Note: Anyone wishing to speak at any Transportation Commission meeting is encouraged to do so. If you wish to speak, please rise and, after you have been recognized by the Chair, give your name and complete address for the record. You will then be allowed to speak. Please note the public testimony may be limited by the Chair.

ASHLAND TRANSPORTATION COMMISSION October 17, 2019

AGENDA

- I. CALL TO ORDER: 6:00 PM, Civic Center Council Chambers, 1175 E. Main Street
- II. ANNOUNCEMENTS
- III. CONSENT AGENDA

A. Approval of Minutes: September 19, 2019

- IV. <u>PUBLIC FORUM</u> (6:05-6:20)
- V. <u>ACCIDENT REPORT</u> (6:20-6:30)
- VI. NEW BUSINESS

A. None

- VII. OLD BUSINESS
 - A. RVTD-Ashland Transit Enhancements (6:30-7:00, no action, RVTD to provide update of status of transit enhancements for Ashland)
 - > RVTD to provide update on demand response micro transit pilot and I5 express
 - B. Traffic Calming Program Updated Draft (7:00-7:30, action required, review final draft edits and discuss next steps)
 - > Based on previous discussion staff has updated the Traffic Calming Program draft per Commission motion and consensus.
 - C. West Village Subdivision-Traffic Calming (7:30-7:50, action required, review conceptual site plan for potential traffic calming actions and make recommendation to public works on actions if any)
 - > Discuss proposed transportation network of new subdivision
- VIII. TASK LIST (If time allows)

A. Discuss current action item list

VII. FOLLOW UP ITEMS

A. Bike Map Subcommittee

- VIII. INFORMATIONAL ITEMS (If time allows)
 - A. Transportation System Plan Solicitation Update
 - B. Transportation. Growth and Management "Revitalize Downtown Ashland" update
- IX. COMMISSION OPEN DISCUSSION (If time allows)
- X. FUTURE AGENDA TOPICS
 - A. MUTCD 4-way stop sign training
 - B. Crosswalk Policy
- XI. ADJOURNMENT: 8:00 PM

Next Meeting Date: November 21, 2019 Meeting

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Public Works Office at 488-5587 (TTY phone number 1 800 735 2900). Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to the meeting (28 CFR 35.102-35.104 ADA Title I).





Transportation Commission Contact List as of October 2019

ASHLAND TRANSPORTATION COMMISSION MINUTES September 19, 2019

These minutes are pending approval by this Commission

CALL TO ORDER:

Borgerson called the meeting to order at 6:02 p.m.

Commissioners Present: Katharine Danner, Bruce Borgerson, Linda Peterson Adams, Joe Graf, Derrick Claypool-

Barnes, Corinne Vièville, Mark Brouillard

Commissioners Absent: None Council Liaison Absent: Julie Akins

Staff Present: Scott Fleury, Taina Glick, Steve MacLennan

ANNOUNCEMENTS

None

CONSENT AGENDA

Approval of Minutes: August 22, 2019

Commissioners Danner/Graf m/s to approve minutes as amended.

All ayes. Minutes approved.

PUBLIC FORUM

Bob Burton Ashland, OR

Spoke of traffic traveling too fast and difficulty seeing pedestrians on Strawberry Ln and requests addition of speed limit signs. He is concerned about the safety of street users as well as pets and wildlife.

Louise Shawkat Ashland, OR

Expressed pleasure with the sharrows on Main St. and requested the addition of pedestrian signage.

ACCIDENT REPORT

Accident Report

Officer Maclennan reported that August was another slow month. MacLennan described an incident where a cyclist ran a red light at E Main St and S Mountain Ave.

NEW BUSINESS

Middle Clay St Improvement Grant Application Letter of Support audio begins at 21:30

Fleury described City staff working with Jackson County Public Works to establish a plan for the County to bring the road to compliance with City standards after which jurisdictional transfer would take place. Improvements would be grant funded with the City providing project management and the County providing match funds. Local residents and City Council have provided letters of support for this project and jurisdictional transfer. Fleury elaborated on the grant application process and the possibility of expediting the project.

Vièville wondered when the City would find out if they received the grant. Fleury felt 4-6 months from October 1. Vieville inquired about ditches on the road. Brouillard was concerned about parking, especially near the intersection with Siskiyou Blvd. Vieville stated the letter is nicely written. Fleury pointed out that Peterson Adams suggested two edits: the date and replacing "commissions" with "commission." Graf moved to support Bruce sending this letter. Danner seconded. All ayes. Motion passed.

ž.		
		el e

ASHLAND TRANSPORTATION COMMISSION MINUTES September 19, 2019

These minutes are pending approval by this Commission

OLD BUSINESS audio begins at 33.15

RVTD – Ashland Transit Enhancements

Fleury indicated RVTD has ordered 2 vans for the transit enhancements. Anticipated start of the express is near the start of 2020. Fleury indicated the express route began September 16 and that riders must have a touch pass app or a pay card. Vièville inquired about fare. Fleury indicated the rate is the same as route 10. Commissioners discussed demand response and other service models. Graf inquired if RVTD was able to get hybrid plug in vehicles. Borgerson responded that the vehicles are hybrid but not plug-ins. Reservations can be made by app, phone, or website and will need at least 30-minute response time.

Transportation Growth and Management "Revitalize Downtown Ashland" update audio begins at 48:07 Kick off meetings for TAC and Citizen Advisory Committee are Thursday Sept 26 and will be noticed on the City website. First formal meeting will be October 23 at the Siskiyou Room in the Community Development building. Graf expressed concern about the focus being on trees, CEAP, and historic instead of multi-modal and that cyclists and pedestrians are not well represented on the CAC. Fleury discussed the potential for jurisdictional transfer of the downtown corridor. Vièville wondered why A St was not included in the area being discussed. Fleury indicated that A St was taken out because a CIP improvement is already planned for that section of road. Graf suggested ensuring that changes can actually happen before accepting jurisdictional transfer of any roadways. Further suggesting that ODOT should update or install signals prior to transfer if it were to occur. Peterson Adams feels that business owners are over-represented on the CAC.

Traffic Calming Program Updated Draft audio begins at 1:08:00

Borgerson felt the radar trailer does not need to be included in the public brochure, rather should be deployed at the discretion of the Police Department or this commission. He expressed concern over dragging out program and wondered about compressing the timeline for data gathering measures. Brouillard wondered about scoring of locations with shadowing issues.

Brouillard suggested increasing the value of accidents compared to speeding. Claypool-Barnes believed more criteria are needed.

Brouillard moved to double the point value for accidents. Peterson Adams seconded. Claypool Barnes reminded commissioners that there are multiple reasons why people crash and that we should be ranking crashes highly. Fleury requested clarification suggesting consideration of accidents that can be affected by traffic calming measures. Borgerson wondered how many speed related accidents there were and agreed with the importance of considering what may have caused the accidents. He supports doubling the point value of accidents. Graf pointed out that doubling the points puts higher value on accidents than a regular occurrence of speeding in excess of 10 mph and felt that 8 points would no longer be an appropriate minimum. Vièville asked for clarification on the point system and values.

Graf moved to amend the motion to also raise the threshold score to 11 for Phase 1 solutions. Danner seconded. Vièville questioned changing the threshold. Graf clarified that the logic of 11 which is roughly half of the total possible points. Claypool Barnes disagreed with increasing the threshold opining that the more phase 1 solutions that can be implemented the better and suggested that a threshold is not needed. He felt that the metrics did not need to be defined at this meeting and that a whole meeting be scheduled just to address scoring metrics. Borgerson also disagrees with increasing threshold. Aye: Graf Nay: Borgerson, Brouillard, Claypool-Barnes, Peterson Adams, Danner, Vieville. Amendment to motion failed 1:6.

ASHLAND TRANSPORTATION COMMISSION MINUTES September 19, 2019

These minutes are pending approval by this Commission

Danner inquired questioned the time span utilized for accidents opposed to that used for ADT. Vote on original motion Aye: Brouillard, Peterson Adams, Borgerson, Claypool Barnes, Vièville. Nay: Graf, Danner. Motion passed: 4:2.

Graf questioned if Borgerson's suggestion of a 3-phase plan was being considered. Commissioners agreed with the clarification that soft measures are in phase 1 and more permanent measures, some that may involve CIP or TSP changes occur in phase 2. Commissioners agreed to move everything but targeted enforcement and radar trailer into phase 2. Claypool-Barnes believed this program should be introduced to City Council strategically and the group expressed frustration about the continued lack of attendance by the council liaison. Claypool Barnes opined that more metrics are needed to encourage City Council to create a budget for the program. Most commissioners agreed to add temporary signage and an informational campaign to phase 1 measures. Claypool-Barnes disagreed with addition of an informational campaign. Continued discussion ensued about the vegetation control procedures and which phase is appropriate for the topic.

INFORMATIONAL ITEMS

None

FUTURE AGENDA TOPICS
MUTCD 4-way stop sign training
Crosswalk Policy

ADJOURNMENT: 8:05 pm

Respectfully submitted, Taina Glick Public Works Administrative Assistant

Memo

ASHLAND

Date:

October 10, 2019

From:

Scott A. Fleury

To:

Transportation Commission

RE:

RVTD Transit Enhancements

BACKGROUND:

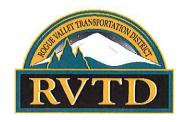
RVTD staff to attend and present on transit enhancements for the City of Ashland. Specifically, the demand response micro-transit pilot project and the I5 express route between Medford and Ashland.

RVTD is scheduled to present before the Ashland City Council at the October 14th Study Session Meeting and provide generally the same information as the TC will receive.

Informational materials attached.

CONCLUSION:

No action required this is an informational update to the Commission. Questions are encouraged.



RVTD's Ashland Demand Response MicroTransit Pilot Project

What is MicroTransit?

Per the Federal Transit Administration's definition, MicroTransit is a "multi-passenger transportation services ... that serve passengers using dynamically generated routes, and may expect passengers to make their way to and from common pick-up or drop-off points. Vehicles can range from large SUVs to vans to shuttle buses. Because they provide transit-like service but on a smaller, more flexible scale, these new services have been referred to as MicroTransit." [TCRP Research Report 188]

MicroTransit utilizes intelligent pieces of computer software to create shared trips among riders using same day reservations. Dynamic routing and pooling allow vehicles to operate efficiently and with relatively short wait times.

Rogue Valley Connector- Ashland

Vehicles

The Rogue Valley Connector (RVC) — Ashland will utilize three total vehicles, two active and one spare. The service will be ADA accessible using one Ford Transit Hybrids with a capacity of seven with one wheelchair slot with the second vehicle having a capacity of 13 with no wheelchair slot. In addition to being ADA accessible the vehicles will be outfitted with a bus door to make passenger loading for older adults easier and come equipped with child safety seats.

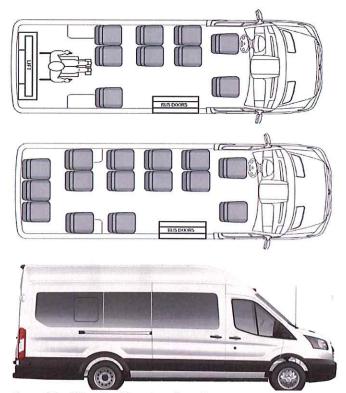
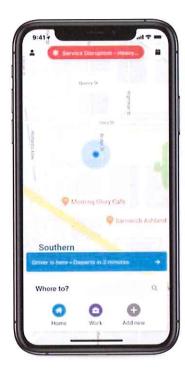


Figure 1 Ford Transit with seat configuration

Software

RVC Ashland will allow for same-day booking of trips predominately through the use of smartphone app. Although most trips are anticipated to be booked through the app, the service will also be available to passengers who do not have a smartphone by going to the RVC website or by calling into an RVTD dispatcher. Prior to booking a passenger will be given the estimated wait time to their vehicle and will be able to choose whether to accept that trip or not. Once they have accepted the trip, passengers will be able to pay their fare through the app or choose to pay once the vehicle arrives. The app will give walking directions to the pickup location or a passenger's destination and will also show the vehicle's estimated time of arrival as well as real-time physical location.

The software's robust backend creates a system that routes the vehicle in real-time to maximize pickup opportunities for passengers while keeping trip times short. The driver interface requires little to no interaction which ensures drivers are not getting distracted while driving. RVTD staff is able to generate various reports on standard service metrics as well as passenger activity which can help to improve the service model over time.







Service Model

The MicroTransit model operating in Ashland will allow for trips to begin and end at any residential area within city limits, but passengers must be picked up or dropped off at "preferred stops" within non-residential areas. This service model allows a passenger to be picked up infront of their home and dropped off at an activity center, like the Ashland Senior Center or Ashland Community Hospital. To return home a passenger will wait at the "preferred stop" to be picked up and will then be dropped off infront of their home. While on the vehicle other passengers may be picked up but only if the extra pickup does not increase the original travel time by more than 1.5x.

If a passenger desires to travel to a destination outside of the city of Ashland, they will be dropped off at the nearest preferred fixed route stop to their origin. A free transfer will then be given to the passenger to allow for frictionless boarding on the fixed-route system.

Service Area

RVTD's MicroTransit service will be available to any passenger within the city limits of Ashland. All trips must begin and end within the city limits but are not limited to any specific neighborhood.

Fare

The Ashland RVC will operate using the same fare structure as RVTD's fixed route system. A single ride on the service will be either \$2 for a full fare or \$1 for reduced fare. Passengers will have the option to either pay cash or use their TouchPass products upon boarding the vehicle. Upon request a free transfer will be given to passengers which will allow them to board a fixed route vehicle without paying another fare.

Funding

Oregon House Bill 2017 established dedicated funds for transit agencies across the state to improve or expand public transportation using a state payroll tax equal to one-tenth of 1 percent. 90 percent of the Statewide Transportation Improvement Fund (STIF) are distributed to agencies across the state as formula funds, while 9 percent of the remaining is allocated to a competitive grant process. RVTD was successful in their application to receive competitive grant funding for this pilot project. State funding for this pilot project will continue until the grant expires on June 30th, 2021.

Demonstrated Need

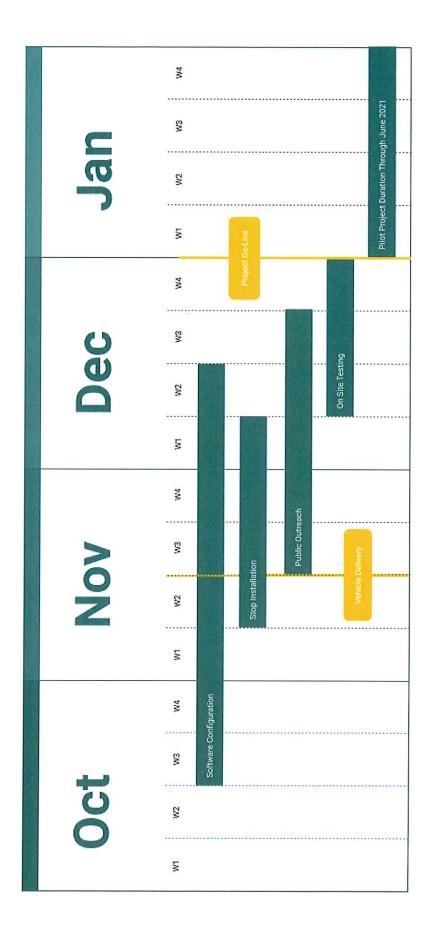
RVTD's existing fixed route service in Ashland has proven to be successful despite its limited geography. The physical geography and existing street network of Ashland have inhibited the expansion of additional fixed route service. Although ridership is high on Ashland's fixed route vehicles, RVTD's analysis has found that large amounts of the city's population are not currently served by transit. The MicroTransit model which utilizes smaller vehicles will be able to access neighborhoods and destinations that have previously been unavailable due to the size of traditional fixed route vehicles.

Valley Lift

The Ashland RVC will operate as a general public demand response service, not a paratransit vehicle. Existing paratransit services will continue to operate normally for passengers in Ashland. In the spirit of equitable transit, RVTD will be expanding the boundary for Valley Lift to mirror the service area for the MicroTransit system. The Valley Lift service will now be expanding to include the Mountain Meadows and Skylark communities.

Timeline

RVTD is anticipating the service to begin in late December of 2019 or early January of 2020. The service will continue in its pilot stage with grant funding through June 30th, 2021. Prior to the project becoming available to the public, there will be weeks of onsite testing and software configuration.



Memo

ASHLAND

Date:

October 10, 2019

From:

Scott A. Fleury

To:

Transportation Commission

RE:

Traffic Calming Program Con't

BACKGROUND CONTINUED:

At the September Transportation Commission meeting the group discussed how to efficiently break the phases of the traffic calming program into passive and active.

At the September meeting the Commission took one formal action and agreed upon consensus to reprioritize all phase 1 actions into phase 2 except for enforcement and placement of the radar speed trailer.

Action:

Brouillard moved to double the point value of accidents in section 2.2. Passed Graf amended motion to raise threshold score to 11 for phase 1 solutions. Failed

Staff has updated the Traffic Calming Program pilot document per the discussion, and it is attached for continued deliberation. Staff has highlighted sections that have changed based on discussions from the past months meeting.

CONCLUSION:

Commission should continue to discuss the program and attached draft created by staff with the goal to formalize a pilot program.

City of Ashland Traffic Calming and Safety Improvement Program

TRAFFIC-CALMED NEIGHBOURHOOD

Acknowledgements
City of Ashland Council
Mayor John Stromberg
Dennis Slattery
Rich Rosenthal
Stef Seffinger
Tonya Graham
Julie Akins
Stephen Jensen

City of Ashland Transportation Commission
Bruce Borgerson
Derrick Claypool-Barnes
Corrine Vievielle
Joseph Graf
Linda Peterson Adams
Katharine Danner
Mark Brouillard

Table of Contents

Section 1: Introduction	1
Section 1.1 Traffic Calming and Safety Improvement Program Overview	1
Section 1.2 Program Timelines	1
Section 2: Project Request and Review Process	5
Section 2.1: Petition & Pre-application Process	5
Section 2.2: Phase Two Project Ranking and Acceptance	5
A total score of 8 points is required to move forward with any phase two solution	ó
For continued evaluation as part of phase 2 ranking and implementation other factors may be considered including, but not limited to the following:	5
Section 2.3: Phase Two "Neighborhood Meeting"	5
Section 2.4: Phase One Immediate Actions	ó
Radar Speed Trailer	ó
Police Enforcement	7
Temporary Speed Signage	7
Section 2.4: Phase Two	
Traffic Safety Campaign	3
Vegetation and Vision Clearance	3
Signage9)
Pavement Markings9)
Intersection Painting)
Curb Extensions)
In Street Speed Reduction Measures	Ĺ
Diverters)
GatewayTreatments)
Stationary Radar Signs	7
Other	7
Monitoring	
Appendixes	3
Appendix A: Petition & Pre-application)

Section 1: Introduction

Section 1.1 Traffic Calming and Safety Improvement Program Overview

The City of Ashland's Traffic Calming and Safety Improvement Program is part of the City's commitment to the safety and livability of our neighborhoods and shall incorporate the goals, policies and objectives of the City's comprehensive plan. The program is a collaborative effort of City staff the Transportation Commission and residents to reduce the impacts of traffic and provide for a safe roadway network for all users. Through active participation by area residents, the City can identify the problem, plan the approach, implement solutions and evaluate the effectiveness.

The program is open to all roadways within the City and works in two distinct phases. The initial phase focuses on data collection and the passive easily implementable measures of law enforcement, radar speed trailer placement and temporary signage. If phase one does not prove effective in meeting the defined goals for traffic calming or safety improvement, then a project can move to phase two. Phase two is for engineering and construction of physical treatments to address the defined problem.

Section 1.2 Program Timelines

Figure 1 shows the general timeline for activities for the City's Traffic Calming and Safety Improvement Program. Overall timeline can be affected by staff availability and scheduling of public meetings.

Figure 1:

ACTVITIES	PLAN START (MONTHS)	PLAN DURATION (MONTHS)	PERIODS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Petition and Pre-Application	Î.	3	
Data Collection	3	2	
Data Review and Project Scoring	5	2	
Public Hearing	7	2	
Phase One Implementation	8	4	
Phase One Monitoring	12	3	
Phase Two Application	15	2	Willian annum ann
Phase Two Implementation	17	4	
Phase Two Monitoring	21	3	· · · · · · · · · · · · · · · · · · ·

Section 2: Project Request and Review Process

Section 2.1: Petition & Pre-application Process

The petition and pre-application process are meant to create neighborhood support for potential Traffic Calming and Safety Improvement Program implementation within a neighborhood or project area. The petition and pre-application are attached as Appendix A.

The petition and pre-application require a minimum of five (5) adult signatures* from distinct addresses within the neighborhood that sign in favor of entering into the Traffic Calming and Safety Improvement Program. The application also requires summary details of the issues encountered within the neighborhood.

Once a verified petition is submitted to Public Works Engineering, the City will define the initial study area and begin data collection. After data collection is complete the City will move forward with targeted enforcement, speed trailer placement and distribution of temporary yard signage if requested.

The study area will initially be influenced by street system configuration, location of schools, hospitals, and/or business centers. Data collection within the study area will include review of accident reports and capturing speed and traffic volumes.

Section 2.2: Phase Two Project Ranking and Acceptance

The City of Ashland has established criteria for phase two improvements that must be met to proceed forward. Data from the collection phase will be used to score and rank the project.

Criteria	Definition	Value	Points
Average Daily Traffic	Traffic volume over a 24-hour	< 500	0
(ADT)	period	500-1000	1
	A CONTROL OF THE CONT	1000-1500	2
		1500-2000	3
		2000-3000	4
		>3000	5
Posted speed limit	The speed at or below	1-5	2
25 MPH-residential	which 85 percent of all vehicles are	5-10	4
85% Threshold	observed to travel under free-	10+	6
	flowing conditions. This is		
	considered what roadway users		
	consider to be a safe travel speed		
	based on roadway conditions		
Accidents	Number of reported accidents,	1	2
	correctable by traffic calming on the	2	4
	project street within the last 5	3	6
	years	4	8
		>5	10

^{*}Signature must be from resident who has property rights control over distinct address.

A total score of 8 points is required to move forward with any phase two solution.

For continued evaluation as part of phase 2 ranking and implementation other factors may be considered including, but not limited to the following:

Public and private facilities on or near the project street, such as schools, parks, community houses, senior housing, etc., which generate a substantial amount of pedestrian traffic
Access to transit within ¼ mile of project street
Existing facilities
Existing Facilitates

Section 2.3: Phase Two "Neighborhood Meeting"

Phase two begins once projects are ranked and the need for traffic calming and safety improvements is verified. Public Works will verify if the minimum criteria are met to proceed forward with any phase two actions. If the project fails to meet the minimum established criteria it will not move forward to phase two, but the City will still place the radar speed trailer onsite perform periodic targeted enforcement and offer free temporary speed signs.

To move forward with any phase two improvements the minimum scoring based on the established criteria shall be 8 points.

Resident support for a traffic calming and safety program is inherent to its success. To develop full support and consensus on project goals and potential solutions, a public hearing will be held by the Transportation Commission at a regularly scheduled meeting. The public hearing will consist of a report prepared by Engineering staff, public input from neighborhood residents and discussion by the Commission. Based on all information provided and discussion The Commission can recommend to the Director of Public Works potential phase two solutions for implementation. A majority of phase 2 solutions have budget ramifications that must be accounted for in the timing and approval of solutions.

Section 2.4: Phase One Immediate Actions

After data collection is completed the City will move forward with two directly implementable soft measures for traffic calming. The two items below represent passive traffic calming measures that will be implemented with after a successful traffic calming petition is verified by Public Works.

Radar Speed Trailer

The Ashland Police Department can place a portable trailer mounted radar unit that detects vehicular speed and displays it on a digital reader board. The trailer shows the drivers actual

speed vs. the posted speed limit. The unit employed by the City of Ashland also collects driver speeds and volumes that can be compared to the previously collected information.



Police Enforcement

After data collection phase is completed the Ashland Police Department can use the information collected to perform targeted enforcement within study area during known times of excessive speed.



Temporary Speed Signage

The City offers free of charge "keep kids alive drive 25" temporary yard signs. The signs can be picked up at 51 Winburn Way at the Community Development Building. A total of five signs will be given to residents for each block/neighborhood request.



Section 2.4: Phase Two

After completion of the data collection phase and immediate implementable actions have been enacted, the City and Transportation Commission will rank all projects in the program and schedule public hearings with neighborhood groups to discuss the potential of phase two actions. A clear set of goals with respect to traffic calming actions should be established in the public meeting, which will enable the pursuit of solutions that match with defined goals. Phase two installations can be considered "pilot" or final in place solutions depending on the evolution of phase two.

Phase two begins

Traffic Safety Campaign

An information letter is prepared by the City and mailed to residents within the study area. The letter explains traffic volumes and speeds captured during data collection. The informational packet will also contain traffic calming features, traffic laws and bicycle and pedestrian safety information. The goal is to heighten traffic safety awareness within the project area.



Vegetation and Vision Clearance

Removal of vegetation that obscures site distance and lines creating a hazardous situation shall be considered as a phase two improvement. Removal shall be done by either homeowners or City forces depending on property ownership.



Signage

The addition of appropriate signage shall be considered, including additional speed limit signs, parking restrictions, and pedestrian and bicyclist informational signs.



Pavement Markings

The addition of pavement markings shall be considered. Markings can include centerlines, fog lines, identification of crossings and speed limits.



Intersection Painting

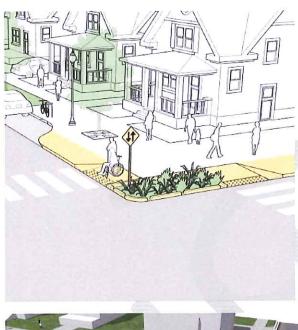
The City of Ashland has a permit approval process for intersection street painting on low volume residential roadways. Painted intersections help create a community identity and are a great way to organize your neighbors around a common goal. They may also have indirect effects on helping to slow traffic in your neighborhood by making drivers aware that residents take pride in their neighborhood, encouraging them to be more respectful while driving down your street.



Curb Extensions

Curb extensions visually and physically narrow the roadway, creating safer and shorter crossings for pedestrians while increasing the available space for street furniture, benches, plantings, and street trees. They may be implemented on downtown, neighborhood, and residential streets, large and small.

Curb extensions have multiple applications and may be segmented into various sub-categories, ranging from traffic calming to bus bulbs and midblock crossings.





(NACTO Image)

In Street Speed Reduction Measures

Median

Medians create a pinchpoints for traffic in the center of the roadway and can reduce pedestrian crossing distances.

Median refuge islands are protected spaces placed in the center of the street to facilitate bicycle and pedestrian crossings. Crossings of two-way streets are facilitated by allowing bicyclists and pedestrians to navigate only one direction of traffic at a time. Medians configured to protect cycle tracks can both facilitate crossings and function as two-stage turn queue boxes. See Two-Stage Turn Queue Boxes for guidance details.



(NACTO Image)

Pinchpoints

Chokers or <u>pinchpoints</u> restrict motorists from operating at high speeds on local streets and significantly expand the sidewalk realm for pedestrians.



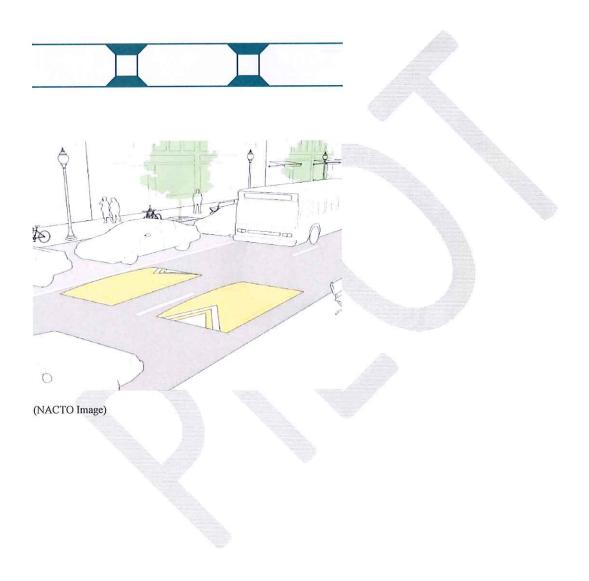
Chicane

Offset curb extensions on residential or low volume downtown streets create a chicane effect that slows traffic speeds considerably. Chicanes increase the amount of public space available on a corridor and can be activated using benches, bicycle parking, and other amenities.



Speed Hump/Cushion

Speed cushions are either speed humps or speed tables that include wheel cutouts to allow large vehicles to pass unaffected, while reducing passenger car speeds. They can be offset to allow unimpeded passage by emergency vehicles and are typically used on key emergency response routes. Speed cushions extend across one direction of travel from the centerline, with longitudinal gap provided to allow wide wheel base vehicles to avoid going over the hump.



Roundabout/Traffic Circle

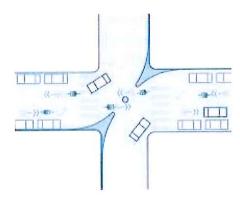
Mini roundabouts and neighborhood traffic circles¹ lower speeds at minor intersection crossings and are an ideal treatment for uncontrolled intersections.

Mini roundabouts may be installed using simple markings or raised islands but are best applied in conjunction with plantings that beautify the street and the surrounding neighborhood. Careful attention should be paid to the available lane width and turning radius used with traffic circles.



Diverters

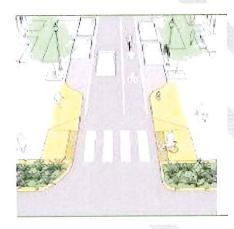
A traffic diverter breaks up the street grid while maintaining permeability for pedestrians and bicyclists.



(NACTO Image)

GatewayTreatments

Curb extensions are often applied at the mouth of an intersection. When installed at the entrance to a residential or low speed street, a curb extension is referred to as a "gateway" treatment and is intended to mark the transition to a slower speed street.



(NACTO Image)

Stationary Radar Signs

A radar speed sign is an interactive sign, that displays vehicle speed as motorists approach. The purpose of radar speed signs is to slow cars down by making drivers aware when they are driving at speeds above the posted limits. They are used as a traffic calming device in addition to or instead of physical devices such as speed humps, speed cushions, speed tables, and speed bumps.



Other

As transportation network solutions evolve so to can traffic calming and safety improvements. Other solutions may be brought to light during the analysis and public hearings that can be implemented and will not be disregarded if not specifically mentioned within this document.

Monitoring

After approved phase one activities have been implemented the City will monitor changes in driver behavior including speed and accident reduction. The monitoring phase will begin 4-6 months after the end of phase one activities.

The City and Ashland and its Transportation Commission would like to give thanks to the National Association of Transportation Officials (NACTO) for allowing the use of some images contained within this document.

Appendixes

Appendix A: Petition & Pre-application

Petition to Initiate Neighborhood Traffic Calming Program

Location:				
A resident of has requested initiation of the Concerns of on In order by at least 5 adult citizens representing separate propert and This level of neighborhood support is development of a traffic calming plan.	to begin the ies on	process, t	his petition between	on must be signed
Please sign the attached petition, include your address a support (yes) or oppose (no) this proposal. If this petition city of Ashland staff will collect data about traffic conditi Proposed Improvement Plan.	receives the ons in the id	necessary	neighbo	rhood support, the
Printed name:	Phone:			
Address:	9	Support		Oppose
Signature:		,	Date:	
	I pi			
Printed name:	Phone:			
Address:		Support		Oppose
Signature:			Date:	
Printed name:	Phone:			
Address:		Support		Oppose
Signature:			Date:	
Printed name:	Phone:			

Address:		Support		Oppose
Signature:			Date:	
Printed name:	Phone:			
Address:		Support		Oppose
Signature:		-	Date:	
Printed name:	Phone:			
Address:		Support		Oppose
Signature:			Date:	
Printed name:	Phone:			en de la companya de
Address:	***************************************	Support		Oppose
Signature:			Date:	1
Printed name:	Phone:			
Address:		Support		Oppose
Signature:			Date:	
			<i>ii.</i>	
Printed name:	Phone:			
Address:		Support		Oppose
Signature:			Date:	
Printed name:	Phone:			
Address:		Support	7	Oppose
Signature:			Date:	
	Í ==			
Printed name:	Phone:			

Memo

ASHLAND

Date:

October 10, 2019

From:

Scott A. Fleury

To:

Transportation Commission

Re:

West Village Subdivision Transportation Network

BACKGROUND:

The Transportation Commission has received previous citizen input regarding the transportation network and safety concerns for the proposed West Village Subdivision that will connect Vansant Street to Randy Street and Otis Street. The project was recently approved by the Planning Commission at the September 10th regular meeting.

Project Description:

The subject property is currently vacant. Proposed development includes up to 42 residential units composed of cottage houses. The development is estimated to generate 396 ADT with 31 trips occurring during the a.m. peak hour and 42 trips during the p.m. peak hour.

The Planning Commission meeting packet can be found here: https://www.ashland.or.us/files/2019-09-10 PC PACKET-web.pdf

Planning Commission Minutes:

B. PLANNING ACTION: PA-T2-2019-00013

SUBJECT PROPERTY: Otis Street (39 1E Map 05AD Tax Lot #200)

APPLICANT: Rogue Planning & Development Services, LLC

OWNER: Taylored Elements/CMK Development LLC

DESCRIPTION: A request for Outline Plan subdivision approval under the Performance Standards Options Chapter to develop a 27-lot subdivision for the vacant 5.92-acre parcel (Tax Lot #200) at the current western terminuses of Otis and Randy Streets, west of Elizabeth Avenue. The proposed subdivision would include 23 single family residential lots, two common open space parcels and two larger lots intended for future Cottage Housing developments totaling 19 cottages. COMPREHENSIVE PLAN DESIGNATION: Single-Family Residential; ZONING: R-1-5-P; ASSESSOR'S MAP #: 391E05AD; TAX LOT: #200.

Chair Pearce summarized the rules of the Public Hearing.

Ex Parte Contact

Commissioner Harper declared no ex parte contact. Commissioner Brown, Dawkins and Norton had no ex parte contact and one site visit. Commissioner Mindlin, Thompson and Pearce declared no ex parte contact and had driven by the site.

Staff Report

Senior Planner Derek Severson provided a presentation (see attached) that included:

- The Proposal.
- Vicinity Map.

- Conceptual Grading & Drainage.
- Example Elevation.

- Site Plan.
- Site Tree Preservation.
- Plan Site Survey Plan.
- Landscaped Site Plan.
- Utility Plan.

- Open Space.
- Irrigation Plan.
- Transportation Impact Analysis (TIA) Thresholds.
- TIA Conclusions.

Staff recommended approval with the Conditions in the draft findings.

Questions of Staff

- Concerns regarding the multi-use path that dead ended.
 - Having multi-use paths dead end was typical in build-outs for incremental connectivity. This would be another incremental extension.
- Would another transportation impact analysis be needed for the cottage housing developments?
 - o No. The TIA presented in the packet included the cottage housing.
- Staff described the location of the four open space areas.
- The potential for a wetland to exist on the property.
 - o There were no wetlands indicated on the local or national inventory. The applicants had submitted a Wetland Determination Request (see attached) to the Oregon Department of State Lands.

Applicant's Presentation

Amy Gunter/Rogue Planning & Development/Kerry KenCairn/KenCairn Landscape Architecture/Ms. Gunter introduced the owner, Kyle Taylor from Taylored Elements and the project team. Mr. Taylor had held a neighborhood meeting in August in response to concerns from neighbors that had gone well.

Ms. Gunter described the subject property. Highlights included that Lot 20 would come back to add an accessory dwelling unit. Lot 19 had a solar envelope. Lots along the north side of the development would most likely be single story units due to solar requirements and an agreement with the present neighbors. The agreement would also increase the side yard setback from 6-feet to 10-feet to the neighbor's property on Vansant Street. A presentation (see attached) included the following:

- Street Design and Layout.
- Tree Protection Preservation.

The applicant distributed the street tree proposal for Randy Street (see attached).

- Example of Street Tree Planting Plan.
- Open Space Plan.
- Utilities/Infrastructure/Stormwater.
- Traffic.
- Conceptual Utility Plan.
- · Conceptual Grading.
- Potential Wetland.

Questions of the Applicant

- When was the last time the site was used for agriculture?
 - o The land was still in use and currently had an agricultural exemption because it was a hay field. There were TID rights on the property.
- Open Space 1 was not a residential lot.
 - o The lot would serve as a buffer from the house on Randy Street and provide a storm water detention feature.
- Where was the culvert located?
 - o It was located in one of the common areas. If it was determined there was a wetland, the applicants would modify the plan and the culvert would allow room to comply with the requirements and provide setbacks. They would amend the final plan to include water protection.

Commissioner Harper wanted to add a Condition that the path be built out in the open space during Phase I. Ms. Gunter objected and explained it would have to happen during Phase II. The objection was having to install a water meter just to meter the open space. She confirmed there was no connection from Randy Street, just Otis Street.

Public Testimony - None

Rebuttal by Applicant - None

Commissioner Dawkins/Thompson m/s to extend the Public Hearing to 10:00 p.m. Voice Vote: ALL AYES.

Deliberations & Decision

Mr. Severson explained the small portion of land on Billings Ranch Road was a building lot.

The Commission discussed a letter submitted by Dave Kanner (see attached). One of Mr. Kanner's concerns was a sharp curve from Randy Street to Vansant Street. He suggested the City either bump out the curb, place a sign or add a warning light. Currently, there was a Condition in regards to the stop sign where the applicant would work with the Public Works Department to determine whether stop signs were necessary at the intersection of Randy Street and Otis Street. Mr. Severson thought staff could rework the Condition to include traffic calming or safety measures needed at the connection to Vansant Street prior to the final plan. Commissioner Dawkins recommended having a 3-way stop at Randy Street and Otis Street.

Commissioner Brown/Dawkins m/s to approve PA-T2-2019-00013 and recommend a 3-way stop at Randy Street and Otis Street. DISCUSSION: Commissioner Dawkins thought it was a straight forward proposal. Commissioner Harper supported the project. He was concerned with the build-out of the common path on Otis Street. Mr. Severson explained 50% of the value of recreational amenities had to be built in Phase I before 50% of the units. All amenities would be built before two thirds of the units were finished. The applicant could clarify that at final plan. Commissioner Harper wanted to know how the path would connect during Phase I. Chair Pearce confirmed two thirds of the build-out was 16 units. The path would be built during Phase I as well. The road would not. Chair Peace was concerned with the wetland. If there was a possible wetland, a wetland study should have been included instead of a Wetland Determination

Request. However, he was comfortable with it being a Condition. Roll Call Vote: Commissioner Mindlin, Pearce, Norton, Brown, Thompson, Dawkins and Harper, YES. Motion passed.

Traffic Impact Analysis:

The traffic impact analysis and preliminary subdivision layout drawings are attached for reference.

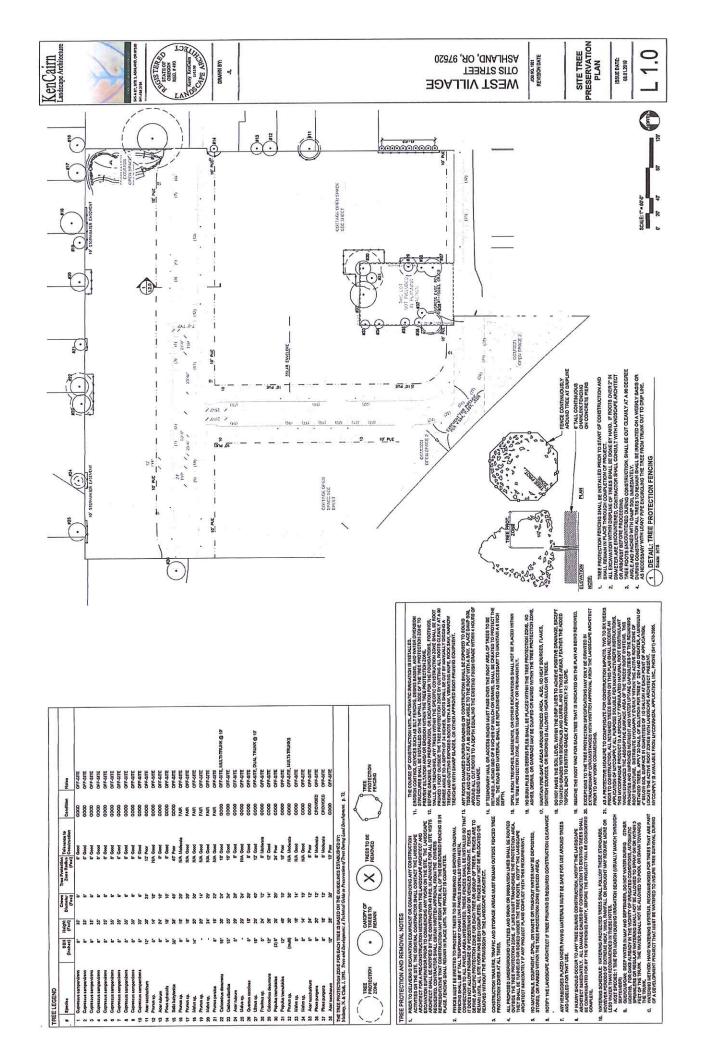
Initial Traffic Calming Design:

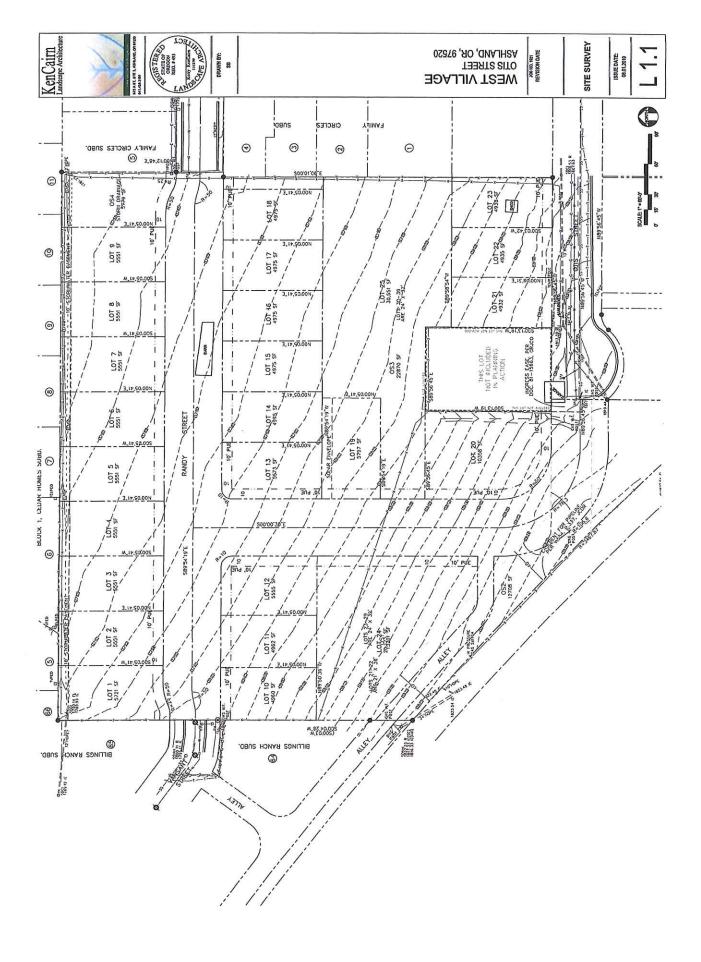
The design initially proposes curb bulb outs at the at the crossing of the extension of Randy Street and the connection to the new street along with a 3-way stop as recommended by the Planning Commission. Curb bulb outs are a known traffic calming feature and one of the defined mechanisms in the City's pilot traffic calming program document.

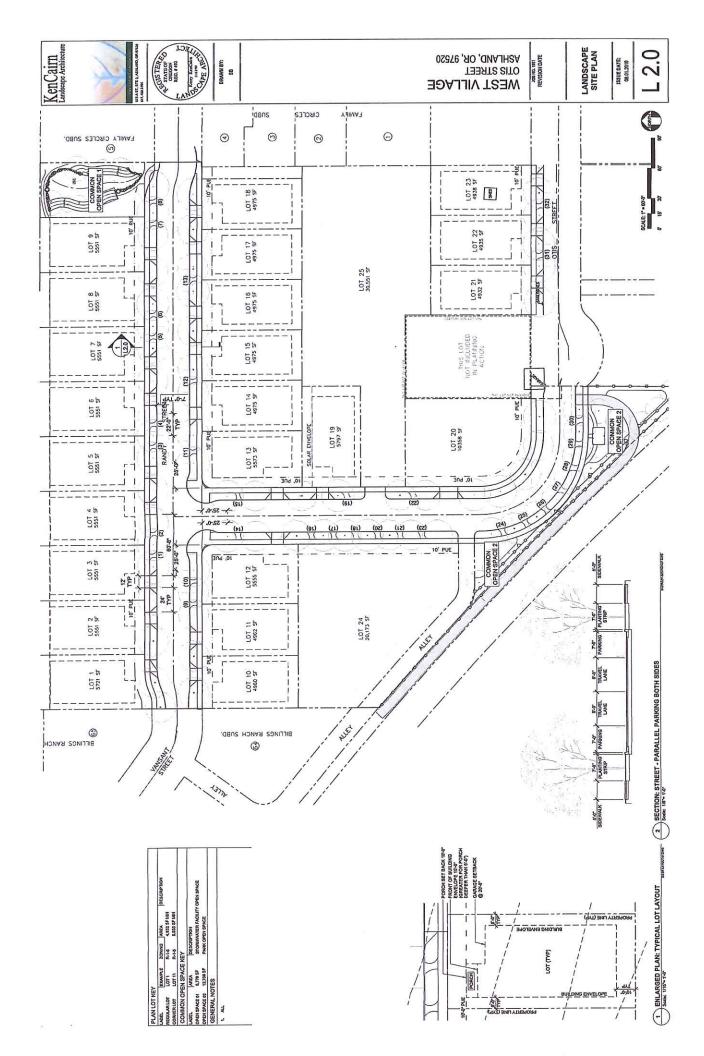
Staff also requested the Traffic Engineer perform a yield sign analysis for Elizabeth Street as their would be new traffic patterns across Elizabeth that have not been experienced before. At time of this staff report the yield analysis has not been completed, but if available by meeting time staff will discuss.

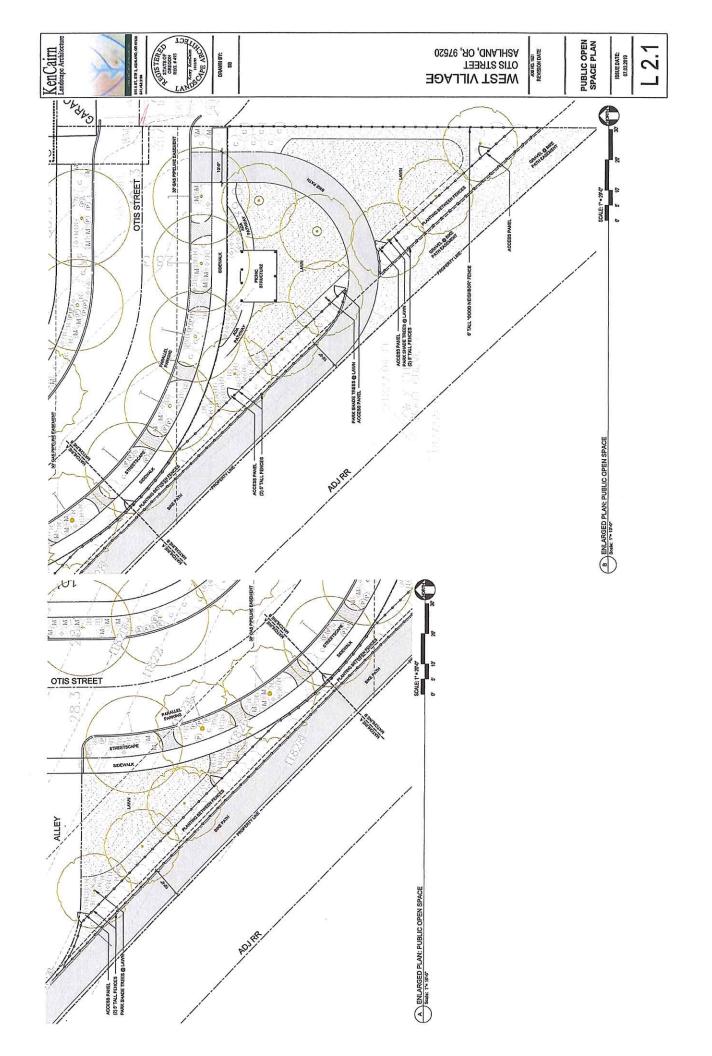
CONCLUSION:

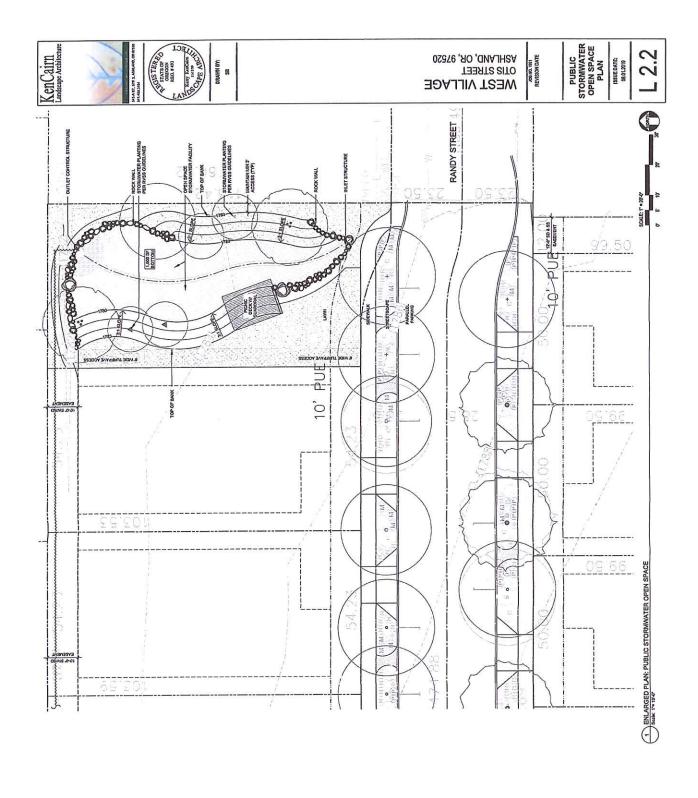
The Commission should review and discuss the transportation network and make recommendations with respect to traffic calming, if any to Public Works Engineering as part of their internal review prior to final approvals.

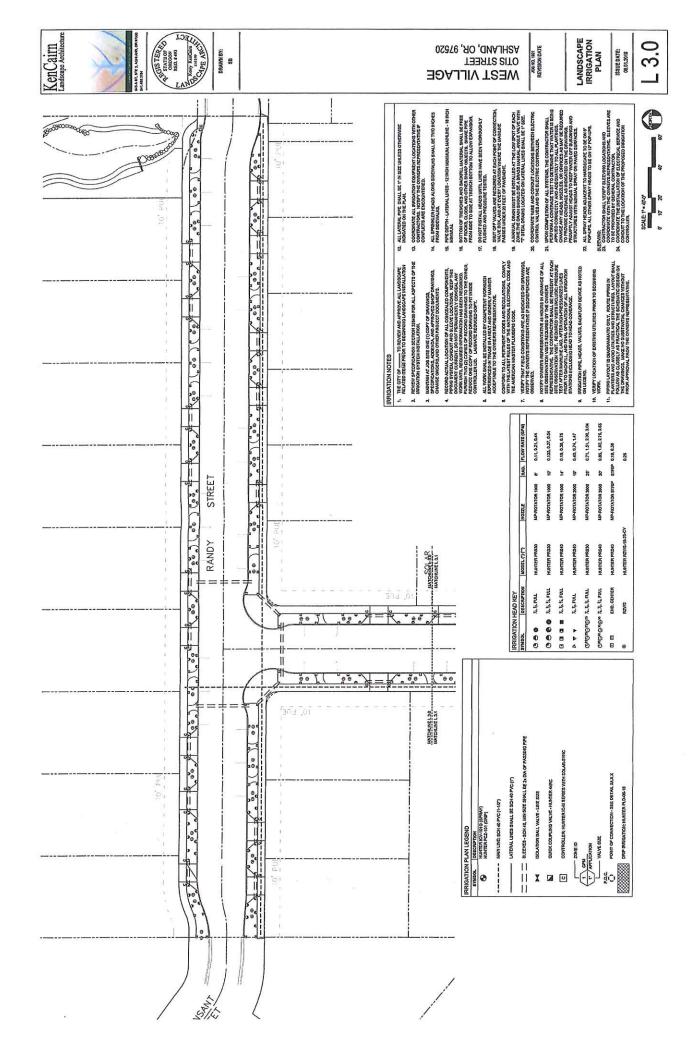


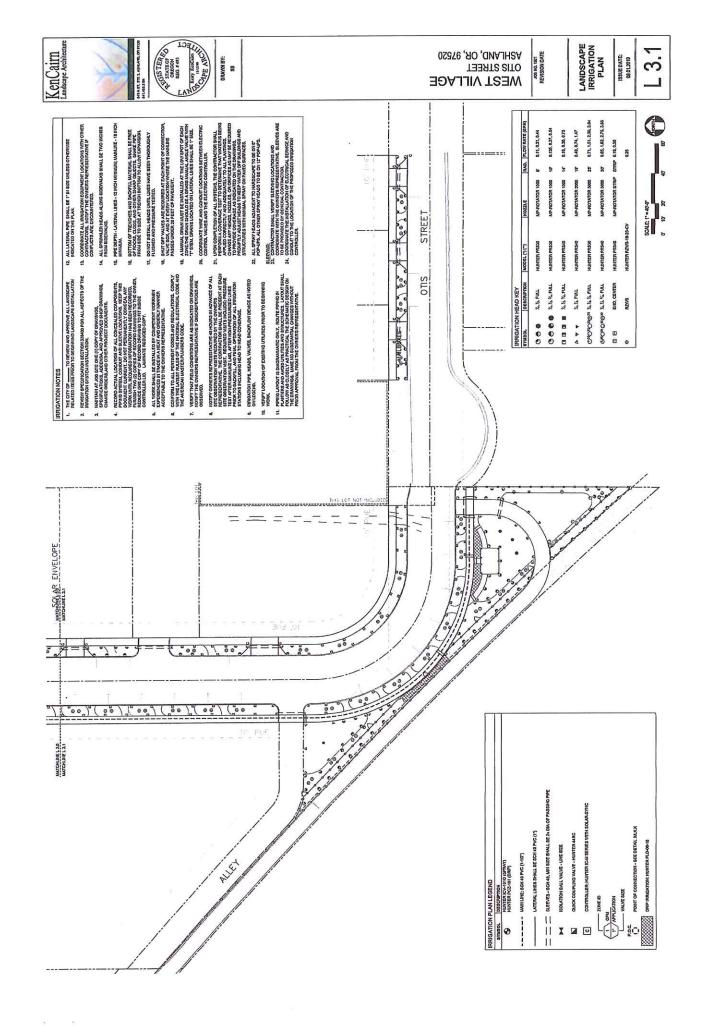


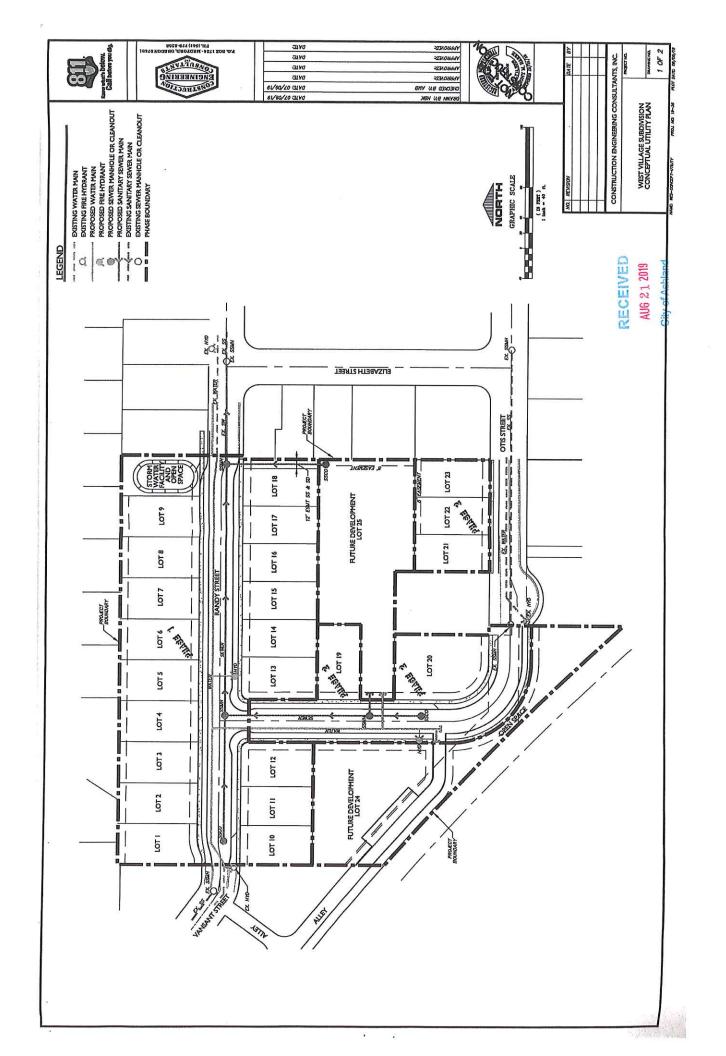


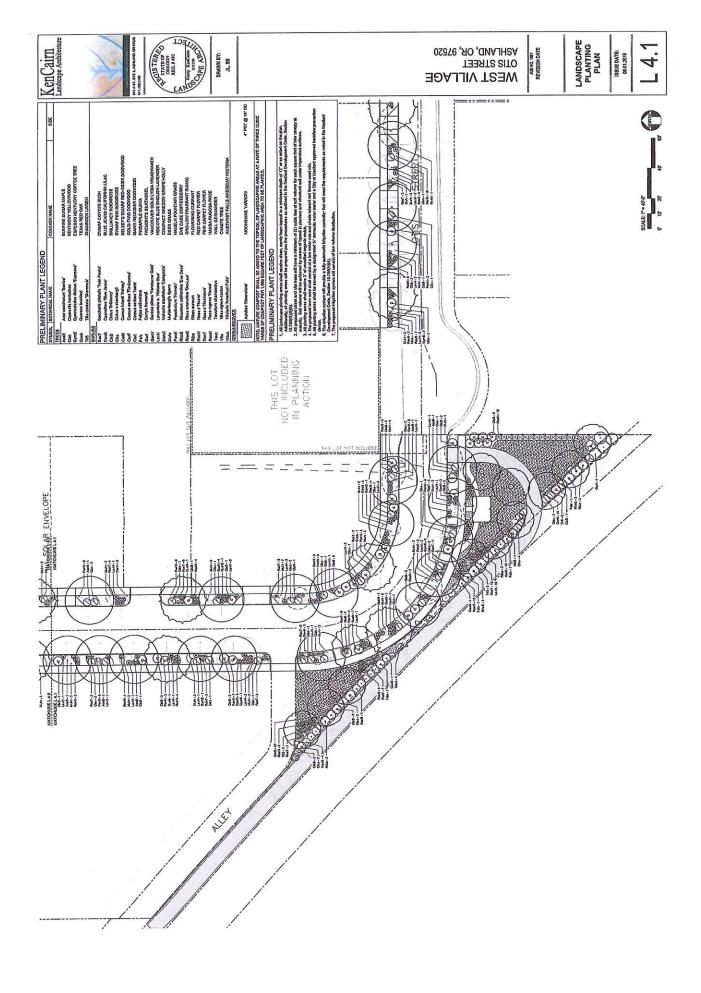










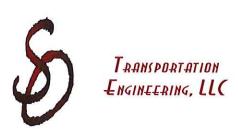


42-Unit Subdivision Development

Traffic Impact Analysis

August 20, 2019

Prepared By:



SOUTHERN OREGON TRANSPORTATION ENGINEERING, LLC

42-Unit Subdivision Development

Traffic Impact Analysis

August 20, 2019

Prepared By:

SOUTHERN OREGON TRANSPORTATION ENGINEERING, LLC



TABLE OF CONTENTS

I. EXECUTIVE SUMMARY	5
II. INTRODUCTION	6
Background	
Project Location	
Project Description	
III. EXISTING YEAR 2019 NO-BUILD CONDITIONS	9
Site Condition	
Roadway Characteristics	
Traffic Counts	
Intersection Capacity and Level of Service	
Operating Standards	
Year 2019 No-Build Intersection Operations	
Year 2019 No-Build 95th Percentile Queue Lengths	12
Crash History	12
Pedestrian, Bicycle, and Transit Facilities	13
Local Street Circulation	13
85th Percentile Speeds	
IV. DESIGN YEAR 2022 NO-BUILD CONDITIONS	15
Design Year No-Build Description	
Design Year No-Build Intersection Operations	15
Design Year No-Build 95 th Percentile Queue Lengths	
V. OVER TRANSPOR	4.0
V. SITE TRAFFIC	
Trip Generation	
Trip Distribution and Assignment	18
VI. DESIGN YEAR 2022 BUILD CONDITIONS	20
Design Year Build Description	
Design Year Build Intersection Operations	
Design Year Build 95th Percentile Queue Lengths	
VII. CONCLUSIONS	23

LIST OF TABLES

Table 1: Roadway Classifications and Descriptions9Table 2: HCM Level of Service Designations for Stop-Controlled Intersections11Table 3: Year 2019 No-Build Intersection Operations11Table 4: Year 2019 No-Build 95th Percentile Queue Lengths12Table 5: 85th Percentile Speeds14Table 6: Design Year 2022 No-Build Intersection Operations15Table 7: Design Year 2022 No-Build 95th Percentile Queue Lengths16Table 8: Development Trip Generations18Table 9: Design Year 2022 Build Intersection Operations20Table 10: Design Year 2022 Build 95th Percentile Queue Lengths21
FIGURES
FIGURE 1: Vicinity Map
<u>APPENDICES</u>
APPENDIX A: TRAFFIC COUNTS, SEASONAL ADJUSTMENTS, VOLUME DEVELOPMENT
APPENDIX B: CRASH DATA, ITE TRIP GENERATION DATA
APPENDIX C: EXISTING YEAR 2019 NO-BUILD SYNCHRO AND SIMTRAFFIC OUTPUT
APPENDIX D: DESIGN YEAR 2022 NO-BUILD SYNCHRO AND SIMTRAFFIC OUTPUT
APPENDIX E: DESIGN YEAR 2022 BUILD SYNCHRO AND SIMTRAFFIC OUTPUT
APPENDIX F: SPEED STUDY
APPENDIX G: AGENCY REQUIREMENTS

I. EXECUTIVE SUMMARY

Summary

Southern Oregon Transportation Engineering, LLC prepared a traffic analysis for a proposed 42-unit residential subdivision in Ashland, Oregon. The subject property is located north of the Central Oregon & Pacific Railroad, at the western end of stubbed streets Otis Street and Randy Street. Proposed development includes up to 42 residential units but will likely not build out to this density.

Access to the site is provided to Randy Street, Otis Street, and through an extension of Vansant Street to the northwest. Proposed development is estimated to generate 396 average daily trips (ADT) with 31 trips occurring during the a.m. peak hour and 42 trips during the p.m. peak hour. No intersections are shown to meet the City's threshold of 50 peak hour trips, but five intersections were selected to address local impacts and circulation. These included Otis Street at Willow Street and Laurel Street, Randy Street at Laurel Street, Vansant Street at W Nevada Street, and Laurel Street at W. Nevada Street. Intersections were evaluated under existing year 2019 and design year 2022 no-build and build conditions to determine what impacts the proposed development may have on the transportation system.

Conclusions

The findings of the traffic impact analysis conclude that the proposed 42-unit residential subdivision can be approved on the transportation system without creating adverse operational impacts. Results of the analysis are as follows:

- 1. All study area intersections are shown to operate within performance standards under existing year 2019 and design year 2022 no-build and build conditions during both the a.m. and p.m. peak hours.
- 2. Study area intersection 95th percentile queue lengths were shown to stay within available link distances for all analysis scenarios.
- 3. There is no crash history in the area, nor any reported crashes at any of the study area intersections within the most recent five years.
- Speeding was evaluated in the study area and shown to be slightly high on Laurel Street.
 Additional signage and/or increased enforcement is recommended as a first step toward reducing speeds.
- 5. Re-routed traffic was considered likely on Otis Street, Randy Street, and Willow Street (south of Otis Street) as a result of the Vansant Street connection to the subject property. This was not shown to create capacity or safety concerns.

This analysis was undertaken to address issues of compliance with the City of Ashland Comprehensive Plan and Land Development Code. Based upon our findings, it is concluded that streets and intersections serving the subject property will accommodate projected a.m. and p.m. peak hour traffic volumes from the proposed 42-unit residential subdivision without degrading the performance of an existing or planned facility such that it would not meet the performance standard identified in the City's Transportation System Plan (TSP).

II. INTRODUCTION

Background

Southern Oregon Transportation Engineering, LLC prepared a traffic analysis for a proposed 42-unit residential subdivision on 5.92 acres in Ashland, Oregon. The subject property is located north of the Central Oregon & Pacific Railroad, at the western end of stubbed streets Otis Street and Randy Street. Proposed development includes up to 42 residential units by design year 2022.

A traffic analysis is required by the City of Ashland to address development impacts to the transportation system. The scope of the analysis includes evaluating development impacts within the study area under existing year 2019 and design year 2022 no-build and build conditions during the a.m. and p.m. peak hours. No study area intersections were reached with 50 peak hour trips, which is the threshold for when an intersection is required to be evaluated in accordance with the City's traffic impact analysis criteria, but five intersections in the site vicinity were selected to address impacts to the local area. These included:

- 1. Otis Street / Willow Street
- 2. Otis Street / Laurel Street
- 3. Randy Street / Laurel Street

- 4. Vansant Street / W Nevada Street
- 5. W. Nevada Street / Laurel Street

Access to the site is provided to Randy Street, Otis Street, and through an extension of Vansant Street to the northwest.

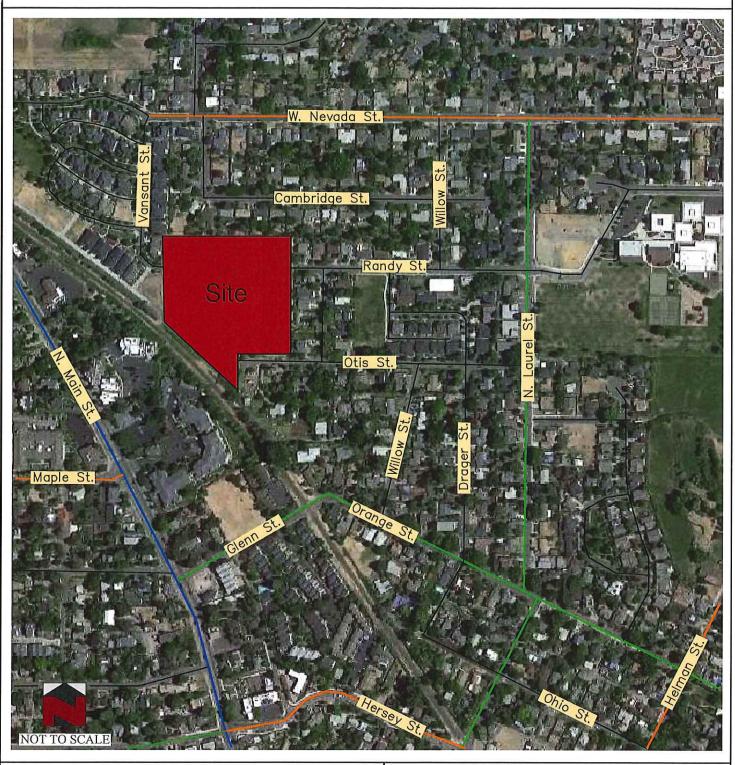
Project Location

The subject property is located 5.92 acres north of the Central Oregon & Pacific Railroad, west of Otis Street and Randy Street on Township 39S Range 1E Section 05AD, tax lot 200 in Ashland, Oregon. Refer to Figures 1 and 2 for a vicinity map and site plan.

Project Description

The subject property is currently vacant. Proposed development includes up to 42 residential units composed of cottage houses. The development is estimated to generate 396 ADT with 31 trips occurring during the a.m. peak hour and 42 trips during the p.m. peak hour.

Figure 1: Vicinity Map





SOUTHERN OREGON
TRANSPORTATION ENGINEERING, LLC

Medford, Oregon 97504 ph 541.941.4148 fax 541.535.6873 Kim.parducci@gmail.com 42-Unit Subdivision
Residential Development
Traffic Impact Analysis
Ashland, Oregon

Figure 2 : Site Plan





SOUTHERN OREGON TRANSPORTATION ENGINEERING, LLC

Medford, Oregon 97504 ph 541.941.4148 fax 541.535.6873 Kim.Parducci@gmail.com 42-Unit Subdivision
Residential Development
Traffic Impact Analysis
Ashland, Oregon

III. EXISTING YEAR 2019 NO-BUILD CONDITIONS

Site Conditions

The subject property is located north of the Central Oregon & Pacific Railroad, west of Otis Street and Randy Street, and is currently vacant. Access is provided to Otis Street, Randy Street, and through an extension of Vansant Street to the northwest.

Roadway Characteristics

The project study area includes intersections on Laurel Street, Otis Street, Randy Street, and W. Nevada Street. All study area streets are in the city limits and under City of Ashland jurisdiction. A summary of roadway classifications and descriptions is provided in Table 1.

Roadway	Jurisdiction	Functional Classification	Lanes	Posted Speed	Sidewalks	Bike Lanes
Laurel Street	City of Ashland	Neighborhood Collector	2	20 ¹ mph	Yes ²	No
W. Nevada Street	City of Ashland	Avenue	2	25 mph	Yes ³	No
Otis Street	City of Ashland	Neighborhood Street	2	25 mph	Yes ⁴	No
Randy Street	City of Ashland	Neighborhood Street	2	20-25 mph	Yes ⁵	No
Willow Street	City of Ashland	Neighborhood Street	2	25 mph	No	No
Vansant Street	City of Ashland	Neighborhood Street	2	25 mph	Yes	No

Notes:

Traffic Counts

Manual traffic counts were gathered by Southern Oregon Transportation Engineering in May of 2019 during the a.m. and p.m. peak periods (7:00-9:00am and 2:45-5:45pm) at study area intersections. The peak hours occurred from 7:30-8:30 a.m. and 2:45-3:45 p.m., during school drop off and pick up times. Count data was then seasonally adjusted using the ODOT 2017 Seasonal Trend Table to account for seasonal spikes in traffic. The seasonal adjustment applied to raw count data was 4.5% or a factor of 1.045, which created our year 2019 no-build traffic volumes. Refer to Figure 3 for year 2019 no-build traffic volumes during the a.m. and p.m. peak hours. Manual traffic counts and the ODOT Seasonal Trend Table are provided in Appendix A.

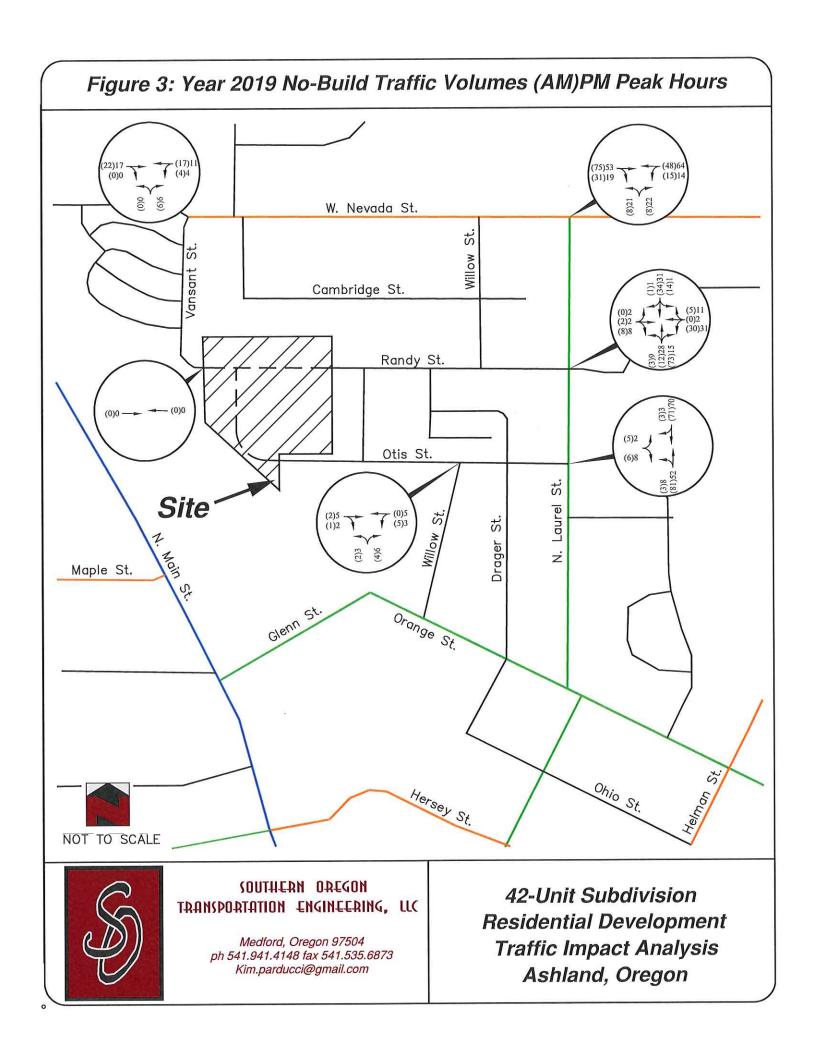
¹ Laurel St., north of Orange Ave. to north of Randy St., and Randy St. east of Laurel St. are within a school zone.

² Sidewalk is provided on the east side of Laurel St. and portions of the west side north of Randy St.

³ Sidewalk is provided on the south side of W. Nevada St. east and west of Laurel St.

⁴ Sidewalk is provided on the north side of Otis St. from Laurel St. to the west approximately 565 feet

⁵ Sidewalk is provided on the north side of Randy St. for 215 feet south of the site, then along the south side to Laurel St.



Intersection Capacity and Level of Service

Intersection capacity calculations were conducted utilizing the methodologies presented in the *Highway Capacity Manual (HCM)*, 6th Edition. Capacity and level of service calculations for two-way stop-controlled intersections were prepared using SYNCHRO 10 timing software.

Level of service quantifies the degree of comfort afforded to drivers as they travel through an intersection or along a roadway section, and is based on total delay, defined as the total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line. Level of service ranges from "A" to "F", with "A" indicating the most desirable condition (free-flow state) and "F" indicating an unsatisfactory condition (excessive congestion and long queue lengths). The *HCM* LOS designation for stop-controlled intersections are provided in Table 2.

able 2 – HCM Level of Service Designations for Stop-Controlled Intersections		
Level of Service	Delay Range	
A	< 10	
В	>10 – 15	
C	>15 - 25	
D	>25 – 35	
E	>35 - 50	
F	> 50	

Operating Standards

Study area intersections are all under City of Ashland jurisdiction. The City of Ashland performance standard for stop-controlled intersections is a LOS "D". Mitigation is required if proposed development causes a study area intersection to exceed the operational standard and is shown to operate worse than no-build conditions.

Year 2019 No-Build Intersection Operations

Study area intersections were evaluated under existing year 2019 no-build conditions during the a.m. and p.m. peak hours to provide a baseline for traffic conditions without the proposed subdivision development. Results are summarized in Table 3.

Intersection	Performance Standard	Traffic Control	AM Peak	PM Peak
Randy Street / Laurel Street	LOS D	AWSC	A, 7.9 sec. SB	A, 7.9 sec. EB
Willow Street / Otis Street	LOS D	TWSC	A, 8.5 sec. NB	A, 8.7 sec. NB
Otis Street / Laurel Street	LOS D	TWSC	A, 9.6 sec. EB	A, 9.1 sec. EB
Laurel Street / W. Nevada Street	LOS D	TWSC	A, 9.6 sec. NB	A, 9.5 sec. NB
Vansant Street / W. Nevada Street	LOS D	TWSC	A, 8.6 sec. NB	A, 8.8 sec. NB

LOS = Level of Service, TWSC = Two-way stop controlled, AWSC = All-way stop controlled

EB = eastbound, WB = westbound, NB = northbound, SB = southbound

Note: Exceeded performance standards are shown in bold, italic

Results of the analysis show all study area intersections operating acceptably (well within performance standards) under existing year 2019 no-build conditions during the a.m. and p.m. peak hours. Synchro output sheets are provided in Appendix C.

Year 2019 No-Build 95th Percentile Queue Lengths

Queuing is the stacking up of vehicles for a given lane movement and can have a significant effect on roadway safety and the overall operation of a transportation system. Long queue lengths in through lanes can block access to turn lanes, driveways, and minor street approaches, as well as spill back into upstream intersections. As a result of this, the estimation of queue lengths is an important aspect of the analysis process for determining how a transportation corridor operates.

Queue lengths are reported as the average, maximum, or 95th percentile queue length. The 95th percentile queue length is used for design purposes and is the queue length reported in this analysis. Five simulations were run and averaged in SimTraffic to determine 95th percentile queue lengths. Queues were evaluated at study area intersections under existing year 2019 no-build conditions. Queue lengths were rounded up to the nearest 25 feet (single vehicle length) and reported in Table 4 for the a.m. and p.m. peak hours.

Intersection / Movement	Available Link Distance (Ft)	AM Peak Queue Lengths (Ft)	PM Peak Queue Lengths (Ft)
Laurel St / Randy St			
EB L/T/R	350	50	50
WB L/T/R	600	50	50
NB L/T/R	350	75	50
SB L/T/R	550	50	50
Willow St / Otis St			
NB L/R	625	25	25
Laurel St / Otis St			
EB L/T/R	225	50	25
NB L/T/R	875	0	0
SB L/T/R	350	0	0
Laurel St / W. Nevada St			
EB T/R	325	0	0
WB L/T	250	25	25
NB L/R	550	50	50
Vansant St / W. Nevada St			
NB L/R	200	50	50

EB=eastbound, WB=westbound, NB=northbound, SB=southbound, L=left, T=Through, R=right Note: Exceeded performance standards are shown in bold, italic

Results of the queuing analysis show all study area intersection queue lengths stay within available link distances under existing year 2019 no-build conditions during both the a.m. and p.m. peak hours. Refer to Appendix C for a full queuing and blocking report.

Crash History

Crash data for the most recent 5-year period was provided from ODOT's crash analysis unit. Results were provided for the period of January 1, 2013 through December 31st, 2017. Crash data was analyzed to identify crash patterns that could be attributable to geometric or operational deficiencies, or crash trends of a specific type that would indicate the need for further investigation at an

intersection. Results showed no reported crashes at any study area intersection. In a look at roadway segments, there was one reported crash on Randy Street near Willow Street in 2014, involving a side-swipe to a parked vehicle. There was also one reported crash on W. Nevada Street near Glendower Street, similarly involving a side-swipe to a parked vehicle. Crash data is provided in Appendix B.

No further investigation is shown to be necessary at this time.

Pedestrian, Bicycle, and Transit Facilities

Sidewalks are currently provided on either the north or south side of Randy Street between the subject property and Laurel Street. This will be the main walking route to Helman Elementary School. Otis Street does not have sidewalk on either side of the street until Drager Street. From Drager Street to Laurel Street, sidewalk is provided on the north side of Otis Street. None of the streets in the study area currently have striped bike lanes. Streets surrounding the site are all local neighborhood streets, which don't normally have striped bike lanes due to low vehicular traffic volumes. W. Nevada Street and Laurel Street are higher order streets. Planned bicycle improvements in the City's Transportation System Plan (TSP) include making Laurel Street a bicycle boulevard between Orange Avenue and W. Nevada Street (B40) and adding striped bike lanes on W. Nevada Street from Vansant Street to N. Mountain Avenue (B3). Planned sidewalk improvements include filling in gaps in the existing sidewalk network along Laurel Street (P4). In the field, there were a significant amount of pedestrians observed on Laurel Street throughout the a.m. and p.m. peak periods, specifically during the Helman Elementary School a.m. and p.m. peak hours. Pedestrians were a mix of adults and children. Many adults were walking with children and often pushing strollers. There were also several runners along Laurel Street. Runners were observed to run along the shoulder of the street.

The nearest transit route is Route 10 provided by Rogue Valley Transit District (RVTD). Route 10 is a fixed-route that runs north-south along N. Main Street and connects Medford to Ashland via Phoenix and Talent. Route 10 continues through the downtown area and loops back on Walker Avenue and E. Main Street. Service is provided from approximately 5:00 a.m. to 10:00 p.m. Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturday. The route operates on 20-30 minute headways on weekdays and on a 60 minute headway on Saturday.

Local Street Circulation

The proposed 42-unit residential subdivision has access to Otis Street, Randy Street, and through a connection from Vansant Street to the northwest. All of the streets surrounding the site are local neighborhood streets, which act as feeders to higher order streets such as Laurel Street, Orange Avenue, and W. Nevada Street. The connection to Vansant Street to the northwest was a concern for the applicant because the assumption was that this connection would promote cut-through traffic. In looking at the site layout, we agree that traffic from the subdivision northwest of Vansant Street could likely re-route to Otis Street and Randy Street if their destination is to/from the south, southeast, southwest, or even to/from Helman Elementary School. This doesn't appear to have much of an impact, however, strictly based on the volume of traffic under consideration. The area west of the Vansant Street / W. Nevada Street contributes 49 a.m. trips and 38 p.m. trips on an average weekday to W. Nevada Street in total. We considered approximately half of that traffic re-routing through the proposed 42-unit subdivision, which is more than would be expected, and this amounted to 28 a.m. trips and 24 p.m. trips re-routing to/from Randy Street and Otis Street. The resulting impact is negligible from an operational standpoint because existing traffic volumes on Randy Street, Otis Street, Willow Street, and other local streets in this area are low to begin with. Willow Street was shown to carry 12 a.m. trips and 14 p.m. trips at Otis Street during each peak hour, respectively. Otis

Street carries 17 a.m. trips and 21 p.m. trips at Laurel Street, while Randy Street carries 14 a.m. trips and 24 p.m. trips. These local neighborhood streets are anticipated to carry 100-150 peak hour trips from a livability standpoint, but even this number is significantly lower than what they are actually designed to carry because the City's desirable volume of traffic on a local street is based on livability. In summary, if all of the re-routed trips (50% of the subdivision trips northwest of the property) were shown to use Willow Street, Otis Street, or Randy Street, those local streets would still be under capacity.

85th Percentile Speeds

Speeding within the study area was evaluated to address safety concerns. Speeds were measured on Otis Street, Willow Street, Orange Avenue, and Laurel Street. The 85th percentile speed, which represents the speed at which 85 percent of vehicles drive at or below, was calculated for each roadway in both directions. Results are provided in Table 5.

Table 5 – 85th Perc						
Roadway	Direction of Travel	85th % Speed (mph)	Posted Speed (mph)			
0.1 0.	Eastbound	20	25			
Otis Street	Westbound	21	23			
Willow Street	Northbound	24	25			
	Southbound	27				
	Eastbound	23	25			
Orange Avenue	Westbound	27	23			
	Northbound	27	20			
Laurel Street	Southbound	29	20			

Results of the speed study show that most of the streets have speeds comparable to the posted speed limit. The one exception is Laurel Street, which has 85th percentile speeds slightly higher than desirable within a school zone. If this section of Laurel Street was not within a school zone then the speeds would be more acceptable, but both directions are a little high for a school zone. Additional signage and/or increased enforcement are options to reduce speeds without altering the roadway cross-section.

IV. DESIGN YEAR 2022 NO-BUILD CONDITIONS

Design Year No-Build Description

Design year no-build conditions represent development completion year no-build conditions for the study area without consideration of proposed development trips. This condition is evaluated to determine how the study area will be impacted by background growth. To account for background growth, a 1.6 percent annual growth rate was applied to seasonally adjusted traffic count data based on expected growth in the local area over the next twenty years. The City's TSP showed 1.0 percent of annual growth at Nevada Street / Oak Street and 1.6 percent of annual growth at Hersey Street / Oak Street. A growth rate of 1.6 percent was used to provide a conservative analysis. Development is estimated for completion by the design year 2022. Design year 2022 no-build traffic volumes are provided in Figure 4 for the a.m. and p.m. peak hours.

Design Year No-Build Intersection Operations

Design year 2022 no-build conditions were evaluated at study area intersections during the a.m. and p.m. peak hours. Results are summarized in Table 6.

Intersection	Performance Standard	Traffic Control	AM Peak	PM Peak
Randy Street / Laurel Street	LOS D	AWSC	A, 7.9 sec. WB	A, 7.9 sec. EB
Willow Street / Otis Street	LOS D	TWSC	A, 8.5 sec. NB	A, 8.7 sec. NB
Otis Street / Laurel Street	LOS D	TWSC	A, 9.7 sec. EB	A, 9.1 sec. EB
Laurel Street / W. Nevada Street	LOS D	TWSC	A, 9.7 sec. NB	A, 9.5 sec. NB
Vansant Street / W. Nevada Street	LOS D	TWSC	A, 8.7 sec. NB	A, 8.8 sec. NB

LOS = Level of Service, TWSC = Two-way stop controlled, AWSC = All-way stop controlled

EB = eastbound, WB = westbound, NB = northbound, SB = southbound

Note: Exceeded performance standards are shown in bold, italic

Results of the analysis show all study area intersections continue to operate acceptably (within performance standards) under design year 2022 no-build conditions during the a.m. and p.m. peak hours. No changes in operation were shown to occur as a result of background traffic. Synchro output sheets are provided in Appendix D.

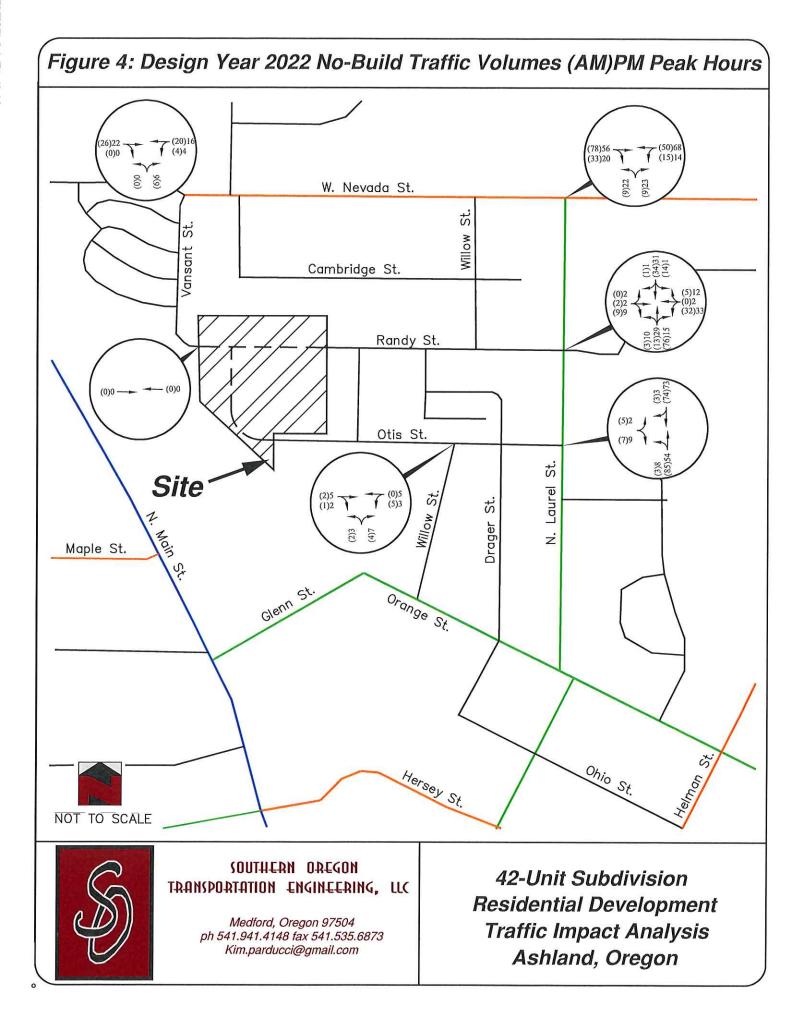
Design Year No-Build 95th Percentile Queue Lengths

Queue lengths were evaluated at study area intersections under design year 2022 no-build conditions. Reported queue lengths were rounded up to the nearest 25 feet (single vehicle length) and summarized in Table 7 for the a.m. and p.m. peak hours.

Intersection / Movement	Available Link Distance (Ft)	AM Peak Queue Lengths (Ft)	PM Peak Queue Lengths (Ft)
Laurel St / Randy St			
EB L/T/R	350	50	50
WB L/T/R	600	50	50
NB L/T/R	350	75	50
SB L/T/R	550	50	50
Willow St / Otis St			
NB L/R	625	25	50
Laurel St / Otis St			
EB L/T/R	225	50	25
NB L/T/R	875	0	25
SB L/T/R	350	0	0
Laurel St / W. Nevada St			
EB T/R	325	0	0
WB L/T	250	25	25
NB L/R	550	50	50
Vansant St / W. Nevada St			
NB L/R	200	50	50

EB=eastbound, WB=westbound, NB=northbound, SB=southbound, L=left, T=Through, R=right Note: Exceeded performance standards are shown in bold, italic

Results of the queuing analysis show all study area intersection queue lengths continue to stay within available link distances under design year 2022 no-build conditions during both the a.m. and p.m. peak hours. No significant changes in queuing were shown to occur as a result of background growth. Refer to Appendix D for a full queuing and blocking report.



V. SITE TRAFFIC

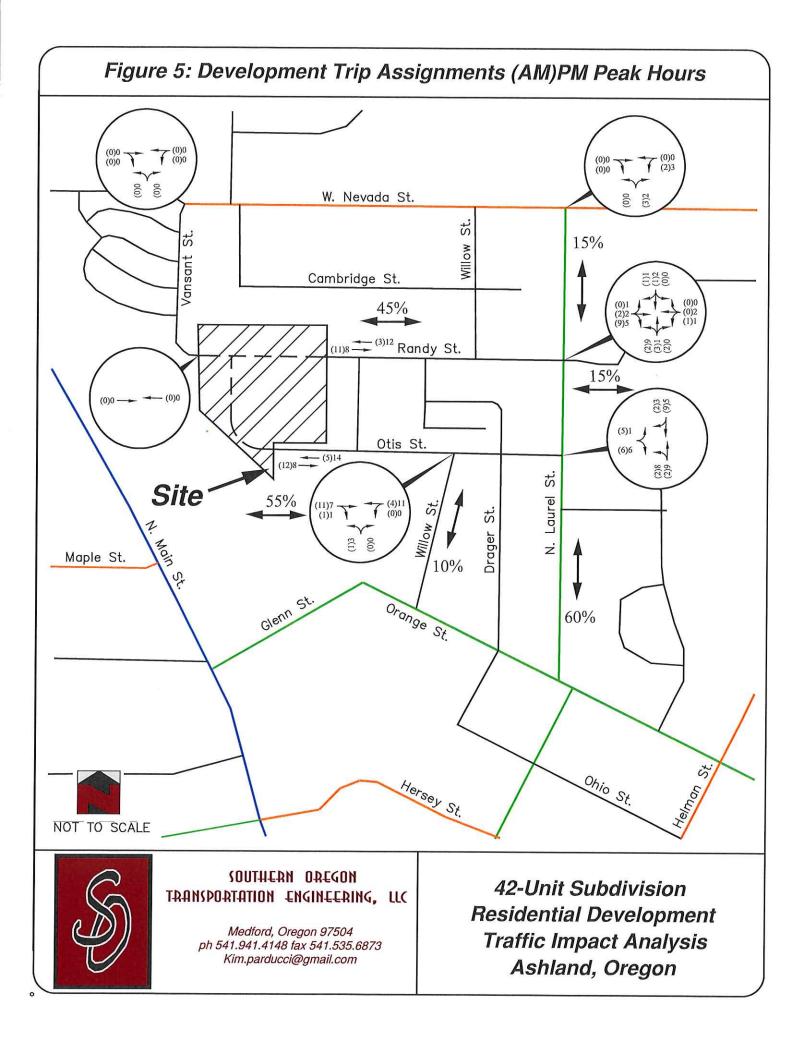
Trip Generation

Trip generation calculations for the proposed 42-unit residential subdivision were prepared utilizing the Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition.* Rates were used for land use code 210 – Single Family Residential. All trips were considered new trips to the transportation system. A summary is provided in Table 8. ITE descriptions and graphs are provided in Appendix B.

Land Use	Unit	Size	ADT	AM Peak Hour			PM Peak Hour		
				Total	(In)	(Out)	Total	(In)	(Out)
ITE 210 — Single Family Residential	Unit	42	396	31	8	23	42	26	16
Total Trips				31	8	23	42	26	16

Trip Distribution and Assignment

Development trips were distributed to the transportation system using existing traffic splits from intersections surrounding the site. Approximately 45% were assumed to distribute to/from Randy Street and 55% to/from Otis Street. From these streets there were approximately 15% to/from the north, 15% to/from the east, 60% to/from the south, and 10% to/from the west. Refer to Figure 5 for development trip assignments during the a.m. and p.m. peak hours.



VI. DESIGN YEAR 2022 BUILD CONDITIONS

Design Year Build Description

Design year build conditions represent no-build conditions for a study area with the addition of proposed development trips considered. Build conditions are compared to no-build conditions to determine what impacts and/or mitigation measures will result from proposed development. Design year 2022 build conditions include development trips from the proposed 42-unit subdivision during the a.m. and p.m. peak hours. Design year 2022 build traffic volumes are provided in Figure 6.

Design Year Build Intersection Operations

Design year 2022 build conditions were evaluated at study area intersections during the a.m. and p.m. peak hours. Results are summarized in Table 9.

Intersection	Performance Standard	Traffic Control	AM Peak	PM Peak
Randy Street / Laurel Street	LOS D	AWSC	A, 7.9 sec. SB	A, 8.0 sec. EB
Willow Street / Otis Street	LOS D	TWSC	A, 8.7 sec. NB	A, 9.2 sec. NB
Elizabeth Avenue / Randy Street	LOS D	TWSC	A, 8.4 sec. NB	A, 8.4 sec. NB
Elizabeth Avenue / Otis Street	LOS D	TWSC	A, 8.7 sec SB	A, 8.7 sec SB
Otis Street / Laurel Street	LOS D	TWSC	A, 9.8 sec. EB	A, 9.2 sec. EB
Laurel Street / W. Nevada Street	LOS D	TWSC	A, 9.1 sec. NB	A, 9.2 sec. NB
Vansant Street / W. Nevada Street	LOS D	TWSC	A, 8.6 sec. NB	A, 8.7 sec. NB

LOS = Level of Service, TWSC = Two-way stop controlled, AWSC = All-way stop controlled

EB = eastbound, WB = westbound, NB = northbound, SB = southbound

Note: Exceeded performance standards are shown in bold, italic

Results of the analysis show all study area intersections continue to operate acceptably (within performance standards) under design year 2022 build conditions during the a.m. and p.m. peak hours. No changes are shown to occur as a result of re-routing and additional development trips. Synchro output sheets are provided in Appendix E.

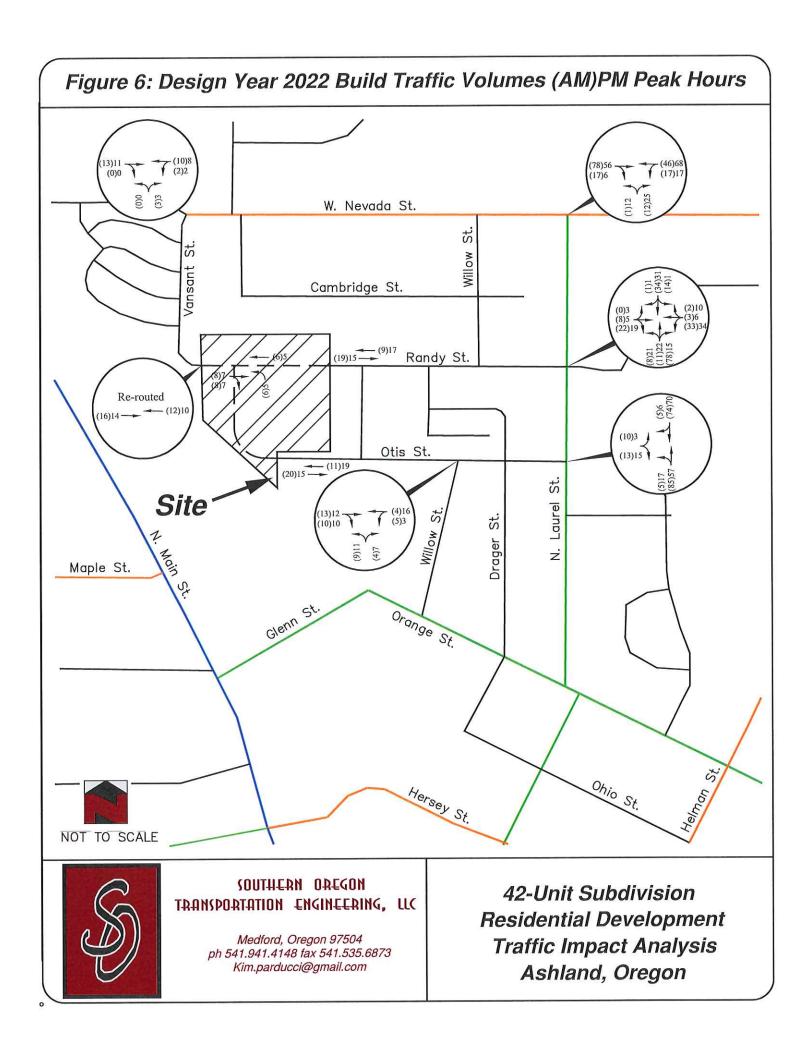
Design Year Build 95th Percentile Queue Lengths

Queue lengths were evaluated at study area intersections under design year 2022 build conditions. Reported queue lengths were rounded up to the nearest 25 feet (single vehicle length) and summarized in Table 10 for the a.m. and p.m. peak hours.

Intersection / Movement	Available Link Distance (Ft)	AM Peak Queue Lengths (Ft)	PM Peak Queue Lengths (Ft)
Laurel St / Randy St			
EB L/T/R	350	50	50
WB L/T/R	600	50	50
NB L/T/R	350	75	50
SB L/T/R	550	50	50
Willow St / Otis St			
NB L/R	625	25	50
Laurel St / Otis St			
EB L/T/R	225	50	50
NB L/T/R	875	25	25
SB L/T/R	350	0	0
Laurel St / W. Nevada St			
EB T/R	325	0	0
WB L/T	250	25	25
NB L/R	550	50	50
Vansant St / W. Nevada St			
WB L/T	200	25	0
NB L/R	200	50	25

EB=eastbound, WB=westbound, NB=northbound, SB=southbound, L=left, T=Through, R=right Note: Exceeded performance standards are shown in bold, italic

Results of the queuing analysis show all study area intersection queue lengths stay within available link distances under design year 2022 build conditions during both the a.m. and p.m. peak hours. No significant changes are shown to occur as a result of re-routing and additional development trips. Refer to Appendix E for a full queuing and blocking report.



VII. CONCLUSIONS

Conclusions

The findings of the traffic impact analysis conclude that the proposed 42-unit residential subdivision can be approved on the transportation system without creating adverse operational impacts. Results of the analysis are as follows:

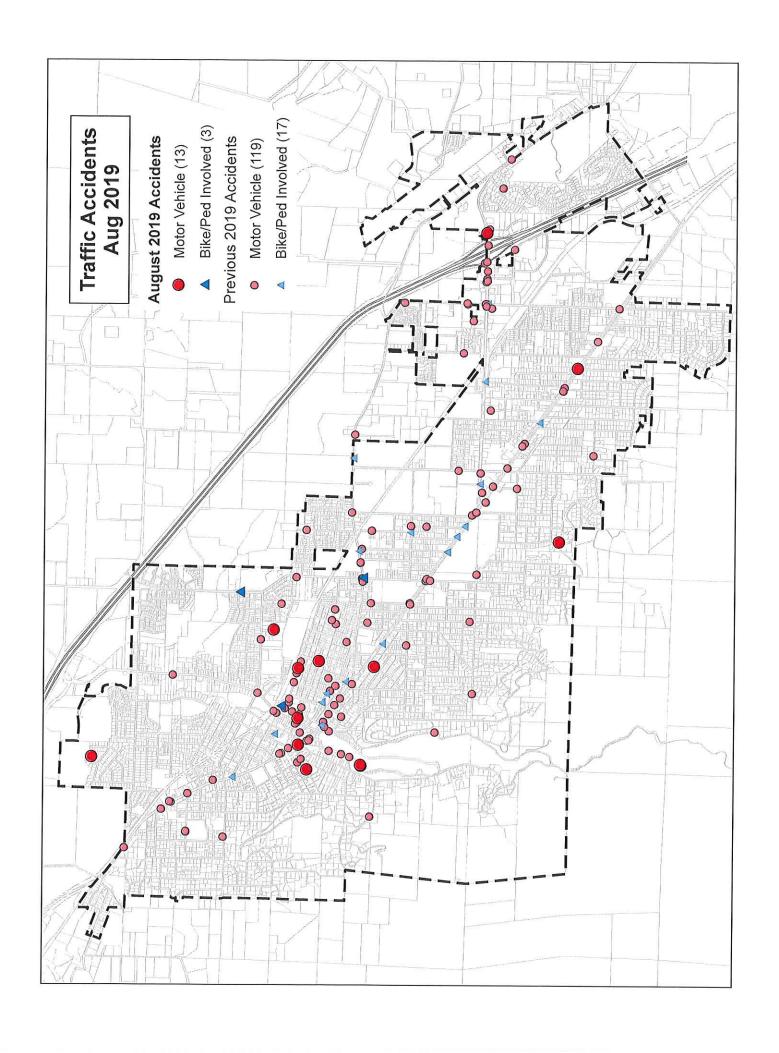
- 6. All study area intersections are shown to operate within performance standards under existing year 2019 and design year 2022 no-build and build conditions during both the a.m. and p.m. peak hours.
- 7. Study area intersection 95th percentile queue lengths were shown to stay within available link distances for all analysis scenarios.
- 8. There is no crash history in the area, nor any reported crashes at any of the study area intersections within the most recent five years.
- Speeding was evaluated in the study area and shown to be slightly high on Laurel Street.
 Additional signage and/or increased enforcement is recommended as a first step toward reducing speeds.
- 10. Re-routed traffic was considered likely on Otis Street, Randy Street, and Willow Street (south of Otis Street) as a result of the Vansant Street connection to the subject property. This was not shown to create capacity or safety concerns.

This analysis was undertaken to address issues of compliance with the City of Ashland Comprehensive Plan and Land Development Code. Based upon our findings, it is concluded that streets and intersections serving the subject property will accommodate projected a.m. and p.m. peak hour traffic volumes from the proposed 42-unit residential subdivision without degrading the performance of an existing or planned facility such that it would not meet the performance standard identified in the City's Transportation System Plan (TSP).



SOUTHERN OREGON TRANSPORTATION ENGINEERING, LLC

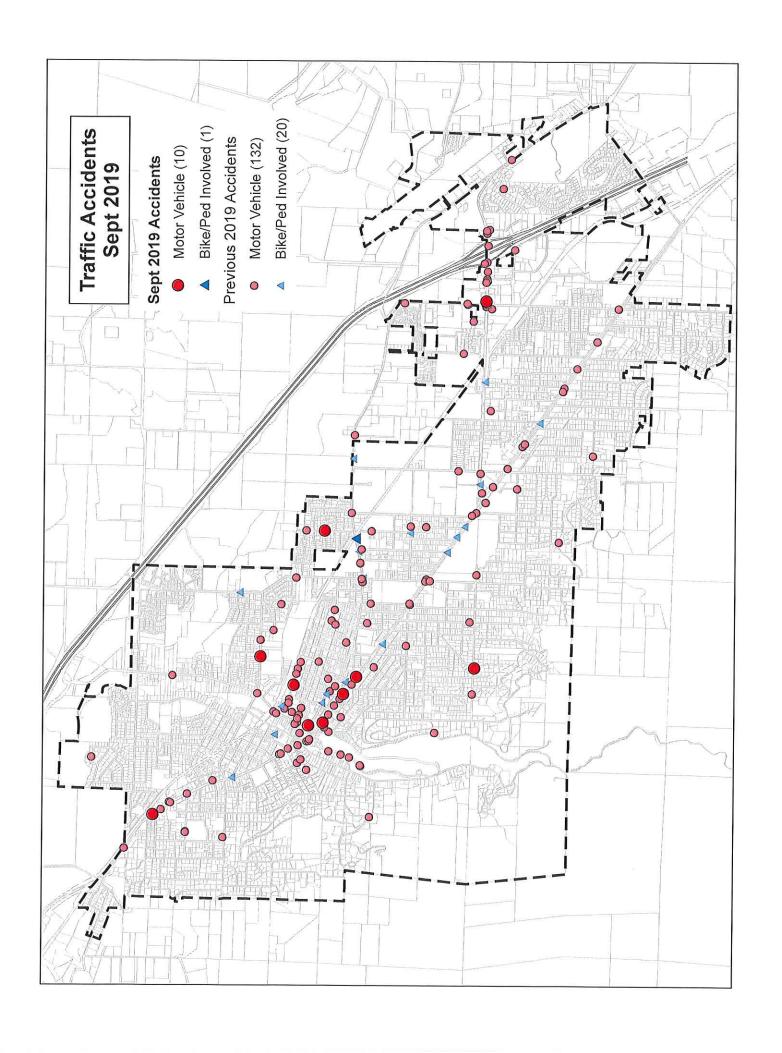
Medford, Oregon 97504 Phone 541.608.9923 Fax 541.535.6873 Email: Kim.parducci@gmail.com



MOTOR VEHICLE CRASH SUMMARY MONTH: AUGUST 2019 NO. OF ACCIDENTS: 16

CAUSE - DRIVER ERROR	Skateboarder was struck while crossing in the crosswalk. Was injured and transported to Ashland Hospital. Driver cited for failure to yield to a pedestrian.	Driver of v1 had just parked on the side of the street and opened vehicle door. V2 was passing by and crashed into door of v1. No citation, more than \$2500 damage to each vehicle.	V1, a RVTD bus, was pulled over at the side of the road to pick up a passenger when v2 sideswiped the bus, knocking the rear view mirror off the side. Dv2 left the area. No leads.	Dv2 was nb on Pinecrest and was distracted by cell phone, causing driver to crash into the rear of parked v1. Dv2 cited for unlawful cell use.	Dv1 backed up and struck parked v2. No citation, only minor damage.	Dv1 was eastbound on B St; Dv2 was northbound on Fourth St. Dv2 pulled out from stop sign and ran into the side of v1. Information exchanged.	Dv1 made an improper turn in lane, striking v2. Dv1 arrested for DUII.	Dv1 sideswiped 2 parked vehicles. Information exchanged.	Dv1 sideswiped parked v2 and left the area. Driver was found and cited for hit and run and DUII.
7 CITY	z	z	z	z	z	z	z	z	z
HIT/	Z	z	>	z	Z	z	Z	z	\
PROP DAM.	z	>	z	>	z	>	ח	z	>
Police On Site	X	>	>	>	>	>	>	>	>
DUII Cited	\	z	z	>	z	z	>	z	Υ
IIna	Z	z	ח	z	z	z	>	z	>
INJ.	>	z	z	z	z	z	z	z	z
BIKE INV.	z	z	z	z	z	z	z	z	z
PED INV.	>	z	z	z	z	z	z	z	z
NO.	~	2	7	2	2	2	2	က	2
LOCATION	N Pioneer St @ A St	A Street @ Third St	Siskiyou Blvd near Glendale Av	Pinecrest Terrace	Winburn Way	B St @ Fourth St	Williamson Way	N Main St	Coventry PI
DAY	Sat	Sun	Mon	Thur	Thur	Tue	Tue	Thur	Mon
TIME	19:42	12:08	15:54 Mon	9:47	17:20 Thur	15:32	17:15	14:02	18:29 Mon
DATE	ო	4	ιΩ	15	15	20	70	22	56
Rep	œ	œ	Ä.	œ	N N	œ	œ	œ	œ

	σω.					I c	با ا
CAUSE - DRIVER ERROR	Dv1 struck bicyclist who was in the bike lane, but who had entered the intersection on a full red light. Dv1 did not see the cyclist. No citation. Many statements from witnesses. Cyclist transported to hospital.	Dv2 parked but did not engage parking brake, v2 rolled into parked v1. Info exchanged.	Dv2 was backing out of a parking lot onto B Street and struck v1. Dv2 cited for unsafe backing, no operator license, driving uninsured.	Dv1 had turned right onto Ashland St, dv2 was merging right to go onto NB I-5. The 2 vehicles collided, no fault determined. Info exchanged.	Dv1 was stopped for ped crossing in the crosswalk and was rearended by dv2. No citation.	Dv1 was crossing Union St at the alleyway, dv2 was sb on Union. Dv1 pulled into the intersection at the alley and crashed into v2. Information exchanged.	Dv1 struck parked v2 and left the area. Report shows that the driver confessed to the accident and to DUII, but no indication of citation for DUII/Hit and Run.
CITY VEH.	z	z	z	z	z	z	z
HIT/ RUN	z	z	z	z	z	z	ם
PROP DAM.	z	>	>	>	z	>	>
Police PROP HIT/ On Site DAM. RUN	>	Y	>	>	Υ	>	z
INJ. DUII Cited	Α	z	٨	z	z	z	n
DUII	z	Z	z	z	z	z	n
	>	z	z	z	z	z	z
PED BIKE INV. INV.	>	Z	z	Z	z	z	z
NO. PED VEH INV.	z	z	z	z	>	z	Z
NO. VEH	_	2	7	2	2	2	7
LOCATION	E Main St @ S Mountain intersection	Winburn Way	B Street	Ashland St near I5 onramp	N Mountain Av at Briscoe PI	Union St near Allison St	Church St
DAY	Tue	Tue	Tue	Tue	Wed	Sat	Sat
TIME DAY	9:48	15:13	16:28 Tue	18:13 Tue	14:57 Wed	14:50	2:15
Rep DATE	27	27	27	27	28	3	8
Rep	α	A.	ď	ď	œ	œ	<u>~</u>



MOTOR VEHICLE CRASH SUMMARY MONTH: SEPTEMBER 2019 NO. OF ACCIDENTS: 11

	70 —	9	70	ω			_	1
CAUSE - DRIVER ERROR	Dv was travelling at a high rate of speed and was unable to negotiate curve in the road. Dv ran off road and was totalled. Driver found to be DUII and also cited for Reckless Driving.	Vehicle was struck while parked, no leads.	Dv1 was stopped in traffic behind another vehicle and was rearended by v2. Dv2 cited for following too close.	Driver struck street sign. Driver was found to be intoxicated. Cited for reckless driving and failure to perform duties of a driver	Dv1 was parked along side of street. Dv1 opened door just as v2 was passing, and v2 crashed into open door. No citation	Dv broke a street tree off at trunk when attempting to park.	V3 stopped in traffic waiting for peds to cross, v2 stopped behind v3. Dv1 did not stop and rearended v2 pushing it into v3. Dv1 cited for following to closely	Dv2 stopped in traffic and was rearended by v1. Minor damage
HIT/ CITY RUN VEH.	z	z	z	z	z	z	z	z
HIT/ RUN	z	>	z	z	z	z	z	z
PROP DAM.	>	>	>	>	>	z	>	z
Police On Site	>-	z	>	>	>	>	>-	z
Cited	>	z	>-	>-	z	z	>-	z
INJ. DUII	>	ם	z	Þ	z	z	Z	z
	z	ח	>	z	z	z	Ф	z
PED BIKE INV.	z	z	z	z	z	Z	z	z
PED IN.	z	z	Z	z	z	z	>	z
NO.	-	2	7		2	7	m	7
LOCATION	Lithia Way	Fordyce St	Lithia Way	Ashland St	A Street	E Main St	E Main St at California St	N Main St near Grant St
DAY	Sun	Mon	Wed	Wed	Tue	Fri	Mon	Fhur
TIME	12:31	Unk	13:36 Wed	15:00 Wed	14.3	1:10	15:33 Mon	14:30 Thur
DATE	~	7	4	4	10	20	73	26
Rep	K	R.	ď	ď	œ	R.	ď	N N

	Motorcycle did not see edge in asphalt (street construction) and slipped off it, crashing. Rider was transported to besuital	Dv1 scraped parked v2 while pulling N N\ into a parking spot. Minor damage.		
z	A CONTRACTOR OF THE PARTY OF TH	ź		
z		z		
>-	>	z		
>-	>	>		
z	z	z		
z	z			
z	>	z		
z	z	z z z		
z	z	z		
7	~	2		
Ashland St near Tolman Creek Rd	E Hersey St near Carol St	E Main St near Pioneer St		
Fri	E	Mon		
90:6		30 16:10 Mon		
	27	30		
œ	ď	Ä		
	Z	27 9:06 Fri Ashland St near Tolman Creek 2 N N N N N Y Y N N N N Y Y N N N N Y Y N N N Y Y N N N Y Y N N N Y Y N N N Y N		