safety, while (d) stipulates that adequate water, sewer and other required facilities for the proposed use are available. The existing conditions on Hunter Road west of the site to Territorial Road do not currently include improvements that are consistent with the City of Veneta's standard for the identified minor arterial functional classification. The roadway is adequate for vehicular capacity, but does not feature shoulders, bike lanes or sidewalks and features open conveyance (ditches) for storm water drainage.

Based on the above findings, the nearby roadway system has adequate vehicle capacity to accommodate the potential increase in vehicular traffic resulting from the proposed zone change; however, the area has limited bicycle and pedestrian facilities available. Approval of the zone change should include the proposed trip cap mitigation, which will allow up to 97 PM peak hour trips from the site. A restrictive covenant should be recorded for the property, in a form acceptable to the City Attorney, stipulating any future development on the property is subject to a trip cap of 97 peak hour trips.

Water Supply

Item Reviewed

Memorandum by MSA, dated May 11, 2016

Comments

- W1. Increased water demands associated with the additional dwelling units are estimated at 87,285 gallons per day (gpd) for average day demands (ADD), and 234,876 gpd for maximum day demand (MDD).
- W2. Public water lines exist adjacent to the site in Hunter Road and Trinity.
- W3. The supply and distribution systems have adequate capacity, as planned in the Water System Master Plan, to meet the increased demands of the proposed re-zoned area. Distribution system capacity to meet fire flow needs in the proposed project area is dependent on the completion of looped piping through the project area from Baker Lane to Bolton Road and Jake Street, as identified in the WSMP.
- W4. The combined increase in water storage needed to accommodate the proposed increased development density is 237,000 gallons, or 0.24 million gallons.

- W5. Under current conditions, the City has an existing storage volume surplus of approximately 1.0 MG. There is adequate storage capacity today to serve the proposed increased development density.
- W6. Per the Water System Master Plan, the City will ultimately have a storage volume deficit of 1.6 MG at build-out within the UGB, without considering the proposed increased development density. The storage volume deficit would be increased to 1.84 MG with these proposed density increases.
- W6. The Capital Improvement Plan (CIP) includes the recommended construction of a new 1.6 MG reservoir in the southwest corner of the City's urban growth boundary in order to meet the projected deficit. This improvement is recommended to be complete by approximately the year 2020.

Based on the findings above, public water is available to the site with adequate capacity to serve development permitted within the proposed zoning.

Sewer Availability

Comments

- S1. Per the City's wastewater engineer, the wastewater treatment plant has capacity to serve 6,220 residents. Current population served is roughly 4,800 residents.
- S2. Public gravity sewer pipes exist in Hunter and Trinity near the western limits of the site. Due to the existing topography of the area, these pipes are likely too shallow to gravity serve the site. In addition, the capacity of portions of the existing gravity pipe in Hunter appears insufficient to accommodate the potential development density proposed based on comments received from the City's Wastewater Engineer.
- S3. Per the City's wastewater engineer, a lift station will be required to pump the wastewater from the project area to the existing gravity collection system on Hunter Road. The pipe in Hunter, between Pine Street and Lindsay Lane, likely will not have the available capacity to handle the flow from the proposed development unless that section of the gravity system is reconstructed with a larger diameter pipe.

Although public wastewater service has been extended to the project site, the capacity of the existing downstream system may be insufficient to serve development of the site. Any future development on the subject site will be required to address wastewater capacity of the existing downstream system, and upsize the system as necessary to accommodate the proposed development.

Stormwater

- ST1. Any future development proposal for the project site will be required to adhere to Veneta's stormwater treatment and detention standards, which limit peak flow rates for new development to existing (pre-development) rates. Increasing the development density potential will have minimal, if any, impact to the downstream system.

Please let me know if you have any questions about this review.

Lisa Garbett

From: INGRAM Daniel B <Daniel.Ingram@co.lane.or.us>
Sent: Wednesday, June 15, 2016 5:18 PM
To: Lisa Garbett
Cc: EICHNER Lindsey A; REESOR David R; TAYLOR Becky; GREEN Lori M; ROBERTS Chris A; LANSBERY Lisa E (PW); PARKER Laurie M; PAUGH Jennifer A; LEMHOUSE Brad
Subject: RE: City File #PRE-4-16, Sarto Village (Pre-Development Conference)

Veneta File Number: PRE-4-16
Lane County File Number TP #11006
Applicant: Jerome Poulin, for Sarto Village Project
Owner: Society of Saint Piux X Southwest District, Inc.
Map & Tax Lots Numbers: 17-05-31-00-00400; 17-05-31-00-00501; and 17-05-31-34-00602
Proposal: 50 acre development consisting of a 55+ Senior Living Community with a mix of Single-Family Attached (91 Units), Detached (35 Units), and Residential Facility (200 Units).

Comments from Lane County Transportation Planning:

The subject property includes Map and Tax Lot numbers 17-05-31-00-00400; 17-05-31-00-00501; and 17-05-31-34-00602 all located within the City of Veneta. The project is generally located south of E. Hunter Road, north of the east – west section of E. Bolton Road, west of Huston Road, and east of Trinity Terrace Subdivision. Per the Pre-Development Conference Package materials provided, access to the proposed development will be via E. Hunter Road to the north, Baker Lane to the east, and Trinity Street & Erdman Way to the west. With the exception of Erdman Way, all access points are within the City of Veneta. An extension of Erdman Way to the south will connect to E. Bolton Road which is a Lane County Road functionally classified as a Rural Local Road.

For informational purposes Lane County Transportation Planning staff has the following comments related to Lane Code criteria:

Lane Code 15.697 – Traffic Impact Analysis Requirements

Staff notes that per previous correspondence with the applicant's Engineer a Goal 12 Traffic Impact Analysis has been provided for the development of the subject property. Staff has reviewed the Sarto Village Zone Change Goal 12 Traffic Impact Analysis, dated April 15, 2016. Staff accepts the findings of this report.

Lane Code 15.105 – Dedications and Improvement Requirements

Pursuant to **LC 15.105(1)**, *"When a land division or other development is proposed, the County may require dedications of right-of-way or easements and improvements necessary to meet the applicable road design standards of LC 15.700 through LC 15.708 and other requirements of this chapter. Road dedications or improvements shall be adequate to serve traffic generated by the new development"*

Staff notes that the master plan shows a connection to E. Bolton Road via an extension of Erdman Way from E. Bolton Road to the subject property. It appears that there is an existing public right-of-way which is 50 feet in width which facilitates the connection to E. Bolton Road. This connection is outside of the Urban Growth Boundary of the City of Veneta and is therefore under Lane County jurisdiction. The road connection will at a minimum need to meet the applicable requirements of either Lane Code 15.705 or Lane Code 15.706 depending upon the Average Daily Traffic (ADT). Staff would recommend that the roadway extension of Erdman Way match the width of the roadway constructed within the development, provided the roadway width meets minimum Lane Code standards. Similarly, staff notes that future extensions of Trinity Street to the east to connect to Josee Lane would require similar improvements to Josee Lane.

Lane Code 15.205 - Facility Permits

A Facility Permit is required for placement of facilities within the right-of-way of County Roads. Facilities and development includes, but is not limited to, road improvements, sidewalks, new or reconstructed driveway or road approach intersections, utility placements, excavation, clearing, grading, culvert placement or replacement, storm water facilities, or any other facility, thing, or appurtenance [LC 15.205(1)].

A Facility Permit shall be required for construction of any connection to E. Bolton Hill Road.

Lane Manual 15.515 - Drainage

In accordance with Lane Manual 15.515, storm water runoff from private property shall not be directed to the Lane County road right-of-way, or into any Lane County drainage facility, including roadside ditches. Ditches adjacent to County roads are designed solely to accommodate roadway storm water runoff. As such, the proposed storm water system will need to be designed such that post-development discharged into the County roadside ditch does not exceed pre-development flow.

Lane County Transportation Planning requests to receive notice of all future development proposals for the subject property. Lane County Transportation Planning has no further comment at this time.

Thank you for providing the opportunity to comment on this proposal.

Daniel B. Ingram, P.E., P.L.S.

Senior Engineering Associate

Lane County Public Works

Phone: (541) 682-6996

e-mail: Daniel.Ingram@co.lane.or.us

From: Lisa Garbett [mailto:lgarbett@ci.veneta.or.us]

Sent: Tuesday, June 07, 2016 10:44 AM

To: INGRAM Daniel B

Cc: Lane B

Subject: City File #PRE-4-16, Sarto Village (Pre-Development Conference)

Importance: High

Hi Dan,

The City of Veneta received the attached Pre-Development Conference request for Sarto Village (City File#PRE-4-16).

The proposed involves these parcels:

Tax Lot 00400, Assessor's Map 17-05-31-00

Tax Lot 00501, Assessor's Map 17-05-31-00

Tax Lot 00602, Assessor's Map 17-05-31-34

The applicant's questions are listed on page 5 of the attachment. If you have any comments to add or questions for the applicant, please send them to me by June 15th.

Also, if you have thoughts on whether a TPR analysis will be required and/or have comments for scope of a TPR, please send those as well.

Thanks, Lisa

Lisa Garbett | Associate Planner

City of Veneta

P.O. Box 458

88184 Eighth Street

Veneta, OR 97487

Office: 541.935.2191 Ext. 304

FAX: 541.935.1838

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Suggested Sign Code Update - Draft

SECTION 5.15 SIGNS

(1) Purpose.

- (a) This section of the Veneta Land Development Ordinance will be referred to as the Veneta Sign Code.
- (b) The general purpose of signs is to communicate. ~~The public benefits from this expression of speech, particularly in identifying businesses. This benefit supports the Comprehensive Plan Goal of establishing Veneta as a service and retail center for the Fern Ridge area and an attractive residential community.~~
- (c) The purpose of this section is to safeguard, preserve, and enhance economic, recreational, and aesthetic values through regulation of the size, number, location, illumination, construction and maintenance of signs; and thereby protect public health, safety and general welfare.

(2) Definitions.

SIGN: ~~Any identification, description, illustration, symbol or device which is placed, painted, or affixed directly or indirectly upon a building, structure, flag or land visible from a public right-of-way.~~

- (a) **Alteration:** ~~Any change ~~excluding content, and~~ including but not limited to the size, shape, method of illumination, position, location, materials, construction, or supporting structure of a sign, ~~but excluding content.~~~~
- (b) **Area:** ~~The area included within the outer dimensions of a sign. In the case of a multi-faced sign, the area of each face shall be included in determining sign area, ~~excepting~~ double-faced signs placed no more than 24 inches back-to-back. The area of odd-shaped signs made up of individual letters mounted to the wall of a building shall be the area enclosed within the outline or perimeter around the sign or letters.~~
- (c) **Building Sign:** ~~A sign attached to, projecting from, erected against or painted on the building, or on the face of a marquee, awning, canopy or building fascia or to a wall or fence which is intended to be read from a public right-of-way.~~
- (d) **Blade Sign:** ~~Blade signs may be hung below roof overhangs, canopies or awnings over public or private pedestrian ways in accordance with Section 5.15-(10)-(h). Such signs shall be uniform in size and placement in relationship to such signs on adjacent buildings, but in no case shall they be~~

larger than ~~24~~10 inches in height ~~by~~ three feet in length. ~~Lettering shall not exceed six inches in height.~~

Commented [CD1]: Len Goodwin recommended having a maximum height rather than 6 sq. ft. to avoid a scenario of 6 ft. tall and 1 ft. wide or similar. Changed the height maximum to 24 inches high and kept three feet long.

- (e) Business:—A commercial or industrial enterprise.
- (f) Construction Sign: A temporary, non-illuminated sign placed at a construction site which identifies the contractor, architect, lending institution and/or development project.—The sign shall be removed once construction is complete.
- (g) Directional Sign:—A permanent sign which is designated and erected solely for the purpose of directing traffic.
- (h) Election:—The time designated by law for voters to cast ballots for candidates and measures.
- (i) Election Signs:—A temporary, non-illuminated sign erected for the purpose of advertising an election candidate or issue.—All election signs must be removed within 30 days following an election.—A candidate who intends to run again in the following election must still comply with this ~~30-day~~30-day requirement.—Such a candidate shall not re-erect election signs until either (1) 30 days has elapsed since that candidate's election signs were removed, or (2) until the filing deadline for the upcoming election, whichever is a shorter period of time.
- (j) Flashing Sign:—An illuminated sign, ~~(or a sign constructed of reflective material to simulate movement), on or within~~ which light is not maintained stationary and constant in intensity and color at all times.
- (k) Free-Standing Sign:—A non-temporary sign erected on a free-standing frame, mast or pole and not attached to any building.—Signs shall comply with the size and height standards for the sign district in which the sign is located and with the Uniform Sign Code (USC).
- (l) Garage, Yard or Estate Sale Sign:—A temporary sign which advertises a public sale for the purpose of disposing of personal property.
- (m) Grand Opening:—A ~~30-day~~30-day period which encompasses the date a newly established business opens to the public.
- (n) Human-scale: A type of design or development in which people feel safe and comfortable walking from place to place because buildings, streetscapes, parking areas, landscaping, lighting, and other components of the built environment are designed foremost with pedestrians in mind.
- (o) Illegal Sign:—A sign which is not authorized by or is erected in violation of

the Veneta Sign Code.

- (pe) Illuminated Sign:— Any sign which has characters, letters, figures, or designs with the source of illumination being on the surface of the sign or from within the sign.
- (qp) Indirectly Lighted Sign:— A sign having a source of illumination directed toward the sign so that a beam of light falls upon the exterior surface of a sign.
- (rq) Logo:— Pictures, figures, symbols, letters, sign copy or similar graphic design which advertises or identifies a business, building or use.
- (sf) Monument Sign:— A low to the ground, free-standing sign mounted in a frame that is incorporated into the overall design of the sign.— The total square footage of a monument sign shall include the supporting frame.— Signs shall comply with the size and height standards for the sign district in which the sign is located and with the Uniform Sign Code (USC).
- (ts) Murals:— Mosaic, wall decoration or painted scene, graphic art technique or combination or grouping of mosaics, murals,— paintings or graphic art techniques applied, implanted or placed directly onto a wall or fence.— With the exception of the artist's signature, the mural shall contain no printed text or logo and shall be intended as a decorative or ornamental feature or to highlight a building's architectural or structural features.
- (ut) Non-conforming Sign:— An existing sign, lawful at the time of enactment of this ordinance, which does not conform to the requirements of the Veneta Sign Code.
- (vz) On-Site Information Sign:— A sign used for the purpose of communicating to persons on the development site.— Such a sign may be visible but shall not convey a message to persons not on the site.— A sign which conveys a message where any portion of the message is easily legible or discernible to a person of ordinary vision from any location off the site commonly visited by members of the public shall not qualify as an on-site information sign.— On-site information signs may include but are not limited to menu boards and building directories.
- (wy) Portable Sign:— A single or double surface painted or poster type sign which is not permanently attached to a building, structure or the ground which is to be displayed for more than 30 days per calendar year.— It shall be constructed of weather-resistant paper, cloth, wood, plastic, or metal, or other material with sufficient structural integrity to withstand wind and moisture, so as to maintain appearance and service for the term of use. The maximum dimensions for sandwich boards, sidewalk signs, and curb signs

Commented [CD2]: Removed definition for plastic signs.

is 42 inches tall by 30 inches wide.

(~~xw~~) Public Sign:— Any sign placed by a public officer or employee in the performance of a public duty, including but not limited to traffic signals and control signs, warning lights, street identification signs, directional signs, informational signs or legal notices.

(~~yx~~) Real Estate Signs:— A temporary, non-illuminated sign advertising the prospective sale, rental or lease of the building(s) or property on which the sign is located.—The sign shall be removed once the property is sold or leased.

(z) Roof Sign: A sign affixed to the roof of the building or structure, rising above the roof level at any point. Signs affixed to the roof edge and hanging below the roof are not classified as roof signs. False facades and architectural elements that also serve as signs do not count as roof signs, if the element would still exist if it were not a sign.

Commented [CD3]: New addition for clarification.

(~~aa~~y) Sign Band: A small rectangular space recessed into an exterior building wall that is designed for a building sign which may be engraved into the building façade or mounted onto the sign band. May have integrated lighting for the sign so that internal signage illumination is not necessary.

(~~bb~~) Sign Cabinet: A frame or external structure of a box-like sign that encloses the various functional elements of the design, whether electrical or structural components. Can be free-standing or wall-mounted.

Commented [CD4]: New definition.

(~~cc~~z) Sign Copy:— Any combination of letters or text which advertise or identify a business, building or use, including logos.

(~~dda~~a) Sign Height:— The vertical distance from grade to the highest point of a sign or a sign structure.

~~(bb)~~ ~~Subdivision Identification Sign: A sign placed at the entrance to a neighborhood development which identifies a subdivision by name.~~

(~~eee~~e) Temporary Sign:— A sign which is not permanently affixed to a building, structure or the ground, including all devices such as banners, pennants, sandwich boards, sidewalk signs, curb signs and balloons which will be displayed for ~~less than~~ 30 days or less per calendar year. The maximum dimensions for sandwich boards, sidewalk signs, and curb signs is 42 inches tall by 30 inches wide.

(~~ffed~~) Unsafe Sign:— Any sign or supporting structure which constitutes a hazard to the public health, safety or welfare by reason of structural design or construction, inadequate maintenance, lack of repair or dilapidation.

(ggee) Vehicle Sign:— Any sign permanently or temporarily placed on or attached to a motor vehicle, where the vehicle is used in the regular course of business for purposes other than the display of signs.

(hhff) Wall Sign:— See Building Sign.

(iigg) Warning Signs:— Signs which warn the public of the existence of danger, hazardous materials or relating to trespass and containing no advertising material.

(jjhh) Window Sign:— Any sign attached to or painted on the inside surface of a window.

(3) Designated Sign Districts.— ~~Three~~ Four sign districts have been established to ensure that sign size and location will provide the most visibility for each business while protecting the aesthetic qualities of surrounding uses.— The size, height and distance allowed between signs vary by district, taking into account traffic speeds and types of uses in each district.— Refer to ~~Tables A and B~~ for Permitted Signs to determine whether or not a sign is allowed in the following districts and what specific requirements may apply.— In addition to specific requirements for each district, signs must comply with all other sections of the Veneta Sign Code.

(a) Highway 126 Corridor District:— All property zoned Highway C commercial, Community Commercial, Industrial-C commercial, Light Industrial, Medium Industrial, and Public F facilities and Parks, which abut Highway 126; ~~except residential uses.~~

(b) Business District(s):— All property zoned Highway C commercial, Community Commercial, ~~residential/commercial,~~ Industrial-C commercial, Light Industrial, Medium Industrial, and Public F facilities and Parks which do not abut Highway 126; ~~except residential uses.~~

(c) Residential District:— All property zoned R rural R residential, G general R residential or S single-family R residential.— Also includes residential uses in the R residential-C commercial zone. The Residential District has two sub-districts: Single-Family Residential and Multi-Family Residential.

(d) Downtown District: All property zoned Broadway Commercial and Residential-Commercial, except residential uses. Signs in the Downtown District should be human-scale and directed primarily at people walking and biking, in addition to people driving.

If property is visible from a state highway, a permit from the Oregon Department of Transportation (ODOT) may be required in addition to any city permits.

(4) Authorization of Similar Signs.—The Building or Planning Official may permit in a particular sign district a type of sign not specifically listed in the Veneta Sign Code, provided the sign is of the same general type as the signs permitted there by code. The decision of the building and planning official may be appealed to the Planning Commission using procedures specified in Section 2.07 of this ordinance.

(5) Prohibited Signs. Any sign not exempted or allowed pursuant to the Veneta Sign Code, except by approval of variance, is not permitted. The following signs are prohibited:

Commented [CD5]: Removed prohibition of plastic signs and message/letter boards (in the Downtown District).

(a) Sign cabinets in the Downtown District.

(b) Roof signs as defined in the Veneta Sign Code.

(c) Signs or devices that move; appear to move; have moving parts or can move by wind or other means; or display flashing, intermittent, scintillating or varying degree of intensity lights including LCD and similar screen type displays (flags and time/temperature signs excepted).

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(d) Strings of lights and "neon type" tubing used to outline or border any feature of the building are not permissible. (Neon tubing is allowed in the actual composition of a sign.)

(e) Strings of pennants, tinsel and lights except for grand openings and holiday lights (from November 15 to January 15).

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(f) Building Signs which project more than six (6) inches above the roof of a building.

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(g) Signs that may be confused with public traffic signs or highway identification signs, or graphically appear similar to these types of signs.—This includes, but is not limited to, signs which use the words "stop, slow, caution, look, danger" or any other word, phrase, symbol or character that may mislead or confuse vehicle operators.

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(h) Any signs (except blade signs) located on or above public rights-of-way without written consent of the applicable jurisdiction.

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(i) Signs placed on, affixed to, or painted on any motor vehicle, trailer or other mobile structure which is inoperable or not registered, licensed and insured for use on public highways.

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(j) Unsafe or illegal signs as defined by the Veneta Sign Code.

(k) Internally illuminated signs in the residential district, except address or name

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plates.

(l) Signs which exceed this Code's size, distance, or height restrictions, or conflict with any other provision of the Veneta Sign Code.

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(6) Temporary Signs.— There is no limit to the size or number of temporary signs allowed on a lot or parcel, except as indicated in Table 5.15 for specific types of temporary signs (such as election signs, real estate signs and garage sale signs). Unless otherwise specified, a temporary sign may only be displayed for ~~up to~~ 30 days or less per calendar year. — Signs that will be displayed for more than 30 days per year are considered "portable signs" and require a permit (see Table 5.15). Although no permit is required for a temporary sign, the Building and Planning Official must be notified of any temporary signs not listed in Table 5.15, for tracking purposes. — The placement of temporary signs must conform to the requirements listed in the Veneta Sign Code.

(7) Permitted Signs.— Table 5.15 below list the types of signs which are allowed within the three designated sign districts. — In addition to the conditions listed in these tables, all signs must comply with all other applicable sections of the Veneta Sign Code.

DRAFT

Type of Sign	Table of Permitted Signs							
	Hwy 126		Business District		Single Family Residential		Multi Family Residential	
	Permitted	Requires Permit	Permitted	Requires Permit	Permitted	Requires Permit	Permitted	Requires Permit
Free-standing or Monument Signs	Y	Y	Y	Y	N	N/A	Y	Y
	Max Height: 35' - Max Size: 100 sq.ft.	1 per lot or parcel Max Height: 20' - Max Size: 64 sq.ft.	1 per lot or parcel Max Height: 20' - Max Size: 64 sq.ft.				1 per lot or parcel Max Height: 20' - Max Size: 64 sq.ft.	
Building Signs	Y	Y	Y	Y	N	N/A	Y	Y
	Total area of all building signs shall not exceed 6% of buildings footprint (sq.ft.)	Total area of all building signs shall not exceed 6% of buildings footprint (sq.ft.)	Total area of all building signs shall not exceed 6% of buildings footprint (sq.ft.)				Total area of all building signs shall not exceed 6% of buildings footprint (sq.ft.)	
Subdivision Identification Signs	N	N/A	N	N/A	Y	Y	N	N/A
					1 Free-standing or monument sign Max Height: 20' Max Size: 32 sq.ft.			
Portable Signs	Y	Y	Y	Y	N	N/A	Y	Y
	Total area of all building signs shall not exceed 6% of buildings footprint (sq.ft.)	Total area of all building signs shall not exceed 6% of buildings footprint (sq.ft.)	Total area of all building signs shall not exceed 6% of buildings footprint (sq.ft.)				Total area of all building signs shall not exceed 6% of buildings footprint (sq.ft.)	
Flags	Y	N	Y	N	Y	Y	Y	N
	Maximum Height: 35' Maximum Size: 20 sq.ft.		Maximum Height: 35' Maximum Size: 20 sq.ft.		Maximum Height: 35' Maximum Size: 20 sq.ft.		Maximum Height: 35' Maximum Size: 20 sq.ft.	
Election Signs	Y	N	Y	N	Y	N	Y	N
	Time Limit (see definition) Maximum Size: 32 sq.ft.		Time Limit (see definition) Maximum Size: 12 sq.ft.		Time Limit (see definition) Maximum Size: 4 sq.ft.		Time Limit (see definition) Maximum Size: 4 sq.ft.	
Real Estate or Construction Signs	Y	N	Y	N	Y	N	Y	N
	Time Limit (see definition) 1 per lot - Maximum Size: 36 sq.ft.		Time Limit (see definition) 1 per lot - Maximum Size: 36 sq.ft.		Time Limit (see definition) 1 per lot - Maximum Size: 4 sq.ft.		Time Limit (see definition) 1 per lot - Maximum Size: 36 sq.ft.	
Driveway Entrance/Exit Signs	Y	N	Y	N	Y	N	Y	N
	Maximum Height: 2 1/2 ft.		Maximum Height: 2 1/2 ft.		Maximum Height: 2 1/2 ft.		Maximum Height: 2 1/2 ft.	
Address Plates	Y	N	Y	N	Y	N	Y	N
	Maximum Size: 1 sq.ft.		Maximum Size: 1 sq.ft.		Maximum Size: 1 sq.ft.		Maximum Size: 1 sq.ft.	
Directional Signs	Y	N	Y	N	Y	N	Y	N
	Maximum Size: 2 sq.ft.		Maximum Size: 2 sq.ft.		Maximum Size: 2 sq.ft.		Maximum Size: 2 sq.ft.	
Blade Signs	Y	N	Y	N	Y	N	Y	N
	1 per business entrance Maximum Size: 6 sq.ft.		1 per business entrance Maximum Size: 6 sq.ft.					
Public Sign	Y	N	Y	N	Y	N	Y	N
Window Signs	Y	N	Y	N	Y	N	Y	N
Holiday lights, decorations, and banners	Y	N	Y	N	Y	N	Y	N
On-site Information Signs	Y	N	Y	N	Y	N	Y	N
Murals	Y	N	Y	N	Y	N	Y	N
Garage, Yard or Estate Sale Signs	N	N	N	N	Y	N	Y	N
Warning Signs	Y	N	Y	N	Y	N	Y	N
Name Plates/Sign Bands	N	N	N	N	Y	N	Y	N

Current Rules Next Update: 2025

TABLE A: Permitted Signs

Type of Sign	Highway 126 Corridor District		Business District		Downtown District		Residential District	
	Permitted	Requires Permit	Permitted	Requires Permit	Permitted	Requires Permit	Permitted	Requires Permit
Free-Standing or Monument Signs	Y	Y	Y	Y	Y	Y	Y	Y
	1 per lot or parcel. Max height: 35 ft. Max size: 100 sq. ft.		1 per lot or parcel. Max height: 20 ft. Max size: 64 sq. ft.		1 per lot or parcel. No plastic signs. No sign cabinets. Max height: 8 ft. Max size: 20 sq. ft.		1 per subdivision. Max height: 20 ft. Max size: 32 sq. ft.	
Building Signs	Y	Y	Y	Y	Y	Y	Y	Y
	Total area of all building signs shall not exceed 6% of building's footprint (sq. ft.)		Total area of all building signs shall not exceed 6% of building's footprint (sq. ft.)		Total area of all building signs shall not exceed 6% of building's footprint (sq. ft.) No plastic signs. No sign cabinets.		Total area of all building signs shall not exceed 6% of building's footprint (sq. ft.)	
Portable Signs	Y	Y	Y	Y	Y	Y	Y	Y
	1 per street frontage. Max height: 42 inches Max width: 30 inches		1 per street frontage. Max height: 42 inches Max width: 30 inches		1 per street frontage. Max height: 42 inches Max width: 30 inches		1 per street frontage. Max height: 42 inches Max width: 30 inches	
Temporary Signs	N	N/A	N	N/A	N	N/A	N	N/A
	Time & size limits (see definition). 1 sandwich board, sidewalk sign, or curb sign per street frontage.		Time & size limits (see definition). 1 sandwich board, sidewalk sign, or curb sign per street frontage.		Time & size limits (see definition). 1 sandwich board, sidewalk sign, or curb sign per street frontage.		Time & size limits (see definition). 1 sandwich board, sidewalk sign, or curb sign per street frontage.	
Flags (no height or size restrictions on the National or State flags)	Y	N	Y	N	Y	N	Y	N
	Max height: 35 ft. Max size: 20 sq. ft.		Max height: 35 ft. Max size: 20 sq. ft.		Max height: 35 ft. Max size: 20 sq. ft.		Max height: 35 ft. Max size: 20 sq. ft.	
Election Signs	Y	N	Y	N	Y	N	Y	N
	Time limit (see definition) Max size: 32 sq. ft.		Time limit (see definition) Max size: 12 sq. ft.		Time limit (see definition) Max size: 4 sq. ft.		Time limit (see definition) Max size: 4 sq. ft.	
Real Estate or Construction Signs	Y	N	Y	N	Y	N	Y	N
	Time limit (see definition). 1 per lot. Max size: 36 sq. ft.		Time limit (see definition). 1 per lot. Max size: 36 sq. ft.		Time limit (see definition). 1 per lot. Max size: 36 sq. ft.		Time limit (see definition). 1 per lot. Max size: 36 sq. ft.	
Driveway Entrance/Exit Signs	Y	N	Y	N	Y	N	Y	N
	Max height: 2 ½ ft.		Max height: 2 ½ ft.		Max height: 2 ½ ft.		Max height: 2 ½ ft.	
Address Plates	Y	N	Y	N	Y	N	Y	N
	Max size: 1 sq. ft.		Max size: 1 sq. ft.		Max size: 1 sq. ft.		Max size: 1 sq. ft.	
Directional Signs	Y	N	Y	N	Y	N	Y	N
	Max size: 2 sq. ft.		Max size: 2 sq. ft.		Max size: 2 sq. ft.		Max size: 2 sq. ft.	
Blade Signs	Y	N	Y	N	Y	N	Y	N
	1 per business entrance. Max size: 6 sq. ft.		1 per business entrance. Max size: 6 sq. ft.		1 per business entrance. Max size: 6 sq. ft.		1 per business entrance. Max size: 6 sq. ft.	
Public Sign	Y	N	Y	N	Y	N	Y	N
	Y	N	Y	N	Y	N	Y	N
Window Signs Holiday Lights, Decorations, And Banners	Y	N	Y	N	Y	N	Y	N
	Y	N	Y	N	Y	N	Y	N
On-Site Information Signs	Y	N	Y	N	Y	N	Y	N
	Y	N	Y	N	Y	N	Y	N
Murals	Y	N	Y	N	Y	N	Y	N
	N	N/A	N	N/A	N	N/A	Y	N
Garage, Yard, & Estate Sale Signs	Y	N	Y	N	Y	N	Y	N
	Y	N	Y	N	Y	N	Y	N

Commented [CD6]: No addition. This would allow the existing flag in the West Lane Shopping Center.

(8) Sign Permits.

(a) A sign permit is required in each of the following instances:

1. Upon the erection of any new sign except signs specifically listed in Table 5.15 as signs not requiring a permit.
2. To make structural or electrical alteration to an existing sign, including a change in the size, shape, materials or location.
3. To replace a pre-existing sign.

(b) Information required for a sign permit:

1. A drawing to scale shall be submitted which indicates fully the material, color, dimensions, size, shape and height above grade. The drawing shall show the structural elements of the proposed sign and supporting structure(s) and any other information needed to show that the sign will not interfere with traffic safety, public health, or general welfare.
 - a. Building Signs: The diagram shall show where the sign will be attached to the building, including the distance the sign will project from the wall to which it is attached and the height above the finished ground surface over which it is mounted.
 - b. Free-standing Signs: In addition to the diagram a site plan shall be submitted which shows the placement of the sign on the property with relation to property lines, driveways, sidewalks, parking areas and buildings.
2. The size and types of all other permitted signs located on the applicant's building or property.
3. For free-standing signs, the applicant shall show the distance, measured in feet, to free-standing signs on adjacent lots.

(c) In addition to a sign permit, all illuminated signs require a City of Veneta electrical permit.

(d) A permit shall expire if a sign is not installed, as approved, within 180 days from the date of approval. Reapplication shall include a new, fully completed application form and a new application fee.

(9) Permit Fees. Sign permit fees which are due and payable upon receipt of a permit shall be set by separate resolution adopted by the council.

(10) Placement of Signs. In addition to requirements of the sign district in which a sign

is located, placement of signs must comply with the following:

- (a) No signs in excess of 2½ feet in height shall be placed in the vision clearance area as described in Section 5.03 or within ten (10) feet of driveways.—A portion of the sign area, excluding the base or supporting structure, may extend into the vision clearance area or within ten (10) feet of a driveway, provided it is at least eight (8) feet above grade.
 - (b) No sign or portion thereof shall be erected within a future street right-of-way unless and until an agreement is recorded stipulating that when street improvements are made the sign will be removed or relocated at no expense to the City.
 - (c) No sign or portion thereof shall be erected within public utility easements.
 - (d) No sign or portion thereof shall be placed where it obstructs ingress or egress through any door, window, fire escape, or like facility required or designated for safety or emergency use.
 - (e) No sign shall interfere with on-site traffic, bicycle or pedestrian circulation.
 - (f) No sign may be placed where it hides from view any official traffic sign or signal.
 - (g) No sign or portion thereof shall extend beyond any property line of the premises on which such sign is located.
 - (h) No sign projecting from a building may be less than eight (8) feet above the ground over which it projects and may not interfere with traffic circulation or public safety.
- (11) Calculating Sign and Wall Areas.—The total area for building signs shall not exceed the area permitted in this sign district in which the building is located.—The area shall include all signs attached to, projecting from, erected against or painted on a wall or portion of a wall, including any fascia, awning, canopy or marquee attached to the wall, which is visible to the public.—If any sign painted on a roof or attached to a fence is visible and intended to be read from a public right-of-way, the total area of the roof painting or fence sign shall be included in the total area permitted for building signs.—The total area permitted for building signs may be divided into multiple signs or used for one single sign and may also be used for portable signs.
- (12) Vehicle Signs.—The City does not regulate signs placed on, affixed to, or painted on any operable motor vehicle, trailer or other mobile structure which is registered, licensed and insured for use on public highways.

(13) Illuminated Signs.—Illuminated signs, except those listed ~~in~~ as Prohibited Signs, are permitted in all sign districts.—In addition to the requirements of the sign district in which the sign is located, illuminated signs must comply with the following:

- (a) No sign may be illuminated or use lighting where such lighting is directed at any portion of a traveled street or will otherwise cause glare or impair the vision of the driver of a motor vehicle or otherwise interfere with the operation thereof.
- (b) No sign may be illuminated or use lighting which causes a direct glare on adjacent properties.
- (c) External illumination shall be shielded so that the light source elements are not directly visible from a residential use which is adjacent to or across a street from the source of illumination.

(14) Sign Maintenance.—Signs and supporting structures shall be maintained to protect public safety and to prevent deterioration.—Sign maintenance includes copy changes, painting, repainting, cleaning and normal maintenance and repair but does not include a structural or electrical change.

(15) Unsafe or Illegal Signs.—Any sign determined by the Building or Planning Official to be an unsafe or illegal sign is subject to the following:

- (a) If the Building or Planning Official finds that any sign is unsafe or illegal, enforcement action shall be taken as prescribed in Section 2.10.—Failure to remove or alter said sign as directed shall subject the permittee or property owner to the penalties prescribed in Section 2.10.
- (b) The Building and Planning Official may remove or cause to be removed any sign which is so unsafe or insecure it constitutes a real and immediate danger to persons or property.
- (c) Any sign removed because it has been determined to be unsafe or illegal shall not be re-established until a valid permit has been issued.

(16) Non-Conforming Signs.

- (a) A non-conforming sign may continue to be used until altered, replaced, modified or moved at which time the sign shall be brought into conformance with all provisions of the Veneta Sign Code.
- (b) General maintenance, repair and copy changes which do not add to the size or shape of the sign shall be permitted.

(c) If a non-conforming sign is totally or substantially destroyed, a future sign on the site shall comply with the provisions of the sign district in which the property is located.

| (17) Variations.— A request for a variance must comply with Article 10.— Variations will not be granted where the following sign regulations are involved:

(a) Prohibited Signs

(b) Abatement of unsafe signs

(c) Construction and Maintenance standards of the Uniform Sign Code

(d) Placement of a sign in the Clear Vision Area

| (18) General Exemption.— All public signs are exempt from the Veneta Sign Code.

City of Veneta
M E M O R A N D U M

Date: August 2, 2016
To: Planning Commission
From: Lisa Garbett, Associate Planner
Subject: Administrative Decisions (June & July 2016) as of July 19, 2016

End of May

1 – Backyard Chicken Permit (Denied per VLDO Section 5.30(1)(c), *“No chickens are allowed on properties occupied by multi-family housing, including duplexes”* (88147 4th Street)

1 – Type A Tree Permit (24798 Bolton Hill Road)

June

1 – Pre-Development Conference (Assessor’s Map/ Tax Lot No. Assessor’s Map/ Tax Lot No’s: 17-05-31-00-00400, 17-05-31-00-00501 and 17-05-31-34-00602)

Proposed Uses: The project (Sarto Village) is described as a “mix of housing options for seniors who are 55+ in age” consisting of detached and attached Single Family Residential units and a Residential Facility consisting of Independent, Assisted and Memory Care units.

1 – Pre-Development Meeting (24917 W. Broadway)

Proposed Uses: Business services and Professional/ business offices

1 – Type B Tree Permit (88093 5th Street)

2 – Type A Tree Permit (24767 Dawn Court and 25275 Woodberry)

1 – Temporary Use Permit Renewal (TNT Fireworks stand at the West Lane Shopping Center)

4 – Building Permits (3 new single family residential and 1 residential addition)\

July N/A

Link to Land Use Decisions on City Website:

<http://www.venetaoregon.gov/planning/page/land-use-decisions>