

Monday, July 1, 2024

College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)

5:00 PM

In-Person at College Place City Hall, 625 S College Avenue, College Place Washington

Meeting may be viewed at: Live Stream on City of College Place, Washington YouTube at https://www.youtube.com/channel/UCbx3qrqzLDL_05NusReSI-g/featured

Zoom Attendee Link: <https://us06web.zoom.us/j/81351351035>

Or you may call this number to listen: 1-669-900-9128 ID# 813 5135 1035 Phone controls: *6 - toggle mute/un-mute and *9 - raise hand

1. Opening Items

Subject :	1.01 Call To Order
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	1. Opening Items
Type :	Procedural
Subject :	1.02 Roll Call
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	1. Opening Items
Type :	Information

Public Content

Voting Members

Position 1 - Tracy Warner - term expires 12/31/2026

Position 2 - Kelli Leen - term expires 12/31/2024

Position 3 - Doug Case - term expires 12/31/2026

Position 4 - Chloe Congleton -term expires 12/31/2024

Position 5 - Allison Peck - term expires 12/31/2026 - Vice Chair

Position 6 - Bruce Morehead - term ends 12/31/2024 - Chair

Ex-Officio - Arlene Alen - WW Valley Chamber of Commerce Representative

Advisory Members

Mike Rizzitiello-City Administrator

Brian Carleton-Finance Director

Sherri St. Clair- City Clerk

Subject :	1.03 Public Comment
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	1. Opening Items
Type :	Procedural

Public Content

Commission meetings are primarily structured to permit Members to arrive at the decisions necessary to make recommendations to the City Council.

Meeting Protocol for Public Comment:

When submitting public comments, include the following information regardless of the manner you are using: Note that there are deadlines for written comments to be included in the meeting documents.

- Your Name
- Your Address

Written Public comments may be provided by submitting comment to Clerk@cpwa.us no later than 4:30 PM on the meeting date to be included in the record. (If typewritten, no less than 11 pt font).

Verbal Public Comments may be made during the meeting:

- In-person at the meeting location - provided at the beginning of each agenda.
- Telephone comment - Call 1-669-900-9128, entering the meeting ID (provided at beginning of agenda) and raise your hand (*9 to raise hand, *6 to mute/un-mute) when comments are requested.
- Virtual comment - Join using the Zoom Attendee link (provided at beginning of agenda) and raise your hand when comments are requested.

Once recognized, you will have five minutes to speak on any subject that is under the control of the Commission.

2. Consent Agenda

Subject :	2.01 Approve Agenda for July 1, 2024
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	2. Consent Agenda
Type :	Action (Consent)
Recommended Action :	Motion to approve the agenda for July 1, 2024.

Consent

Our adopted rules of Parliamentary Procedure, The Standard Code of Parliamentary Procedure by Alice Sturgis, 4th Edition, provide for a consent agenda listing several items for approval of the Board by a single motion. Most of the items listed under the consent agenda have gone through Board subcommittee review and recommendation. Documentation concerning these items has been provided to all board members and the public in advance to assure an extensive and thorough review. Items may be removed from the consent agenda at the request of any board member.

Subject : 2.02 Approve Minutes from June 3, 2024

Meeting : Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)

Category : 2. Consent Agenda

Type : Action (Consent), Minutes

Recommended Action : Motion to approve the minutes from June 3, 2024.

File Attachments

[2024-6-3_EDTEC_Meeting_Minutes_Draft_BoardDocs® Plus.pdf \(169 KB\)](#)

Consent

Our adopted rules of Parliamentary Procedure, The Standard Code of Parliamentary Procedure by Alice Sturgis, 4th Edition, provide for a consent agenda listing several items for approval of the Board by a single motion. Most of the items listed under the consent agenda have gone through Board subcommittee review and recommendation. Documentation concerning these items has been provided to all board members and the public in advance to assure an extensive and thorough review. Items may be removed from the consent agenda at the request of any board member.

Subject : 2.03 Excusing the Absence of Commission Member Case

Meeting : Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)

Category : 2. Consent Agenda

Type : Action (Consent)

Recommended Action : Motion to approve excusing the absence of Commission Member Case.

Consent

Our adopted rules of Parliamentary Procedure, The Standard Code of Parliamentary Procedure by Alice Sturgis, 4th Edition, provide for a consent agenda listing several items for approval of the Board by a single motion. Most of the items listed under the consent agenda have gone through Board subcommittee review and recommendation. Documentation concerning these items has been provided to all board members and the public in advance to assure an extensive and thorough review. Items may be removed from the consent agenda at the request of any board member.

Subject : 2.04 Approve Consent Agenda - Our adopted rules of Parliamentary Procedure, The Standard Code of Parliamentary Procedure, provide for a consent agenda listing items for approval of the Commission by a single motion. Typically the items listed under the consent agenda are the minutes from previous meetings and the agenda for the current meeting. Documentation concerning these items has been provided to all Commission Members and the public in advance to assure an extensive and thorough review. Items may be removed from the consent agenda at the request of any Commission Member.

Meeting : Jul 1, 2024 - College Place Economic Development, Tourism,

and Events Commission- - Hybrid (In-Person & Electronic)

Category : 2. Consent Agenda
Type : Action (Consent)
Recommended Action : Motion to approve the consent agenda

Consent

Our adopted rules of Parliamentary Procedure, The Standard Code of Parliamentary Procedure by Alice Sturgis, 4th Edition, provide for a consent agenda listing several items for approval of the Board by a single motion. Most of the items listed under the consent agenda have gone through Board subcommittee review and recommendation. Documentation concerning these items has been provided to all board members and the public in advance to assure an extensive and thorough review. Items may be removed from the consent agenda at the request of any board member.

3. Guest Presentations

Subject : 3.01 Visit Walla Walla Area Wide Branding - Mr. Guy Glaeser (Visit Walla Walla)
Meeting : Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category : 3. Guest Presentations
Type : Discussion, Information

Public Content

Historical Perspective:

Visit Walla Walla received a Tourism Planning Grant from the State to make a Tourism Plan for the area. A subcommittee was established to work on branding for the area.

Information for Consideration:

Mr. Guy Glaeser from Visit Walla Walla will give a presentation on branding concepts to solicit feedback from the Commission.

4. Action Agenda

Subject : 4.01 12th & Larch Intersection Redesign - Mr. Rizzitiello
Meeting : Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category : 4. Action Agenda
Type : Action
Preferred Date : Jul 01, 2024
Absolute Date : Jul 01, 2024
Fiscal Impact : Yes

Dollar Amount :	\$1,732,123.83
Budgeted :	No
Budget Source :	90% State Transportation Improvement Board UAP/ATP Grant / 10% City Transportation Benefit District
Recommended Action :	Motion to support 12th & Larch Intersection Reconfiguration Project and permit Chair to sign Letter of Support for grant.

Public Content

Historical Perspective:

Since 2017 a traffic study paid for by the State Community Economic Revitalization Board (CERB) recommended this intersection be converted to a roundabout.

Information for Consideration:

The City paid J-U-B Engineers to develop a conceptual design for the intersection. The grant opportunity is available in August 2024 with final announcements in December 2024.

File Attachments

[12th & Larch ROW Estimate 2024-06-16.pdf \(53 KB\)](#)
[12th&Larch Roundabout Cost Estimate 2024-06-16.pdf \(81 KB\)](#)
[2024-06-14 12th Larch Roundabout.pdf \(1,936 KB\)](#)
[Grants_PW_2017_CentralCollegePlace_Study_Reduced.pdf \(10.307 KB\)](#)

Subject :	4.02 Support for Development of Flex Industrial Building - Mr. Rizzitiello
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	4. Action Agenda
Type :	Action
Preferred Date :	Jul 01, 2024
Absolute Date :	Jul 01, 2024
Fiscal Impact :	Yes
Dollar Amount :	\$7,860,000.00
Budgeted :	No
Budget Source :	Creative District / ArtsWa Capital Request
Recommended Action :	Motion to support development of Flex Industrial Building as part of Capital Request to State through the COALLA Joint Creative District.

Public Content

Historical Perspective:

The COALLA Creative District was approved by ArtsWA in June 2024. This Joint Creative District will avail fiscal opportunities from the State and Federal Levels.

Information for Consideration:

In 2021-2022 the City obtained a State Community Economic Revitalization Board grant to conduct a planning study to assess the need vs. demand for a Light Industrial Building the City or public entity would own in College Place. A chronic problem is our lack of any available Class A, B, or C Flex/Light Industrial Space in the City. Many students when they graduate the area Colleges cannot find space and relocate to Tri-Cities or other areas where inexpensive space is more plentiful. The study identified the need for about 39,000 square feet split between three structures. The City would like to pursue a capital request with the Creative District as a vehicle to make this a reality.

File Attachments

[FlexLI-FeasibilityRpt_FINAL.pdf \(10,629 KB\)](#)

Subject :	4.03 County .09 Grant Request to Pay For Architectural Services for Lions Park Community Center - Mr. Rizzitiello
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	4. Action Agenda
Type :	Action
Preferred Date :	Jul 01, 2024
Absolute Date :	Jul 01, 2024
Fiscal Impact :	Yes
Dollar Amount :	\$200,000.00
Budgeted :	No
Budget Source :	Walla Walla County .09 Grant
Recommended Action :	Motion to support grant application into Walla Walla County .09 Grant Program for Architectural Plan Development for Lions Park Community Center Replacement Project and permitting Chair to sign.

Public Content

Historical Perspective:

The City has been working on the redevelopment of Lions Park since 2017. The park reconstruction is underway as Phase 1.

Phase II is replacing the community-center with the swiss army knife of community centers. It will have a permanent branch of the library, childcare, commercial kitchen, community room, and non-profit agency drop in space.

Information for Consideration:

The City paid Design West architects to do some conceptual work on what the replacement plan would look like.

Since that time the City has in hand a State Early Learning grant earmark for \$2.5 million and a Senator Cantwell earmark at hand for another \$2.5 million. The total estimated cost is \$10.1 million. The idea is to continue chase after grants and whatever is left over would be split proportionally between the City, Library, and Childcare entity.

The City wants to go to the County .09 grant program to pay for the development of buildable architectural plans (\$200,000).

File Attachments

- [College Place_CC&LIB_9.8.23.pdf \(342 KB\)](#)
- [College Place_Lions Park Budget_9.13.23.pdf \(120 KB\)](#)
- [Sales_Tax_Fund_Application_2018-19.pdf \(246 KB\)](#)

5. Staff Reports

Subject :	5.01 Comprehensive Economic Development Strategy (CEDS) - Mr. Rizzitiello
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	5. Staff Reports
Type :	Discussion, Information

Public Content

Historical Perspective:

In order to qualify for Federal Economic Development Agency (EDA) Infrastructure funding you need to have a plan in place that covers core tenants of economic development per EDA framework. It needs to be renewed every six years.

Information for Consideration:

Typically this work is usually done at a regional level. However, partner agencies were very non-committal about this, so the City put in for a EDA Comprehensive Economic Development Strategy (CEDS) Planning Grant. They want to award us \$40,000 grant. This will become part of the Economic Development section of our forthcoming Comprehensive Plan.

File Attachments

- [City of College Place Further Consideration Letter_June 2024.pdf \(246 KB\)](#)

[Yakima Kittitas CEDS.pdf \(1,218 KB\)](#)
[Example Staffing Plan 2.pdf \(122 KB\)](#)
[SAMPLE SOW for CEDS development.pdf \(122 KB\)](#)

Subject : 5.02 Drinking Water Reservoir #4 - Mr. Rizzitiello
Meeting : Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category : 5. Staff Reports
Type : Discussion, Information

Public Content

Historical Perspective:

Drinking Water Reservoir #4 is needed to address a system wide deficiency of 600,000 gallons and then to plan for future growth in the west and southwestern sections of the community.

Information for Consideration:

The plan is to get engineering done in 2024 with SEPA and then aim for construction in later 2025. The estimated financial makeup is as follows:

- State DOH Drinking Water (52% Forgivable): \$10 million
- US Army Corps WRDA Grant: \$5 million
- Senator Cantwell CDS Grant Request: \$3 million
- Representative Cathy McMorris Rodgers CDS Grant Request: \$4 million

File Attachments

[Council_20240507.pdf \(1,575 KB\)](#)

Subject : 5.03 Police Station Concept - Mr. Rizzitiello
Meeting : Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category : 5. Staff Reports
Type : Discussion, Information

Public Content

Historical Perspective:

The existing Police Station was originally built as a private mechanic shop and student apartments back in the 1950's. The City has used it as a split Community Development Office /Police Officer area between the early 2000s and 2017. From 2017 onward it has been solely utilized as a Police Department.

Information for Consideration:

The structure is not hardened. It doesn't meet a lot of standards. We paid for Design West to do a study of facility needs. It identified a need of about 19,000 square feet. In order to pay for this we would go for a voter approved bond with match from a Congressional Directed Spending request. The likely split is \$11.1 million bond with rest coming from a CDS request.

File Attachments

- [6.5.24 Site Plan.pdf \(11,006 KB\)](#)
- [23072 CPPD Schedule 06-17-24.pdf \(126 KB\)](#)
- [23072 CPPD site 06-17-24.pdf \(10,945 KB\)](#)
- [23072 prelim estimate.r 06-17-24.pdf \(133 KB\)](#)

Subject :	5.04 FY 2025 to 2033 Strategic Plan Work - Mr. Rizzitiello
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	5. Staff Reports
Type :	Discussion, Information

Public Content

Historical Perspective:

The existing Strategic Plan was the first one the community ever done and was completed in 2017 with updates in 2019 and 2021. Since that time we have a new Mayor and three new Councilmembers.

Information for Consideration:

The Strategic Plan will govern mission, values, vision, goals, and objectives for the next eight years (2025 to 2033). The consultant will do targeted community member interviews, open public citizen survey, staff meetings, and then workshops with City Council to get this hopefully in place by the end of the year.

File Attachments

- [College Place Council Prelim ChartV2.pdf \(101 KB\)](#)
- [Strategic Plan document_Edited52021.pdf \(688 KB\)](#)

Subject :	5.05 July 2024 Development Activity - Mr. Rizzitiello
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	5. Staff Reports
Type :	Discussion, Information

Public Content

Information for Consideration:

Discuss Developments

File Attachments

[DevelopmentTrackSheet_July2024.pdf \(130 KB\)](#)

6. Closing Items

Subject :	6.01 Next Meeting: August 5, 2024
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	6. Closing Items
Type :	Information
Subject :	6.02 Conclude
Meeting :	Jul 1, 2024 - College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic)
Category :	6. Closing Items
Type :	Procedural

College Place Economic Development, Tourism, and Events Commission- - Hybrid (In-Person & Electronic) (Monday, June 3, 2024)

Generated by Sherri St Clair on Monday, June 3, 2024

1. Opening Items

Procedural: 1.01 Call To Order

Chair Morehead called the meeting to order at 5:06 PM.

Information: 1.02 Roll Call

PRESENT:

Commission Members	Tracy Warner; Kelli Leen; Allison Peck; Bruce Morehead
Ex- Officio	Arlene Alen - Walla Walla Valley Chamber of Commerce City Administrator, Michael Rizzitiello
Staff	Finance Director, Brian Carleton; City Clerk, Sherri St. Clair

Also Present: Ben Hoppe of J-U-B Engineers

MEMBERS EXCUSED: Chloe Congleton

MEMBERS ABSENT: Doug Case

Procedural: 1.03 Public Comment - None

2. Consent Agenda

Action (Consent): 2.01 Approve Agenda for June 3, 2024

Action (Consent), Minutes: 2.02 Approve Minutes from May 6, 2024

Action (Consent), 2.03 Excusing the Absence of Commission Member Congleton

Action (Consent): 2.04 Approve Consent Agenda - Our adopted rules of Parliamentary Procedure, The Standard Code of Parliamentary Procedure, provide for a consent agenda listing items for approval of the Commission by a single motion. Typically the items listed under the consent agenda are the minutes from previous meetings and the agenda for the current meeting. Documentation concerning these items has been provided to all Commission Members and the public in advance to assure an extensive and thorough review. Items may be removed from the consent agenda at the request of any Commission Member.

Clerk note: Excusing the Absence of Commission Member Congleton was in the Consent Agenda but not stated as part of the consent agenda during the meeting. Member Allen raised her hand in favor of approving the consent agenda but did not vote verbally.

Commission Member Peck made a motion to approve the consent agenda. Second by Member Leen and the motion passed 4-0.

3. Guest Presentations

Discussion, Information: 3.01 Martin Airfield Area Study -

Mr. Rizzitiello introduced Mr. Ben Hoppe of J-U-B Engineers and informed the Commission that the City received a State Community Economic Revitalization Board grant to pay for the majority of a study for Martin Airfield. Mr. Hoppe gave a presentation on the the Martin Airfield Planning Study.

Discussion, Information: 3.02 Park Plan Survey -

Mr. Rizzitiello informed the Commission that the City's Park Plan will be expiring at the end of this year and that the City is required to have an active Park Plan to receive State Recreation Conservation Office grant funds. In addition, Mr. Rizzitiello informed the Commission that the City has created a survey for public input on the City's parks. Mr. Rizzitiello also noted that the major difference between the expiring Park Plan and the new Park Plan will be a focus on new parks rather than existing parks within the City.

Discussion ensued.

Discussion, Information: 3.03 FY 2024 Community Events -

Mrs. St Clair presented the upcoming College Place Community Events including the College Place Farmers Market, the College Place Freedom Festival, and Movies in the Park.

4. Action AgendaAction: 4.01 Price Development -

Mr. Rizzitiello informed the Commission that a developer is interested in developing the property south of Home Depot. The developer would like to construct a hotel and convention center as well as supporting retail and restaurants. However, the developer needs access for freight to the potential developments. The City of Walla Walla owns Myra Road and was unwilling to allow a right-in right-out off of Myra Road. Mr. Rizzitiello informed the Commission that to alleviate the issue of freight access, the City has provided a design for a roundabout on Whitman Drive. In addition, Mr. Rizzitiello outlined potential funding sources for the project.

Commission Member Leen made a motion to recommend intersection design treatment to City Council. Second by Member Peck and the motion passed 4-0.

Action: 4.02 Conceptual Roundabout - State Route 125 & College Avenue/Aufte -

Mr. Rizzitiello informed the Commission that due to future developments planned in the State Route 125 (SR 125) and College Avenue/Aufte Ln area, the City has developed a conceptual design for a roundabout to allow access to the new development off of SR 125 and surrounding areas. Mr. Rizzitiello informed the Commission that the State Freight Mobility Strategic Investment Board offers grant funding for projects such as this. However, the Board only puts out a call for projects once every twelve years. Mr. Rizzitiello presented other possible funding for the project.

Discussion ensued.

Commission Member Warner made a motion to recommend intersection design treatment to City Council. Second by Member Alen and the motion 4-0.

5. Staff ReportsDiscussion, Information: 5.01 Coalla Creative District -

Mr. Rizzitiello informed the Commission that the Cities of Walla Walla and College Place are the first Creative District encompassing two cities in Washington State. ArtWalla will be the committee in charge of distributing grants funds between the two cities. ArtWalla will also be working on the Launch Checklist and Strategic Plan. In addition, Mr. Rizzitiello informed the Commission that creative district signs will be installed on SR 125 and Highway 12.

Discussion, Information: 5.02 June 2024 Development Activity -

Mr. Rizzitiello presented the June 2024 Development Activity outlining the commercial/industrial and residential developments within the City.

6. Closing Items

Information: 6.01 Next Meeting: July 1, 2024

Procedural: 6.02 Conclude

Commission Member Leen made a motion to conclude the meeting at 5:47 PM. Second by Member Peck and, with no objections, the meeting concluded.

Approved:

Bruce Morehead - Chair

Attest:

Sherri St. Clair – City Clerk

The foregoing minutes are the official record of the Economic Development, Tourism, and Events Commission meeting that occurred June 3, 2024. Further detail may be obtained by reviewing the actual audio recording made during this session.

LPA-005b
Rev. 5/2020



J·U·B ENGINEERS, INC.

DATE: June 16, 2024

CLIENT PROJ. NO.

J-U-B PROJ. NO.:
30-20-075-065

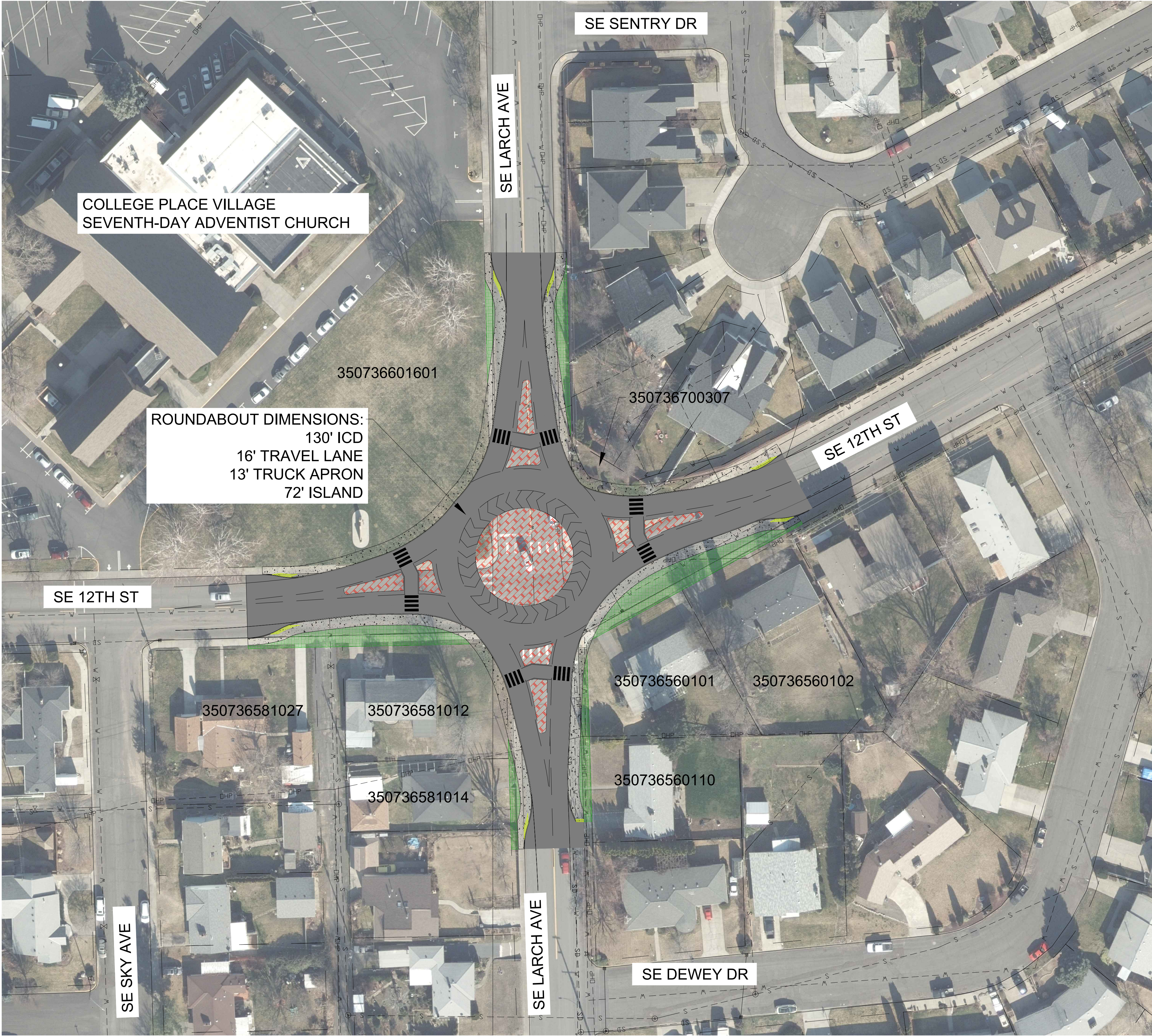
ROUNDAABOUT ONLY

ITEM NO.	SPEC. SECTION	DESCRIPTION	SCHEDULE OF VALUES			
			QUANTITY	UNIT	PRICE	AMOUNT
		PREPARATION				
1	1-09.7	Mobilization (10%)	1	LS	\$89,400.00	\$89,400.00
2	2-01.5	Clearing and Grubbing	0.5	AC	\$25,000.00	\$12,500.00
3	1-05.4	Roadway Surveying	1	LS	\$7,000.00	\$7,000.00
4	1-05.4	ADA Features Surveying	1	LS	\$1,000.00	\$1,000.00
5	1-05.18	Record Drawings	1	LS	\$500.00	\$500.00
6	2-02.5	Removal of Structures and Obstructions	1	LS	\$1,000.00	\$1,000.00
7		Removing Asphalt Conc. Pavement	4,200	SY	\$12.50	\$52,500.00
8		Removing Cement Conc. Curb and Gutter	1,500	LF	\$10.00	\$15,000.00
9		Removing Cement Conc. Curb Wall	135	LF	\$15.00	\$2,025.00
10		Removing Asphalt Conc. Sidewalk	1,000	SY	\$5.00	\$5,000.00
11	2-02.5	HMA Sawcut	185	LF	\$5.00	\$925.00
		GRADING				
12	2-03.5	Roadway Excavation Incl. Haul	1,700	CY	\$8.00	\$13,600.00
		STORM SEWER				
13	7-05.5	Storm Sewer	1	LS	\$45,000.00	\$45,000.00
		WATER LINES				
14	7.09.5	Water Lines	1	LS	\$15,000.00	\$15,000.00
		SURFACING				
15	4-04.5	Crushed Surfacing Top Course	2,000	TON	\$45.00	\$90,000.00
		HOT MIX ASPHALT				
16	5-04.4	HMA CL. 1/2" PG 70-28	800	TON	\$135.00	\$108,000.00
17	5-04.4	Job Mix Compliance Price Adjustment	CALC	CALC	(\$1.00)	(\$1.00)
18	5-04.4	Compaction Price Adjustment	CALC	CALC	(\$1.00)	(\$1.00)
16	5-04.5	Soil Residual Herbicide	6,200	SY	\$1.20	\$7,440.00
		EROSION CONTROL AND ROADSIDE PLANTING				
19	8-01.5	ESC Lead	30	DAY	\$250.00	\$7,500.00
20	8-01.5(1)	Erosion Control and Water Pollution Prevention	1	LS	\$10,000.00	\$10,000.00
21	8-02.3	Topsoil Type A, 2 Inch Thick	700.00	SY	\$10.00	\$7,000.00
22	8-02.5	Seeding and Mulching	0.25	AC	\$8,500.00	\$2,125.00
		TRAFFIC				
23	8-04.5	Cement Conc. Traffic Curb and Gutter	2,635	LF	\$30.00	\$79,050.00
24	8-04.5	Cement Conc. Curb Wall	155	LF	\$70.00	\$10,850.00
25	8-04.5	Roundabout Truck Apron Cem. Conc. Curb and Gutter	307	LF	\$30.00	\$9,210.00
26	8-04.5	Roundabout Cement Concrete Curb and Gutter	226	LF	\$30.00	\$6,780.00
27	8-04.5	Cement Conc. For Splitter Island Walkway	101	SY	\$70.00	\$7,062.22
28	8-04.5	Cement Conc. For Center of Roundabout	386	SY	\$60.00	\$23,140.00
29	5-05.5	Textured and Pigmented Cement Concrete Pavement	740	SY	\$60.00	\$44,400.00
30	8-06.5	Cement Conc. Driveway Entrance Type 1	15	SY	\$65.00	\$975.00
31	8-06.5	Cement Driveway Transition	15	SY	\$60.00	\$900.00
32	8-14.5	Cement Conc. Sidewalk	1,152	SY	\$45.00	\$51,845.00
33	8-14.5	Cement Conc. Curb Ramp	12	EA	\$3,000.00	\$36,000.00
34	8-14.5	Detectable Warning Surface	64	SF	\$20.00	\$1,280.00
37	8-20.5	Illumination System	1	LS	\$100,000.00	\$100,000.00
35	8-21.5	Permanent Signing	1	LS	\$7,500.00	\$7,500.00
36	8-22.5	Permanent Striping	1	LS	\$5,000.00	\$5,000.00
38	1-10.4(1)	Project Temporary Traffic Control	1	LS	\$90,000.00	\$90,000.00
		OTHER ITEMS				
39		Record Drawings (Minimum Bid \$500)	1	LS	\$500.00	\$500.00
40	2-01.5	Roadside Cleanup	1	EST	\$5,000.00	\$5,000.00
41	1-04.4	Minor Change	1	CALC	\$5,000.00	\$5,000.00
42	1-07.15	SPCC Plan	1	LS	\$1,500.00	\$1,500.00
43	8-01.5	TESC Plan	1	LS	\$5,000.00	\$5,000.00
SUBTOTAL						\$983,505.22
PROJECT CONTINGENCY (30%)						\$295,051.57
SUBTOTAL W/ PROJECT CONTINGENCY						\$1,278,556.79
RIGHT OF WAY						\$70,000.00
PRELIMINARY ENGINEERING AND PERMITTING (15%)						\$191,783.52
CONSTRUCTION AND ENGINEERING (15%)						\$191,783.52
TOTAL ESTIMATED CONSTRUCTION COSTS (2024 Dollar)						\$1,732,123.83

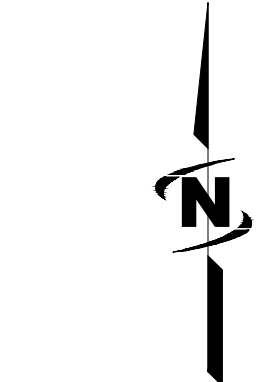
J-J-B ENGINEERS, INC.

3611 S. Zintel Way, Kennewick WA 99337

Plot Date: 01/17/2024 5:26 PM Plotted By: Stu Barton
Date Created: 01/14/2024 JUB.COM\CENTRAL\CLIENT\SIWA\COLLEGE PLACE\CITY PROJECTS\36-20-075_2020_ONCALL\DESIGN-065 - 12TH AND LARCH ROUNDABOUT CONCEPT CAD\EXHIBIT\SIWA-20-075-065_C-CONCEPT1.DWG



CALL 2 BUSINESS DAYS IN ADVANCE BEFORE
YOU DIG, GRADE, OR EXCAVATE FOR THE
MARKING OF UNDERGROUND MEMBER
UTILITIES



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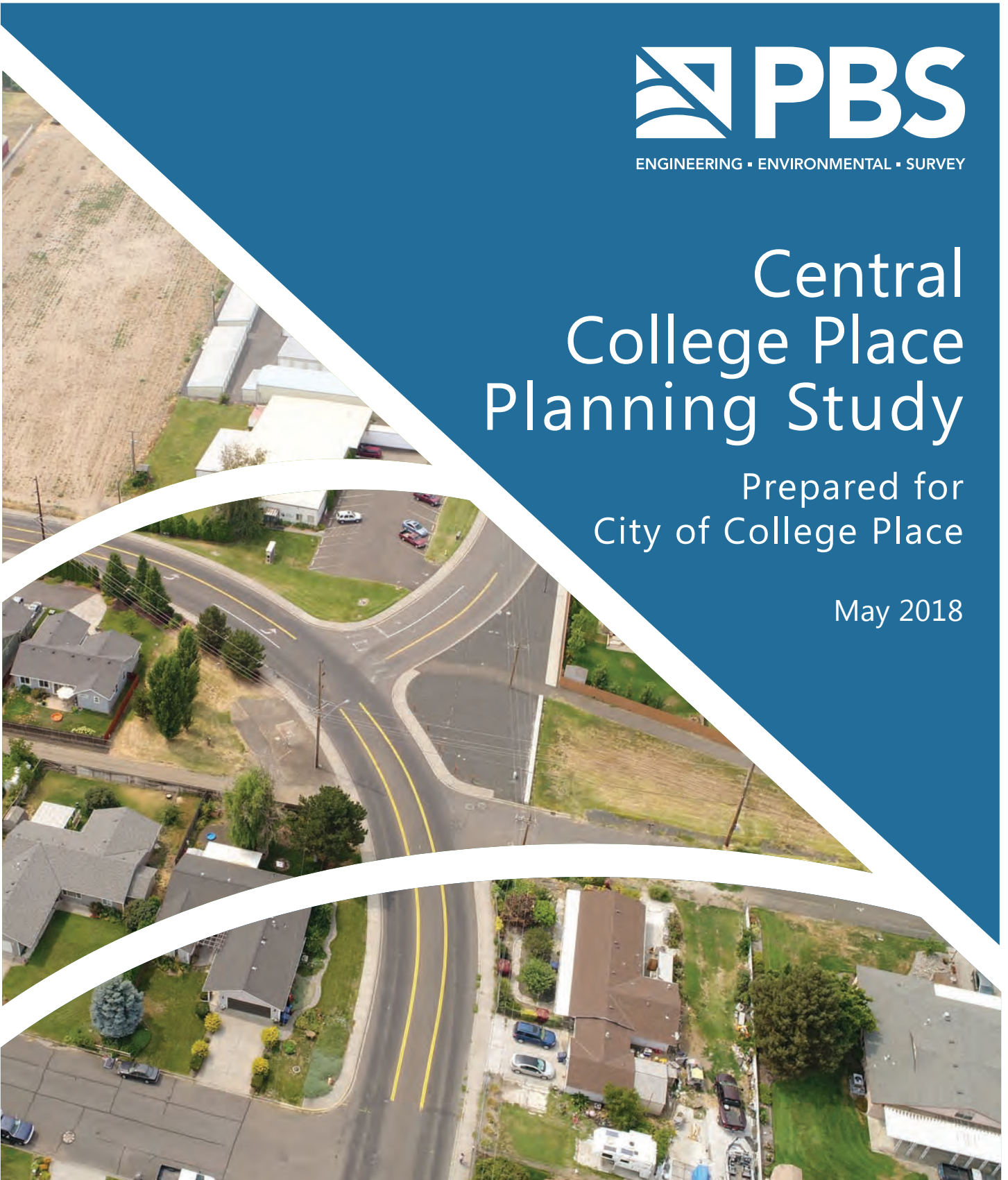


ENGINEERING • ENVIRONMENTAL • SURVEY

Central College Place Planning Study

Prepared for
City of College Place

May 2018



Prepared by
PBS Engineering And Environmental Inc. and ECONorthwest
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College Place Planning Study

College Place, Washington

Prepared for:

City of College Place

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May 11, 2018

PBS Project No. 67136.000



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1 INTRODUCTION

The City of College Place (City) received a Community Economic Revitalization Board (CERB) grant in 2017 to develop a Planning Study that will support private business growth and expansion along the Larch Avenue Corridor in College Place, Washington. Primary goals of this study include the following:

- Develop a preliminary engineering analysis for the Larch/C Street, Larch/Whitman, and Larch/12th Street intersections to determine how they can be improved to safely convey traffic flow.
- Identify methods to promote economic development opportunities within the City, particularly for the 10-acre site on the SE corner of Larch Avenue and C Street. Evaluate site zoning appropriateness, area infrastructure needs, market considerations, and estimate funding needed for public facility improvements.

This report documents the work performed by PBS Engineering and Environmental (PBS) in conjunction with the City of College Place and EcoNorthwest to meet these objectives and other requirements of the CERB grant.

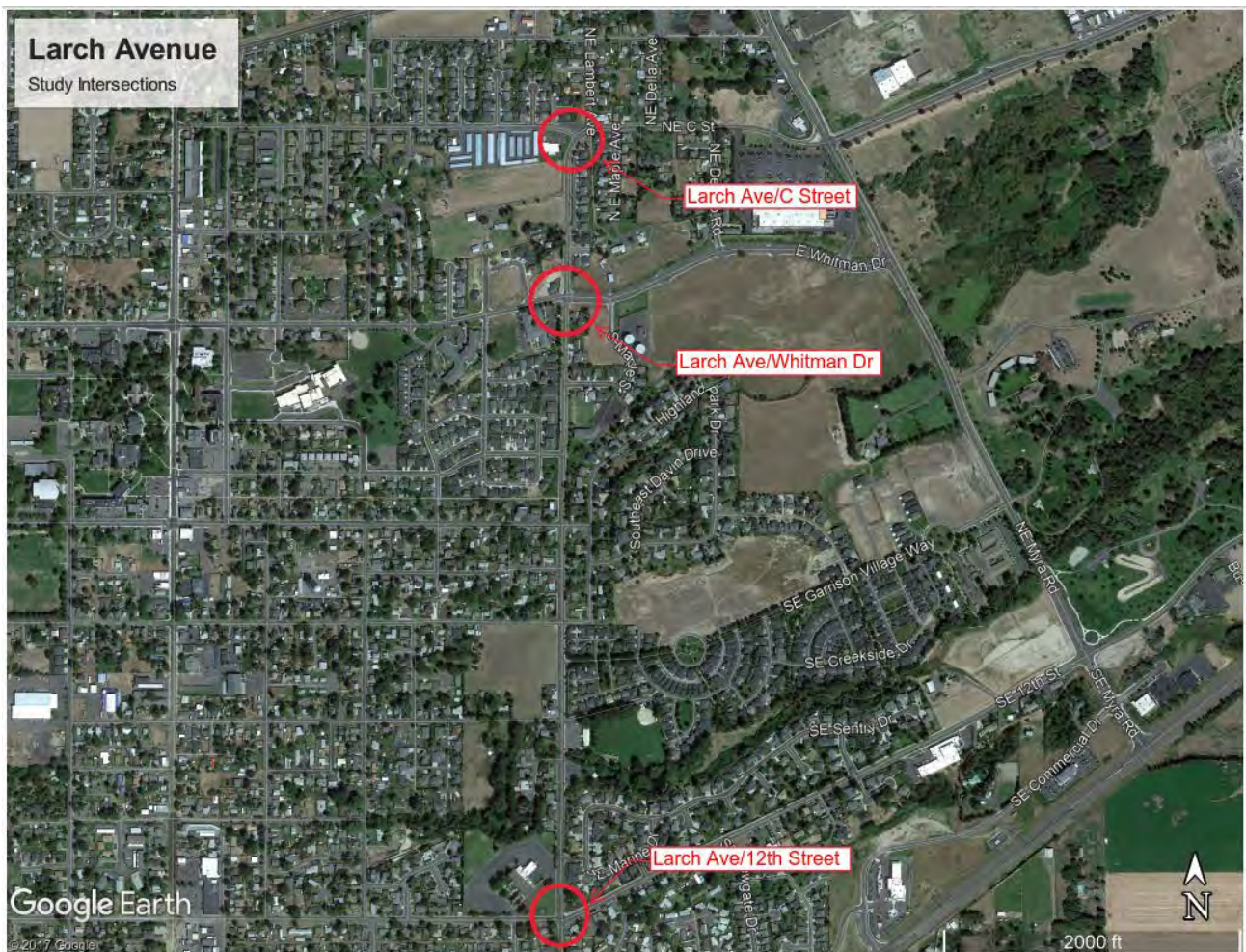


Figure 1: Study Intersections for College Place Planning Study

2 BACKGROUND AND APPROACH

The City of College Place is home to 6,740 people and Walla Walla University. College Place

lies within the greater Walla Walla Valley which is home to about 70,000 residents, a hospital, Whitman College, and Walla Walla Community College. Target industries of the region include food processing, medical services, wine, and tourism. The City has only three acres of active light industrial land. About 10.45 acres of light industrial property exist near the southwest corner of C Street and Larch Street (see Figure 2). However, access to the area is challenging due to problematic transportation patterns along the Larch Street corridor at the C, Whitman, and 12th Street intersections due to residential and commercial growth.

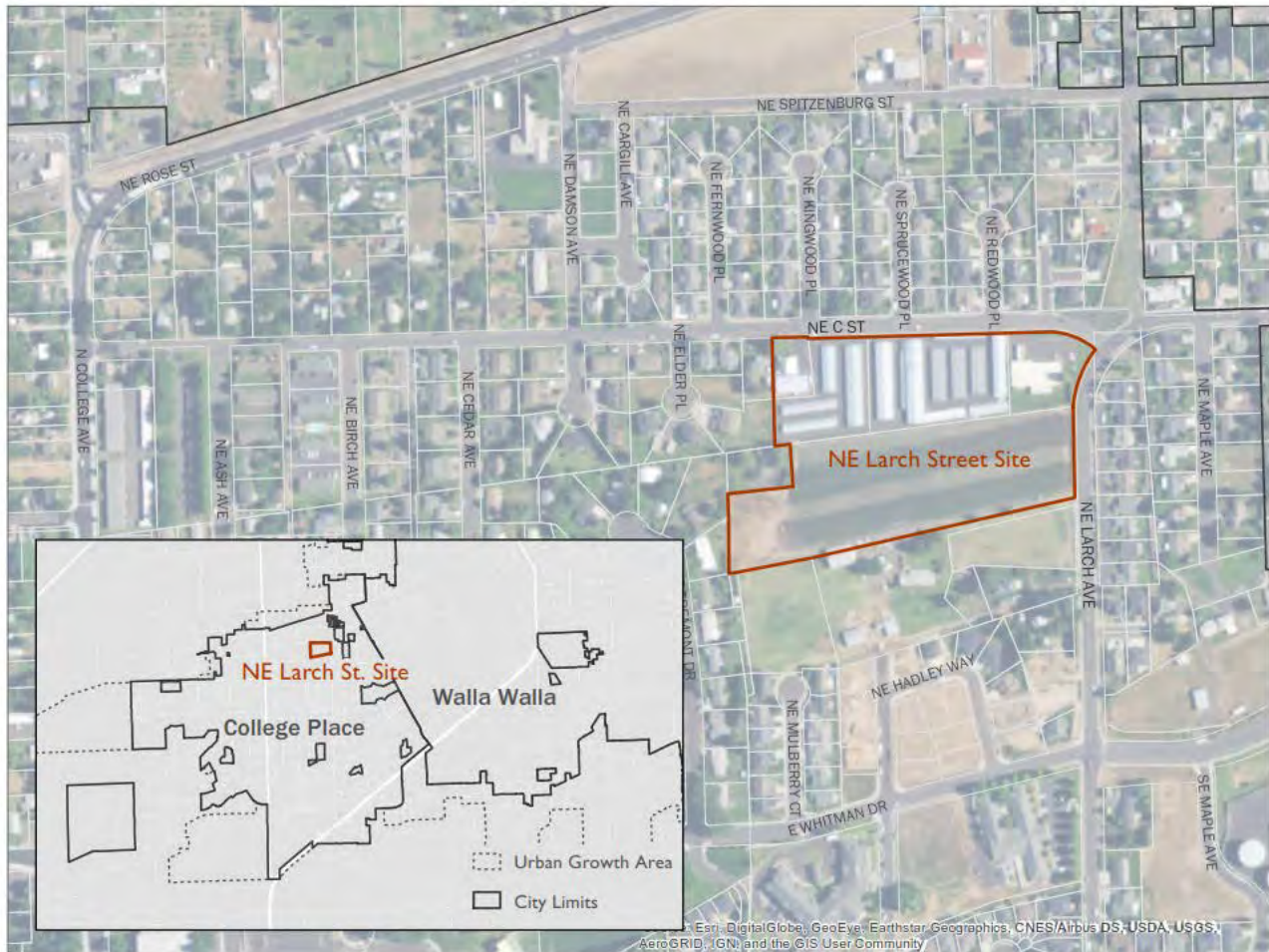


Figure 2. Study Site for College Place Planning Study (Source: ECONorthwest)

The design team's approach to the project included an analysis of the study intersections and Larch Avenue site from an engineering perspective as well as marketing and economic perspective. This approach provides a more complete picture of the opportunities and challenges associated with promoting development along the corridor. Results from the marketing and engineering analyses were coordinated throughout the study and used to inform design decisions for the project. For example, the potential zoning from the market analysis was used to develop future traffic counts for the traffic study.

The following sections of this report summarize the various deliverables that were developed as part of the planning study. Detailed reports and other information can be found in the appendices attached to this report.

3 PRELIMINARY ENGINEERING ANALYSIS

3.1 Aerial Survey

A PBS Survey technician conducted an unmanned aerial survey of the study intersections along the Larch Avenue Corridor in October 2017. The aerial imagery obtained during this flight was used to develop several concept exhibits for traffic improvements as well as a virtual tour which can be viewed on the PBS website using the following link: <http://www.pbsenv.com/uas/67136/>

3.2 Boundary Survey

Preliminary mapping of right-of-way along the Larch Avenue Corridor was completed March 6, 2018, using AutoCAD and was incorporated into the traffic improvement exhibits discussed in section 3.5 of this report.

3.3 Utility Infrastructure Review

The utility infrastructure along the Larch Avenue Corridor was reviewed in October 2017 and discussed during the October project meeting at the City of College Place. Based on feedback from the City on existing utilities as well as future improvements planned for C Street along the northern boundary of the site, no utility capacity issues were identified that would impede development of the study site.

3.4 Traffic Analysis and Report

The traffic analysis conducted for this project consisted of gathering traffic data along the existing corridor and developing a traffic alternatives report in Washington State Department of Transportation (WSDOT) format based on projected development/growth along the Larch Avenue Corridor. This report is included in Appendix F.

The analysis included four key intersections and evaluated the alternative traffic controls ranging from “do nothing” to a signalized intersection or roundabout. These analyses were conducted for existing conditions as well as a near-term future projection (year 2023) and a long-term projection (year 2040). Based on the findings of the analysis, the following are the recommended traffic control alternatives for each intersection:

Table 1. Recommended Traffic Improvements Along Larch Avenue Corridor Over Time

Time Horizon	Recommended Improvement Type by Intersection			
	<i>Larch and C Street</i>	<i>Larch and Lambert</i>	<i>Larch and Whitman</i>	<i>Larch and 12th</i>
Existing Conditions	Do Nothing	Do Nothing	Install 4-way stop	Install 4-way stop
Near term (year 2023)			Compact roundabout or traffic signal*	Compact roundabout or traffic signal*
Long Term (year 2040)				

*Note: Year when improvement is needed will depend on growth patterns. Traffic report shows intersection of Whitman and Larch Avenue as level of service F by 2023 and intersection of 12th and Larch as level of service D by 2023.

Note that no improvements are anticipated for the intersections of Larch and C Street and Larch and Lambert, although the City has inquired about the impact of converting Lambert Avenue from one-way to two-way from C Street to Rose Street. This potential change would not have any impact on the operation of the Lambert/C Street intersection. The change would only result in additional right and left turns from C Street to Lambert, and being free movements, would not significantly impact level of service. With the existing striped

median on C Street, there is currently room for left turning vehicles to wait for a gap without blocking through traffic.

Changing Lambert from one-way to two-way would improve traffic circulation within the neighborhood but would likely create complaints of “cut-through traffic” from the residents of Lambert Avenue. The current width of the street would control speeding as one opposing vehicles would need to yield the right of way to pass. This “skinny street” traffic calming method is widely used in many communities. If the City desired to implement other traffic calming measures, speed humps would be an effective tool.

3.5 Traffic Improvement Concepts

Following the project meeting that occurred at the City of College Place on Thursday March 8, 2018, the design team identified a total of six improvement concepts for improvements to the Study Intersections along Larch Avenue. Exhibits for each of these concepts are included in Appendix G of this report and include:

- Exhibit 1: Conceptual four-way stop control for Larch and Whitman
- Exhibit 2: Conceptual Signalized Intersection for Larch and Whitman
- Exhibit 3: Conceptual Roundabout for Larch and Whitman
- Exhibit 4: Conceptual four-way stop control for Larch and 12th
- Exhibit 5: Conceptual Roundabout for Larch and 12th
- Exhibit 6: Conceptual Signalized Intersection for Larch and 12th

3.6 Cost Estimates

Cost estimate were developed for each type of traffic improvement outlined in the Traffic Analysis. These estimates are in 2018 dollars and include design and survey costs as detailed in Appendix H.

Table 2. Cost for Traffic Improvements Along Larch Avenue Corridor

Improvement Type	Larch and C Street	Larch and Lambert	Larch and Whitman	Larch and 12th
Four-way stop	-	-	\$9,600	\$9,600
Signalized Intersection			\$553,000	\$553,000
Compact Roundabout			\$1,200,000	\$1,200,000

Note: all costs are in 2018 dollars with no cost assumed for relocation of franchise utilities. Includes soft costs such as design and survey

4 CULTURAL RESOURCES REVIEW

A cultural resources background research evaluation was performed by Reiss-Landreau Research for the three Intersections as detailed in Appendix E. The preliminary research conducted by Reiss-Landreau at the Washington State Department of Archaeology and Historic Preservation (DAHP) in Olympia revealed no sites in sections 25 and 36, but that Larch Avenue is located approximately .45 miles from the remains of Fort Walla Walla, and 24 recorded historic and precontact sites located there. Three cemeteries, and 25 cultural resources reports document past work within one linear mile of the project.

Based on these findings, the report recommends that a subsurface cultural resources study be performed when alignments are known. Importantly, if substantial changes to the four corners of the intersections are modified, historic preservation analysis should be conducted on potential impact to historic era homes and structures. A survey research strategy must be developed at the next stage when alignments and construction engineering is determined.

5 MARKET AND LOCATION ANALYSIS

A Market Analysis and Site Evaluation report was developed as part of the planning study by EcoNorthwest. The Final version of this report was completed in February 2018 and can be found in Appendix A. This report is intended to: identify the highest and best use of the site in light of the site's unique characteristics and recent market trends; and evaluate the site's competitive advantages versus other similar sites.

Based on the market data, competitive developments, and site suitability assessment, ECONorthwest determined that there are two land uses with long-term development potential at the site to further consider: multifamily housing and light industrial businesses.

5.1 Multifamily Considerations

Multifamily housing is a good prospect for the site. Given the size of the site, its location in a residential neighborhood, and the relatively modest demand for multifamily housing in region, a mix of housing types from single-unit homes to apartments may have the best prospects. A mixture of for-sale and rental homes may also differentiate the site from multifamily development at the Village at Fort Walla Walla.

5.2 Light Industrial Considerations

The industrial real estate market fundamentals in the Walla Walla region are stable, but they are not exceptionally strong. However, over the long-term, as the region continues to grow there will be a continued need for small to medium parcels to accommodate these primarily local serving businesses. Output and employment in goods-producing industries (who typically use industrial space) in the area have grown modestly over the last ten years. Continued growth in these sectors will generate a need for more industrial space in the area over the long-term. There are a number of industrial parks in the region that likely have more than enough land to accommodate new industrial development in the near future.

6 ECONOMIC IMPACTS

An economic impact memorandum was developed as part of the planning study by EcoNorthwest. This report was completed in April 2018 and can be found in Appendix B. It describes the economic impacts associated with the two zoning designations being considered for the 10-acre study property at the southwest corner of Larch Avenue and C Street. An understanding of the impacts associated with each zoning designation may help the City select a preferred zoning designation and marketing strategy for the property.

The development of both multifamily apartment and light-industrial buildings will have positive economic impacts for the City of College Place. The construction of both developments will support jobs and increased tax revenues in the City. The long-term impacts of development when complete will likely be different depending the type of development.

Multifamily development at the NE Larch Street site would have a larger direct investment. As a result, it would likely generate more tax revenue for the City over time. Multifamily residential uses would also support a population of between 76 and 605 residents. The City could expect to capture a large share of those residents' spending.

Light-industrial uses would support more long-term employment at the site with an estimated range of 88 to 140 full-time jobs. In contrast, multifamily residential uses would be unlikely to support any direct employment at the site. Multifamily development would, however, support indirect employment, such as landscaping and building maintenance over the long-term. Table 3 compares employment, total direct investment, and tax revenue potential for the two uses.

Table 3. Use Comparison

Type of Development	Multifamily Residential	Light Industrial
Population	76-605	0
Employment (non-construction)	0	88-140
Direct Investment	\$26.0 M	\$6.4 M
Tax Revenue Potential	Medium	Low

Source: ECONorthwest

In evaluating potential zoning changes at the NE Larch Street site, the City of College Place should also consider its broad economic development goals. For example, is adding jobs within city a higher priority than growing the tax base? It is also important to note that this analysis does not look at the net benefits of the two uses. Net benefits would factor in the additional service costs to the City from the increase in population and employment under each use. Multifamily housing would likely have more public service needs, given the projected larger number of people occupying the site, which would have more potential costs for the City.

7 MARKETING STRATEGY

7.1 Overview

The final component of this planning study consists of a marketing strategy for the Larch Avenue study site at the southwest corner of Larch Avenue and C Street. This marketing strategy is a required component of the CERB grant and includes a plan for inducing economic growth of the study property. The group currently responsible for implementing the marketing strategy is the City of College Place, with support from consultants and business groups when necessary. The City is well positioned to lead this effort given its stewardship role in the community as well as the tools available to City staff to promote growth.

7.2 Framework for City Action

Target Industries for the study property include multifamily or light-industrial development. The project team is currently pursuing the market readiness of each.

Further actions the City can take based on the development readiness of the use(s) include:

- Land use changes (re-zoning)
- Community outreach/advertising
- Property acquisition
- Development of incentives
- Coordinating partnerships

7.3 Site Development Profile

Table 4 provides a summary of the goals and marketing considerations for the two recommended uses of the site. Further consideration of these items may help inform the marketing strategy for the property.

Table 4. Considerations for Marketing Strategy

Consideration	Multifamily Residential	Light Industrial
Goals	Higher tax revenue Housing supply	Additional Jobs
Development Barriers	Ownership	Ownership Lower market demand Longer time horizon
Opportunities	Higher market demand Location	Location

7.4 Next Steps

Marketing of the study property to promote development will generally include several on-going efforts led by the City of College Place. Anticipated actions associated with these efforts are presented in Table 5, along with the roles, designed outcomes, timeline, and progress metrics. This table should be updated as progress is made toward development of the property.

Table 5. Marketing Strategy Summary Table

Action Items	Roles and Responsibilities	Desired Outcome	Timeline	Progress Metric
Develop Marketing Flyer	Consultant Team	Have a single page document that can be distributed to market the property	Spring, 2018	Completed—see appendix C
Market Readiness Outreach	City, Consultant Team	Evaluate interest in property and addition barriers to development	Spring, 2018	Memo summarizing outreach efforts and findings
Identify Partnership opportunities				List of opportunities
Discuss Incentives				

- **Actions and Roles:** The groups with responsibilities for the development approach and their role. Who has the lead and who is supporting?
- **Timeline:** Sequential phasing of actions to implement the development approach.
- **Desired Outcomes:** What outcomes would represent success? Include items like increased tax revenue, jobs, population, etc.
- **Monitor Progress:** What metrics should the City put in place to monitor progress toward the outcomes and the data source needed for those metrics.

APPENDIX A

Market Analysis Report

College Place

NE Larch Street Site

Market Analysis and

Site Evaluation

February 2018

Prepared for:

City of College Place

ECONorthwest
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Acknowledgments

For over 40 years ECONorthwest has helped its clients make sound decisions based on rigorous economic, planning, and financial analysis. For more information about ECONorthwest: www.econw.com.

ECONorthwest prepared this report for the City of College Place. It received substantial assistance from PBS, along with a number of College Place community members.

That assistance notwithstanding, ECONorthwest is responsible for the content of this report. The staff at ECONorthwest prepared this report based on their general knowledge of real estate markets and on information derived from government agencies, private statistical services, the reports of others, interviews of individuals, or other sources believed to be reliable. ECONorthwest has not independently verified the accuracy of all such information, and makes no representation regarding its accuracy or completeness. Any statements nonfactual in nature constitute the authors' current opinions, which may change as more information becomes available.

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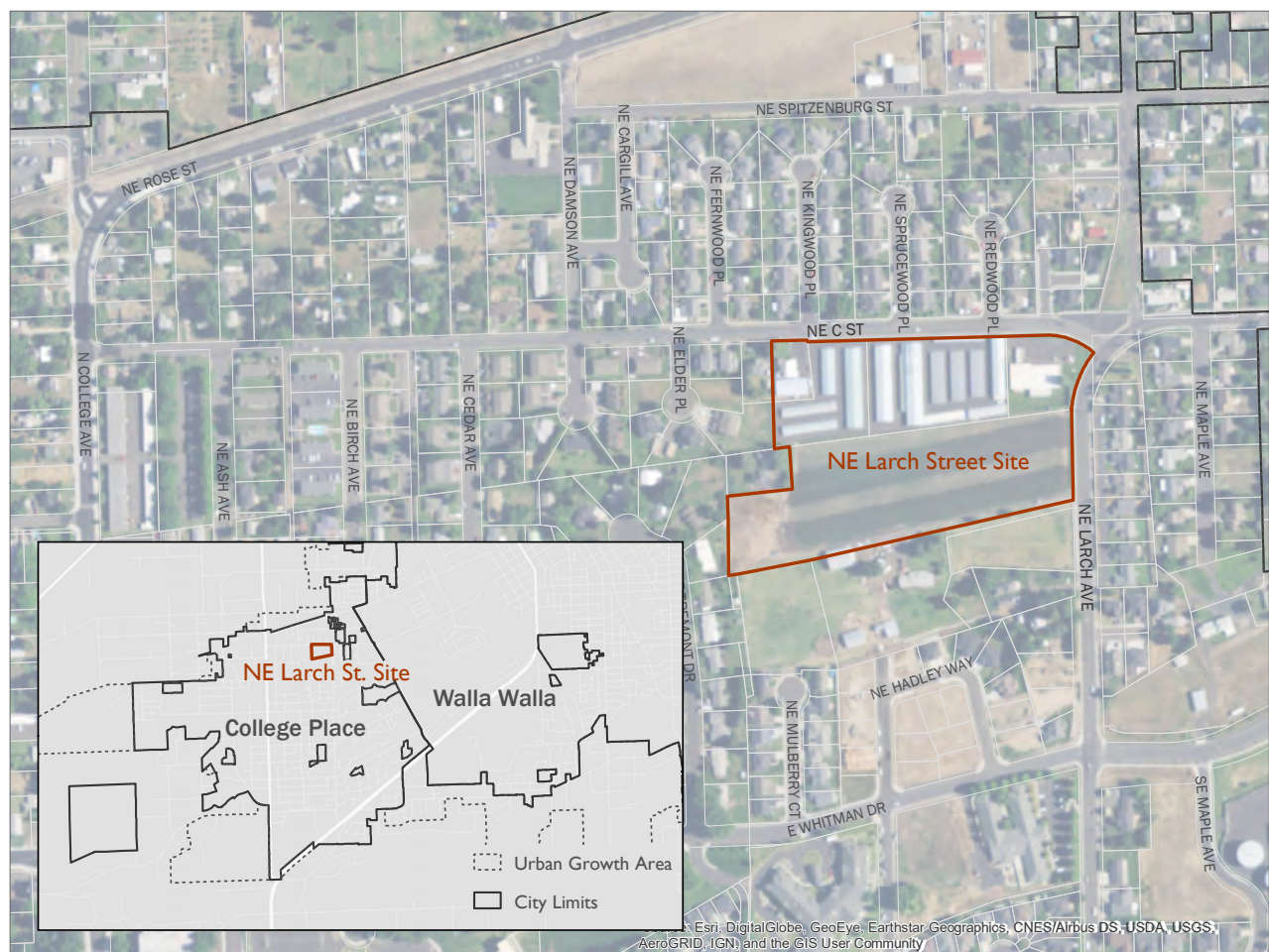
1 Introduction

1.1 Background

The City of College Place is seeking to promote economic development opportunities within the city. As part of this effort, the City is considering whether light-industrial uses are viable at a development opportunity site in northeast College Place, the Northeast Larch Street Site.

Exhibit 1 shows the location of the site relative to the rest of the region. The site is 10 total acres. Over half of the site (5.5 acres) is currently zoned Single-family Residential (R-60) and is currently vacant. The smaller portion of the site (4.5 acres) is zoned Light Industrial District (LI) and is occupied by a self-storage facility and several small office buildings.

Exhibit 1. Site Location



Source: City of College Place, ECONorthwest

In mid-2017, PBS Engineering and Environmental Inc. (PBS) was engaged by the City to assess site and infrastructure conditions and potential constraints for an opportunity development site within the community. PBS brought ECONorthwest onto the consultant team to assist with the real estate market analysis and to assess the potential for development at the subject site in the

near to mid-term. This market analysis is intended to; 1) identify the highest and best use of the site in light of the site's unique characteristics and recent market trends, and; 2) evaluate the site's competitive advantages versus other similar sites. Based on development potential identified, PBS will then conduct analyses of transportation and infrastructure needs to support these future uses. Combined, this work will be used by the City of College Place for policy evaluation, and economic development purposes.

1.2 Our Approach

The study has several components intended to provide a broad picture of the College Place real estate market and to help stakeholders understand the potential highest and best use of the NE Larch Street site. These components start with a high-level examination of the demographic and economic trends of the College Place market and then examine the development suitability of the subject site. Lastly, the report evaluates the competitiveness of the site for uses the market analysis identified as having the most development potential. The individual sections of this report are as follows:

- **Market Data and Trends – Key Findings** provides an overview of demographic, economic, and real estate trends in the region and College Place. An appendix provides a more detailed summary of the market data and trends.
- **Competitive Development Assessment** summarizes other large-scale developments and competitive properties in the local market area.
- **Site Suitability Assessment** evaluates the suitability of the site for different types of residential, commercial, and industrial uses.
- **Site Assessment Summary** compares the viability of a multifamily use and an industrial use at the site.

1.3 Methods and Data

In this study, we drew from a variety of data sources to compile an understanding of the College Place real estate market. Source citations can be found on each page with quantitative data. We also relied on stakeholder interviews to fill in the gaps between data and tell the local, qualitative story of what's going on in College Place. Mixing the qualitative input from locals with on-the-ground knowledge is essential to understand a modestly sized market like College Place.

2 Market Analysis

2.1 Market Data and Trends – Key Findings

The City of College Place is the second largest city in Walla Walla County after its larger sibling—the City of Walla Walla—located immediately to the east. College Place has kept pace with the County and the rest of the State in terms of population growth. Although, the College

Place population has grown at a slightly slower rate than the County and State, it has grown 15 percent over the past decade and half, indicating that it's a community that is growing year over year.

2.1.1 Economic Growth

From 2000 to 2016, College Place added 1,182 people, growing by a total of 15 percent, an annual average growth rate of 0.9 percent.

Walla Walla MSA added 8,600 people since 2000, growing by a total of 16 percent and slightly outpacing College Place with an annual average growth rate of 1.0 percent. The State of Washington had an annual average growth rate of 1.2 percent.

Exhibit 2. Population Growth, Areas of Comparison, 2000-2016

Source: Decennial Census 2000, ACS 2012-16 Total population, Washington Office of Financial Management

AAGR is Average Annual Growth Rate

	Population		Change (2000-2016)		
	2000	2016	Number	% Change	AAGR
College Place	7,814	9,245	1,431	18%	1.1%
Walla Walla MSA	55,180	63,780	8,600	16%	1.0%
Washington State	5,894,121	7,073,146	1,179,025	20%	1.1%

Incomes in College Place are modest. The median household income is around \$40,000, which is more than \$20,000 below than the median income for the entire State of Washington. Incomes in College Place have risen dramatically however. Since the turn of the millennium, the median income in College Place has grown by 38 percent. Lower income levels are likely related to the larger share of young adults in the City. The share of persons under 25 years of age is 39 percent, which is higher relative to the Walla Walla MSA (34 percent) and Washington State (32 percent).

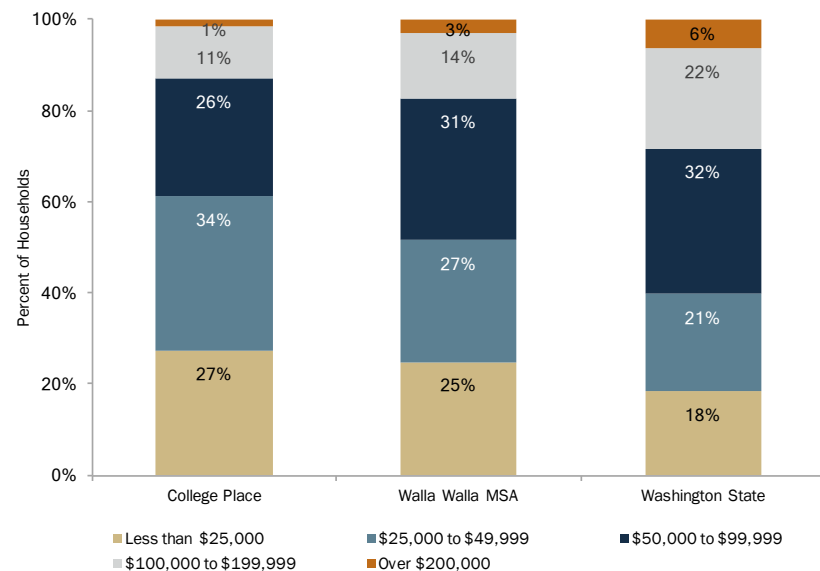
About 61 percent of College Place households earned median incomes below \$50,000. Approximately one-quarter earned \$50,000 to \$99,999.

About half of Walla Walla MSA households earned median incomes below \$50,000, compared to 39 percent across the State.

Exhibit 3. Household Income, Areas of Comparison, 2012-2016

Source: US Census Bureau, 2012-2016 ACS Table B19001

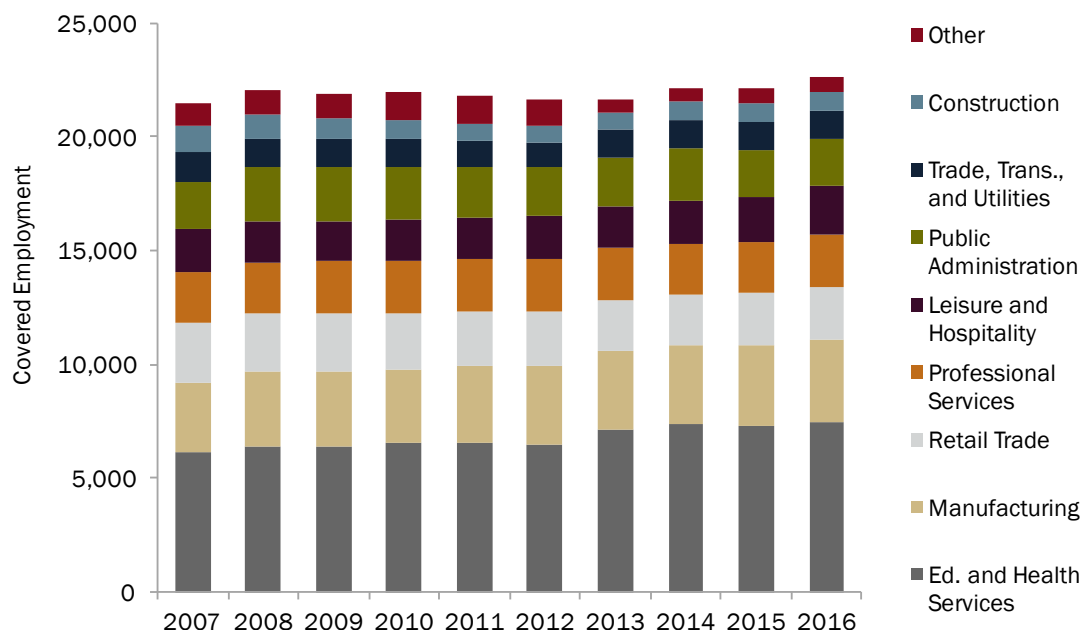
Data are in 2016 inflation-adjusted dollars



Walla Walla County has a diverse, primarily service-oriented economy, and employment has been stable over the last ten years. In 2016, covered employment totaled 22,652, which is almost 1,200 more jobs than in 2007. Education and health service sector jobs are one-third of these jobs. Manufacturing, retail, and other commercial services account for much of the remaining job base. Major employers in the county reflect that the regional economy is based on agriculture, education, health care, and manufacturing.

Exhibit 4. Covered Employment, Walla Walla County, 2017

Source: Bureau of Labor Statistics, 2017



The overall picture of College Place is one of a modestly sized community that is growing incrementally year over year. The City is one that is buoyed by local universities and a metro area that serves as a regional hub for the largely rural agricultural economy. Growth, both demographic and economic, is projected to continue through the mid-term and long-term.

2.1.2 Real Estate Trends

The City of College Place has a modest commercial real estate sector. To capture a more complete understanding of commercial real estate trends in the region, we examined commercial real estate trends across all of Walla Walla County.

Generally, Walla Walla County's commercial real estate sector has rebounded since the recent recession. Although the extent of recovery has been different from sector to sector, the retail sector has shown the strongest gains since the recession. Retail rents have jumped up considerably and retail vacancy has plummeted to one percent. Recently proposed retail projects reflect the positive swing in the market. Other real estate sectors—office, industrial, and multifamily—have had mixed trends in the past decade.

Office vacancy, which for a majority of the past ten years was over 12 percent, has dropped recently. And although office rents were trending upwards from 2012 to 2016, year-to-date figures for 2017 indicate a dip in recent office lease rates.

The industrial sector has maintained high levels of vacancy over the past decade with few deliveries to market. Industrial rents have been stable, averaging between \$3.00 and 5.00 per square foot.

The regional multifamily residential market improved since the recent recession, but it has not recovered to pre-recession levels of construction. Most additions to housing supply have been single-family homes, rather than multifamily buildings. Multifamily rents have increased slightly over the past ten years, but on average they remain below \$1.20 per square foot - a low rate that does not typically incent new development. Multifamily vacancy has steadily declined over the past four years. A proposed 180-unit apartment complex in College Place is an additional sign of an improving multifamily housing market.

2.1.3 Real Estate Demand Outlook

Overall, demographic, economic, and real estate market trends point to a community that is growing at a modest rate year over year. The local population has grown, job numbers have increased, incomes have gone up, and developers have proposed historically unrivaled new projects. A continuation of these trends signifies an increased demand for real estate. However, because of the modest size of the local market and incremental nature of growth in demand, new projects are likely to only succeed at desirable locations with above average qualities.

- **Retail Outlook.** The largest opportunity for real estate sector growth is in the retail sector, where rents have increased and vacancy is at an all-time low. Two proposed projects, to be discussed in the following section, will capture most demand for retail space in the near to mid-term. These large projects will drastically augment the existing retail market in and around College Place.
- **Multifamily Outlook.** While the fundamentals of the multifamily sector do not appear to be strong (low existing rental rates in particular) the sociodemographic trends of the community point to an increasing demand for multifamily units in the near- to mid-term. These trends include; small household sizes, a young population, and increasing incomes. These trends will shift the housing needs of the College Place population. The new College Place households that fit these demographics will seek smaller housing units that are proximate to retail, commercial, and community services.
- **Industrial Outlook.** The industrial sector has had variable performance in the past decade. The Walla Walla metro region has a number of vacant and development-ready industrial sites. For this reason, industrial users have several good options for locating new, existing, or expanding businesses.
- **Office Outlook.** The local office market is not robust, and has had little development activity as of late. The local office market is modestly sized and primarily contains locally focused services (e.g. accountants, lawyers, and real estate agents). Speculative office construction is unlikely. Build-to-suit developments, in which an existing business contracts a developer for a custom project, are possible. Although these developments can be few and far between.

Based on the economic and real estate trends, the uses with the most regional demand in the near- to mid-term are retail, multifamily, and industrial uses.

2.2 Competitive Development Assessment

Any development proposal for the NE Larch Street site will compete with other nearby sites for a limited amount of regional demand for retail space, office space, apartments, and industrial land. For these reasons, this section; 1) outlines new proposed development projects in the development pipeline that will add to the residential and commercial real estate supply in the near- and mid-term, and; 2) provides a list of existing industrial sites that the NE Larch Site would compete against, should an industrial use be pursued.

2.2.1 Proposed Multifamily Mixed-Use and Commercial

There are two proposed large-scale projects both less than one mile from the NE Larch Street Site. The Village at Fort Walla Walla is a mixed-use development in College Place, and Walla Walla Town Center is a retail centers in the City of Walla Walla on the boundary with College Place. Combined these two developments would add over 500,000 square feet of retail space and 180 apartments to the local real estate market.

The Village at Fort Walla Walla

The Village at Fort Walla Walla will include a commercial center, a medical district, and a housing district. The 32-acre site is located at the southwest corner of E Whitman Drive and SE Myra Road, 0.5 miles to the southeast of the subject site. College Place Land Development Partners, LLC is currently undertaking the project.

Exhibit 5. Village at Fort Walla Walla Concept Plan



Source: TD&H Engineering

The Village at Fort Walla Walla project is divided into five phases:

- Phase 1 – Residential Apartments
- Phase 2 – Grocery Store & Mixed-Use
- Phase 3 – Main Street Mixed-Use
- Phase 4 – Medical District
- Phase 5 – Unknown Future Development

The proposed development will feature six apartment buildings with 180 total multifamily units. On-site amenities for the residential units will include a pool, carports with storage units, and large landscaped areas. Also included in the project will be a series of commercial outlets, including a boutique grocery store and retail/restaurant pads. Two four-story medical facilities will also be onsite and include garage parking and medical office facilities. The developers have indicated that there is sufficient land for additional future development. These later phase uses have not been identified yet.

Walla Walla Town Center

The proposed Walla Walla Town Center is located at the site of the former Blue Mountain Mall at Rose Street, Myra Road, and Poplar Street, less than one mile to the east of the subject site. College Place currently lacks national and regional retail outlets; the Walla Walla Town Center will bring in some of the most recognizable brands retail brands to the community. Bed Bath & Beyond; Famous Footwear; Hobby Lobby; Marshall's; Ross; Ulta; ShopKo; and Sportsman's Warehouse will anchor the 370,000-square-foot retail development. When complete, the two-phase master-planned project proposed by Zelman Development Co. and Real Estate Affiliates Inc. will be the largest retail center within a 50-mile radius.

Exhibit 6. Walla Walla Town Center Site Plan



Source: Zelman Development Co.

2.2.2 Light Industrial

The following inventory of light industrial sites are available for future development in Walla Walla County. We have included them here, because they represent competitive locations for light industrial development for the subject site. Moreover, an industrial user looking for property in the College Place market may consider the subject site in comparison to those listed below. Cumulatively, these sites represent a sizable amount of industrial land in the region for development.

There are only a few properties currently zoned industrial in College Place. These properties are currently in use. The subject site is one of only three industrial locations within the city and the only site that is available for development. The other two locations are: (1) several properties at the intersection of Whitman Drive and NW Evans Avenue, and (2) another collection of properties located along Bade Avenue where it intersects with 8th Street. The properties on

Whitman Drive are currently occupied by a manufacturer. The properties along Bade Avenue are occupied by Walla Walla University's Physical Plant and Operations Department. Because of their current uses, neither of these industrial locations are good candidates for redevelopment. The list below is the comprehensive set of light industrial areas in the Walla Walla region.

West Whitman Drive Light-Industrial District (College Place)

One of the three light-industrial zoned areas in the City of College Place. This area consists of one 3.7-acre parcel that is currently developed with a large light-industrial building. The property is occupied by several smaller commercial and industrial businesses.

SW Bade Avenue Light-Industrial District (College Place)

This area is another light-industrial zoned area in the City. This area consists of five parcels totaling 7.5 acres. The parcels are occupied by one building and a large amount of associated yard and storage space.

The Avery Business Park – Phase 2 (Walla Walla)

Phase 2 consists of 12.3 development-ready acres of industrial light/commercially zoned land in the City of Walla Walla. The site is located at Rose Street, Blue Mountain Railroad, and Poplar Street near the Walla Walla Regional Airport. The site has access to light manufacturing, service-related, and commercial type industries, including rail access. The park is located between Key Technology's Corporate Headquarters and AmeriCold Logistics. The Port will sell and/or lease the development lots.

Burbank Industrial Park (Burbank)

The Burbank Industrial Park is located at the confluence of the Snake and Colombia Rivers about 35 miles west of the City of Walla Walla in Burbank, Washington. The industrially zoned 5-acre site would be well suited for importing and exporting products via barge or rail. The park is bound by South Second Street and the Snake River. Park lots are available for lease.

Burbank Business Park (Burbank)

Directly east of the Burbank Industrial Park, the adjacent Burbank Business Park is 112 acres of commercial (15 acres) and light industrially zoned land (97 acres) located near U.S. Highway 12. The park consists of 97 lots that range in size from 0.5 acres to 20 acres. Lots are available for sale and lease. Sales prices in the Burbank Business Park range from \$1.50 to \$6.00 per square foot.

Dodd Road Industrial Park – Parcel A (Walla Walla)

Parcel A of the Dodd Road Industrial Park is located in the western portion of Walla Walla County. The 54-acre lot is zoned heavy industrial and is currently leased by Boise White Paper. The site has both truck and rail access and can be subdivided to meet developer needs.

Melrose Industrial Park (Walla Walla)

The Melrose Business Park is nearly 33 acres of industrial zoned property located on Melrose Street in the City of Walla Walla and is currently owned by the Port of Walla Walla. The site has both truck and rail access and is located near the Walla Walla Regional Airport. The City has completed both Phase 1 and 2 environmental mitigation on the site.

Wallula Gap Business Park (Wallula)

The Wallula Gap Business Park is located in the western portion of Walla Walla County, directly east of the Dodd Road Industrial Park. It consists of 1400 acres of heavy and mixed industrial zoned land. The site is adjacent to U.S. Highway 12, the Union Pacific Railroad mainline. Currently, the site is used predominantly for industrial agriculture.

Waitsburg Business Park (Waitsburg)

The 9.61-acre Waitsburg Business Park is located in Northeast Waitsburg Washington at Mill Race Road and Garden Street. The park consists of seven industrially zoned lots ranging from one to two acres in size. The site has both truck and rail access, and lot sizes can be reconfigured to meet developer needs.

Walla Walla Regional Airport Business Park (Walla Walla)

The Walla Walla Regional Airport Business Park consists of approximately 832 acres of airport development (industrial and commercial) zoned land in Northeast Walla Walla. The Airport Business Park has existing buildings that range from 2,500 to 20,000 square feet, but the majority of the site remains undeveloped.

2.3 Site Suitability Assessment

This section considers the suitability of the site for different land uses based the existing conditions, such as site accessibility, visibility, and configuration. The subject site is located in northeast College Place and approximately two miles west of downtown Walla Walla. The site is bordered by NE C Street (to the North) and NE Larch Street (to the east). To the west and south of the site are existing residential properties. Exhibit 7 below shows and aerial image of the site.

Exhibit 7. Aerial Drone Image of the Subject Site Looking Southwest



Source: PBS Engineering

The table below considers the subject site's suitability for several proposed uses based on a list of suitability factors.

Exhibit 8. Site Suitability Assessment

Assessment Factors	Residential or Mix of Residential and Commercial Uses	Commercial Uses Only	Industrial Uses Only
Local and Regional Accessibility¹	The site has average accessibility by car. NE C Street to the north is a two-lane road with relatively little traffic. NE Larch Street has more traffic, but also features a middle turn lane. Planned road improvements to C Street – including bike lanes and on-street parking – will increase the attractiveness of the site for a residential use.	Commercial users would have to compete with existing local residential users. However, there is likely road capacity for some increased level of commercial use on the site.	Truck traffic for an industrial use at the site would have to compete for road space with local residential users. The site is a relative distance from a regional highway or collector street. These factors combined make for below average accessibility for most industrial users.
Site Configuration and Orientation	The site's irregular rectangular shape would be efficient for any number of residential, mixed-use, commercial, or industrial configurations.		
Visibility and Exposure	Residential uses alone do not rely on visibility and exposure to be successful developments. The commercial component of mixed-use developments do typically need exposure to be successful. The site has limited opportunities for visibility and exposure along NE Larch Street.	Due to low traffic volume along the site's adjacent roads, there is below average exposure for a commercial user at the site. That said, there are no geographic impediments that would obstruct site visibility.	Industrial uses tend to not rely on visibility and exposure as much as commercial uses. For this reason, there is average visibility and exposure for an industrial user.
Proximity to Complementary Uses	The subject site is completely surrounded by residential uses. Additional residential at the subject site would complement the surrounding neighborhood.	There are no commercial businesses immediately adjacent to the subject site. Further to the east and southeast are several commercial businesses. There are also plans for several large commercial developments in these areas. (The subject site does contain a few existing commercial businesses, including; a self-storage business, a carpet business, and a faith-based nonprofit organization)	Existing industrial uses are located further to the south and east of the subject site. There are no industrial uses in close proximity.
Character of Surrounding Uses	The surrounding neighborhood contains primarily single-family homes. The neighborhood has both attached and detached single family homes. Larger multifamily developments are located along NE C Street further to the west.		
Availability of Infrastructure and Utilities	The subject site is tied into the local infrastructure and utility network.		

¹ The City of College Place has plans to improve several roads near to the subject site. The City currently has plans to improve C Street (College to Larch) and Damson Avenue (C St. to Rose St). Improvements will include new utility infrastructure, new asphalt surfacing, a single lane in each direction, parking on one side of the street, and bike lanes.

Overall, the site is likely most suitable for residential uses, a mix of residential and commercial uses, or less intense industrial uses, such as warehousing or small-scale production. Commercial uses, particularly retail, are likely not as suitable because of lack of visibility. In addition, heavy industrial uses or warehouse and distribution facilities are less compatible with surrounding residential uses and may generate heavy truck traffic.

2.4 Site Assessment Summary

Based on the market data, competitive developments, and site suitability assessment, ECONorthwest determined that there are two land uses with long-term development potential at the site to further consider: multifamily housing and light industrial businesses.

- **Market Data and Trends** determined modest but increasing demand factors for multifamily apartments, retail space, light-industrial uses in the Walla Walla area.
- **The Competitive Development Assessment** identified a sizable amount of new retail uses in the development pipeline and quite a few development sites available for industrial uses within Walla Walla County.
- **The Site Suitability Assessment** determined that site accessibility, visibility, and surrounding uses make residential and lower intensity industrial uses the most suitable options for the site.

As a result of these factors, multifamily housing is likely the highest and best use of the site in the near-term. The surrounding neighborhood is already residential and NE Larch Street and C Street provide good accessibility without being formidable barriers for pedestrians to cross. However, for economic development purposes, the City of College Place may want to support light industrial development at the site. The potential for each of these uses at the site is in more detail below.

2.4.1 Multifamily

Multifamily housing includes a variety of housing types including apartment buildings, duplexes, triplexes, and attached townhomes. Based on average apartment rent levels, new apartment buildings would likely be two- to three-story woodframe construction with surface parking. These types of multifamily housing do not have many site requirements beyond typical water and sewer utilities connections, parking, and stormwater treatment facilities.

The market fundamentals for multifamily housing indicate growing demand for additional housing in the area with a limited supply of units. Since the recent recession, both Walla Walla County and the City of College Place have seen housing development increase. By 2016, housing production was at the average that has been built over the last 15 years. However, most of these units have been single-unit homes, and few multifamily units have been built in the last five years. For rental housing specifically, vacancies are at their lowest point in the last ten years at just under four percent, and apartment rents have been increasing for several years.

There are new multifamily units in the development pipeline in College Place. Phase 1 of the Village at Fort Walla Walla, which is just 0.5 miles from the site, is slated to build 180 multifamily units. As a result, much of the demand for apartments may be absorbed by this development in the near-term.

Overall, multifamily housing is a good prospect for the site. Given the size of the site, its location in a residential neighborhood, and the relatively modest demand for multifamily housing in region, a mix of housing types from single-unit homes to apartments may have the best prospects. A mixture of for-sale and rental homes may also differentiate the site from multifamily development at the Village at Fort Walla Walla.

The development potential of the site depends on the zoning. The 5.5-acre portion of the site currently zoned R-60, which allows single-family homes and duplexes. The minimum lot size is 6,000 square feet for single-family homes and 7,500 square feet for duplexes. To allow apartments, the site would have to be rezoned to RM – Multifamily Residential, which allows multifamily structures.

If the zoning remains R-60, the site could accommodate 35 to 40 units depending on the mix of single-family homes and duplexes. If the zoning was changed to RM, the site could accommodate approximately 250 units, assuming the full built-out of the 5.5 acres with three-story apartment buildings and surface parking. Based on this assumed buildout, PBS estimated that the site would generate 1,663 average weekday trips. For comparison, if the site remained zoned R-60 and developed as a single-family subdivision with 35 homes, the site would generate 334 average weekday trips. A development of this scale may require mitigation measure to account for the additional trips on the local road network.

Exhibit 9. Multifamily Development Capacity

Assessment Factors	
Assumed Density	45 Units per Acre
Estimated Number of Units	252 units
Estimated Number of Parking Spaces	378 parking spaces
Estimated Number of Average Weekday Trips	1,663 trips
Example Multifamily Housing in College Place	



2.4.2 Light-Industrial

Light-industrial uses include small-scale fabrication and light assembly businesses, contractors, commercial supply businesses, and even production spaces for food and beverage, such as wineries or coffee roasters, which may have a retail component. Many light-industrial users do not need large spaces, often are not large users of water and electricity, and do not require close proximity to major transportation facilities, such as ports, railroads, or highways. Some businesses may need outdoor yard space for storage or other purposes. These businesses are also somewhat price sensitive to the cost for building rent or land. As a result, new light-industrial developments will likely seek lower-cost vacant land.

The industrial real estate market fundamentals in the Walla Walla region are stable, but they are not exceptionally strong. Rents have increased to over \$5.00 per square foot in the last three years and vacancies are around 10 percent. However, based on CoStar's survey, more industrial space is being vacated than leased in 2017, resulting in an increase in vacancies.

Over the long-term, as the region continues to grow there will be a continued need for small to medium parcels to accommodate these primarily local serving businesses. Output and employment in goods-producing industries (who typically use industrial space) in the area have grown modestly over the last ten years. Continued growth in these sectors will generate a need for more industrial space in the area over the long-term. There are a number of industrial parks in the region that likely have more than enough land to accommodate new industrial development in the near future.

Accommodating industrial uses on the 5.5 acres would require the that the vacant lot currently zoned R-60 be rezoned to IL – Light Industrial. The IL zone allows a 100 percent lot coverage. However, due to parking and yard and storage needs this assessment assumes that only 33 percent of the lot area would be used for building area. Excluding area for right-of-way access, the site would likely accommodate approximately 71,000 square feet of light industrial building area. Assuming 500 square feet per employee, the site would support 142 jobs. Trip generation estimates for a light-industrial development of this scale would total an estimated 496 average weekday trips.

Exhibit 10. Light-Industrial Development Capacity

Assessment Factors	
Assumed Density	0.33 floor-to-area ratio
Estimated Building Area	71,000 square feet
Estimated Employment	142 employees
Estimated Number of Average Weekday Trips	496 trips
Example Light Industrial Uses in Walla Walla	



3 Appendix – Market Data and Trends Detail

The following section examines College Place’s demographic and economic context. In the pages that follow, we identify demographic trends that will influence the demand for development at the subject site. We also explore economic demand drivers that will the type and viability of business location at the subject site.

3.1 Demographic Trends

Population Growth

College Place is a city of almost 9,000 and is the second largest city in the Walla Walla, Washington Metropolitan Statistical Area (MSA), which includes Walla Walla County and Columbia County. The local population has grown slightly slower than the State as a whole, but is on pace with the rest of the Walla Walla MSA.

From 2000 to 2016, College Place added 1,182 people, growing by a total of 15%, an annual average growth rate of 0.9%.

Walla Walla MSA added 8,600 people since 2000, growing by a total of 16% and slightly outpacing College Place with an annual average growth rate of 1.0%. The State of Washington had an annual average growth rate of 1.2%.

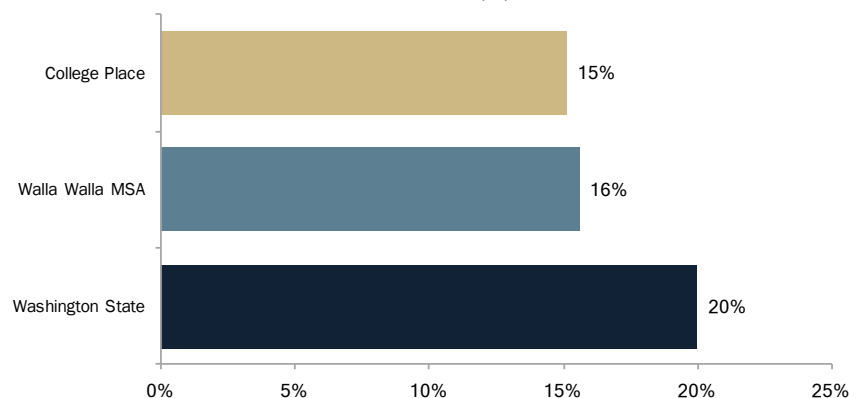
Exhibit 11. Population Growth, Areas of Comparison, 2000-2016

Source: Decennial Census 2000, ACS 2012-16 Total population
AAGR is Average Annual Growth Rate

	Population		Change (2000-2016)		
	2000	2012-16	Number	% Change	AAGR
College Place	7,814	9,245	1,431	18%	1.1%
Walla Walla MSA	55,180	63,780	8,600	16%	1.0%
Washington State	5,894,121	7,073,146	1,179,025	20%	1.1%

Exhibit 12. Comparative Population Change, 2000-2016

Source: Decennial Census 2000, ACS 2012-16 Total population



The Washington Office of Financial Management’s population forecasts for the Walla Walla MSA project that the area’s population will grow slower compared to the entire State of Washington through 2040. The Walla Walla MSA is projected to grow at an annual rate of just 0.4%, adding 5,766 people by 2040. This is slower population growth rate than the area experienced since 2000.

The forecasted population growth in Walla Walla MSA is approximately 5,800 people (or a 9% increase) over the next 23 years.

Exhibit 13. Total Population Forecast, 2017 – 2040

Source: Washington Office of Financial Management State Population Forecast, Nov. 2017, Washington State Growth Management Population Projections for Counties, May 2017.

Note: Population forecasts not available for College Place. Only five-year estimates available for Walla Walla County and Columbia County.

	Population		Change (2017-2040)		
	2017	2040	Number	% Change	AAGR
Walla Walla MSA	65,500	71,266	5,766	9%	0.4%
Washington State	7,310,300	9,242,022	1,931,722	26%	1.0%

Age Characteristics

The median age of the City’s population is 34, which is almost 4 years younger than the median age of Washington and Walla Walla MSA. College Place also has a larger share of persons under 25 years of age relative to Walla Walla MSA and Washington State.

The median age in College Place is 34 years old. The median age in Walla Walla MSA is higher at about 38 years. The median age for the entire State of Washington is also 38.

Exhibit 14. Median Age, Areas of Comparison, 2012-16

Source: US Census Bureau, 2012-16 ACS Table B01002

34	38	38
College Place	Walla Walla MSA	Washington State

The largest age cohort in College Place are those under 25 years of age. This is consistent with Walla Walla MSA.

College Place and Walla Walla MSA both have a large share of people aged 60 and older relative to the State.

Exhibit 15. Population Distribution by Age, Areas of Comparison, 2012-16

Source: US Census Bureau, 2012-2016 ACS Table S0101

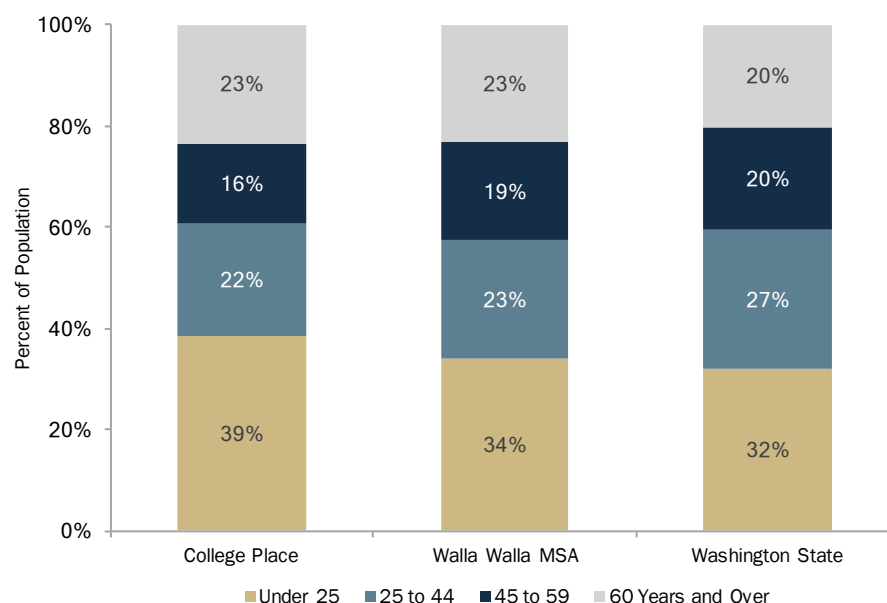


Exhibit 15 above shows a comparative distribution of populations by age. The distribution shows that College Place has quite a different population distribution than the State of Washington. Almost 40 percent of the City's population is under the age of 25, compared to 32 percent of the population statewide. College Place also has a higher share of those 60 years of age and older (23%) than the State (20%).

Walla Walla MSA's population aged 65 and over is expected to increase by about 32% by 2040.

This age cohort is expected to nearly double in size in Washington State over the same time period.

Exhibit 16. Population 65 and Over Forecast, 2015 - 2040

Source: Washington Office of Financial Management State Population Forecast, Nov. 2016, Washington State Growth Management Population Projections for Counties, May 2012.

	Population		Change (2015-2040)		
	2015	2040	Number	% Change	AAGR
Walla Walla MSA	10,580	14,005	3,425	32%	0.4%
Washington State	989,124	1,857,527	868,403	88%	1.0%

Household Characteristics

College Place has a larger average household size than the State. The most dramatic difference in household make up between College Place and the State of Washington is the fact that over 35 percent of College Place households are one-person households. The entire State of Washington has only 28 percent single-person households. One- and two-person households combine to make up 74 percent of all College Place households. This is likely due to a higher share of younger (under 25) and older (over 60) residents relative to the State.

The average household size is 2.3 persons per household in College Place and 2.5 persons in Walla Walla MSA.

Exhibit 17. Average Household Size, Number of Persons per Household, Areas of Comparison, 2012-16

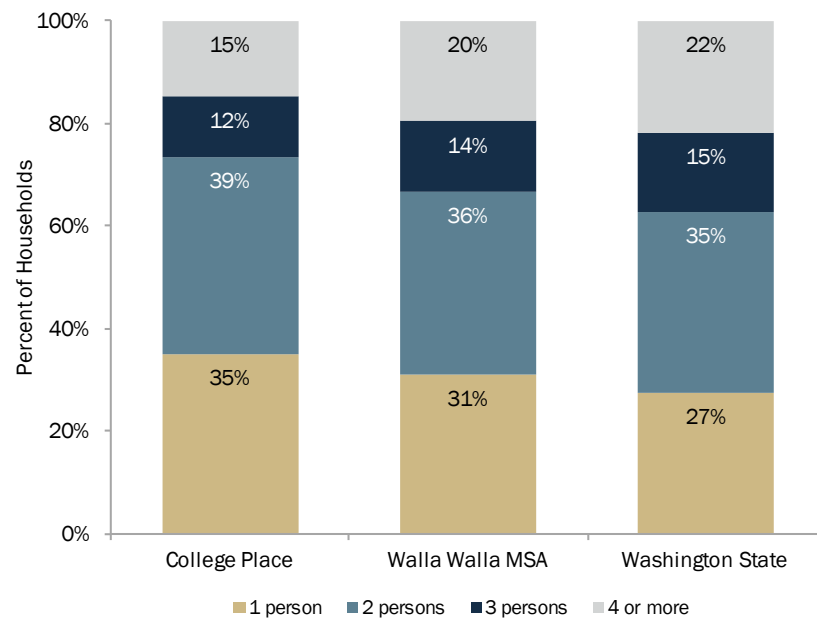
Source: US Census Bureau, 2012-2016 ACS Table B25010

2.3	2.5	2.6
College Place	Walla Walla MSA	Washington State

Two-person households account for the largest share (39%) of households in College Place. 35% of households are one-person households, 12% are three-person households, and 15% are four-person households or larger in College Place.

Exhibit 18. Household Size, Areas of Comparison, 2012-16

Source: US Census Bureau, 2012-16 ACS Table B25009



Income Characteristics

Median household income in College Place is less than that of Walla Walla MSA and the State. However, the median income in College Place have grown more than double the rate of Walla Walla MSA and is on par with the State's income growth over the last sixteen years.

The median household income for College Place is well below the median income for the State.

The median income for Walla Walla MSA is about \$7,300 above College Place's median household income.

Exhibit 19. Median Household Income, Areas of Comparison, 2012-16

Source: US Census Bureau, 2012-16 ACS Table B25119

\$40,747	\$48,015	\$62,848
College Place	Walla Walla MSA	Washington State

In addition, College Place experienced a growth in median household income comparable to the State over the 2000 to 2016 period.

Exhibit 20. Percent Increase in Median Household Income from 2000 to 2012-16, Areas of Comparison

Source: US Census Bureau, 2000 SF3 Table HCT012 and 2012-16 ACS Table B25119

38%	15%	38%
College Place	Walla Walla MSA	Washington State

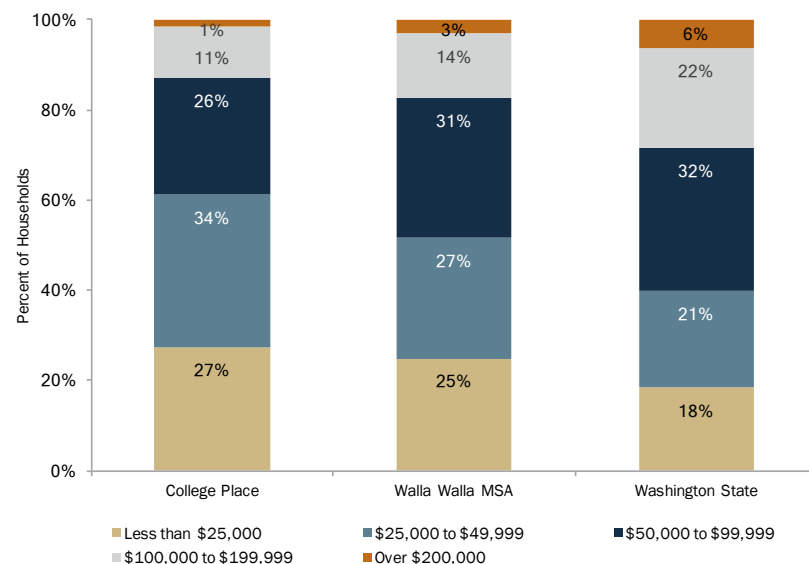
About 61% of College Place households earned median incomes below \$50,000. Approximately one-quarter earned \$50,000 to \$99,999.

About half of Walla Walla MSA households earned median incomes below \$50,000, compared to 39% across the State.

Exhibit 21. Household Income, Areas of Comparison, 2012-16

Source: US Census Bureau, 2012-16 ACS Table B19001

Data are in 2016 inflation-adjusted dollars



3.2 Regional Economic Trends

College Place is a part of the broader regional economy. As a result, the economic drivers in the region will generate demand in College Place for real estate development to accommodate the growth in jobs and employment. Economic drivers include regional changes in exports and technology that affect business growth and job creation. This section first reviews production and export trends and then employment composition and change.

Gross Domestic Product and Exports

The economy of the Walla Walla MSA is primarily a service-based economy. Service-providing sectors account for 63 percent gross domestic product (GDP) and goods-producing sectors (such as manufacturing) make up about 37 percent of the total economic output of the MSA. The region's economy was not noticeably affected by the recession in 2008, and GDP increase from 2007 to 2010. Total output has increased again since 2014, and in 2016 reach \$2.3 billion.

The manufacturing, food and beverage manufacturing, and agriculture sectors accounts for the large share of the Walla Walla MSA's exports from the region. Exports declined from 2012 to 2015, but increased sharply in 2016 from a doubling of exports in the manufacturing sector. Total exports in 2016 were \$483 million.

Exhibit 22. Real Gross Domestic Product, Walla Walla MSA, 2007-2016 (2016\$)

Source: Bureau of Economic Analysis, 2017

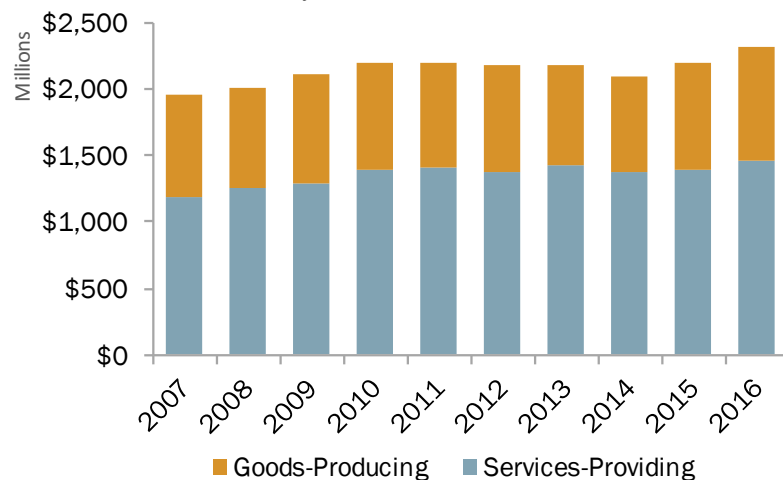
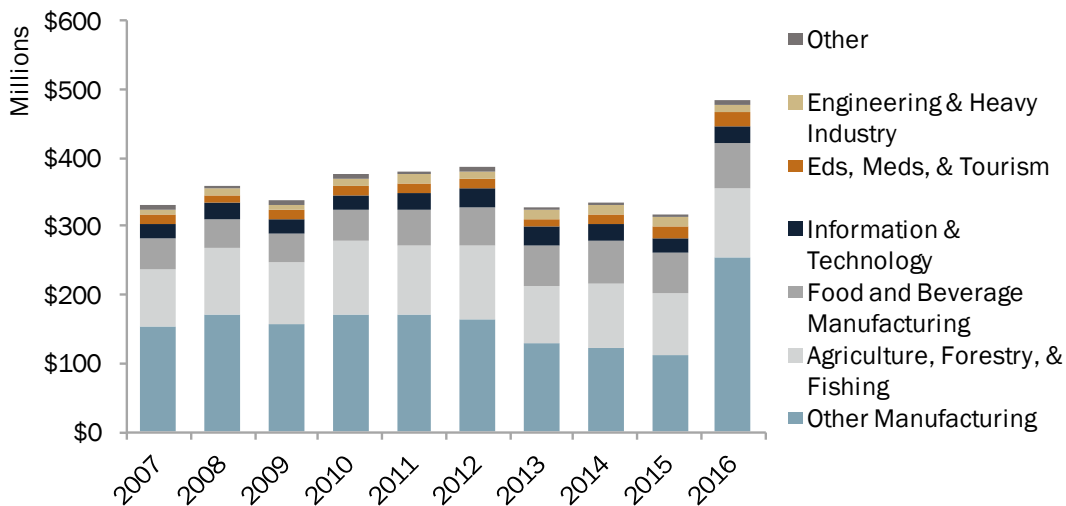


Exhibit 23. Exports by Sector, Walla Walla MSA, 2007-2016 (2016\$)

Source: Brookings Institute, Export Monitor, 2017

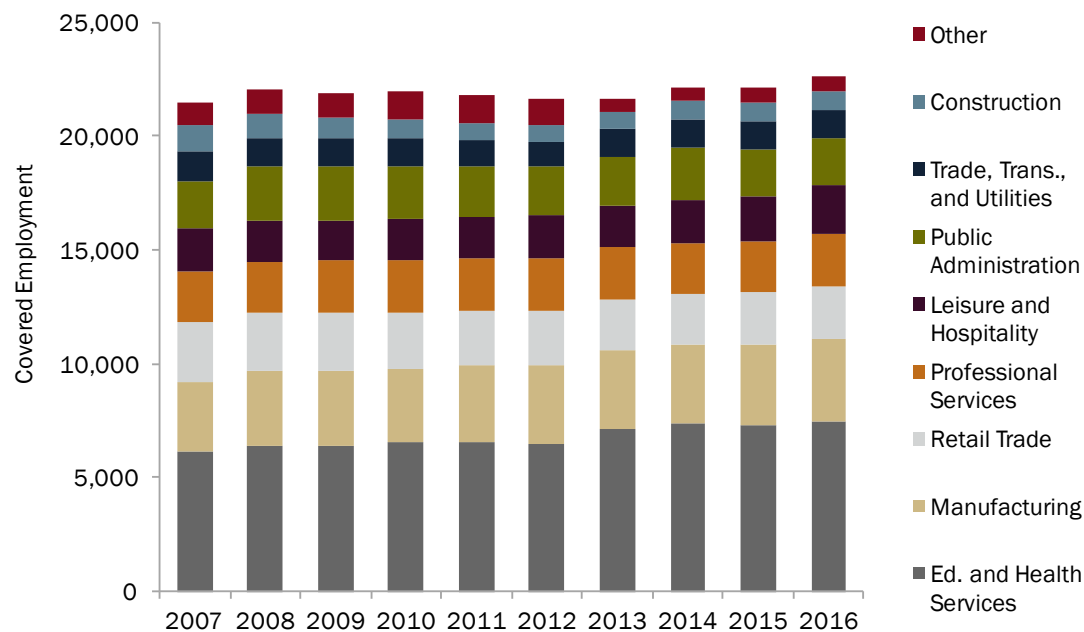


Employment by Sector

Walla Walla County has a diverse job base, and employment has been stable over the last ten years. In 2016, covered employment totaled 22,652, which is almost 1,200 more jobs than in 2007. Education and health service sector jobs are one-third of these jobs. Manufacturing, retail, and other commercial services account for much of the remaining job base.

Exhibit 24. Covered Employment, Walla Walla County, 2017

Source: Bureau of Labor Statistics, 2017



Major employers in the county reflect its economy based on agriculture, education, health care, and manufacturing. Agriculture based businesses are large employers, especially seasonal workers. Washington State Penitentiary was the County's third largest, employing 1,089 persons. Medical centers and education institutions make up many of the other large employers.

Major Employers

Walla Walla County's largest employer in 2016 was Broetje Orchards with the caveat that part-time workers are considered seasonal that work full-time from March to November.

Tyson Fresh Meats, Inc. was Walla Walla County's second largest employer with 1,380 persons employed full- or part-time.

Exhibit 25. Largest Individual Employers in Walla Walla County, 2016

Source: Port of Walla Walla, 2016

Note: A full-time employee is an employee that averages 40 hours per week. All other employees are counted as part-time. The only exception below is Wal-Mart, which considers 28 hours per week (or more) as full-time.

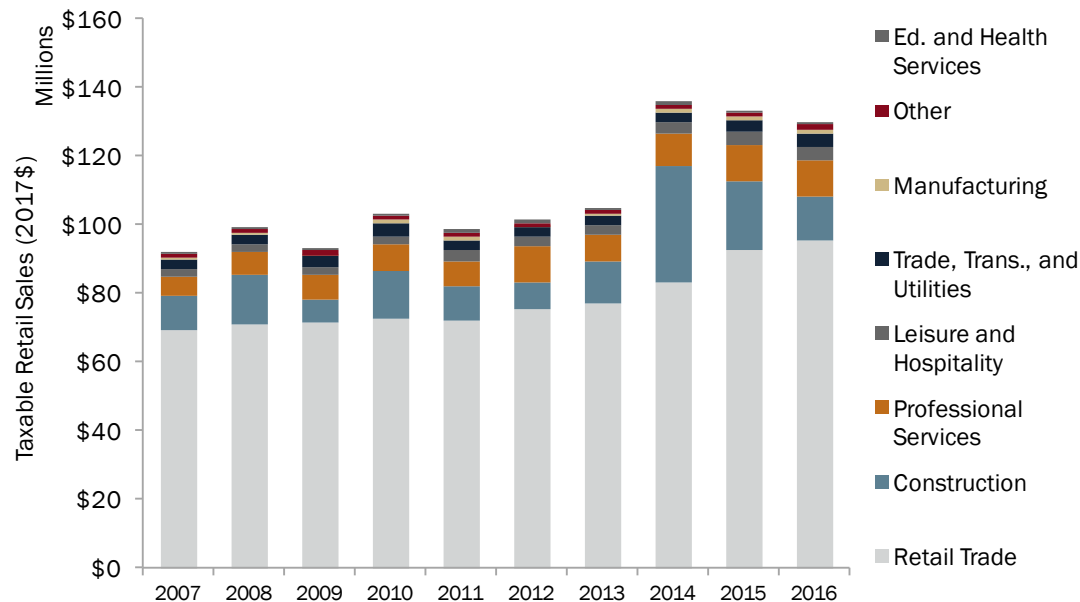
Company	FTE	PTE	Total Employment
Broetje Orchards	1,300	1,100	2,400
Tyson Fresh Meats, Inc.	1,380	0	1,380
Washington State Penitentiary	1,030	59	1,089
Providence St. Mary Medical Center	650	311	961
Walla Walla School District #140	570	244	814
Walla Walla Community College	322	292	614
Packing Corp. of America/Boise Paper	600	0	600
Whitman College	379	191	570
Walla Walla University	255	193	448
U.S. Dept. of Veterans Affairs	393	43	436
Key Technology, Inc.	431	3	434
Walla Walla General Hospital	298	112	410
U.S. Army Corps of Engineers	350	3	353
Walla Walla County	315	27	342
Wal-Mart	161	177	338

Taxable Retail Sales Trends by Sector

Taxable retail sales (TRS) are a major component of the local tax base and an indicator of economic activity. Retail sales reflect revenue from one-time expenditures on construction in a jurisdiction and on-going revenue from changes in spending. TRS within College Place has increased since 2007. In 2016, total TRS were \$130 million. The retail trade sector accounted for 73 percent of all TRS in the city. The retail trade sector also grew the most, increasing by \$26 million since 2007.

Exhibit 26. Taxable Retail Sales, College Place (2017\$)

Source: Washington Department of Revenue, 2017



3.3 Real Estate Trends

The City of College Place has a modest commercial real estate sector. To capture a more complete understanding of commercial real estate trends in the region, we examined commercial real estate trends across all of Walla Walla County.

Retail

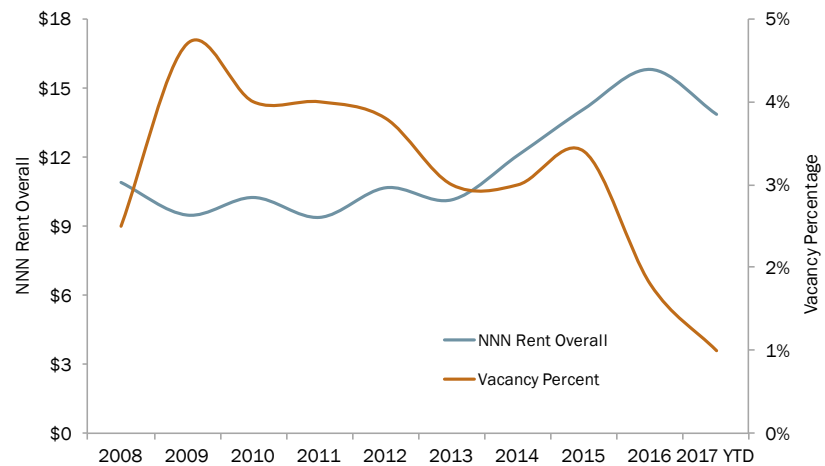
College Place has a modest retail sector with only a few retail outlets primarily clustered near Highway 125 to the south, and around the intersection of C Street and NE Myra Road. There are also several retail outlets along College Avenue near to Walla Walla University. Much larger concentrations of retail properties are located in and around downtown Walla Walla and to the east along Isaacs Avenue.

The County's retail market appears to be improving. Vacancy has been on the decline and rents have increased since the recent recession. Two upcoming multiphase developments will greatly increase the square footage of retail space in and around the City of College Place. The Village at Walla Walla will be the largest mixed-use development to ever be constructed in the city, and one of the largest developments the region has seen in years. Just outside of the city boundaries in the neighboring city of Walla Walla, the Walla Walla Town Center is proposed to emerge from the location of a former regional mall. More detail on these two developments is provided in the body of this report.

Retail vacancy has steadily declined over the past decade and is now at the lowest level in recent history. Retail rents have risen sharply since the end of the recent recession.

Exhibit 27. Retail Rent per Square Foot and Vacancy Rate, Walla Walla County

Source: CoStar



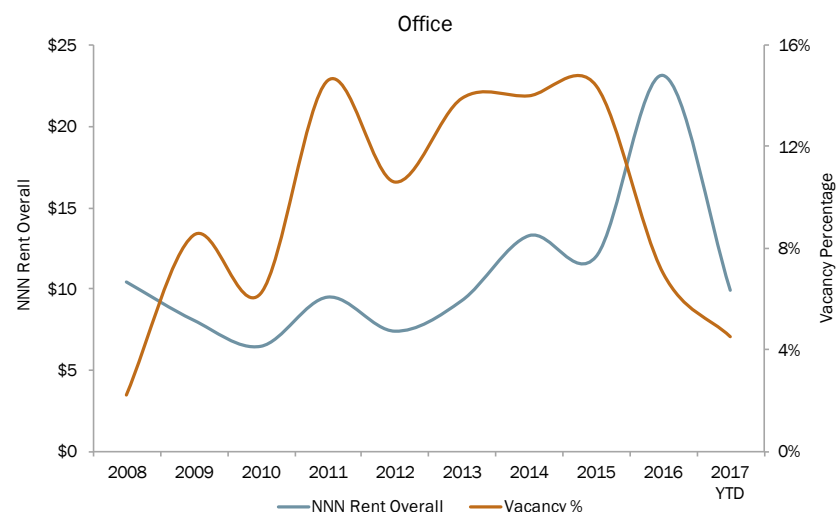
Office

Walla Walla County's office market is concentrated in the Walla Walla metro area. The office market appears to have improved in the past few years. The area vacancy rate has declined while rents are stable. Current average gross rent is around \$10 to 11 per square foot per year, a low rate for most markets. Although rents have fluctuated in the past few years. Average building size is a little more than 9,000 square feet, indicating a small, locally serving office market.

Office vacancy has tightened in recent years. Office rents are low, but have fluctuated recently.

Exhibit 28. Office Rent per Square Foot and Vacancy Rate, Walla Walla County

Source: CoStar



Industrial

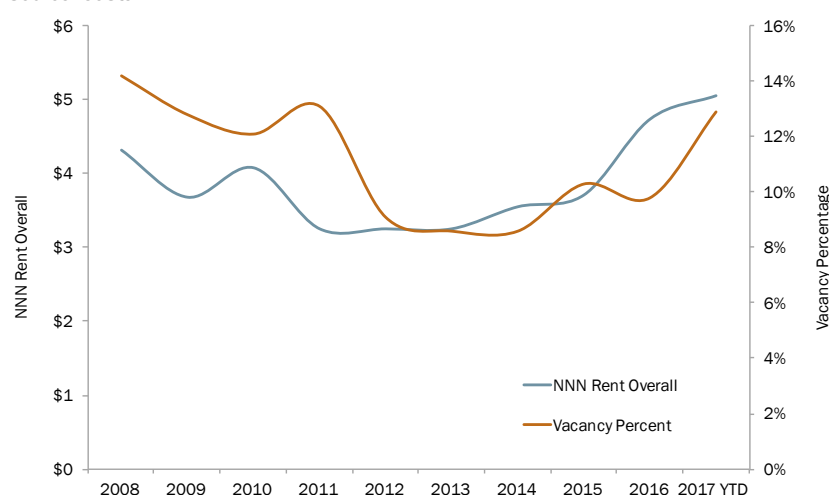
Walla Walla County's industrial sector contains a total of 48 buildings. The average building size is approximately 41,000 square feet. The current average industrial rent is around \$5.00 per square foot per year or about \$0.42 per square foot per month. There has only been one industrial property delivery in the past ten years, and recent absorption has been negative.

Industrial rents appear to be stable with the exception of a small increase in rents over the past couple years. Industrial vacancy dropped after the recent recession, but has been on the rise in the past few years.

Industrial rents have increased in recent years, while industrial vacancy has started to creep back upwards.

Exhibit 29. Industrial Rent per Square Foot and Vacancy Rate, Walla Walla County

Source: CoStar



Multifamily

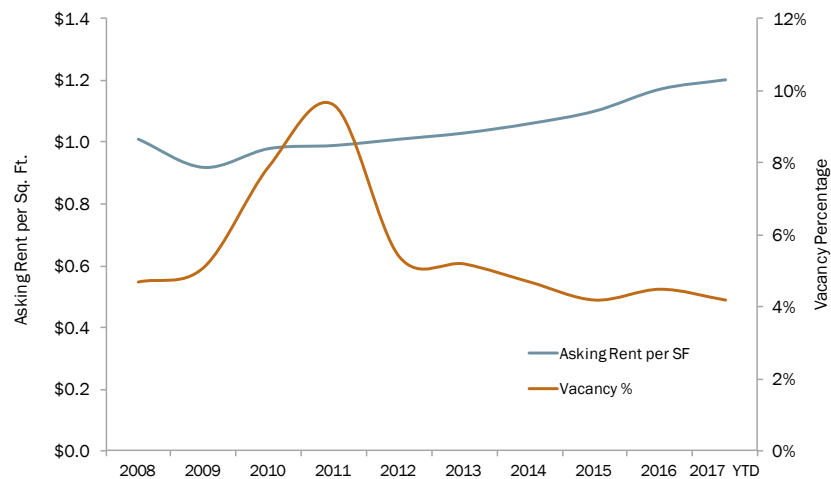
Walla Walla County's multifamily market is centered around the Walla Walla metro area. There are 1,265 multifamily units spread across 32 properties, resulting in an average of 39 units per property. There have been no deliveries to market since 2011. The Walla Walla metro area features two universities—Whitman College and Walla Walla University—resulting in more multifamily units than average for other cities of the same size.

Multifamily rents are relatively low and have remained steady over the past decade. The vacancy rate increased significantly during the recent recession, but has recovered and now sits at less than five percent.

Multifamily rents in Walla Walla County are stable. Vacancy has recovered to pre-recession levels.

Exhibit 30. Multifamily Rent per Square Foot and Vacancy Rate, Walla Walla County

Source: CoStar

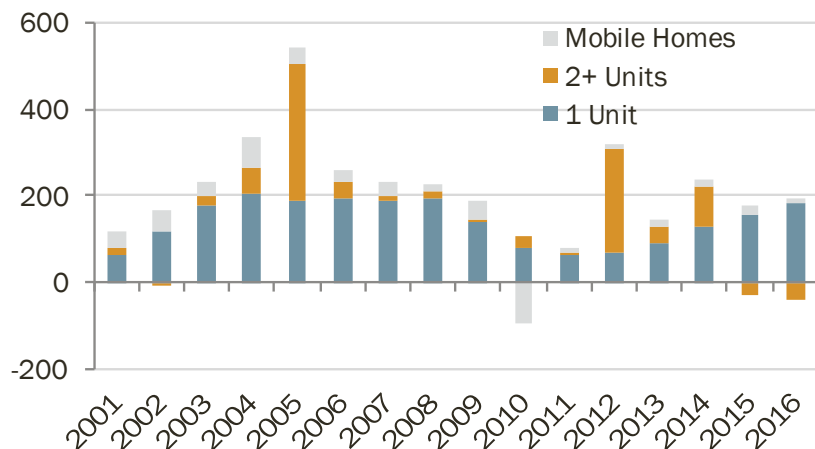


Walla Walla County has average about 200 units of housing built a year over the last 15 years.

Multifamily housing (those with two or more units) averaged just over 60 units built per year over the same period.

Exhibit 31. Housing Units Built, Walla Walla County

Source: Washington Office of Financial Management²



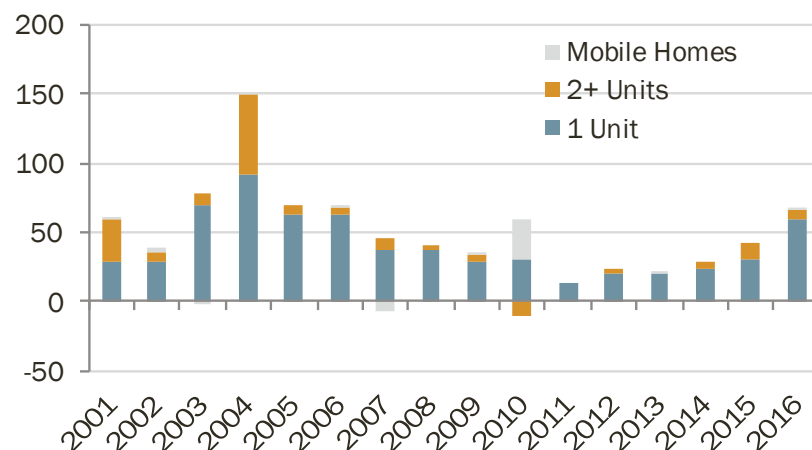
² Negative housing unit production is the result of housing demolitions. All numbers are net, built versus demolition.

The City of College Place has averaged a little over 50 units a year over the last 15 years.

77% of the units built in the last 15 years have been single-unit homes. Just 49 two plus units have been built in the last 10 years.

Exhibit 32. Housing Units Built, City of College Place

Source: Washington Office of Financial Management



APPENDIX B

Economic Memorandum

DATE: April 23, 2018
TO: Michael Melder, Ryan Billen - PBS
FROM: Matthew Craigie, Erik Rundell
SUBJECT: POTENTIAL COMMUNITY AND ECONOMIC IMPACTS FROM DEVELOPMENT OF THE NE LARCH STREET SITE

Background

Economic impacts are the changes in economic activity that result from an investment of dollars that create new demand for goods and services. They are often measured through changes in spending, jobs, incomes, tax revenues, and the like. Economic impacts also consider the “multiplier effect” of these changes: a new job added to the economy means more spending by businesses buying things down their supply chains, which in turn induces additional new jobs to support that new spending.

The City of College Place, through this project, seeks to identify potential and best-use opportunities for a site located on NE Larch Street. The development will generate new economic activity on the site, and in the local economy. This new economic activity will positively impact the local economy by bringing in new direct investment, more opportunities for local businesses to serve regional demand, and enhancing the productivity of existing retail and service businesses in the city.

Earlier in this NE Larch Street Project, we conducted a market analysis that explored potential future uses at the site. After assessing the College Place market, physical site characteristics, and the local regulatory environment, we concluded that the two most likely development types for the NE Larch Street site are: (1) multifamily residential or (2) an industrial use. This economic impact brief will explore the potential economic benefits that would result from development of either of the identified uses.

College Place Market Overview

The City of College Place is the second largest city in Walla Walla County. College Place has kept pace with the County and the rest of the State in terms of the rate of population growth over the last ten years. Since 2012, College Place has grown faster than Walla Walla County overall.

Exhibit 1. Population, 2012 and 2017

	2012	2017	5-Year Growth
College Place	8,845	9,440	6.7%
Walla Walla County	59,100	61,400	3.9%

Source: *Washington of Financial Management*

The average civilian labor force for Walla Walla County was 28,928 for 2016 based on the US Bureau of Labor Statistics. Total employment in Walla County in 2016 was 27,261, and the unemployment rate was at less than six percent. The unemployment is similar to the Washington State unemployment rate.

Exhibit 2. Total Covered Employment, 2014-2016

	2014	2015	2016	3-Year Unemployment Rate
Walla Walla County	26,667	26,382	27,261	5.9%
Washington State	3,276,706	3,345,835	3,445,880	5.7%

Source: Washington Employment Security Department, Quarterly Census of Employment and Wages

Incomes in College Place are modest. Based on the 2012-2016 ACS, the median household income is approximately \$40,000, which is more than \$20,000 below than the median income for the entire State of Washington of \$63,000. In addition, the hourly wages are lower in Walla Walla County than the average for the State as well.

Exhibit 3. Average Hourly Wage, 2016

	Wage
Walla Walla County	\$18.09
Washington State	\$20.68

Source: Washington Employment Security Department, Quarterly Census of Employment and Wages

Economic Impacts

Economic impacts are the changes in economic activity that result from an investment of dollars. This assessment considers just the positive outcomes from the development of the site with multifamily apartment or light-industrial businesses, which would include additional jobs, income, tax revenues, and the like. The assessment does not consider any costs associated with development. New development on the NE Larch Street site would have positive impact on the economy of College Place in a number of ways. However, the development of either multifamily residential or industrial will have different economic impacts on the local community.

Multifamily Residential Development

The primary impacts from multifamily development at the site include 1) one-time impacts from construction of the structures and 2) ongoing impacts from the completion and occupation of those unit by additional residents in the City.

Impacts from Construction

Construction of approximately 250 housing units, the likely maximum housing density for the site, would include a direct investment of \$26.0 million¹ in the City. A sizable portion of this investment would go to temporary construction jobs within the City. These workers, some of

¹ Assumes construction cost of \$115.00 per square foot for multifamily structure.

whom would likely live in the College Place vicinity, would bring additional spending to the city that would not have otherwise occurred.

In addition, sales tax would apply to the total construction cost, which would generate a one-time bump in sales tax revenues for those years for local jurisdictions, including College Place.

Impacts from Completed Development

After the development is complete, multifamily apartments would result in increased spending and tax revenues for the city. Multifamily residential would not necessarily lead to direct employment. However, additional housing would increase the population living within the city. The city would likely capture a larger share of those resident's spending than if they lived elsewhere in the region, which would support College Place businesses and associated employment. Depending on how the property would be rezoned, it could fit a few dozen or hundreds of new residents (Exhibit 4).

Exhibit 4. Population Increase due to Multifamily

Zone	# of Units	Additional Population
R-60 – Single Family and Duplex	35-40	76-87
RM – Multifamily Residential	250	605

Source: US Census Bureau, 2012-2016 ACS Table B25009

Multifamily development would also generate additional ongoing tax revenue for the city. Additional spending in the city from new residents would generate sales tax revenues that the city would not have otherwise received. New residents would also pay utility taxes based on their consumption of electricity, natural gas, solid waste services, cable service, and telephone service. Lastly, the increase in the assessed value of the property related to new construction would increase property tax revenues for the city.

Light-Industrial Development

The primary impacts from light-industrial development at the site include 1) one-time impacts from construction of the structures and 2) ongoing impacts from the completion and occupation of those buildings by businesses and employees. The actual ongoing impacts will vary based on the type of businesses that occupy the completed buildings.

Impacts from Construction

Construction of over 70,000 square feet of light-industrial buildings would include a direct investment of \$6.4 million² in the City. A sizable portion of this investment would go to temporary construction jobs within the City. These workers, some of whom would likely live in the College Place vicinity, would bring additional spending to the city that would not have otherwise occurred.

² Assumes construction cost of \$90.00 per square foot for warehouse type building.

In addition, sales tax would apply to the total construction cost, which would generate a one-time bump in sales tax revenues for those years for local jurisdictions, including College Place.

Impacts from Completed Development

After the development is complete, light-industrial uses would result in increased number of jobs, spending, and tax revenues for the city. Based on the potential types of businesses and planned square feet of building area, we estimated the potential number of jobs the development would support after it was built and occupied. Job estimates are based on the assumed number of square feet per employee for different types of businesses. The low-range estimates assume fewer employees per square foot by use, and the high-range estimates assume a higher density of employees per square foot. We assumed a range of 500 to 800 square feet per employee for typical light-industrial businesses. These assumptions result in 88 to 140 additional jobs in College Place.

Exhibit 5 shows the average annual wage for jobs in several sectors that would be likely to occupy a new industrial space at the NE Larch Street site. Wages range from the manufacturing sector of \$50,575 to wholesale traders at \$49,404 a year. The temporary jobs related to the construction of either of these development options average at \$32,249 a year.

Exhibit 5. Walla Walla County Annual Average Wages by Sector, 2016

Sector (NAICS 3-Digit)	Average Annual Wage
Manufacturing	\$50,575
Wholesale trade	\$49,404
Construction of buildings	\$32,249

Source: Washington Employment Security Department, Quarterly Census of Employment and Wages

The new industrial space would also generate additional spending through rent payments and spending by workers, some of whom would likely live in the College Place vicinity as well.

Light-industrial development, like a multifamily development, would generate additional ongoing tax revenue for the city. Businesses at the site would purchase goods and services from other businesses in the city, which would increase sales tax revenues. Depending on the type of business that would occupy the site, there may also be additional sales taxes revenues generated through the direct sale or export of goods and services. In addition, businesses would pay utility taxes based on their consumption of electricity, natural gas, solid waste services, cable service, and telephone service. Lastly, the increase in the assessed value of the property related to new construction would increase property tax revenues for the city.

Summary

The development of both multifamily apartment and light-industrial buildings will have positive economic impacts for the City of College Place. The construction of both developments will support jobs and increased tax revenues in the city. The long-term impacts of development when complete will likely be different depending the type of development.

Multifamily development at the NE Larch Street site would have a larger direct investment. As a result, it would likely generate more tax revenue for the City over time. Multifamily residential uses would also support a population of between 76 and 605 residents. The City could expect to capture a large share of those residents' spending.

Light-industrial uses would support more long-term employment at the site with an estimated range of 88 to 140 full-time jobs. In contrast, multifamily residential uses would be unlikely to support any direct employment at the site. Multifamily development would, however, support indirect employment, such as landscaping and building maintenance over the long-term. Exhibit 6 compares employment, total direct investment, and tax revenue potential for the two uses.

Exhibit 6. Use Comparison

Type of Development	Multifamily Residential	Light Industrial
Population	76-605	0
Employment (non-construction)	0	88-140
Direct Investment	\$26.0 M	\$6.4 M
Tax Revenue Potential	Medium	Low

Source: ECONorthwest

In evaluating potential zoning changes at the NE Larch Street site, the City of College Place should also consider its broad economic development goals. For example, is adding jobs within city a higher priority than growing the tax base? It is also important to note that this analysis does not look at the *net* benefits of the two uses. Net benefits would factor in the additional service costs to the City from the increase in population and employment under each use. Multifamily housing would likely have more public service needs, given the projected larger number of people occupying the site, which would have more potential costs for the city.

APPENDIX C

Marketing Flyer

NE Larch Street Site | 10 ACRES

NE LARCH AVENUE & C STREET, COLLEGE PLACE, WASHINGTON



1.5 MILES / 3 MINUTE DRIVE FROM MYRA ROAD EXIT - HIGHWAY 12



AERIAL VIEW



STREET VIEW

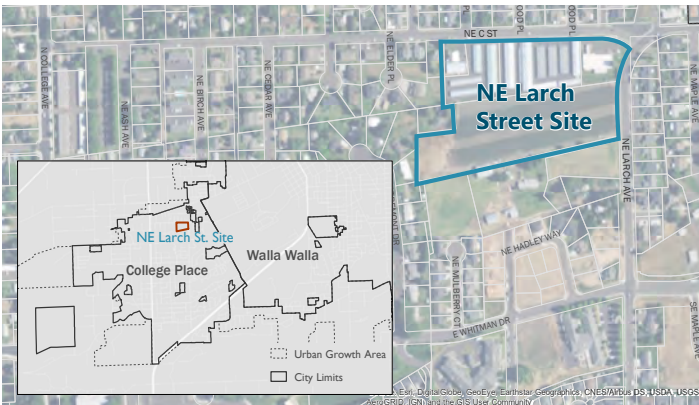
(Google)

ZONING POTENTIAL



Multifamily and Light Industrial

Currently zoned as Light Industrial and Single Family Residential (R-60).
City amenable to multifamily re-zoning.



DEMOGRAPHIC INFORMATION

MEDIAN
HOUSEHOLD INCOME
\$40,747*

POVERTY RATE
17.7%*

POPULATION WITHIN

- 20 MILES // 69,000
- 40 MILES // 192,000
- 60 MILES // 366,000

MARKETING RESOURCES

- Washington Department of Commerce: choosewashingtonstate.com
- Washington Business Hub: business.wa.gov
- City of College Place Economic Development: cpwa.us

* Source: US Census Bureau, 2012-2016 ACS Table B25119

CONTACT THE CITY

Mike Rizzitiello, City Administrator
City of College Place
625 College Avenue
College Place, WA 99324
(509) 394-8506

APPENDIX D
Meeting Minutes

PROJECT NAME:	PBS PROJECT NO.:	MEETING NO.:
College Place Planning Study	67136.000	01
MEETING DATE:	LOCATION:	
Thursday, October 19th, 2017	City Hall 625 South College Ave College Place, WA 99324	
MEETING SUBJECT:	PREPARED BY:	
Project Kickoff Meeting	Ryan Billen	
ATTENDED BY:		
Mike Rizzitiello, City Administrator, Project Manager	mrizzitiello@cpwa.us	(509)-394-8506
Robert Gordon, City Engineer	RGordon@cpwa.us	(509) 525-0510
Jon Rickard, City Planning Director	jrickard@cpwa.us	(509) 394-8524
Michael Melder, PBS Consultant Project Manager	michael.melder@pbsusa.com	(509) 394-4075
Ryan Billen, PBS Utilities and Project Coordinator	ryan.billen@pbsusa.com	(509) 416-5495
John Manix, PBS Traffic Engineer	john.manix@pbsusa.com	(360) 567-2117
Matt Craigie, ECONorthwest, Economic Analysis	craigie@econw.com	(503) 200-5090
Morgan Shook, ECONorthwest, Economic Analysis PM	shook@econw.com	(206) 388-0082
ATTACHMENTS:		
☐ Yes ☒ No To be sent separately:		

1. Project Introduction—Mike Melder

a. Overview and Background:

- i. CERB grant funded project to evaluate highest and best use for zoning of 11-acre parcel at southwest corner of 4th & Larch. General lack of light industrial zoning in the City.
- ii. Project will also evaluate traffic conditions and configurations at three intersections (Larch & C Street, Larch & Whitman, and Larch & 12th).
- iii. Project also includes drone survey, planning-level right of way mapping, evaluate utilities along corridor, perform an archaeological reconnaissance.

b. Progress to date

- i. Held internal team kickoff meeting
- ii. Drone flight completed, aerial imagery available. Still processing data for virtual tour and obtaining planning level right of way.
- iii. John Manix working on amendment for traffic evaluation of the Villages at Fort Walla Walla.

c. Look ahead activities

- i. Start archaeologist going on the cultural resources review
- ii. Begin traffic counts
- iii. Begin market/economic analysis

2. Economic Evaluation

a. ECONorthwest:

- i. Project understanding—the City is considering making regulatory/infrastructure changes to support higher intensity use on the site.
- ii. Will review market analysis and trends to help determine what market will bear light industrial zoning for 11 acre area.
- iii. Key Questions
 - 1. What are some higher intensity land uses of this commercial land that are potential viable in the College Place context?
 - 2. How does the site compete with other similar site comparables?
 - 3. What is the possible scale of development on the site?
- iv. This is a CERB funded grant and therefore needs to include an economic impacts component.

b. City Input:

- i. City currently has only a few acres of active light industrial property
- ii. would like to confirm whether market will support light industrial zoning for the 11 acre parcel southwest of Larch & C Street.
- iii. Current development around project area are primarily commercial, including Blue Mountain mall and Villages at Fort Walla Walla.
- iv. Villages at Fort Walla Walla also includes ~180 apartments

c. ECONorthwest Needs:

- i. Land Use & Zoning Standards, building permits, GIS data
- ii. Several (five or six) local stakeholders to interview for the market assessment (These can include: brokers, developers, contractors, or other stakeholders that understand the local project context)
- iii. Any other local market data—it would be great to have more details on the two major projects being developed near the site (Total square footages, number of residential units, etc.)

3. Traffic Evaluation

a. PBS—John Manix

- i. What traffic issues are known/existing in the project area?

b. City Input

- i. Traffic—City concerned about traffic congestion at the three intersections, especially considering the amount of traffic that will be generated by upcoming commercial projects on the east side of Larch
- ii. Bicycle Traffic—A number of “near miss” incidents have been reported along the corridor between vehicles and bicyclists

4. Utilities

a. PBS—Ryan Billen

- i. Are there any known capacity constraints or poor condition utilities along the corridor, or any specific problem areas or capital improvement projects planned in the area?

b. City Input

- i. No known capacity issues, condition problems, or CIP projects planned for utilities along the Larch corridor, other than:
 - 1. 4th getting new utilities with road project currently under design
 - 2. Future well #2 site on City property west of Maple
 - 3. Existing PRV station at 4th and Larch that would potentially need to be relocated to accommodate intersection revisions.
- ii. Impact fees assessed through lot frontage

5. Other

- a. City currently working on a comprehensive plan update**
- b. City would like to avoid/minimize property takings**
- c. Potential office use of Rose Street property by Pocket inet**
- d. Church at intersection of Larch & 12th open to impacts to their frontage to accommodate intersection improvements**

6. Action Items:

- a. Project team to move forward with traffic counts, market analysis, right of way determination**
- b. City to provide GIS data to support ECONorthwest analysis**
- c. City to provide Contact information regarding local stakeholders**

PROJECT NAME:	PBS PROJECT NO.:	MEETING NO.:
College Place Planning Study	67136.000	02
MEETING DATE:	LOCATION:	
Thursday, March 8th, 2018	City Hall 625 South College Ave College Place, WA 99324	
MEETING SUBJECT:	PREPARED BY:	
Traffic Meeting	Ryan Billen	
ATTENDED BY:		
Mike Rizzitiello, City Administrator, Project Manager	mrizzitiello@cpwa.us	(509)-394-8506
Robert Gordon, City Engineer	RGordon@cpwa.us	(509) 525-0510
Jon Rickard, City Planning Director	jrickard@cpwa.us	(509) 394-8524
Paul Hartwig, Public Works Director	phartwig@ci.college-place.wa.us	(509) 394-8526
Michael Melder, PBS Consultant Project Manager	michael.melder@pbsusa.com	(509) 394-4075
Ryan Billen, PBS Utilities and Project Coordinator	ryan.billen@pbsusa.com	(509) 416-5495
John Manix, PBS Traffic Engineer	john.manix@pbsusa.com	(360) 567-2117
ATTACHMENTS:		
☒ Yes ☐ No To be sent separately:		

1. Project Update—Mike Melder

a. Survey—Aerial and boundary

- i. Completed

b. Market Analysis

- i. Completed

c. Archaeological Reconnaissance

- i. Completed

d. Preliminary Traffic Report

- i. Completed, will revise final report based on feedback from meeting

e. Look ahead activities

- i. Finalize Traffic Report and Layouts
- ii. Finalize economic analysis
- iii. Develop cost estimates for intersection improvement options

2. Traffic alternatives analysis summary—John Manix

a. Assumptions and vehicle trips for project study area (light industrial vs. multifamily)

- i. Vehicle trips included project, as well as trips from upcoming Village at Fort Walla Walla
- ii. City concerned that all trips might not be accounted for. PBS to coordinate with city to verify/add trips from full development of Towncenter project, as well as other project such as the McKiernan/Christensen properties.

b. Intersection performance and recommended improvements for 2023 time horizon:

- i. Preliminary findings include:
 - 1. Larch and C Street: No Improvements
 - 2. Larch and Whitman: four-way stop
 - 3. Larch and 12th: four-way stop

c. Intersection performance and recommended improvements for 2040 time horizon:

- i. Preliminary findings include:
 - 1. Larch and C Street: No Improvements
 - 2. Larch and Whitman: Traffic signal or compact roundabout
 - 3. Larch and 12th: Traffic signal or compact roundabout

3. Traffic improvement layouts (Exhibits 1–3)

- i. Larch and C Street:
 - 1. Add short discussion of two-way traffic on Lambert to report
- ii. Larch and Whitman:
 - 1. Intersection currently configured with left turn lane, which lends the intersection to a future signalized intersection. Creek to the north will limit. Currently a bike route with multi-use path on north side of Whitman.
- iii. Larch and 12th:
 - 1. Roundabout a good fit for the intersection. Driveway at SE corner will have to be relocated for roundabout. Driveway constitutes a larger issue for a signalized intersection, potentially requiring acquisition of the property.
- iv. Provide the following additional exhibits
 - 1. Add four-way stop exhibit for Larch and Whitman
 - 2. Add roundabout exhibit for Larch and Whitman
 - 3. Shift roundabout at 12th and Larch to the northwest
 - 4. Add signal exhibit for Larch and 12th
 - 5. Add four-way stop exhibit for Larch and 12th

4. Additional concerns or considerations for traffic issues along project corridor

5. Other

a. City comprehensive plan update

- i. City has programmed preliminary cost for of \$500,000 for Larch and Whitman and Larch and 12th improvement. Budget numbers will be adjusted following cost estimate numbers developed by PBS.

b. Additional considerations for economic analysis and prospectus for property

- i. Developer fees collected to date for 12th and Larch and Whitman and Larch intersection improvements.

6. Action Items:

- a. **PBS: Move forward with revised exhibits and associated cost estimates.**
- b. **City of College Place: Identify additional traffic projects and information to be included in final traffic report. Research remaining funds allocated for 12th and Larch and Whitman and Larch intersection improvements.**

APPENDIX E

Cultural Resources Review

Author: Christopher Landreau, M.S.

Title of Report: College Place Washington, Larch Avenue Intersections, Cultural Resources Background Research, Walla Walla County, Washington

Date of Report: November 22, 2017

County: Walla Walla

Sections 25 and 36 Township 7N, Range 35E

Quads: College Place WA 7.5' Acres: N/A TBD

PDF of report submitted (REQUIRED) ☒ Yes

Historic Property Inventory Forms to be Approved Online? Yes ☒ No

Archaeological Site(s)/Isolate(s) Found or Amended? Yes ☒ No

TCP(s) found? ☐ Yes ☒ No

Replace a draft? Yes ☒ No

Satisfy a DAHP Archaeological Excavation Permit requirement? ☐ Yes # ☒ No

Were Human Remains Found? ☐ Yes DAHP Case # ☒ No

DAHP Archaeological Site #:

College Place Washington, Larch Avenue Intersections, Cultural Resources Background Research, Walla Walla County, Washington

November 22, 2017
RLR Report 2017-402-29

By
Christopher Landreau, M.S.
REISS-LANDREAU RESEARCH

PH (509) 952-5130 E-Mail: chris@reisslandreau.com



Consultation Provided to:
PBS Engineers Inc.
And the City of Walla Walla, Washington

Introduction

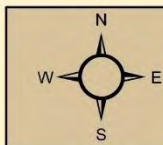
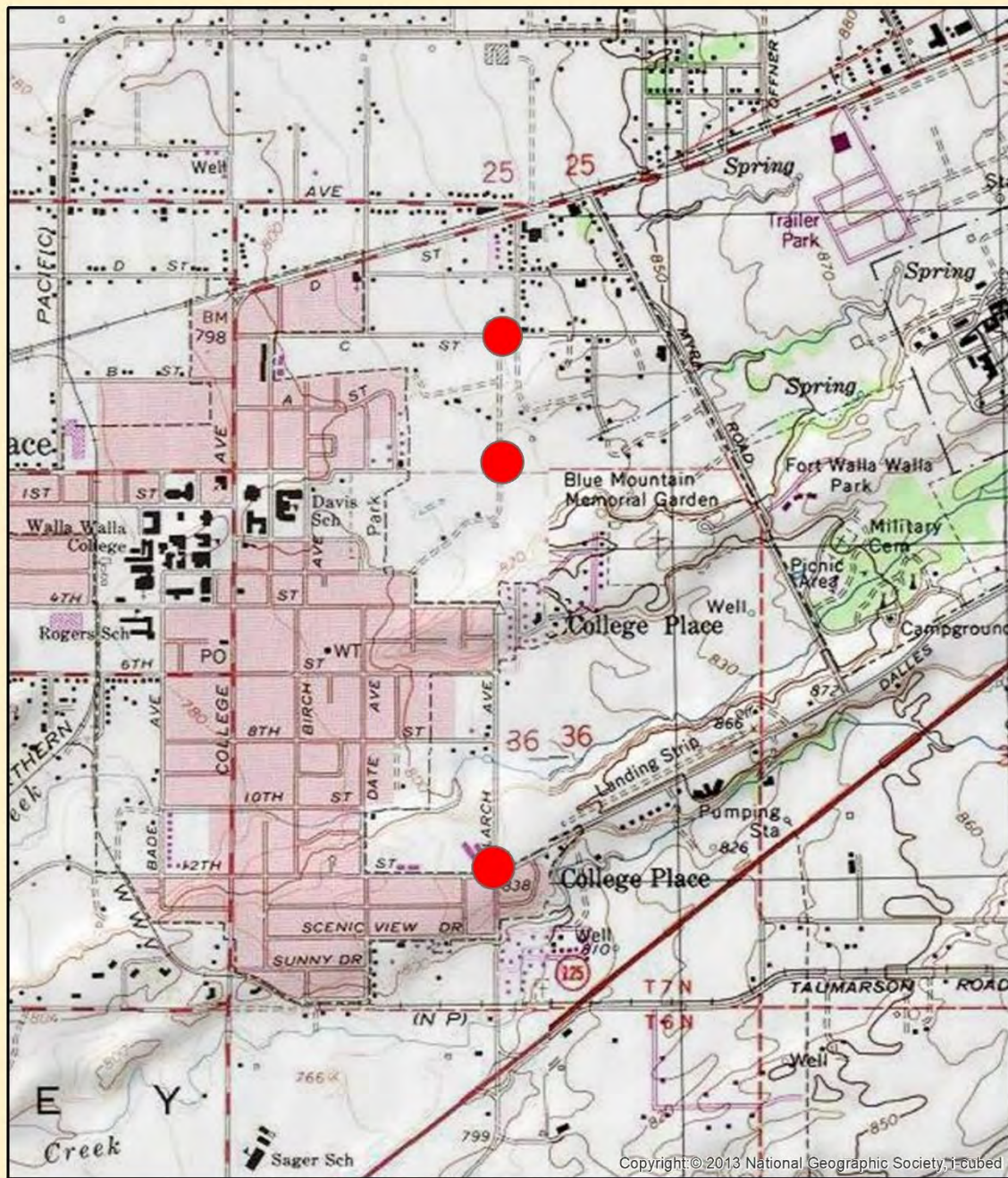
The City of College Place is planning to revise and improve three intersections along Larch Avenue. The project is geared toward improving the baseline infrastructure and safety along the corridor.

This report documents a cultural resources background research evaluation of the three intersections. The preliminary research conducted at the State of Washington Archaeological archives in Olympia revealed no sites in sections 25 and 36, but that Larch Avenue is located approximately .45 miles from the remains of Fort Walla Walla, and 24 recorded historic and precontact sites located there. Three cemeteries, and 25 cultural resources reports document past work within one linear mile of the project.

Legal Information:

Sections 25 and 36 Township 7N, Range 35E, College Place, WA 7.5' quadrangle

Larch Avenue Intersections



USGS 1:24,000
College Place WA
7.5' Topographic Quadrangle

0 0.075 0.15 0.3 0.45 0.6
Miles

FIGURE 1: PROJECT TOPOGRAPHIC MAP

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Cultural Setting.....	8
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Research Analysis	22
Recommendations.....	22
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Project Description

A. Project Activities: The City of College Place is home to 9,400 people and Walla Walla University. College Place lies within the greater Walla Walla Valley which is home to about 70,000 residents, multiple hospitals, Whitman College, and Walla Walla Community College. Target industries of the region include food processing, medical service, wine, and tourism. The City of College Place has only three acres of active light industrial land, approximately 10.45 acres of light industrial property exist near the southwest corner of C Street and Larch Street. However, access to the area is challenging due to problematic transportation patterns along the Larch Avenue corridor at the C, Whitman, and 12th Street intersections due to residential and commercial growth.

The general premise of this study is to do a preliminary engineering analysis for the Larch/ C Street, Larch/Whitman, and Larch/12th Street intersections (Study Intersections will be improved to safely convey traffic flow). Additionally, site appropriateness, area infrastructure analysis, market analysis, and estimation of funding needed for public facility improvements needs to be identified.

B. Area of Potential Effect (APE): The City is considering the following options for each of the three intersections in question:

- Maintain the current stop controlled intersections
- Add a traffic signal with left turn lanes (would likely entail road widening to accommodate turn lanes)
- Replace the intersection with a compact urban roundabout.

C. Location and size (in acres) of the project: This project is located in College Place WA and will be over 5 acres of study area.

D. Research personnel: C. Landreau

E. What circumstances led to this survey: This project was a preliminary research study

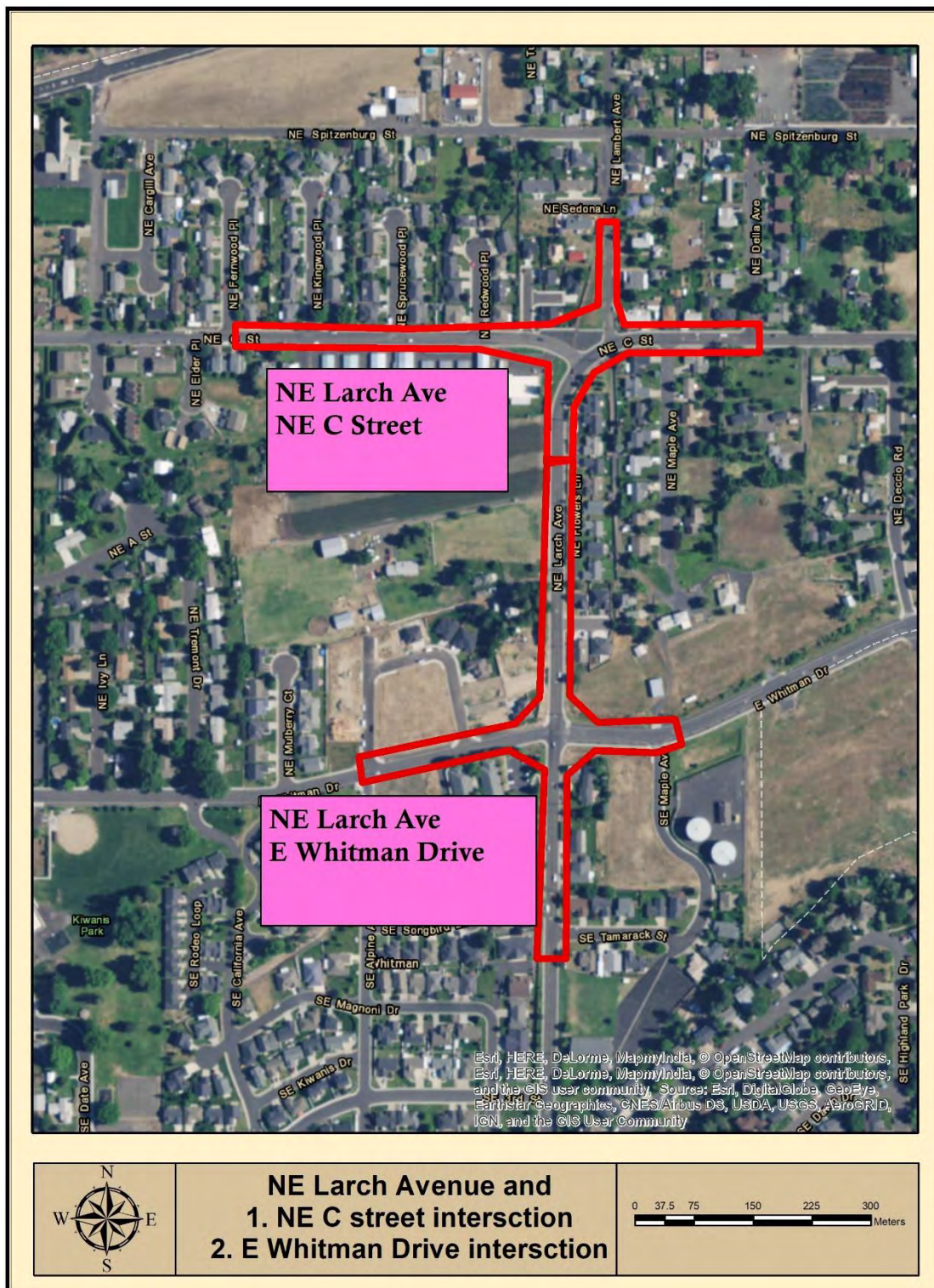


FIGURE 2 AREA 1

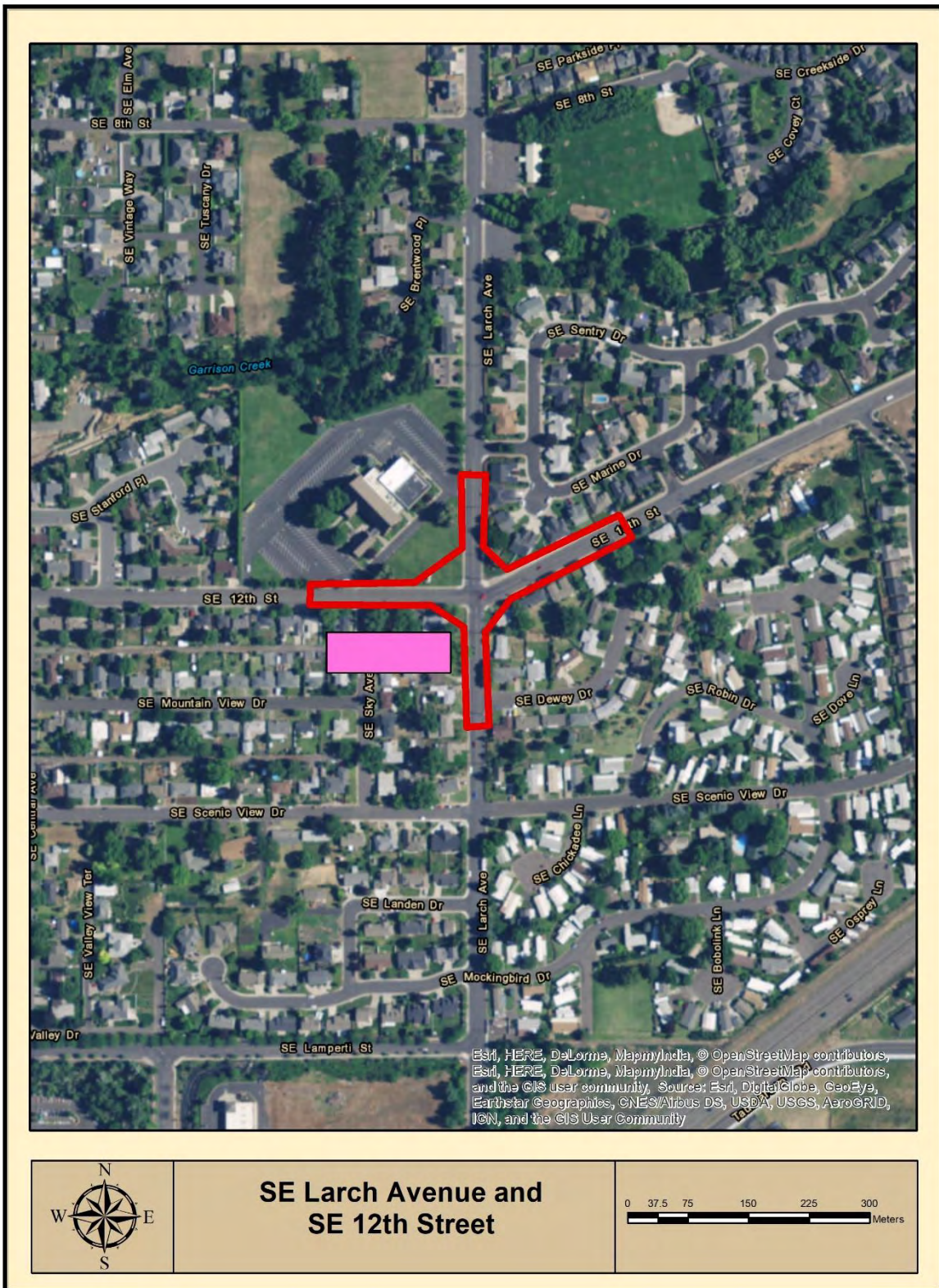


FIGURE 3: AREA 2

Environmental Setting

The College Place area is part of the Columbia Basin Physiographic region (Lasmanis, 1991, pg. 265; Walker, 1998), the Columbia Plateau (McKee, 1972), or the Great Plain of the Columbia (Meinig 1968). All three are apropos as the geophysical setting is a basin at an altitude above sea level, yet should be regarded strictly as a structural basin which formed before the Columbia River Basalt Group (CRBG) filled with successive basalt flows during the Miocene.

McKee (1971) outlines tectonic events beginning 40 Mya involving a massive crustal plate—the Farallon plate—which subducted under the North American plate causing pressure to build up and deformation of the crust. The project area is between a normal yet concealed fault—known more colloquially as the Horse Heaven Hills—and a concealed opposing thrust fault. Excessive pressure led to faulting and eventually flood-like eruptions of olivine-rich basalt. Subduction of the Farallon plate under the North American plate continued from 19 to 2 Mya, but at a slower rate. The Columbia River Basalt Group is the result of several sequential low-viscosity Miocene flood-basalt flows from approximately 17.5 to 2 Mya that covered an area of over 63,000 mi² and began in an unstable fault zone near the present borders of Washington, Idaho, and Oregon. Individual lava flows measure 27 to 100 ft. (8 to 30 m) thick, but when taken in aggregate—as one might at Vantage, Washington—a total thickness of 2,000 to 5,000 ft. (600 to 1,550 m) can be attributed to this formation (Franklin, Blinn, & Dyrness, 1988, p. 29). Columbia River Basalt Group (CRBG) flows were malleable enough that they folded under pressure instead of faulting, though there are numerous faults within the region.

The Columbia Basin Province is best defined by the areal extent of the Miocene CRBG flows. These basalts, which are present in the Blue Mountain uplift as well as in the Columbia Basin, cover 36% of the state of Washington. This group consists of four flood basalt formations, starting with the Imnaha Basalt at 17.5 Mya, followed by the Grande Ronde Basalt (16.5 to 15.6 Mya), the Wanapum Basalt (15.6 to 14.5 Mya), and lastly the Saddle Mountains Basalt (14.5 to 6 Mya).

On the basis of geophysical evidence, the basalts are known to reach a maximum total thickness of 16,000 ft. (4,545m) in the Pasco Basin. During the Pliocene and the Pleistocene, gravel, sand, silt, and clay were deposited in lakes or by aggrading streams and rivers in depressions such as the Pasco Basin, where in places 1,000 ft. (300m) of sediment lies on top of the basalt. Glacial outwash during the Pleistocene produced huge volumes of wind-blown silt called loess. Loess blankets much of the Columbia Basin and in places is up to 200 ft. (60m) thick. Indeed, much of the project area resides atop Missoula Flood deposits composed of gravels, silts, and aurally distributed loess (see Soils below) hence the development of the Columbia Basin Project in the 1930s and 1950s.

Surficial geology is dominated by Quaternary loessal deposits resultant from the Missoula Floods series of events and aerial redistribution thereof since the last flood event. Otherwise, Middle Miocene CRBG Umatilla Member is exposed in drainages e.g., Coyote Canyon and relatively low-relief outcrops. Middle Miocene CRBG Umatilla Member (map symbol Mvsu; Figure 5) is composed of two flows black in color but weathering to yellow-orange in color. They have a glassy to very fine grained crystalline structure with sparse plagioclase phenocrysts. These flows have well-developed entablature with hackly jointing and colonnades in places. These flows have normal magnetic polarity. The upper subunit is named Sillusi flow and the lower subunit is named Basalt of Umatilla. Basalt of Umatilla has lower P₂O₅ and higher TiO₂ than the Sillusi flow, though both are known to have mixed locally and may be difficult to distinguish (Reidel, Fecht, and Washington (State), 1994).

Middle Miocene Pomona Member (map unit Mvsp, Figure 5) is also represented along a Columbia River paleochannel exposure to the north of the project area. CRBG Pomona Member has two flows or flow units, each with small phenocrysts of plagioclase, clinopyroxene, and olivine. Pomona Member flows have reversed magnetic polarity and occurs in nearly sheet-like flows ca. 30-60m thick. The Upper flow is black to gray-black in color weathering to gray. The Lower flow is blue-black in color weathering to black-gray. Both exhibit fanning columns distinguish (Reidel, Fecht, and Washington (State), 1994).

Smith (1977) finds that the Columbia Basin is dominated by two major landform types: flood-scoured coulees and loess-mantled interfluvial uplands. Otherwise, the contrast between upland and "lowland" topography provides microclimate niches wherein different biotic, human, and ecologic communities have managed to eke out an existence since the last catastrophic flood event ca. 12,500 years before the present. Indeed, between CRBG flows in the steep canyon areas exposures of the Ringold Formation occasionally crop out, revealing or producing cryptocrystalline-silicate (CCS) groundmass materials early inhabitants of the region used for the manufacturing of stone tools such as projectile points, knives, scrapers, drills, burins, and other flake tools.

Further;

During the Pliocene and the Pleistocene, gravel, sand, silt, and clay were deposited in lakes or by aggrading streams and rivers in depressions such as the Pasco Basin, where 1,000 feet of sediment lies on top of the basalt. Glacial outwash during the Pleistocene produced huge volumes of wind-blown silt called loess. It blankets much of the Columbia Basin and in places is up to 200 feet thick. The loess-rich soils of the Palouse sub-province provide ideal conditions for growing wheat, making southeast Washington one of the major grain-producing regions of the world."(Lasmanis 1991:264).

Soils on the project area are comprised of relatively deep Ellisforde, Stanfield and Umapine silts (Figure 4), overlaying very deep 16-20 thousand year old Touchet formation beds:

In the valley of the Walla Walla River, the loess is underlain by stratified deposits of silt and fine sand, which, according to Rieger, contain minerals that are more characteristic of basalt than of loess. This stratified material appears to be the Touchet formation described by Flint (4). The Touchet formation consists of alternate layers of silt or of fine and very fine sand. The silt is compact and platy or laminated and is permeable to water and roots. In numerous places the laminated layer is covered with a thin film of calcium carbonate, and in these

places it is essentially impermeable. The sandy layers are massive, rapidly permeable, and often aquiferous. (Soil Survey of Walla Walla County Washington, USDA Soil Conservation Service)

Vegetation

Prior to Euro-American settlement, the project area was within undisturbed Palouse grassland with bunchgrass, and ryegrass (Franklin & Dyrness, 1973). The predominant vegetation in the valley bottom was Bluebunch wheatgrass (*Agropyron spicatum*) and Basin wild rye (*Elymus cinereus*). Willow (*Salix* spp.) along with species of fruit trees and cottonwood (*Populus trichocarpa*) outlined streams and wetted areas, while big sage (*Artemesia tridentata*), rabbitbrush (*Chrysothasmus nauseoseum*), and bitterbrush (*Purshia tridentata*) flourished in the drier areas (Franklin & Dyrness).

Cultural Setting

Prehistory Overview

Archaeological investigation of the Columbia Plateau now spans one hundred years. Early efforts concentrated on main-stem riverine settings, more often than not along the Columbia and Snake rivers, as a result of large-scale reclamation projects. The American Museum of Natural History sponsored perhaps the earliest formal inquiry into central Washington archaeology when Harlan Smith (1910) documented and excavated locations in the upper Yakima River Basin, from the Naches River to Lake Cle Elum. Smith recorded a variety of cultural resources, including private artifact collections, pictographs, petroglyphs, a tool stone quarry, house pit depressions and human internments.

The early period of conservation archaeology coincided with the Culture History period of Americanist archaeology and produced “characterizations of time and space in terms of archaeological content” for the region (Dunnell, 1979). Archaeological periods and phases represent, for the most part, spans of time during which settlement and/or subsistence is assumed to have changed very little (Bicchieri, 1976). Phase ranges are based on a combination of radiocarbon dates and chronologies largely based on projectile point forms.

Cultural history of this region begins with the Paleo-Indian period dating to 11,500 years ago. The Richey-Roberts Clovis Cache is the only known site to contain intact cultural deposits of this age and was found north of the proposed project area near Wenatchee, WA (Mierendorf, 1987). Numerous artifacts attributed to the Clovis period have been found across the landscape but are entirely limited to surface finds (Ames et al., 1998) where chronological placement is limited to artifact typology association. The climate at this period experienced major changes as the cooler Pleistocene environment transitioned into the warmer Holocene environment; this period also represents the last major retreat of the glaciers and a transformation into the landscape that we generally see today (Chatters, 1998).

Using the Cultural Chronology developed by Ames et al. (1998) the next major technological shift seen in the archaeological record dates to 11,000-5,000/4,400 years ago and is characterized by people who utilized a broad-spectrum hunter-gatherer subsistence economy. These people would have moved across the landscape according to seasonal changes in low population densities which were highly adaptable (Ames et al.). No evidence of pit houses or permanent structures has been found from this era. Technologies inferred from artifacts and features indicate that these people were highly mobile and likely had no use for a permanent structure. This period also predates the eruption of Mount Mazama in southern Oregon, a chronological marker used to date archaeological sites based on their position above or below the lens of ash.

After the eruption of Mount Mazama, Ames et al. (1998) identifies the next major technological shift at 5,000/4,400-1,900 years ago. This shift in technology is marked by the decline in frequency of projectile points and an increase in milling stone size and evidence of intensified natural resource exploitation including certain roots and salmon. This period also marks the first appearance of pit houses. The climate during this period was cooler relative to the climate observed during Period 1B. Timberlines descended in elevation and moisture increased (Chatters, 1998).

The next period of technological shift identified by Ames et al. (1998) spans from 1,900 years ago to A.D. 1720 (ca. 300 years ago). At the beginning of this period pit houses became widespread. Evidence of a heavy reliance on fishing, storage and intensive exploitation of camas can be found in the archaeological record from this period. Land use patterns observed by Euro-American explorers during their first arrivals corroborate archaeological findings. The period ends with the arrival of the horse and European explorers (i.e., Contact Period). Within this period the climate continued to cool until around 800 years ago when temperatures begin to warm and glaciers receded as a result (Chatters, 1998). This fluctuation in temperature is reflected in the observable tree lines in the archaeological record. Between A.D. 1400 and 1850 a “Little Ice Age” occurred, and while evident in the higher mountain ranges, this event had little effect on the flora of the Northwest (Chatters, 1998).

Early Euro-American History

At the time of Euro-American arrival to the project area the landscape was home to the Cayuse, Umatilla and Walla Walla groups (Stern 1998). The Cayuse spoke their own language while the Walla Walla and the Umatilla spoke dialects of Sahaptin. These people followed a highly mobile lifestyle based on fishing, hunting and plant resources that were obtained through a seasonal round of hunting and gathering. Winter villages were situated along river valleys at lower elevations such as Yellowhawk Creek.

Before Washington became a territory, in the autumn of 1805, Lewis and Clark were the first Euro Americans to explore the region when they canoed down the Snake River and then on to the Columbia River. On their way back east the expedition traveled one mile up the Walla Walla River and then traveled overland to the Touchet River (Moulton 1991).

Canadian explorer David Thompson (1770-1857) was the first to describe interactions with native groups in his historical narrative account (historylink.org, 2012; HistoryLink File #9009). Thompson embarked from Kettle Falls on July 3, 1811 on a historic voyage down the Columbia River to the Pacific Ocean. Thompson was also the fur agent in charge of the Columbia Department of the North West Company of Canada. He was sent on a mission to determine whether the Columbia was navigable to the sea and whether it could provide a viable trade route for the fur company. Thompson was the first white man to descend the river and make contact with tribes between Kettle Falls and the mouth of the Snake River. Thompson’s route intersected the route of Lewis and Clark from five years earlier.

Between 1818 and 1833, additional trading posts were established in the Northwest. Ross (1956, pg.125) notes the Yakama were trading at Fort Nez Percés near the mouth of the Walla Walla River after the North West Company established the post in 1818. Fort Vancouver was established by the London-based Hudson’s Bay Company (HBC) on the Lower Columbia River in 1825. Fort Nisqually, established by the HBC at the south end of Puget Sound, was established in 1833. By the late 1840s, the fur trade went into decline while a new era of intensive settlement primarily by Euro-Americans was just beginning. Instead of trading posts, military forts were constructed.

The arrival of Euro-Americans marked a new period in the landscape.

Walla Walla

With the establishment of the fur trade in the Washington and Oregon region missionaries began coming to the region with hopes of converting the native peoples to Christianity and use of agriculture. One of these groups was Marcus and Narcissa Whitman who chose Waiilatpu as the location for their Presbyterian mission in October of 1836 (Meinig 1968). A combination of failing to convert local native people to Christianity and the arrival of scarlet fever and measles, likely introduced by emigrant parties, created a precarious relationship between the Whitman's and the local peoples. Tribal frustrations reached a peak and the Whitman Mission was attacked by local peoples who killed Marcus and Narcissa Whitman along with 11 other people in 1847. The remaining personnel were ransomed after one month to representatives of the Hudson's Bay Company for five hundred dollars' worth of goods (Meinig 1968).

One of the by-products of early French trappers coming to the area in the 1820's-1830's is that they inter-married with Native women of the area. These mixed but mostly catholic French/Indian families were known locally as Metis, and must have been known to the Presbyterian Whitman Mission people, but were never mentioned in Whitman's diaries. The Metis were the longest inhabitants of Frenchtown, the earliest community on the west side of what would become Walla Walla, and descendants still celebrate their heritage today. Later they would relocate and become absorbed into the tribes:

In the 1880s, when reservation lands were allotted to individual Indians, a Métis group descended from former Hudson's Bay Company employees and their Indian wives moved from Frenchtown to the reservation (Historical Research Associates 2009: Appendix B-7)

Once the treaty with the Walla Walla's was signed in 1855, a group of Oregon Militia decided to confront the Native groups, led by Peopeomoxmox, chief of the Walla Walla tribe. Over 1000 Native Americans were involved against 350 well-armed militia men from Oregon.



FIGURE 4: PEOPEOMOXMOX, COURTESY WASHINGTON SATATE HISTORICAL SOCIETY

In response to a call from U.S. Army Major Gabriel Rains, Oregon Mounted Volunteers marched from the Willamette Valley and established Fort Henrietta on the Umatilla River. After inspecting the abandoned Fort Walla Walla trading post, they marched towards the Touchet River to punish the Walla Wallas. Chief Peopeomoxmox met them under a white flag of truce and at their insistence became their hostage to prevent an immediate attack on his village. When the Volunteers returned to the Walla Walla River and started up the valley to establish a winter camp at the old Whitman Mission, the battle began. Peopeomoxmox and four other hostages were killed while in captivity by the Volunteers at the Larocque cabin during the first day of the battle. The Chief's body was mutilated and dismembered. (Frenchtown Historical Foundation:2016)

When the fighting subsided, and the Native Americans had retreated after four days, the military began to assert its control, and implemented martial law in the region. The precursor to modern Wala Walla: Steptoeville was established:

During 1856, the Walla Walla Valley was occupied with overwhelming force, including Federal troops commanded by two newcomers on the scene who would have a great influence on future conflict in the region: Colonel George Wright and Colonel Edward Steptoe. Kamiakin and many of his followers took refuge to the east, in the country of the Spokane Tribe, and would become involved in a final loose alliance against the intruding whites that also included the Coeur d'Alenes and Palouses. By 1858, Steptoe had established a new Fort Walla Walla near the current city of the name. In the spring of that year he led a doomed expedition into the Palouse Hills north of the Snake River. At the battle of Tohotonimme, near present day Rosalia, his command was overwhelmed by large numbers of Indian warriors, surrounded, and then expelled back across the Snake River. (Emmerson and Gaugh 2008:12)

After the Battle of Walla Walla, the region had been firmly rested from the control of tribal groups, and despite an uneasy coexistence, no more major conflicts occurred

The larger conflict known as the Yakama War finally ended in 1858 following an aggressive campaign by the U.S. Army under Colonel George Wright. In 1859, Congress ratified the three treaties signed in Walla Walla resulting in the Yakama, Nez Perce, and Umatilla reservations and officially opening the rest of the region to white settlement. (Frenchtown Historical Foundation:2016)

The discovery of Gold in Idaho, NE Washington and the Blue Mountains of Oregon created the next influx of Euro-Americans to the region. With the creation of the Washington territory in 1853 Isaac Stevens was appointed the territorial governor and decided that a reservation system in Washington would best serve the interests of the Indians and non-Indians. With a signed treaty Stevens immediately declared that ceded lands were open for settlement immediately. With this declaration miners began flowing through Indian lands creating tension between the local peoples and the incoming miners, most of whom were particularly unsavory to the local Indians (Meinig 1968). This tension erupted into violence and the local Indian agent, supported by the army, ordered all non-Indians out of the Walla Walla Valley in late 1855 or early 1856. During the summer of 1856 the army established Fort Walla Walla on Mill Creek 5 miles upriver from the former Whitman mission which allowed them to control movement through the valley by its near proximity to the trails used to access various regions within the valley.

Peace was declared in 1858 and the Walla Walla valley was opened to non-Indian settlement. The town of Walla Walla was created in 1859 and it supplied the incoming miners as well as Fort Walla Walla. Walla Walla was

officially incorporated on January 11, 1862. Following this period of rapid growth, agriculture became the city's primary industry.

College Place, although currently directly adjacent to Walla Walla, was originally 3 miles SW of the city. Its foundations as a city arise from the founding of Walla Walla College.

College Place was given its name in 1891, after Seventh-day Adventists in Washington and Oregon decided to establish a college in the area adjacent to Walla Walla's southwest border. Even before the first stones were laid for the college's first buildings, the land around the site was platted and Adventist families began buying lots.

Of those families that moved to College Place, "the overwhelming majority came because of the school - to work there, to enroll their children in school, or to attend as adults," writes Wilton H. Bunch, son of the first mayor of College Place. But the new town was not to be solely a haven for Adventists. "Despite this driving force for growth, College Place was not a Seventh-day Adventist ghetto; the Presbyterians built the first church building. The German church followed in 1911, and the college finally built an SDA church that opened in 1913" (Bunch, p. 9)

In anticipation of the growth of the town around the soon-to-be college, a post office was established in College Place in May 1892. Henry Carnahan was named the first postmaster and he opened for business using the front room of his residence. Before the establishment of the College Place post office, residents had to drive or walk three miles to Walla Walla for their mail. (Marshall, 2017).

Literature Review:

PREVIOUS ARCHAEOLOGICAL SURVEY AND KNOWN ARCHAEOLOGY

The literature review was conducted at the Washington Department of Archaeology and Historic Preservation (DAHP) website, WISAARD.

The file search revealed that 25 relevant archaeological surveys have been completed within 1 mile of the proposed project area.

NADB: 1689152

Title: A Cultural Resources Inventory of a Revised Location of the Briggs High Tunnel,
Contract No. 1616P

Report Date: March 24, 2017

Document Type: Survey Report

Author: Hoffmann, Tara

This NRCS project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1688771

Title: A Cultural Resources Inventory of Two Seasonal High Tunnels (Contract Nos. 160B7 and 1606P)
Report Date: September 9, 2016
Document Type: Survey Report
Author: Hoffman, Tara

This NRCS project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1688357
Title: Archaeological Survey of the City of College Place Kiwanis Park, College Place, Washington
Report Date: May 1, 2016
Document Type: Survey Report
Author: Morton, Ashley

This Fort Walla Walla Museum project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1686340
Title: Cultural Resources Investigations for the Jonathan M. Wainwright Memorial VA Medical Center Site Utilities Project
Report Date: February 1, 2015
Document Type: Survey Report
Author: McKenney, Pamela

This Archaeological and Historical Services project Identified some scattered non-diagnostic historic remains, as well as a corner foundation for a Fort Walla Walla era building, and requested minor re-alignment of the project.

NADB: 1684825
Title: Final Report: Phase II Archaeological Survey for the Department of Veterans Affairs Enhanced-Use Lease Project: Jonathan M. Wainwright Memorial VAMC
Report Date: February 1, 2014
Document Type: Survey Report
Author: Cascella, Melissa

This report by ICF international detailed a phase II discovery of two known archaeological sites for a new veterans affairs project.

NADB: 1684806
Title: Cultural Resource Survey for the Taumarson Road Reconstruction Project
Report Date: January 1, 2014
Document Type: Survey Report
Author: Hannum, Michelle

This Plateau Archaeological Investigations project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1684678

Title: Phase II/III Archaeological Investigations: Proposed Multi-Specialty Out-Patient Clinic and Residential Recovery Unit Projects, Jonathon M. Wainwright Memorial VA Medical Center

Report Date: January 1, 2014

Document Type: Survey Report

Author: Payne, James

This report by Fort Walla Walla Museum detailed a phase II/III discovery and mitigation of Fort era historic archaeological sites for a new veterans affairs project.

NADB: 1684559

Title: Cultural Resources Survey for the Davis Elementary School Project, City of College Place

Report Date: November 1, 2012

Document Type: Survey Report

Author: Hannum, Michelle

This Plateau Archaeological Investigations project identified the Davis Elementary School gymnasium as potentially eligible to the National Register.

NADB: 1683934

Title: College Place SP05WO313, 218 SE 4th St., College Place

Report Date: July 11, 2013

Document Type: Historic Structures Survey Report

Author: Buehner, Chanel

This cellular tower antennae project found no properties affected.

NADB: 1683931

Title: Cultural Resources Survey for the College Avenue and Rose Street Reconstruction Project, City of College Place, Walla Walla County, Washington

Report Date: January 1, 2013

Document Type: Survey Report

Author: Harder, David

This Plateau Archaeological Investigations project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1683350

Title: Cultural Resources Survey for the John Sager Middle/High School Project, City of College Place

Report Date: January 1, 2013

Document Type: Survey Report

Author: Hannum, Michelle

This Plateau Archaeological Investigations project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1683092

Title: Cultural Resource Survey of the Proposed Myra Road SR 125 to Garrison Creek Project

Report Date: May 17, 2012

Document Type: Survey Report

Author: Civay, Gregory

This Fort Walla Walla Investigation identified three previously identified historic sites potentially affected by the proposed project.

NADB: 1682374

Title: Archaeological Monitoring of Ground Disturbing Activities at the SSA Building Project

Location, College Place

Report Date: June 12, 2012

Document Type: Monitoring Report

Author: Harder, David

This Plateau Archaeological Investigations project did not identify eligible cultural resources within the Area of potential effect during monitoring.

NADB: 1354960

Title: Cultural Resources Survey Jonathan M. Wainwright VA Memorial Medical Center New Multi-Specialty Care Outpatient Clinic and Campus Realignment Project

Report Date: August 1, 2010

Document Type: Survey Report

Author: Hetzel, Christopher

This ICF International project identified many resources related to Fort Walla Walla and requested mitigation prior to proceeding on the Veterans affairs project.

NADB: 1354597

Title: Myra Road- SR 125 to Garrison Creek Project, Walla Walla and College Place, Washington

Report Date: August 11, 2010

Document Type: Survey Report

Author: Roberst, Stephen

This Fort Walla Walla Museum project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1353752

Title: Cultural Resources Assessment, T-Mobile College Place WT Telecommunication Cell Tower Site

Report Date: November 1, 2009

Document Type: Survey Report

Author: Chidley, Michael
County: Walla Walla

This cellular tower antennae project by Bannerstone Archaeological Consulting found no adverse effect to a single historic structure.

NADB: 1352462
Title: Cultural Resource Survey for the Proposed Building Expansion and Parking Lot at Fort Walla Walla Museum
Report Date: February 10, 2009
Document Type: Survey Report
Author: Payne, James H.

This Fort Walla Walla Museum project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1352306
Title: Archaeological Testing Report, Port of Walla Walla Key Technology Campus Expansion Project
Report Date: December 22, 2008
Document Type: Data Recovery Report
Author: Rust, Thomas C.

This project involved phase 2 testing at 45WW240. The site was previously recorded and involved the historic port of Walla Walla from the late 19th century.

NADB: 1350619
Title: Archaeological Survey for the 2007 Walla Walla Reconditioning Project
Report Date: November 15, 2007
Document Type: Survey Report
Author: Buchanan, Kelsey W.

This Archaeological Investigations Northwest project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1350594
Title: Cultural Resource Survey for the Commercial Drive Road Construction Project, College Place
Report Date: November 1, 2007
Document Type: Survey Report
Author: Harder, David A.

This Plateau Archaeological Investigations project did not identify eligible cultural resources within the Area of potential effect during monitoring.

NADB: 1350453
Title: Eastside Water Development Project Cultural Resource Survey, College Place

Report Date: November 1, 2007
Document Type: Survey Report
Author: Harder, David

This Plateau Archaeological Investigations project identified a single archaeological site related to the historic Davin family of Walla Walla.

NADB: 1349605
Title: Cultural Resource Survey for the College Place South Cellular Tower #2839
Report Date: July 1, 2007
Document Type: Survey Report
Author: Harder, David A.

This Plateau Archaeological Investigations project did not identify eligible cultural resources within the Area of potential effect.

NADB: 1349442
Title: Cultural Resource Survey for Whitman Crossing Project, College Place
Report Date: March 1, 2007
Document Type: Survey Report
Author: Harder, David A.

This Plateau Archaeological Investigations project did not identify eligible cultural resources within the Area of potential effect but recommended monitoring.

NADB: 1349294
Title: Cultural Resource Survey for Myra Road Extension, College Place and Walla Walla
Report Date: April 1, 2007
Document Type: Survey Report
Author: Harder, David A.

This Plateau Archaeological Investigations project identified several cultural resources within the Area of potential effect but recommended monitoring.

NADB: 1348558
Title: Whitman Drive Extension Project Cultural Resources Survey, College Place
Report Date: October 1, 2006
Document Type: Survey Report
Author: Harder, David

This Plateau Archaeological Investigations project did not identify eligible cultural resources within the Area of potential effect.

Previously recorded National Register properties within 1 linear mile

Register Name: Saturno-Breen Truck Garden
Other Name(s): Breen Truck Garden
Listing Number: 82004301
Smithsonian Number: WW00071
Address: East of College Place on Route 5, College Place, WA
Construction Year(s): 1892
Listed Date: 1982-03-01
Register Status: National Register; Washington Heritage Register

Previously recorded archaeological sites within the project proposed Alignment APE

WW00389

Comments: Historic isolate, 9mm cartridge casing, ca. Early-twentieth century, March 1, 2016

WW00390

Comments: Historic isolate, corroded brass button, ca. Late-nineteenth century, March 1, 2016

WW00391

Comments: Historic isolate, crushed, white aluminum screw bottle cap embossed with "RB" within a wreath, ca. Late-nineteenth century to early-twentieth century, Field Temporary Number(s): ZBA Isolate 8

WW00397

Comments: Precontact lithic material, chert flake, Historic Military Properties, historic debris concentrations, red brick, mortar fragments, sawn mammal bones, metal fragments, cut nails, glass, historic component ca. late-nineteenth century to early-twentieth, September 23, 2015

WW00346

Comments: Historic Military Properties, Brick Foundation, Ceramic, Glass, Slate, Charcoal, Nails, Wood, 50 X 50 Ft, Ca. 1883 – 1921, April 3, 2013

WW00347

Comments: Fort Walla Walla Sewer System, Ceramic Sewer Tile, Bricks, Mortar, Manholes, 620 X 5 Ft, Ca. 1895 – 1921+ , April 3, 2013

WW00348

Comments: Historic Federal Properties, Ceramic, Glass, Metal, Square And Round Nails, Metal Wire, Coal, Slag, Wood, Charcoal, Concrete Blocks, 150 X 70 FT, CA. 1945 – 1980, Date Recorded: April 3, 2013

WW00333

Comments: Officers' Row, Brick, Nails, Mortar, Flat Glass, Wood, Concrete, Slate, Tile, Plaster, Roofing Shingles, Coal, Slag, Charcoal, Toy Marble, Button, Bullet, Safety Pin,

Textile, pre contact lithic isolate, 313 X 34M, CA. 1858 – 1910, Date Recorded: December 10, 2012

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WW00330

Comments: Fort Walla Walla Building 24, Historic Military Properties, Residential Structure Remains, Foundation, Refuse Debris, Coal, Faunal Remains, Brick, Round Nails, 98 X 79 Ft, Ca. 1875- 1930s, Date Recorded: September 6, 2012

WW00328

Comments: Historic Debris Scatter, 26 Artifacts Of Glass, Bone, Earthenware, Iron And Porcelain, Ca 1900, 213x 132 X 40cm, Date Recorded: April 13, 2012

WW00329

Comments: Historic Debris Scatter, Fort Walla Walla Refuse And Sewer Line, Domestic And Building Materials, Ca 1900, 194 X 146 X 40 Cm, Date Recorded: April 13, 2012

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WW00332

Comments: Historic Debris Scatter/ Concentration, Unlined Privy Vault, Bottles, Kerosene Lamp Parts, Clay Pipes, Coins, Cans, 6 X 4ft, CA. 1873-1906, Date Recorded: April 13, 2012

WW00331

Comments: Fort Walla Walla Building 71, Historic Military Properties, Historic Residential Structure, Refuse Debris, Glass, Ceramic, Architectural Materials, Brick, Mortar, Round Nails, Screws, Pre Contact Lithics, 100 X 70ft, Historic Component Ca. 1906-1921, Date Recorded: December 30, 2011

WW00344

Comments: Fort Walla Hospital (1858-1889), 255 X 263 Feet, Mid 19th - Early 20th Century, Historic Artifacts: Architectural Materials, Faunal Remains, Metal Slag And Charcoal, Metal, Ceramic, And Glass Fragments; Prehistoric Components: Flake And Biface. Date Recorded: August 1, 2011.

WW00345

Comments: Wagon Shed (Building 66), Circa 1900 - 1925, Historic Artifacts: Wooden Planks, Medicine Bottle, Charcoal, Coal, And Brick Fragments. Date Recorded: July 26, 2011.

WW00342

Comments: Officer's Quarters (Building 7), 140 X 115 Feet, Circa 2nd Half Of 19th Century, Historic Artifact Cluster: Glass, Ceramic, Earthenware Floor Tiles, Tin Can, And Metal Bucket Handle. Date Recorded: April 22, 2011

WW00343

Comments: Coal Shed (Building 58), 23 X 125 Feet, Circa 1850 - 1925, Historic Artifacts: Glass, Ceramic, Bone, Metal, And Coal Chunks. Date Recorded: April 22, 2011.

WW00304

Comments: Historic Fort, Refuse Scatter, Metal Debris, 20 X 13m, Ca. 1880-1910. Date Recorded: July 12, 2010

WW00305

Comments: Historic Fort, Brick, Wire Strapping, 2 X 12m, Ca. 1880-1910. Date Recorded: July 12, 2010

WW00306

Comments: Pre Contact Isolate, Ccs Shatter, Date Recorded: July 10, 2010

WW00240

Comments: Key Technology Historic Debris Scatter And Pre-Contact Components Site, Historic Refuse, Glass, Ceramic, Concrete, Tile, Brick, Fiberboard, Wire, Pipes, Bolts, Round Head Nails, Pre-Contact Lithic Material, 181 X 172m, Ca. 1860s-1940s. Date Recorded: May 19, 2008.

WW00212

Comments: Historic Refuse Scatter, Ceramic, Glass, Metal, Brick, Shell, Mammal Bone, From Plow Zone -Lithic Debitage, 181 X 8m, Ca. 1909-2000. Date Recorded: October 31, 2007.

WW00033

Comments: Fort Walla Walla Military Site, Extensive Dump, 1 Sq. Mile, 1858, Date Recorded: December 5, 1977.

WW00105

Comments: LITHIC ITEMS INCLUDE 16 DOUBLE-NOTCHED NET SINKERS, Date Recorded: January 1, 1966.

General Land Office Cadastral map review

By 1860, roads in the area were well established. In the locale of the future Larch Avenue was open farmland. Cross territorial and inter-territorial roads were plentiful given the garrison at fort Walla Walla. In terms of the known infrastructure from the time, there is little to indicate any specific ownership other than a landholding of a *J. Mitchel (Figure 7, Cadastral)*.

Research Analysis

Background research shows that although quite a number of archaeological research studies in the local area, particularly many associated with the remains of Fort Walla Walla. The 26 sites noted are of great indicative importance. What is imperative to recognize is that this area was occupied by the original Walla Walla College, and there remains potential for cultural sites related to the school, with potential for remains exceeding a century. There have been no listed studies in the direct area of potential effect for the project. Mitigating this somewhat is an unknown amount of infrastructural disturbance from modern transportation related construction.

Deep Aeolian silty soils and a dry sage steppe environment likely limited precontact land use in some areas, but local tribal groups would have focused settlement and resource acquisition in areas where water was readily available like local rivers and streams, two of which can be seen in the 1860 cadastral map of the sections in question.

All three intersections pose challenges in terms of cultural resources. There has been inadequate fieldwork within the direct proposed study area to make many assumptions. Challenges include the proximity to known historic settlements such as Fort Walla Walla and Walla Walla College as well as the general proximity to a well-known Native American habitation zone.

Recommendations

At this time, from a preservation perspective **we must recommend subsurface cultural resources study when alignments are known. Importantly, if substantial changes to the four corners of the intersections are modified, historic preservation analysis should be conducted on potential impact to historic era homes and structures.** In terms of potential contact or precontact remains, given the known potential of this area, subsurface testing and monitoring should also be conducted. From a research perspective, for the purposes of this preliminary study, we do not have any material way of knowing the potential for intact soils or archaeologically positive layers. A survey research strategy must be developed at the next stage when alignments and construction engineering is determined.

Bibliography

Alt, D., & Hyndman, D. W. (1995). *Northwest exposures: A geologic story of the Northwest*. Missoula, MT: Mountain Press.

Ames, K. M., Dumond, D. E., Galm, J. R., & Minor, R. (1998). *Prehistory of the southern plateau*. In W. C. Sturtevant, & D. E. Walker (1998). *Handbook of North American Indians*. Volume 12. Plateau. Washington, D.C.: Smithsonian Institution.

Angwin, K., & Rasmussen, J. L. (2003). *South Columbia Irrigation District building and quarters inventory*. US Department of Interior, Bureau of Reclamation, Yakima, WA.

Bicchieri, B. (1976). *Units of culture and units of time: Periodization and its use in syntheses of plateau prehistory*. S.l: s.n.

Bicchieri, B. (1994). *Archaeological survey of randomly selected ¼ sections of Reecer Canyon Quadrangle*. Archaeological and Cultural Task Group of the Yakima Resources Management Cooperative. Ellensburg, Washington.

Boreson, K. (1998). *A cultural resources survey of scattered U S. Bureau of Reclamation tracts in Adams, Franklin, and Grant Counties, Washington*. Archaeology and Historical Services short report 579. Submitted to US Bureau of Reclamation and Washington State Office of Archaeology and Historic Preservation. Cheney, WA: Eastern Washington University.

Bureau of Reclamation [BOR]. (2011). *The story of Columbia Basin Project—Washington*. Retrieved February 6, 2012 from http://www.usbr.gov/pn/project/columbia_index.html#

Bureau of Land Management [BLM]. (2012). *Land Status & Cadastral Records Viewer: Willamette Meridian—Oregon and Washington States*. Retrieved November 10, 2016, from <http://www.blm.gov/or/landrecords/survey/ySrvy1.php>

Chatters, J. C. (1998). *Environment*. In Sturtevant, W. C., & Walker, D. E. (1998). *Handbook of North American Indians*. Volume 12. Plateau. Washington, D.C.: Smithsonian Institution.

Chatters, J. C., & Cleveland, G. C. (1984). *Human adaptation along the Columbia River, 4700-1600 BP: A report of test excavation at river mile 590, north central Washington*. Central Washington University occasional paper, no. 1. Ellensburg, WA: Graduate Studies & Research, Central Washington University.

Cheever, B. B. (1949). *The development of railroads in the State of Washington 1860 to 1948*. Bellingham, WA: Western Washington College of Education.

Crisson, F., and Axton, S. (2001). *Cultural resources survey for the Benton-Franklin No. 1 & 2 lines rebuild project, Benton and Franklin Counties, Washington*. Report prepared by Archaeological and Historical Services of Cheney, WA for Bonneville Power Administration and submitted to the Washington State Office of Archaeology and Historic Preservation.

Dickson, C. (1999). *McNary Reservoir cultural resource inventory survey report*. Report prepared for the U.S. Army Corps of Engineers Walla Walla District by the Confederated Tribes of the Umatilla Indian Reservation, Umatilla, OR

Doncaster, K. (2010). *Historic Property Inventory forms*. Washington State Department of Archaeology and Historic preservation Historic Property Inventory database, Olympia.

Dunnell, R. C. (1979) Trends in current Americanist Archaeology. *American Journal of Archaeology*, 83, 437-449.

Franklin, J. F., & Dyrness, C. T. (1973). *Natural vegetation of Oregon and Washington. General technical report PNW-8*. Portland, OR: U.S. Department of Agriculture, Forest Service; Pacific Northwest Forest and Range Experiment Station.

Franklin, J. F., Blinn, T., & Dyrness, C. T. (1988). *Natural vegetation of Oregon and Washington: Commentary and bibliographic supplement*. Corvallis, OR: Oregon State University Press; USDA Forest Service, Pacific Northwest Research Station.

Hodges, C. M., Miss, C. & Shea, J. (2003). *Cultural resources survey for the Desert Claim Wind Power Project, Kittitas County, Washington*. Seattle, WA: Northwest Archaeological Associates. Report on file at the Department of Archaeology and Historic Preservation, Olympia, WA.

Hunn, E. S., & Selam, J. (1990). *Nch'i-wa'ia, "the big river": Mid-Columbia Indians and their land*. Seattle: University of Washington Press.

Keith, M. E. (1999). *Cultural resources inventory report, Tri-Cities encroachments, Walla Walla District, Corps of Engineers*. Report prepared by Walla Walla District Army Corps of Engineers, Walla Walla, WA.

Landreau, C. (2007). *An archaeological review and inventory of a county road 170 re-alignment and improvement project in Franklin County, Washington*. Report prepared for HDR Engineering and submitted to Washington State Department of Archaeology and Historic Preservation.

Lasmanis, R. (1991). The geology of Washington. *Rocks and Minerals*, 66(4), pgs. 262-277.

Leonhardy, F. C., & Rice, D. G. (1970). A proposed culture typology for the lower Snake River region, Southeastern Washington. *Northwest Anthropological Research Notes*, 4(1), 1-29.

Marshall, Patrick (2013) College Place, a Thumbnail History, HistoryLink.org Essay 10655 <http://www.historylink.org/File/10655>

McKee, E. H. (1971). Tertiary igneous chronology of the Great Basin of Western United States: Implications for tectonic models. *Geological Society of America Bulletin*, 80(12), 3497-3502.

McKee, B. (1972). *Cascadia; the geologic evolution of the Pacific Northwest*. New York: McGraw-Hill.

McNett, James, 2016 *Historic Property Inventory Form for the Esquatzel Diversion Channel*. State of Washington DAHP archives

Meinig, D. W. (1968). *The Great Columbia Plain: A historical geography, 1805-1910*. Seattle: University of Washington Press.

Nelson, C. M. (1969). *The Sunset Creek site (45-KT-28), and its place in plateau prehistory*. Pullman: Washington State University, Laboratory of Anthropology.

Pitzer, P. C. *Grand Coulee, Harnessing a dream*. Pullman, WA: Washington State University Press.

USDA [NRCS]. (2012). Web Soil Survey. Retrieved on April 6, 2012 from <http://www.websoilsurvey.nrcs.usda.gov>

Ray, V. F. (1936). Native villages and groupings of the Columbia Basin. *Pacific Northwest*

Quarterly, 27, 99-152.

Ray, V. F. (1939). Cultural relations in the Plateau of Northwestern America. *Publications of the Frederick Webb Hodge Anniversary Publication Fund*, 3. Southwestern Museum, Los Angeles.

Reidel, S. P. (1984). The Saddle Mountains: The evolution of an anticline in the Yakima Fold Belt. *American Journal of Science*, 284, 942-978.

Reidel, S. P., Focht, K. R., & Washington (State). (1994). *Geologic map of the Richland 1:100,000 quadrangle, Washington*. Olympia, WA.: Washington Division of Geology and Earth Resources.

Schuster, H. H. (1998). *Yakima and neighboring groups*. In D. E. Walker (Ed.), *Handbook of North American Indians: Vol. 12. Plateau*. (pp. 327-351). Washington D.C.: Smithsonian Institution.

Simonds, W. J. (1998). *The Columbia Basin Project*. United States Department of the Interior, Bureau of Reclamation, Denver, CO: Bureau of Reclamation History Program.

Smith, C. B. & Callum, K. E. (2005). *NRCS Eickmeyer Farms Inc. EQIP 2004 site identification survey in Franklin County, Washington (OAHP LogNo.082604-10-NRCS)*. Report prepared by NRCS for WA State Office of Archaeology and Historic Preservation.

Smith, H. I. (1910). *The archaeology of the Yakima Valley*. Anthropological Papers of the American Museum of Natural History VI (1). New York: American Museum of Natural History.

Smith, W. C., & Central Washington Archaeological Survey. (1977). *Archaeological explorations in the Columbia Basin: A report on the Mesa Project, 1973-1975*. Ellensburg, WA: Central Washington Archaeological Survey, Dept. of Anthropology, Central Washington University.

Smith, G. A. (1988). Neogene synvolcanic and syntectonic sedimentation in Central Washington. *Geological Society of America Bulletin*, 100, 1479-1492.

United States Department of the Interior, Bureau of Reclamation. (1972). *Federal Reclamation and Related Laws Annotated*, Volume II, 1943-1958. Washington, D. C.: U.S. Government Printing Office.

United States. (1995). *How to apply the National Register criteria for evaluation*. Washington, D.C.: Interagency Resources Division.

Western Historical Publishing Company. (1955). *An illustrated history of the Big Bend country: Embracing Lincoln, Douglas, Adams and Franklin counties, State of Washington : index*. Spokane, WA: Western Historical Pub. Co.

Woody, D. (2010). *USDA NRCS Final CRM Report for the William Lasch EQIP 2009 Project in Franklin County, Washington*. Report prepared by the Yakama Nation Cultural Resources Program for the NRCS and submitted to WA Department of Archaeology and Historic Preservation.

APPENDIX F
Traffic Report



May 2, 2018

Mike Rizzitiello
City Administrator
625 South College Avenue
College Place, Washington 99324

Via email: MRizzitiello@cpwa.us

Regarding: Alternative Traffic Control Analysis
Central College Place Planning Study
College Place, Washington
PBS Project 67136.000

Dear Mr. Rizzitiello:

As a component of the Central College Place Planning Study, PBS is submitting a revised and updated alternative traffic control analysis (ATCA) for intersections potentially impacted by the development of the NE Larch Avenue site. This letter updates the letter report dated February 28, 2018, based on comments from the March 8, 2018, phone conference, additional in-process project trips, updated collision data, and College Place City Council comments from the email dated March 29, 2018.

The analysis included four key intersections and evaluated the alternative traffic controls ranging from “do nothing” to a standard roundabout. The report format follows Washington State Department of Transportation’s (WSDOT) *Design Manual* for Intersection Control Analysis.¹ This includes addressing the following:

- Project background and need. This builds on the marketing analysis prepared by ECONorthwest for the site.²
- Analysis. Level of service (LOS) analysis based on the City of College Place’s (City) Transportation Impact Analysis Guidelines.³
- Cost-Benefit Analysis. Analysis of which alternative will provide the most benefit for cost based on operations and safety impacts.
- Feasibility. Addresses whether there are physical constraints that make some alternatives less or more feasible.
- Selection. Recommendations on the preferred traffic control devised for each intersection.

The scope of work for the analysis included the following intersections:

- C Street and Lambert Avenue
- Larch Avenue and C Street
- Larch Avenue and Whitman Drive

¹ Washington State Department of Transportation, *Design Manual*, July 2017.

² ECONorthwest, *College Place NE Larch Street Site Market Analysis and Site Evaluation*, December 2017.

³ City of College Place, *Transportation Impact Analysis Guidelines*, February 2013.

- Larch Avenue and 12th Street

The following findings and recommendations are based on the ATCA evaluation.

FINDINGS AND RECOMMENDATIONS

The findings of the alternatives analysis are listed below.

College Place has historically grown at about one percent per year. The growth rate has the potential to increase with development interest in large parcels in the conceptual stage of development. These and other conceptual developments are too preliminary to estimate the trip generation. Thus, the background growth is assumed to be two percent per year for 2023 and one percent for 2040. Several in-process projects contribute to the background growth at the study intersections and were applied to the background traffic volumes.

All these in-process projects report PM peak hour traffic trips but several had no data for the AM peak hour, such as Blue Mountain Mall, Homestead Village, and Stone Creek. The AM is not the peak traffic period but the lack of in-process trips from large projects significantly compromised AM LOS analysis and give faulty high LOS reports.

The updated in-process project trips and growth rate resulted in a substandard LOS in 2023 with or without the development of the Larch Avenue site at Larch Avenue/Whitman Drive and Larch Avenue/12th Street intersections. When the in-process developments are completed, these intersections will fail with LOS F operation on the critical approaches.

The analysis is based on the highest trip generation assuming 250 apartments are constructed on the site. This will generate 1,663 daily trips, with 155 trips in the PM and 128 trips in the AM peak hours.

Larch Avenue/Whitman Drive has a collision rate above critical rate. Additional traffic control should reduce the collisions at Larch Avenue/ Whitman Drive. Larch Avenue/12th Street intersection's collision rate is relatively high but below the critical rate.

Criteria from *Manual on Uniform Traffic Control Devices* (MUTCD) are currently met for a four-way stop at Larch Avenue/12th Street and Larch Avenue/Whitman Drive intersections.

None of the streets associated with the studied intersections had bike lanes or other bike route signs or markings. Whitman has a multi-use path on one side and SE 12th Street is intended to be signed as a bike route. Most streets had some or complete sidewalk systems.

All studied intersections currently operate at a LOS within City standards.

By the 2023 construction year, with or without the project trips, Larch Avenue/Whitman Drive and Larch Avenue/12th Street drop below City LOS standards in the PM peak hour.

The 2023 LOS with the project volumes for Larch Avenue/12th Street intersection is LOS C with four-way stop control but Larch Ave/Whitman Drive intersection operated at LOS E, with four-way stop control.

By the 2040 horizon year, with project trips, Larch Avenue/Whitman Drive and Larch Avenue/12th Street, the LOS drops below the City standard without installation of either a traffic signal or roundabout at both intersections.

The analysis did not find the need for additional turn lanes at the studied intersections. Left lanes should be considered with traffic signal installation at the east approach to Larch Avenue/Whitman Drive and all approaches to Larch Avenue/12th Street.

The MUTCD peak hour traffic signal warrants were met for both Larch Avenue/Whitman Drive and Larch Avenue/12th Street in the 2023 horizon year with project trips.

A compact/mini roundabout, with an inscribed circle of 90 feet, is feasible and desirable for the Larch Avenue/Whitman Drive and Larch Avenue/12th Street intersection. Roundabouts are more desirable based on context sensitivity/sustainability design considerations. However, a traffic signal appears to have a better cost-benefit value compared to a roundabout.

Based on the findings of the analysis, the following are the recommended traffic control alternatives for each intersection:

- C Street/Lambert Avenue and Larch Avenue/C Street: Do nothing.
- Larch Avenue/12th Street and Larch Avenue/Whitman Drive: Install a four-way stop now.
- Larch Avenue/12th Street and Larch Avenue/Whitman Drive: Collect development fees for a compact roundabout.
- Larch Avenue/12th Street and Larch Avenue/Whitman Drive: Install either roundabout or traffic signal based on community input and funding available. Assuming funding is available, a roundabout is the preferred alternative.

BACKGROUND AND PROJECT NEEDS

The ATCA is related to the development of the NE Larch Avenue site located at the southwest corner of the intersection of NE Larch Avenue and NE C Street. The 10-acre site is occupied by 4.5 acres of self-storage units. The remaining 5.5 acres is not occupied. The City is interested in increasing its tax base by exploring development opportunities for the NE Larch Avenue site. This report is intended to identify transportation impacts of development alternatives. See Figure 1, Vicinity Map, and Figure 2, Site Plan.

The NE Larch Avenue site is at the intersection of Larch Avenue/C Street. Nearby is the C Street/Lambert Avenue intersection. The Larch Avenue/Whitman Drive and Larch Avenue/12th Street intersections are of interest due to possible impacts. The existing conditions for each roadway is described below.

Larch Avenue is classified as a Minor Arterial, with one lane in each direction and a two-way left-turn lane from C Street to 4th Street. From 4th Street to Lamperti Street, it has only one lane in each direction. It has relatively complete sidewalks on both sides from C Street to 12th Street. It has no bike lanes. The posted speed limit is 30 miles per hour (mph).

C Street is classified as a Minor Arterial, with one lane in each direction and a two-way left-turn lane from Myra Road to Larch Avenue. From Larch Avenue to College Avenue, it is classified as Collector and has only one lane in each direction. It has complete sidewalks on both sides from Myra Road to Larch Avenue and intermittent sidewalks from C Street to College Avenue. It has no bike lanes. The posted speed limit is 25 mph.

Whitman Drive is classified as a Minor Arterial, with one lane in each direction and a two-way left-turn lane from Myra Road to Larch Avenue. From Larch Avenue to College Avenue, it has only one lane in each direction. It has

complete sidewalks from Myra Road to College Avenue. It has no bike lanes but the wide sidewalk on one side is intended as a multi-use path. The posted speed limit is 30 mph.

SE 12th Street is classified as a Minor Arterial, with one lane in each direction from Myra Road to College Avenue. It has intermittent sidewalks from Myra Road to College Avenue. It has no bike lanes but noted in the *2010 Regional Bicycle and Pedestrian Transportation Plan* calls for bike route signage on SE 12th Street. The posted speed limit is 35 mph.

Lambert Avenue is a one-lane roadway and is classified as a Collector, with one lane southbound from Rose Street to C Street. It has no sidewalks or bike lanes. The posted speed limit is 25 mph.

See Figure 3 for intersection lane configuration.

Traffic data was collected on studied intersections and roadways. See Figure 4 for existing peak hour turning movement volumes. The following table summarizes the 24-hour traffic count data in Appendix A.

Table 1. October 2017 Traffic Data

Location	Volume ^a	Speed ^b	Classification		
			PV ^c	Light ^d	Heavy ^e
Larch Avenue south of C Street	6,142	34 mph	5,546	332	12
Larch Avenue south of 6th Street	3,882	33 mph	3,498	236	10
Larch Avenue south of 12th Street	4,562	28 mph	4,137	264	6
C Street east of Larch Avenue	7,011	32 mph	6,276	445	22
C Street west of Larch Avenue	1,744	27 mph	1,543	94	3
Whitman Drive east of Larch Avenue	1,946	29 mph	1,797	101	1
12th Avenue east of Larch Avenue	6,245	34 mph	5,649	306	6

^a Vehicles per day based on 24-hour count

^b 85th percentile speed

^c Passenger vehicles, FHWA Classification 2 to 3

^d Light trucks, FHWA Classification 5 to 7

^e Heavy trucks, FHWA Classification 8 to 13

The current traffic controls at each intersection is stop sign control on the minor or lower volume leg(s) of the two streets. With additional traffic volume, the alternative traffic controls considered range from least restrictive and least expensive to implement to more restrictive and expensive. This includes the following:

- Maintain the existing stop control on the minor leg(s).
- Install additional stop signs to a multi-way stop sign.
- Install a traffic signal with and without additional turn lanes.
- Install roundabouts.

The market analysis report considered several land-use alternatives, and trip generation volumes were estimated for each. The multi-family home alternative was used as the worst-case alternative for trips generated from 250 apartment units.

ANALYSIS

The ATCA includes both LOS analysis and safety for the study intersections. For this ATCA, the “project” assumes the Larch Avenue site is built out with 250 apartment units by 2023. The ATCA considers the following alternatives:

- 2017 existing conditions
- 2023 without project trips
- 2023 with project trips
- 2023 with project trips and mitigation
- 2040 without project trips and existing traffic control
- 2040 with project trips and existing traffic control
- 2040 with project and mitigation
- 2040 with project and a roundabout

Methods and Assumptions

The existing level of service conditions are based on 2017 counts for AM and PM peak hours. The construction year is assumed in 2023. The 2023 and 2040 horizon year conditions are based on a growth rate of two percent in the short term (2023), one percent in the long term and in-process trips from approved land-use development. The in-process project trips were based on traffic impact analysis reports supplied by College Place and Walla Walla. The trips estimated from the reports were distributed to the study intersections.

The future traffic volumes with the project is based on the background growth and the trip generation for medium-density residential land-use as mentioned in the market analysis report. From the ITE Trip Generation Manual for apartments, Land Use Code 220 was used for the trip estimate from the conceptual development.⁴ See the trip generation memo in Appendix B for more information on the trip generation. The trip distribution was based on the existing turning movement volumes at the studied intersection and engineering judgement. See Figure 6 for the trip distribution and trip assignment.

The project area and the LOS analysis are limited to the study intersections. The LOS analysis is based on the City's Transportation Impact Analysis Guidelines and an assumed peak hour factor of 0.92.

The traffic signal alternative was analyzed with Synchro, version 9.0, using Highway Capacity Manual (HCM) 2010 methodology for both the existing and future conditions. The existing and future LOS was based on an assumed 90-second cycle length in actuated, non-coordinated operation. Future conditions with a roundabout alternative were analyzed with SIDRA Intersection, version 7.0. WSDOT analysis protocol for SIDRA⁵ and Synchro⁶ were used for the analysis. A minor reduction in capacity (1.05 environmental factor) was applied to the proposed mini roundabouts with a 90-foot inscribed diameter due to uncertainty related to mini roundabout performance.

The safety analysis for the intersections reviewed the collision data supplied by WSDOT for the years 2012–October 2017. The collision rate is based on the 2017 turning movement counts. Collision severity—the number of collisions with fatal or severe injuries—is the primary consideration related to the cost-benefit analysis.

The measures of effectiveness are LOS grades, delay, volume-to-capacity ratio, queue length, collision rates, collision frequency, and cost-benefit ratio.

⁴ Institute of Transportation Engineers, *Trip Generation Manual*, 9th Edition, 2012.

⁵ Washington Department of Transportation, *WSDOT Sidra Policy Settings*, November 2015.

⁶ Washington Department of Transportation, *WSDOT SYNCHRO & SIMTRAFFIC Protocol*, April 2017, Synchro version 8.

Cost estimates for the alternatives are conceptual and only intended for comparison purposes in the cost-benefit section.

Existing LOS Analysis without the Project

The existing conditions, in 2017, were analyzed based on recent traffic counts. A peak hour factor of 0.90 was used for all intersections.

Table 2. Intersection LOS for Existing without Project

Intersection	AM Peak				PM Peak			
	LOS ^a	Delay ^b	V/C ^c	Queue ^d	LOS ^a	Delay ^b	V/C ^c	Queue ^d
C Street/Lambert Avenue	A	8	0.01 SB	0	A	8	0.01 SB	0
Larch Avenue/C Street	B	12	0.14 SB	<25	B	13	0.08 SB LT	<25
Larch Avenue/Whitman Drive	C	17	0.45 EB	50	C	20	0.38 EB LT	50
Larch Avenue/12th Street	C	16	0.31 SB	25	D	26	0.52 SB	75

^a Intersection level of service based on delay on critical approach/movement

^b Control delay (seconds) on critical approach/movement

^c Volume to capacity ratio for critical approach/movement

^d 95th percentile queue length in feet for critical approach/movement

The Larch Avenue/12th Street intersection currently is at the City of College Place's LOS threshold of at least D.

Future Background Traffic

The project is assumed to be constructed in 2023 and the trips were added to the 2023 background growth conditions. The future background growth was given consideration. Historically, College Place and the surrounding community has grown at rate of one percent. With the strengthening economy and interest in several large parcels within the area, the growth rate was increased to two percent. This is intended to address the large lots conceptual developments south of SR 125 at Myra Road and the McKiernan/Christensen properties the southwest quadrant of the Mojonier Road and College Avenue as well as several other developments. At this stage of these developments, it is not possible to accurately estimate the trip generation, distribution, and assignment to the studied intersections. A growth rate too high can result in reports with a faulty low level of service and recommendation of expensive transportation improvement that may be unnecessary. Thus, the 2040 forecasted traffic volumes used the historic one percent growth rate.

The analysis included traffic from several "in-process" projects. These are projects approved for construction that can be either incomplete or not started. Thus, their project trips were added to the studied intersections in either 2023 or 2040 based on phasing. The number of trips were taken from the traffic studied prepared for each and distributed to the studied intersections. In several cases, only PM trips were reported in the traffic studies. Thus, the AM analysis does not include many in-process project trips. If applicable, the in-process project's pass-by trip reduction was applied, and the net new trips were assigned to the studied intersection. Some were reported as partially complete, such as Homestead Acres, which has 144 homes of the total 321 homes complete and fully occupied. The following list are in-process projects contributing to the background traffic in 2023 and 2040:

- The Village at Fort Walla Walla – zero percent complete. Phase one applied to 2023 and phases two through five applied to 2040.

- Whitman Crossing 2 – zero percent complete, 2023 only.
- Blue Mountain Mall – zero percent complete 2023 only, PM trips only.
- Homestead Village – 45 percent complete, 2023 only, PM trips only.
- Locati Blalock – 90 percent complete, 2023 only.
- Stone Creek – 40 percent complete, 2023 only, PM trips only.

See Figure 5 for 2023 in-process trips assigned to the studied intersections. The trip distribution and assignment to the studied intersections is based on professional judgement and existing traffic volumes. The in-process trips were added to the existing traffic volume with the grown rate applied and used in the future year traffic analysis.

2023 LOS Analysis with and without the Project

See Figure 7 and 8 for 2023 turning movement counts, with and without the project.

Table 3. Intersection LOS for 2023 without Project

Intersection	AM Peak				PM Peak			
	LOS ^a	Delay ^b	V/C ^c	Queue ^d	LOS ^a	Delay ^b	V/C ^c	Queue ^d
C Street/Lambert Avenue	B	13	0.29 SB	25	A	8	0.01 SB	0
Larch Avenue/C Street	B	12	0.15 SB	<25	C	15	0.13 SB LT	<25
Larch Avenue/Whitman Drive	C	19	0.50 EB	75	F	63	0.84 EB LT	175
Larch Avenue/12th Street	C	16	0.30 SB	25	F	78	0.94 SB	225

^a Intersection level of service based on delay on critical approach/movement

^b Control delay (seconds) on critical approach/movement

^c Volume to capacity ratio for critical approach/movement

^d 95th percentile queue length in feet for critical approach/movement

The Larch Avenue/12th Street and Larch Avenue/12th Street intersections are estimated to fail (LOS F) in 2023 in the PM peak hour. This is due to several large in-process projects and expected developments. The expected development was addressed by increasing the background growth rate from one to two percent annually. The in-process trips were assigned to these two intersections based on professional judgement on the trip distribution. Thus, the level of confidence in the LOS estimate is only moderately high but it is a reasonable expectation based on the best information we have available. It is recommended that the City put each intersection on the six-year transportation improvement program and collect development fees to fund intersection improvements.

Table 4. Intersection LOS for 2023 with Project

Intersection	AM Peak				PM Peak			
	LOS ^a	Delay ^b	V/C ^c	Queue ^d	LOS ^a	Delay ^b	V/C ^c	Queue ^d
C Street/Lambert Avenue	A	8	0.01 SB	0	A	8	0.01 SB	0
Larch Avenue/C Street	B	12	0.15 SB	<25	C	16	0.13 SB LT	<25
Larch Avenue/Whitman Drive	C	24	0.59 EB	100	F	121	1.05 EB LT	250
Larch Avenue/12th Street	C	18	0.42 SB	50	F	300+	1.56 SB	475

^a Intersection level of service based on delay on critical approach/movement

^b Control delay (seconds) on critical approach/movement

^c Volume to capacity ratio for critical approach/movement

^d 95th percentile queue length in feet for critical approach/movement

The LOS is further impacted by the proposed Larch Avenue project. As it proceeds in the development approval process, conditions of approval should include contributions to intersection improvements that brings LOS with City standards, LOS D.

2023 PM Peak Hour Level of Service Analysis with Project and Mitigation

Only the PM peak hour drops below City LOS standards and only at the Larch Avenue/Whitman Drive and Larch Avenue/12th Street intersections. Four-way stop controls was evaluated as a low-cost mitigation.

Table 5. Intersection Level of Service for 2023 with Project and four-way stop Control

Intersection	PM Peak			
	LOS ^a	Delay ^b	V/C ^c	Queue ^d
Larch/Whitman	F	67	1.01 SB	375
Larch/12th	D	34	0.83 WB	225

^a Intersection level of service based on delay on critical approach/movement

^b Control delay (seconds) on critical approach/movement

^c Volume to capacity ratio for critical approach/movement

^d 95th percentile queue length in feet

The installation of all-way stop control at Larch Avenue/12th Street improves the LOS to within City standards (LOS D), but the Larch Avenue/Whitman Drive intersection remains well below City standards.

2040 Level of Service Analysis with and without the Project

The one percent annual growth rate and the full build out of the Village at Fort Walla Walla project trips were added to the existing traffic volumes for the 2040 horizon year without the project trips or the four-way stop control. See Figures 9 and 10 for 2040 turning movement counts, with and without the project.

Table 6. Intersection Level of Service for 2040 without Project

Intersection	AM Peak				PM Peak			
	LOS ^a	Delay ^b	V/C ^c	Queue ^d	LOS ^a	Delay ^b	V/C ^c	Queue ^d
C/Lambert	B	14	0.32 SB	25	A	8	0.01 SB	0
Larch/C	B	13	0.18 SB	<25	C	16	0.14 SB LT	<25
Larch/Whitman	F	54	0.90 EB	250	F	334	1.61 EB LT	550
Larch/12th	C	21	0.48 SB	75	F	505	1.98 SB	625

^a Intersection level of service based on delay on critical approach/movement

^b Control delay (seconds) on critical approach/movement

^c Volume to capacity ratio for critical approach/movement

^d 95th percentile queue length in feet for critical approach/movement

Both Larch Avenue/Whitman Drive and Larch Avenue/12th Street have LOS significantly below City standards.

The project trips were added to the 2040 traffic conditions.

Table 7. Intersection Level of Service for 2040 with Project

Intersection	AM Peak				PM Peak			
	LOS ^a	Delay ^b	V/C ^c	Queue ^d	LOS ^a	Delay ^b	V/C ^c	Queue ^d
C/Lambert	B	14	0.34 SB	50	A	8	0.007 SB	0
Larch/C	B	14	0.19 SB	25	C	17	0.15 SB LT	<25
Larch/Whitman	F	88	1.03 EB	325	F	504	1.98 EB LT	675
Larch/12th	C	23	0.55 SB	75	F	1034	3.12 SB	875

^a Intersection level of service based on delay on critical approach/movement

^b Control delay (seconds) on critical approach/movement

^c Volume to capacity ratio for critical approach/movement

^d 95th percentile queue length in feet for critical approach/movement

With project trips the delay increases, and the LOS falls further below City standards. The four-way stop mitigation was evaluated for the 2040 PM peak with project trips.

Table 8. Intersection Level of Service for 2040 PM Peak with Project and four-way stop Control

Intersection	PM Peak			
	LOS ^a	Delay ^b	V/C ^c	Queue ^d
Larch/Whitman	F	153	1.25 SB	575
Larch/12th	F	78	1.03 WB	375

^a Intersection level of service based on delay on critical approach/movement

^b Control delay (seconds) on critical approach/movement

^c Volume to capacity ratio for critical approach/movement

^d 95th percentile queue length in feet for critical approach/movement

The traffic volumes are too high for a four-way stop controlled intersections and additional traffic control is needed. The LOS was evaluated for 2040 PM peak hour with project trips and with two mitigation alternatives at Larch Avenue/Whitman Drive and Larch Avenue/12th Street:

- Traffic signal
- Roundabout

The traffic signal is assumed to be two-phase operation, 90-second cycle length, with striped left turn lanes and permitted left turn phasing. No widening is assumed for both intersections.

Table 9. Intersection Level of Service for 2040 PM Peak with Project and Traffic Signal

Intersection	PM Peak			
	LOS ^a	Delay ^b	V/C ^c	Queue ^d
Larch/Whitman	B	11	0.64 SB	288
Larch/12th	A	10	0.51 SB	100

^a Intersection level of service based intersection summary

^b Control delay (seconds) for intersection summary

^c Volume to capacity ratio for critical approach/movement

^d 95th percentile queue length in feet for critical approach/movement

The LOS service for the two intersections improved dramatically with a LOS significantly higher than City standards.

To complete the alternative traffic control analysis, roundabouts were evaluated at both Larch Avenue/Whitman Drive and Larch Avenue/12th Street as mitigation. Single-lane roundabouts are assumed with an inscribed circle of 90 feet, outside diameter of the circular intersection, which is approximately the diagonal distance from curb to curb in the existing intersection. At this diameter, the roundabout falls within a mini or compact roundabout category. A mini roundabout was proposed to minimize any necessary right-of-way, but the smaller diameter reduces capacity. Table 10 shows the LOS for both intersections.

Table 10. Intersection Level of Service for 2040 with Project and Roundabout

Intersection	PM Peak			
	LOS ^a	Delay ^b	V/C ^c	Queue ^d
Larch/Whitman	B	15	0.68 SB	225
Larch/12th	B	12	0.62 WB	175

^a Intersection level of service based on delay on critical approach/movement

^b Control delay (seconds) on critical approach/movement

^c Volume to capacity ratio for critical approach/movement

^d 95th percentile queue length in feet for critical approach/movement

The LOS for a compact mini roundabout at Larch Avenue/Whitman Drive and Larch Avenue/12th Street is approximately the same as the proposed traffic signals. Based on LOS, four-way stop control is the preferred traffic control in the short term, but roundabouts are the preferred alternative in the long term. Depending on the impact of in-process and conceptual development, intersection improvement may be needed as soon as 2023.

Safety Analysis

The safety evaluation included review of the collision history, calculating the collision rate, and preparing a collision diagram for locations with a collision rate above the critical rate. Over five years (January 1, 2012–October 2017) of collisions were reviewed for crash trends and rates. The collision rates were estimated for each intersection based on 2017, PM turning movement volumes. Table 11 summarizes the existing collision history.

Table 11. Intersection Collision History Analysis

Location	Number of Collisions	Number of Serious Injury or Fatal Collisions	Daily Traffic Entering Intersection	Critical Collision Rate	Intersection Crash Rate
C Street and Lambert Avenue	2	0	6,730	0.90	0.14
Larch Avenue and C Street	4	0	6,920	.90	0.27
Larch Avenue and Whitman Drive	17	0	7,900	0.88	1.01
Larch Avenue and 12th Street	11	0	8,510	0.89	0.61

Because the crash rate at the Larch Avenue/Whitman Drive intersection was above the critical rate, a collision diagram was prepared. A Larch Avenue/12th Street collision diagram was prepared as well. See Appendix D for collision diagrams. They show a significant number of right-angle collisions that are correctable by stop signs or other improvements.

Stop Sign Evaluation

The multi-way stop sign warrants were checked in the MUTCD for the intersection of Larch Avenue/12th Street and Larch Avenue/Whitman Drive under the current conditions.⁷ The warrants are:

Collision History: In a 12-month period, five collisions susceptible to correction by a multi-stop (for example, right-angle collisions)

Minimum Volume: At least 300 vehicles per hour for 8 hours on the major approach
At least 200 vehicles per hour for the same 8 hours on the minor approach
Average delay on the minor street of 30 seconds per vehicle

The Larch Avenue/12th Street intersection meets warrants for a four-way stop under existing conditions based on the minimum volume criteria. In a 12-month period between September 2015 and August 2016, five collisions were recorded, three of which were right-angle collisions. See collision diagram in Appendix D. The peak hour delay for the minor street approach is 46 seconds.

Table 12 shows the hours that meet the minimum volume criteria. warrant.

⁷ Federal Highway Administration, *Manual on Uniform Traffic Control Devices*, 2009 Edition.

Table 12 Minimum Volume Criteria

Highest Hour of Day ^a	Major Approach ^b 12th Street East of Larch Ave	Minor Approach ^b Larch Avenue South of 12th St
10 AM	378	279
12 Noon	528	426
1 PM	496	386
2 PM	460	340
3 PM	594	444
4 PM	568	412
5 PM	609	435
6 PM	442	330

^a Based on 24-hour count collected October 2017

^b Total of both directions

The Larch Avenue/Whitman Drive intersection meets warrants for a four-way stop under existing conditions based the collision history. In a 12-month period between November 2016 and October 2017, nine collisions were recorded, seven of which were right-angle collisions. See collision diagram in Appendix D.

Traffic Signal Evaluation

For future years, the peak hour warrant for a traffic signal was compared to the 2023 construction year with project trips for both Larch Avenue/Whitman Drive and Larch Avenue/12th Street. Best practice is to use a least-restrictive traffic control upgrade as necessary (four-way stop signs). Signals should be considered due to the drop in LOS.

The Larch Avenue/Whitman Drive intersection meets the peak hour warrant and Larch Avenue/12th Street is close to meeting the peak hour warrant in 2023 with project trips. See the peak hour warrant excerpt from the MUTCD in Appendix D.

In the future, prior to installing a signal, a more in-depth evaluation should confirm the need for a signal reviewing the eight-hour signal warrants, collision history and LOS.

Based on the LOS and safety evaluation, the following findings are based on comparison of the existing year, 2023 construction year and 2040 horizon year with and without the project:

- The C Street/Lambert Avenue and Larch Avenue/C Street intersections operate within City LOS standards with and without the project beyond the 2040 horizon year.
- The Larch Avenue/12th Street and Larch Avenue/Whitman Drive intersections meet warrants for a four-way stop that should be installed soon with or without the project.
- The Larch Avenue/Whitman Drive intersection will drop below City LOS standard in 2023 with the project trips but can be mitigated with a traffic signal or roundabout. Continue to monitor the performance to verify the need for intersection improvements. Collect development fees to fund future improvements.

- The Larch Avenue/12th Street intersection is estimated to be at City LOS standards in 2023 with a four-way stop sign and close to meeting signal warrants. Continue to monitor the performance to verify the need for intersection improvements. Collect development fees to fund future improvements.
- In the 2040 horizon year, both the Larch Avenue/Whitman Drive and Larch Avenue/12th Street intersections will need traffic control upgrades to traffic signal or roundabout.

The following analysis is related to which traffic control alternatives to recommend for the Larch Avenue/Whitman Drive and Larch Avenue/12th Street.

COST-BENEFIT ANALYSIS

Typically, cost-benefit analysis is based on collision reduction and operational cost reduction between alternatives. For the studied intersections, the existing two-way stop controls and the proposed four-way stop controls are by far the most cost effective. This is the case until the volumes increase to the point that the delay is excessive.

The cost of the roundabout is significantly higher than a traffic signal but typically operates safer and with higher LOS. In this case, the intersections are anticipated to operate safely due to the relatively low volumes and speeds. The proposed traffic signal will operate at a high LOS through the 2040 horizon year, thus roundabouts do not offer significant cost savings due to reduced delay.

A lower cost compact or mini roundabouts are proposed that appear to fit in the existing intersection footprint without the need for significant right-of-way. The intent is to reduce cost of the roundabout by reducing the diameter of the roundabout.

Roundabout maintenance costs are significantly lower than a traffic signal, but this would not pay off the significantly higher installation fees within the 2040 horizon year.

Roundabouts have other advantages that are discussed further in the feasibility section but are not recommended based on cost-benefit analysis.

FEASIBILITY

No physical constraint was found that deemed either alternative as infeasible. Funding is an important consideration related to the feasibility.

Funding can be a significant feasibility issue for the alternatives. Standard roundabouts are significantly more expensive than a typical traffic signal. A compact roundabout, sometimes referred to as mini roundabout, may provide a lower cost alternative to the standard roundabout. The recommendation is to collect development fees based on the cost of a mini roundabout.

The signal at mast arms appear to conflict with the overhead power lines on Larch Avenue at Whitman Drive and 12th Street.

The driveway at the southeast corner of Larch Avenue/12th Street conflicts with all alternatives.

Right-of-Way

The limits of the public right-of-way were confirmed at the intersections. Both a traffic signal and a roundabout appear to fit within the existing right-of-way.

Environmental

Neither alternative has a significantly greater environmental impact over the other.

Context Sensitive/Sustainable Design

This consideration is where the two alternatives differ in value and merit. The roundabout alternative has several advantages, which are discussed below:

- The roundabout appears to best meet the City's Comprehensive Plan's overall transportation goal TR-1B: *Strive to plan, construct and maintain transportation facilities in such a manner as to promote positive social, economic and environmental effects.*⁸
- The roundabout alternative should meet Comprehensive Policy TR-3N: *Recognize the "C" Street/Larch Avenue and 12th Street/Larch Avenues as significant intersections with potential for improved traffic flow.*
- Traffic signals are very familiar to the community as opposed to roundabouts. Public agencies often get comments from community members expressing a preference for traffic signals over roundabouts. The trucking industry has a history of opposing roundabouts, and this location has moderate truck volume. If it were the first installation of a roundabout in the area, opposition should be anticipated. However, the Myra Road corridor already has roundabouts that have allowed the community and trucking industry to gain familiarity.
- Roundabouts provide a higher level of service (less delay) during off-peak hours. This particularly true for these intersection with low levels of traffic during off peak periods with little or no delay at roundabouts
- Roundabouts are a safer alternative than a traffic signal. Intersections converted from a traffic signal to a roundabout experience approximately a 26 percent reduction in crashes for all crash types, including pedestrian and bicycles.⁹ Pedestrians and cyclists have shorter crossing distance and fewer conflict points. Traffic speeds through intersection with roundabouts are lower than those with traffic signals, and delays are much shorter at intersections with roundabouts. Thus, roundabouts have both fewer and less severe collisions. On Whitman Drive, with the multi-use trail, bicyclists would be anticipated to use the crosswalks, which is a safer alternative for less experienced cyclists than sharing the lane with either a traffic signal or roundabout.
- Gap acceptance is an issue at new roundabouts. This is more of an issue with compact or mini roundabouts because the larger the circle the longer the gap in circulating traffic. Drivers not familiar with roundabouts often need longer gaps to feel comfortable entering a roundabout. WSDOT has noted that most drivers learn to better judge available gaps, and the delay on the minor street is reduced as they gain experience. In the case of both roundabouts, LOS evaluation shows delay on the lower volume legs is due to adequate gaps in the circulating traffic.
- Roundabouts reducing the likelihood of speeding near the intersections and will be quieter.

Both alternatives are viable and should be considered. The traffic signal will typically be much lower in cost, but the roundabout has higher LOS and livability. Assuming funding is available, a roundabout is the preferred alternative.

⁸ City of College Place, *City of College Place Comprehensive Plan*, March 2008 (with 2014 amendment).

⁹ CMFClearinghouse.org, *CMF Comparison Conversion of signalized intersection to single or multi-lane roundabout*, October 15, 2017

SELECTION

Based on the findings of the analysis, the following are the recommended traffic control alternatives for each intersection:

- C Street/Lambert Avenue and Larch Avenue/C Street: Do nothing.
- Larch Avenue/12th Street and Larch Avenue/Whitman Drive: Install a four-way stop now.
- Larch Avenue/12th Street and Larch Avenue/Whitman Drive: Collect development fees for a compact roundabout.
- Larch Avenue/12th Street and Larch Avenue/Whitman Drive: Install either roundabout or traffic signal based on community input and funding available. Assuming funding is available, a roundabout is the preferred alternative.

Please feel free to contact me at 360.567.2117 or john.manix@pbsusa.com with any questions or comments.

Sincerely,

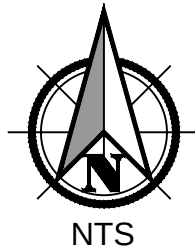
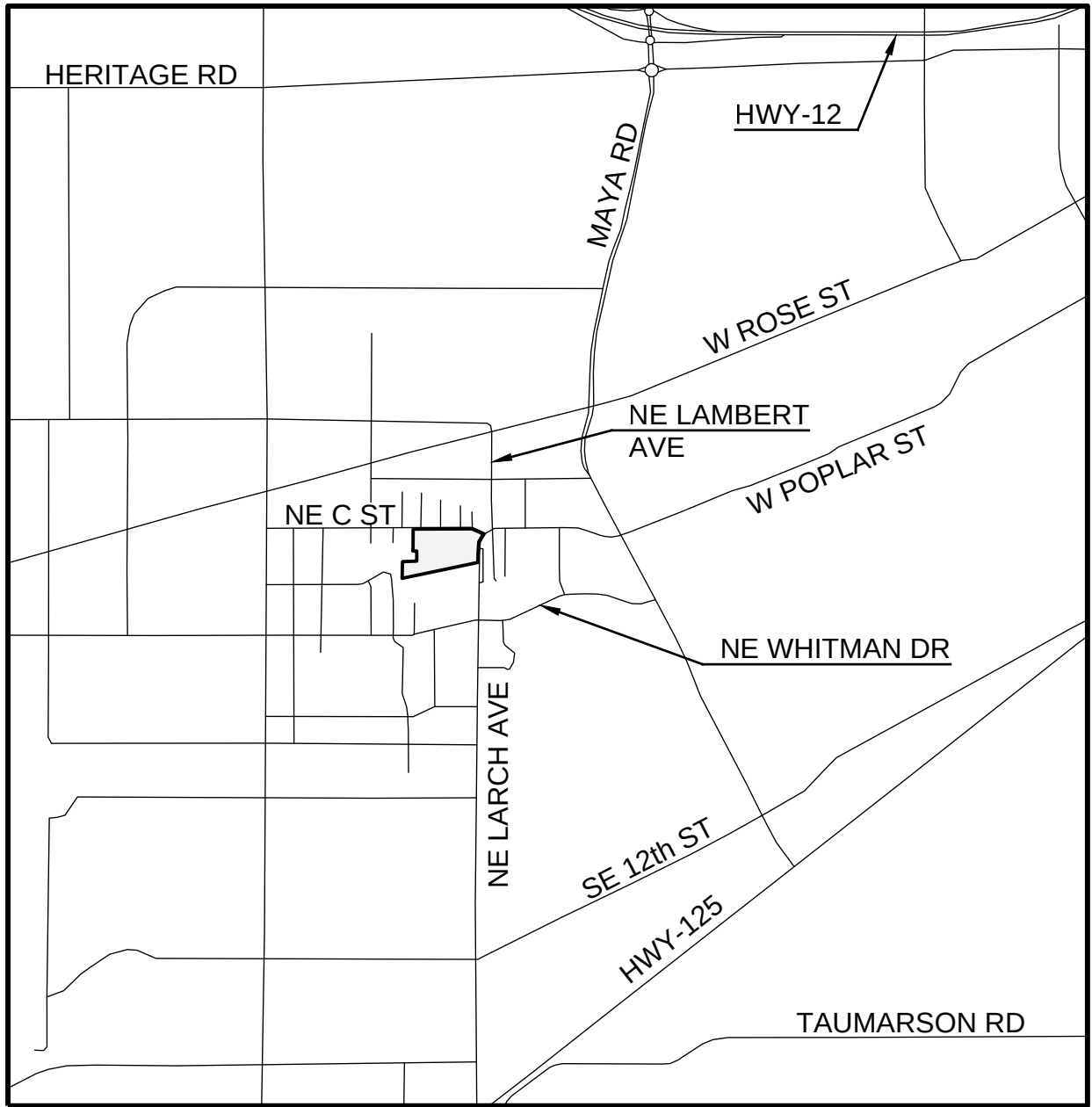
John Manix, PE
Senior Traffic Engineer

cc:

Attachments: Figures

Appendix A: Traffic count data
Appendix B: Trip Generation Memo
Appendix C: Level of service reports
Appendix D: Collision history, collision rates, collision diagram, and MUTCD peak hour warrant

JAM:mo

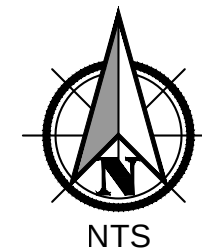
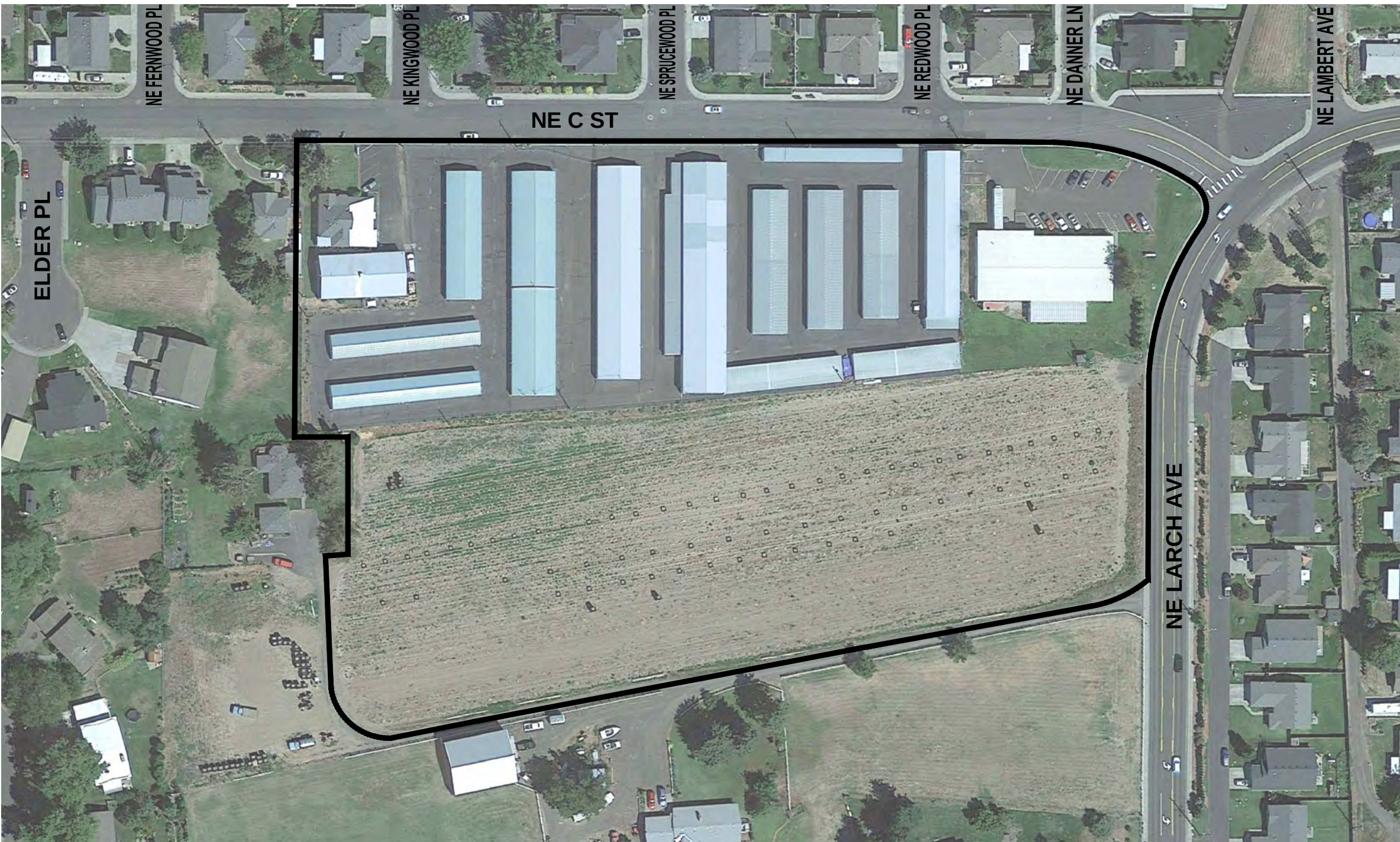


Vicinity Map Central College Place Planning Study - Traffic Study

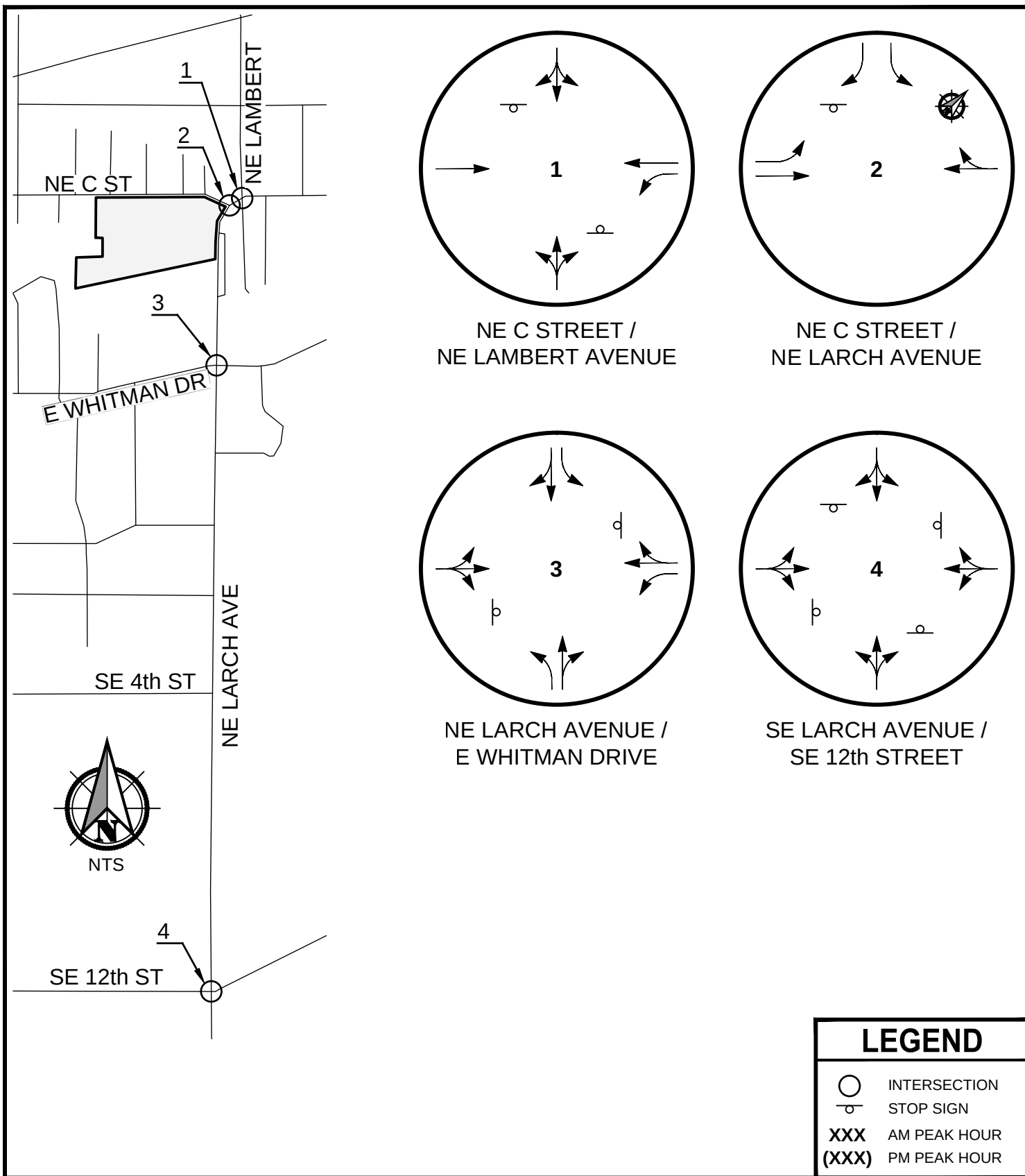
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FIGURE

1



Site Plan
Central College Place Planning Study - Traffic Study



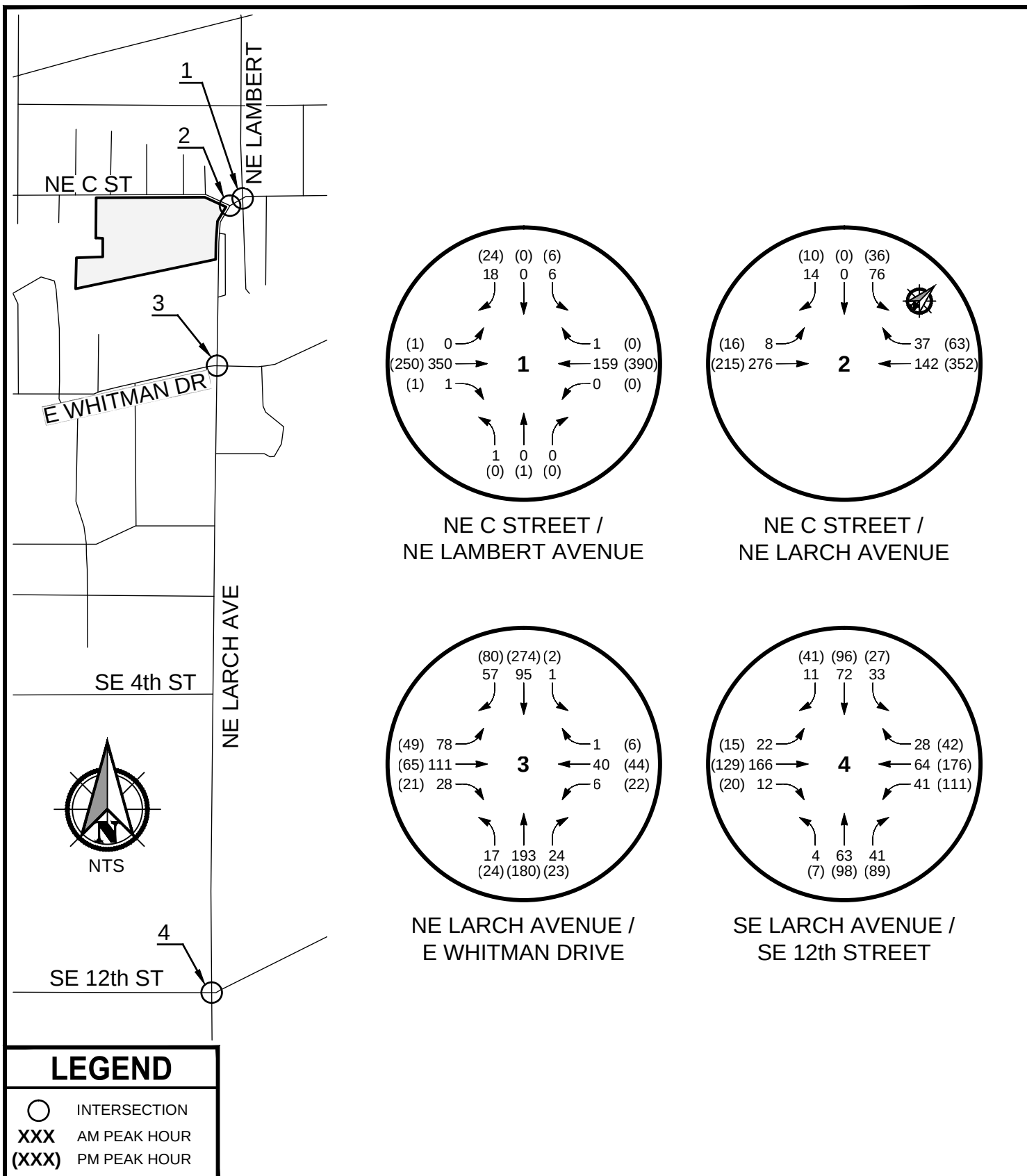
Existing Lane Configuration and Traffic Control

Central College Place Planning Study - Traffic Study

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FIGURE

3



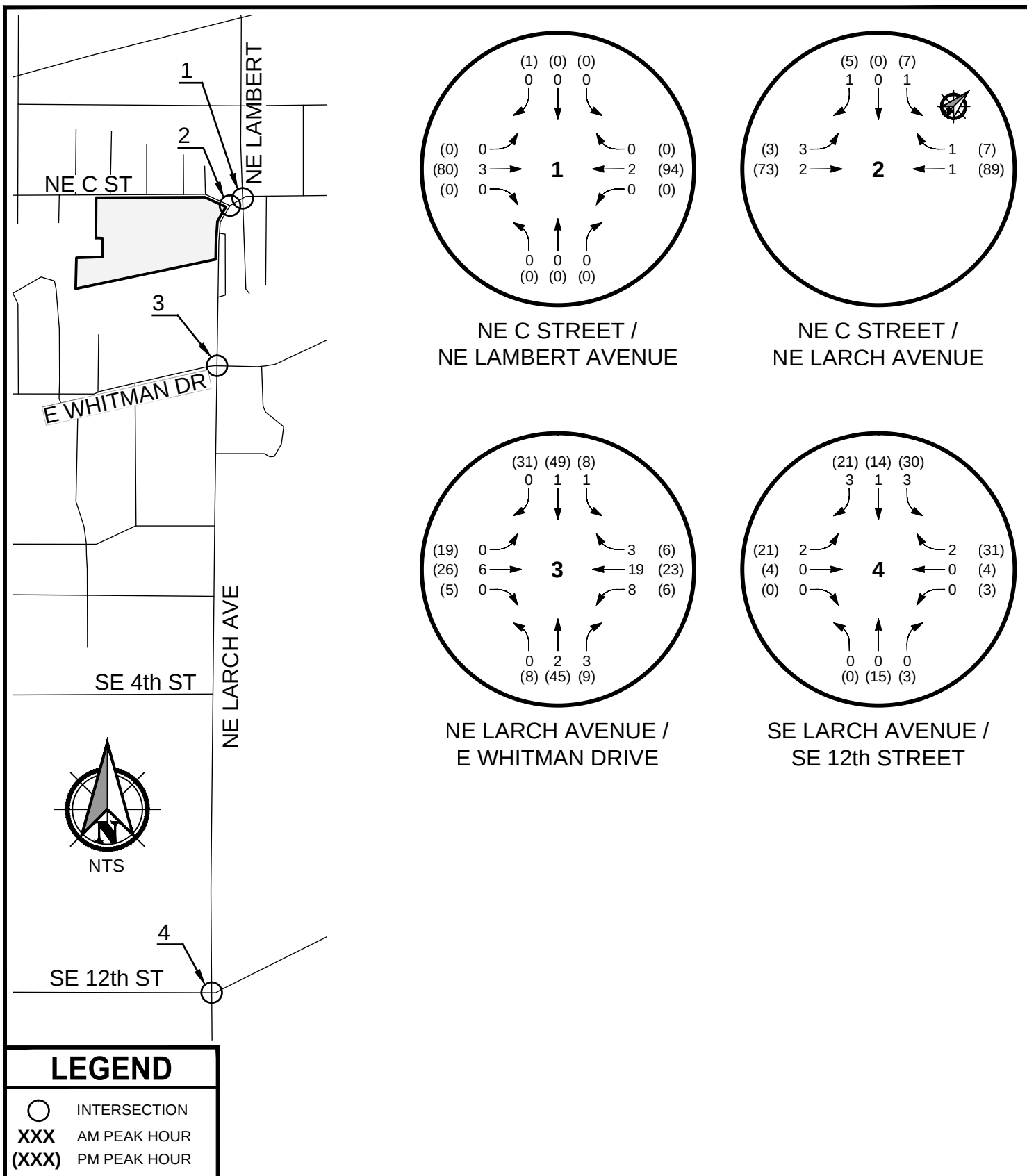
Existing Weekday Peak Hour Volumes

Central College Place Planning Study - Traffic Study

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FIGURE

4



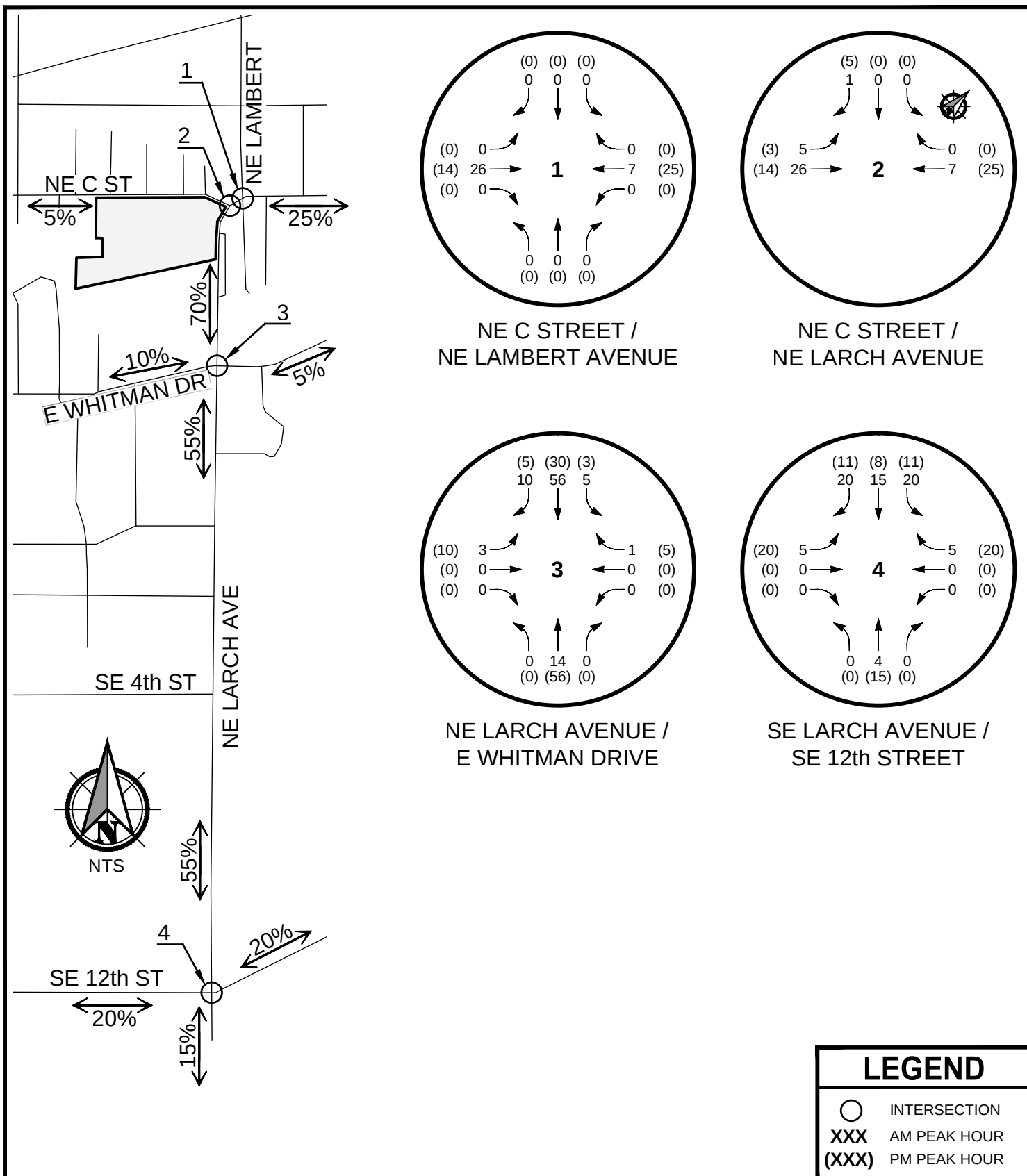
Peak Hour In-Process Trips for 2023

Central College Place Planning Study - Traffic Study

APRIL 2018
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FIGURE

5

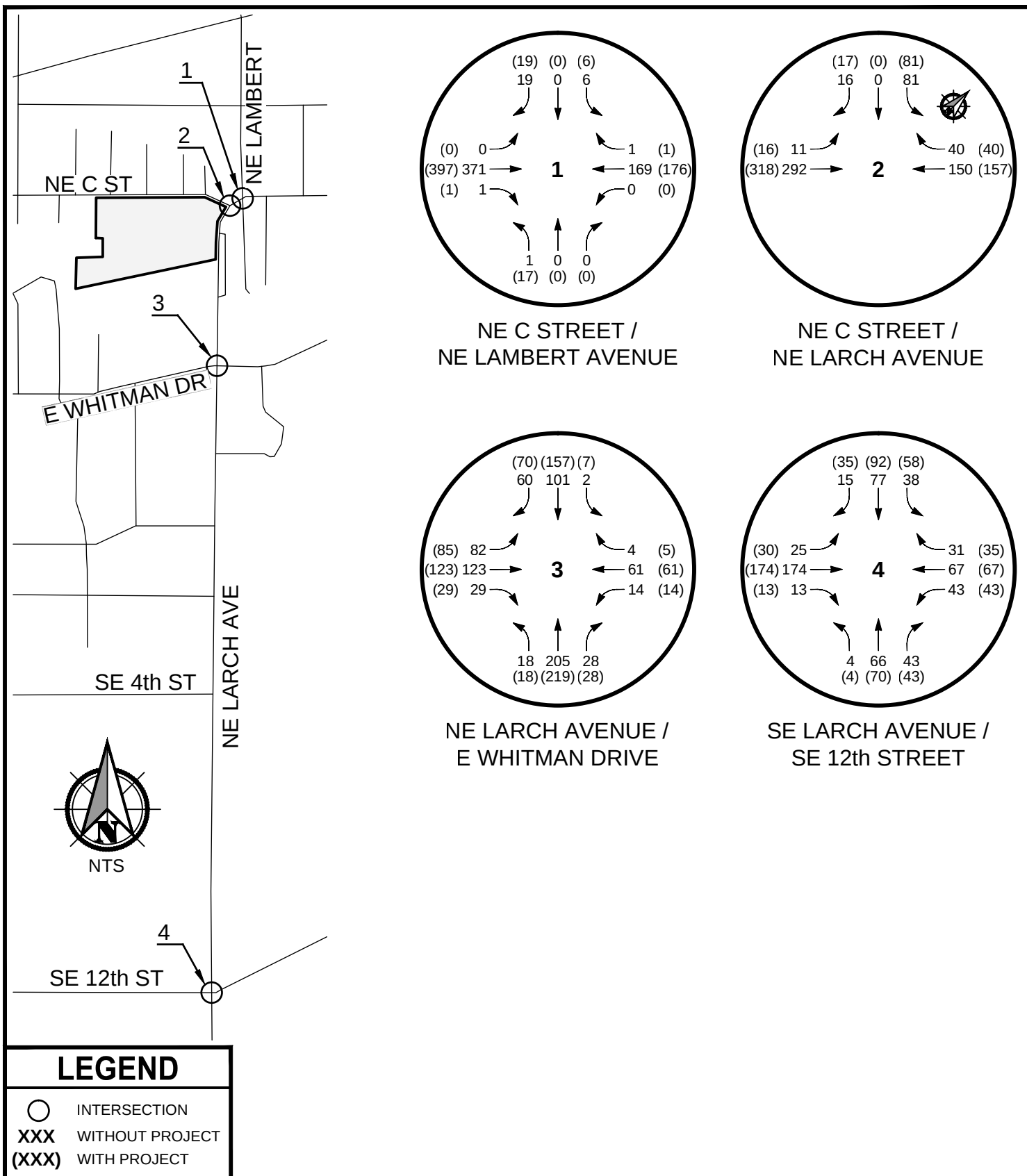


Project Trip Distribution and Trip Assignment Central College Place Planning Study - Traffic Study

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FIGURE

6



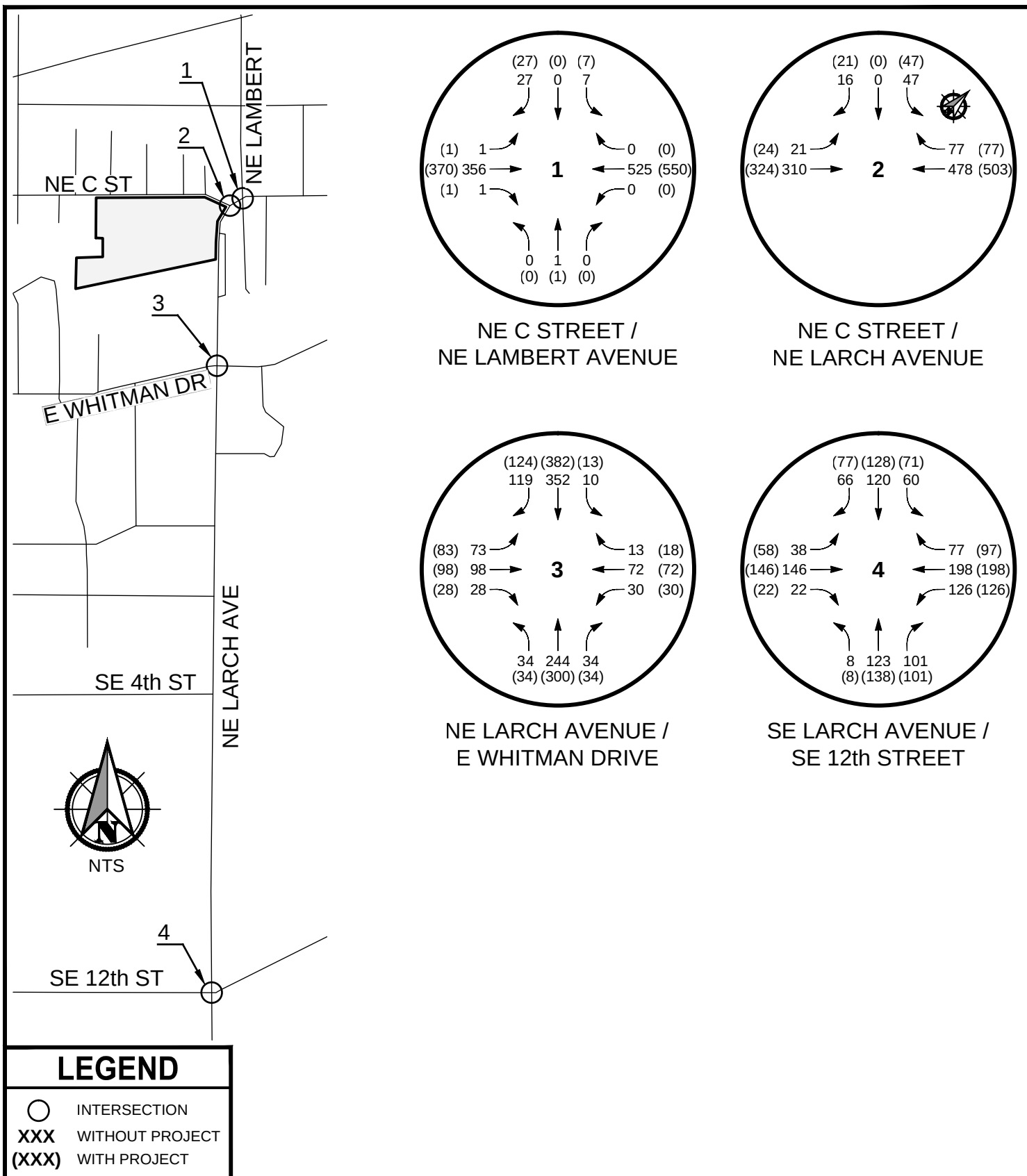
2023 AM Peak Hours Without and With Project

Central College Place Planning Study - Traffic Study

APRIL 2018
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FIGURE

7



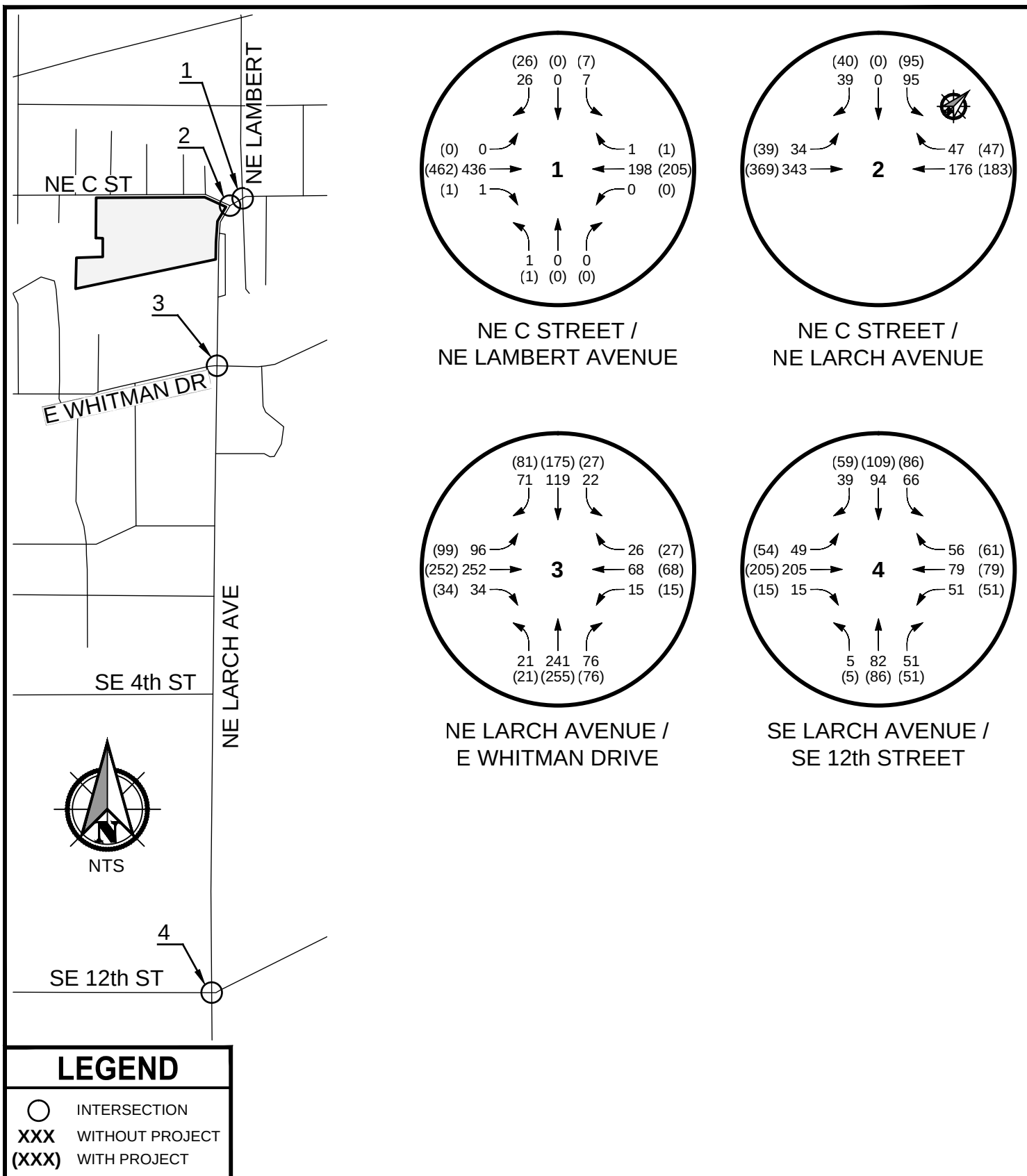
2023 PM Peak Hours Without and With Project

Central College Place Planning Study - Traffic Study

APRIL 2018
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FIGURE

8



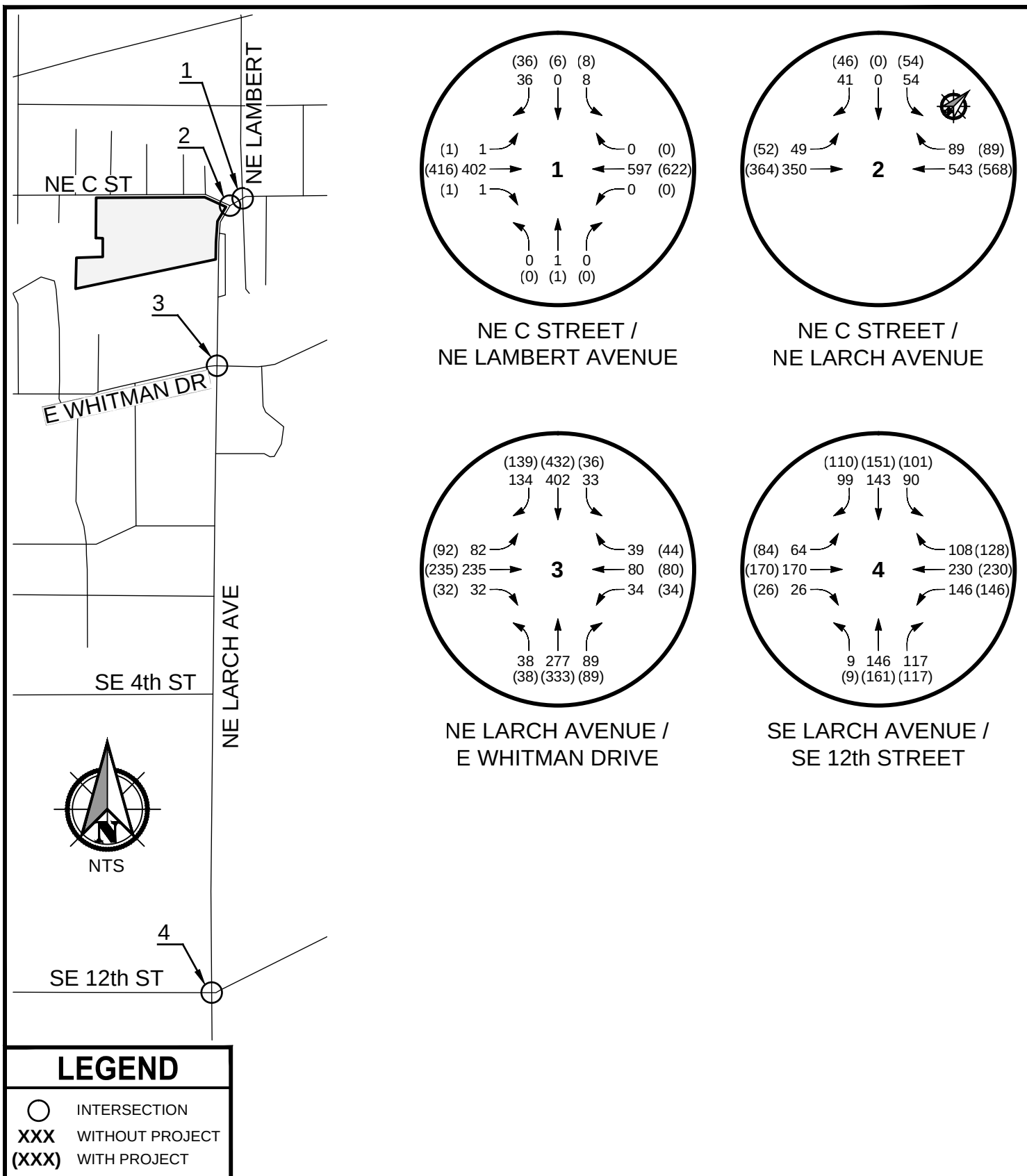
2040 AM Peak Hours Without and With Project

Central College Place Planning Study - Traffic Study

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FIGURE

9



2040 PM Peak Hours Without and With Project

Central College Place Planning Study - Traffic Study

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FIGURE

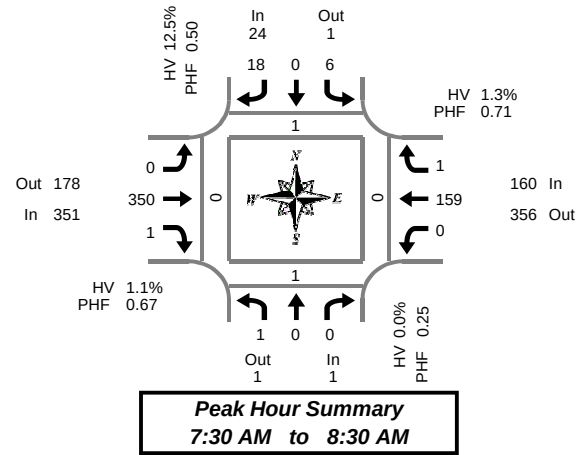
10

APPENDIX A

Total Vehicle Summary



Clay Carney
(503) 833-2740



NE Lambert Ave & NE C St

Wednesday, October 25, 2017

7:00 AM to 9:00 AM

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	0	0	2	0	2	0	1	50	0	0	0	14	0	0	69	0	0	0	0
7:15 AM	0	0	0	0	0	0	2	0	0	66	0	0	0	29	0	0	97	0	0	0	0
7:30 AM	1	0	0	0	3	0	3	1	0	79	0	0	0	38	0	0	124	1	0	0	0
7:45 AM	0	0	0	0	1	0	3	0	0	131	0	0	0	55	1	0	191	0	0	0	0
8:00 AM	0	0	0	0	0	0	2	0	0	71	1	0	0	45	0	0	119	0	1	0	0
8:15 AM	0	0	0	0	2	0	10	0	0	69	0	0	0	21	0	0	102	0	0	0	0
8:30 AM	0	0	0	0	4	0	2	0	0	50	0	0	0	37	0	0	93	0	0	0	0
8:45 AM	0	0	1	0	0	0	5	0	0	44	0	1	0	40	0	0	90	1	2	0	0
Total Survey	1	0	1	0	12	0	29	1	1	560	1	1	0	279	1	0	885	2	3	0	0

Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1	1	2	0	24	1	25	1	351	178	529	0	160	356	516	0	536	1	1	0	0
%HV	0.0%				12.5%				1.1%				1.3%				1.7%				
PHF	0.25				0.50				0.67				0.71				0.70				

By Movement	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	1	0	0	1	6	0	18	24	0	350	1	351	0	159	1	160	536
%HV	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	11.1%	12.5%	0.0%	1.1%	0.0%	1.1%	0.0%	1.3%	0.0%	1.3%	1.7%
PHF	0.25	0.00	0.00	0.25	0.50	0.00	0.45	0.50	0.00	0.67	0.25	0.67	0.00	0.72	0.25	0.71	0.70

Rolling Hour Summary

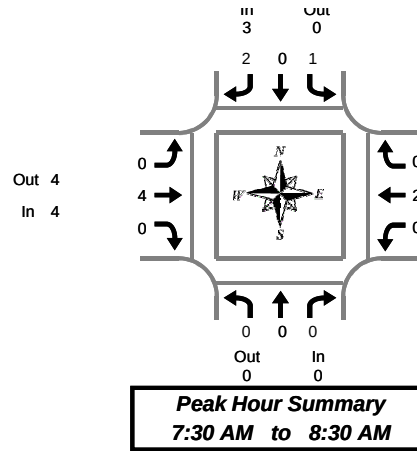
7:00 AM to 9:00 AM

Interval Start Time	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	1	0	0	0	6	0	10	1	1	326	0	0	0	136	1	0	481	1	0	0	0
7:15 AM	1	0	0	0	4	0	10	1	0	347	1	0	0	167	1	0	531	1	1	0	0
7:30 AM	1	0	0	0	6	0	18	1	0	350	1	0	0	159	1	0	536	1	1	0	0
7:45 AM	0	0	0	0	7	0	17	0	0	321	1	0	0	158	1	0	505	0	1	0	0
8:00 AM	0	0	1	0	6	0	19	0	0	234	1	1	0	143	0	0	404	1	3	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NE Lambert Ave & NE C St

Wednesday, October 25, 2017

7:00 AM to 9:00 AM

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	1	1	0	2	0	2	0	2	0	2	5
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	3	0	3	5
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total Survey	0	0	0	0	1	0	2	3	0	9	0	9	0	8	0	8	20

Heavy Vehicle Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound NE Lambert Ave			Southbound NE Lambert Ave			Eastbound NE C St			Westbound NE C St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	3	0	3	4	4	8	2	5	7	9
PHF	0.00			0.38			0.17			0.10			0.19

By Movement	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	1	0	2	3	0	4	0	4	0	2	0	2	9
PHF	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.38	0.00	0.17	0.00	0.17	0.00	0.10	0.00	0.10	0.19

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	1	0	1	2	0	2	0	2	0	3	0	3	7
7:15 AM	0	0	0	0	1	0	1	2	0	3	0	3	0	0	0	0	5
7:30 AM	0	0	0	0	1	0	2	3	0	4	0	4	0	2	0	2	9
7:45 AM	0	0	0	0	0	0	2	2	0	5	0	5	0	5	0	5	12
8:00 AM	0	0	0	0	0	0	1	1	0	7	0	7	0	5	0	5	13

Peak Hour Summary

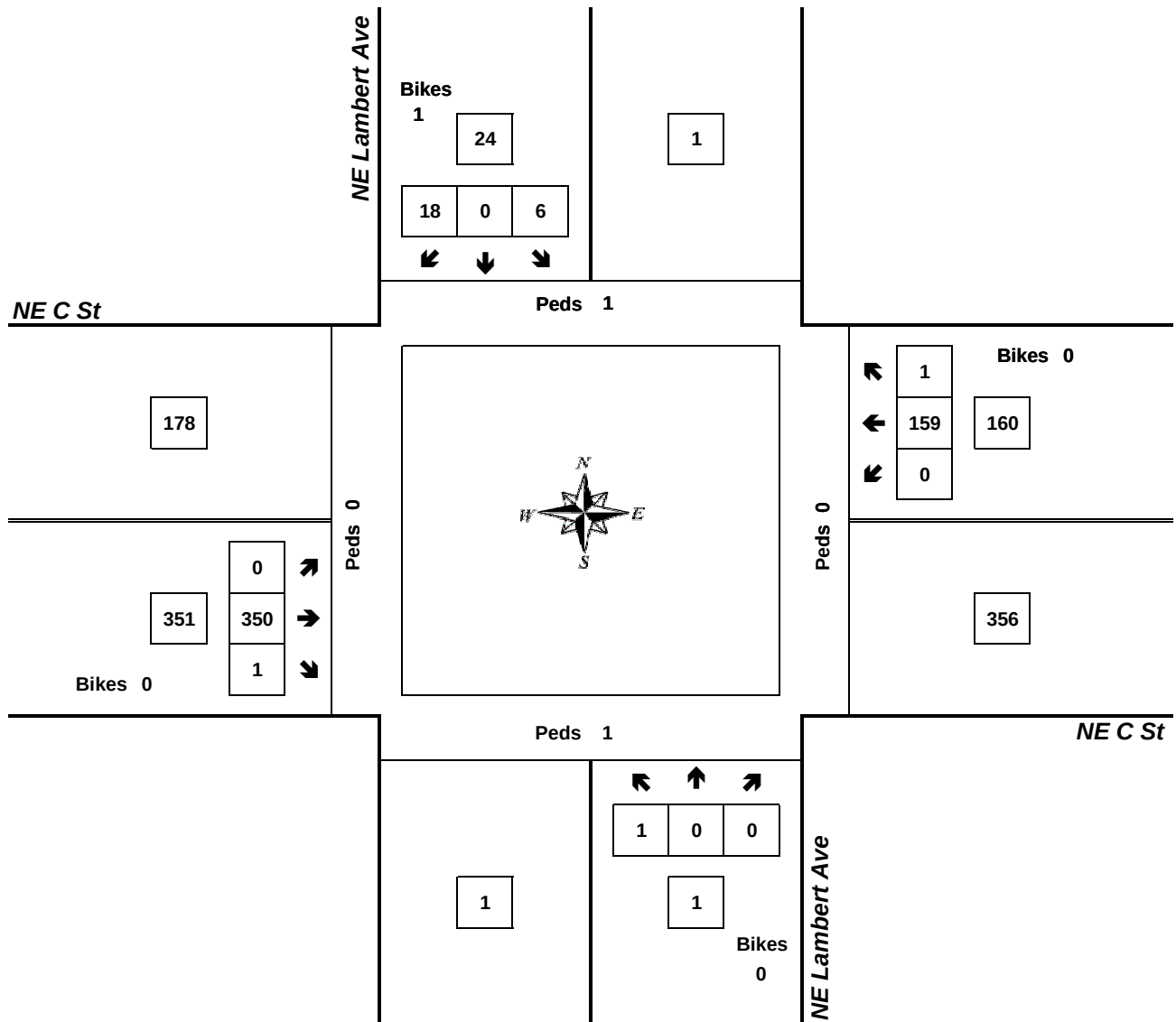


Clay Carney
(503) 833-2740

NE Lambert Ave & NE C St

7:30 AM to 8:30 AM

Wednesday, October 25, 2017



Approach	PHF	HV%	Volume
EB	0.67	1.1%	351
WB	0.71	1.3%	160
NB	0.25	0.0%	1
SB	0.50	12.5%	24
Intersection	0.70	1.7%	536

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

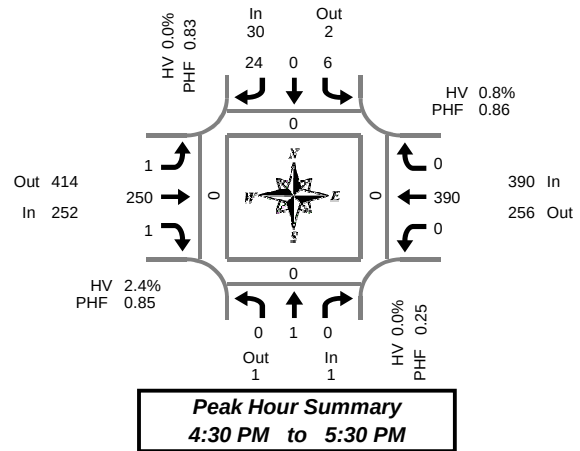


Clay Carney
(503) 833-2740

NE Lambert Ave & NE C St

Tuesday, October 24, 2017

4:00 PM to 6:00 PM



15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	1	0	5	0	0	61	0	0	0	82	0	0	149	3	0	0	0
4:15 PM	0	0	0	0	1	0	6	0	0	60	0	0	0	85	0	0	152	0	0	0	0
4:30 PM	0	0	0	0	2	0	2	0	1	59	0	0	0	88	0	0	152	0	0	0	0
4:45 PM	0	0	0	0	2	0	7	0	0	56	0	0	0	108	0	0	173	0	0	0	0
5:00 PM	0	0	0	0	1	0	8	0	0	61	1	0	0	114	0	0	185	0	0	0	0
5:15 PM	0	1	0	0	1	0	7	0	0	74	0	0	0	80	0	1	163	0	0	0	0
5:30 PM	0	0	1	0	4	0	5	0	0	44	0	0	0	80	0	0	134	0	0	0	0
5:45 PM	0	0	0	0	3	0	7	0	0	67	0	0	0	79	0	1	156	0	0	0	0
Total Survey	0	1	1	0	15	0	47	0	1	482	1	0	0	716	0	2	1,264	3	0	0	0

Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1	1	2	0	30	2	32	0	252	414	666	0	390	256	646	1	673	0	0	0	0
%HV	0.0%				0.0%				2.4%				0.8%				1.3%				
PHF	0.25				0.83				0.85				0.86				0.91				

By Movement	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	1	0	1	6	0	24	30	1	250	1	252	0	390	0	390	673
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	2.4%	0.0%	0.8%	0.0%	0.8%	1.3%
PHF	0.00	0.25	0.00	0.25	0.75	0.00	0.75	0.83	0.25	0.84	0.25	0.85	0.00	0.86	0.00	0.86	0.91

Rolling Hour Summary

4:00 PM to 6:00 PM

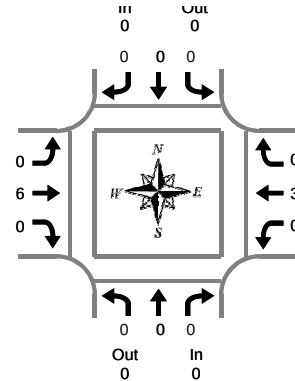
Interval Start Time	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	6	0	20	0	1	236	0	0	0	363	0	0	626	3	0	0	0
4:15 PM	0	0	0	0	6	0	23	0	1	236	1	0	0	395	0	0	662	0	0	0	0
4:30 PM	0	1	0	0	6	0	24	0	1	250	1	0	0	390	0	1	673	0	0	0	0
4:45 PM	0	1	1	0	8	0	27	0	0	235	1	0	0	382	0	1	655	0	0	0	0
5:00 PM	0	1	1	0	9	0	27	0	0	246	1	0	0	353	0	2	638	0	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740

Out 3
In 6



Peak Hour Summary
4:30 PM to 5:30 PM

NE Lambert Ave & NE C St

Tuesday, October 24, 2017

4:00 PM to 6:00 PM

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	1	1	0	2	0	2	0	2	0	2	5
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
4:45 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	0	1	1	0	12	0	12	0	6	0	6	19

Heavy Vehicle Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound NE Lambert Ave			Southbound NE Lambert Ave			Eastbound NE C St			Westbound NE C St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	0	0	0	6	3	9	3	6	9	9
PHF	0.00			0.00			0.21			0.19			0.23

By Movement	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	0	0	0	0	6	0	6	0	3	0	3	9
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.21	0.00	0.19	0.00	0.19	0.23

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NE Lambert Ave				Southbound NE Lambert Ave				Eastbound NE C St				Westbound NE C St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	1	1	0	9	0	9	0	4	0	4	14
4:15 PM	0	0	0	0	0	0	0	0	0	7	0	7	0	3	0	3	10
4:30 PM	0	0	0	0	0	0	0	0	0	6	0	6	0	3	0	3	9
4:45 PM	0	0	0	0	0	0	0	0	0	7	0	7	0	2	0	2	9
5:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	2	0	2	5

All Traffic Data
Services Inc.

The map shows a city block with the following details:

- Streets:** NE C St (horizontal) and NE Lambert Ave (vertical).
- Central Intersection:** Marked with a compass rose showing North (N), South (S), East (E), and West (W).
- Buildings and Addresses:**
 - Top-left: 414
 - Top-right: 390
 - Bottom-left: 252, 250, 1
 - Bottom-right: 256, 1
 - Top-center: 30, 24, 0, 6
 - Top-right-center: 2
 - Bottom-right-center: 1
- Traffic Signs and Markings:**
 - Bikes:** 0 (top-left, top-center, bottom-right), 1 (top-right, bottom-right).
 - Peds:** 0 (top-center, bottom-center), 1 (bottom-right).
 - Arrows:** Various arrows indicating traffic flow and pedestrian crossings.

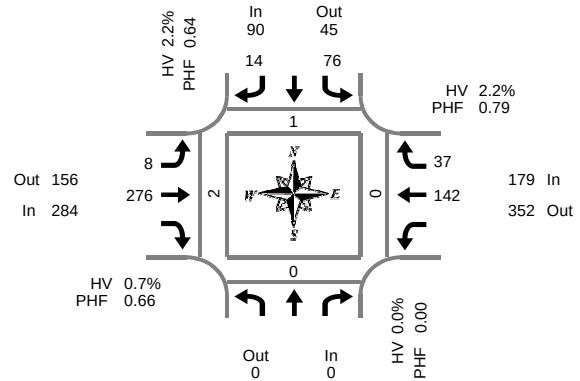
Approach	PHF	HV%	Volume
EB	0.85	2.4%	252
WB	0.86	0.8%	390
NB	0.25	0.0%	1
SB	0.83	0.0%	30
Intersection	0.91	1.3%	673

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
7:30 AM to 8:30 AM

NE C St & NE Larch Ave

Wednesday, October 25, 2017

7:00 AM to 9:00 AM

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NE C St				Southbound NE C St				Eastbound NE Larch Ave				Westbound NE Larch Ave				Interval Total	Pedestrians Crosswalk			
				Bikes	L		R	Bikes	L	T		Bikes		T	R	Bikes		North	South	East	West
7:00 AM				0	6		0	0	3	45		0		7	8	0	69	1	0	0	0
7:15 AM				0	16		2	0	3	50		0		27	4	0	102	0	0	0	0
7:30 AM				0	18		4	0	2	61		0		35	7	0	127	0	0	0	0
7:45 AM				0	28		7	0	1	106		1		44	13	0	199	0	0	0	0
8:00 AM				0	19		1	0	3	53		0		37	11	0	124	0	0	0	2
8:15 AM				0	11		2	0	2	56		0		26	6	0	103	1	0	0	0
8:30 AM				0	15		1	0	5	35		0		28	10	0	94	1	0	0	0
8:45 AM				0	5		2	0	2	38		0		36	10	0	93	1	0	2	0
Total Survey				0	118		19	0	21	444		1		240	69	0	911	4	0	2	2

Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound NE C St				Southbound NE C St				Eastbound NE Larch Ave				Westbound NE Larch Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	0	0	0	90	45	135	0	284	156	440	1	179	352	531	0	553	1	0	0	2
%HV	0.0%				2.2%				0.7%				2.2%				1.4%				
PHF	0.00				0.64				0.66				0.79				0.69				

By Movement	Northbound NE C St				Southbound NE C St				Eastbound NE Larch Ave				Westbound NE Larch Ave				Total
				Total	L		R	Total	L	T		Total		T	R	Total	
Volume				0	76		14	90	8	276		284		142	37	179	553
%HV	NA	NA	NA	0.0%	2.6%	NA	0.0%	2.2%	0.0%	0.7%	NA	0.7%	NA	2.8%	0.0%	2.2%	1.4%
PHF				0.00	0.68		0.50	0.64	0.67	0.65		0.66		0.81	0.71	0.79	0.69

Rolling Hour Summary

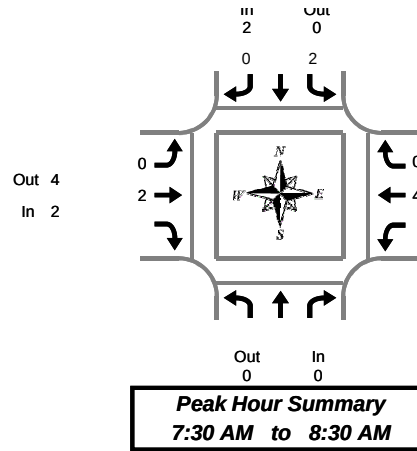
7:00 AM to 9:00 AM

Interval Start Time	Northbound NE C St				Southbound NE C St				Eastbound NE Larch Ave				Westbound NE Larch Ave				Interval Total	Pedestrians Crosswalk			
				Bikes	L		R	Bikes	L	T		Bikes		T	R	Bikes		North	South	East	West
7:00 AM				0	68		13	0	9	262		1		113	32	0	497	1	0	0	0
7:15 AM				0	81		14	0	9	270		1		143	35	0	552	0	0	0	2
7:30 AM				0	76		14	0	8	276		1		142	37	0	553	1	0	0	2
7:45 AM				0	73		11	0	11	250		1		135	40	0	520	2	0	0	2
8:00 AM				0	50		6	0	12	182		0		127	37	0	414	3	0	2	2

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NE C St & NE Larch Ave

Wednesday, October 25, 2017

7:00 AM to 9:00 AM

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NE C St			Southbound NE C St			Eastbound NE Larch Ave			Westbound NE Larch Ave			Interval Total
			Total	L		R	L	T	Total	T	R	Total	
7:00 AM			0	0		0	0	0	0	0	3	3	3
7:15 AM			0	0		0	0	1	1	0	0	0	1
7:30 AM			0	1		0	1	0	0	0	0	0	1
7:45 AM			0	0		0	0	0	0	1	0	1	1
8:00 AM			0	0		0	0	1	1	0	0	0	1
8:15 AM			0	1		0	1	1	1	3	0	3	5
8:30 AM			0	0		0	0	2	2	2	0	2	4
8:45 AM			0	0		0	0	2	2	0	0	0	2
Total Survey			0	2		0	2	0	7	6	3	9	18

Heavy Vehicle Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound NE C St			Southbound NE C St			Eastbound NE Larch Ave			Westbound NE Larch Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	2	0	2	2	4	6	4	4	8	8
PHF	0.00			0.50			0.10			0.20			0.18

By Movement	Northbound NE C St			Southbound NE C St			Eastbound NE Larch Ave			Westbound NE Larch Ave			Total
			Total	L		R	L	T	Total	T	R	Total	
Volume			0	2		0	0	2	2	4	0	4	8
PHF			0.00	0.50		0.00	0.00	0.10	0.10	0.20	0.00	0.20	0.18

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NE C St			Southbound NE C St			Eastbound NE Larch Ave			Westbound NE Larch Ave			Interval Total
			Total	L		R	L	T	Total	T	R	Total	
7:00 AM			0	1		0	0	1	1	1	3	4	6
7:15 AM			0	1		0	0	2	2	1	0	1	4
7:30 AM			0	2		0	0	2	2	4	0	4	8
7:45 AM			0	1		0	0	4	4	6	0	6	11
8:00 AM			0	1		0	0	6	6	5	0	5	12

Peak Hour Summary

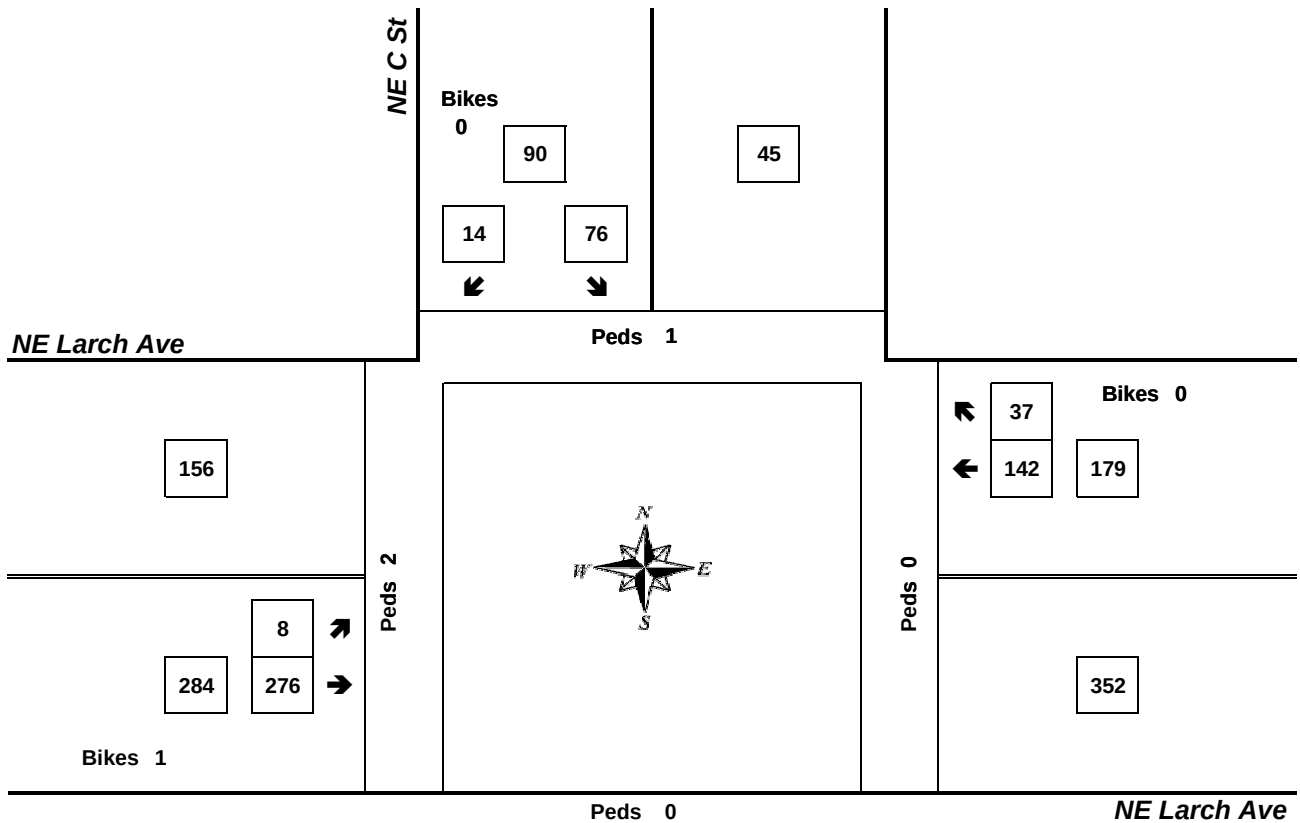


Clay Carney
(503) 833-2740

NE C St & NE Larch Ave

7:30 AM to 8:30 AM

Wednesday, October 25, 2017



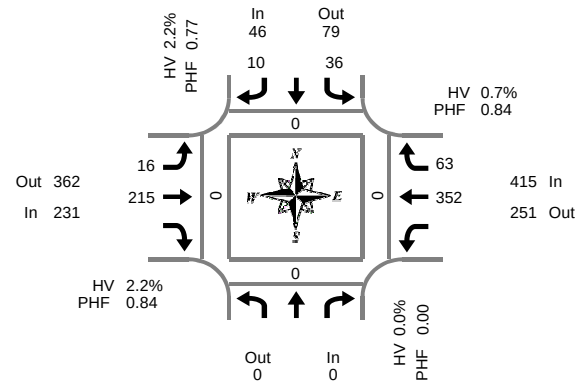
Approach	PHF	HV%	Volume
EB	0.66	0.7%	284
WB	0.79	2.2%	179
NB	0.00	0.0%	0
SB	0.64	2.2%	90
Intersection	0.69	1.4%	553

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
4:30 PM to 5:30 PM

NE C St & NE Larch Ave

Tuesday, October 24, 2017

4:00 PM to 6:00 PM

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NE C St				Southbound NE C St				Eastbound NE Larch Ave				Westbound NE Larch Ave				Interval Total	Pedestrians Crosswalk			
				Bikes	L		R	Bikes	L	T		Bikes		T	R	Bikes		North	South	East	West
4:00 PM				0	12		2	0	4	48		0		68	18	0	152	2	0	0	0
4:15 PM				0	15		2	0	4	45		0		70	21	0	157	0	0	0	0
4:30 PM				0	9		1	0	2	51		0		74	16	0	153	0	0	0	0
4:45 PM				0	7		1	0	6	47		0		100	15	0	176	0	0	0	0
5:00 PM				0	11		4	0	5	51		0		109	14	0	194	0	0	0	0
5:15 PM				0	9		4	0	3	66		0		69	18	1	169	0	0	0	0
5:30 PM				0	6		3	0	1	36		0		66	19	0	131	0	0	0	0
5:45 PM				0	8		3	0	4	59		0		66	20	1	160	0	0	0	0
Total Survey				0	77		20	0	29	403		0		622	141	2	1,292	2	0	0	0

Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound NE C St				Southbound NE C St				Eastbound NE Larch Ave				Westbound NE Larch Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	0	0	0	46	79	125	0	231	362	593	0	415	251	666	1	692	0	0	0	0
%HV	0.0%				2.2%				2.2%				0.7%				1.3%				
PHF	0.00				0.77				0.84				0.84				0.89				

By Movement	Northbound NE C St				Southbound NE C St				Eastbound NE Larch Ave				Westbound NE Larch Ave				Total
				Total	L		R	Total	L	T		Total		T	R	Total	
Volume				0	36		10	46	16	215		231		352	63	415	692
%HV	NA	NA	NA	0.0%	0.0%	NA	10.0%	2.2%	0.0%	2.3%	NA	2.2%	NA	0.9%	0.0%	0.7%	1.3%
PHF				0.00	0.82		0.63	0.77	0.67	0.81		0.84		0.81	0.88	0.84	0.89

Rolling Hour Summary

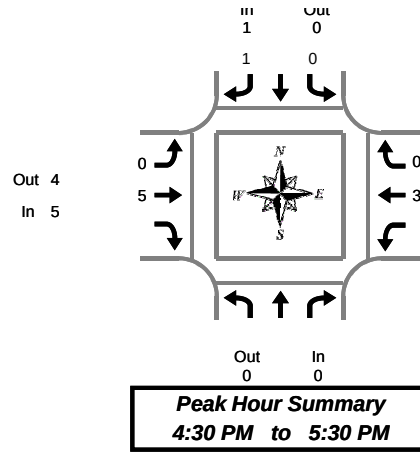
4:00 PM to 6:00 PM

Interval Start Time	Northbound NE C St				Southbound NE C St				Eastbound NE Larch Ave				Westbound NE Larch Ave				Interval Total	Pedestrians Crosswalk			
				Bikes	L		R	Bikes	L	T		Bikes		T	R	Bikes		North	South	East	West
4:00 PM				0	43		6	0	16	191		0		312	70	0	638	2	0	0	0
4:15 PM				0	42		8	0	17	194		0		353	66	0	680	0	0	0	0
4:30 PM				0	36		10	0	16	215		0		352	63	1	692	0	0	0	0
4:45 PM				0	33		12	0	15	200		0		344	66	1	670	0	0	0	0
5:00 PM				0	34		14	0	13	212		0		310	71	2	654	0	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NE C St & NE Larch Ave

Tuesday, October 24, 2017

4:00 PM to 6:00 PM

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NE C St			Southbound NE C St			Eastbound NE Larch Ave			Westbound NE Larch Ave			Interval Total
			Total	L		R	L	T	Total	T	R	Total	
4:00 PM			0	1		0	1	0	1	3	0	3	5
4:15 PM			0	0		0	0	2	2	0	0	0	2
4:30 PM			0	0		0	0	1	1	2	0	2	3
4:45 PM			0	0		1	1	0	4	0	0	0	5
5:00 PM			0	0		0	0	0	0	1	0	1	1
5:15 PM			0	0		0	0	0	0	0	0	0	0
5:30 PM			0	0		0	0	1	1	1	0	1	2
5:45 PM			0	0		0	0	0	0	0	0	0	0
Total Survey			0	1		1	2	0	9	7	0	7	18

Heavy Vehicle Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound NE C St			Southbound NE C St			Eastbound NE Larch Ave			Westbound NE Larch Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	1	0	1	5	4	9	3	5	8	9
PHF	0.00			0.25			0.18			0.15			0.23

By Movement	Northbound NE C St			Southbound NE C St			Eastbound NE Larch Ave			Westbound NE Larch Ave			Total
			Total	L		R	L	T	Total	T	R	Total	
Volume			0	0		1	0	5	5	3	0	3	9
PHF			0.00	0.00		0.25	0.00	0.18	0.18	0.15	0.00	0.15	0.23

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NE C St			Southbound NE C St			Eastbound NE Larch Ave			Westbound NE Larch Ave			Interval Total
			Total	L		R	L	T	Total	T	R	Total	
4:00 PM			0	1		1	0	8	8	5	0	5	15
4:15 PM			0	0		1	0	7	7	3	0	3	11
4:30 PM			0	0		1	0	5	5	3	0	3	9
4:45 PM			0	0		1	0	5	5	2	0	2	8
5:00 PM			0	0		0	0	1	1	2	0	2	3

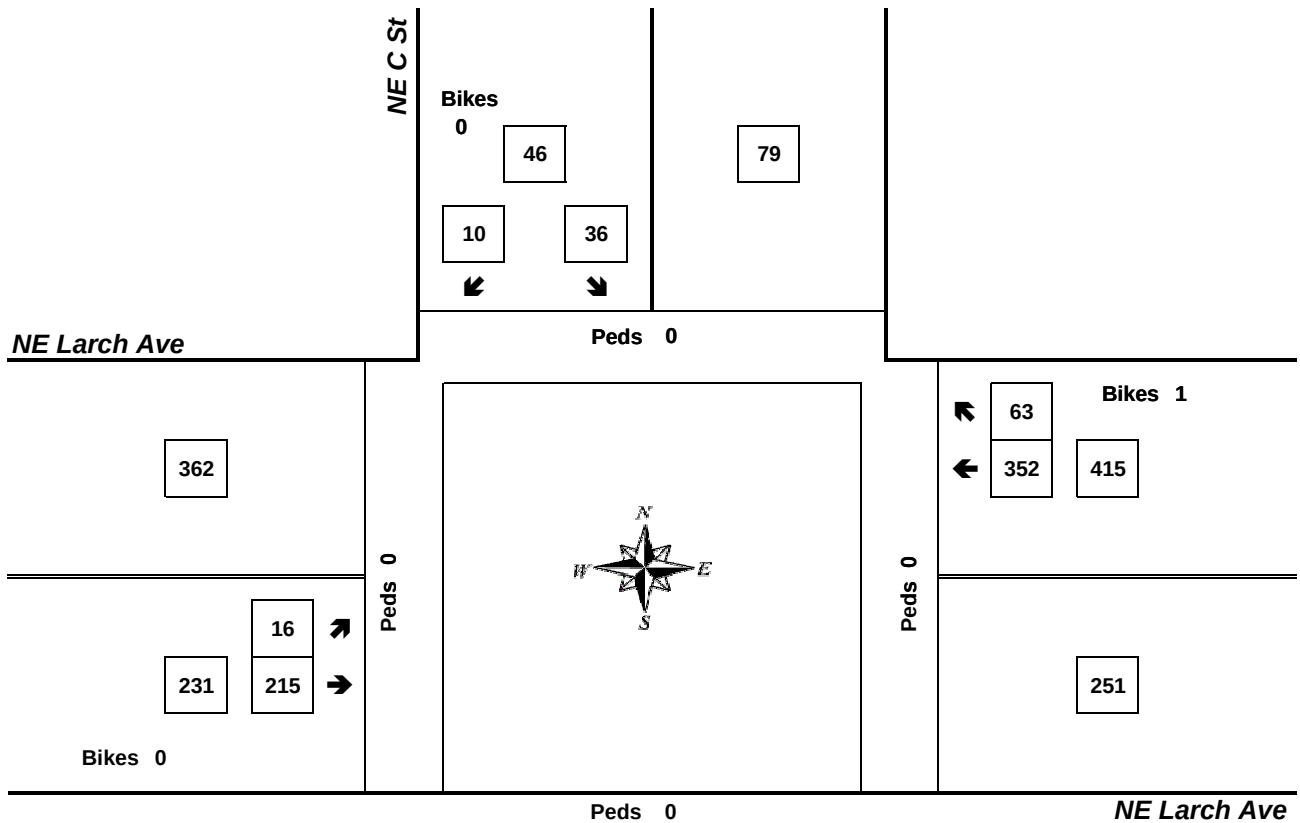
Peak Hour Summary



Clay Carney
(503) 833-2740

NE C St & NE Larch Ave

4:30 PM to 5:30 PM
Tuesday, October 24, 2017



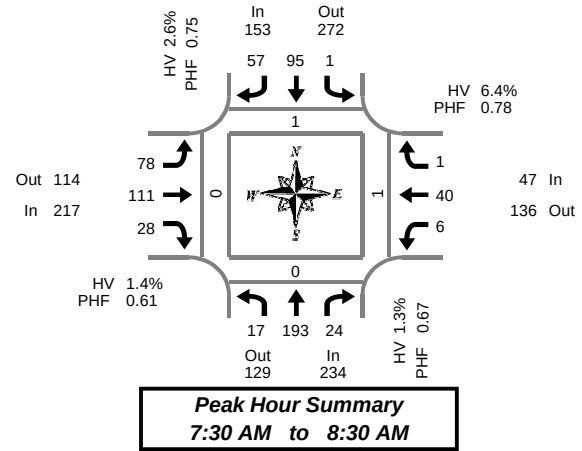
Approach	PHF	HV%	Volume
EB	0.84	2.2%	231
WB	0.84	0.7%	415
NB	0.00	0.0%	0
SB	0.77	2.2%	46
Intersection	0.89	1.3%	692

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



NE Larch Ave & NE Whitman Dr

Wednesday, October 25, 2017

7:00 AM to 9:00 AM

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	1	40	3	0	0	3	5	0	6	16	3	0	2	4	1	0	84	0	0	0	1
7:15 AM	2	42	6	0	0	18	9	0	9	10	2	0	0	3	1	0	102	0	0	0	1
7:30 AM	4	45	4	0	0	26	13	0	15	16	2	0	2	12	0	0	139	1	0	0	0
7:45 AM	8	68	11	0	0	27	24	0	31	45	13	0	1	8	0	0	236	0	0	0	0
8:00 AM	3	39	4	0	0	24	13	0	18	36	12	0	1	13	1	0	164	0	0	1	0
8:15 AM	2	41	5	0	1	18	7	0	14	14	1	0	2	7	0	0	112	0	0	0	0
8:30 AM	5	36	6	0	2	15	11	0	3	17	0	0	2	7	0	0	104	0	0	0	0
8:45 AM	2	30	3	0	1	27	13	0	10	15	2	0	1	3	0	0	107	0	0	0	0
Total Survey	27	341	42	0	4	158	95	0	106	169	35	0	11	57	3	0	1,048	1	0	1	2

Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	234	129	363	0	153	272	425	0	217	114	331	0	47	136	183	0	651	1	0	1	0
%HV	1.3%				2.6%				1.4%				6.4%				2.0%				
PHF	0.67				0.75				0.61				0.78				0.69				

By Movement	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	17	193	24	234	1	95	57	153	78	111	28	217	6	40	1	47	651
%HV	5.9%	1.0%	0.0%	1.3%	0.0%	2.1%	3.5%	2.6%	0.0%	0.9%	7.1%	1.4%	16.7%	5.0%	0.0%	6.4%	2.0%
PHF	0.53	0.71	0.55	0.67	0.25	0.88	0.59	0.75	0.63	0.62	0.54	0.61	0.75	0.77	0.25	0.78	0.69

Rolling Hour Summary

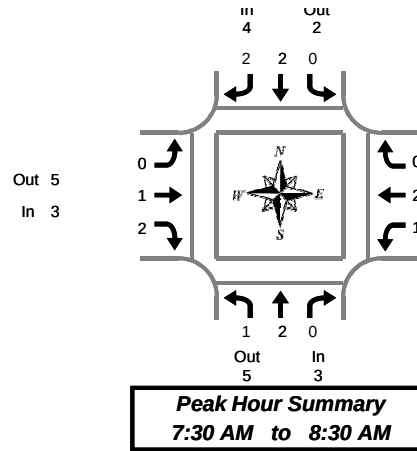
7:00 AM to 9:00 AM

Interval Start Time	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	15	195	24	0	0	74	51	0	61	87	20	0	5	27	2	0	561	1	0	0	2
7:15 AM	17	194	25	0	0	95	59	0	73	107	29	0	4	36	2	0	641	1	0	1	1
7:30 AM	17	193	24	0	1	95	57	0	78	111	28	0	6	40	1	0	651	1	0	1	0
7:45 AM	18	184	26	0	3	84	55	0	66	112	26	0	6	35	1	0	616	0	0	1	0
8:00 AM	12	146	18	0	4	84	44	0	45	82	15	0	6	30	1	0	487	0	0	1	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NE Larch Ave & NE Whitman Dr

Wednesday, October 25, 2017

7:00 AM to 9:00 AM

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
7:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
7:45 AM	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	2
8:00 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	1	0	1	3
8:15 AM	1	1	0	2	0	2	1	3	0	1	0	1	0	0	0	0	6
8:30 AM	0	1	0	1	1	1	1	3	1	2	0	3	0	0	0	0	7
8:45 AM	0	2	0	2	0	0	1	1	0	1	1	2	0	0	0	0	5
Total Survey	1	6	0	7	1	3	4	8	1	5	4	10	1	3	0	4	29

Heavy Vehicle Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Total
	In	Out	Total		In	Out	Total		In	Out	Total		In	Out	Total		
Volume	3	5	8		4	2	6		3	5	8		3	1	4		13
PHF	0.15				0.14				0.13				0.25				0.18

By Movement	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	1	2	0	3	0	2	2	4	0	1	2	3	1	2	0	3	13
PHF	0.25	0.13	0.00	0.15	0.00	0.17	0.17	0.14	0.00	0.06	0.25	0.13	0.25	0.25	0.00	0.25	0.18

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	1	0	1	0	0	1	1	0	1	2	3	1	2	0	3	8
7:15 AM	0	2	0	2	0	0	1	1	0	1	2	3	1	3	0	4	10
7:30 AM	1	2	0	3	0	2	2	4	0	1	2	3	1	2	0	3	13
7:45 AM	1	3	0	4	1	3	3	7	1	3	2	6	0	1	0	1	18
8:00 AM	1	5	0	6	1	3	3	7	1	4	2	7	0	1	0	1	21

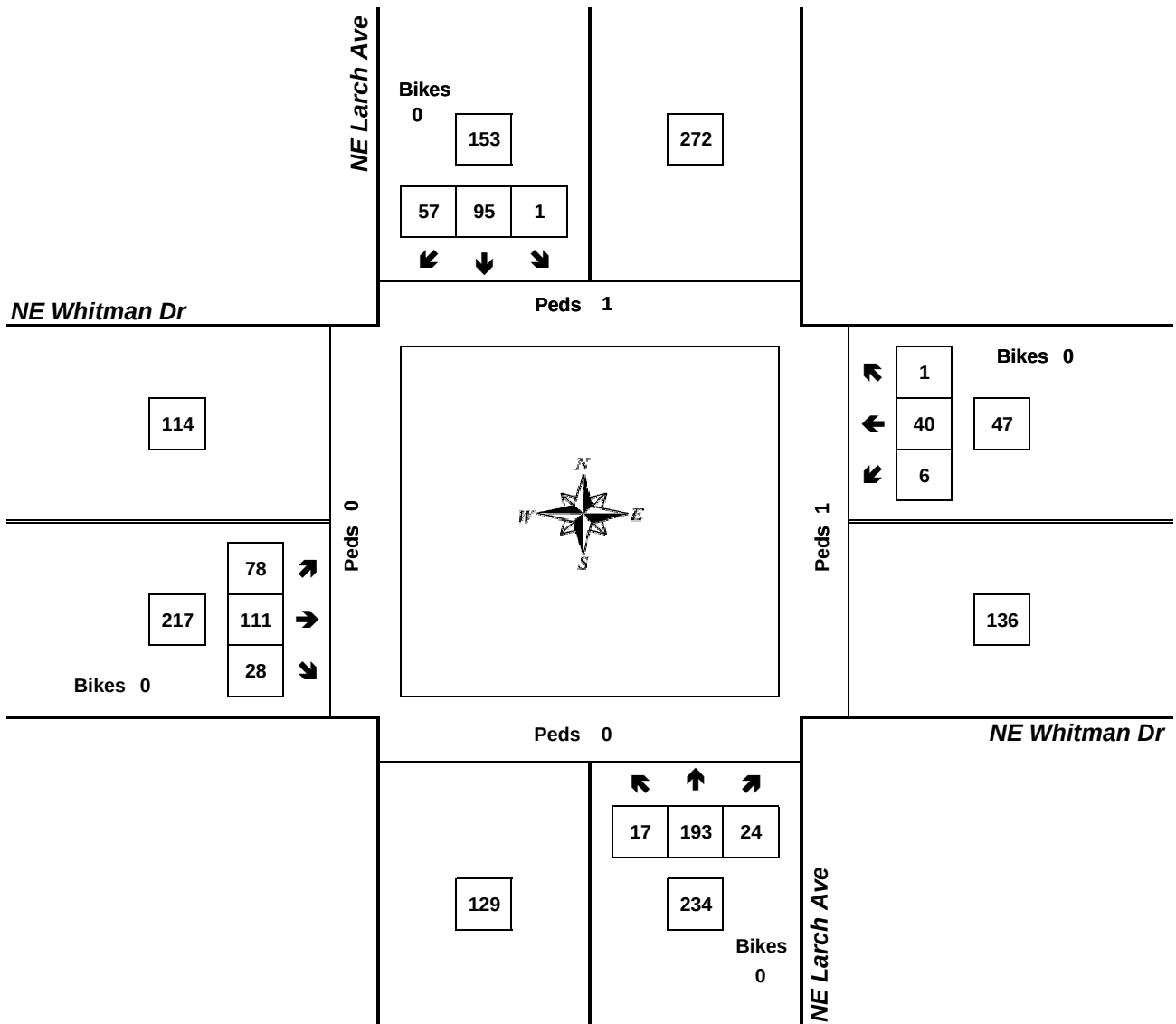
Peak Hour Summary



Clay Carney
(503) 833-2740

NE Larch Ave & NE Whitman Dr

7:30 AM to 8:30 AM
Wednesday, October 25, 2017



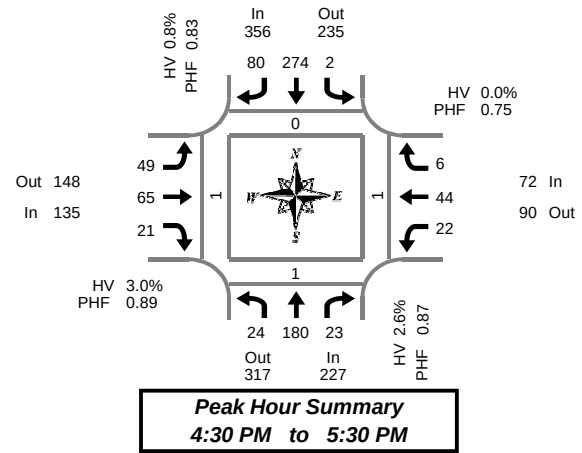
Approach	PHF	HV%	Volume
EB	0.61	1.4%	217
WB	0.78	6.4%	47
NB	0.67	1.3%	234
SB	0.75	2.6%	153
Intersection	0.69	2.0%	651

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



NE Larch Ave & NE Whitman Dr

Tuesday, October 24, 2017

4:00 PM to 6:00 PM

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	40	5	0	1	62	12	0	9	16	8	0	4	12	0	0	169	0	0	0	0
4:15 PM	5	41	7	0	1	50	18	0	5	20	7	0	5	15	1	0	175	0	0	0	1
4:30 PM	5	40	6	0	2	50	19	0	11	18	5	0	2	15	2	0	175	0	0	0	0
4:45 PM	8	42	5	0	0	77	28	1	14	20	4	0	2	4	1	0	205	0	0	1	0
5:00 PM	4	47	5	0	0	86	21	0	10	13	6	0	9	14	1	0	216	0	0	0	1
5:15 PM	7	51	7	0	0	61	12	0	14	14	6	0	9	11	2	0	194	0	1	0	0
5:30 PM	3	35	11	0	1	60	10	0	4	15	5	0	4	11	0	0	159	0	1	0	0
5:45 PM	8	49	7	0	0	51	16	0	13	14	4	0	1	9	2	0	174	0	0	0	0
Total Survey	40	345	53	0	5	497	136	1	80	130	45	0	36	91	9	0	1,467	0	2	1	2

Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	227	317	544	0	356	235	591	1	135	148	283	0	72	90	162	0	790	0	1	1	1
%HV	2.6%				0.8%				3.0%				0.0%				1.6%				
PHF	0.87				0.83				0.89				0.75				0.91				

By Movement	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	24	180	23	227	2	274	80	356	49	65	21	135	22	44	6	72	790
%HV	8.3%	1.7%	4.3%	2.6%	50.0%	0.0%	2.5%	0.8%	4.1%	0.0%	9.5%	3.0%	0.0%	0.0%	0.0%	0.0%	1.6%
PHF	0.75	0.88	0.82	0.87	0.25	0.80	0.71	0.83	0.88	0.81	0.88	0.89	0.61	0.73	0.75	0.75	0.91

Rolling Hour Summary

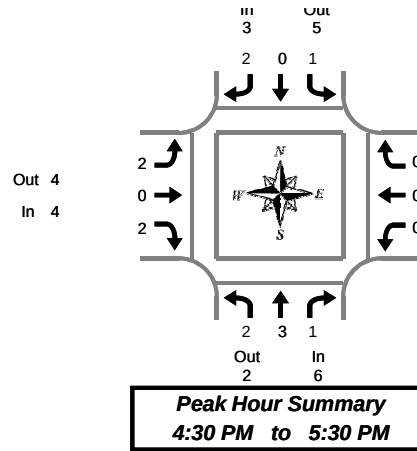
4:00 PM to 6:00 PM

Interval Start Time	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Interval Total	Pedestrians Crosswalks			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	18	163	23	0	4	239	77	1	39	74	24	0	13	46	4	0	724	0	0	1	1
4:15 PM	22	170	23	0	3	263	86	1	40	71	22	0	18	48	5	0	771	0	0	1	2
4:30 PM	24	180	23	0	2	274	80	1	49	65	21	0	22	44	6	0	790	0	1	1	1
4:45 PM	22	175	28	0	1	284	71	1	42	62	21	0	24	40	4	0	774	0	2	1	1
5:00 PM	22	182	30	0	1	258	59	0	41	56	21	0	23	45	5	0	743	0	2	0	1

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NE Larch Ave & NE Whitman Dr

Tuesday, October 24, 2017

4:00 PM to 6:00 PM

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
4:15 PM	0	2	1	3	0	0	0	0	0	2	2	4	0	0	0	0	7
4:30 PM	0	1	0	1	1	0	1	2	0	0	0	0	0	0	0	0	3
4:45 PM	2	2	0	4	0	0	1	1	2	0	1	3	0	0	0	0	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
5:30 PM	0	1	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	2	7	3	12	1	5	2	8	2	2	4	8	0	1	0	1	29

Heavy Vehicle Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Total
	In	Out	Total		In	Out	Total		In	Out	Total		In	Out	Total		
Volume	6	2	8		3	5	8		4	4	8		0	2	2		13
PHF	0.19				0.15				0.14				0.00				0.18

By Movement	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	3	1	6	1	0	2	3	2	0	2	4	0	0	0	0	13
PHF	0.25	0.15	0.13	0.19	0.25	0.00	0.25	0.15	0.25	0.00	0.17	0.14	0.00	0.00	0.00	0.00	0.18

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NE Larch Ave				Southbound NE Larch Ave				Eastbound NE Whitman Dr				Westbound NE Whitman Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	2	6	1	9	1	3	2	6	2	2	3	7	0	1	0	1	23
4:15 PM	2	5	1	8	1	0	2	3	2	2	3	7	0	0	0	0	18
4:30 PM	2	3	1	6	1	0	2	3	2	0	2	4	0	0	0	0	13
4:45 PM	2	3	2	7	0	2	1	3	2	0	2	4	0	0	0	0	14
5:00 PM	0	1	2	3	0	2	0	2	0	0	1	1	0	0	0	0	6

All Traffic Data
Services Inc.

The map shows a grid of streets with various data points and directional indicators. The streets are labeled as follows:

- NE Larch Ave** (vertical street on the left and right)
- NE Whitman Dr** (horizontal street at the top and bottom)
- NE Prescott St** (horizontal street in the middle)

A central compass rose indicates North (N), South (S), East (E), and West (W). The map is divided into several blocks, each with its own set of data points and directional indicators.

Top-Left Block:

- NE Larch Ave: 356
- NE Prescott St: 80, 274, 2
- NE Whitman Dr: 148

Top-Right Block:

- NE Larch Ave: 235
- NE Prescott St: 6, 44, 22
- NE Whitman Dr: 72

Bottom-Left Block:

- NE Larch Ave: 135
- NE Prescott St: 49, 65, 21
- NE Whitman Dr: 317

Bottom-Right Block:

- NE Larch Ave: 227
- NE Prescott St: 24, 180, 23
- NE Whitman Dr: 90

Arrows indicate directions: North (N), South (S), East (E), and West (W). The map also includes a central compass rose and a scale bar.

Approach	PHF	HV%	Volume
EB	0.89	3.0%	135
WB	0.75	0.0%	72
NB	0.87	2.6%	227
SB	0.83	0.8%	356
Intersection	0.91	1.6%	790

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

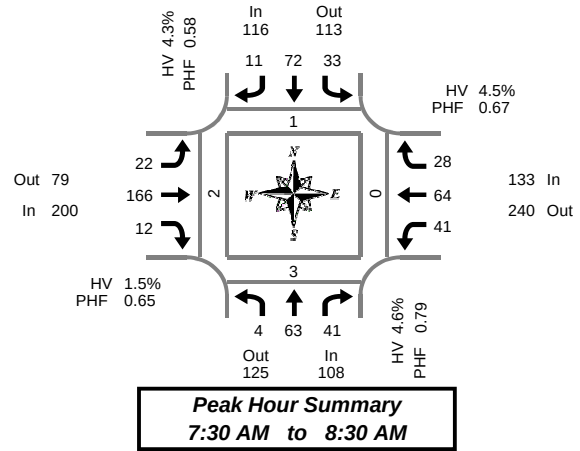


Clay Carney
(503) 833-2740

SE Larch Ave & SE 12th St

Wednesday, October 25, 2017

7:00 AM to 9:00 AM



15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	11	11	0	4	9	1	0	1	19	3	0	8	11	2	0	80	0	0	0	0
7:15 AM	1	8	9	0	5	13	2	0	1	27	1	0	5	16	5	1	93	0	0	0	0
7:30 AM	1	16	8	0	6	13	2	0	4	43	3	0	5	16	5	1	122	0	1	0	0
7:45 AM	0	18	16	0	18	28	4	0	6	65	6	0	16	23	11	0	211	0	2	0	2
8:00 AM	1	15	9	0	6	22	1	0	9	38	2	0	10	10	6	0	129	1	0	0	0
8:15 AM	2	14	8	0	3	9	4	0	3	20	1	0	10	15	6	0	95	0	0	0	0
8:30 AM	2	13	11	0	7	10	3	0	1	30	5	0	11	18	2	0	113	0	0	0	0
8:45 AM	2	11	11	0	4	9	2	0	3	28	2	0	11	12	9	0	104	1	0	0	0
Total Survey	9	106	83	0	53	113	19	0	28	270	23	0	76	121	46	2	947	2	3	0	2

Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	108	125	233	0	116	113	229	0	200	79	279	0	133	240	373	1	557	1	3	0	2
%HV	4.6%				4.3%				1.5%				4.5%				3.4%				
PHF	0.79				0.58				0.65				0.67				0.66				

By Movement	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	4	63	41	108	33	72	11	116	22	166	12	200	41	64	28	133	557
%HV	0.0%	7.9%	0.0%	4.6%	6.1%	2.8%	9.1%	4.3%	9.1%	0.6%	0.0%	1.5%	7.3%	3.1%	3.6%	4.5%	3.4%
PHF	0.50	0.88	0.64	0.79	0.46	0.64	0.69	0.58	0.61	0.64	0.50	0.65	0.64	0.70	0.64	0.67	0.66

Rolling Hour Summary

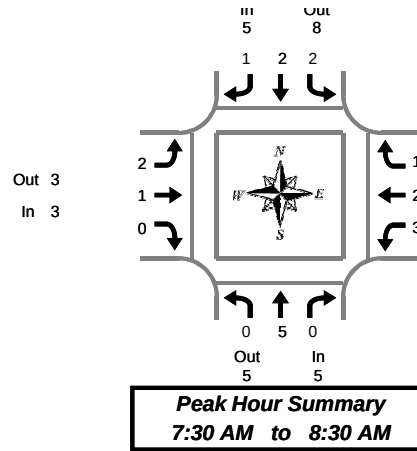
7:00 AM to 9:00 AM

Interval Start Time	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	2	53	44	0	33	63	9	0	12	154	13	0	34	66	23	2	506	0	3	0	2
7:15 AM	3	57	42	0	35	76	9	0	20	173	12	0	36	65	27	2	555	1	3	0	2
7:30 AM	4	63	41	0	33	72	11	0	22	166	12	0	41	64	28	1	557	1	3	0	2
7:45 AM	5	60	44	0	34	69	12	0	19	153	14	0	47	66	25	0	548	1	2	0	2
8:00 AM	7	53	39	0	20	50	10	0	16	116	10	0	42	55	23	0	441	2	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SE Larch Ave & SE 12th St

Wednesday, October 25, 2017

7:00 AM to 9:00 AM

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	1	0	1	0	0	1	1	1	1	0	2	4
7:15 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
7:30 AM	0	2	0	2	0	0	0	0	1	0	0	1	0	0	0	0	3
7:45 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
8:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	3	1	1	5	6
8:15 AM	0	2	0	2	1	1	1	3	1	0	0	1	0	1	0	1	7
8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
8:45 AM	0	0	0	0	0	2	0	2	1	0	0	1	0	0	1	1	4
Total Survey	0	5	0	5	2	7	1	10	3	2	1	6	4	5	2	11	32

Heavy Vehicle Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Total
	In	Out	Total		In	Out	Total		In	Out	Total		In	Out	Total		
Volume	5	5	10		5	8	13		3	3	6		6	3	9		19
PHF	0.42				0.21				0.25				0.21				0.30

By Movement	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	5	0	5	2	2	1	5	2	1	0	3	3	2	1	6	19
PHF	0.00	0.42	0.00	0.42	0.25	0.13	0.25	0.21	0.25	0.13	0.00	0.25	0.25	0.17	0.25	0.21	0.30

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	3	0	3	0	3	0	3	1	2	1	4	1	2	0	3	13
7:15 AM	0	3	0	3	1	2	0	3	1	2	0	3	3	2	1	6	15
7:30 AM	0	5	0	5	2	2	1	5	2	1	0	3	3	2	1	6	19
7:45 AM	0	3	0	3	2	3	1	6	1	1	0	2	3	3	1	7	18
8:00 AM	0	2	0	2	2	4	1	7	2	0	0	2	3	3	2	8	19

Peak Hour Summary

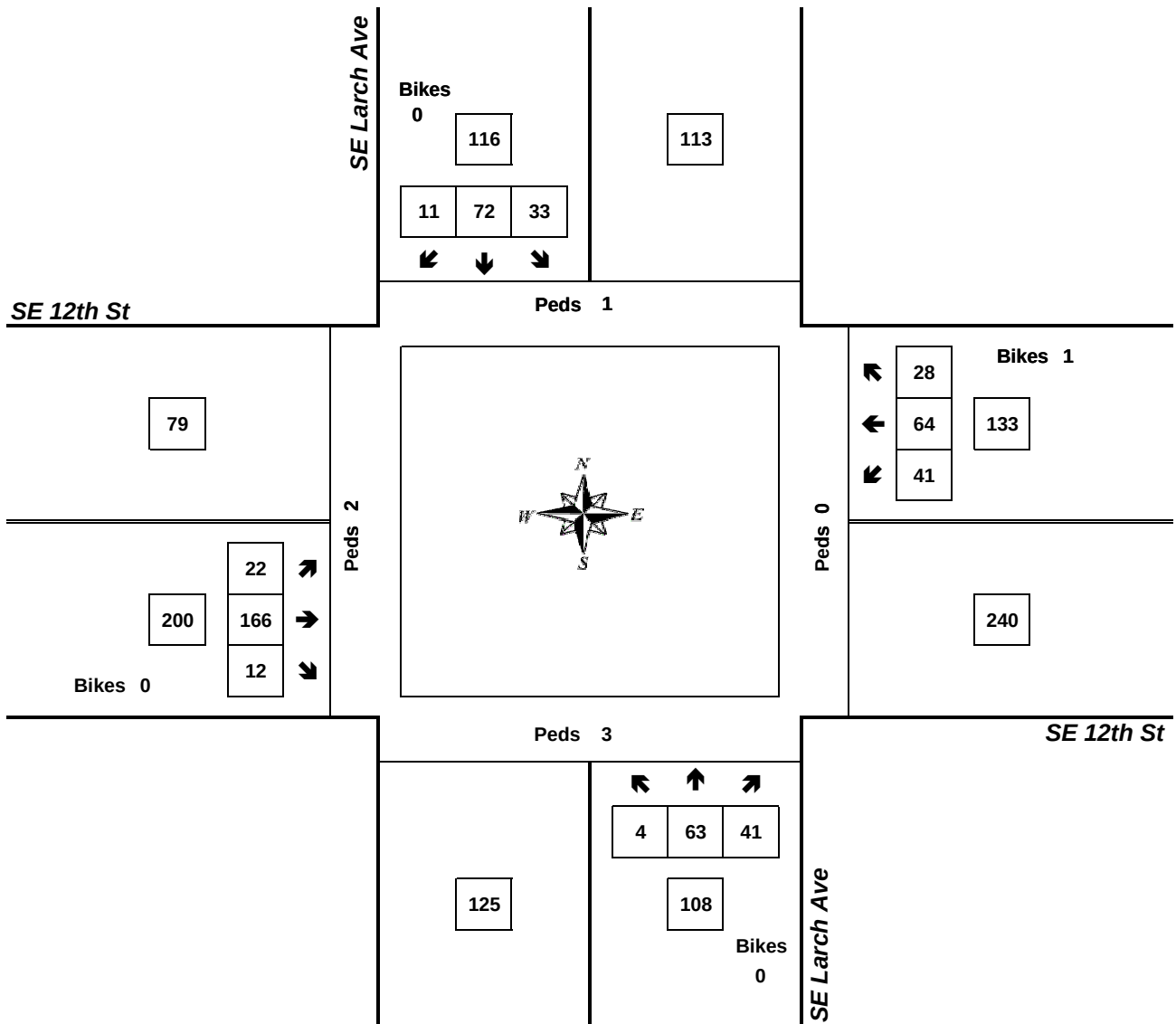


Clay Carney
(503) 833-2740

SE Larch Ave & SE 12th St

7:30 AM to 8:30 AM

Wednesday, October 25, 2017



Approach	PHF	HV%	Volume
EB	0.65	1.5%	200
WB	0.67	4.5%	133
NB	0.79	4.6%	108
SB	0.58	4.3%	116
Intersection	0.66	3.4%	557

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

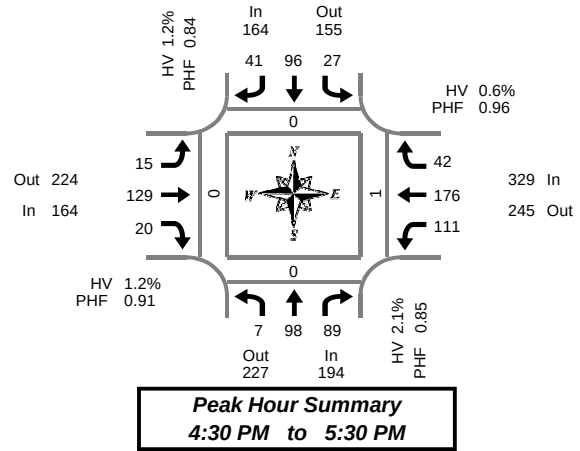


Clay Carney
(503) 833-2740

SE Larch Ave & SE 12th St

Tuesday, October 24, 2017

4:00 PM to 6:00 PM



15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	1	22	23	0	7	25	10	0	4	24	14	0	25	55	10	0	220	0	0	0	1
4:15 PM	3	28	25	0	8	14	9	0	4	33	7	0	32	36	10	0	209	0	0	0	0
4:30 PM	1	22	21	0	13	23	13	0	4	29	3	0	24	53	9	0	215	0	0	0	0
4:45 PM	1	22	21	0	4	17	9	0	3	32	4	0	34	29	9	0	185	0	0	0	0
5:00 PM	3	28	26	0	7	25	12	0	3	36	6	1	24	50	12	0	232	0	0	1	0
5:15 PM	2	26	21	0	3	31	7	0	5	32	7	0	29	44	12	0	219	0	0	0	0
5:30 PM	1	20	29	0	7	15	3	0	2	32	5	1	33	43	7	0	197	0	0	0	1
5:45 PM	2	26	19	1	8	18	6	0	4	22	5	0	35	33	7	0	185	0	0	0	1
Total Survey	14	194	185	1	57	168	69	0	29	240	51	2	236	343	76	0	1,662	0	0	1	3

Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	194	227	421	0	164	155	319	0	164	224	388	1	329	245	574	0	851	0	0	1	0
%HV	2.1%				1.2%				1.2%				0.6%				1.2%				
PHF	0.85				0.84				0.91				0.96				0.92				

By Movement	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	7	98	89	194	27	96	41	164	15	129	20	164	111	176	42	329	851
%HV	0.0%	3.1%	1.1%	2.1%	0.0%	2.1%	0.0%	1.2%	0.0%	0.8%	5.0%	1.2%	0.0%	0.0%	4.8%	0.6%	1.2%
PHF	0.58	0.88	0.86	0.85	0.52	0.77	0.79	0.84	0.75	0.90	0.71	0.91	0.82	0.83	0.88	0.96	0.92

Rolling Hour Summary

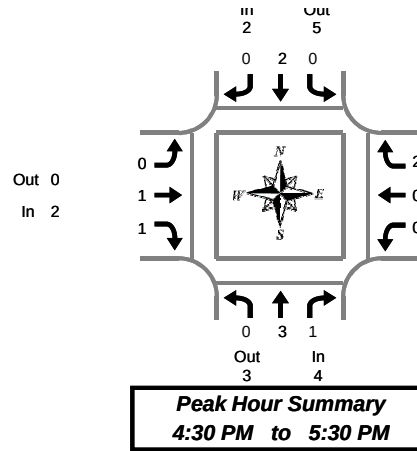
4:00 PM to 6:00 PM

Interval Start Time	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	6	94	90	0	32	79	41	0	15	118	28	0	115	173	38	0	829	0	0	0	1
4:15 PM	8	100	93	0	32	79	43	0	14	130	20	1	114	168	40	0	841	0	0	1	0
4:30 PM	7	98	89	0	27	96	41	0	15	129	20	1	111	176	42	0	851	0	0	1	0
4:45 PM	7	96	97	0	21	88	31	0	13	132	22	2	120	166	40	0	833	0	0	1	1
5:00 PM	8	100	95	1	25	89	28	0	14	122	23	2	121	170	38	0	833	0	0	1	2

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SE Larch Ave & SE 12th St

Tuesday, October 24, 2017

4:00 PM to 6:00 PM

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	1	0	0	1	1	1	0	2	0	0	0	0	0	0	0	0	3
4:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
4:45 PM	0	1	1	2	0	1	0	1	0	0	0	0	0	0	1	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
5:15 PM	0	1	0	1	0	1	0	1	1	0	0	0	0	0	1	1	3
5:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
Total Survey	1	4	2	7	2	3	0	5	0	1	1	2	0	1	2	3	17

Heavy Vehicle Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound SE Larch Ave			Southbound SE Larch Ave			Eastbound SE 12th St			Westbound SE 12th St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	4	3	7	2	5	7	2	0	2	2	2	4	10
PHF	0.25			0.17			0.25			0.25			0.28

By Movement	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	3	1	4	0	2	0	2	0	1	1	2	0	0	2	2	10
PHF	0.00	0.38	0.25	0.25	0.00	0.25	0.00	0.17	0.00	0.25	0.25	0.25	0.00	0.00	0.25	0.25	0.28

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SE Larch Ave				Southbound SE Larch Ave				Eastbound SE 12th St				Westbound SE 12th St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	3	1	5	1	2	0	3	0	1	0	1	0	0	1	1	10
4:15 PM	1	2	1	4	1	2	0	3	0	1	1	2	0	0	1	1	10
4:30 PM	0	3	1	4	0	2	0	2	0	1	1	2	0	0	2	2	10
4:45 PM	0	2	2	4	0	2	0	2	0	0	1	1	0	0	2	2	9
5:00 PM	0	1	1	2	1	1	0	2	0	0	1	1	0	1	1	2	7

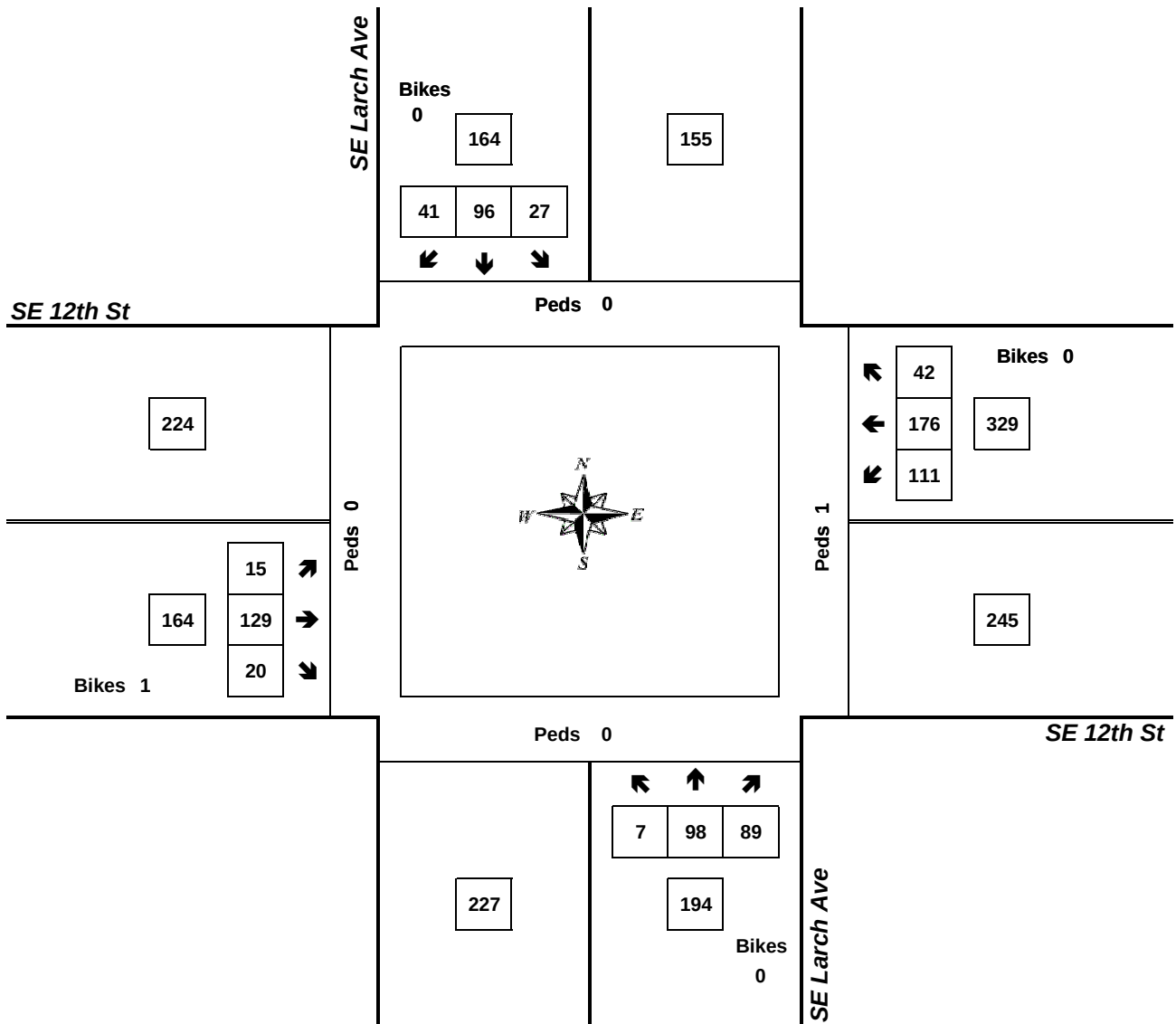
Peak Hour Summary



Clay Carney
(503) 833-2740

SE Larch Ave & SE 12th St

4:30 PM to 5:30 PM
Tuesday, October 24, 2017



Approach	PHF	HV%	Volume
EB	0.91	1.2%	164
WB	0.96	0.6%	329
NB	0.85	2.1%	194
SB	0.84	1.2%	164
Intersection	0.92	1.2%	851

Count Period: 4:00 PM to 6:00 PM

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE C St E-O NE Larch Ave

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	5	185	56	0	17	2	0	1	0	0	0	0	0	8	274
13:00	4	175	48	0	18	1	0	0	0	0	0	0	0	11	257
14:00	6	156	55	0	16	0	0	0	0	0	0	0	0	5	238
15:00	0	155	40	2	17	0	0	1	0	0	0	0	0	6	221
16:00	5	164	42	1	25	0	0	2	0	0	0	0	0	5	244
17:00	3	171	44	0	25	0	0	2	0	0	0	0	0	11	256
18:00	2	153	37	0	11	0	0	0	0	0	0	0	0	6	209
19:00	1	74	20	0	4	0	0	0	0	0	0	0	0	5	104
20:00	0	83	15	0	4	0	0	0	0	0	0	0	0	2	104
21:00	1	52	13	0	3	0	0	0	0	0	0	0	0	2	71
22:00	0	28	3	0	1	0	0	0	0	0	0	0	0	0	32
23:00	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
Total	27	1406	373	3	141	3	0	6	0	0	0	0	0	61	2020
Percent	1.3%	69.6%	18.5%	0.1%	7.0%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	
AM Peak Vol.															
PM Peak Vol.	14:00 6	12:00 185	12:00 56	15:00 2	16:00 25	12:00 2		16:00 2						13:00 11	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE C St E-O NE Larch Ave

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
04:00	0	11	5	0	2	0	0	0	0	0	0	0	0	0	18
05:00	0	47	10	0	9	0	0	0	0	0	0	0	0	0	66
06:00	2	88	25	0	9	1	0	0	0	0	0	0	0	2	127
07:00	1	246	59	3	22	0	0	0	0	0	0	0	0	9	340
08:00	1	162	46	0	20	0	0	0	0	0	0	0	0	3	232
09:00	5	119	42	0	19	0	0	0	0	0	0	0	0	9	194
10:00	0	125	42	0	14	0	0	0	0	0	0	0	0	3	184
11:00	0	155	52	0	7	0	0	1	0	0	0	0	0	8	223
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	9	973	283	3	102	1	0	1	0	0	0	0	0	34	1406
Percent	0.6%	69.2%	20.1%	0.2%	7.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	
AM Peak	09:00	07:00	07:00	07:00	07:00	06:00		11:00						07:00	
Vol.	5	246	59	3	22	1		1						9	
PM Peak															
Vol.															
Grand Total	36	2379	656	6	243	4	0	7	0	0	0	0	0	95	3426
Percent	1.1%	69.4%	19.1%	0.2%	7.1%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE C St E-O NE Larch Ave

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	3	234	31	0	19	3	0	1	0	0	0	0	0	14	305
13:00	8	167	48	0	16	1	0	1	0	0	0	0	0	8	249
14:00	4	203	45	1	16	2	0	1	0	0	0	0	0	8	280
15:00	2	219	46	2	19	0	0	0	0	0	0	0	0	4	292
16:00	1	310	48	1	13	0	0	4	0	0	0	0	0	6	383
17:00	4	307	41	0	17	1	0	0	0	0	0	0	0	10	380
18:00	0	219	25	0	13	0	0	2	0	0	0	0	0	6	265
19:00	0	135	22	0	6	0	0	0	0	0	0	0	0	4	167
20:00	0	139	15	0	3	0	0	0	0	0	0	0	0	2	159
21:00	0	67	10	0	4	0	0	0	0	0	0	0	0	1	82
22:00	0	35	3	0	0	0	0	0	0	0	0	0	0	0	38
23:00	1	37	0	0	1	0	0	0	0	0	0	0	0	0	39
Total	23	2072	334	4	127	7	0	9	0	0	0	0	0	63	2639
Percent	0.9%	78.5%	12.7%	0.2%	4.8%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	
AM Peak Vol.															
PM Peak Vol.	13:00 8	16:00 310	13:00 48	15:00 2	12:00 19	12:00 3		16:00 4						12:00 14	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE C St E-O NE Larch Ave

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	18	0	0	0	0	0	0	0	0	0	0	0	0	18
01:00	0	11	1	0	0	0	0	0	0	0	0	0	0	0	12
02:00	0	8	3	0	0	0	0	0	0	0	0	0	0	0	11
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
05:00	1	16	0	0	1	1	0	0	0	0	0	0	0	0	19
06:00	1	41	13	2	4	1	0	0	0	0	0	0	0	1	63
07:00	2	105	22	2	9	0	0	0	0	0	0	0	0	8	148
08:00	2	92	28	1	10	0	0	2	0	0	0	0	0	2	137
09:00	4	110	25	1	9	1	0	0	0	0	0	0	0	6	156
10:00	3	115	37	0	16	0	0	2	0	0	0	0	0	1	174
11:00	2	156	30	0	12	0	0	2	0	0	0	0	0	2	204
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	15	676	159	6	61	3	0	6	0	0	0	0	0	20	946
Percent	1.6%	71.5%	16.8%	0.6%	6.4%	0.3%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	
AM Peak	09:00	11:00	10:00	06:00	10:00	05:00		08:00						07:00	
Vol.	4	156	37	2	16	1		2						8	
PM Peak															
Vol.															
Grand Total	38	2748	493	10	188	10	0	15	0	0	0	0	0	83	3585
Percent	1.1%	76.7%	13.8%	0.3%	5.2%	0.3%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE C St E-O NE Larch Ave

EB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	9	6	28	150	77	4	0	0	0	0	0	0	0	0	274	32	34
13:00	11	8	47	138	49	4	0	0	0	0	0	0	0	0	257	31	34
14:00	9	5	32	115	75	2	0	0	0	0	0	0	0	0	238	32	34
15:00	6	7	35	116	54	3	0	0	0	0	0	0	0	0	221	32	34
16:00	5	3	20	121	80	14	1	0	0	0	0	0	0	0	244	33	36
17:00	3	3	36	148	63	2	1	0	0	0	0	0	0	0	256	32	34
18:00	6	6	32	122	41	2	0	0	0	0	0	0	0	0	209	31	33
19:00	6	2	11	55	27	2	1	0	0	0	0	0	0	0	104	32	34
20:00	2	2	26	47	22	5	0	0	0	0	0	0	0	0	104	32	34
21:00	2	0	14	34	20	1	0	0	0	0	0	0	0	0	71	32	34
22:00	0	1	3	16	11	1	0	0	0	0	0	0	0	0	32	33	34
23:00	0	0	1	7	1	1	0	0	0	0	0	0	0	0	10	32	37
Total	59	43	285	1069	520	41	3	0	0	0	0	0	0	0	2020		
Percent	2.9%	2.1%	14.1%	52.9%	25.7%	2.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	13:00 11	13:00 8	13:00 47	12:00 150	16:00 80	16:00 14	16:00 1								12:00 274		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE C St E-O NE Larch Ave

EB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/25/17	0	0	0	3	2	0	0	0	0	0	0	0	0	0	5	33	34
01:00	0	0	0	3	0	0	0	0	1	0	0	0	0	0	4	52	53
02:00	0	0	2	1	3	0	0	0	0	0	0	0	0	0	6	33	34
03:00	0	0	1	5	1	0	0	0	0	0	0	0	0	0	7	29	33
04:00	0	0	3	7	7	1	0	0	0	0	0	0	0	0	18	33	35
05:00	1	1	11	34	18	0	0	1	0	0	0	0	0	0	66	32	34
06:00	2	2	17	67	34	5	0	0	0	0	0	0	0	0	127	32	34
07:00	9	8	52	166	96	9	0	0	0	0	0	0	0	0	340	32	34
08:00	3	2	26	117	72	12	0	0	0	0	0	0	0	0	232	33	35
09:00	11	3	30	83	65	2	0	0	0	0	0	0	0	0	194	32	34
10:00	4	2	23	88	58	7	0	2	0	0	0	0	0	0	184	33	34
11:00	9	6	37	111	55	5	0	0	0	0	0	0	0	0	223	32	34
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	39	24	202	685	411	41	0	3	1	0	0	0	0	0	1406		
Percent	2.8%	1.7%	14.4%	48.7%	29.2%	2.9%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	07:00	07:00	07:00	07:00	08:00		10:00	01:00						07:00		
Vol.	11	8	52	166	96	12		2	1						340		
PM Peak																	
Vol.																	
Grand Total	98	67	487	1754	931	82	3	3	1	0	0	0	0	0	3426		
Percent	2.9%	2.0%	14.2%	51.2%	27.2%	2.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		23 MPH												
			50th Percentile :		28 MPH												
			85th Percentile :		32 MPH												
			95th Percentile :		34 MPH												

Statistics 10 MPH Pace Speed : 26-35 MPH
Number in Pace : 2685
Percent in Pace : 78.4%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 28 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE C St E-O NE Larch Ave

WB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	14	5	35	166	75	10	0	0	0	0	0	0	0	0	305	32	34
13:00	9	4	32	131	70	3	0	0	0	0	0	0	0	0	249	32	34
14:00	8	3	25	168	73	3	0	0	0	0	0	0	0	0	280	32	34
15:00	4	5	28	151	87	16	0	0	1	0	0	0	0	0	292	33	35
16:00	6	11	38	214	112	2	0	0	0	0	0	0	0	0	383	32	34
17:00	11	3	59	219	85	3	0	0	0	0	0	0	0	0	380	31	34
18:00	6	8	50	150	46	5	0	0	0	0	0	0	0	0	265	31	34
19:00	4	0	25	91	41	4	2	0	0	0	0	0	0	0	167	32	34
20:00	2	0	25	102	26	3	1	0	0	0	0	0	0	0	159	31	34
21:00	2	1	16	41	19	3	0	0	0	0	0	0	0	0	82	32	34
22:00	0	0	7	16	12	2	1	0	0	0	0	0	0	0	38	33	37
23:00	0	0	0	24	13	2	0	0	0	0	0	0	0	0	39	33	35
Total	66	40	340	1473	659	56	4	0	1	0	0	0	0	0	2639		
Percent	2.5%	1.5%	12.9%	55.8%	25.0%	2.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	12:00 14	16:00 11	17:00 59	17:00 219	16:00 112	15:00 16	19:00 2		15:00 1						16:00 383		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE C St E-O NE Larch Ave

WB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/25/17	0	0	2	9	6	1	0	0	0	0	0	0	0	0	18	33	35
01:00	0	0	0	9	3	0	0	0	0	0	0	0	0	0	12	32	34
02:00	0	0	0	8	2	1	0	0	0	0	0	0	0	0	11	33	37
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	1	1	2	0	0	0	0	0	0	0	0	0	4	33	34
05:00	0	0	6	9	2	2	0	0	0	0	0	0	0	0	19	32	37
06:00	1	1	16	28	16	1	0	0	0	0	0	0	0	0	63	32	34
07:00	10	7	13	72	44	2	0	0	0	0	0	0	0	0	148	32	34
08:00	2	1	22	70	35	6	1	0	0	0	0	0	0	0	137	33	35
09:00	6	2	14	82	48	4	0	0	0	0	0	0	0	0	156	32	34
10:00	2	1	24	84	56	7	0	0	0	0	0	0	0	0	174	33	34
11:00	2	3	25	114	53	7	0	0	0	0	0	0	0	0	204	32	34
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	23	15	123	486	267	31	1	0	0	0	0	0	0	0	946		
Percent	2.4%	1.6%	13.0%	51.4%	28.2%	3.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	11:00	11:00	10:00	10:00	08:00								11:00		
Vol.	10	7	25	114	56	7	1								204		
PM Peak																	
Vol.																	
Grand Total	89	55	463	1959	926	87	5	0	1	0	0	0	0	0	3585		
Percent	2.5%	1.5%	12.9%	54.6%	25.8%	2.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		24 MPH												
			50th Percentile :		28 MPH												
			85th Percentile :		32 MPH												
			95th Percentile :		34 MPH												

Statistics 10 MPH Pace Speed : 26-35 MPH
Number in Pace : 2885
Percent in Pace : 80.5%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 28 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
 NE C St W-O NE Larch Ave

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	2	44	9	0	8	0	0	0	0	0	0	0	0	0	63
13:00	1	36	8	0	1	1	0	0	0	0	0	0	0	0	47
14:00	0	36	10	0	7	0	0	0	0	0	0	0	0	1	54
15:00	1	43	7	0	4	0	0	1	0	0	0	0	0	1	57
16:00	1	40	5	0	2	0	0	0	0	0	0	0	0	2	50
17:00	0	33	12	0	1	0	0	0	0	0	0	0	0	1	47
18:00	3	35	5	0	2	0	0	0	0	0	0	0	0	2	47
19:00	0	18	6	0	0	0	0	0	0	0	0	0	0	0	24
20:00	1	18	4	0	0	0	0	0	0	0	0	0	0	0	23
21:00	0	16	1	0	1	0	0	0	0	0	0	0	0	0	18
22:00	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
23:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	9	329	68	0	26	1	0	1	0	0	0	0	0	7	441
Percent	2.0%	74.6%	15.4%	0.0%	5.9%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	
AM Peak Vol.															
PM Peak Vol.	18:00 3	12:00 44	17:00 12		12:00 8	13:00 1		15:00 1						16:00 2	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
 NE C St W-O NE Larch Ave

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
05:00	0	14	2	0	2	0	0	0	0	0	0	0	0	0	18
06:00	0	25	5	0	0	0	0	0	0	0	0	0	0	0	30
07:00	0	66	9	1	2	1	0	0	0	0	0	0	0	1	80
08:00	1	42	11	0	3	0	0	0	0	0	0	0	0	1	58
09:00	0	31	7	0	3	0	0	0	0	0	0	0	0	3	44
10:00	0	26	11	1	4	0	0	0	0	0	0	0	0	2	44
11:00	0	32	12	0	1	0	0	0	0	0	0	0	0	0	45
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	1	251	58	2	15	1	0	0	0	0	0	0	0	7	335
Percent	0.3%	74.9%	17.3%	0.6%	4.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	
AM Peak	08:00	07:00	11:00	07:00	10:00	07:00								09:00	
Vol.	1	66	12	1	4	1								3	
PM Peak															
Vol.															
Grand Total	10	580	126	2	41	2	0	1	0	0	0	0	0	14	776
Percent	1.3%	74.7%	16.2%	0.3%	5.3%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE C St W-O NE Larch Ave

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	3	54	16	0	2	0	0	0	0	0	0	0	0	2	77
13:00	2	37	19	0	2	1	0	0	0	0	0	0	0	5	66
14:00	4	48	9	0	5	0	0	1	0	0	0	0	0	1	68
15:00	2	55	15	2	5	0	0	0	0	0	0	0	0	1	80
16:00	0	72	10	0	2	0	0	0	0	0	0	0	0	1	85
17:00	1	62	15	0	4	0	0	0	0	0	0	0	0	3	85
18:00	2	53	7	0	2	1	0	0	0	0	0	0	0	5	70
19:00	0	34	4	0	1	0	0	0	0	0	0	0	0	0	39
20:00	1	42	5	0	2	0	0	0	0	0	0	0	0	2	52
21:00	0	19	5	0	1	0	0	0	0	0	0	0	0	0	25
22:00	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
23:00	1	8	1	0	2	0	0	0	0	0	0	0	0	1	13
Total	16	492	107	2	28	2	0	1	0	0	0	0	0	21	669
Percent	2.4%	73.5%	16.0%	0.3%	4.2%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	
AM Peak Vol.															
PM Peak Vol.	14:00 4	16:00 72	13:00 19	15:00 2	14:00 5	13:00 1		14:00 1						13:00 5	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
 NE C St W-O NE Larch Ave

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	2	7	0	0	0	0	0	0	0	0	0	0	0	1	10
01:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00	0	5	2	0	0	1	0	0	0	0	0	0	0	1	9
06:00	1	13	5	0	1	0	0	0	0	0	0	0	0	2	22
07:00	1	20	10	1	3	0	0	0	0	0	0	0	0	6	41
08:00	3	35	7	0	5	0	0	1	0	0	0	0	0	1	52
09:00	6	26	5	0	4	1	0	0	0	0	0	0	0	6	48
10:00	1	27	12	1	3	0	0	0	0	0	0	0	0	3	47
11:00	0	44	10	0	3	0	0	0	0	0	0	0	0	3	60
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	14	186	52	2	19	2	0	1	0	0	0	0	0	23	299
Percent	4.7%	62.2%	17.4%	0.7%	6.4%	0.7%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	
AM Peak	09:00	11:00	10:00	07:00	08:00	05:00		08:00						07:00	
Vol.	6	44	12	1	5	1		1						6	
PM Peak															
Vol.															
Grand Total	30	678	159	4	47	4	0	2	0	0	0	0	0	44	968
Percent	3.1%	70.0%	16.4%	0.4%	4.9%	0.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	

All Traffic Data
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Vancouver, WA. 98683
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Site Code: 1
NE C St W-O NE Larch Ave

EB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	5	8	34	16	0	0	0	0	0	0	0	0	0	0	63	27	29
13:00	1	8	28	9	1	0	0	0	0	0	0	0	0	0	47	26	29
14:00	3	10	22	19	0	0	0	0	0	0	0	0	0	0	54	27	29
15:00	2	19	26	10	0	0	0	0	0	0	0	0	0	0	57	25	28
16:00	5	10	20	14	1	0	0	0	0	0	0	0	0	0	50	27	29
17:00	3	10	26	7	1	0	0	0	0	0	0	0	0	0	47	25	29
18:00	7	9	18	13	0	0	0	0	0	0	0	0	0	0	47	27	29
19:00	1	6	13	4	0	0	0	0	0	0	0	0	0	0	24	25	28
20:00	1	7	15	0	0	0	0	0	0	0	0	0	0	0	23	23	24
21:00	1	3	6	7	1	0	0	0	0	0	0	0	0	0	18	28	30
22:00	0	2	8	0	0	0	0	0	0	0	0	0	0	0	10	24	24
23:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	24	24
Total	29	92	217	99	4	0	0	0	0	0	0	0	0	0	441		
Percent	6.6%	20.9%	49.2%	22.4%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	18:00 7	15:00 19	12:00 34	14:00 19	13:00 1										12:00 63		

All Traffic Data
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Vancouver, WA. 98683
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Site Code: 1
NE C St W-O NE Larch Ave

EB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
	15	20	25	30	35	40	45	50	55	60	65	70	75	999			
10/25/17	0	0	3	1	0	0	0	0	0	0	0	0	0	0	4	27	28
01:00	0	0	2	2	0	0	0	0	0	0	0	0	0	0	4	28	29
02:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	28	29
03:00	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	24	24
04:00	0	2	1	1	0	0	0	0	0	0	0	0	0	0	4	27	28
05:00	1	2	14	1	0	0	0	0	0	0	0	0	0	0	18	24	25
06:00	0	11	11	8	0	0	0	0	0	0	0	0	0	0	30	27	29
07:00	2	15	42	19	2	0	0	0	0	0	0	0	0	0	80	27	29
08:00	1	11	25	18	3	0	0	0	0	0	0	0	0	0	58	28	30
09:00	4	7	22	11	0	0	0	0	0	0	0	0	0	0	44	27	29
10:00	2	10	18	12	2	0	0	0	0	0	0	0	0	0	44	28	29
11:00	1	8	22	12	2	0	0	0	0	0	0	0	0	0	45	28	29
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	11	66	163	86	9	0	0	0	0	0	0	0	0	0	335		
Percent	3.3%	19.7%	48.7%	25.7%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	07:00	07:00	07:00	08:00										07:00		
Vol.	4	15	42	19	3										80		
PM Peak																	
Vol.																	
Grand Total	40	158	380	185	13	0	0	0	0	0	0	0	0	0	776		
Percent	5.2%	20.4%	49.0%	23.8%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		17 MPH												
			50th Percentile :		22 MPH												
			85th Percentile :		27 MPH												
			95th Percentile :		29 MPH												

Statistics

10 MPH Pace Speed : 21-30 MPH
Number in Pace : 565
Percent in Pace : 72.8%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 23 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
 NE C St W-O NE Larch Ave

WB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	6	6	41	24	0	0	0	0	0	0	0	0	0	0	77	27	29
13:00	6	9	33	18	0	0	0	0	0	0	0	0	0	0	66	27	29
14:00	3	13	33	18	0	1	0	0	0	0	0	0	0	0	68	27	29
15:00	3	14	38	20	5	0	0	0	0	0	0	0	0	0	80	28	31
16:00	2	7	51	23	2	0	0	0	0	0	0	0	0	0	85	27	29
17:00	4	9	47	25	0	0	0	0	0	0	0	0	0	0	85	27	29
18:00	5	9	38	15	3	0	0	0	0	0	0	0	0	0	70	27	29
19:00	0	4	20	14	1	0	0	0	0	0	0	0	0	0	39	28	29
20:00	3	8	29	12	0	0	0	0	0	0	0	0	0	0	52	26	28
21:00	0	3	12	9	1	0	0	0	0	0	0	0	0	0	25	28	29
22:00	0	1	6	2	0	0	0	0	0	0	0	0	0	0	9	26	28
23:00	1	0	7	5	0	0	0	0	0	0	0	0	0	0	13	28	29
Total	33	83	355	185	12	1	0	0	0	0	0	0	0	0	669		
Percent	4.9%	12.4%	53.1%	27.7%	1.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	12:00 6	15:00 14	16:00 51	17:00 25	15:00 5	14:00 1									16:00 85		

All Traffic Data
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Site Code: 1
 NE C St W-O NE Larch Ave

WB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/25/17	1	1	4	3	1	0	0	0	0	0	0	0	0	0	10	29	32
01:00	0	1	3	2	0	0	0	0	0	0	0	0	0	0	6	27	29
02:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	29	29
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	28	29
05:00	3	1	4	1	0	0	0	0	0	0	0	0	0	0	9	24	27
06:00	2	9	4	5	2	0	0	0	0	0	0	0	0	0	22	28	32
07:00	8	1	19	13	0	0	0	0	0	0	0	0	0	0	41	27	29
08:00	3	4	22	21	2	0	0	0	0	0	0	0	0	0	52	28	29
09:00	10	8	16	13	1	0	0	0	0	0	0	0	0	0	48	27	29
10:00	3	4	20	18	2	0	0	0	0	0	0	0	0	0	47	28	29
11:00	4	10	30	15	1	0	0	0	0	0	0	0	0	0	60	27	29
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	34	39	123	94	9	0	0	0	0	0	0	0	0	0	299		
Percent	11.4%	13.0%	41.1%	31.4%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	11:00	11:00	08:00	06:00										11:00		
Vol.	10	10	30	21	2										60		
PM Peak																	
Vol.																	
Grand Total	67	122	478	279	21	1	0	0	0	0	0	0	0	0	968		
Percent	6.9%	12.6%	49.4%	28.8%	2.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		18 MPH												
			50th Percentile :		23 MPH												
			85th Percentile :		27 MPH												
			95th Percentile :		29 MPH												

Statistics

10 MPH Pace Speed : 21-30 MPH
 Number in Pace : 757
 Percent in Pace : 78.2%
 Number of Vehicles > 55 MPH : 0
 Percent of Vehicles > 55 MPH : 0.0%
 Mean Speed(Average) : 23 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
E Whitman Dr E-O NE Larch Ave

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	0	65	8	0	2	0	0	1	0	0	0	0	0	0	76
13:00	2	60	18	1	7	0	0	0	0	0	0	0	0	1	89
14:00	1	85	17	0	6	0	0	0	0	0	0	0	0	2	111
15:00	0	67	13	0	6	0	0	0	0	0	0	0	0	0	86
16:00	0	85	9	2	3	0	0	0	0	0	0	0	0	0	99
17:00	2	64	13	0	5	0	0	0	0	0	0	0	0	2	86
18:00	0	61	10	0	4	0	0	0	0	0	0	0	0	1	76
19:00	1	31	6	0	2	0	0	0	0	0	0	0	0	2	42
20:00	0	31	5	0	1	0	0	0	0	0	0	0	0	0	37
21:00	2	24	3	0	1	0	0	0	0	0	0	0	0	0	30
22:00	0	18	1	0	0	0	0	0	0	0	0	0	0	0	19
23:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	8	597	103	3	37	0	0	1	0	0	0	0	0	8	757
Percent	1.1%	78.9%	13.6%	0.4%	4.9%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	
AM Peak Vol.															
PM Peak Vol.	13:00 2	14:00 85	13:00 18	16:00 2	13:00 7			12:00 1						14:00 2	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
E Whitman Dr E-O NE Larch Ave

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00	0	10	2	0	1	0	0	0	0	0	0	0	0	0	13
06:00	0	26	7	0	2	0	0	0	0	0	0	0	0	0	35
07:00	1	95	17	0	4	1	0	0	0	0	0	0	0	1	119
08:00	1	76	19	0	6	0	0	0	0	0	0	0	0	1	103
09:00	1	42	8	0	4	0	0	0	0	0	0	0	0	0	55
10:00	1	32	11	0	7	0	0	0	0	0	0	0	0	0	51
11:00	0	58	18	0	6	0	0	0	0	0	0	0	0	0	82
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	4	345	82	0	31	1	0	0	0	0	0	0	0	2	465
Percent	0.9%	74.2%	17.6%	0.0%	6.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	
AM Peak	07:00	07:00	08:00		10:00	07:00								07:00	
Vol.	1	95	19		7	1								1	
PM Peak															
Vol.															
Grand Total	12	942	185	3	68	1	0	1	0	0	0	0	0	10	1222
Percent	1.0%	77.1%	15.1%	0.2%	5.6%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	

Site Code: 1

[illegible]

WB[illegible]

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 29694
E Whitman Dr E-O NE Larch Ave

EB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	0	3	31	40	2	0	0	0	0	0	0	0	0	0	76	28	29
13:00	1	4	33	45	6	0	0	0	0	0	0	0	0	0	89	29	31
14:00	2	3	44	62	0	0	0	0	0	0	0	0	0	0	111	28	29
15:00	0	1	39	42	4	0	0	0	0	0	0	0	0	0	86	28	29
16:00	0	7	41	47	4	0	0	0	0	0	0	0	0	0	99	28	29
17:00	3	7	37	37	2	0	0	0	0	0	0	0	0	0	86	28	29
18:00	1	5	33	35	2	0	0	0	0	0	0	0	0	0	76	28	29
19:00	2	2	19	15	3	1	0	0	0	0	0	0	0	0	42	29	33
20:00	1	2	15	18	1	0	0	0	0	0	0	0	0	0	37	28	29
21:00	1	2	16	10	1	0	0	0	0	0	0	0	0	0	30	28	29
22:00	0	1	13	4	0	0	1	0	0	0	0	0	0	0	19	27	40
23:00	0	0	3	3	0	0	0	0	0	0	0	0	0	0	6	28	29
Total	11	37	324	358	25	1	1	0	0	0	0	0	0	0	757		
Percent	1.5%	4.9%	42.8%	47.3%	3.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	17:00 3	16:00 7	14:00 44	14:00 62	13:00 6	19:00 1	22:00 1								14:00 111		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 29694
E Whitman Dr E-O NE Larch Ave

EB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
	15	20	25	30	35	40	45	50	55	60	65	70	75	999			
10/25/17	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	28	29
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	29	29
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	29	29
04:00	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3	23	24
05:00	0	1	10	2	0	0	0	0	0	0	0	0	0	0	13	25	28
06:00	0	1	17	15	2	0	0	0	0	0	0	0	0	0	35	28	30
07:00	1	15	43	51	9	0	0	0	0	0	0	0	0	0	119	29	31
08:00	1	5	50	41	6	0	0	0	0	0	0	0	0	0	103	28	30
09:00	1	1	29	23	1	0	0	0	0	0	0	0	0	0	55	28	29
10:00	0	2	30	17	2	0	0	0	0	0	0	0	0	0	51	28	29
11:00	0	7	34	40	1	0	0	0	0	0	0	0	0	0	82	28	29
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	3	33	216	192	21	0	0	0	0	0	0	0	0	0	465		
Percent	0.6%	7.1%	46.5%	41.3%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	08:00	07:00	07:00										07:00		
Vol.	1	15	50	51	9										119		
PM Peak																	
Vol.																	
Grand Total	14	70	540	550	46	1	1	0	0	0	0	0	0	0	1222		
Percent	1.1%	5.7%	44.2%	45.0%	3.8%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		20 MPH												
			50th Percentile :		24 MPH												
			85th Percentile :		28 MPH												
			95th Percentile :		29 MPH												

Statistics

10 MPH Pace Speed : 21-30 MPH
Number in Pace : 1090
Percent in Pace : 89.2%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 25 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 29694
E Whitman Dr E-O NE Larch Ave

WB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	0	5	18	42	7	0	0	0	0	0	0	0	0	0	72	29	32
13:00	1	2	16	19	4	0	0	0	0	0	0	0	0	0	42	29	32
14:00	6	1	26	19	5	0	0	0	0	0	0	0	0	0	57	29	32
15:00	0	4	15	19	3	1	0	0	0	0	0	0	0	0	42	29	33
16:00	2	6	22	34	6	0	0	0	0	0	0	0	0	0	70	29	32
17:00	5	8	31	23	1	0	1	0	0	0	0	0	0	0	69	28	29
18:00	1	7	25	17	3	0	0	0	0	0	0	0	0	0	53	28	30
19:00	3	6	19	18	1	0	0	0	0	0	0	0	0	0	47	28	29
20:00	0	0	12	14	0	0	0	0	0	0	0	0	0	0	26	28	29
21:00	0	1	8	9	2	0	0	0	0	0	0	0	0	0	20	29	32
22:00	0	1	2	3	1	0	0	0	0	0	0	0	0	0	7	29	33
23:00	0	1	1	3	0	0	0	0	0	0	0	0	0	0	5	28	29
Total	18	42	195	220	33	1	1	0	0	0	0	0	0	0	510		
Percent	3.5%	8.2%	38.2%	43.1%	6.5%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	14:00 6	17:00 8	17:00 31	12:00 42	12:00 7	15:00 1	17:00 1								12:00 72		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 29694
E Whitman Dr E-O NE Larch Ave

WB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
		20	25	30	35	40	45	50	55	60	65	70	75	999			
10/25/17	0	1	2	1	2	0	0	0	0	0	0	0	0	0	6	32	34
01:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	33	34
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	28	29
04:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	34	34
05:00	0	1	3	2	0	0	0	0	0	0	0	0	0	0	6	27	29
06:00	0	1	2	4	0	0	0	0	0	0	0	0	0	0	7	28	29
07:00	2	6	20	14	1	0	0	0	0	0	0	0	0	0	43	28	29
08:00	0	2	8	22	2	0	0	0	0	0	0	0	0	0	34	29	30
09:00	0	2	12	14	2	0	0	0	0	0	0	0	0	0	30	29	31
10:00	1	4	17	12	3	0	0	0	0	0	0	0	0	0	37	28	31
11:00	1	0	18	27	0	0	0	0	0	0	0	0	0	0	46	28	29
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	4	17	84	97	12	0	0	0	0	0	0	0	0	0	214		
Percent	1.9%	7.9%	39.3%	45.3%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	07:00	11:00	10:00										11:00		
Vol.	2	6	20	27	3										46		
PM Peak																	
Vol.																	
Grand Total	22	59	279	317	45	1	1	0	0	0	0	0	0	0	724		
Percent	3.0%	8.1%	38.5%	43.8%	6.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		20 MPH												
			50th Percentile :		25 MPH												
			85th Percentile :		29 MPH												
			95th Percentile :		31 MPH												

Statistics

10 MPH Pace Speed : 21-30 MPH
Number in Pace : 596
Percent in Pace : 82.3%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 25 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE Larch Ave S-O NE C St

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	1	147	44	0	10	1	0	0	0	0	0	0	0	14	217
13:00	1	153	39	0	12	0	0	0	0	0	0	0	0	8	213
14:00	2	129	44	0	5	1	0	0	0	0	0	0	0	10	191
15:00	0	136	33	3	11	0	0	0	0	0	0	0	0	8	191
16:00	2	142	37	1	20	0	0	1	0	0	0	0	0	9	212
17:00	6	145	38	0	18	0	0	2	0	0	0	0	0	13	222
18:00	1	143	19	0	7	0	0	0	0	0	0	0	0	18	188
19:00	0	84	11	0	3	0	0	0	0	0	0	0	0	1	99
20:00	0	81	11	0	4	0	0	0	0	0	0	0	0	1	97
21:00	0	53	10	0	2	0	0	0	0	0	0	0	0	0	65
22:00	0	20	2	0	1	0	0	0	0	0	0	0	0	0	23
23:00	0	8	0	0	1	0	0	0	0	0	0	0	0	0	9
Total	13	1241	288	4	94	2	0	3	0	0	0	0	0	82	1727
Percent	0.8%	71.9%	16.7%	0.2%	5.4%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	
AM Peak Vol.															
PM Peak Vol.	17:00 6	13:00 153	12:00 44	15:00 3	16:00 20	12:00 1		17:00 2						18:00 18	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
 NE Larch Ave S-O NE C St

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	11	3	0	1	0	0	0	0	0	0	0	0	0	15
05:00	0	33	12	0	5	0	0	0	0	0	0	0	0	2	52
06:00	1	69	18	0	8	1	0	0	0	0	0	0	0	3	100
07:00	1	203	56	1	8	0	0	0	0	0	0	0	0	5	274
08:00	0	150	33	0	10	0	0	0	0	0	0	0	0	4	197
09:00	2	115	28	0	14	0	0	0	0	0	0	0	0	3	162
10:00	0	110	33	0	7	0	0	0	0	0	0	0	0	9	159
11:00	0	120	38	1	6	0	0	0	0	0	0	0	0	9	174
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	4	825	222	2	59	1	0	0	0	0	0	0	0	35	1148
Percent	0.3%	71.9%	19.3%	0.2%	5.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	
AM Peak	09:00	07:00	07:00	07:00	09:00	06:00								10:00	
Vol.	2	203	56	1	14	1								9	
PM Peak															
Vol.															
Grand Total	17	2066	510	6	153	3	0	3	0	0	0	0	0	117	2875
Percent	0.6%	71.9%	17.7%	0.2%	5.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE Larch Ave S-O NE C St

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	2	226	31	0	19	1	0	0	0	0	0	0	0	8	287
13:00	4	171	37	0	14	0	0	1	0	0	0	0	0	6	233
14:00	2	190	39	1	15	1	0	1	0	0	0	0	0	6	255
15:00	3	196	42	2	13	0	0	1	0	0	0	0	0	5	262
16:00	2	253	49	1	13	0	0	1	0	0	0	0	0	2	321
17:00	3	248	42	0	17	1	0	1	0	0	0	0	0	9	321
18:00	0	212	24	0	14	0	0	0	0	0	0	0	0	9	259
19:00	0	132	24	0	7	0	0	0	0	0	0	0	0	1	164
20:00	0	123	13	0	5	0	0	0	0	0	0	0	0	1	142
21:00	0	71	7	0	3	0	0	0	0	0	0	0	0	0	81
22:00	0	36	3	0	0	0	0	0	0	0	0	0	0	0	39
23:00	0	29	0	0	0	0	0	0	0	0	0	0	0	0	29
Total	16	1887	311	4	120	3	0	5	0	0	0	0	0	47	2393
Percent	0.7%	78.9%	13.0%	0.2%	5.0%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	
AM Peak Vol.															
PM Peak Vol.	13:00 4	16:00 253	16:00 49	15:00 2	12:00 19	12:00 1		13:00 1						17:00 9	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
 NE Larch Ave S-O NE C St

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13
01:00	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
02:00	0	7	3	0	0	0	0	0	0	0	0	0	0	0	10
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
05:00	1	14	2	0	0	1	0	0	0	0	0	0	0	0	18
06:00	0	39	13	2	5	0	0	0	0	0	0	0	0	4	63
07:00	1	106	17	1	6	0	0	0	0	0	0	0	0	3	134
08:00	3	89	31	1	5	0	0	2	0	0	0	0	0	3	134
09:00	4	111	27	1	9	0	0	0	0	0	0	0	0	1	153
10:00	5	99	30	1	13	0	0	1	0	0	0	0	0	5	154
11:00	2	130	28	0	14	0	0	1	0	0	0	0	0	7	182
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	16	619	153	6	52	1	0	4	0	0	0	0	0	23	874
Percent	1.8%	70.8%	17.5%	0.7%	5.9%	0.1%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	
AM Peak	10:00	11:00	08:00	06:00	11:00	05:00		08:00						11:00	
Vol.	5	130	31	2	14	1		2						7	
PM Peak															
Vol.															
Grand Total	32	2506	464	10	172	4	0	9	0	0	0	0	0	70	3267
Percent	1.0%	76.7%	14.2%	0.3%	5.3%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
 NE Larch Ave S-O NE C St

NB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	14	0	8	84	93	17	1	0	0	0	0	0	0	0	217	34	37
13:00	8	0	12	94	89	9	1	0	0	0	0	0	0	0	213	33	34
14:00	10	0	9	79	83	10	0	0	0	0	0	0	0	0	191	33	35
15:00	8	0	5	87	78	12	1	0	0	0	0	0	0	0	191	33	36
16:00	9	0	6	66	108	21	2	0	0	0	0	0	0	0	212	34	37
17:00	13	0	11	100	90	5	3	0	0	0	0	0	0	0	222	33	34
18:00	18	0	16	87	61	6	0	0	0	0	0	0	0	0	188	33	34
19:00	1	0	1	46	43	7	1	0	0	0	0	0	0	0	99	34	37
20:00	1	0	5	50	36	4	1	0	0	0	0	0	0	0	97	33	35
21:00	0	0	3	32	27	3	0	0	0	0	0	0	0	0	65	33	34
22:00	0	0	0	7	12	3	1	0	0	0	0	0	0	0	23	35	39
23:00	0	0	0	1	5	3	0	0	0	0	0	0	0	0	9	37	39
Total	82	0	76	733	725	100	11	0	0	0	0	0	0	0	1727		
Percent	4.7%	0.0%	4.4%	42.4%	42.0%	5.8%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	18:00 18		18:00 16	17:00 100	16:00 108	16:00 21	17:00 3								17:00 222		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
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Site Code: 1
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NB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
	15	20	25	30	35	40	45	50	55	60	65	70	75	999			
10/25/17	0	0	0	1	4	1	0	0	0	0	0	0	0	0	6	35	38
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	29	29
02:00	0	0	0	2	1	1	0	0	0	0	0	0	0	0	4	37	38
03:00	0	0	1	1	1	1	0	0	0	0	0	0	0	0	4	37	39
04:00	0	0	0	6	7	1	0	1	0	0	0	0	0	0	15	34	46
05:00	2	0	3	20	25	1	0	1	0	0	0	0	0	0	52	33	34
06:00	3	0	5	32	50	9	1	0	0	0	0	0	0	0	100	34	37
07:00	6	2	4	109	134	18	0	1	0	0	0	0	0	0	274	34	36
08:00	4	2	8	85	82	14	2	0	0	0	0	0	0	0	197	34	37
09:00	3	0	2	60	84	11	2	0	0	0	0	0	0	0	162	34	37
10:00	9	0	6	60	62	19	3	0	0	0	0	0	0	0	159	34	38
11:00	9	1	7	85	63	7	2	0	0	0	0	0	0	0	174	33	35
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	36	5	36	462	513	83	10	3	0	0	0	0	0	0	1148		
Percent	3.1%	0.4%	3.1%	40.2%	44.7%	7.2%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	07:00	08:00	07:00	07:00	10:00	10:00	04:00							07:00		
Vol.	9	2	8	109	134	19	3	1							274		
PM Peak																	
Vol.																	
Grand Total	118	5	112	1195	1238	183	21	3	0	0	0	0	0	0	2875		
Percent	4.1%	0.2%	3.9%	41.6%	43.1%	6.4%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		25 MPH												
			50th Percentile :		30 MPH												
			85th Percentile :		34 MPH												
			95th Percentile :		36 MPH												

Statistics

10 MPH Pace Speed : 26-35 MPH
 Number in Pace : 2433
 Percent in Pace : 84.6%
 Number of Vehicles > 55 MPH : 0
 Percent of Vehicles > 55 MPH : 0.0%
 Mean Speed(Average) : 30 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
 NE Larch Ave S-O NE C St

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	12	2	11	164	85	12	1	0	0	0	0	0	0	0	287	33	34
13:00	6	3	14	124	81	5	0	0	0	0	0	0	0	0	233	33	34
14:00	7	1	25	137	75	9	1	0	0	0	0	0	0	0	255	33	34
15:00	5	3	18	135	89	11	1	0	0	0	0	0	0	0	262	33	34
16:00	2	1	35	179	98	6	0	0	0	0	0	0	0	0	321	32	34
17:00	9	0	18	205	80	9	0	0	0	0	0	0	0	0	321	32	34
18:00	9	4	36	145	62	3	0	0	0	0	0	0	0	0	259	32	34
19:00	1	0	15	94	50	4	0	0	0	0	0	0	0	0	164	32	34
20:00	1	0	15	88	36	2	0	0	0	0	0	0	0	0	142	32	34
21:00	0	1	7	47	22	4	0	0	0	0	0	0	0	0	81	33	34
22:00	0	0	4	17	15	3	0	0	0	0	0	0	0	0	39	34	36
23:00	0	0	1	19	7	1	1	0	0	0	0	0	0	0	29	33	37
Total	52	15	199	1354	700	69	4	0	0	0	0	0	0	0	2393		
Percent	2.2%	0.6%	8.3%	56.6%	29.3%	2.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	12:00 12	18:00 4	18:00 36	17:00 205	16:00 98	12:00 12	12:00 1								16:00 321		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
NE Larch Ave S-O NE C St

SB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/25/17	0	0	2	6	3	2	0	0	0	0	0	0	0	0	13	35	38
01:00	0	0	0	6	2	0	0	0	0	0	0	0	0	0	8	32	33
02:00	0	0	1	7	2	0	0	0	0	0	0	0	0	0	10	31	33
03:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	39	39
04:00	0	0	0	2	1	1	0	0	0	0	0	0	0	0	4	37	38
05:00	0	0	2	11	4	1	0	0	0	0	0	0	0	0	18	32	35
06:00	4	0	13	29	16	0	1	0	0	0	0	0	0	0	63	32	34
07:00	3	1	18	75	36	1	0	0	0	0	0	0	0	0	134	32	34
08:00	3	1	10	80	37	3	0	0	0	0	0	0	0	0	134	32	34
09:00	1	0	13	72	60	7	0	0	0	0	0	0	0	0	153	33	34
10:00	5	1	21	74	46	6	0	1	0	0	0	0	0	0	154	33	34
11:00	7	2	15	103	51	4	0	0	0	0	0	0	0	0	182	32	34
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	23	5	95	465	258	26	1	1	0	0	0	0	0	0	874		
Percent	2.6%	0.6%	10.9%	53.2%	29.5%	3.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	10:00	11:00	09:00	09:00	06:00	10:00							11:00		
Vol.	7	2	21	103	60	7	1	1							182		
PM Peak																	
Vol.																	
Grand Total	75	20	294	1819	958	95	5	1	0	0	0	0	0	0	3267		
Percent	2.3%	0.6%	9.0%	55.7%	29.3%	2.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		25 MPH												
			50th Percentile :		28 MPH												
			85th Percentile :		32 MPH												
			95th Percentile :		34 MPH												

Statistics 10 MPH Pace Speed : 26-35 MPH
Number in Pace : 2777
Percent in Pace : 85.0%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 29 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 6th St

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	1	125	28	0	7	0	0	0	0	0	0	0	0	3	164
13:00	2	121	16	0	11	2	0	0	0	0	0	0	0	1	153
14:00	2	107	15	1	5	0	0	1	0	0	0	0	0	4	135
15:00	2	118	14	2	12	1	0	1	0	0	0	0	0	2	152
16:00	1	123	17	4	11	0	0	1	0	0	0	0	0	4	161
17:00	6	126	26	0	10	0	0	0	0	0	0	0	0	4	172
18:00	3	106	16	0	8	0	0	0	0	0	0	0	0	7	140
19:00	0	81	14	0	4	1	0	0	0	0	0	0	0	0	100
20:00	0	61	6	0	4	0	0	0	0	0	0	0	0	0	71
21:00	0	50	2	0	3	0	0	0	0	0	0	0	0	0	55
22:00	1	15	2	0	2	0	0	0	0	0	0	0	0	0	20
23:00	0	12	1	0	0	0	0	0	0	0	0	0	0	0	13
Total	18	1045	157	7	77	4	0	3	0	0	0	0	0	25	1336
Percent	1.3%	78.2%	11.8%	0.5%	5.8%	0.3%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	
AM Peak Vol.															
PM Peak Vol.	17:00 6	17:00 126	12:00 28	16:00 4	15:00 12	13:00 2		14:00 1						18:00 7	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 6th St

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
01:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	9	2	0	0	0	0	0	0	0	0	0	0	0	11
05:00	0	7	4	0	2	0	0	0	0	0	0	0	0	0	13
06:00	0	39	11	0	3	0	0	0	0	0	0	0	0	0	53
07:00	0	109	23	3	8	0	0	0	0	0	0	0	0	4	147
08:00	0	85	20	0	5	0	0	0	0	0	0	0	0	2	112
09:00	2	76	7	0	9	0	0	0	0	0	0	0	0	2	96
10:00	0	78	13	0	9	0	0	1	0	0	0	0	0	1	102
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	2	421	81	3	36	0	0	1	0	0	0	0	0	10	554
Percent	0.4%	76.0%	14.6%	0.5%	6.5%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	
AM Peak	09:00	07:00	07:00	07:00	09:00			10:00						07:00	
Vol.	2	109	23	3	9			1						4	
PM Peak															
Vol.															
Grand Total	20	1466	238	10	113	4	0	4	0	0	0	0	0	35	1890
Percent	1.1%	77.6%	12.6%	0.5%	6.0%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 6th St

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	1	134	21	0	10	0	0	0	0	0	0	0	0	3	169
13:00	1	108	25	0	9	0	0	1	0	0	0	0	0	5	149
14:00	0	94	23	0	9	0	0	1	0	0	0	0	0	13	140
15:00	2	144	31	1	9	0	0	0	0	0	0	0	0	12	199
16:00	0	153	27	0	12	0	0	1	0	0	0	0	0	2	195
17:00	1	143	23	0	8	0	0	0	0	0	0	0	0	4	179
18:00	1	124	16	0	6	0	0	1	0	0	0	0	0	4	152
19:00	0	64	15	0	4	0	0	0	0	0	0	0	0	1	84
20:00	0	61	10	0	4	0	0	0	0	0	0	0	0	0	75
21:00	0	30	3	0	0	0	0	0	0	0	0	0	0	0	33
22:00	1	18	3	0	1	0	0	0	0	0	0	0	0	0	23
23:00	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
Total	7	1084	197	1	72	0	0	4	0	0	0	0	0	44	1409
Percent	0.5%	76.9%	14.0%	0.1%	5.1%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	
AM Peak Vol.															
PM Peak Vol.	15:00 2	16:00 153	15:00 31	15:00 1	16:00 12			13:00 1						14:00 13	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 6th St

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
05:00	0	7	1	0	1	0	0	0	0	0	0	0	0	0	9
06:00	0	30	7	0	4	0	0	0	0	0	0	0	0	0	41
07:00	0	68	23	0	8	1	0	0	0	0	0	0	0	5	105
08:00	1	57	22	0	5	1	0	0	0	0	0	0	0	2	88
09:00	2	71	17	0	8	0	0	1	0	0	0	0	0	3	102
10:00	0	74	23	1	10	0	0	1	0	0	0	0	0	7	116
11:00	0	69	20	0	9	0	0	0	0	0	0	0	0	1	99
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	3	399	114	1	45	2	0	2	0	0	0	0	0	18	584
Percent	0.5%	68.3%	19.5%	0.2%	7.7%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	
AM Peak	09:00	10:00	07:00	10:00	10:00	07:00		09:00						10:00	
Vol.	2	74	23	1	10	1		1						7	
PM Peak															
Vol.															
Grand Total	10	1483	311	2	117	2	0	6	0	0	0	0	0	62	1993
Percent	0.5%	74.4%	15.6%	0.1%	5.9%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 6th St

NB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	3	5	20	51	71	13	1	0	0	0	0	0	0	0	164	34	37
13:00	3	9	22	51	58	9	1	0	0	0	0	0	0	0	153	33	36
14:00	4	3	20	53	51	4	0	0	0	0	0	0	0	0	135	33	34
15:00	5	6	27	58	48	8	0	0	0	0	0	0	0	0	152	33	35
16:00	8	16	25	47	53	8	4	0	0	0	0	0	0	0	161	33	37
17:00	5	9	29	52	69	7	1	0	0	0	0	0	0	0	172	33	34
18:00	7	4	18	56	41	14	0	0	0	0	0	0	0	0	140	34	37
19:00	0	2	18	49	26	3	2	0	0	0	0	0	0	0	100	33	35
20:00	0	2	12	40	16	0	1	0	0	0	0	0	0	0	71	31	34
21:00	0	1	10	27	14	2	1	0	0	0	0	0	0	0	55	33	35
22:00	0	0	6	9	4	1	0	0	0	0	0	0	0	0	20	32	35
23:00	0	1	1	9	1	0	1	0	0	0	0	0	0	0	13	30	41
Total	35	58	208	502	452	69	12	0	0	0	0	0	0	0	1336		
Percent	2.6%	4.3%	15.6%	37.6%	33.8%	5.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	16:00 8	16:00 16	17:00 29	15:00 58	12:00 71	18:00 14	16:00 4								17:00 172		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 6th St

NB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	85th Percent	95th Percent
10/25/17	0	2	0	5	1	0	0	0	0	0	0	0	0	0	8	29	32
01:00	0	0	0	3	1	0	0	0	0	0	0	0	0	0	4	32	33
02:00	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3	28	29
03:00	0	0	1	3	0	0	0	0	0	0	0	0	0	0	4	29	29
04:00	0	0	1	5	3	2	0	0	0	0	0	0	0	0	11	35	38
05:00	0	0	3	3	5	2	0	0	0	0	0	0	0	0	13	35	38
06:00	1	4	8	18	18	3	1	0	0	0	0	0	0	0	53	33	37
07:00	5	11	19	59	45	8	0	0	0	0	0	0	0	0	147	33	35
08:00	2	4	17	47	36	4	2	0	0	0	0	0	0	0	112	33	35
09:00	4	2	13	39	31	6	1	0	0	0	0	0	0	0	96	33	36
10:00	1	1	18	52	25	5	0	0	0	0	0	0	0	0	102	32	34
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	13	24	81	236	165	30	4	0	0	0	0	0	0	0	553		
Percent	2.4%	4.3%	14.6%	42.7%	29.8%	5.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	07:00	07:00	07:00	07:00	08:00								07:00		
Vol.	5	11	19	59	45	8	2								147		
PM Peak																	
Vol.																	
Grand Total	48	82	289	738	617	99	16	0	0	0	0	0	0	0	1889		
Percent	2.5%	4.3%	15.3%	39.1%	32.7%	5.2%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		22 MPH												
			50th Percentile :		28 MPH												
			85th Percentile :		33 MPH												
			95th Percentile :		36 MPH												

Statistics

10 MPH Pace Speed : 26-35 MPH
Number in Pace : 1355
Percent in Pace : 71.7%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 29 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 6th St

SB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	4	6	16	52	73	18	0	0	0	0	0	0	0	0	169	34	37
13:00	5	1	12	36	80	15	0	0	0	0	0	0	0	0	149	34	37
14:00	13	5	18	55	41	6	2	0	0	0	0	0	0	0	140	33	35
15:00	16	7	24	69	72	11	0	0	0	0	0	0	0	0	199	33	35
16:00	2	8	19	73	83	10	0	0	0	0	0	0	0	0	195	33	35
17:00	4	5	19	75	64	10	2	0	0	0	0	0	0	0	179	33	36
18:00	5	7	19	60	57	4	0	0	0	0	0	0	0	0	152	33	34
19:00	1	3	11	41	24	4	0	0	0	0	0	0	0	0	84	33	34
20:00	0	7	9	36	22	1	0	0	0	0	0	0	0	0	75	32	34
21:00	0	1	2	14	16	0	0	0	0	0	0	0	0	0	33	33	34
22:00	0	1	2	12	4	2	0	0	0	2	0	0	0	0	23	36	57
23:00	0	0	1	4	5	1	0	0	0	0	0	0	0	0	11	34	37
Total	50	51	152	527	541	82	4	0	0	2	0	0	0	0	1409		
Percent	3.5%	3.6%	10.8%	37.4%	38.4%	5.8%	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	15:00 16	16:00 8	15:00 24	17:00 75	16:00 83	12:00 18	14:00 2			22:00 2					15:00 199		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 6th St

SB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/25/17	0	0	0	6	1	1	0	0	0	0	0	0	0	0	8	33	37
01:00	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4	33	34
02:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	38	39
03:00	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3	32	34
04:00	0	0	3	1	2	1	0	0	0	0	0	0	0	0	7	34	38
05:00	0	0	2	5	2	0	0	0	0	0	0	0	0	0	9	31	33
06:00	0	2	11	17	11	0	0	0	0	0	0	0	0	0	41	32	34
07:00	8	4	12	36	40	5	0	0	0	0	0	0	0	0	105	33	34
08:00	2	3	15	33	25	10	0	0	0	0	0	0	0	0	88	34	37
09:00	5	1	11	47	34	4	0	0	0	0	0	0	0	0	102	33	34
10:00	7	3	13	41	47	5	0	0	0	0	0	0	0	0	116	33	34
11:00	3	4	12	41	36	3	0	0	0	0	0	0	0	0	99	33	34
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	25	17	80	230	202	30	0	0	0	0	0	0	0	0	584		
Percent	4.3%	2.9%	13.7%	39.4%	34.6%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	08:00	09:00	10:00	08:00									10:00		
Vol.	8	4	15	47	47	10									116		
PM Peak																	
Vol.																	
Grand Total	75	68	232	757	743	112	4	0	0	2	0	0	0	0	1993		
Percent	3.8%	3.4%	11.6%	38.0%	37.3%	5.6%	0.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		23 MPH												
			50th Percentile :		29 MPH												
			85th Percentile :		33 MPH												
			95th Percentile :		35 MPH												

Statistics

10 MPH Pace Speed : 26-35 MPH
Number in Pace : 1500
Percent in Pace : 75.3%
Number of Vehicles > 55 MPH : 2
Percent of Vehicles > 55 MPH : 0.1%
Mean Speed(Average) : 29 MPH

EB[illegible]

EB[illegible]

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE 12th St E-O SE Larch Ave

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	3	199	52	0	6	1	0	0	0	0	0	0	0	7	268
13:00	1	189	43	0	12	1	0	1	0	0	0	0	0	9	256
14:00	2	179	35	0	9	0	0	0	0	0	0	0	0	17	242
15:00	3	227	44	1	26	0	0	0	0	0	0	0	0	15	316
16:00	2	246	49	0	13	1	0	0	0	0	0	0	0	22	333
17:00	6	251	40	0	7	0	0	0	0	0	0	0	0	34	338
18:00	5	166	28	0	19	0	0	0	0	0	0	0	0	18	236
19:00	0	110	16	0	2	0	0	0	0	0	0	0	0	6	134
20:00	0	96	16	0	5	0	0	0	0	0	0	0	0	3	120
21:00	0	63	15	0	3	0	0	1	0	0	0	0	0	1	83
22:00	1	33	2	0	3	0	0	0	0	0	0	0	0	1	40
23:00	0	24	4	0	0	0	0	0	0	0	0	0	0	0	28
Total	23	1783	344	1	105	3	0	2	0	0	0	0	0	133	2394
Percent	1.0%	74.5%	14.4%	0.0%	4.4%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	
AM Peak Vol.															
PM Peak Vol.	17:00 6	17:00 251	12:00 52	15:00 1	15:00 26	12:00 1		13:00 1						17:00 34	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE 12th St E-O SE Larch Ave

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	13	0	0	1	0	0	0	0	0	0	0	0	0	14
01:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
02:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
05:00	1	6	5	0	4	0	0	0	0	0	0	0	0	0	16
06:00	0	28	3	0	3	0	0	0	0	0	0	0	0	2	36
07:00	0	94	16	1	7	0	0	1	0	0	0	0	0	6	125
08:00	5	84	22	1	7	1	0	1	0	0	0	0	0	2	123
09:00	2	102	24	1	9	0	0	0	0	0	0	0	0	9	147
10:00	3	146	36	0	13	0	0	1	0	0	0	0	0	7	206
11:00	1	124	30	1	8	0	0	0	0	0	0	0	0	2	166
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	12	612	139	4	52	1	0	3	0	0	0	0	0	28	851
Percent	1.4%	71.9%	16.3%	0.5%	6.1%	0.1%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	
AM Peak	08:00	10:00	10:00	07:00	10:00	08:00		07:00						09:00	
Vol.	5	146	36	1	13	1		1						9	
PM Peak															
Vol.															
Grand Total	35	2395	483	5	157	4	0	5	0	0	0	0	0	161	3245
Percent	1.1%	73.8%	14.9%	0.2%	4.8%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE 12th St E-O SE Larch Ave

EB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	8	1	10	102	127	12	0	0	0	0	0	0	0	0	260	33	34
13:00	8	0	7	83	130	10	2	0	0	0	0	0	0	0	240	34	34
14:00	10	1	5	94	104	3	0	1	0	0	0	0	0	0	218	33	34
15:00	10	1	7	110	131	17	2	0	0	0	0	0	0	0	278	34	36
16:00	14	1	9	89	106	15	1	0	0	0	0	0	0	0	235	34	36
17:00	38	2	16	100	100	15	0	0	0	0	0	0	0	0	271	33	35
18:00	12	2	26	108	54	4	0	0	0	0	0	0	0	0	206	32	34
19:00	5	1	8	57	37	6	0	0	0	0	0	0	0	0	114	33	35
20:00	1	0	6	58	33	5	0	0	0	0	0	0	0	0	103	33	34
21:00	3	1	4	20	19	4	0	0	0	0	0	0	0	0	51	34	36
22:00	0	0	6	13	10	4	0	0	0	0	0	0	0	0	33	34	37
23:00	0	0	4	6	8	0	0	0	0	0	0	0	0	0	18	33	34
Total	109	10	108	840	859	95	5	1	0	0	0	0	0	0	2027		
Percent	5.4%	0.5%	5.3%	41.4%	42.4%	4.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	17:00 38	17:00 2	18:00 26	15:00 110	15:00 131	15:00 17	13:00 2	14:00 1							15:00 278		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE 12th St E-O SE Larch Ave

EB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/25/17	0	0	1	5	2	1	0	0	0	0	0	0	0	0	9	34	37
01:00	0	0	0	1	0	1	1	0	0	0	0	0	0	0	3	42	44
02:00	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	33	34
03:00	0	0	0	3	1	0	0	0	0	0	0	0	0	0	4	32	33
04:00	0	0	2	6	8	0	0	0	0	0	0	0	0	0	16	33	34
05:00	0	0	2	15	16	7	0	0	0	0	0	0	0	0	40	35	38
06:00	0	0	5	23	34	8	0	0	0	0	0	0	0	0	70	34	37
07:00	3	3	2	65	126	15	1	0	0	0	0	0	0	0	215	34	36
08:00	2	0	7	62	100	18	1	0	0	0	0	0	0	0	190	34	37
09:00	8	3	6	57	92	12	1	0	0	0	0	0	0	0	179	34	36
10:00	3	2	14	76	67	8	2	0	0	0	0	0	0	0	172	33	35
11:00	0	0	0	0	73	0	0	0	0	0	0	0	0	0	73	34	34
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	16	8	39	314	520	70	6	0	0	0	0	0	0	0	973		
Percent	1.6%	0.8%	4.0%	32.3%	53.4%	7.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	07:00	10:00	10:00	07:00	08:00	10:00								07:00		
Vol.	8	3	14	76	126	18	2								215		
PM Peak																	
Vol.																	
Grand Total	125	18	147	1154	1379	165	11	1	0	0	0	0	0	0	3000		
Percent	4.2%	0.6%	4.9%	38.5%	46.0%	5.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 25 MPH
50th Percentile : 30 MPH
85th Percentile : 34 MPH
95th Percentile : 35 MPH

Statistics 10 MPH Pace Speed : 26-35 MPH
Number in Pace : 2533
Percent in Pace : 84.4%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 30 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE 12th St E-O SE Larch Ave

WB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	7	0	6	95	143	15	2	0	0	0	0	0	0	0	268	34	36
13:00	9	1	6	97	120	23	0	0	0	0	0	0	0	0	256	34	37
14:00	17	1	3	80	115	26	0	0	0	0	0	0	0	0	242	34	37
15:00	18	2	9	115	155	16	1	0	0	0	0	0	0	0	316	34	35
16:00	22	0	7	102	160	40	2	0	0	0	0	0	0	0	333	34	38
17:00	36	0	15	108	156	23	0	0	0	0	0	0	0	0	338	34	36
18:00	23	2	9	100	99	3	0	0	0	0	0	0	0	0	236	33	34
19:00	5	0	12	72	43	2	0	0	0	0	0	0	0	0	134	32	34
20:00	3	0	7	61	46	3	0	0	0	0	0	0	0	0	120	33	34
21:00	1	1	5	51	21	4	0	0	0	0	0	0	0	0	83	32	34
22:00	1	1	3	13	19	3	0	0	0	0	0	0	0	0	40	34	36
23:00	0	0	1	13	12	1	1	0	0	0	0	0	0	0	28	34	38
Total	142	8	83	907	1089	159	6	0	0	0	0	0	0	0	2394		
Percent	5.9%	0.3%	3.5%	37.9%	45.5%	6.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	17:00 36	15:00 2	17:00 15	15:00 115	16:00 160	16:00 40	12:00 2								17:00 338		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE 12th St E-O SE Larch Ave

WB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/25/17	0	0	0	13	1	0	0	0	0	0	0	0	0	0	14	29	31
01:00	0	0	0	3	1	2	0	0	0	0	0	0	0	0	6	37	39
02:00	0	0	0	2	3	0	0	0	0	0	0	0	0	0	5	33	34
03:00	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3	28	29
04:00	0	0	2	1	1	0	0	0	0	0	0	0	0	0	4	32	33
05:00	0	0	4	8	4	0	0	0	0	0	0	0	0	0	16	32	34
06:00	2	0	2	20	10	2	0	0	0	0	0	0	0	0	36	33	35
07:00	6	0	4	45	64	6	0	0	0	0	0	0	0	0	125	34	34
08:00	2	1	6	53	53	8	0	0	0	0	0	0	0	0	123	34	36
09:00	8	0	4	60	66	8	1	0	0	0	0	0	0	0	147	34	36
10:00	7	3	6	60	118	11	1	0	0	0	0	0	0	0	206	34	35
11:00	6	2	4	61	84	9	0	0	0	0	0	0	0	0	166	34	35
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	31	6	33	328	405	46	2	0	0	0	0	0	0	0	851		
Percent	3.6%	0.7%	3.9%	38.5%	47.6%	5.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	10:00	08:00	11:00	10:00	10:00	09:00								10:00		
Vol.	8	3	6	61	118	11	1								206		
PM Peak																	
Vol.																	
Grand Total	173	14	116	1235	1494	205	8	0	0	0	0	0	0	0	3245		
Percent	5.3%	0.4%	3.6%	38.1%	46.0%	6.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		25 MPH												
			50th Percentile :		30 MPH												
			85th Percentile :		34 MPH												
			95th Percentile :		36 MPH												

Statistics

10 MPH Pace Speed : 26-35 MPH
Number in Pace : 2729
Percent in Pace : 84.1%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 30 MPH

NB

[illegible]

NB

[illegible]

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 12th St

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	4	160	35	2	10	0	0	1	0	0	0	0	0	9	221
13:00	1	147	36	0	14	0	0	2	0	0	0	0	0	5	205
14:00	0	119	31	0	14	0	0	0	0	0	0	0	0	4	168
15:00	2	173	40	2	15	0	0	0	0	0	0	0	0	8	240
16:00	1	166	32	0	16	0	0	1	0	0	0	0	0	7	223
17:00	3	177	30	0	11	1	0	1	0	0	0	0	0	8	231
18:00	2	120	18	0	10	0	0	0	0	0	0	0	0	1	151
19:00	0	71	13	0	6	0	0	0	0	0	0	0	0	0	90
20:00	0	65	11	0	4	0	0	0	0	0	0	0	0	0	80
21:00	1	51	6	0	1	0	0	0	0	0	0	0	0	2	61
22:00	0	23	3	0	0	0	0	0	0	0	0	0	0	0	26
23:00	0	15	1	0	0	0	0	0	0	0	0	0	0	0	16
Total	14	1287	256	4	101	1	0	5	0	0	0	0	0	44	1712
Percent	0.8%	75.2%	15.0%	0.2%	5.9%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	
AM Peak Vol.															
PM Peak Vol.	12:00 4	17:00 177	15:00 40	12:00 2	16:00 16	17:00 1		13:00 2						12:00 9	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 12th St

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
10/25/17	0	10	0	0	1	0	0	0	0	0	0	0	0	0	11
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7
05:00	1	6	3	0	3	0	0	0	0	0	0	0	0	0	13
06:00	0	38	6	0	5	1	0	0	0	0	0	0	0	0	50
07:00	0	82	19	1	10	0	0	0	0	0	0	0	0	1	113
08:00	1	65	27	0	6	1	0	0	0	0	0	0	0	1	101
09:00	3	98	12	0	10	1	0	0	0	0	0	0	0	0	124
10:00	4	106	29	1	16	0	0	0	0	0	0	0	0	4	160
11:00	1	95	20	0	12	0	0	0	0	0	0	0	0	0	128
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	10	514	118	2	63	3	0	0	0	0	0	0	0	6	716
Percent	1.4%	71.8%	16.5%	0.3%	8.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	
AM Peak	10:00	10:00	10:00	07:00	10:00	06:00								10:00	
Vol.	4	106	29	1	16	1								4	
PM Peak															
Vol.															
Grand Total	24	1801	374	6	164	4	0	5	0	0	0	0	0	50	2428
Percent	1.0%	74.2%	15.4%	0.2%	6.8%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 12th St

NB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	11	39	113	41	1	0	0	0	0	0	0	0	0	0	205	26	28
13:00	12	34	96	38	1	0	0	0	0	0	0	0	0	0	181	26	28
14:00	5	30	106	29	2	0	0	0	0	0	0	0	0	0	172	25	28
15:00	15	57	108	22	2	0	0	0	0	0	0	0	0	0	204	24	28
16:00	11	45	95	37	1	0	0	0	0	0	0	0	0	0	189	26	28
17:00	19	47	107	31	0	0	0	0	0	0	0	0	0	0	204	25	28
18:00	9	57	89	24	0	0	0	0	0	0	0	0	0	0	179	24	28
19:00	1	29	68	16	1	0	0	0	0	0	0	0	0	0	115	24	28
20:00	3	22	43	12	1	0	0	0	0	0	0	0	0	0	81	25	28
21:00	1	16	32	14	1	0	0	0	0	0	0	0	0	0	64	26	29
22:00	1	3	10	8	1	0	0	0	0	0	0	0	0	0	23	28	29
23:00	0	4	11	2	0	1	0	0	0	0	0	0	0	0	18	25	35
Total	88	383	878	274	11	1	0	0	0	0	0	0	0	0	1635		
Percent	5.4%	23.4%	53.7%	16.8%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	17:00 19	15:00 57	12:00 113	12:00 41	14:00 2	23:00 1									12:00 205		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 12th St

NB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
		20	25	30	35	40	45	50	55	60	65	70	75	999			
10/25/17	0	1	5	1	0	0	0	0	0	0	0	0	0	0	7	24	28
01:00	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4	23	24
02:00	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	27	29
03:00	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	24	24
04:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6	22	24
05:00	0	1	7	3	2	0	0	0	0	0	0	0	0	0	13	30	33
06:00	1	6	18	11	1	0	0	0	0	0	0	0	0	0	37	27	29
07:00	2	19	54	21	4	0	0	0	0	0	0	0	0	0	100	27	29
08:00	2	18	59	17	1	0	0	0	0	0	0	0	0	0	97	26	28
09:00	2	14	64	28	2	0	0	0	0	0	0	0	0	0	110	27	29
10:00	5	21	61	32	0	0	0	0	0	0	0	0	0	0	119	27	29
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	12	87	276	114	10	0	0	0	0	0	0	0	0	0	499		
Percent	2.4%	17.4%	55.3%	22.8%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	10:00	09:00	10:00	07:00										10:00		
Vol.	5	21	64	32	4										119		
PM Peak																	
Vol.																	
Grand Total	100	470	1154	388	21	1	0	0	0	0	0	0	0	0	2134		
Percent	4.7%	22.0%	54.1%	18.2%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		17 MPH												
			50th Percentile :		22 MPH												
			85th Percentile :		26 MPH												
			95th Percentile :		28 MPH												

Statistics

10 MPH Pace Speed : 16-25 MPH
Number in Pace : 1624
Percent in Pace : 76.1%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 22 MPH

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 12th St

SB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/24/17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	9	17	74	103	17	1	0	0	0	0	0	0	0	0	221	29	32
13:00	5	7	87	100	6	0	0	0	0	0	0	0	0	0	205	28	29
14:00	4	7	71	81	5	0	0	0	0	0	0	0	0	0	168	28	29
15:00	8	8	117	102	5	0	0	0	0	0	0	0	0	0	240	28	29
16:00	7	17	86	97	15	1	0	0	0	0	0	0	0	0	223	29	31
17:00	8	13	114	95	1	0	0	0	0	0	0	0	0	0	231	28	29
18:00	3	3	84	58	3	0	0	0	0	0	0	0	0	0	151	28	29
19:00	0	6	50	29	5	0	0	0	0	0	0	0	0	0	90	28	30
20:00	0	5	45	25	5	0	0	0	0	0	0	0	0	0	80	28	31
21:00	2	7	22	25	5	0	0	0	0	0	0	0	0	0	61	29	31
22:00	1	2	11	12	0	0	0	0	0	0	0	0	0	0	26	28	29
23:00	0	2	8	6	0	0	0	0	0	0	0	0	0	0	16	28	29
Total	47	94	769	733	67	2	0	0	0	0	0	0	0	0	1712		
Percent	2.7%	5.5%	44.9%	42.8%	3.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	12:00 9	12:00 17	15:00 117	12:00 103	12:00 17	12:00 1									15:00 240		

All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740

Site Code: 1
SE Larch Ave S-O SE 12th St

SB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	85th Percent	95th Percent
10/25/17	0	3	5	3	0	0	0	0	0	0	0	0	0	0	11	27	29
01:00	0	0	2	2	0	0	0	0	0	0	0	0	0	0	4	28	29
02:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	29	29
03:00	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	24	24
04:00	0	0	3	4	0	0	0	0	0	0	0	0	0	0	7	28	29
05:00	0	4	6	3	0	0	0	0	0	0	0	0	0	0	13	26	28
06:00	0	4	28	16	2	0	0	0	0	0	0	0	0	0	50	28	29
07:00	1	5	54	50	3	0	0	0	0	0	0	0	0	0	113	28	29
08:00	2	3	45	49	2	0	0	0	0	0	0	0	0	0	101	28	29
09:00	1	11	60	49	3	0	0	0	0	0	0	0	0	0	124	28	29
10:00	4	10	83	60	3	0	0	0	0	0	0	0	0	0	160	28	29
11:00	2	9	75	42	0	0	0	0	0	0	0	0	0	0	128	27	29
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	10	49	365	279	13	0	0	0	0	0	0	0	0	0	716		
Percent	1.4%	6.8%	51.0%	39.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	09:00	10:00	10:00	07:00										10:00		
Vol.	4	11	83	60	3										160		
PM Peak																	
Vol.																	
Grand Total	57	143	1134	1012	80	2	0	0	0	0	0	0	0	0	2428		
Percent	2.3%	5.9%	46.7%	41.7%	3.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
			15th Percentile :		20 MPH												
			50th Percentile :		24 MPH												
			85th Percentile :		28 MPH												
			95th Percentile :		29 MPH												

Statistics

10 MPH Pace Speed : 21-30 MPH
Number in Pace : 2146
Percent in Pace : 88.4%
Number of Vehicles > 55 MPH : 0
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 25 MPH

APPENDIX B

MEMORANDUM

DATE: January 30, 2018

TO: Ryan Billen, PE

FROM: John Manix, PE

PROJECT: 67136.000, Phase 0004, Task 004

REGARDING: Central College Place Planning Study, TIA, Trip Generation of Three Alternative Land Uses

The following trip generation tables show the range of new trips generated from the site based on the market analysis.¹ Please distribute it to the project team members for their information. If they have any concerns, comments, or questions, please let me know. We plan to move forward with the TIA based on alternative 2, the highest trip alternative. If the analysis shows the need for traffic mitigation, we will follow up with the project team before completing the report. The three alternatives include the following:

1. Existing zoning with the lowest density of residential land use: single-family homes.
2. Proposed RM zoning using 250 apartment units based on the market reports analysis.
3. Proposed 72,000 square feet of light industrial land use based on the market analysis

PBS Engineering and Environmental Inc. (PBS) will be preparing a traffic impact analysis (TIA) report to evaluate the change in zoning. To prepare the TIA report, a land use alternative and size are needed. The market analysis provided the two alternatives to the existing zoning that include build-out of the vacant 5.5 acres.

Table 1. Alternative 1: Single-Family Homes with Existing Zoning

Land Use (ITE Code)	Single-family detached (210)	
Independent Variable	Units	
Size	35	
Average Weekday Trips (ADT)	334	
Peak Hour Trips	AM Peak Hour (7:00–9:00 AM)	PM Peak Hour (4:00–6:00 PM)
In	7	22
Out	20	13
Total Trips	27	35

¹ College Place NE Larch Street Site Market Analysis and Site Evaluation, ECONorthwest, December 2017.

Table 2. Alternative 2: Apartments with RM Zoning

Land Use (ITE Code)	Apartments (220)	
Independent Variable	Units	
Size	250	
Average Weekday Trips (ADT)	1,663	
Peak Hour Trips	AM Peak Hour (7:00–9:00 AM)	PM Peak Hour (4:00–6:00 PM)
In	26	101
Out	102	54
Total Trips	128	155

Table 3. Alternative 3: Light Industrial Zoning

Land Use (ITE Code)	General Light Industrial (110)	
Independent Variable	1,000 square feet	
Size	71	
Average Weekday Trips (ADT)	496	
Peak Hour Trips	AM Peak Hour (7:00–9:00 AM)	PM Peak Hour (4:00–6:00 PM)
In	57	8
Out	8	61
Total Trips	65	69

Trip Generation Findings and Recommendation

The range of trips generation varies significantly depending on the land use and the size. Assuming the number of trips from the proposed apartments does not necessitate expensive traffic mitigation, then we know that light industrial land use will likely not trigger mitigation. It is interesting to note that light industrial trip generation is in the opposite direction of the residential. Thus, it should have even less traffic impacts than residential land use alternatives because the existing surrounding land use is mostly residential. Alternative 2, proposed RM zoning, is the recommended land use for the TIA report as a worst-case scenario.

Attachment: Trip generation calculations

JAM:REVIEWER:lc

APPENDIX C

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	0	368	167	0	6	19
Future Vol, veh/h	0	368	167	0	6	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	409	186	0	7	21

Major/Minor	Major1	Minor1	Major2
Conflicting Flow All	-	0	443
Stage 1	-	-	409
Stage 2	-	-	34
Critical Hdwy	-	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	4.018
Pot Cap-1 Maneuver	0	-	509
Stage 1	0	-	596
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	0
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	0
Stage 2	-	-	0

Approach	EB	WB	SB
HCM Control Delay, s	0		2
HCM LOS		-	

Minor Lane/Major Mvmt	EBTWBLn1	SBL	SBR
Capacity (veh/h)	-	-	1150
HCM Lane V/C Ratio	-	-	0.006
HCM Control Delay (s)	-	-	8.1
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	291	149	39	80	16
Future Vol, veh/h	11	291	149	39	80	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	323	166	43	89	18

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	209	0	0 535 187
Stage 1	-	-	- 187 -
Stage 2	-	-	- 348 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1362	-	- 506 855
Stage 1	-	-	- 845 -
Stage 2	-	-	- 715 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1362	-	- 502 855
Mov Cap-2 Maneuver	-	-	- 576 -
Stage 1	-	-	- 845 -
Stage 2	-	-	- 709 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1362	-	-	-	576	855
HCM Lane V/C Ratio	0.009	-	-	-	0.154	0.021
HCM Control Delay (s)	7.7	-	-	-	12.4	9.3
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0.1

Intersection

Int Delay, s/veh 8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	82	123	29	14	61	4	18	203	28	2	100	60
Future Vol, veh/h	82	123	29	14	61	4	18	203	28	2	100	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	137	32	16	68	4	20	226	31	2	111	67

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	466	446	144	514	463	241	178	0	0	257	0	0
Stage 1	149	149	-	281	281	-	-	-	-	-	-	-
Stage 2	317	297	-	233	182	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	507	507	903	471	496	798	1398	-	-	1308	-	-
Stage 1	854	774	-	726	678	-	-	-	-	-	-	-
Stage 2	694	668	-	770	749	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	445	499	903	354	488	798	1398	-	-	1308	-	-
Mov Cap-2 Maneuver	445	499	-	354	488	-	-	-	-	-	-	-
Stage 1	842	773	-	716	668	-	-	-	-	-	-	-
Stage 2	611	658	-	610	748	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.4	13.8	0.6	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1398	-	-	506 354 500	1308	-	-
HCM Lane V/C Ratio	0.014	-	-	0.514 0.044 0.144	0.002	-	-
HCM Control Delay (s)	7.6	-	-	19.4 15.6 13.4	7.8	-	-
HCM Lane LOS	A	-	-	C C B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.9 0.1 0.5	0	-	-

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	174	13	43	67	30	4	66	43	38	77	15
Future Vol, veh/h	24	174	13	43	67	30	4	66	43	38	77	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	193	14	48	74	33	4	73	48	42	86	17
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	108	0	0	208	0	0	492	457	201	501	448	91
Stage 1	-	-	-	-	-	-	254	254	-	187	187	-
Stage 2	-	-	-	-	-	-	238	203	-	314	261	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1483	-	-	1363	-	-	487	500	840	480	506	967
Stage 1	-	-	-	-	-	-	750	697	-	815	745	-
Stage 2	-	-	-	-	-	-	765	733	-	697	692	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1483	-	-	1363	-	-	395	471	840	381	477	967
Mov Cap-2 Maneuver	-	-	-	-	-	-	395	471	-	381	477	-
Stage 1	-	-	-	-	-	-	734	682	-	798	717	-
Stage 2	-	-	-	-	-	-	637	705	-	574	677	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			2.4			13.3			16		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	561	1483	-	-	1363	-	-	470				
HCM Lane V/C Ratio	0.224	0.018	-	-	0.035	-	-	0.307				
HCM Control Delay (s)	13.3	7.5	0	-	7.7	0	-	16				
HCM Lane LOS	B	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0.1	-	-	1.3				

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	0	252	390	0	6	24
Future Vol, veh/h	0	252	390	0	6	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	280	433	0	7	27

Major/Minor	Major1	Minor1	Major2
Conflicting Flow All	-	0	320
Stage 1	-	-	280
Stage 2	-	-	40
Critical Hdwy	-	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	4.018
Pot Cap-1 Maneuver	0	-	597
Stage 1	0	-	679
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	0
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	0
Stage 2	-	-	0

Approach	EB	WB	SB
HCM Control Delay, s	0		1.6
HCM LOS		-	

Minor Lane/Major Mvmt	EBTWBLn1	SBL	SBR
Capacity (veh/h)	-	-	1283
HCM Lane V/C Ratio	-	-	0.005
HCM Control Delay (s)	-	-	7.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	215	352	63	36	10
Future Vol, veh/h	16	215	352	63	36	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	239	391	70	40	11

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	461	0	0 700 426
Stage 1	-	-	- 426 -
Stage 2	-	-	- 274 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1100	-	- 405 628
Stage 1	-	-	- 659 -
Stage 2	-	-	- 772 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1100	-	- 398 628
Mov Cap-2 Maneuver	-	-	- 502 -
Stage 1	-	-	- 659 -
Stage 2	-	-	- 759 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1100	-	-	-	502	628
HCM Lane V/C Ratio	0.016	-	-	-	0.08	0.018
HCM Control Delay (s)	8.3	-	-	-	12.8	10.8
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3	0.1

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	65	21	22	44	6	24	180	23	2	274	80
Future Vol, veh/h	49	65	21	22	44	6	24	180	23	2	274	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	200	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	72	23	24	49	7	27	200	26	2	304	89
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	647	632	349	667	664	213	393	0	0	226	0	0
Stage 1	353	353	-	266	266	-	-	-	-	-	-	-
Stage 2	294	279	-	401	398	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	384	398	694	372	381	827	1166	-	-	1342	-	-
Stage 1	664	631	-	739	689	-	-	-	-	-	-	-
Stage 2	714	680	-	626	603	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	336	388	694	302	372	827	1166	-	-	1342	-	-
Mov Cap-2 Maneuver	336	388	-	302	372	-	-	-	-	-	-	-
Stage 1	649	630	-	722	673	-	-	-	-	-	-	-
Stage 2	642	664	-	535	602	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	19.7		16.3		0.9		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	1166	-	-	393	302	398	1342	-	-			
HCM Lane V/C Ratio	0.023	-	-	0.382	0.081	0.14	0.002	-	-			
HCM Control Delay (s)	8.2	-	-	19.7	18	15.5	7.7	-	-			
HCM Lane LOS	A	-	-	C	C	C	A	-	-			
HCM 95th %tile Q(veh)	0.1	-	-	1.8	0.3	0.5	0	-	-			

Intersection												
Int Delay, s/veh	10.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	129	20	111	176	42	7	98	89	27	96	41
Future Vol, veh/h	15	129	20	111	176	42	7	98	89	27	96	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	143	22	123	196	47	8	109	99	30	107	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	242	0	0	166	0	0	730	677	154	758	665	219
Stage 1	-	-	-	-	-	-	188	188	-	466	466	-
Stage 2	-	-	-	-	-	-	542	489	-	292	199	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1324	-	-	1412	-	-	338	375	892	324	381	821
Stage 1	-	-	-	-	-	-	814	745	-	577	562	-
Stage 2	-	-	-	-	-	-	525	549	-	716	736	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1324	-	-	1412	-	-	221	332	892	197	338	821
Mov Cap-2 Maneuver	-	-	-	-	-	-	221	332	-	197	338	-
Stage 1	-	-	-	-	-	-	803	735	-	569	505	-
Stage 2	-	-	-	-	-	-	352	494	-	535	726	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	2.6	19.8	26.2
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	455	1324	-	-	1412	-	-	348
HCM Lane V/C Ratio	0.474	0.013	-	-	0.087	-	-	0.524
HCM Control Delay (s)	19.8	7.8	0	-	7.8	0	-	26.2
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	2.5	0	-	-	0.3	-	-	2.9

Intersection

Int Delay, s/veh 3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	0	372	169	1	6	19
Future Vol, veh/h	0	372	169	1	6	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	404	184	1	7	21

Major/Minor	Major1	Minor1	Major2	Minor2	Major3	Minor3
Conflicting Flow All	-	0	438	404	404	-
Stage 1	-	-	404	-	-	-
Stage 2	-	-	34	-	-	-
Critical Hdwy	-	-	6.52	6.22	4.12	-
Critical Hdwy Stg 1	-	-	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	0	-	512	647	1155	-
Stage 1	0	-	599	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	0	647	1155	-
Mov Cap-2 Maneuver	-	-	0	-	-	-
Stage 1	-	-	0	-	-	-
Stage 2	-	-	0	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	12.8	2
HCM LOS		B	

Minor Lane/Major Mvmt	EBTWBLn1	SBL	SBR
Capacity (veh/h)	-	647	1155
HCM Lane V/C Ratio	-	0.286	0.006
HCM Control Delay (s)	-	12.8	8.1
HCM Lane LOS	-	B	A
HCM 95th %tile Q(veh)	-	1.2	0

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	293	150	40	81	16
Future Vol, veh/h	11	293	150	40	81	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	318	163	43	88	17

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	207	0	0 527 185
Stage 1	-	-	- 185 -
Stage 2	-	-	- 342 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1364	-	- 512 857
Stage 1	-	-	- 847 -
Stage 2	-	-	- 719 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1364	-	- 507 857
Mov Cap-2 Maneuver	-	-	- 580 -
Stage 1	-	-	- 847 -
Stage 2	-	-	- 713 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1364	-	-	-	580	857
HCM Lane V/C Ratio	0.009	-	-	-	0.152	0.02
HCM Control Delay (s)	7.7	-	-	-	12.3	9.3
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0.1

Intersection												
Int Delay, s/veh	7.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	123	30	14	61	4	18	205	28	2	101	60
Future Vol, veh/h	83	123	30	14	61	4	18	205	28	2	101	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	134	33	15	66	4	20	223	30	2	110	65
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	460	439	142	507	456	238	175	0	0	253	0	0
Stage 1	147	147	-	277	277	-	-	-	-	-	-	-
Stage 2	313	292	-	230	179	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	512	512	906	476	501	801	1401	-	-	1312	-	-
Stage 1	856	775	-	729	681	-	-	-	-	-	-	-
Stage 2	698	671	-	773	751	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	451	504	906	361	493	801	1401	-	-	1312	-	-
Mov Cap-2 Maneuver	451	504	-	361	493	-	-	-	-	-	-	-
Stage 1	844	774	-	719	671	-	-	-	-	-	-	-
Stage 2	617	661	-	616	750	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	18.9		13.7		0.5		0.1					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	1401	-	-	512	361	505	1312	-	-			
HCM Lane V/C Ratio	0.014	-	-	0.501	0.042	0.14	0.002	-	-			
HCM Control Delay (s)	7.6	-	-	18.9	15.4	13.3	7.7	-	-			
HCM Lane LOS	A	-	-	C	C	B	A	-	-			
HCM 95th %tile Q(veh)	0	-	-	2.8	0.1	0.5	0	-	-			

HCM 2010 TWSC
4: Larch Ave & 12th St

04/25/2018

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	174	13	43	67	31	4	66	43	39	77	16
Future Vol, veh/h	25	174	13	43	67	31	4	66	43	39	77	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	189	14	47	73	34	4	72	47	42	84	17
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	107	0	0	203	0	0	485	451	196	493	441	90
Stage 1	-	-	-	-	-	-	251	251	-	183	183	-
Stage 2	-	-	-	-	-	-	234	200	-	310	258	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1484	-	-	1369	-	-	492	504	845	486	510	968
Stage 1	-	-	-	-	-	-	753	699	-	819	748	-
Stage 2	-	-	-	-	-	-	769	736	-	700	694	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1484	-	-	1369	-	-	401	475	845	389	481	968
Mov Cap-2 Maneuver	-	-	-	-	-	-	401	475	-	389	481	-
Stage 1	-	-	-	-	-	-	737	684	-	802	720	-
Stage 2	-	-	-	-	-	-	643	709	-	579	679	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			2.4			13.1			15.8		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	566	1484	-	-	1369	-	-	477				
HCM Lane V/C Ratio	0.217	0.018	-	-	0.034	-	-	0.301				
HCM Control Delay (s)	13.1	7.5	0	-	7.7	0	-	15.8				
HCM Lane LOS	B	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.1	-	-	1.3				

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	1	356	525	0	7	27
Future Vol, veh/h	1	356	525	0	7	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	387	571	0	8	29

Major/Minor	Major1	Minor1	Major2
Conflicting Flow All	29	0	434
Stage 1	-	-	389
Stage 2	-	-	45
Critical Hdwy	4.12	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	4.018
Pot Cap-1 Maneuver	1584	- ~	515
Stage 1	-	-	608
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1584	-	0
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	0
Stage 2	-	-	0

Approach	EB	WB	SB
HCM Control Delay, s	0		1.7
HCM LOS		-	

Minor Lane/Major Mvmt	EBL	EBTWBLn1	SBL	SBR
Capacity (veh/h)	1584	-	-	1171
HCM Lane V/C Ratio	0.001	-	-	0.006
HCM Control Delay (s)	7.3	-	-	8.1
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	310	478	77	47	16
Future Vol, veh/h	21	310	478	77	47	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	337	520	84	51	17

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	603	0	0 944 561
Stage 1	-	-	- 561 -
Stage 2	-	-	- 383 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	975	-	- 291 527
Stage 1	-	-	- 571 -
Stage 2	-	-	- 689 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	975	-	- 284 527
Mov Cap-2 Maneuver	-	-	- 410 -
Stage 1	-	-	- 571 -
Stage 2	-	-	- 673 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	975	-	-	-	410	527
HCM Lane V/C Ratio	0.023	-	-	-	0.125	0.033
HCM Control Delay (s)	8.8	-	-	-	15	12.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.1

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Intersection

Int Delay, s/veh 14

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	73	98	28	13	72	30	34	244	34	10	352	119
Future Vol, veh/h	73	98	28	13	72	30	34	244	34	10	352	119
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	200	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	107	30	14	78	33	37	265	37	11	383	129

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	882	845	447	896	892	284	512	0	0	302	0	0
Stage 1	469	469	-	358	358	-	-	-	-	-	-	-
Stage 2	413	376	-	538	534	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	267	300	612	261	281	755	1053	-	-	1259	-	-
Stage 1	575	561	-	660	628	-	-	-	-	-	-	-
Stage 2	616	616	-	527	524	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	192	287	612	171	269	755	1053	-	-	1259	-	-
Mov Cap-2 Maneuver	192	287	-	171	269	-	-	-	-	-	-	-
Stage 1	555	556	-	637	606	-	-	-	-	-	-	-
Stage 2	495	594	-	401	519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	63	22	0.9	0.2
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1053	-	-	259	171	332	1259
HCM Lane V/C Ratio	0.035	-	-	0.835	0.083	0.334	0.009
HCM Control Delay (s)	8.5	-	-	63	27.9	21.2	7.9
HCM Lane LOS	A	-	-	F	D	C	A
HCM 95th %tile Q(veh)	0.1	-	-	6.7	0.3	1.4	0

Intersection												
Int Delay, s/veh	24.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	146	22	77	198	126	8	123	101	60	120	66
Future Vol, veh/h	38	146	22	77	198	126	8	123	101	60	120	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	159	24	84	215	137	9	134	110	65	130	72
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	352	0	0	183	0	0	805	773	171	826	716	284
Stage 1	-	-	-	-	-	-	253	253	-	451	451	-
Stage 2	-	-	-	-	-	-	552	520	-	375	265	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1207	-	-	1392	-	-	301	330	873	291	356	755
Stage 1	-	-	-	-	-	-	751	698	-	588	571	-
Stage 2	-	-	-	-	-	-	518	532	-	646	689	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1207	-	-	1392	-	-	170	293	873	151	316	755
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	293	-	151	316	-
Stage 1	-	-	-	-	-	-	722	671	-	566	528	-
Stage 2	-	-	-	-	-	-	326	492	-	435	663	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.5			1.5			28.4			78.1		
HCM LOS							D			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	398	1207	-	-	1392	-	-	285				
HCM Lane V/C Ratio	0.634	0.034	-	-	0.06	-	-	0.938				
HCM Control Delay (s)	28.4	8.1	0	-	7.8	0	-	78.1				
HCM Lane LOS	D	A	A	-	A	A	-	F				
HCM 95th %tile Q(veh)	4.2	0.1	-	-	0.2	-	-	9				

Intersection

Int Delay, s/veh 3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	1	372	169	1	6	19
Future Vol, veh/h	1	372	169	1	6	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	404	184	1	7	21

Major/Minor	Major1	Minor1	Major2	Minor2	Major3	Minor3
Conflicting Flow All	21	0	441	404	404	-
Stage 1	-	-	407	-	-	-
Stage 2	-	-	34	-	-	-
Critical Hdwy	4.12	-	6.52	6.22	4.12	-
Critical Hdwy Stg 1	-	-	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	1595	-	510	647	1155	-
Stage 1	-	-	597	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1595	-	0	647	1155	-
Mov Cap-2 Maneuver	-	-	0	-	-	-
Stage 1	-	-	0	-	-	-
Stage 2	-	-	0	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	12.8	2
HCM LOS		B	

Minor Lane/Major Mvmt	EBL	EBTWBLn1	SBL	SBR
Capacity (veh/h)	1595	-	647	1155
HCM Lane V/C Ratio	0.001	-	0.286	0.006
HCM Control Delay (s)	7.3	-	12.8	8.1
HCM Lane LOS	A	-	B	A
HCM 95th %tile Q(veh)	0	-	1.2	0

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	293	150	40	81	16
Future Vol, veh/h	11	293	150	40	81	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	318	163	43	88	17

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	207	0	0 527 185
Stage 1	-	-	- 185 -
Stage 2	-	-	- 342 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1364	-	- 512 857
Stage 1	-	-	- 847 -
Stage 2	-	-	- 719 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1364	-	- 507 857
Mov Cap-2 Maneuver	-	-	- 580 -
Stage 1	-	-	- 847 -
Stage 2	-	-	- 713 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1364	-	-	-	580	857
HCM Lane V/C Ratio	0.009	-	-	-	0.152	0.02
HCM Control Delay (s)	7.7	-	-	-	12.3	9.3
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0.1

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Intersection

Int Delay, s/veh 8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	86	123	30	14	61	5	18	219	28	7	157	70
Future Vol, veh/h	86	123	30	14	61	5	18	219	28	7	157	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	93	134	33	15	66	5	20	238	30	8	171	76

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	552	532	209	599	554	253	247	0	0	268	0	0
Stage 1	224	224	-	292	292	-	-	-	-	-	-	-
Stage 2	328	308	-	307	262	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	444	453	831	413	440	786	1319	-	-	1296	-	-
Stage 1	779	718	-	716	671	-	-	-	-	-	-	-
Stage 2	685	660	-	703	691	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	383	443	831	299	431	786	1319	-	-	1296	-	-
Mov Cap-2 Maneuver	383	443	-	299	431	-	-	-	-	-	-	-
Stage 1	767	714	-	705	661	-	-	-	-	-	-	-
Stage 2	603	650	-	546	687	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	23.9		15.1		0.5		0.2	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1319	-	-	444	299	446	1296
HCM Lane V/C Ratio	0.015	-	-	0.585	0.051	0.161	0.006
HCM Control Delay (s)	7.8	-	-	23.9	17.7	14.6	7.8
HCM Lane LOS	A	-	-	C	C	B	A
HCM 95th %tile Q(veh)	0	-	-	3.7	0.2	0.6	0

Intersection												
Int Delay, s/veh	8.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	174	13	43	67	36	4	70	43	59	92	36
Future Vol, veh/h	30	174	13	43	67	36	4	70	43	59	92	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	189	14	47	73	39	4	76	47	64	100	39
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	112	0	0	203	0	0	516	466	196	509	454	92
Stage 1	-	-	-	-	-	-	261	261	-	186	186	-
Stage 2	-	-	-	-	-	-	255	205	-	323	268	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1478	-	-	1369	-	-	470	494	845	475	502	965
Stage 1	-	-	-	-	-	-	744	692	-	816	746	-
Stage 2	-	-	-	-	-	-	749	732	-	689	687	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1478	-	-	1369	-	-	360	464	845	374	471	965
Mov Cap-2 Maneuver	-	-	-	-	-	-	360	464	-	374	471	-
Stage 1	-	-	-	-	-	-	725	675	-	796	718	-
Stage 2	-	-	-	-	-	-	596	705	-	563	670	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			2.3			13.5			17.9		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	550	1478	-	-	1369	-	-	479				
HCM Lane V/C Ratio	0.231	0.022	-	-	0.034	-	-	0.424				
HCM Control Delay (s)	13.5	7.5	0	-	7.7	0	-	17.9				
HCM Lane LOS	B	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0.1	-	-	2.1				

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	1	370	550	0	7	27
Future Vol, veh/h	1	370	550	0	7	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	402	598	0	8	29

Major/Minor	Major1	Minor1	Major2
Conflicting Flow All	29	0	449
Stage 1	-	-	404
Stage 2	-	-	45
Critical Hdwy	4.12	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	4.018
Pot Cap-1 Maneuver	1584	- ~	505
Stage 1	-	-	599
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1584	-	0
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	0
Stage 2	-	-	0

Approach	EB	WB	SB
HCM Control Delay, s	0		1.7
HCM LOS		-	

Minor Lane/Major Mvmt	EBL	EBTWBLn1	SBL	SBR
Capacity (veh/h)	1584	-	-	1157
HCM Lane V/C Ratio	0.001	-	-	0.007
HCM Control Delay (s)	7.3	-	-	8.1
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	324	503	77	47	21
Future Vol, veh/h	24	324	503	77	47	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	352	547	84	51	23

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	630	0	0 993 589
Stage 1	-	-	- 589 -
Stage 2	-	-	- 404 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	952	-	- 272 508
Stage 1	-	-	- 554 -
Stage 2	-	-	- 674 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	952	-	- 265 508
Mov Cap-2 Maneuver	-	-	- 394 -
Stage 1	-	-	- 554 -
Stage 2	-	-	- 656 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	952	-	-	-	394	508
HCM Lane V/C Ratio	0.027	-	-	-	0.13	0.045
HCM Control Delay (s)	8.9	-	-	-	15.5	12.4
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.1

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Intersection												
Int Delay, s/veh	24.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	98	28	30	72	18	34	300	34	13	382	124
Future Vol, veh/h	83	98	28	30	72	18	34	300	34	13	382	124
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	200	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	107	30	33	78	20	37	326	37	14	415	135
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	978	948	483	997	996	345	550	0	0	363	0	0
Stage 1	511	511	-	418	418	-	-	-	-	-	-	-
Stage 2	467	437	-	579	578	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	230	261	584	223	244	698	1020	-	-	1196	-	-
Stage 1	545	537	-	612	591	-	-	-	-	-	-	-
Stage 2	576	579	-	501	501	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	159	249	584	136	232	698	1020	-	-	1196	-	-
Mov Cap-2 Maneuver	159	249	-	136	232	-	-	-	-	-	-	-
Stage 1	525	531	-	590	570	-	-	-	-	-	-	-
Stage 2	465	558	-	375	495	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	121.2		29.4		0.8		0.2					
HCM LOS	F		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	1020	-	-	217	136	268	1196	-	-			
HCM Lane V/C Ratio	0.036	-	-	1.047	0.24	0.365	0.012	-	-			
HCM Control Delay (s)	8.7	-	-	121.2	39.6	26	8	-	-			
HCM Lane LOS	A	-	-	F	E	D	A	-	-			
HCM 95th %tile O(veh)	0.1	-	-	9.9	0.9	1.6	0	-	-			

HCM 2010 TWSC
4: Larch Ave & 12th St

04/25/2018

Intersection												
Int Delay, s/veh	89.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	58	146	22	126	198	97	8	138	101	71	128	77
Future Vol, veh/h	58	146	22	126	198	97	8	138	101	71	128	77
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	159	24	137	215	105	9	150	110	77	139	84
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	321	0	0	183	0	0	950	892	171	969	851	268
Stage 1	-	-	-	-	-	-	297	297	-	542	542	-
Stage 2	-	-	-	-	-	-	653	595	-	427	309	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1239	-	-	1392	-	-	240	281	873	233	297	771
Stage 1	-	-	-	-	-	-	712	668	-	525	520	-
Stage 2	-	-	-	-	-	-	456	492	-	606	660	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1239	-	-	1392	-	-	104	233	873	87	246	771
Mov Cap-2 Maneuver	-	-	-	-	-	-	104	233	-	87	246	-
Stage 1	-	-	-	-	-	-	671	630	-	495	457	-
Stage 2	-	-	-	-	-	-	249	432	-	381	622	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			2.4			57.3			\$ 321.2		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	315	1239	-	-	1392	-	-	192				
HCM Lane V/C Ratio	0.852	0.051	-	-	0.098	-	-	1.563				
HCM Control Delay (s)	57.3	8.1	0	-	7.9	0	-	\$ 321.2				
HCM Lane LOS	F	A	A	-	A	A	-	F				
HCM 95th %tile Q(veh)	7.5	0.2	-	-	0.3	-	-	19.3				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined					*: All major volume in platoon			

Intersection

Int Delay, s/veh 4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	0	437	198	1	7	26
Future Vol, veh/h	0	437	198	1	7	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	437	198	1	7	26

Major/Minor	Major1	Minor1	Major2	Minor2	Major3	Minor3
Conflicting Flow All	-	0	477	437	437	-
Stage 1	-	-	437	-	-	-
Stage 2	-	-	40	-	-	-
Critical Hdwy	-	-	6.52	6.22	4.12	-
Critical Hdwy Stg 1	-	-	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	0	-	487	620	1123	-
Stage 1	0	-	579	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	0	620	1123	-
Mov Cap-2 Maneuver	-	-	0	-	-	-
Stage 1	-	-	0	-	-	-
Stage 2	-	-	0	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	13.5	1.7
HCM LOS		B	

Minor Lane/Major Mvmt	EBTWBLn1	SBL	SBR
Capacity (veh/h)	- 620	1123	-
HCM Lane V/C Ratio	- 0.321	0.006	-
HCM Control Delay (s)	- 13.5	8.2	-
HCM Lane LOS	- B	A	-
HCM 95th %tile Q(veh)	- 1.4	0	-

Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	344	176	47	95	39
Future Vol, veh/h	34	344	176	47	95	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	344	176	47	95	39

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	223	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1346	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1346	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1346	-	-	-	529	841
HCM Lane V/C Ratio	0.025	-	-	-	0.18	0.046
HCM Control Delay (s)	7.7	-	-	-	13.3	9.5
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6	0.1

Intersection												
Int Delay, s/veh	22											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	97	252	35	15	68	26	21	241	76	22	119	71
Future Vol, veh/h	97	252	35	15	68	26	21	241	76	22	119	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	97	252	35	15	68	26	21	241	76	22	119	71

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	567	558	155	663	555	279	190	0	0	317	0	0
Stage 1	199	199	-	321	321	-	-	-	-	-	-	-
Stage 2	368	359	-	342	234	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	434	438	891	375	440	760	1384	-	-	1243	-	-
Stage 1	803	736	-	691	652	-	-	-	-	-	-	-
Stage 2	652	627	-	673	711	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	359	424	891	186	426	760	1384	-	-	1243	-	-
Mov Cap-2 Maneuver	359	424	-	186	426	-	-	-	-	-	-	-
Stage 1	791	723	-	681	642	-	-	-	-	-	-	-
Stage 2	554	617	-	414	698	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	54.3		15.8		0.5		0.8	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1384	-	-	425	186	485	1243
HCM Lane V/C Ratio	0.015	-	-	0.904	0.081	0.194	0.018
HCM Control Delay (s)	7.6	-	-	54.3	26	14.2	7.9
HCM Lane LOS	A	-	-	F	D	B	A
HCM 95th %tile Q(veh)	0	-	-	9.7	0.3	0.7	0.1

Intersection												
Int Delay, s/veh	8.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	49	205	15	51	79	56	5	82	51	67	94	40
Future Vol, veh/h	49	205	15	51	79	56	5	82	51	67	94	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	205	15	51	79	56	5	82	51	67	94	40
Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	135	0	0	220	0	0	587	548	213	586	527	107
Stage 1	-	-	-	-	-	-	311	311	-	209	209	-
Stage 2	-	-	-	-	-	-	276	237	-	377	318	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1449	-	-	1349	-	-	421	444	827	422	456	947
Stage 1	-	-	-	-	-	-	699	658	-	793	729	-
Stage 2	-	-	-	-	-	-	730	709	-	644	654	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1449	-	-	1349	-	-	314	409	827	316	420	947
Mov Cap-2 Maneuver	-	-	-	-	-	-	314	409	-	316	420	-
Stage 1	-	-	-	-	-	-	672	632	-	762	699	-
Stage 2	-	-	-	-	-	-	580	680	-	505	628	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	1.4		2.1		15		21.2					
HCM LOS					C		C					
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	496	1449	-	-	1349	-	-	420				
HCM Lane V/C Ratio	0.278	0.034	-	-	0.038	-	-	0.479				
HCM Control Delay (s)	15	7.6	0	-	7.8	0	-	21.2				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0.1	-	-	2.5				

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	1	402	597	0	8	36
Future Vol, veh/h	1	402	597	0	8	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	402	597	0	8	36

Major/Minor	Major1	Minor1	Major2
Conflicting Flow All	36	0	456
Stage 1	-	-	404
Stage 2	-	-	52
Critical Hdwy	4.12	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	4.018
Pot Cap-1 Maneuver	1575	- ~ 501	0 1157
Stage 1	-	-	599
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1575	-	0
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	0
Stage 2	-	-	0

Approach	EB	WB	SB
HCM Control Delay, s	0		1.5
HCM LOS		-	

Minor Lane/Major Mvmt	EBL	EBTWBLn1	SBL	SBR
Capacity (veh/h)	1575	-	-	1157
HCM Lane V/C Ratio	0.001	-	-	0.007
HCM Control Delay (s)	7.3	-	-	8.1
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	350	543	89	54	41
Future Vol, veh/h	49	350	543	89	54	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	350	543	89	54	41

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	632	0	0 1036 588
Stage 1	-	-	- 588 -
Stage 2	-	-	- 448 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	951	-	- 256 509
Stage 1	-	-	- 555 -
Stage 2	-	-	- 644 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	951	-	- 243 509
Mov Cap-2 Maneuver	-	-	- 376 -
Stage 1	-	-	- 555 -
Stage 2	-	-	- 611 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	951	-	-	-	376	509
HCM Lane V/C Ratio	0.052	-	-	-	0.144	0.081
HCM Control Delay (s)	9	-	-	-	16.2	12.7
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.3

Intersection												
Int Delay, s/veh	79.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	82	235	32	34	80	39	38	277	89	33	402	134
Future Vol, veh/h	82	235	32	34	80	39	38	277	89	33	402	134
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	200	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	82	235	32	34	80	39	38	277	89	33	402	134

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	992	977	469	1067	1000	322	536	0	0	366	0	0
Stage 1	535	535	-	398	398	-	-	-	-	-	-	-
Stage 2	457	442	-	669	602	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	225	251	594	200	243	719	1032	-	-	1193	-	-
Stage 1	529	524	-	628	603	-	-	-	-	-	-	-
Stage 2	583	576	-	447	489	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	148	235	594	-	228	719	1032	-	-	1193	-	-
Mov Cap-2 Maneuver	148	235	-	-	228	-	-	-	-	-	-	-
Stage 1	510	510	-	605	581	-	-	-	-	-	-	-
Stage 2	458	555	-	222	475	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	333.8		0.8	0.5
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1032	-	-	217	294	1193	-
HCM Lane V/C Ratio	0.037	-	-	1.608	0.405	0.028	-
HCM Control Delay (s)	8.6	-	-	\$ 333.8	25.3	8.1	-
HCM Lane LOS	A	-	-	F	D	A	-
HCM 95th %tile Q(veh)	0.1	-	-	22.4	1.9	0.1	-

Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

HCM 2010 TWSC
4: Larch Ave & 12th St

04/25/2018

Intersection												
Int Delay, s/veh	140.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	64	170	26	146	230	108	9	146	117	90	143	99
Future Vol, veh/h	64	170	26	146	230	108	9	146	117	90	143	99
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	170	26	146	230	108	9	146	117	90	143	99
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	338	0	0	196	0	0	1008	941	183	1019	900	284
Stage 1	-	-	-	-	-	-	311	311	-	576	576	-
Stage 2	-	-	-	-	-	-	697	630	-	443	324	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1221	-	-	1377	-	-	219	263	859	215	278	755
Stage 1	-	-	-	-	-	-	699	658	-	503	502	-
Stage 2	-	-	-	-	-	-	431	475	-	594	650	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1221	-	-	1377	-	-	83	215	859	~ 74	227	755
Mov Cap-2 Maneuver	-	-	-	-	-	-	83	215	-	~ 74	227	-
Stage 1	-	-	-	-	-	-	658	619	-	473	436	-
Stage 2	-	-	-	-	-	-	218	412	-	369	612	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2			2.4			73.8			\$ 505.5		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	294	1221	-	-	1377	-	-	168				
HCM Lane V/C Ratio	0.925	0.052	-	-	0.106	-	-	1.976				
HCM Control Delay (s)	73.8	8.1	0	-	7.9	0	-	\$ 505.5				
HCM Lane LOS	F	A	A	-	A	A	-	F				
HCM 95th %tile Q(veh)	8.8	0.2	-	-	0.4	-	-	25.4				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined					*: All major volume in platoon			

Intersection

Int Delay, s/veh 4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	
Traffic Vol, veh/h	1	463	205	1	7	26
Future Vol, veh/h	1	463	205	1	7	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	463	205	1	7	26

Major/Minor	Major1	Minor1	Major2	Minor2	Major3	Minor3
Conflicting Flow All	26	0	505	463	463	-
Stage 1	-	-	465	-	-	-
Stage 2	-	-	40	-	-	-
Critical Hdwy	4.12	-	6.52	6.22	4.12	-
Critical Hdwy Stg 1	-	-	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	1588	-	470	599	1098	-
Stage 1	-	-	563	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1588	-	0	599	1098	-
Mov Cap-2 Maneuver	-	-	0	-	-	-
Stage 1	-	-	0	-	-	-
Stage 2	-	-	0	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	14.1	1.8
HCM LOS		B	

Minor Lane/Major Mvmt	EBL	EBTWBLn1	SBL	SBR
Capacity (veh/h)	1588	-	599	1098
HCM Lane V/C Ratio	0.001	-	0.344	0.006
HCM Control Delay (s)	7.3	-	14.1	8.3
HCM Lane LOS	A	-	B	A
HCM 95th %tile Q(veh)	0	-	1.5	0

Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	39	370	183	47	95	40
Future Vol, veh/h	39	370	183	47	95	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	370	183	47	95	40

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	230	0	0 655 207
Stage 1	-	-	- 207 -
Stage 2	-	-	- 448 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1338	-	- 431 833
Stage 1	-	-	- 828 -
Stage 2	-	-	- 644 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1338	-	- 418 833
Mov Cap-2 Maneuver	-	-	- 507 -
Stage 1	-	-	- 828 -
Stage 2	-	-	- 625 -

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1338	-	-	-	507	833
HCM Lane V/C Ratio	0.029	-	-	-	0.187	0.048
HCM Control Delay (s)	7.8	-	-	-	13.7	9.5
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7	0.2

Intersection												
Int Delay, s/veh	32.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	100	252	35	27	68	15	21	255	76	27	175	81
Future Vol, veh/h	100	252	35	27	68	15	21	255	76	27	175	81
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	100	252	35	27	68	15	21	255	76	27	175	81

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	647	643	216	748	645	293	256	0	0	331	0	0
Stage 1	270	270	-	335	335	-	-	-	-	-	-	-
Stage 2	377	373	-	413	310	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	384	392	824	329	391	746	1309	-	-	1228	-	-
Stage 1	736	686	-	679	643	-	-	-	-	-	-	-
Stage 2	644	618	-	616	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	315	377	824	142	376	746	1309	-	-	1228	-	-
Mov Cap-2 Maneuver	315	377	-	142	376	-	-	-	-	-	-	-
Stage 1	724	671	-	668	633	-	-	-	-	-	-	-
Stage 2	554	608	-	360	645	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	88.1		20.9		0.5		0.8	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1309	-	-	376	142	413	1228
HCM Lane V/C Ratio	0.016	-	-	1.029	0.19	0.201	0.022
HCM Control Delay (s)	7.8	-	-	88.1	36.2	15.9	8
HCM Lane LOS	A	-	-	F	E	C	A
HCM 95th %tile Q(veh)	0	-	-	12.8	0.7	0.7	0.1

Intersection												
Int Delay, s/veh	10.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	46	205	15	51	79	53	5	85	51	77	108	50
Future Vol, veh/h	46	205	15	51	79	53	5	85	51	77	108	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	205	15	51	79	53	5	85	51	77	108	50
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	132	0	0	220	0	0	592	539	213	581	520	106
Stage 1	-	-	-	-	-	-	305	305	-	208	208	-
Stage 2	-	-	-	-	-	-	287	234	-	373	312	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1453	-	-	1349	-	-	418	449	827	425	461	948
Stage 1	-	-	-	-	-	-	705	662	-	794	730	-
Stage 2	-	-	-	-	-	-	720	711	-	648	658	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1453	-	-	1349	-	-	301	415	827	317	426	948
Mov Cap-2 Maneuver	-	-	-	-	-	-	301	415	-	317	426	-
Stage 1	-	-	-	-	-	-	680	638	-	765	700	-
Stage 2	-	-	-	-	-	-	553	682	-	508	634	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			2.2			15.1			23.2		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	498	1453	-	-	1349	-	-	428				
HCM Lane V/C Ratio	0.283	0.032	-	-	0.038	-	-	0.549				
HCM Control Delay (s)	15.1	7.6	0	-	7.8	0	-	23.2				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	1.2	0.1	-	-	0.1	-	-	3.2				

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	1	416	622	0	8	36
Future Vol, veh/h	1	416	622	0	8	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	416	622	0	8	36

Major/Minor	Major1	Minor1	Major2
Conflicting Flow All	36	0	470
Stage 1	-	-	418
Stage 2	-	-	52
Critical Hdwy	4.12	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	4.018
Pot Cap-1 Maneuver	1575	- ~ 492	0 1143
Stage 1	-	- ~ 591	0 -
Stage 2	-	-	0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1575	- 0	- 1143
Mov Cap-2 Maneuver	-	- 0	- -
Stage 1	-	- 0	- -
Stage 2	-	- 0	- -

Approach	EB	WB	SB
HCM Control Delay, s	0		1.5
HCM LOS		-	

Minor Lane/Major Mvmt	EBL	EBTWBLn1	SBL	SBR
Capacity (veh/h)	1575	-	- 1143	-
HCM Lane V/C Ratio	0.001	-	- 0.007	-
HCM Control Delay (s)	7.3	-	- 8.2	-
HCM Lane LOS	A	-	- A	-
HCM 95th %tile Q(veh)	0	-	- 0	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	364	568	89	54	46
Future Vol, veh/h	52	364	568	89	54	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	364	568	89	54	46

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	657	0	0 1081 613
Stage 1	-	-	- 613 -
Stage 2	-	-	- 468 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	931	-	- 241 492
Stage 1	-	-	- 541 -
Stage 2	-	-	- 630 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	931	-	- 228 492
Mov Cap-2 Maneuver	-	-	- 362 -
Stage 1	-	-	- 541 -
Stage 2	-	-	- 595 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	931	-	-	-	362	492
HCM Lane V/C Ratio	0.056	-	-	-	0.149	0.093
HCM Control Delay (s)	9.1	-	-	-	16.7	13.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.3

Intersection

Int Delay, s/veh 114.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	92	235	32	34	80	44	38	333	89	36	432	139
Future Vol, veh/h	92	235	32	34	80	44	38	333	89	36	432	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	200	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	92	235	32	34	80	44	38	333	89	36	432	139

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	1090	1072	502	1161	1097	378	571	0	0	422	0	0
Stage 1	574	574	-	454	454	-	-	-	-	-	-	-
Stage 2	516	498	-	707	643	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	193	~ 220	569	172	213	669	1002	-	-	1137	-	-
Stage 1	504	503	-	586	569	-	-	-	-	-	-	-
Stage 2	542	544	-	426	468	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	118	~ 205	569	-	198	669	1002	-	-	1137	-	-
Mov Cap-2 Maneuver	118	~ 205	-	-	198	-	-	-	-	-	-	-
Stage 1	485	487	-	564	547	-	-	-	-	-	-	-
Stage 2	416	523	-	201	453	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	504.4		0.7	0.5
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1002	-	-	181	264	1137	-
HCM Lane V/C Ratio	0.038	-	-	1.983	0.47	0.032	-
HCM Control Delay (s)	8.7	-	-	504.4	30.2	8.3	-
HCM Lane LOS	A	-	-	F	D	A	-
HCM 95th %tile Q(veh)	0.1	-	-	27.2	2.3	0.1	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 TWSC
4: Larch Ave & 12th St

04/25/2018

Intersection												
Int Delay, s/veh	289.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	84	170	26	146	230	128	9	161	117	101	151	110
Future Vol, veh/h	84	170	26	146	230	128	9	161	117	101	151	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	170	26	146	230	128	9	161	117	101	151	110
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	358	0	0	196	0	0	1068	1001	183	1076	950	294
Stage 1	-	-	-	-	-	-	351	351	-	586	586	-
Stage 2	-	-	-	-	-	-	717	650	-	490	364	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1201	-	-	1377	-	-	199	243	859	197	260	745
Stage 1	-	-	-	-	-	-	666	632	-	496	497	-
Stage 2	-	-	-	-	-	-	421	465	-	560	624	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1201	-	-	1377	-	-	60	194	859	~ 45	207	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	60	194	-	~ 45	207	-
Stage 1	-	-	-	-	-	-	613	582	-	457	430	-
Stage 2	-	-	-	-	-	-	201	402	-	322	575	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.5			2.3			133.2			\$ 1034		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	257	1201	-	-	1377	-	-	116				
HCM Lane V/C Ratio	1.117	0.07	-	-	0.106	-	-	3.121				
HCM Control Delay (s)	133.2	8.2	0	-	7.9	0	-	\$ 1034				
HCM Lane LOS	F	A	A	-	A	A	-	F				
HCM 95th %tile Q(veh)	12.4	0.2	-	-	0.4	-	-	34.7				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined					*: All major volume in platoon			

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	1	370	550	0	7	27
Future Vol, veh/h	1	370	550	0	7	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	402	598	0	8	29

Major/Minor	Major1	Minor1	Major2
Conflicting Flow All	29	0	449
Stage 1	-	-	404
Stage 2	-	-	45
Critical Hdwy	4.12	-	6.52
Critical Hdwy Stg 1	-	-	5.52
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	4.018
Pot Cap-1 Maneuver	1584	- ~	505
Stage 1	-	-	599
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1584	-	0
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	0
Stage 2	-	-	0

Approach	EB	WB	SB
HCM Control Delay, s	0		1.7
HCM LOS		-	

Minor Lane/Major Mvmt	EBL	EBTWBLn1	SBL	SBR
Capacity (veh/h)	1584	-	-	1157
HCM Lane V/C Ratio	0.001	-	-	0.007
HCM Control Delay (s)	7.3	-	-	8.1
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	324	503	77	47	21
Future Vol, veh/h	24	324	503	77	47	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	352	547	84	51	23

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	630	0	0 993 589
Stage 1	-	-	- 589 -
Stage 2	-	-	- 404 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	952	-	- 272 508
Stage 1	-	-	- 554 -
Stage 2	-	-	- 674 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	952	-	- 265 508
Mov Cap-2 Maneuver	-	-	- 394 -
Stage 1	-	-	- 554 -
Stage 2	-	-	- 656 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	952	-	-	-	394	508
HCM Lane V/C Ratio	0.027	-	-	-	0.13	0.045
HCM Control Delay (s)	8.9	-	-	-	15.5	12.4
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.1

HCM 2010 AWSC
3: Whitman Dr & Larch St

04/26/2018

Intersection

Intersection Delay, s/veh 39.9
Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	83	98	28	30	72	18	34	300	34	13	382	124
Future Vol, veh/h	83	98	28	30	72	18	34	300	34	13	382	124
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	107	30	33	78	20	37	326	37	14	415	135
Number of Lanes	0	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	19.1	13.2	23.9	65.7
HCM LOS	C	B	C	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	40%	100%	0%	100%	0%
Vol Thru, %	0%	90%	47%	0%	80%	0%	75%
Vol Right, %	0%	10%	13%	0%	20%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	34	334	209	30	90	13	506
LT Vol	34	0	83	30	0	13	0
Through Vol	0	300	98	0	72	0	382
RT Vol	0	34	28	0	18	0	124
Lane Flow Rate	37	363	227	33	98	14	550
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.078	0.708	0.505	0.079	0.223	0.029	1.011
Departure Headway (Hd)	7.604	7.018	8.006	8.956	8.195	7.305	6.618
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	469	512	448	402	435	488	545
Service Time	5.382	4.795	6.092	6.656	5.993	5.073	4.385
HCM Lane V/C Ratio	0.079	0.709	0.507	0.082	0.225	0.029	1.009
HCM Control Delay	11	25.2	19.1	12.4	13.4	10.3	67.1
HCM Lane LOS	B	D	C	B	B	B	F
HCM 95th-tile Q	0.3	5.6	2.8	0.3	0.8	0.1	14.7

Intersection

Intersection Delay, s/veh23.8

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	58	146	22	126	198	97	8	138	101	71	128	77
Future Vol, veh/h	58	146	22	126	198	97	8	138	101	71	128	77
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	159	24	137	215	105	9	150	110	77	139	84
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.9	34.1	17.4	19.4
HCM LOS	C	D	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	26%	30%	26%
Vol Thru, %	56%	65%	47%	46%
Vol Right, %	41%	10%	23%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	247	226	421	276
LT Vol	8	58	126	71
Through Vol	138	146	198	128
RT Vol	101	22	97	77
Lane Flow Rate	268	246	458	300
Geometry Grp	1	1	1	1
Degree of Util (X)	0.52	0.488	0.831	0.583
Departure Headway (Hd)	6.979	7.152	6.541	6.996
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	515	504	554	516
Service Time	5.042	5.214	4.59	5.055
HCM Lane V/C Ratio	0.52	0.488	0.827	0.581
HCM Control Delay	17.4	16.9	34.1	19.4
HCM Lane LOS	C	C	D	C
HCM 95th-tile Q	3	2.6	8.5	3.7

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	1	416	622	0	8	36
Future Vol, veh/h	1	416	622	0	8	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	416	622	0	8	36

Major/Minor	Major1	Minor1	Major2
Conflicting Flow All	36	0 470	- 416 -
Stage 1	-	- 418	- - -
Stage 2	-	- 52	- - -
Critical Hdwy	4.12	- 6.52	- 4.12 -
Critical Hdwy Stg 1	-	- 5.52	- - -
Critical Hdwy Stg 2	-	- -	- - -
Follow-up Hdwy	2.218	- 4.018	- 2.218 -
Pot Cap-1 Maneuver	1575	- ~ 492	0 1143 -
Stage 1	-	- ~ 591	0 - -
Stage 2	-	- -	0 - -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1575	- 0	- 1143 -
Mov Cap-2 Maneuver	-	- 0	- - -
Stage 1	-	- 0	- - -
Stage 2	-	- 0	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0		1.5
HCM LOS		-	

Minor Lane/Major Mvmt	EBL	EBTWBLn1	SBL	SBR
Capacity (veh/h)	1575	- -	1143	-
HCM Lane V/C Ratio	0.001	- -	0.007	-
HCM Control Delay (s)	7.3	- -	8.2	-
HCM Lane LOS	A	- -	A	-
HCM 95th %tile Q(veh)	0	- -	0	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	364	568	89	54	46
Future Vol, veh/h	52	364	568	89	54	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	364	568	89	54	46

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	657	0	0 1081 613
Stage 1	-	-	- 613 -
Stage 2	-	-	- 468 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	931	-	- 241 492
Stage 1	-	-	- 541 -
Stage 2	-	-	- 630 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	931	-	- 228 492
Mov Cap-2 Maneuver	-	-	- 362 -
Stage 1	-	-	- 541 -
Stage 2	-	-	- 595 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	931	-	-	-	362	492
HCM Lane V/C Ratio	0.056	-	-	-	0.149	0.093
HCM Control Delay (s)	9.1	-	-	-	16.7	13.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.3

HCM 2010 AWSC
3: Whitman Dr & Larch St

04/29/2018

Intersection												
Intersection Delay, s/veh	81.9											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	92	235	32	34	80	44	38	333	89	36	432	139
Future Vol, veh/h	92	235	32	34	80	44	38	333	89	36	432	139
Peak Hour 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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	92	235	32	34	80	44	38	333	89	36	432	139
Number of Lanes	0	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	44.3	16.1	51.5	144.4
HCM LOS	E	C	F	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	26%	100%	0%	100%	0%
Vol Thru, %	0%	79%	65%	0%	65%	0%	76%
Vol Right, %	0%	21%	9%	0%	35%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	38	422	359	34	124	36	571
LT Vol	38	0	92	34	0	36	0
Through Vol	0	333	235	0	80	0	432
RT Vol	0	89	32	0	44	0	139
Lane Flow Rate	38	422	359	34	124	36	571
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.09	0.921	0.837	0.092	0.308	0.086	1.246
Departure Headway (Hd)	9.084	8.408	9.049	10.473	9.686	8.55	7.855
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	397	435	402	344	373	418	463
Service Time	6.784	6.108	7.049	8.173	7.386	6.331	5.635
HCM Lane V/C Ratio	0.096	0.97	0.893	0.099	0.332	0.086	1.233
HCM Control Delay	12.7	55	44.3	14.2	16.6	12.1	152.7
HCM Lane LOS	B	F	E	B	C	B	F
HCM 95th-tile Q	0.3	10.2	7.8	0.3	1.3	0.3	23.1

Intersection

Intersection Delay, s/veh45.6

Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	84	170	26	146	230	128	9	161	117	101	151	110
Future Vol, veh/h	84	170	26	146	230	128	9	161	117	101	151	110
Peak Hour 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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	170	26	146	230	128	9	161	117	101	151	110
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	24.5	78.1	24.2	33.7
HCM LOS	C	F	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	30%	29%	28%
Vol Thru, %	56%	61%	46%	42%
Vol Right, %	41%	9%	25%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	287	280	504	362
LT Vol	9	84	146	101
Through Vol	161	170	230	151
RT Vol	117	26	128	110
Lane Flow Rate	287	280	504	362
Geometry Grp	1	1	1	1
Degree of Util (X)	0.632	0.629	1.036	0.777
Departure Headway (Hd)	8.197	8.349	7.4	7.997
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	445	434	489	456
Service Time	6.197	6.349	5.466	5.997
HCM Lane V/C Ratio	0.645	0.645	1.031	0.794
HCM Control Delay	24.2	24.5	78.1	33.7
HCM Lane LOS	C	C	F	D
HCM 95th-tile Q	4.3	4.2	14.8	6.8

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	1	416	622	0	8	36
Future Vol, veh/h	1	416	622	0	8	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	416	622	0	8	36

Major/Minor	Major1	Minor1	Major2
Conflicting Flow All	36	0 470	- 416 -
Stage 1	-	- 418	- - -
Stage 2	-	- 52	- - -
Critical Hdwy	4.12	- 6.52	- 4.12 -
Critical Hdwy Stg 1	-	- 5.52	- - -
Critical Hdwy Stg 2	-	- -	- - -
Follow-up Hdwy	2.218	- 4.018	- 2.218 -
Pot Cap-1 Maneuver	1575	- ~ 492	0 1143 -
Stage 1	-	- ~ 591	0 - -
Stage 2	-	- -	0 - -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1575	- 0	- 1143 -
Mov Cap-2 Maneuver	-	- 0	- - -
Stage 1	-	- 0	- - -
Stage 2	-	- 0	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0		1.5
HCM LOS		-	

Minor Lane/Major Mvmt	EBL	EBTWBLn1	SBL	SBR
Capacity (veh/h)	1575	- -	1143	-
HCM Lane V/C Ratio	0.001	- -	0.007	-
HCM Control Delay (s)	7.3	- -	8.2	-
HCM Lane LOS	A	- -	A	-
HCM 95th %tile Q(veh)	0	- -	0	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	364	568	89	54	46
Future Vol, veh/h	52	364	568	89	54	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	364	568	89	54	46

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	657	0	0 1081 613
Stage 1	-	-	- 613 -
Stage 2	-	-	- 468 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	931	-	- 241 492
Stage 1	-	-	- 541 -
Stage 2	-	-	- 630 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	931	-	- 228 492
Mov Cap-2 Maneuver	-	-	- 362 -
Stage 1	-	-	- 541 -
Stage 2	-	-	- 595 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	931	-	-	-	362	492
HCM Lane V/C Ratio	0.056	-	-	-	0.149	0.093
HCM Control Delay (s)	9.1	-	-	-	16.7	13.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.3

Queues

3: Whitman Dr & Larch St

04/25/2018



Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	359	34	124	38	422	36	571
v/c Ratio	0.63	0.10	0.19	0.15	0.51	0.10	0.69
Control Delay	20.6	14.5	11.0	11.0	12.2	9.8	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	14.5	11.0	11.0	12.2	9.8	15.9
Queue Length 50th (ft)	75	6	16	5	68	5	105
Queue Length 95th (ft)	221	29	62	27	192	24	288
Internal Link Dist (ft)	712		866		1700		1025
Turn Bay Length (ft)		200		100		100	
Base Capacity (vph)	1200	697	1304	484	1589	711	1581
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.05	0.10	0.08	0.27	0.05	0.36
Intersection Summary							

HCM 2010 Signalized Intersection Summary

3: Whitman Dr & Larch St

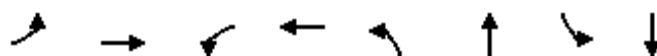
04/25/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	235	32	34	80	44	38	333	89	36	432	139
Future Volume (veh/h)	92	235	32	34	80	44	38	333	89	36	432	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	92	235	32	34	80	44	38	333	89	36	432	139
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	366	45	463	340	187	382	710	190	493	677	218
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	318	1217	150	1108	1131	622	838	1417	379	961	1351	435
Grp Volume(v), veh/h	359	0	0	34	0	124	38	0	422	36	0	571
Grp Sat Flow(s),veh/h/ln	1685	0	0	1108	0	1753	838	0	1796	961	0	1786
Q Serve(g_s), s	5.1	0.0	0.0	0.0	0.0	2.4	1.6	0.0	7.0	1.2	0.0	10.7
Cycle Q Clear(g_c), s	8.4	0.0	0.0	1.2	0.0	2.4	12.2	0.0	7.0	8.1	0.0	10.7
Prop In Lane	0.26		0.09	1.00		0.35	1.00		0.21	1.00		0.24
Lane Grp Cap(c), veh/h	606	0	0	463	0	527	382	0	900	493	0	895
V/C Ratio(X)	0.59	0.00	0.00	0.07	0.00	0.24	0.10	0.00	0.47	0.07	0.00	0.64
Avail Cap(c_a), veh/h	1357	0	0	971	0	1331	819	0	1838	995	0	1827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.0	0.0	0.0	11.5	0.0	12.0	12.8	0.0	7.4	10.0	0.0	8.3
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.4	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	0.3	0.0	1.2	0.4	0.0	3.5	0.3	0.0	5.3
LnGrp Delay(d),s/veh	14.9	0.0	0.0	11.6	0.0	12.2	12.9	0.0	7.8	10.1	0.0	9.1
LnGrp LOS	B			B		B	B		A	B		A
Approach Vol, veh/h		359			158			460			607	
Approach Delay, s/veh		14.9			12.1			8.2			9.1	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.3		18.2		27.3		18.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		14.2		10.4		12.7		4.4				
Green Ext Time (p_c), s		8.5		3.3		8.6		3.4				
Intersection Summary												
HCM 2010 Ctrl Delay			10.5									
HCM 2010 LOS			B									

Queues

4: Larch Ave & 12th St

04/25/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	196	146	358	9	278	101	261
v/c Ratio	0.22	0.28	0.32	0.51	0.03	0.47	0.29	0.44
Control Delay	8.8	7.9	9.7	9.9	8.9	10.6	11.6	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	7.9	9.7	9.9	8.9	10.6	11.6	10.2
Queue Length 50th (ft)	8	18	15	34	1	28	12	25
Queue Length 95th (ft)	32	57	51	101	8	88	44	82
Internal Link Dist (ft)		805		550		641		922
Turn Bay Length (ft)								
Base Capacity (vph)	991	1818	1177	1756	1080	1693	1063	1693
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.11	0.12	0.20	0.01	0.16	0.10	0.15
Intersection Summary								

HCM 2010 Signalized Intersection Summary

4: Larch Ave & 12th St

04/25/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	170	26	146	230	128	9	161	117	101	151	110
Future Volume (veh/h)	84	170	26	146	230	128	9	161	117	101	151	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	84	170	26	146	230	128	9	161	117	101	151	110
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	443	636	97	580	453	252	465	362	263	451	362	264
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1019	1579	241	1182	1126	626	1114	1004	730	1097	1003	731
Grp Volume(v), veh/h	84	0	196	146	0	358	9	0	278	101	0	261
Grp Sat Flow(s),veh/h/ln	1019	0	1820	1182	0	1752	1114	0	1734	1097	0	1734
Q Serve(g_s), s	2.6	0.0	2.7	3.6	0.0	5.8	0.2	0.0	4.6	2.9	0.0	4.3
Cycle Q Clear(g_c), s	8.4	0.0	2.7	6.3	0.0	5.8	4.5	0.0	4.6	7.6	0.0	4.3
Prop In Lane	1.00		0.13	1.00		0.36	1.00		0.42	1.00		0.42
Lane Grp Cap(c), veh/h	443	0	733	580	0	706	465	0	626	451	0	626
V/C Ratio(X)	0.19	0.00	0.27	0.25	0.00	0.51	0.02	0.00	0.44	0.22	0.00	0.42
Avail Cap(c_a), veh/h	1197	0	2079	1454	0	2001	1160	0	1707	1135	0	1707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.7	0.0	7.6	9.7	0.0	8.5	10.9	0.0	9.3	12.2	0.0	9.2
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.2	0.0	0.6	0.0	0.0	0.5	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.4	1.2	0.0	2.9	0.1	0.0	2.2	0.9	0.0	2.1
LnGrp Delay(d),s/veh	11.9	0.0	7.8	10.0	0.0	9.1	10.9	0.0	9.8	12.4	0.0	9.6
LnGrp LOS	B		A	A		A	B		A	B		A
Approach Vol, veh/h	280		504				287		362			
Approach Delay, s/veh	9.0		9.3				9.8		10.4			
Approach LOS	A		A				A		B			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	18.2		19.8		18.2		19.8					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	37.5		43.5		37.5		43.5					
Max Q Clear Time (g_c+I1), s	6.6		10.4		9.6		8.3					
Green Ext Time (p_c), s	4.2		4.9		4.2		5.0					
Intersection Summary												
HCM 2010 Ctrl Delay			9.6									
HCM 2010 LOS			A									

APPENDIX D

OFFICER REPORTED CRASHES THAT OCCURRED ON ALL ROADS IN WALLA WALLA COUNTY

01/01/2012 - available 2017

Under 23 U.S. Code § 409 and 23 U.S. Code § 148, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	BLOCK NUMBER	INTERSECTING TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	DATE	TIME
City Street	Walla Walla	College Place	E WHITMAN DR	500	NE LARCH AVE					05/19/2012	11:57
City Street	Walla Walla	College Place	E WHITMAN DR	0	SE LARCH AVE					02/07/2017	12:36
City Street	Walla Walla	College Place	E WHITMAN DR	500		50	F	W	SE LARCH AVE	03/08/2014	14:05
City Street	Walla Walla	College Place	NE C ST	800	NE LAMBERT AVE					01/24/2016	16:28
City Street	Walla Walla	College Place	NE C ST	0	NE LAMBERT AVE					12/13/2016	21:16
City Street	Walla Walla	College Place	NE C ST	0	NE LARCH AVE					02/04/2017	16:18
City Street	Walla Walla	College Place	NE LARCH AVE	200	E WHITMAN DR					11/24/2013	19:09
City Street	Walla Walla	College Place	NE LARCH AVE	200	E WHITMAN DR					04/07/2015	12:31
City Street	Walla Walla	College Place	NE LARCH AVE	0	E WHITMAN DR					01/23/2017	08:48
City Street	Walla Walla	College Place	NE LARCH AVE	0	E WHITMAN DR					02/07/2017	13:55
City Street	Walla Walla	College Place	NE LARCH AVE	0	E WHITMAN DR					04/28/2017	19:25
City Street	Walla Walla	College Place	NE LARCH AVE	0	E WHITMAN DR					07/28/2017	13:18
City Street	Walla Walla	College Place	NE LARCH AVE	0	E WHITMAN DR					08/26/2017	19:17
City Street	Walla Walla	College Place	NE LARCH AVE	200	NE C ST					05/11/2014	09:58
City Street	Walla Walla	College Place	NE LARCH AVE	200	NE C ST					11/29/2015	03:30
City Street	Walla Walla	College Place	NE LARCH AVE	200	NE C ST					10/02/2016	09:54
City Street	Walla Walla	College Place	SE 12TH ST	1100	SE LARCH					08/19/2012	13:13
City Street	Walla Walla	College Place	SE 12TH ST	1100	SE LARCH AVE					01/05/2012	15:25
City Street	Walla Walla	College Place	SE 12TH ST	700	SE LARCH AVE					07/09/2013	17:31
City Street	Walla Walla	College Place	SE 12TH ST	700	SE LARCH AVE					02/03/2015	14:05

MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDES	# BIKES	JUNCTION RELATIONSHIP	ROADWAY SURFACE CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	1	0	0	At Intersection and Related	Ice	Wood Sign Post	Making Right Turn
No Apparent Injury	0	0	2	0	0	At Driveway	Dry	Entering at angle	Slowing
Possible Injury	1	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Ice	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Ice	From same direction - all other	Backing
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Slowing
Possible Injury	1	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
Possible Injury	1	0	2	0	0	At Intersection and Related	Ice	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Ice	Entering at angle	Making Right Turn
Suspected Minor Injury	3	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Not Related	Dry	Entering at angle	Going Straight Ahead
Suspected Minor Injury	3	0	3	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Making Left Turn
Unknown	0	0	1	0	0	At Intersection and Not Related	Dry	Other Objects	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	From same direction - one right	Other*
Suspected Minor Injury	2	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
Possible Injury	2	0	2	0	0	At Intersection and Related	Wet	Entering at angle	Starting in Traffic Lane
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
Possible Injury	2	0	2	0	0	At Intersection and Related	Wet	Entering at angle	Going Straight Ahead

VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	Collision Diagram #	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)
Going Straight Ahead	East	West	North	South	1	Disregard Stop Sign - Flashing Red
	North	West			2	Other
Making Right Turn	South	North	West	South	3	None
Making Right Turn	West	East	North	West		None
Going Straight Ahead	North	South	East	West		Exceeding Reas. Safe Speed
Stopped at Signal or Stop Sign	East	Vehicle Backing	East	Vehicle Stopped		Improper Backing
Going Straight Ahead	East	West	South	North	4	Driver Not Distracted
Going Straight Ahead	East	West	North	South	5	Inattention
Going Straight Ahead	West	East	North	South	6	Disregard Stop Sign - Flashing Red
Stopped at Signal or Stop Sign	North	West	Vehicle Stopped	Vehicle Stopped	7	Other
Going Straight Ahead	East	West	North	South	8	Disregard Stop Sign - Flashing Red
Going Straight Ahead	East	West	North	South	9	Inattention
Going Straight Ahead	East	West	North	South	10	Did Not Grant RW to Vehicle
Going Straight Ahead	North	East	East	West		Did Not Grant RW to Vehicle
	North	South				Inattention
Making Right Turn	North	South	North	West		Follow Too Closely
Going Straight Ahead	South	North	East	West	1	Disregard Stop Sign - Flashing Red
Going Straight Ahead	South	North	East	West	2	Did Not Grant RW to Vehicle
Going Straight Ahead	North	South	West	East	3	Inattention
Going Straight Ahead	North	South	West	East	4	Inattention

MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	
None	None
Improper Turn	
Improper Turn	Improper Turn
None	
None	None
Driver Not Distracted	
None	None
Driver Not Distracted	
None	
None	
None	
None	
None	
None	None
None	
None	None
None	
None	
None	

OFFICER REPORTED CRASHES THAT OCCURRED ON ALL ROADS IN WALLA WALLA COUNTY

01/01/2012 - available 2017

Under 23 U.S. Code § 409 and 23 U.S. Code § 148, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	BLOCK NUMBER	INTERSECTING TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	DATE	TIME
City Street	Walla Walla	College Place	SE 12TH ST	700	SE LARCH AVE					09/18/2015	14:29
City Street	Walla Walla	College Place	SE 12TH ST	700	SE LARCH AVE					04/04/2016	17:32
City Street	Walla Walla	College Place	SE 12TH ST	700	SE LARCH AVE					08/08/2016	07:50
City Street	Walla Walla	College Place	SE 12TH ST	700		110	F	W	SE LARCH AVE	05/02/2014	22:30
City Street	Walla Walla	College Place	SE 12TH ST	800		90	F	E	SE LARCH AVE	07/05/2014	08:59
City Street	Walla Walla	College Place	SE LARCH AVE		E WHITMAN DR					11/07/2012	15:55
City Street	Walla Walla	College Place	SE LARCH AVE	100	E WHITMAN DR					12/04/2013	13:41
City Street	Walla Walla	College Place	SE LARCH AVE	100	E WHITMAN DR					06/15/2014	18:26
City Street	Walla Walla	College Place	SE LARCH AVE	100	E WHITMAN DR					05/07/2016	22:04
City Street	Walla Walla	College Place	SE LARCH AVE	0	E WHITMAN DR					12/12/2016	10:16
City Street	Walla Walla	College Place	SE LARCH AVE	0	E WHITMAN DR					01/11/2017	07:59
City Street	Walla Walla	College Place	SE LARCH AVE	0	E WHITMAN DR					10/03/2017	17:01
City Street	Walla Walla	College Place	SE LARCH AVE	1200	SE 12TH ST					04/18/2014	14:09
City Street	Walla Walla	College Place	SE LARCH AVE	1200	SE 12TH ST					01/11/2016	21:50
City Street	Walla Walla	College Place	SE LARCH AVE	1200	SE 12TH ST					01/18/2016	19:00
City Street	Walla Walla	College Place	SE LARCH AVE	0	SE 12TH ST					11/16/2016	17:15
City Street	Walla Walla	College Place	SE LARCH AVE	1100		200	F	N	SE 12TH ST	11/04/2015	15:41
City Street	Walla Walla	College Place	SE LARCH AVE	1300		150	F	N	SE SCENIC VIEW	08/07/2016	16:08

MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	JUNCTION RELATIONSHIP	ROADWAY SURFACE CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION
Possible Injury	1	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Same direction -- both turning	Making Right Turn
Unknown	0	0	1	0	0	Not at Intersection and Not Related	Dry	Tree or Stump (stationary)	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	Not at Intersection and Not Related	Dry	From same direction - all other	Making U-Turn
Possible Injury	2	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Starting in Traffic Lane
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Making Right Turn
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	1	0	0	At Intersection and Related	Snow/Slush	Utility Pole	Making Right Turn
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Snow/Slush	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	Entering at angle	Stopped in Roadway
Possible Injury	3	0	2	0	0	At Intersection and Related	Dry	From same direction - both going	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	At Intersection and Related	Dry	From same direction - both going	Going Straight Ahead
Possible Injury	2	0	3	0	0	Driveway Related but Not at Intersection	Dry	From same direction - both going	Going Straight Ahead
No Apparent Injury	0	0	2	0	0	Not at Intersection and Not Related	Dry	One parked--one moving	Going Straight Ahead

VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	Collision Diagram #	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)
Going Straight Ahead	South	North	West	East	5	Inattention
Going Straight Ahead	South	North	East	West	6	Inattention
Making Right Turn	West	South	West	South	7	Improper Turn
	East	West			8	Other
Going Straight Ahead	West	West	West	East	9	Inattention
Going Straight Ahead	East	West	North	South	11	Did Not Grant RW to Vehicle
Going Straight Ahead	East	West	North	South	12	Did Not Grant RW to Vehicle
Stopped at Signal or Stop Sign	North	West	Vehicle Stopped	Vehicle Stopped	13	Inattention
Going Straight Ahead	East	West	North	South	14	None
	North	West			15	Exceeding Reas. Safe Speed
Going Straight Ahead	South	North	East	West	16	None
Going Straight Ahead	West	East	North	South	17	Disregard Stop Sign - Flashing Red
Going Straight Ahead	North	South	West	East	10	Inattention
Making Left Turn	Vehicle Stopped	Vehicle Stopped	West	North	11	None
Stopped at Signal or Stop Sign	North	South	Vehicle Stopped	Vehicle Stopped	12	Under Influence of Alcohol
Stopped at Signal or Stop Sign	South	North	Vehicle Stopped	Vehicle Stopped	13	Inattention
Stopped for Traffic	South	North	South	Vehicle Stopped	14	Inattention
Legally Parked, Unoccupied	North	South			15	Driver Adjusting Audio or Entertainment

MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	
Driver Not Distracted	Blue
None	
None	
None	Yellow
None	
Driver Not Distracted	
None	
Disregard Stop Sign - Flashing Red	Blue
None	
None	
Improper Turn	
None	
None	
None	

Collision Rate Calculations at NE C St and NE Lambert Ave

Intersection: NE C Street & NE Lambert Avenue 1-May-18

Ra = System Wide Average accident rate = 0.6
 K = Statistical Constant = 1.645

Average Daily cars passing Through intersection
 ADT 300
3900
10
2520
 M= Millions of Vehicles for a five year period = 14.24741

Rc= Critical Accident Rate = 0.9024835

Accident Rate

Number of accidents = 2
 Number of years = 5.8

Accident Rate = 0.1403764

$$Rc = Ra + (K * Ra / M)^{.5} - 1 / (2 * M)$$

ADT = 2017 PM Count X 10

PM Peak Hour= Approx. 10% ADT

Collision Rate Calculations at NE C St and NE Larch Ave

Intersection: NE C Street & NE Larch Ave 1-May-18

Ra = System Wide Average accident rate = 0.6
 K = Statistical Constant = 1.645

Average Daily cars passing Through intersection
 ADT

460
4150
0
2310

M= Millions of Vehicles for a five year period = 14.64964

Rc= Critical Accident Rate = 0.8987804

Accident Rate

Number of accidents =

4

 Number of years =

5.8

Accident Rate = 0.2730443

$$Rc = Ra + (K * Ra / M)^{.5} - 1 / (2 * M)$$

ADT = 2017 PM Count X 10

PM Peak Hour= Approx. 10% ADT

Collision Rate Calculations at
NE Larch Ave and NE Whitman Dr

Intersection: NE Larch Avenue & NE Whitman Drive 1-May-18

Ra = System Wide Average accident rate = 0.6

K = Statistical Constant = 1.645

Average Daily cars passing Through intersection
ADT

3,560

720

2270

1350

M= Millions of Vehicles for a five year period = 16.7243

Rc= Critical Accident Rate = 0.881682

Accident Rate

Number of accidents = 17

Number of years = 5.8

Accident Rate = 1.016485

$$R_c = R_a + (K \cdot R_a / M)^{.5} - 1 / (2 \cdot M)$$

ADT = 2017 PM Count X 10

PM Peak Hour= Approx. 10% ADT

Collision Rate Calculations at
SE Larch Ave and SE 12 St

Intersection: SE Larch Avenue & SE 12th Street 1-May-18

Ra = System Wide Average accident rate = 0.6
 K = Statistical Constant = 1.645

Average Daily cars passing Through intersection
 ADT

1,640
3290
1940
1640

M= Millions of Vehicles for a five year period = 18.01567

Rc= Critical Accident Rate = 0.87245

Accident Rate

Number of accidents =

11

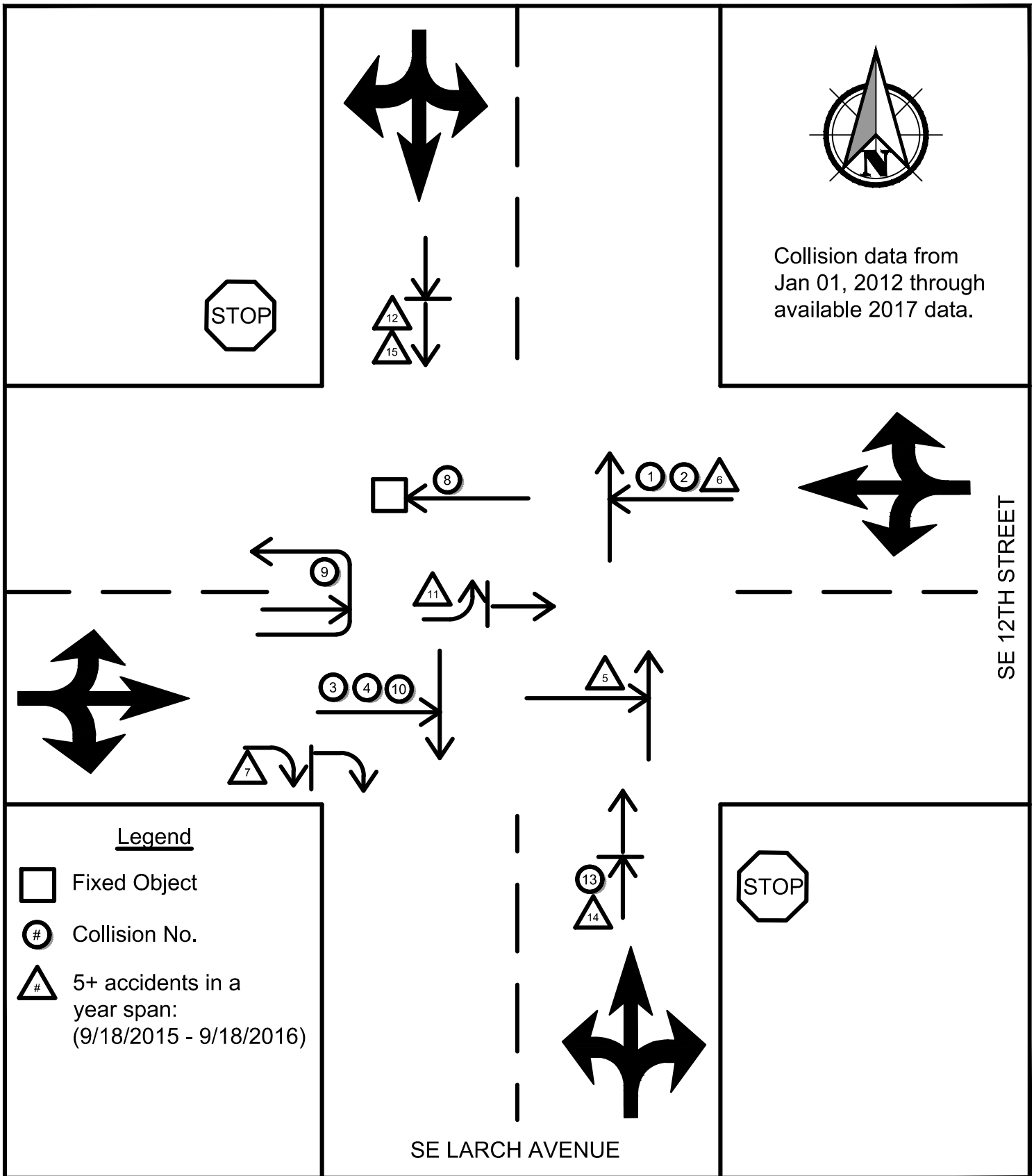
 Number of years =

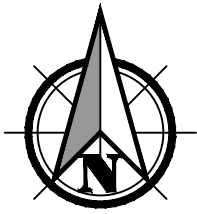
5.8

Accident Rate = 0.61058

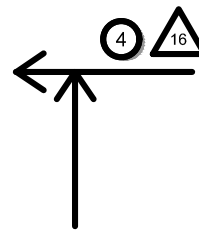
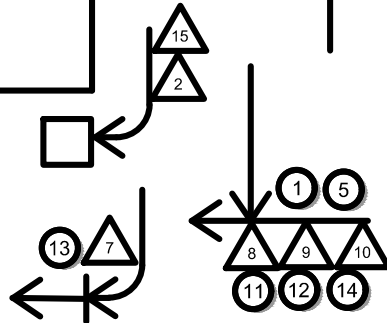
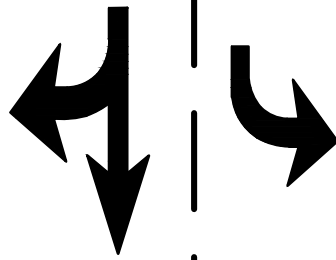
$$R_c = R_a + (K \cdot R_a / M)^{.5} - 1 / (2 \cdot M)$$

ADT = 2017 PM Count X 10
 PM Peak Hour= Approx. 10% ADT

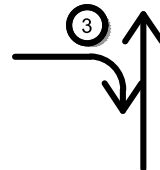
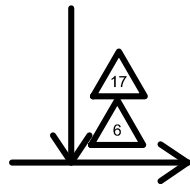
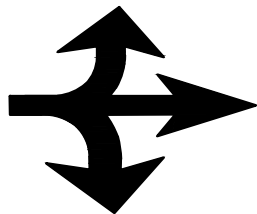




Collision data from
Jan 01, 2012 through
available 2017 data.



E WHITMAN DRIVE



NE LARCH AVENUE

Legend

- Fixed Object
- Collision No.
- 5+ accidents in a year span:
(10/3/2016 - 10/3/2017)



Collision Diagram
NE Larch Avenue & E Whitman Drive

May 1, 2018
67136.000

FIGURE

2

APPENDIX G

Traffic Improvement Concepts

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CONCEPTUAL TRAFFIC IMPROVEMENTS FOR:
COLLEGE PLACE PLANNING STUDY
INTERSECTION OF LARCH AND WHITMAN



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MARCH, 2018
SHEET ID
SHEET 1 OF 6

Filename: L:\Projects\6700067136-000\CivilCAD\Working\Exhibits\67136_ Exhibit2B_WhitmanSignal.dwg Layout Tab: LAYOUT1 User: Brandon Woods CAD Plot Date/Time: 3/16/2018 4:10:33 PM



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INTERSECTION OF LARCH AND WHITMAN



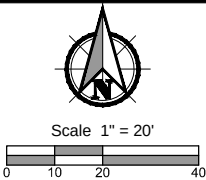
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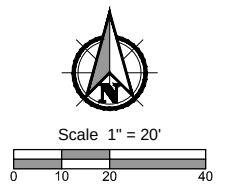
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INTERSECTION OF LARCH AND 12TH

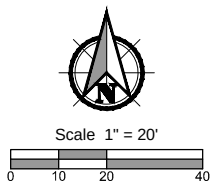


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INTERSECTION OF LARCH AND 12TH



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CONCEPTUAL TRAFFIC IMPROVEMENTS FOR:
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INTERSECTION OF LARCH AND 12TH



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SHEET 6 OF 6

APPENDIX H

Traffic Improvement Cost Estimates

Preliminary Estimate of Probable Construction Costs for
Intersection Improvements: 4-Way Stop Controlled Intersections*

Prepared By: PBS Engineering and Environmental

Prepared 5/10/2018

Item	Description	\$/unit	Qty	Units	Cost
General					
1	Mobilization	\$ 1,000.00	1	LS	\$ 1,000.00
2	Project Temporary Traffic Control	\$ 1,000.00	1	LS	\$ 1,000.00
Total Cost of General					\$ 2,000.00
Miscellaneous Construction					
3	Permanent Signing**	\$ 4,000.00	1	LS	\$ 4,000.00
4	Permanent Striping - Plastic Legend Markings	\$ 2,000.00	1	LS	\$ 2,000.00
Miscellaneous Construction					\$ 6,000.00
Construction Subtotal					\$ 8,000.00

Total Development Cost	\$ 8,000.00
Contingency (20%)	\$ 1,600.00
Development Cost Grand Total	\$ 9,600.00

*In 2018 dollars, assumes no utility relocations are required

**Includes 2 blinking stop signs

**Preliminary Estimate of Probable Construction Costs for
Intersection Improvements: Signalized Intersections***

Prepared By: PBS Engineering and Environmental

Prepared 5/10/2018

Item	Description	\$/unit	Qty	Units	Cost
General					
1	Mobilization	\$ 30,000.00	1	LS	\$ 30,000.00
2	SPCC Plan	\$ 1,000.00	1	LS	\$ 1,000.00
4	Project Temporary Traffic Control	\$ 20,000.00	1	LS	\$ 20,000.00
Total Cost of General					\$ 51,000.00
Earthwork, Bases, and Surface Treatments					
5	Clearing and Grubbing	\$ 1,000.00	1	LS	\$ 1,000.00
6	Crushed Surfacing Base Course	\$ 25.00	130	TON	\$ 3,250.00
7	HMA	\$ 70.00	100	TON	\$ 7,000.00
Earthwork, Bases, and Surface Treatments					\$ 11,250.00
Miscellaneous Construction					
8	Erosion Control	\$ 5,000.00	1	LS	\$ 5,000.00
9	Cement Concrete Sidewalk	\$ 150.00	10	SY	\$ 1,500.00
10	Traffic Signal System	\$ 250,000.00	1	LS	\$ 250,000.00
11	Street Lights	\$ 50,000.00	1	LS	\$ 50,000.00
12	Permanent Signing	\$ 3,000.00	1	LS	\$ 3,000.00
13	Permanent Striping	\$ 2,000.00	1	LS	\$ 2,000.00
Miscellaneous Construction					\$ 311,500.00
Construction Subtotal					\$ 373,750.00
Soft Costs For Development					
14	Survey and Engineering (12%)	\$ 44,900.00	1	LS	\$ 44,900.00
15	Construction Management/Support (10%)	\$ 37,400.00	1	LS	\$ 37,400.00
16	Construction Staking	\$ 5,000.00	1	LS	\$ 5,000.00
Total Soft Costs					\$ 87,300.00
Soft Cost Subtotal					\$ 87,300.00
Total Development Cost					\$ 461,050.00
Contingency (20%)					\$ 92,200.00
Development Cost Grand Total					\$ 553,250.00

*In 2018 dollars, assumes cost of relocating franchise utilities are paid by others

**Preliminary Estimate of Probable Construction Costs for
Intersection Improvements: Roundabouts***

Prepared By: PBS Engineering and Environmental
Prepared 5/10/2018

Item	Description	\$/unit	Qty	Units	Cost
General					
1	Mobilization	\$ 80,000.00	1	LS	\$ 80,000.00
2	SPCC Plan	\$ 2,500.00	1	LS	\$ 2,500.00
4	Project Temporary Traffic Control (15%)	\$ 130,000.00	1	LS	\$ 130,000.00
Total Cost of General					\$ 212,500.00
Earthwork, Bases, and Surface Treatments					
5	Clearing and Grubbing	\$ 5,000.00	1	LS	\$ 5,000.00
6	Roadway Excavation	\$ 25.00	5,000	CY	\$ 125,000.00
7	Gravel Borrow	\$ 20.00	5,000	CY	\$ 100,000.00
8	Crushed Surfacing Base Course	\$ 25.00	2,000	TON	\$ 50,000.00
9	HMA	\$ 120.00	1,000	TON	\$ 120,000.00
Earthwork, Bases, and Surface Treatments					\$ 400,000.00
Stormwater					
10	Storm Manhole	\$ 3,500.00	4	EA	\$ 14,000.00
11	Catch Basin	\$ 2,000.00	10	EA	\$ 20,000.00
12	Schedule A Storm Pipe	\$ 80.00	1,000	LF	\$ 80,000.00
13	Water Quality	\$ 20,000.00	1	LS	\$ 20,000.00
Total Cost of Stormwater					\$ 134,000.00
Miscellaneous Construction					
14	Erosion Control	\$ 20,000.00	1	LS	\$ 20,000.00
15	Cement Concrete Traffic Curb	\$ 30.00	2,000	LF	\$ 60,000.00
16	Cement Concrete Sidewalk	\$ 90.00	500	SY	\$ 45,000.00
17	Cement Concrete Curb Ramp	\$ 2,500.00	8	EA	\$ 20,000.00
18	Landscape Restoration	\$ 5,000.00	1	LS	\$ 5,000.00
19	Permanent Signing	\$ 25,000.00	1	LS	\$ 25,000.00
20	Permanent Striping	\$ 20,000.00	1	LS	\$ 20,000.00
Total Cost of Water					\$ 195,000.00
Construction Subtotal					\$ 807,500.00
Soft Costs For Development					
21	Survey and Engineering (12%)	\$ 96,900.00	1	LS	\$ 96,900.00
22	Construction Management/Support (10%)	\$ 80,800.00	1	LS	\$ 80,800.00
23	Construction Staking	\$ 20,000.00	1	LS	\$ 20,000.00
Total Soft Costs					\$ 197,700.00
Soft Cost Subtotal					\$ 197,700.00

Total Development Cost	\$ 1,005,200.00
Contingency (20%)	\$ 201,000.00
Development Cost Grand Total	\$ 1,206,200.00

*In 2018 dollars, assumes cost of relocating franchise utilities are paid by others

FLEX LIGHT INDUSTRIAL FEASIBILITY STUDY



City of College Place

January 2022

PREPARED BY:



J-U-B ENGINEERS, Inc.
3611 South Zintel Way
Kennewick, Washington 99337

With Assistance from:

The Metts Group



Design West



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APPENDICES

Appendix A. Site Investigation Report

Appendix B: Engineer's Opinion of Probable Costs

1 INTRODUCTION

The City of College Place evaluated three parcels to construct a light industrial flex building and selected a preferred site through a Site Investigation Report, completed in June 2021. The City is currently lacking existing building space for incoming businesses, resulting in these businesses looking elsewhere for commercial/light industrial space.

The purpose of this report is to discuss the preferred site selected and identify the conceptual site layout, utilities, traffic analysis, and estimated development cost. This analysis is part of the Washington State Community and Economic Revitalization Board (CERB) Feasibility Study.

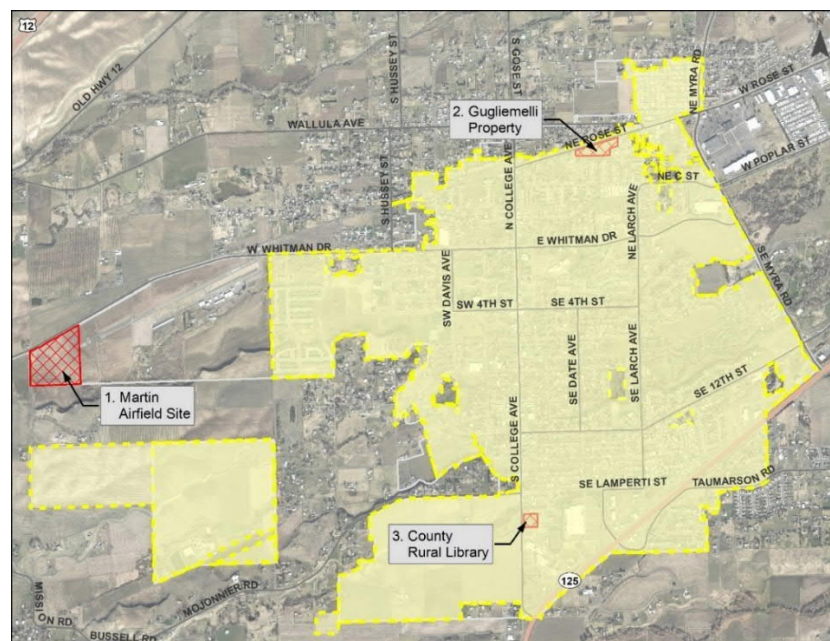
1.1 SITE INVESTIGATION REPORT

The City of College Place identified three potential sites for a flex industrial development. In order to determine the best available site for the Feasibility Study a Site Investigation Report was prepared to identify and compare the various site features, available infrastructure and development restrictions. This analysis also included an economic analysis which looked at the targeted industry clusters which would be most likely to utilize each site.

The Site Investigation Report utilized internet research and telephone discussions to obtain governmental, agency, and utility company information for the three sites:

- Option 1 – Martin Airfield,
- Option 2 – Gugliemelli Property, and
- Option 3 – The Rural County Library.

FIGURE 1. SITE INVESTIGATION REPORT VICINITY MAP



After a thorough review process, Option 2 – Gugliemelli Property, was selected as the favorable site due to its current size, access, and existing utilities. The full Site Investigation Report can be found in [Appendix A](#) of this report. Following the selection process, the Port of Walla Walla and the City of College Place have begun collaborating on how to create a quick impact to the City and solve the immediate need for building space for existing and future businesses in the area.

Through an Economic Analysis, the following uses were identified as suitable for this property:

- High Tech (Management consulting services, data processing, and other computer related services)
- Healthcare (Hospitals, offices of physicians and dentists, and healthcare support services)
- Food and Beverage (Wineries, Breweries and Fruit Farming)

1.2 GUGLIEMELLI PROPERTY

The Gugliemelli Property is described as parcel 350725522434 (4.52 acres). The parcel is located within the city limits of College Place along Rose Street and zoned General Commercial. The property is currently undeveloped and has historically been farmed with dryland wheat. The existing land uses surrounding the site includes residential, as well as commercial and light industrial uses to the east. The site is currently owned by Pauline S. Gugliemelli.

FIGURE 2. GUGLIEMELLI PROPERTY



1.3 STUDY GOALS

The City of College Place identified three key goals for this analysis, namely:

- Identify feasible industrial uses for the Flex Light Industrial Site.
- Delineate infrastructure improvements necessary to serve recommended potential industrial uses.
- Prepare a marketing strategy to attract targeted industrial users to the subject site.

In order to achieve these primary study goals, several corresponding study work elements have been prepared for the subject property as follows:

- Site Investigation Report
- Economic feasibility analysis and marketing strategy
- A conceptual site plan
- Site infrastructure analysis

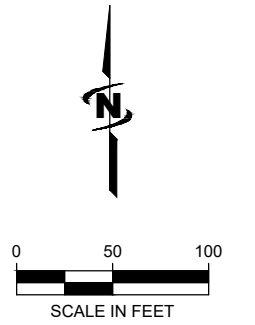
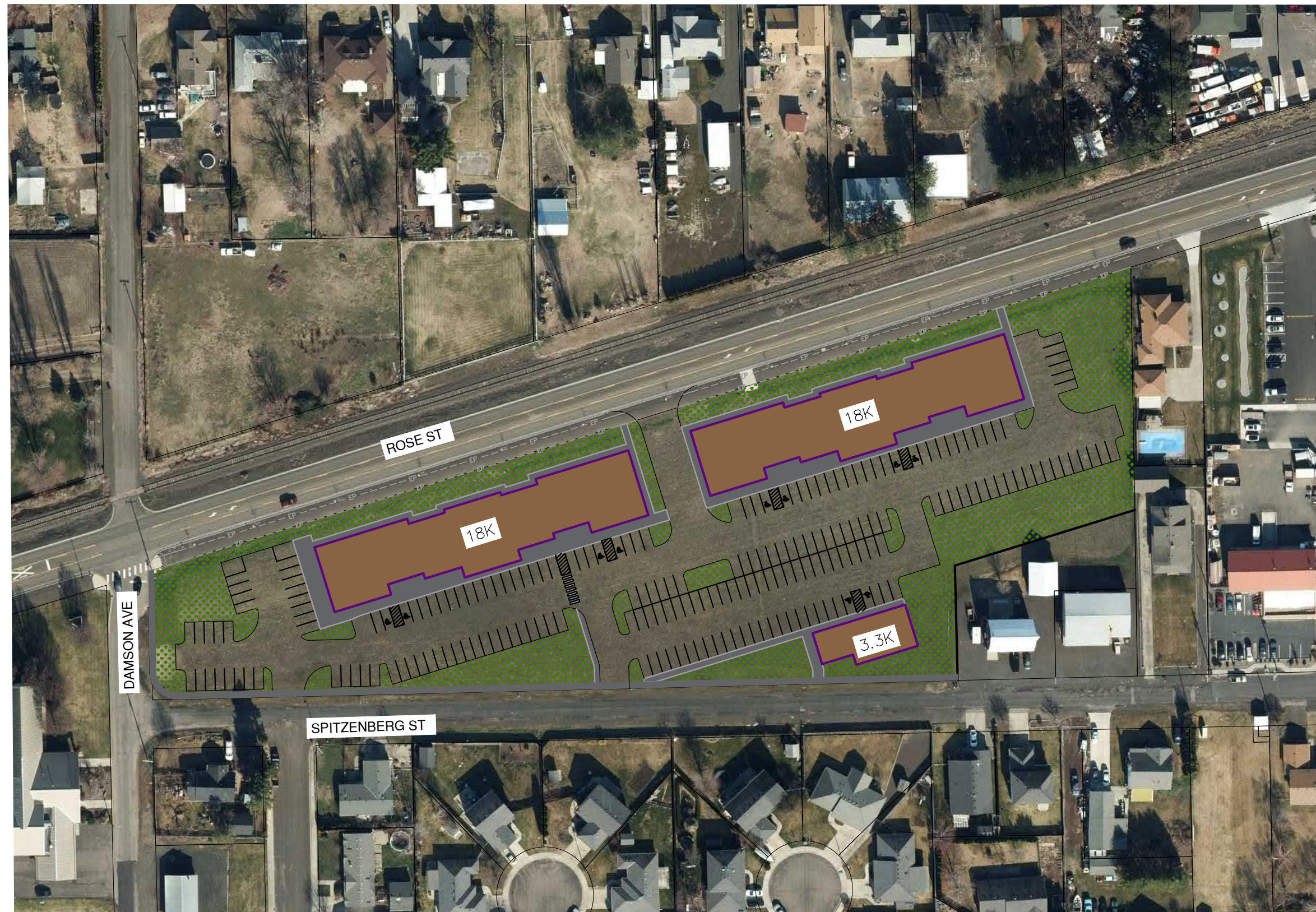
This study's overall focus is on determining the market and physical feasibility of developing the Flex Light Industrial Site. Doing so would achieve several City's objectives including the creation of new jobs, increasing the local property tax base, and possibly achieving a positive cash flow from disposition of the property to an industrial user.

2 CONCEPTUAL SITE PLAN

After consultation with the Port of Walla Walla and the City of College Place, a conceptual site plan of the Gugliemelli property was developed to determine general building space and size that would be feasible to construct on the property. Several site plans were developed. The preferred conceptual site plan was selected and is shown in [Figure 3](#). Factors in determining the layout and the amount of building space included parking requirements as required by City code. Additional consideration included visibility, vehicular access, setbacks, types of users and other market factors.

The site plan has identified approximately 39,300 square feet of building space to be constructed. The building space is based upon the amount of parking area that the site can develop. The minimum parking code requirement is 1 parking space per 200 square feet of building space. This would require a minimum of 197 parking spaces for the overall site plan. The site plan shows approximately 208 parking spaces which is a little over the minimum. The parking area will need to accommodate ADA parking. The ADA stalls would need to be placed to the nearest points of building entry. Based upon the conceptual site layout plan, a Utility Analysis and an Opinion of Probable Costs was prepared. Refer to Sections 3 and 5 for more information on the utility needs and development costs.

FIGURE 3. CONCEPTUAL SITE LAYOUT
CITY OF COLLEGE PLACE
INDUSTRIAL FLEX-SPACE



SITE SUMMARY

BUILDING SF: 39,300

PARKING REQ: $\frac{1}{200}$ SF = 197 PARKING SPACES

PARKING SPACES PROVIDED: 208+/-

3 UTILITY ANALYSIS

The following is a summary of the proposed utility improvements that are anticipated to support the overall site development. A conceptual site utility plan was developed and shows proposed utility improvements and is located in Several site plans were developed. The preferred conceptual site plan was selected and is shown in [Figure 4](#).

3.1 WATER

The proposed site is within the City's water service area. There is an existing 8-inch water line along Rose St and Damson Ave. An existing 8-inch service stub is provided near the northwest corner of the property. Refer to [Figure 4](#), the Conceptual Utility Layout Plan, to see the anticipated overall utility layout to support the project.

An 8-inch waterline will be required to be installed along Spitzenberg Street from Damson Avenue. A fire hydrant is anticipated at the end of the waterline improvement. Service stubs from this 8-inch water main would be extended to the subject property.

An 8-inch waterline would be required to extended across the site from Spitzenberg to Rose. This internal waterline would provide service to the proposed buildings to include domestic water supply, fire sprinkler supply and fire hydrant supply. It is anticipated that water services for each of the buildings will be 2-inch along with a 4-inch fire sprinkler supply line. It is estimated that the project would need two on-site fire hydrants.

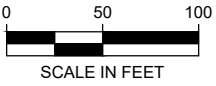
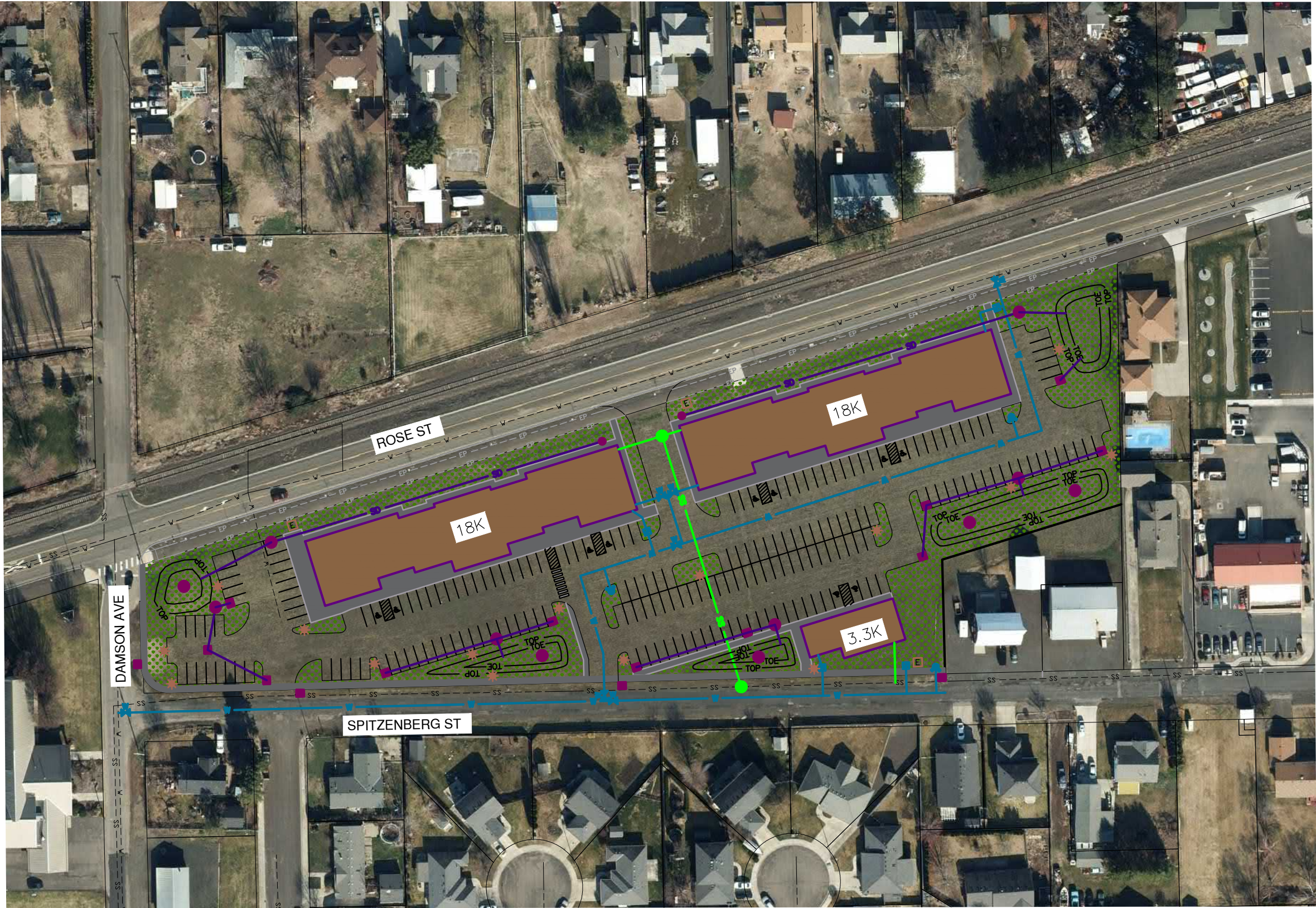
3.2 SANITARY SEWER

There is an existing sewer line located along Spitzenberg. A new sewer service connection will be made in Spitzenberg to service the project. An 8-inch sewer line along with a couple of sewer manholes would need to be extended into the site. Refer to [Figure 4](#), the Conceptual Utility Layout plan to see the anticipated overall utility layout to support the project. Sewer services can then be extended to each of the proposed buildings.

3.3 STORMWATER

Stormwater will need to be retained on-site in accordance with City code requirements. A series of catch basin, manholes, drainage basins and infiltration trenches will be used to collect and retain stormwater on-site. Refer to [Figure 4](#), the Conceptual Utility Layout plan to see the anticipated overall utility layout to support the project.

FIGURE 4: CONCEPTUAL UTILITY LAYOUT
CITY OF COLLEGE PLACE
INDUSTRIAL FLEX-SPACE



LEGEND	PROPOSED	EXISTING
STORM DRAIN PIPING	SD	---
DOMESTIC WATER PIPING	W	---
SANITARY SEWER PIPING	SS	---
SEWER MANHOLE	●	●
STORMWATER MANHOLE	●	●
CATCH BASIN	■	■
WATER METER	■	■
FIRE HYDRANT	■	■
WATER VALVE	■	■
STREET LIGHT	★	★
ELECTRICAL TRANSFORMER	■	■

4 TRAFFIC ANALYSIS

The project is surrounded by three roads which includes Rose Street (north) Damson Avenue (west) and Spitzenberg (south). Refer to [Figure 3](#) the conceptual site plan that shows the project area.

Rose Street is classified as an arterial roadway and has been recently improved. It is a 3-lane roadway that includes a center turn lane. The posted speed limit is 35 mph. Concrete curb and gutter, concrete sidewalks, street trees and an asphalt pathway are located along the Rose Street property frontage. A proposed driveway connection to Rose Street is shown on the conceptual site plan and is located approximately 500-ft east of Dawson Avenue.

Damson Avenue is a residential collector, is only partially improved and is stop control at Rose Street. The posted speed limit is 25 mph. It is assumed that the easterly $\frac{1}{2}$ of the roadway would need to be improved to City standards. This would include roadway widening, concrete curb and gutters, concrete sidewalks, street-lights and storm drainage.

Spitzenberg Street is a residential collector, is only partially improved and is stop control at Damson. The posted speed limit is 25 mph. It is assumed that the northerly $\frac{1}{2}$ of the roadway would need to be improved to City standards. This would include roadway widening, concrete curb and gutters, concrete sidewalks, street-lights and storm drainage.

4.1 LAND USE/TRIP GENERATION

The project will increase traffic in the general area. It is anticipated that the majority of new trips will come from Rose Street. This is mainly due it's connectivity to N. College Avenue and NE Myra Road. Additional trips will occur on Damson and Spitzenberg; however, these trips are anticipated to be minimal.

The project is classified as light industrial with flexible space. Therefore, the type of use is not limited to just light industrial uses. There could be a mix of land uses that could include trades services, bakery, office, small restaurant, winery or other uses. To determine the amount of traffic generated by the project we have assumed land uses for the building spaces. Table 1 shows land use and the calculated traffic generation based upon the Trip Generation Rates from the 10th Edition ITE Trip Generation Manual.

TABLE 1: LAND USE TABLE

Land Use	ITE #	Square Ft	ADT	AM Peak	PM Peak	PM In	PM Out
Light Industrial	110	18,000	89	13	12	2	10
Office Park	750	15,000	166	22	16	1	15
Quality Restaurant	931	3,300	277	3	26	17	9
Winery	970	3,000	138	6	22	11	11
TOTAL	-	39,300	670	44	76	31	45

*ADT: Average Daily Traffic

Table 2 shows the peak hour in the PM at 76 trips. To add these peak hour trips to the roadway network, some assumptions were made as to the travel routes that the trips would generally use. Based upon existing roadway network, it is anticipated that most of the new trips would be added to Rose Street. It is assumed that the driveway approach connecting to Rose Street as shown on the conceptual site plan would be the predominant point of vehicular access in and out of the site. Table 2 shows the percent of PM peak hour trips outbound to Rose Street and inbound from Rose Street at the proposed driveway access. The total trips being added to Rose Street are estimated to be 85% of the PM Peak. The remaining 15% of the PM Peak trips are assumed to be added to Spitzenberg and Damson and are not include Table 2 as they are not significant.

TABLE 2: ROSE STREET DISTRIBUTION

	50% Right-Out	35% Left-Out	50% Left-In	35% Right-In
PM OUT	23	16	-	-
PM IN			16	11

From Table 2, there are an estimated 23 PM Peak right turn movements onto Rose Street along with 16 left turn movements onto Rose Street from the proposed driveway access to Rose Street. There are an estimated 16 PM Peak left turn movements into the project site from Rose Street with 11 PM Peak right turn movements into the project site from Rose Street.

Based upon the above assumptions it does not appear that there would be any significant traffic concerns/issues that would need to be addressed and/or mitigated for the proposed project. However, it is recommended that prior to any development occurring, that traffic impacts be reevaluated with the most current information.

5 CONCEPTUAL BUILDING PLAN

As previously stated, approximately 39,300 square feet of building space is anticipated. The concept site plan shows two 18,000 square foot buildings and one smaller 3,300 square foot building. Conceptual building renderings of the 18,000 square foot buildings were created. The preferred conceptual site plan was selected and is shown in [Figure 5 and 6](#). These renderings are intended to provide a visual idea of what the buildings could look like and for building programming. To keep the buildings flexible, the interior development of the building will not be finished. The interior would have bare walls studs and gravel floors. This will allow for future tenants to finish their space specific to their needs. Development costs for the building spaces are estimated at \$200 per square foot. This cost is only for the building which generally include the outside finishes, bare wall studs on the interior, small roof top HVAC units with penetrations to the space below and fire sprinkler line run along the ceiling. It does not include interior fixtures or finishes or floors. Refer to Section 6 for more information on development costs.

LIGHT INDUSTRIAL BUILDING +/-18,000 SF

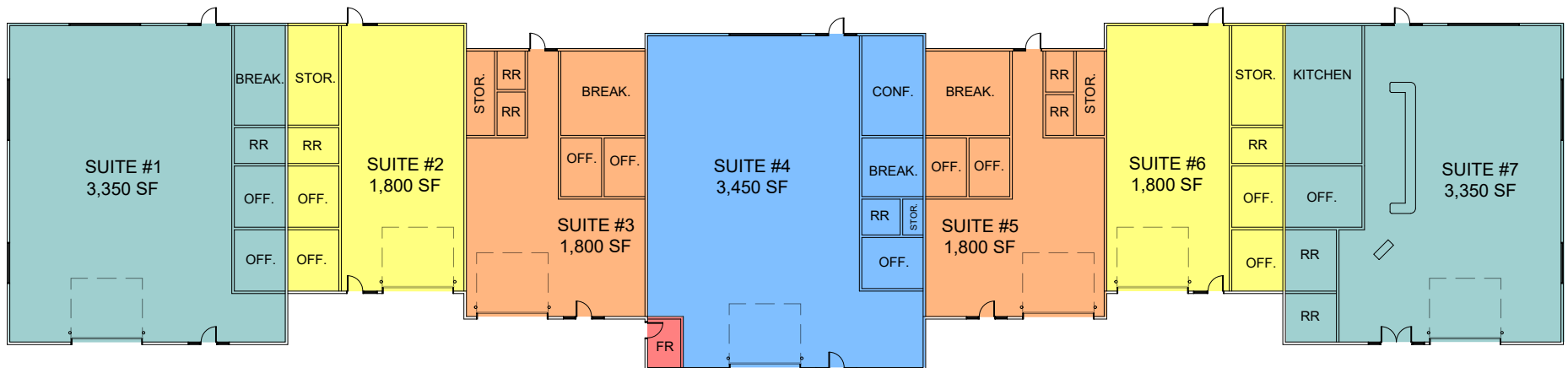


FIGURE 5
CONCEPTUAL DESIGN - FLOOR PLAN
COLLEGE PLACE FLEX BUILDING



LIGHT INDUSTRIAL BUILDING +/-18,000 SF



FIGURE 6
CONCEPTUAL DESIGN - ELEVATION
COLLEGE PLACE FLEX BUILDING

LIGHT INDUSTRIAL BUILDING +/-18,000 SF



FIGURE 6
CONCEPTUAL DESIGN - ELEVATION
COLLEGE PLACE FLEX BUILDING

6 COST ESTIMATES

An Engineer's Opinion of Probable Cost was developed to determine the total amount of anticipated costs to develop the site. These costs are based 2021 construction costs. Table 3 shows a general breakdown of these development costs. Site Development costs cover site improvements and off-site roadway improvements excluding the building shell costs. Building shell costs include the outer building shell and exterior finishes, HVAC rooftop units, fire sprinkler line but does not include interior finishes or floors. Soft costs include permit fees, sales tax, A/E design fees, construction management and 20% contingency of site development and building shell costs. Land purchase is the actual cost of purchasing the property. Refer to [Appendix B](#) that includes a more detailed breakdown of the Engineer's Opinion of Probable Cost.

TABLE 3: DEVELOPMENT COSTS

ITEM	COSTS	COST PER SQF (197,000 SQF OR 4.52 ACRES)
SITE DEVELOPMENT	\$1,800,000	\$9.20/SQF
BUILDING SHELL	\$7,900,000	\$40/SQF
LAND PURCHASE	\$2,000,000	\$10.15/SQF
SOFT COSTS	\$4,300,000	\$21.85/SQF
TOTAL COSTS	\$16,000,000	\$81.20/SQF

As shown in Table 3, the Engineer's Opinion of Probable Cost is \$16,000,000. The project site is approximately 4.52 acres or around 197,000 square feet. This breaks down to about \$81.20 per square feet of land area.

7 ECONOMIC ANALYSIS SUMMARY

7.1 OVERVIEW

The general goal of this element of the study is to analyze economically feasible commercial and industrial uses which could be located on the 4.52-acre Gugliemelli Property. This economic feasibility portion of the study conforms to the minimum threshold criteria established by the Washington State Community and Economic Revitalization Board (CERB) for potential grant funding opportunities; further analysis can be found in the Site Investigation Report found in Appendix A.

7.2 SUMMARY

According to Washington Employment Security Department, there are approximately 31,900 people in the labor force in Walla Walla County as of November 2021. According to Census' Longitudinal Employer-Household Destination data, roughly 36%, or 7,790, of Walla Walla County residents leave the County for work each day while another 11,400 people commute into the County to work.

The 7,790 residents commuting outside Walla Walla County for work indicate an untapped labor pool County businesses could build upon. Most of the jobs being filled by outside residents are in goods producing industries while those leaving Walla Walla County, work in service-based industries, including healthcare.

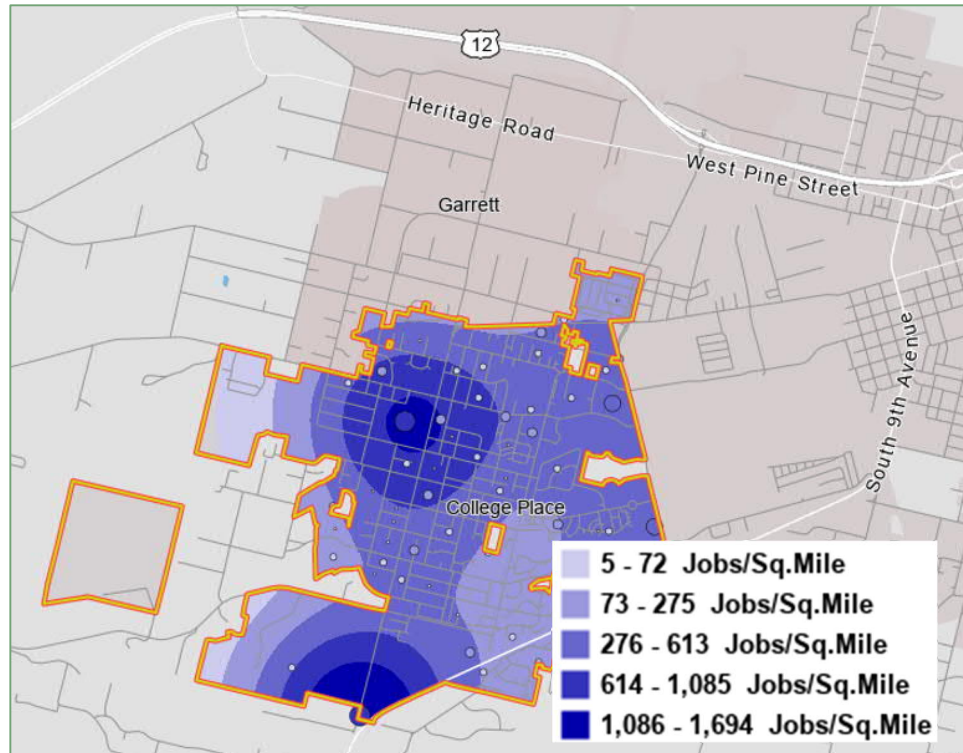
Over 88%, or roughly 2,900, of College Place residents commute outside the City for work while 80%, or 1,500, of the jobs within the City are being filled by outside residents. As shown in the table below, nearly half of College Place residents commute to Walla Walla for work. Majority of College Place residents work in a service-based industry. The top three industries residents work include healthcare (19%), educational services (14%), and retail trade (12%).

TABLE 4. WHERE COLLEGE PLACE RESIDENTS WORK (2019)

City	Number	Percent
Walla Walla	1,588	48.1%
College Place	385	11.7%
Spokane	95	2.9%
Kennewick	81	2.5%
Richland	61	1.8%
Pasco	59	1.8%
All Other Locations	1,033	31.2%

Source: U.S. Census Bureau, Center for Economic Studies, LEHD

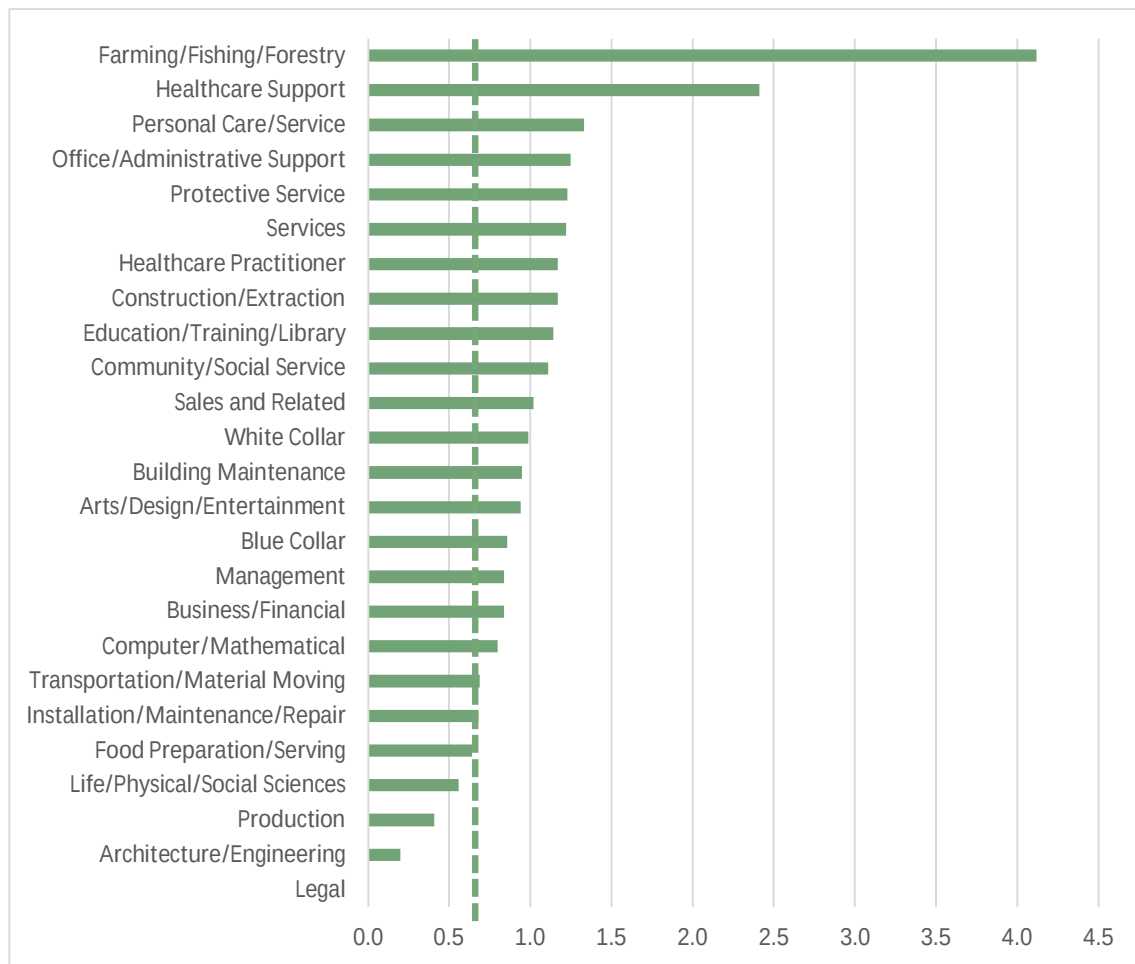
FIGURE 7. JOBS LOCATED IN COLLEGE PLACE (2019)



Source: U.S. Census Bureau, Center for Economic Studies, LEHD

As mentioned earlier, majority of College Place residents work in a service-based industry. This could include anything from healthcare to professional services to restaurants. How concentrated each occupation is to College Place compared to other regions across the U.S. is indicated by a location quotient or LQ. Anything above 1.0 indicates a higher concentrated occupation in College Place. Healthcare workers are highly concentrated and specialized in College Place and an even larger concentration of ag workers because of the strong agricultural presence in the region (see figure below).

FIGURE 8. CONCENTRATION BY OCCUPATION, COLLEGE PLACE 2021



Note: Location Quotients compare the industry/occupation share of a local area's employment relative to that same share nationally. A value lower/greater than 1 indicates that the local area is less/more specialized in that industry or occupation category than the US as a whole.

Source: Esri

After a thorough review process, as provided in the Site Investigation Report, Option 2 – Gugliemelli Property, was selected as the favorable site due to its current size, access, and existing utilities. This option also yielded more positive economic results—higher contribution to jobs, GRP and overall output and community benefit.

Given the conceptual layout produced by J-U-B Engineers and the desirable industries that have the potential of fulfilling existing needs of the community and businesses, there is potential for a few different users at this site. Through the Economic Analysis produced during the Site Investigation, the following uses were identified as suitable for this property:

- High Tech (Management consulting services, data processing, and other computer related services)
- Healthcare (Hospitals, offices of physicians and dentists, and healthcare support services)
- Food and Beverage (Wineries, Breweries and Fruit Farming)

The impacts summarized below in Table 5 and Table 6 are indicative of the different users outlined above. The 200 direct jobs and 77 indirect and induced jobs estimated to be created at full build-out will increase the level of employment in Walla Walla County by 0.9%, increasing from 31,013 to 31,289—assuming that all workers will reside in Walla Walla County (labor force data is based on place of residence and not place of work). A small portion will most likely reside in College Place and, therefore, positively impacting the level of employment and, ultimately, reducing the number of unemployed and unemployment rate by nearly 32% (see Table 7).

The influx of job creation boasts well for the region in terms of housing, schools, and local tax revenues—equating to roughly \$15 million each year at full buildout (as shown in Table 8).

TABLE 5. JOB IMPACTS BY USE

	Building Size (SF)	SF/Emp	Initial Workers
LIGHT INDUSTRIAL	18,000	500	36
OFFICE PARK	15,000	100	150
RESTAURANT	3,300	450	7
WINERY	3,000	450	7
SUBTOTAL	39,300	197	200

Sources: J-U-B Engineers, Author's calculations

TABLE 6. ECONOMIC IMPACT SUMMARY BY BUILDOUT SCENARIO

Impact Type	Buildout Scenario				Totals
	Light Industrial	Office Park	Restaurant	Winery	
Impact on Jobs					
Direct	36	150	7	7	200
Indirect + Induced	20	49	2	6	77
TOTAL	56	199	9	13	277
Impact on Earnings (annualized)					
Direct	\$2,249,395	\$8,545,680	\$158,940	\$144,491	\$11,098,506
Indirect + Induced	\$1,248,265	\$2,811,093	\$26,902	\$127,189	\$4,213,449
TOTAL	\$3,497,660	\$11,356,773	\$185,842	\$271,680	\$15,311,955

Source: Author's calculations using IMPLAN multipliers

TABLE 7. LABOR FORCE IMPACTS AS A RESULT OF 200 JOBS DIRECTLY CREATED, WALLA WALLA COUNTY

Walla Walla County	Current	Impact from Total Jobs	Percent Change
Labor Force	31,899	31,899	0.0%
Employment	31,013	31,289	0.9%
Unemployed	886	610	-31.2%
Unemployment Rate	2.8%	0	-31.8%

¹assuming that people that fill these jobs will reside in Walla Walla County (labor force data is based on “place of residence” and not place of work)

*assuming the number in the labor force remains the same and total jobs impact the level of employment and reduce the number of unemployed

Source: Author’s calculations based on Washington Employment Security Department data

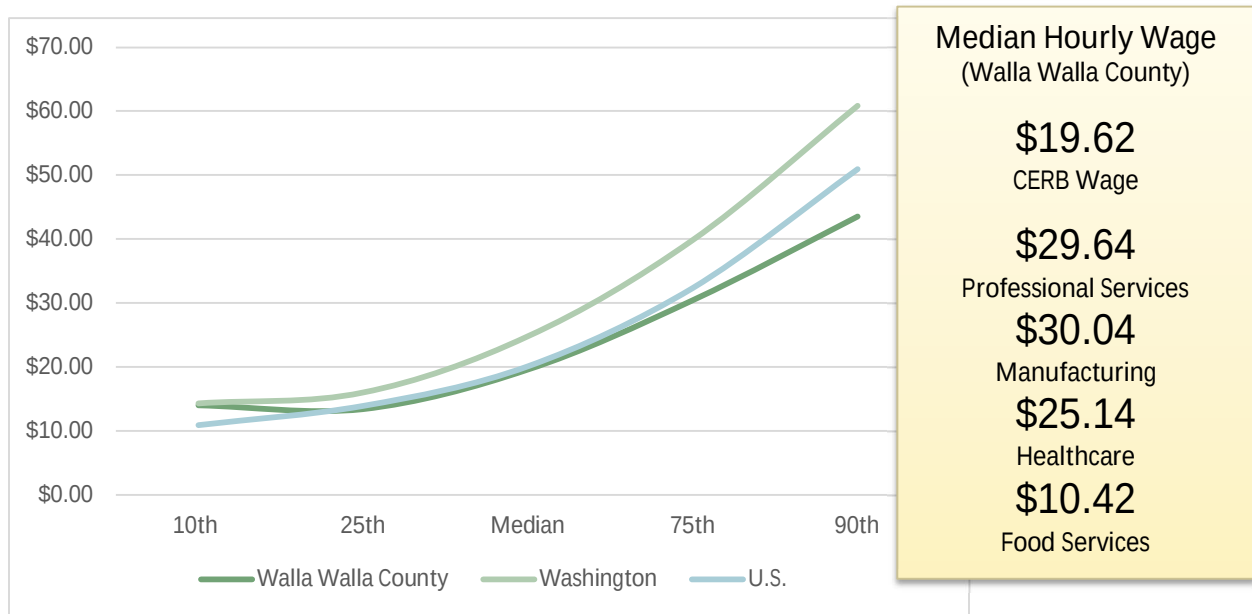
TABLE 8. TAX IMPACT SUMMARY (ANNUALIZED)

Estimated Tax Revenue	Local	County	State	Federal	Total
Direct	\$151,129	\$53,118	\$322,466	\$2,244,305	\$2,771,019
Indirect + Induced	\$283,654	\$99,237	\$447,144	\$696,127	\$1,526,162
TOTAL	\$434,783	\$152,355	\$769,610	\$2,940,433	\$4,297,181

Source: Author’s calculations using IMPLAN multipliers

The average annual wage in Walla Walla County in 2020 (most recent data available) was \$48,431, nearly 37% lower than the State of Washington. This trend is also true for the targeted industries identified. However, workers in the professional services industries earn roughly 27% more (\$29.64 per hour), on average, than the median wage for all industries in the County (\$19.62 per hour)—the CERB standard qualification. Since most of the jobs would come from the office park space, these numbers were used.

FIGURE 9. WAGES BY PERCENTILE (2020)



Source: BLS

7.3 MARKETING STRATEGY

The City of College Place should continue to work closely with local and regional economic development organizations on a focused marketing strategy, resulting in highly visual content for distribution to site selectors, prospective industrial tenants, and developers.

There are several strategies that are expected to contribute to a meaningful marketing effort. Strategies lead to activities that will better ready the site for sale, more actively market the site, provide information about the site to potential buyers, and identify prospective buyers. The strategies involved in marketing a project generally include:

- Contact and interview prospective users or tenants (outlined in the sections below)
- Develop a marketing plan
- Establish a marketing budget
- Prepare and distribute marketing documents (highly visual brochures, technical packages, website, social media)
- Highlight regional assets
- Coordinate with local and regional EDOs
- Reach out to targeted industry users looking to enter this market

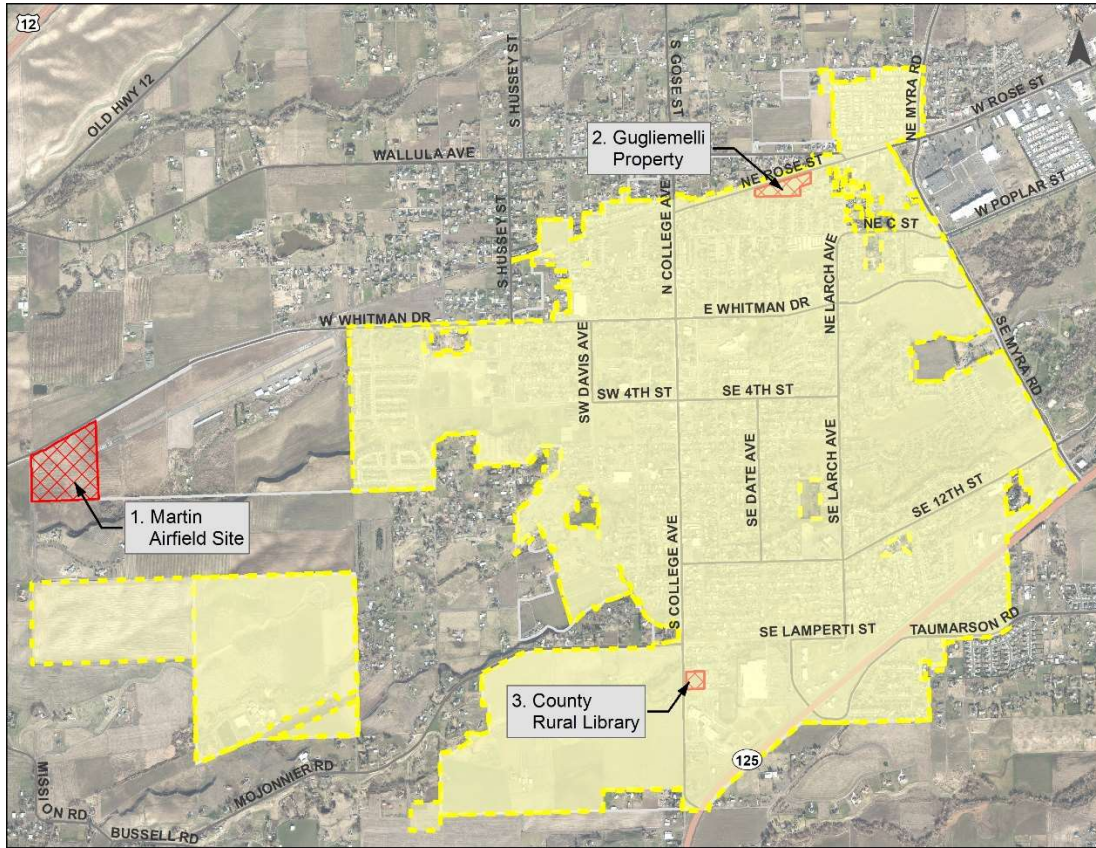
8 SUMMARY

The feasibility report identifies the development standards and potential challenges this site has. After the Guglielmelli property was selected, a conceptual site and utility layout was prepared. The concept site plan has a total of 39,300 SF of flex building space anticipated. The concept utility plan identifies the existing and proposed mainlines to be installed to sufficiently service this proposal within the City's service area. Street improvements have been identified in the traffic analysis. This may include roadway widening, concrete curb and gutter, concrete sidewalk, streetlights, and storm drainage. The Engineer's Opinion and Probable Cost is approximately \$16,000,000. This includes site development, building shell, land purchase, and soft costs.

Economic benefits resulting from the development of this site include the creation of potential job opportunities, increased tax revenue, overall increase in earnings. It is estimated that 200 jobs could be created from the development of the site with median wages estimated at \$29.64 per hour for a professional services worker. The overall median wage exceeds the CERB median hourly wage of \$19.62 for Walla Walla County. The successful development of the site could also increase the local tax revenues by over \$2.5 million, generate over \$11 million in earnings per year, grow the labor force in the region by 0.9 % and reduce the unemployment rate by nearly 32%.

APPENDIX A. SITE INVESTIGATION REPORT

SITE INVESTIGATION REPORT



City of College Place

June 2021

PREPARED BY:



J-U-B ENGINEERS, Inc.

2810 W. Clearwater Avenue, Suite 201

KENNEWICK, WASHINGTON 99336

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Appendix B. Gugliemelli Property Soil Map
Appendix C. Rural Library Property Soil Map
Appendix D. City Zoning Map
Appendix E. City Comprehensive Plan Future Land Use Map
Appendix F. City Water and Sewer Map
Appendix G. Summary of Targeted Industry Clusters and Supporting Industries

1 INTRODUCTION

The City of College Place is currently evaluating three (3) parcels to construct an industrial flex building. The information contained in this report was obtained by internet research of governmental, agency, and utility company site along with telephone discussions. The purpose of this site investigative report is to summarize the various site development, utility, and access requirements for the development of the proposed sites. The City of College Place will then select the most favorable site for further analysis as part of the CERB Feasibility Study.

1.1 OPTION 1

The Martin Airfield Property is currently owned by Martin Airport, LLC and is described as parcel 350734210008 (78.06 acres). The parcel is located west of the airport runway and within the Urban Growth Area (UGA) of the City of College Place. This site will require city services to be extended to the site. The runway of the existing airport to the east extends to this property and will impact development with height and airspace restrictions.

The soils for the majority (89.8%) of the site is described as UmA – Umapine silt loam. The other soils consist of PmA - Pedigo silt loam (2.9%) and UpA – Umapine silt loam (7.4%). See **Appendix A** for a soil survey map.



In 2019, J-U-B prepared an analysis of future development costs of Martin Airfield. As a result, it was identified that this site will require further evaluation of the following potential development restrictions:

- Airport building height and land use compatibility requirements.
- Critical areas and shallow ground water located along Doan's Creek.
- Roadways improvements may be needed to handle the increase of truck traffic associated with the proposed industrial development of this area.
- Water service to the area would need to be extended to the site as well as a new elevated storage tank to serve the site and vicinity.
- Sewer service would require the construction of a new lift station at the west edge of the site that could serve the Martin Airfield site. In addition, a force main would need to be extended to the Sewer Treatment Plant to the South.

1.2 OPTION 2

The Gugliemelli Property is currently owned by Pauline S. Guglielmelli and is described as parcel 350725522434 (4.52 acres).

The parcel is located within the city limits of College Place and currently zoned General Commercial. The property is currently undeveloped and has historically been farmed with dryland wheat. The existing land uses surrounding the site includes residential with commercial and light industrial uses to the east. The site has existing water service to the north and sewer service to the south.

The soil type for the entire property is identified as AmA – Ahtanum silt loam (100.0%). See **Appendix B** for a soil survey map.



1.3 OPTION 3

The Rural Library site is currently owned by the Walla Walla County Rural Library and is described as parcel 350601220067 (1.89 acres).

The parcel is located within the city limits of College Place and currently zoned General Commercial. The property is currently undeveloped since the demolition of the previous single-family dwelling. This site has existing water and sewer service available to the north, with water also available to the west, off of College Avenue.

The soils for the majority (76.0%) of the site is described as StA – Stanfield very fine sandy loam. The other soils consist of TsA – Touchet silt loam (1.3%) and YkA – Yakima gravelly silt loam (22.6%). See **Appendix C** for a soil survey map.



2 ZONING AND PLANNING

The Martin Airfield Site is within the UGB and currently has a zoning designation of Light Industrial. It is assumed that this property will be annexed into the city and zoned Light Industrial. The other two properties, Gugliemelli and the Rural Library sites are within City Limits and zoned General Commercial. See **Appendix D and E** for the City of College Place Zoning Map and Comprehensive Future Land Use Map respectively. The following chapter identify the development requirements for the City of College Place.

2.1 DEVELOPMENT STANDARDS

2.1.1 LIGHT INDUSTRIAL

The purpose of the light industrial zoning district is to provide for the location and grouping of industrial activities that do not generate offensive external impacts such as excessive noise, pollution or emissions, involve limited assembly, fabrication and handling of products, include research and technological processes and do not create exceptional demands upon public facilities and services. A further purpose is to afford protection to the industries so located by prohibiting the intrusion of incompatible influences.

- Setbacks
 - Front: None
 - Side: None
 - Rear: None
- Max. Building Heights – None
- Lot Dimensions
 - Min. Size: None
 - Max. Lot Coverage: 100%
 - Min. Lot Width: 50'
- Off- street parking – 1 space per every 500 square feet (CPMC Section 14.60.070)

2.1.2 GENERAL COMMERCIAL

The purpose of the general commercial zoning district is to provide for the concentrated grouping of diversified retail trade, administrative, and professional offices, and services. This district encourages a full range of commercial activities, including convenience, comparison and professional shops and businesses serving the entire community trading area (CPMC Section 14.50.020-3).

- Setbacks
 - Front: None

- Side: None
 - Rear: None
- Max. Building Heights – None
- Lot Dimensions
 - Min. Size: None
 - Max. Lot Coverage: 100%
 - Min. Lot Width: 50'
- Off- street parking – 1 space per every 200 square feet plus adequate employee parking and at least one (1) space for each employee at work during peak hours (CPMC Section 14.60.070).

2.1.3 GENERAL DEVELOPMENT STANDARDS

All new commercial and industrial development within the city will be required to comply with the following development standards.

- Parking and Loading: In accordance with CPMC Section 14.60.070.
- Signs: In accordance with CPMC Section 14.60.090.
- Landscaping Requirements: In accordance with CPMC Section 14.60.040.
- Street Lighting: In accordance with CPMC Section 14.12.
- Site Plan Review: The purpose of a site plan review is to determine whether new development activities will or will not have an adverse effect on the public health, safety and welfare of residents of College Place, and that new development activities are compatible with existing patterns so development and the provisions of the College Place Comprehensive Plan (CPMC Section 14.30.140).
 - Development activities subject to a site plan review shall be determined by the city and may include new construction, modifications to existing uses or structures that increase the size of the building or the intensity of the use, and/or changes of use.
 - The site plan review shall include the whole site including subsequent phases of development without regard to existing or proposed lot lines as well as nearby infrastructure.
 - A site plan review permit is separate from and does not replace other required permits such as a conditional use permit or a shoreline substantial development permit. A site plan review may be combined and reviewed concurrently with other permits and approvals, as determined by the city.
- Lighting: Exterior lighting for all uses and signs shall be directed downward and otherwise arranged, shaded, screening, shielded and of a design that results in a light being directed onto the site (CPMC Section 14.60.080.A).

- Pavement Requirements: All off-street parking areas shall be paved with asphalt or concrete and shall manage stormwater in accordance with the provisions of the College Place engineering design standards (CPMC Section 17.60.070.B.2).
- Streets, Sidewalks, & Public Places: In accordance with CPMC Section 12.

2.2 FLOODPLAIN, CRITICAL AREAS, ETC.

Per the City of College Place Critical area Protection Maps, the subject properties are not located within the follow critical areas: Existing Riparian Areas, wetlands, critical aquifer recharge areas, or frequently flooded areas. Any development must be designed and constructed in accordance with erosion control and surface/storm water management requirements in current City regulations. There is existing riparian areas located along Doan Creek near the Martin Airfield site and along Stone Creek near the County Library site. As a result, the critical areas ordinance maps recommend a 75-ft buffer along Doan Creek and 35-ft along Stone Creek.

2.3 SUBDIVISION OPTIONS

The City of College Place allows three options for land division: subdivision, short plat and binding site plans. All three options are subject to a four-step review and approval process in accordance with the provisions of CPMC Section 14.90.050 and CPMC Section 14.30. The steps include:

1. Pre-application consultation and preparation of application materials;
2. Preliminary review and approval;
3. Civil plan review and approvals, construction, inspection, acceptance of improvements, and the execution of access and maintenance agreements; and
4. Final review and approval.

2.3.1 LONG PLAT

A long plat is a division of land into five or more lots, tracts, or parcels. This type of division of land requires a long plat review procedure that includes environmental review and a public hearing. The Hearing Examiner is authorized to make the final decision for approval, approval with conditions, or denial following an open record hearing.

2.3.2 SHORT PLAT

A short plat is a division of land into four or fewer lots, tracts, or parcels. This type of land division requires a short plat review. If critical areas are present, an environmental review will be required with a public notice of the application and the preliminary SEPA determination. If critical areas are not present, the application can be administratively approved.

2.3.3 BINDING SITE PLAN

A binding site plan is a type of division typically used for commercial and industrial sites. There is no limits to the number of lots, tracts, or parcels created in this option. In general, a binding site plan is to a scaled drawing which:

- a) Identifies and shows the areas and location of all streets, roads, improvements, utilities, open spaces, and any other matters specified by this title;
- b) Contains inscriptions or attachments setting forth such appropriate limitations and conditions for the use of the land as established by the City Council; and
- c) Contains provisions making any development be in conformity with the site plan.

2.4 SEPA PROCESS

The State Environmental Policy Act (SEPA) requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. The purpose of this checklist is to provide information to help the City of College Place identify impacts from the proposal and to help the agency decide whether an EIS is required. Typically, the SEPA checklist is submitted with the site plan or binding site plan for concurrent review and approval. Approvals are administrative but requires an agency review and public review and comment period.

3 ROADWAYS

3.1 W WHITMAN DR

The Martin Airfield Site is bound by W Whitman Dr to the north and Hampton Ln to the west. Whitman Dr is a Rural Minor Collector, owned and operated by the County. Hampton Ln is a private road. Whitman Dr is a 40-foot wide street with 5-foot shoulders on each side. Direct access to the site is anticipated to be via Whitman Dr. If this site is selected further analysis to determine impacts of development to Whitman Dr and the surround area is needed.



3.2 NE ROSE ST

The Gugliemelli Property is bound by NE Rose St to the north, NE Damson Ave to the west, and NE Spitzenburg St to the south. All of these streets are public roadways and maintained by the City of College Place. Rose St is a 3-lane, 40-foot wide street, with a walking path on the south side of the street, adjacent to the subject property. Spitzenburg St is a narrow 2-lane local road with no curb and gutter or sidewalks. It has been identified by the City that access to the site could be provided via Rose St and Spitzenburg St. If this site is selected, further analysis of the future improvements and widening along Spitzenburg is anticipated to conform with city standards.



3.3 S COLLEGE AVE

The County Rural Library is bound by S College Ave to the west and SE Cedar Bend Dr to the north. Both of these streets are owned and maintained by the City of College Place. College Ave is a 40-foot wide street with sidewalks on both sides. Cedar Bend Dr is a local road that serves a residential neighborhood. It is anticipated that access would need to be provided off of College Ave if this site is developed. No impacts to the roadway are anticipated at this time.



4 UTILITIES

The following is a summary of the existing utilities that serve the three sites as well as a brief description of future improvement anticipated if the development occurs on the site.

4.1 WATER

Martin Airfield – This site is located within of the City’s water service area, but is currently not served by water. It is anticipated the extension of a 12-inch water main to the site and the construction of a new well would be required for development of this site.

Gugliemelli – This proposed site is within the City’s water service area. There is an existing 8-inch water line along Rose St and Damson Ave. An existing 8-inch service stub is provided near the northwest corner of the property.

County Rural Library – This site is within the City’s water service area. Along the north property line on Cedar Bend Dr, there is an 8-inch water line. To the west, along S College Ave, there is a 12-inch water main available.

See Appendix F: City of College Place Water and Sewer Map

4.2 SEWER

Martin Airfield – This site is located within the city sewer service area, but is not currently served by sewer. This would result in a need to extended services if development occurred. Due to the location of the site, it is anticipated that a lift station and forcemain would be required to be able to provide sewer service to this site.

Gugliemelli – This proposed site is located within the City’s sewer service area. There is an existing 8-inch water line along NE Spitzenburg St. No sewer lines are stubbed along Spitzenburg St.

County Rural Library – Sewer services are available on Cedar Bend Dr in an 8-inch sewer main. No sewer lines are stubbed onto the property.

See Appendix F: City of College Place Water and Sewer Map

4.3 STORMWATER

All land-disturbing activities, new development and redevelopment unless otherwise exempted in accordance with CPMC Section 13.86.030 shall be required to comply with the standards, procedures and requirements set forth by this chapter and the current:

- City of College Place Standard Plans and Specifications as adopted by council resolution; and
- Stormwater Management Manual for Eastern Washington (SWMMEW).

It is anticipated that all stormwater will be required to be retained and treated on each site. Refer to CPMC Section 13. 86 for more detail.

4.4 ELECTRICITY

Martin Airfield

- Columbia Rural Electric Association (Columbia REA) provides power to this site with underground, 3-phase available. This site is located off of an express feed on the south side of Whitman Dr that can provide ample power to future development.
- Pacific Power can be provided service with both single-phase and 3-phase.

Gugliemelli

- This site is also served by Columbia REA with underground, 3-phase power, located off of Spitzenberg St.
- Pacific Power can service this site with single-phase and 3-phase. To determine load availability, an estimator must review the site beforehand.

County Rural Library

- Columbia REA has provided underground utilities to the site with the intention to develop the County Rural Library. The Library was never built, but the utilities remain. This site has 3-phase direct feed available. The voltage available to this site are as follows: 277/480, 120/240, and 120/208.
- Pacific Power can provide service to the site. Power is available on SE Hickory Ct, behind the property.

4.5 TELEPHONE & CABLE

Century Link can provide telephone, cable, and high speed internet to all three sites. Internet speeds for each site are:

- Martin Airfield – 30M downstream / 1.5M upstream
- Gugliemelli – 1.5M downstream / 500K upstream
- County Rural Library – 80M downstream / 10M upstream

4.6 NATURAL GAS

Gas service is provided by Cascade Natural Gas Corporation (CNGC).

- Martin Airfield – Gas service is available to the airport but servicing the center of the site will be expensive (~\$100,000).
- Gugliemelli – Gas Service is available with a 4" steel gas line that runs along the entire frontage of property on NE Rose St. A 2" plastic gas stub on the southeast corner of property is also available on NE Spitzenberg St.

- County Rural Library –Gas service is available with a 2” main on S College Ave and on the entire frontage from SE Cedar Bend Dr to the High School. There is currently an abandoned gas line on the property the extends to the former house on the property. Gas service to the site is available in abundance.

5 ECONOMIC ANALYSIS

5.1 INTRODUCTION

The City of College Place is currently evaluating three parcels to construct an industrial flex building. The purpose of this Economic Analysis is to support the Site Investigation Report prepared by J-U-B Engineers, Inc. to provide insight into economic drivers that will have the greatest potential for the City.

This analysis identifies unique factors within the regional economy and defines industry clusters and supporting industries that complement each site and have a strong opportunity to promote economic diversity and drive economic prosperity. The following have been identified as key industry clusters that represent opportunities for growth and diversification for the regional economy as well as opportunities for regional businesses to diversify their market base.

- Manufacturing
- Healthcare
- Food and Beverage
- High-tech
- Warehousing and Storage

5.2 METHODOLOGY

The data contained in this report was obtained by IMPLAN—an economic input-output modeling application—and confirmed by interviews from regional experts in the applied fields; Walla Walla County Comprehensive Development Strategy; and desktop research.

The methodology to determine the industry clusters listed above was initially vetted by the current industry mix within the County and their contribution to GRP. Industries within each industry cluster were extracted and analyzed further based on supply chain needs, regional met demand and grounded on regional trade flows. Those industries spending the highest value on exported goods took precedent coupled with the most growth opportunity. Industries were further vetted by desktop research and phone interviews with regional experts. To determine whether each industry was a good fit for each site option, the industry's use was evaluated, site size, and its conformity with adjacent land uses.

TABLE 1. GLOSSARY OF TERMS

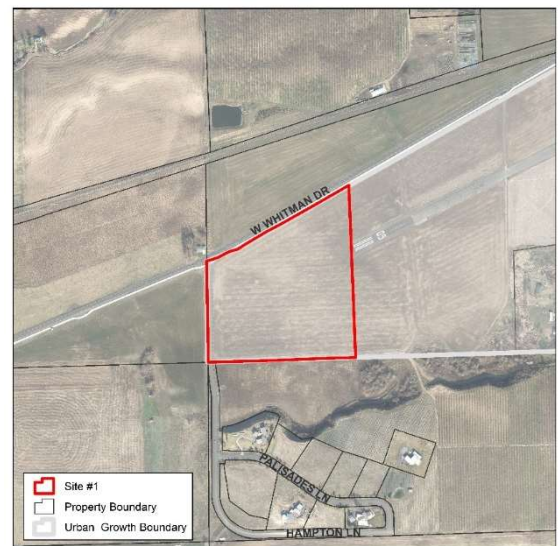
TERM	DEFINITION
Target Industry Cluster	A broadly defined industry.
Supporting Industries	Group of industries representing the entire value chain of a broadly defined industry from suppliers to end products, including supporting inventory.
Output	The value of industry production; sales. For manufacturers, sales minus inventory.
GRP	The difference between an industry's or establishment's total output and the cost of its intermediate inputs; it is a measure of the contribution of GRP, Gross Regional Product.
Purchases	The amount an industry spends for the purchase of a given commodity.

5.2.1 OPTION 1

Current zoning, adjacent uses and sizeable location make Option 1 a prime site for commercial warehousing and light industrial uses. Using the above methodology, warehousing and storage; manufacturing; food and beverage; and high-tech industry clusters are most complementary uses for this site.

The warehousing and storage industry across Walla Walla County produced \$10M in output in 2019 and contributed 0.2% to the County's GRP.

The industries that have the greatest potential to support regional needs for the warehousing and storage industry cluster are listed below. The warehousing and storage industry cluster spends the most on these industries but are largely exported because these businesses are not completely accessible in the region and, in some cases, not accessible at all as indicated by a zero.



Option 1 Site

TABLE 2. WAREHOUSING AND STORAGE TARGET INDUSTRY CLUSTER AND SUPPORTING INDUSTRIES

Target Industry Cluster and Supporting Industries	Jobs	Average Annual Wage	Output	GRP	Purchases
Warehousing and Storage	88	\$71,700	\$10,000,000	\$6,200,000	
Motor vehicle electrical and electronic equipment	0	---	\$0	\$0	\$81K
Wholesale services - professional and commercial equipment and supplies	12	\$89,000	\$3,000,000	\$1,500,000	\$78K
Other motor vehicle parts	191	\$134,000	\$106,000,000	\$34,500,000	\$49K
Couriers and messenger services	57	\$34,000	\$3,000,000	\$899,000	\$49K
Wholesale trade agents and brokers (wine barrel brokers, wine brokers)	0	---	\$0	\$0	---

Manufacturing is the third largest sector in Walla Walla County's economy. The manufacturing sectors that have the greatest economic growth potential in this analysis (listed in Table 3) contribute 5.4% to the region's GRP, collectively, and produced \$673M in goods and services in 2019.

The agricultural-centric economy spans from farm to table and relies on a variety of manufacturers and distributors to make it materialize. Frozen fruit manufacturing and paperboard container manufacturing are the largest contributors in manufacturing. Frozen fruit manufacturers, alone, produced \$340M in goods and services in 2019 and contributed \$76.6M to the region's GRP, or 2.4%. While paperboard container manufacturing produced \$248M in goods and services and contributed \$69M to the region's GRP, or 2.2%. The following industries have the most potential to support existing manufacturing businesses around the region.

Machine shops are a common thread in most manufacturing facilities and supply chains. Machined products are one of the top 10 products purchased in the region; however, less than one percent of the product is produced in the region. The region is prime for machine and assemble type jobs as the workforce is established.

The food and beverage industry plays a vital role in the region's culture and economy, particularly wineries and fruit farming. Wineries contribute \$54M to the region's total GRP, or 2%, and fruit farming nearly 4%.

TABLE 3. MANUFACTURING TARGETED INDUSTRY CLUSTERS AND SUPPORTING INDUSTRIES

Target Industry Cluster and Supporting Industries	Jobs	Average Annual Wage	Output	GRP	Purchases
Frozen fruits, juices manufacturing	734	\$59,200	\$340,700,000	\$76,600,000	
Wholesale services - Grocery and related product wholesalers	101	\$53,100	\$16,900,000	\$7,300,000	\$33M
Truck transportation services	157	\$67,000	\$26,000,000	\$14,000,000	\$18M
Wholesale services - Wholesale electronic markets and agents and brokers	69	\$73,400	\$6,300,000	\$5,000,000	\$8.5M
Plastics packaging materials and unlaminated films and sheets	0	---	\$0	\$0	---
Farm machinery and equipment manufacturing	117	\$122,700	\$62,800,000	\$15,300,000	
Other motor vehicle parts	191	\$134,000	\$106,000,000	\$34,500,000	\$3.3M
Motor vehicle transmission and power train parts	0	---	\$0	\$0	\$2.6M
Other engine equipment	0	---	\$0	\$0	\$2.2M
Wholesale services - Motor vehicle and motor vehicle parts and supplies	7	\$82,000	\$2,900,000	\$1,400,000	\$1.8M
Tires	0	---	\$0	\$0	\$1.8M
Crowned and stamped metals	0	---	\$0	\$0	\$1.4M
Paperboard container manufacturing	458	\$111,100	\$248,000,000	\$69,000,000	
Paperboard from pulp	0	---	\$0	\$0	\$46M
Paper from pulp	0	---	\$0	\$0	\$43M
Printing inks	0	---	\$0	\$0	\$6M
Wholesale services - Professional and commercial equipment and supplies	12	\$89,000	\$3,000,000	\$1,500,000	\$4M
Machine shops	12	\$31,000	\$1,600,000	\$578,000	\$3.2M
Food product machinery manufacturing	135		\$37,000,000	\$13,800,000	
Custom computer programming services	111	\$70,000	\$10,500,000	\$6,100,000	\$6M
Machine shops	12	\$31,000	\$1,600,000	\$578,000	\$1.7M
Wholesale services - Other durable goods merchant wholesalers	30	\$48,000	\$6,400,000	\$2,800,000	\$1.1M

Wholesale and truck transportation services would best serve this industry cluster. Additionally, because fruit farming is a key driver in the regional economy, fertilizer and pesticides manufacturing shows most potential to support this industry along with other ag producers in the region. Facilities such as McGregor, Wilbur-Ellis and Nutrien, located in Walla Walla, fulfill a portion of this demand, however, the data indicate more growth opportunities for existing suppliers or those outside the market area. The region currently demands roughly \$26M in fertilizer and pesticides each year—roughly \$6.6M of the total is spent in the fruit farming industry.

TABLE 4. FOOD AND BEVERAGE TARGETED INDUSTRY CLUSTERS AND SUPPORTING INDUSTRIES

Target Industry Cluster and Supporting Industries	Jobs	Average Annual Wage	Output	GRP	Purchases
Wineries	721	\$51,100	\$210,700,000	\$54,000,000	
Wholesale services - Grocery and related product wholesalers	101	\$53,100	\$16,900,000	\$7,300,000	\$11.2M
Wholesale services - Machinery, equipment, and supplies	107	\$74,800	\$28,500,000	\$16,000,000	\$10.7M
Packaging machinery	0	---	\$0	\$0	\$10.5M
Glass containers	0	---	\$0	\$0	\$7.6M
Truck transportation services	157	\$67,000	\$26,000,000	\$14,000,000	\$6.1M
Machine shops	12	\$31,000	\$1,600,000	\$578,000	\$3M
Breweries	2	\$17,000	\$581,700	\$114,000	
Metal cans	0	---	\$0	\$0	\$75K
Glass containers	0	---	\$0	\$0	\$44K
Flour	0	---	\$0	\$0	\$26K
Truck transportation services	157	\$67,000	\$26,000,000	\$14,000,000	\$22K
Wholesale services - Other durable goods merchant wholesalers	30	\$48,000	\$6,400,000	\$2,800,000	\$12K
Fruit Farming	2,107	\$33,100	\$154,300,000	\$114,400,000	
Support activities for agriculture and forestry	204	\$42,800	\$9,700,000	\$8,000,000	\$18.3M
Pesticides and other agricultural chemicals	0	---	\$0	\$0	\$4.8M
Phosphatic fertilizer	0	---	\$0	\$0	\$1M
Nitrogenous fertilizer	0	---	\$0	\$0	\$800K
Wood containers and pallets	0	---	\$0	\$0	\$500K

Option 1 site has the ability to accommodate particular high-tech firms requiring larger building(s) and site. Due to its proximity to agricultural amenities, businesses that focus on R&D, biopharmaceuticals, biotechnology, automation, data warehousing, etc. are feasible. Other, smaller, type of high-tech activity would be more suitable for Options 2 and 3.

TABLE 5. HIGH-TECH TARGETED INDUSTRY CLUSTERS AND SUPPORTING INDUSTRIES

Target Industry Cluster and Supporting Industries	Jobs	Average Annual Wage	Output	GRP	Purchases
Scientific R&D	673	\$72,600	\$129,300,000	\$56,600,000	
Management consulting services	213	\$93,700	\$17,100,000	\$5,600,000	\$5.6M
Data processing, hosting, and related services	31	\$44,500	\$11,300,000	\$1,900,000	\$490K
Other computer related services	11	\$93,100	\$1,700,000	\$568,800	\$319K
Software publishers	22	\$152,300	\$6,700,000	\$6,000,000	\$286K

5.2.2 OPTION 2 & 3

Site Options 2 and 3 are significantly smaller than Option 1 (Option 2 is ~4.5 acres and Option 3 is ~2 acres) and are currently zoned for commercial and are situated adjacent to residential uses. These limiting factors are ideal for a mix of smaller businesses. Healthcare support services, smaller high-tech firms, and wine/beer tasting rooms, or a brewery show great potential.

Following government, the healthcare industry is the second largest sector in Walla Walla County's economy. Hospitals, alone, contribute nearly \$144M to the region's GRP, 4.5%. Supporting healthcare services contribute similarly. The healthcare supply chain is diverse and provides a considerable amount of opportunity to a region. From pharmaceuticals to medical device manufacturing to cybersecurity, the industry cluster reaches all aspects of the economy. The industries listed below signify those with the greatest opportunity for growth in the region. Each industry listed are most demanded by the larger targeted industry cluster highlighted in grey, but are not satisfied in the region.



Option 2 Site



Option 3 Site

TABLE 6. HEALTHCARE TARGETED INDUSTRY CLUSTERS AND SUPPORTING INDUSTRIES

Target Industry Cluster and Supporting Industries	Jobs	Average Annual Wage	Output	GRP	Purchases
Hospitals	1,111	\$110,100	\$242,700,000	\$143,900,000	
Wholesale services - professional and commercial equipment sales	12	\$89,000	\$3,000,000	\$1,500,000	\$3.2M
Other ambulatory healthcare services	0	---	\$0	\$0	\$2.9M
In-vitro diagnostic substances	0	---	\$0	\$0	\$2.8M
Pharmaceuticals	7	\$68,000	\$7,500,000	\$1,800,000	\$2.8M
Wholesale services - drugs and druggists sundries	0	\$68,000	\$179,000	\$50,000	\$2.3M
Offices of Physicians and Dentists	939	\$69,000	\$114,000,000	\$76,300,000	
Medical and diagnostic laboratories	20	\$56,000	\$2,600,000	\$1,600,000	\$2.1M
Wholesale services - Professional and commercial equipment and supplies	12	\$89,000	\$3,000,000	\$1,500,000	\$1.2M
Pharmaceuticals	7	\$68,000	\$7,500,000	\$1,800,000	\$900K
Surgical appliance and supplies	0	---	\$0	\$0	\$472K
Healthcare Support Services					
Continuing care retirement communities and assisted living facilities for the elderly	840	\$43,000	\$66,600,000	\$37,700,000	---
Home healthcare services	172	\$34,000	\$8,600,000	\$6,400,000	---
Services for the elderly and persons with disabilities	292	\$47,000	\$20,900,000	\$13,500,000	---

The scientific research and development industry cluster employs over 670 people in Walla Walla County and accounts for nearly 2% of the region's GRP. Consulting and data processing and hosting services are of the top industries supporting the R&D space around the region. Such industries and those listed in Table 7 may prove to be a catalyst for R&D activities incubating in the region.

Initial conversations around creating space for startups or a makerspace have occurred in partnership with Walla Walla University, Port of Walla Walla, Walla Walla Chamber of Commerce and the City of College Place. An identified lead should take place in order to catapult such an initiative forward as site Options 2 and 3 are prime for such an ecosystem.

TABLE 7. HIGH-TECH TARGETED INDUSTRY CLUSTERS AND SUPPORTING INDUSTRIES

Target Industry Cluster and Supporting Industries	Jobs	Average Annual Wage	Output	GRP	Purchases
Scientific R&D	673	\$72,600	\$129,300,000	\$56,600,000	
Management consulting services	213	\$93,700	\$17,100,000	\$5,600,000	\$5.6M
Data processing, hosting, and related services	31	\$44,500	\$11,300,000	\$1,900,000	\$490K
Other computer related services	11	\$93,100	\$1,700,000	\$568,800	\$319K
Software publishers	22	\$152,300	\$6,700,000	\$6,000,000	\$286K

As mentioned earlier, the food and beverage industry—particularly wine and fruit farming—are vital to the region. The smaller sites in Options 2 and 3 offer a different perspective. Wholesale services, such as a beer/wine store, tasting room, or equipment supplies has the potential to thrive in this space.

TABLE 8. FOOD AND BEVERAGE TARGETED INDUSTRY CLUSTERS AND SUPPORTING INDUSTRIES

Target Industry Cluster and Supporting Industries	Jobs	Average Annual Wage	Output	GRP	Purchases
Wineries	721	\$51,100	\$210,700,000	\$54,000,000	
Wholesale services - Grocery and related product wholesalers	101	\$53,100	\$16,900,000	\$7,300,000	\$11.2M
Wholesale services - Machinery, equipment, and supplies	107	\$74,800	\$28,500,000	\$16,000,000	\$10.7M
Breweries	2	\$17,000	\$581,700	\$114,000	
Wholesale services - Other durable goods merchant wholesalers	30	\$48,000	\$6,400,000	\$2,800,000	\$12K
Fruit Farming	2,107	\$33,100	\$154,300,000	\$114,400,000	
Support activities for agriculture and forestry	204	\$42,800	\$9,700,000	\$8,000,000	\$18.3M

6 SUMMARY

The above table summarizes the various site development, utility, access requirements, and targeted industry clusters for the three sites to construct an industrial flex building. The next steps include identify the property owners and the feasibility of purchase. The industrial flex building will allow for a wide range of office and warehouses uses. Although there are still a handful of uncertainties, it is anticipated that the Port of Walla Walla is interesting in working with the City to help create a quick impact and solve the immediate need for building space for existing and future businesses in the area. Future discussions with the Port is needed to help identify their interest in the project.

TABLE 9. SITE SELECTION SUMMARY

Category	Martin Airfield	Gugliemelli	County Rural Library
Jurisdiction	Requires Annexation	City	City
Size (acres)	78.06	4.52	1.89
Off Street Parking	1 space per every 500 SF	1 space per every 200 + employee parking	1 space per every 200 + employee parking
Roadway	Requires frontage improvements?	Requires frontage and ½ street improvements along Spitzenberg St ad Damson Ave.	No improvements anticipated.
Water	Currently Unavailable	8-inch main with service line existing	12-inch main nearby
Sewer	Currently Unavailable	8-inch main with service line existing	8-inch main nearby
Targeted Industry Clusters			
Warehousing and Storage	Yes	No	No
High-Tech	Yes	Yes	Yes
Healthcare	No	Yes	Yes
Manufacturing	Yes	No	No
Food & Beverage	Yes	Yes, Some Uses	Yes, Some Uses

APPENDIX A. MARTIN AIRFIELD PROPERTY SOIL MAP



Soil Map—Walla Walla County Area, Washington



Map Scale: 1:3,820 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 150 300 600 900 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

2/2/2021
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:31,700.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Walla Walla County Area, Washington

Survey Area Data: Version 5, Jun 4, 2020

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

Date(s) aerial images were photographed: Jul 7, 2014—Oct 27, 2016

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PmA	Pedigo silt loam, 0 to 3 percent slopes	1.1	2.9%
UmA	Umapine silt loam, 0 to 3 percent slopes	33.5	89.8%
UpA	Umapine silt loam, leached surface, 0 to 3 percent slopes	2.7	7.4%
Totals for Area of Interest		37.3	100.0%

APPENDIX B. GUGLIEMELLI PROPERTY SOIL MAP



Soil Map—Walla Walla County Area, Washington



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

2/2/2021
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:31,700.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Walla Walla County Area, Washington

Survey Area Data: Version 5, Jun 4, 2020

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

Date(s) aerial images were photographed: Jul 7, 2014—Oct 27, 2016

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AmA	Ahtanum silt loam, 0 to 3 percent slopes	4.8	100.0%
Totals for Area of Interest		4.8	100.0%

APPENDIX C. RURAL LIBRARY PROPERTY SOIL MAP



Soil Map—Walla Walla County Area, Washington



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:31,700.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Walla Walla County Area, Washington

Survey Area Data: Version 5, Jun 4, 2020

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

Date(s) aerial images were photographed: Jul 7, 2014—Oct 27, 2016

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

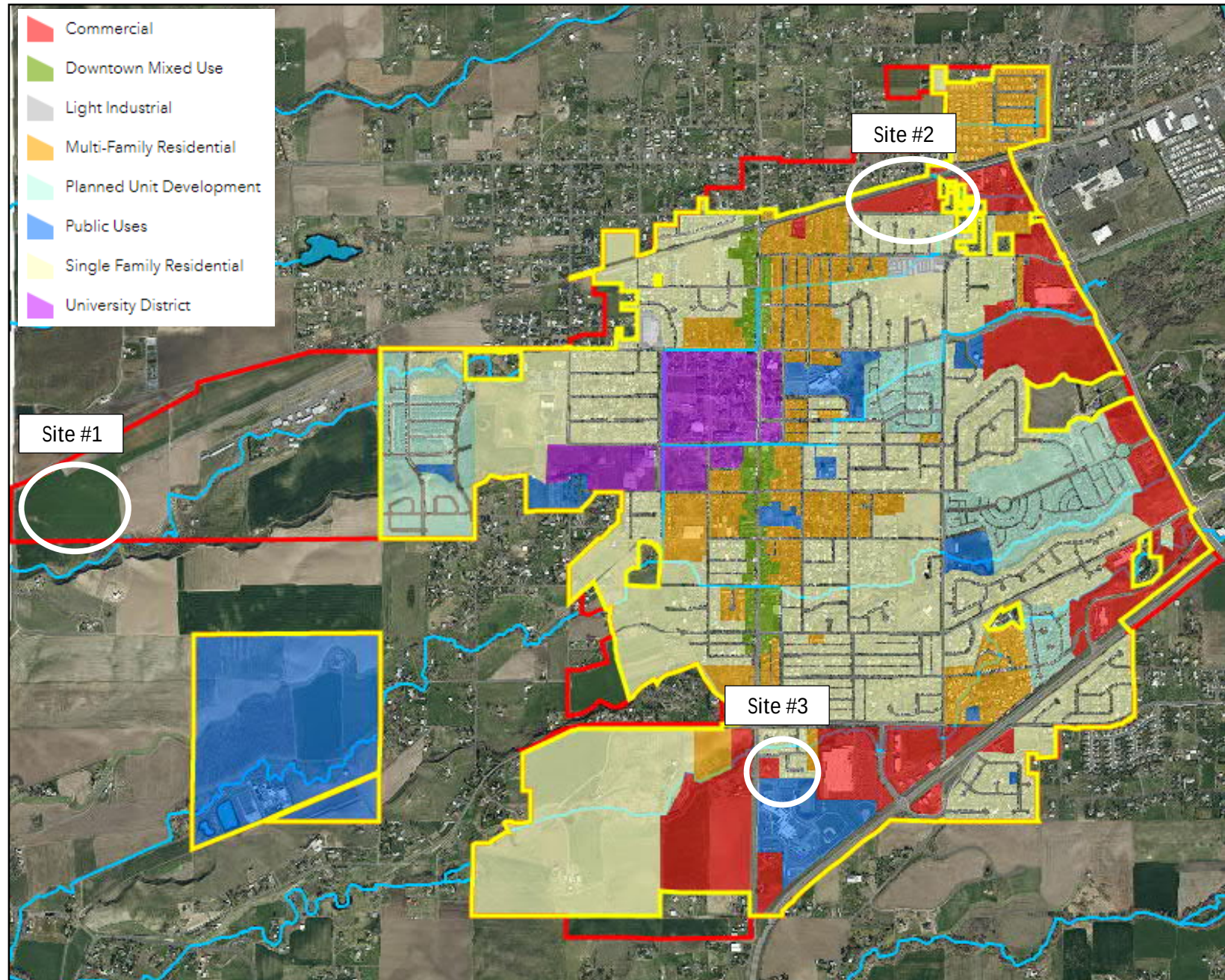
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
StA	Stanfield very fine sandy loam, 0 to 3 percent slopes	1.6	76.0%
TsA	Touchet silt loam, 0 to 3 percent slopes	0.0	1.3%
YkA	Yakima gravelly silt loam, 0 to 3 percent slopes	0.5	22.6%
Totals for Area of Interest		2.0	100.0%

APPENDIX D. CITY ZONING MAP



APPENDIX D: CITY OF COLLEGE PLACE ZONING MAP



Source: <https://cocp.maps.arcgis.com/apps/webappviewer/index.html?id=86f9039347fa48749100523105fc84bb>

APPENDIX E. CITY COMPREHENSIVE PLAN FUTURE LAND USE MAP





CITY OF COLLEGE PLACE WASHINGTON

September 2018

LEGEND

Future Land Use Designations

- College Ave District
- Commercial
- Light Industrial
- Multiple Family Residential
- Public Uses
- Single Family Residential
- Walla Walla University
- Proposed/Potential Revision
- City Limits
- Proposed UGA Boundary
- Parcel

Potential Revisions Under City Review

- 1- College Avenue District to Single Family Residential.
- 2- College Avenue District to Multiple Family Residential.
- 3- Commercial/Light Industrial to Commercial.
- 4- Light Industrial to Multiple Family Residential.
- 5- Multiple Family Residential to Commercial.
- 6- Multiple Family Residential to Single Family Residential.
- 7- Multiple Family Residential to University District.
- 8- Single Family Residential to Commercial.
- 9- Single Family Residential to Multiple Family Residential.
- 10- Public Reserve to College Avenue District.
- 11- Public Reserve to Single Family Residential.
- 12- Public Reserve to Multiple Family Residential.
- 13- Public Reserve to University District.
- 14- Commercial to Parks, Recreation, and Open Space (PROS).
- 15- Single Family Residential to Parks, Recreation, and Open Space (PROS).

Potential Revisions Under County Review

- Area 1A: Urban Industrial to Rural Airport
- Area 1B: Urban Industrial to Single Family Residential
- Area 2A: Rural Residential 5 to Commercial
- Area 2B: Rural Residential 5 to Single Family Residential
- Area 2C: Rural Residential 5 to Single Family Residential

Technical Adjustments

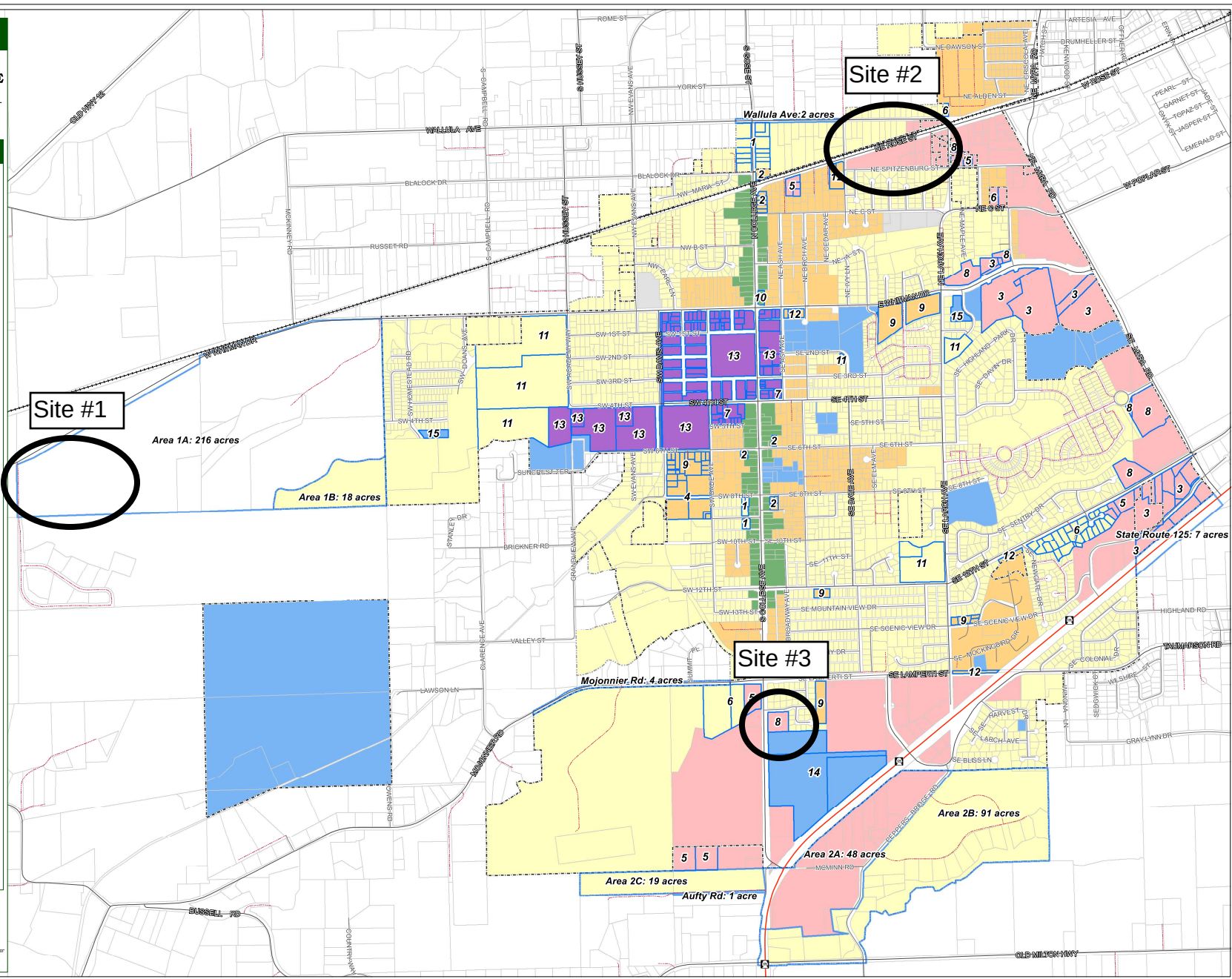
- Walla Walla Avenue: Single Family Residential 2 acres
- Mojonnier Road: Single Family Residential 4 acres
- Auffy Road: Single Family Residential 1 acre
- State Route 125: 7 acres



0 0.25 0.5 Miles



Disclaimer: The information on this map is intended for general reference use only. The City of College Place, and those operating on their behalf, cannot guarantee the accuracy or usefulness of the information shown. The user of this map assumes all responsibility for inappropriate use of the information provided herein.



APPENDIX F. CITY WATER AND SEWER MAP



Future Water Service Area Map



**CITY OF COLLEGE PLACE
WASHINGTON**
September 2018

LEGEND

Water Service Areas

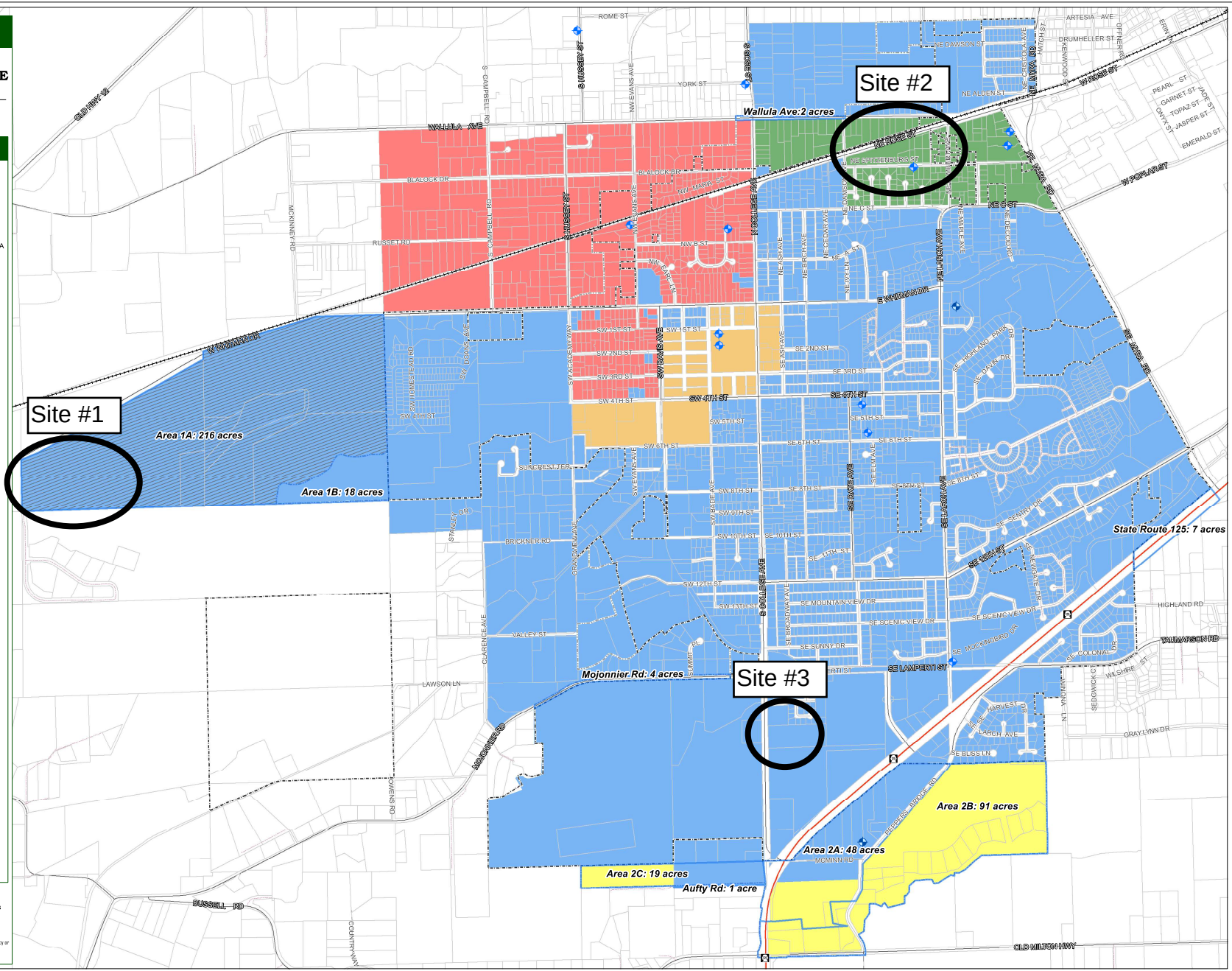
- CLASS A WELL
- PROPOSED CLASS A WELL
- COLLEGE PLACE WATER DEPT
- COLLEGE PLACE WATER DEPT- PROPOSED WITHDRAWAL AREA
- CONSOLIDATES IRRIGATION DISTRICT #14
- FUTURE SERVICE AREA
- GREEN TANK IRRIGATION DISTRICT
- WALLA WALLA COLLEGE WATER
- Proposed/Potential Revision
- City Limits
- Proposed UGA Boundary
- Parcel

Potential Revisions Under County Review

Area 1A: 216 acres
Area 1B: 18 acres
Area 2A: 48 acres
Area 2B: 91 acres
Area 2C: 19 acres

Technical Adjustments

Walla Walla Avenue: 2 acres
Mojonnier Road: 4 acres
Auffy Road: 1 acre
State Route 125: 7 acres



Disclaimer: The information on this map is intended for general reference use only. The City of College Place, and those operating on their behalf, cannot guarantee the accuracy or usefulness of the information shown. The user of this map assumes all responsibility for any errors or omissions in the information provided herein.

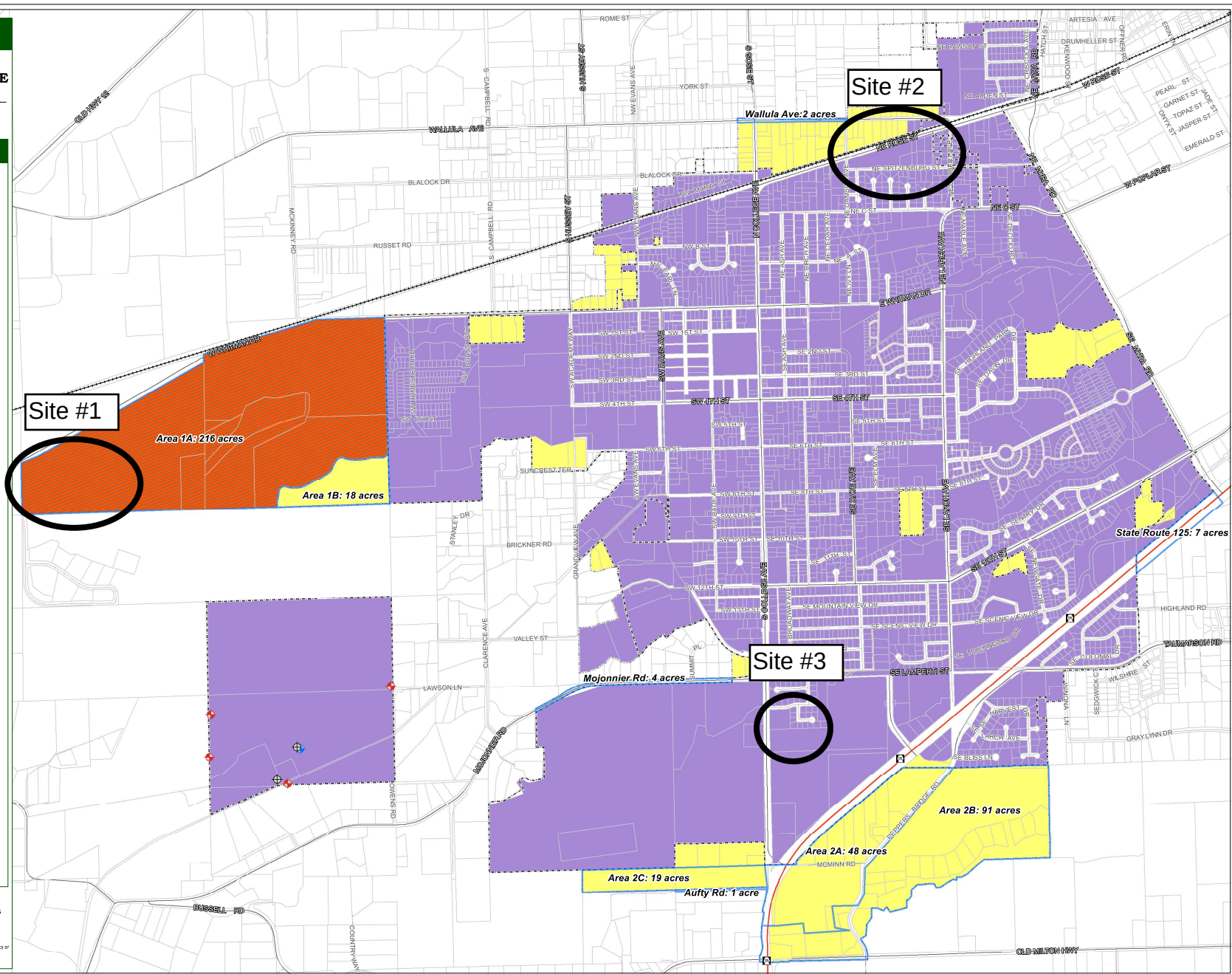
September 2018

Sewer Service Areas

-  IRRIGATION
-  MONITORING
-  POTABLE WATER
-  SERVICE AREA
-  FUTURE SERVICE AREA
-  PROPOSED WITHDRAWAL AREA
-  Proposed/Potential Revision
-  City Limits
-  Proposed UGA Boundary
-  Parcel

Area 1A: 216 acres
Area 1B: 18 acres
Area 2A: 48 acres
Area 2B: 91 acres
Area 2C: 19 acres

Wallula Avenue: 2 acres
Mojonnier Road: 4 acres
Aufty Road: 1 acre
State Route 125: 7 acres



A horizontal scale bar with a black segment from 0 to 0.25 miles and a white segment from 0.25 to 0.5 miles. The word "Miles" is at the right end.



Disclaimer: The information on this map is intended for general reference use only. The City of College Place, and those operating on their behalf, cannot guarantee the accuracy or usefulness of the information shown. The user of this map assumes all responsibility for inappropriate use of the information provided herein.

APPENDIX G. SUMMARY OF TARGETED INDUSTRY CLUSTERS AND SUPPORTING INDUSTRIES



	Warehousing and Storage	High Tech	HEALTHCARE	MANUFACTURING	FOOD AND BEVERAGE
Option 1	YES	YES	NO	YES	YES
Option 2	NO	YES	YES	NO	YES, SOME USES
Option 3	NO	YES	YES	NO	YES, SOME USES

Warehousing and Storage	Scientific R&D	Hospitals	Frozen fruits, juices Manufacturing	Wineries
(\$6.2M GRP / Output = \$10M)	(\$56.6M GRP / Output = \$129M)	(\$144M GRP / Output = \$243M)	(\$76.6M GRP / Output = \$341M)	(\$54M GRP / Output = \$211M)
Motor vehicle electrical and electronic equipment	Management consulting services	Wholesale services - professional and commercial equipment sales	Wholesale services - Grocery and related product wholesalers	Wholesale services - Grocery and related product wholesalers
Wholesale services - professional and commercial equipment and supplies	Data processing, hosting, and related services	Other ambulatory healthcare services	Truck transportation services	Wholesale services - Machinery, equipment, and supplies
Other motor vehicle parts	Other computer related services	In-vitro diagnostic substances	Wholesale services - Wholesale electronic markets and agents and brokers	Packaging machinery
Couriers and messenger services	Software publishers	Pharmaceuticals	Plastics packaging materials and unlaminated films and sheets	Glass containers
Wholesale trade agents and brokers (wine barrel brokers, wine brokers)		Wholesale services - drugs and druggists sundries		Truck transportation services
				Machine shops
Offices of Physicians and Dentists	Farm Machinery and Equipment Manufacturing	Breweries		
(\$76M GRP / Output = \$114M)	(\$15.3M GRP / Output = \$63M)	(\$114K GRP / Output = \$582k)		
Management of companies and enterprises	Other motor vehicle parts	Metal cans		
Medical and diagnostic laboratories	Motor vehicle transmission and power train parts	Glass containers		
Wholesale services - Professional and commercial equipment and supplies	Other engine equipment	Flour		
Pharmaceuticals	Wholesale services - Motor vehicle and motor vehicle parts and supplies	Truck transportation services		
Surgical appliance and supplies	Tires	Wholesale services - Other durable goods merchant wholesalers		
	Crowned and stamped metals			
Healthcare Support Services	Paperboard Container Manufacturing	Fruit Farming		
(Output = \$8.6M in home health and \$20.8M in mental health)	(\$69M GRP / Output = \$248M)	(\$114M GRP / Output = \$154M)		
Continuing care retirement communities and assisted living facilities for the elderly	Paperboard from pulp	Support activities for agriculture and forestry		
Home healthcare services	Paper from pulp	Pesticides and other agricultural chemicals		
Services for the elderly and persons with disabilities	Printing inks	Phosphatic fertilizer		
	Wholesale services - Professional and commercial equipment and supplies	Nitrogenous ferticizer		
	Machine shops	Wood containers and pallets		
Food Product Machinery Manufacturing				
(\$13.8M GRP / Output = \$37M)				
Custom computer programming services				
Machine shops				
Wholesale services - Other durable goods merchant wholesalers				

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APPENDIX B. ENGINEER'S OPINION OF PROBABLY COSTS



ENGINEER'S OPINION OF PROBABLE COST

PROJECT: Flex Light Industrial Building Planning Study DATE: 11/9/2021

PROJECT DESCRIPTION: Overall Site Development Costs

CLIENT: City of College Place

CLIENT PROJ. NO.

J-U-B PROJ. NO.: 30-20-070

ITEM NO.	DESCRIPTION	SCHEDULE OF VALUES	
		ITEM COST	TOTAL COST
	GENERAL REQUIREMENTS		\$35,000
1	MOBILIZATION (2% OF CIVIL/LANDSCAPING TOTAL)	\$35,000	
	CIVIL/LANDSCAPING		\$1,760,488
2	SURVEY	\$40,000	
3	CLEAR AND GRUB/EROSION CONTROL	\$19,500	
4	SITE GRADING	\$72,222	
5	SANITARY SEWER	\$40,750	
6	DOMESTIC WATER	\$143,850	
7	STORM DRAINAGE	\$218,450	
8	ELECTRICAL POWER	\$85,000	
9	SITE LIGHTING	\$67,000	
10	STRIPING	\$10,000	
11	SITE SIGNAGE	\$30,000	
12	CONCRETE SIDEWALK	\$80,778	
13	ASPHALT SUBGRADE ROCK	\$91,857	
14	ASPHALT PAVING	\$190,361	
15	CURB AND GUTTER	\$66,000	
16	IRRIGATION	\$174,000	
17	PLANTINGS	\$101,689	
18	TRASH ENCLOSURE	\$25,500	
19	ON-SITE CONCRETE SIDEWALKS	\$80,778	
20	OFF-SITE ROADWAY IMPROVEMENTS	\$222,754	
	BUILDING IMPROVEMENTS		\$7,860,000
21	STRUCTURES	\$7,860,000	

Note: Assumes all pipe trenching, backfill, compaction, pipe bedding and trench safety is included in unit price.
Does not include any structure removal and/or hazardous abatement.
Does not include Water and Sewer Connection Fees.
Does not include Material Testing

SUBTOTAL		\$9,655,488
PERMIT FEES	1.00%	\$96,555
TAXES	8.70%	\$840,027
A/E DESIGN SERVICES	8.00%	\$772,439
GEOTECHNICAL INVESTIGATION		\$10,000
CONSTRUCTION MANAGEMENT	3.00%	\$289,665
SUBTOTAL		\$11,664,174
CONTINGENCY	20%	\$2,332,835
LAND PURCHASE		\$2,000,000
TOTAL ESTIMATED COSTS		\$15,997,009

DSM

J-U-B ENGINEERS, INC.

3611 S ZINTEL WAY., KENNEWICK, WASHINGTON 99337 (509) 783-2144

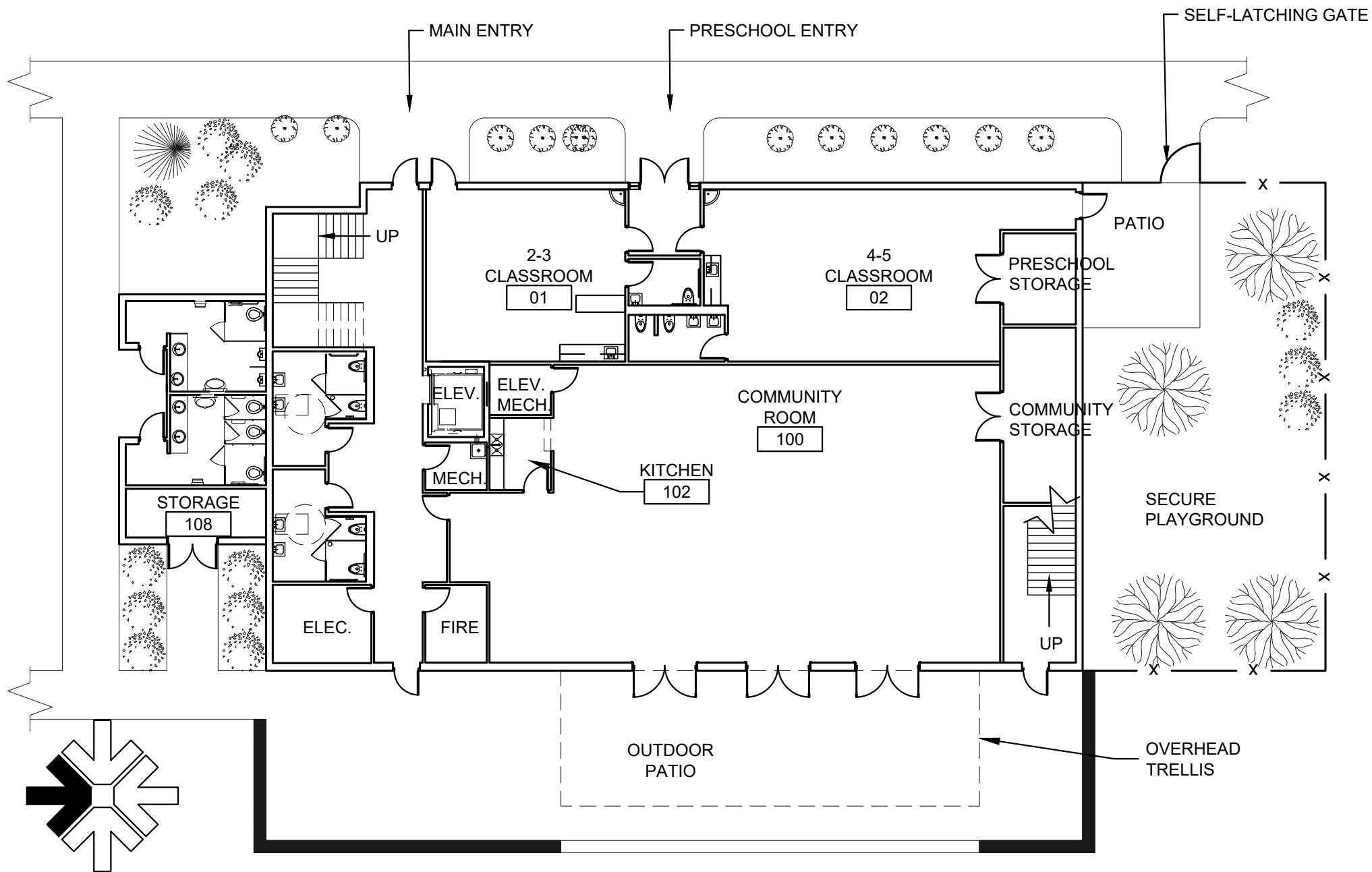


ENGINEER'S OPINION OF PROBABLE COST

PROJECT:		Flex Light Industrial Building Planning Study			DATE:	11/9/2021
PROJECT DESCRIPTION:		Overall Site Development Costs				
CLIENT:		City of College Place				
CLIENT PROJ. NO.		J-U-B PROJ. NO.: 30-20-070				
ITEM NO.	DESCRIPTION	SCHEDULE OF VALUES				
		QUANTITY	UNIT	UNIT PRICE	TOTAL COST	
MOBILIZATION		\$35,000				
1	Mobilization (2% of Civil/Landscaping Total)	1	LS	\$35,000	\$35,000	
SURVEY		\$40,000				
1	Construction Staking	1	LS	\$40,000	\$40,000	
CLEAR AND GRUB		\$19,500				
1	Silt Fencing	2,000	LF	\$3.50	\$7,000	
2	Construction Entrance	1	LS	\$2,500	\$2,500	
3	Dust Control	1	LS	\$7,500	\$7,500	
4	SWPPP	1	LS	\$2,500	\$2,500	
SITE GRADING		\$72,222				
1	Earthwork	7,222	CY	\$10	\$72,222	
SANITARY SEWER		\$40,750				
1	Dig and Verify	2	EA	\$1,200	\$2,400	
2	Connect to Existing	2	EA	\$1,500	\$3,000	
3	8" PVC Sanitary Sewer Pipe	250	LF	\$60	\$15,000	
4	6" PVC Sanitary Sewer Pipe	100	LF	\$55	\$5,500	
5	4" PVC Sanitary Sewer Pipe	100	LF	\$50	\$5,000	
6	Sanitary Sewer 48" Dia. Manhole	2	EA	\$3,800	\$7,600	
7	Cleanout Assembly	3	EA	\$750	\$2,250	
DOMESTIC AND FIRE WATER		\$143,850				
1	Dig and Verify	1	EA	\$1,200	\$1,200	
2	Connect to Existing	1	EA	\$2,500	\$2,500	
3	2"x8" Tapping Saddle	3	EA	\$1,600	\$4,800	
4	2" Copper	200	LF	\$40	\$8,000	
5	2" DCVA	3	EA	\$5,500	\$16,500	
6	2" Water Meter Connection	3	EA	\$3,200	\$9,600	
7	4" Gate Valve	2	EA	\$1,000	\$2,000	
8	6" Gate Valve	1	EA	\$1,800	\$1,800	
9	8" Gate Valve	2	EA	\$2,000	\$4,000	
10	4" DI	100	LF	\$45	\$4,500	
11	4" DI Fittings/Elbows	2	EA	\$750	\$1,500	
11	6" DI	100	LF	\$70	\$7,000	
12	8" DI	730	LF	\$85	\$62,050	
13	8" Fittings/Elbows	4	EA	\$1,200	\$4,800	
14	Free Standing Dual Port FDC	2	EA	\$3,000	\$6,000	
15	Fire Hydrant Assembly	2	EA	\$3,800	\$7,600	

CLIENT:		City of College Place			
CLIENT PROJ. NO.		J-U-B PROJ. NO.: 30-20-070			
ITEM NO.	DESCRIPTION	SCHEDULE OF VALUES			
		QUANTITY	UNIT	UNIT PRICE	TOTAL COST
STORM DRAINAGE					\$218,450
1	Catch Basin	11	EA	\$1,500	\$16,500
2	Cleanout Assembly	6	EA	\$750	\$4,500
3	48" Dia. SD Manhole	10	EA	\$3,800	\$38,000
4	8" Storm Sewer Pipe	600	LF	\$60	\$36,000
5	12" Storm Sewer Pipe	550	LF	\$65	\$35,750
6	Quarry Spall Outfall Protection	30	TON	\$90	\$2,700
7	Infiltration Trenches	300	LF	\$200	\$60,000
8	Storm Drainage Basins	5	EA	\$5,000	\$25,000
SITE LIGHTING					\$67,000
1	Light Pole and Base	13	EA	\$4,000	\$52,000
9	Lighting Conduit	1,000	LF	\$15	\$15,000
ELECTRICAL SERVICE					\$85,000
1	Electrical Primary Conduit	500	LF	\$20	\$10,000
2	Vaults	3	EA	\$10,000	\$30,000
3	Transformer	3	EA	\$15,000	\$45,000
STRIPING					\$10,000
1	Parking Lot Striping	1	LS	\$10,000	\$10,000
SITE SIGNAGE					\$30,000
1	Parking Signage	1	LS	\$5,000	\$5,000
2	Monument Signage	1	LS	\$25,000	\$25,000
ASPHALT SUBGRADE ROCK					\$91,857
1	Crushed Surfacing Top Course (2") - Standard Duty	1,044	TON	\$22	\$22,964
2	Crushed Surfacing Base Course (6") - Standard Duty	3,131	TON	\$22	\$68,893
ASPHALT					\$190,361
1	HMA Cl. 1/2 in, PG 64-28 (3") - Standard Duty	1,731	TON	\$110	\$190,361
CURB AND GUTTER					\$66,000
1	Concrete Curb and Gutter	3,000	LF	\$22	\$66,000
IRRIGATION					\$174,000
1	Site Irrigation	58,000	SF	\$3.00	\$174,000
PLANTING					\$101,689
1	Trees (2")	30	EA	\$425	\$12,750
2	Shrubs (5 gal)	200	EA	\$40	\$8,000
3	Ornamental Grass	200	EA	\$30	\$6,000
4	Crushed Rock Basalt (3" depth)	342	CY	\$40	\$13,689
5	Turf Grass Sod	35,000	SF	\$1.75	\$61,250
TRASH ENCLOSURE					\$25,500
1	Trash eclosure	3	EA	\$8,500.00	\$25,500
ON-SITE CONCRETE SIDEWALKS					\$80,778
1	On-Site 4" Cement Conc. Sidewalk w/2" CSTC	1,944	SY	\$40	\$77,778
2	Truncated Domes	100	SF	\$30	\$3,000

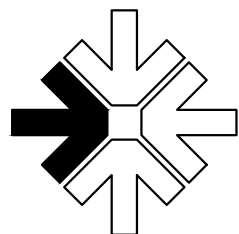
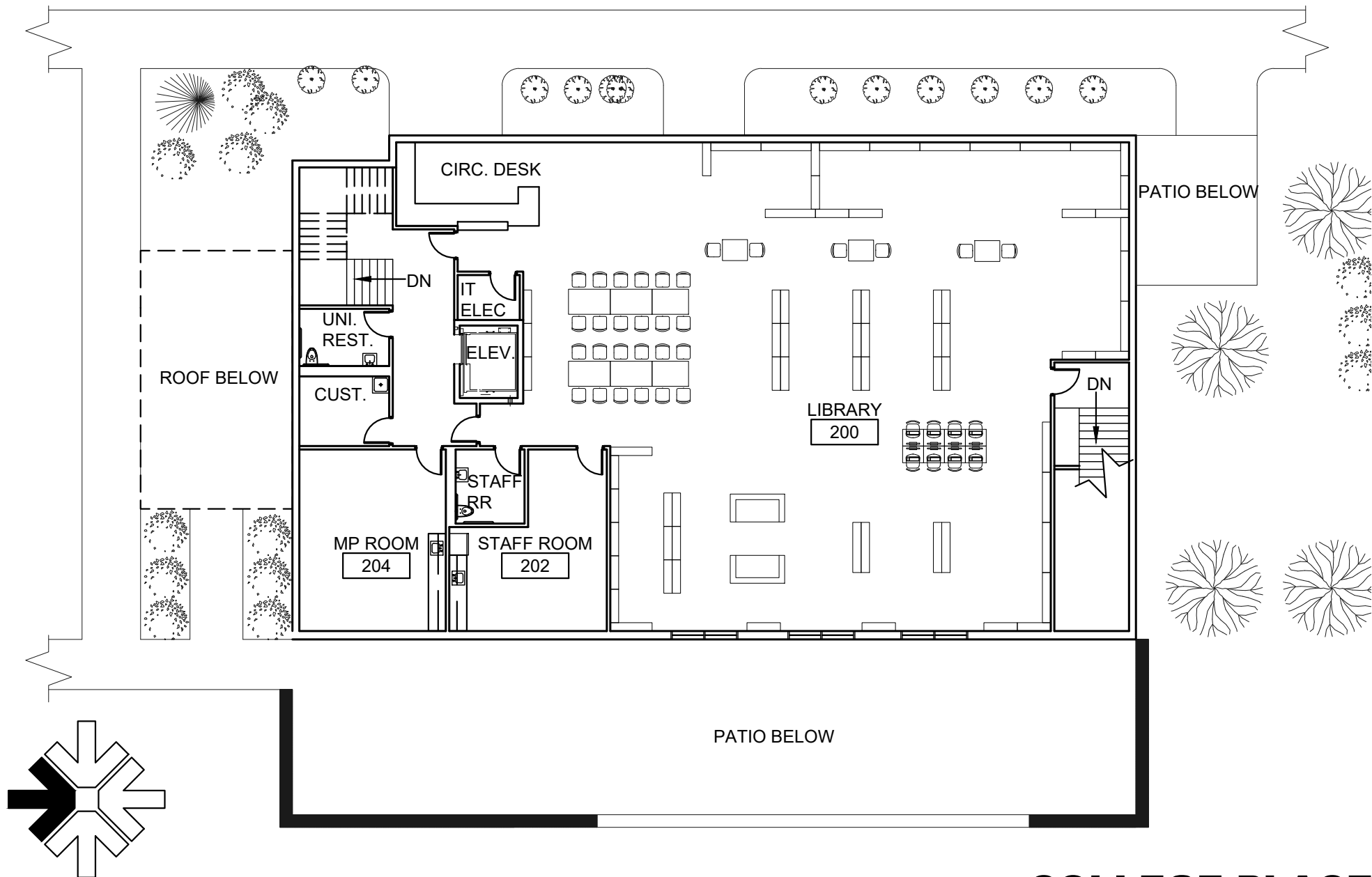
CLIENT:		City of College Place			
CLIENT PROJ. NO.		J-U-B PROJ. NO.: 30-20-070			
ITEM NO.	DESCRIPTION	SCHEDULE OF VALUES			
		QUANTITY	UNIT	UNIT PRICE	TOTAL COST
OFF-SITE ROADWAY IMPROVEMENTS					\$222,754
1	HMA Cl. 1/2 in, PG 64-28 (3") - Standard Duty	315	TON	\$110	\$34,650
2	Crushed Surfacing Top Course (2") - Standard Duty	194	TON	\$22	\$4,264
3	Crushed Surfacing Base Course (6") - Standard Duty	570	TON	\$22	\$12,540
4	Earthwork	500	CY	\$10.00	\$5,000
5	Concrete Sidewalk	500	SY	\$40.00	\$20,000
6	Concrete Curb and Gutter	900	LF	\$22.00	\$19,800
7	ADA Pedestrian Ramps	2	EA	\$2,500.00	\$5,000
8	Signage	4	EA	\$500.00	\$2,000
9	Striping	1	LS	\$2,500.00	\$2,500
10	Catch Basins	4	EA	\$1,500.00	\$6,000
11	12" Storm Sewer Pipe	100	LF	\$65.00	\$6,500
12	Connect to Existing Storm	4	EA	\$1,200.00	\$4,800
13	8" DI	780	LF	\$85.00	\$66,300
14	8" Gate Valves	3	EA	\$2,000.00	\$6,000
15	8" Fittings	3	EA	\$1,200.00	\$3,600
16	Connect to Existing Water	1	EA	\$1,500.00	\$1,500
17	Fire Hydrant Assembly	1	EA	\$3,800.00	\$3,800
18	Street Lights	3	EA	\$4,500.00	\$13,500
19	Traffic Control	1	LS	\$5,000.00	\$5,000
BUILDING IMPROVEMENTS					\$7,860,000
1	Structures	39,300	SF	\$200	\$7,860,000
SUBTOTAL					
DSM					
J-U-B ENGINEERS, INC.					
3611 S ZINTEL WAY., KENNEWICK, WASHINGTON 99337 (509) 783-2144					



1ST FLOOR PLAN

SCALE: 1/16" = 1'-0" 6,700SF

COLLEGE PLACE LION'S PARK COMMUNITY CENTER & LIBRARY



NORTH

2ND FLOOR PLAN

SCALE: 1/16" = 1'-0" 6,000SF

COLLEGE PLACE LION'S PARK COMMUNITY CENTER & LIBRARY

City of College Place - Community Center/Library Budget

Project Summary

Construction Costs

Existing Building and Parking Lot Demolition	1	ea	\$	120,000
New Building Construction (12,700 sf)	1	ea	\$	6,159,500
Rear Paver Patio with Trellis (2,000 sf)	1	ea	\$	240,000
Commercial Kitchen Equipment (small kitchen)	1	ea	\$	50,000
Parking Lot and Storm Water Improvements (20,000 sf)	1	ea	\$	250,000
Playground Toys and Surfacing	1	ea	\$	180,000
Construction Contingency - 5.0%	1	ea	\$	349,975
Sale Tax on Construction Costs - 8.6%	1	ea	\$	632,055
Subtotal:			\$	7,981,530
<i>Construction per square foot cost (with sales tax)</i>				<i>12,700 \$ 628.47</i>

Consultant Services

Basic A/E Design Services	1	ea	\$	798,153
Additional A/E Services & Reimbursable Allowance	1	ea	\$	30,000
Geotechnical Survey and Report	1	ea	\$	8,500
Site Survey and Topo	1	ea	\$	8,500
Hazardous Material Abatement Survey			n/a	
Storm Water Protection Plan	1	ea	\$	10,500
Environmental Mitigation Services			n/a	
Mechanical/Electrical Commissioning Agent (estimate)	1	ea	n/a	
Material Testing & Special Inspection Agent (estimate)	1	ea	\$	17,500
Construction Management - 1.5%			\$	119,723
Subtotal:			\$	992,876

Other Project Costs

City Review and Permit Fees (estimate)	1	ea	\$	70,000
Owner Insurance (estimate)	1	ea	\$	25,000
Utility Tie-In and Fees (estimate)	1	ea	\$	50,000
One Year Construction Escalation 2024 - 6%	1	ea	\$	478,892
Furnishings, Fixtures and Equipment - 6%	1	ea	\$	478,892
Sale Tax on Equipment - 8.6%	1	ea	\$	41,185
Subtotal:			\$	1,143,968

ESTIMATED PROJECT TOTAL:

\$ 10,118,374

Total project per square foot cost

12,700 \$ 796.72


BRANDON WILMS 9/13/23

Walla Walla County

Economic Development Sales Tax Fund

SECTION I.

APPLICATION FOR FUNDING

Applicant:			
Project Title:			
Contact:			
Title:			
Telephone:			
Fax:			
E-Mail:			
Mailing Address:			
City:		Zip Code:	
Total Project Financing			
Total Project Cost:	\$		
Amount secured to date:	\$		
The total amount requested from the Economic Development Sales Tax Fund: Loan & Grant combined	\$		
Loan Information			
Amount of loan request:	\$		
Loan term requested (Maximum term is 10 years):		YRS	Rate
<i>A loan is a general obligation or revenue obligation of the jurisdiction receiving the loan. With the acceptance of a loan, the jurisdiction agrees to obligate its full faith, credit, and revenue to repay the loan, regardless of the project which prompted the application for funding. The maximum loan amount is \$200,000. Please review Attachment A - Principle Guidelines for the Economic Development Sales Tax Fund – Line item #4.</i>			
Grant Information			
Amount of Grant request: <i>(Please review Attachment A - Principle Guidelines for the Economic Development Sales Tax Fund – Line item #4)</i>	\$		
Amount of Local Public Match: <i>(Please review Attachment A - Principle Guidelines for the Economic Development Sales Tax Fund – Line item #5)</i>	\$		

Declaration: I hereby certify that the information given in this application is true and correct to the best of my knowledge and belief and that I have reviewed Attachment A - Principle Guidelines for the Economic Development Sales Tax Fund.

Signature of Responsible Official: _____ **Date:** _____

Print or Type Name and Title: _____

SECTION II. IDENTIFICATION OF PUBLIC FACILITY PROJECT AND COSTS

1. Describe the entire public facilities project, including the parts that you are not asking to fund.
(The term "public facilities" means bridges, roads, domestic and industrial water facilities, sanitary sewer facilities, earth stabilization, storm sewer facilities, railroads, electrical facilities, natural gas facilities, research, testing, training, and incubation facilities in innovation partnership zones designated under RCW 43.330.270, buildings, structures, telecommunications infrastructure, transportation infrastructure, or commercial infrastructure, and port facilities in the state of Washington.
2. Summarize efforts taken to date regarding the project in terms of specific steps and studies and dates of action.
3. Does this project qualify as economic development and does it create or retain family wage jobs?
(Please review Attachment A - Principle Guidelines for the Economic Development Sales Tax Fund.").

4. List the number of projected jobs to be retained and/or created by the firm as a result of the public infrastructure project. Jobs must be expressed in Full-Time Equivalents (FTEs). Management positions should be indicated as an annual salary. * Retained jobs are defined as jobs that would otherwise be lost in Walla Walla County.

Job Description	Number of Jobs Created (in FTEs)	Number of Jobs Retained* (in FTEs)	Hourly Wage and/or Annual Wage
			\$
			\$
			\$
			\$
			\$
			\$

Projected annual gross payroll for all job classifications? _____

How many of these positions are part-time or seasonal work? _____

5. Is this project listed in the Walla Walla County Comprehensive Plan (Chapter 11 Economic Development Element- Appendix G)? No ☐ Yes ☐

6. Does your organization have an active interest and involvement in economic development? Please explain?

7. Will this project upgrade existing public infrastructure or build new public infrastructure? Please explain?

8. List each funding source for the public project and amount. Identify whether the funding source has been secured or is being requested.

Funding Source	Status	Amount
		\$
		\$
		\$
		\$
		\$
		\$
		\$
Total Project Cost		\$

9. Estimated schedule for public project completion. Indicate the month and year when the activities listed have been, or will be, completed.

Activities	Estimated Completion Date (Month/Year)
Preliminary Engineering Report	
All Required Permits Obtained	
Design Engineering	
Land/Right-of-Way Acquisition	
Final Bid Documents	
Award Construction Contract	
Begin Construction	
Complete Construction	
Construction Project Operational	

10. What other quantifiable outcomes can this project measure in addition to the number of jobs created and retained?

Private sector capital investment \$ _____

Increase in local property tax revenue: \$ _____

Increase in local sales tax revenue: \$ _____

Other:

11. Will the public facility project be maintained by the applicant? Indicate the projected annual operating cost of the proposed public facility project and revenue source for maintenance? Please explain.

Return Completed Application To:
Port of Walla Walla
310 A. Street, Walla Walla, WA 99362
509-525-3100

ATTACHMENT A
Principle Guidelines
Economic Development Sales Tax Fund (EDSTF)

**Some provisions within these principle guidelines are requirements under RCW
82.14.370 - Sales and use tax for public facilities in rural counties.**

1. Public infrastructure projects must be listed in the Walla Walla County Comprehensive Plan (Chapter 11 Economic Development Element – Appendix G). Public infrastructure project listed in the approved County Comprehensive Plan does not guarantee the public infrastructure project will receive funding.
2. At the beginning of each fiscal year, the Port will notify the jurisdictions of the available funding in the EDSTF and will transmit the application form and these principle guidelines.
3. The Port Commission will maintain discipline in using the EDSTF for strategic economic development opportunities. Public infrastructure projects that create, retain and/or expand family wage jobs (defined as \$25,000 per year plus a benefits package), encourage private sector capital investment, and new taxes are the primary goal of the EDSTF.
4. Cap any one jurisdiction from receiving more than a \$200,000 grant and a \$200,000 loan in any one fiscal year. Exceptions will be made for extraordinary job creating opportunities, private sector capital investments, and new taxes. Exceptions will also be made if a jurisdiction has projects that would allow the funding to be distributed countywide. For example, a jurisdiction may have a qualifying project in Burbank and during that same fiscal year, they may have a qualifying project in Waitsburg. In order to help disburse the EDSTF countywide, both qualifying applications would be considered.
5. Applications require a 50% local public match to the amount of the EDSTF request. 10% local public match will be required for the City of Prescott and City of Waitsburg due to their size and access to local public matching dollars. Local public match is defined as publicly-appropriated local funds. Funds appropriated from the state, federal, other funding sources, and in-kind match do not qualify as a local public match. Private sector funds directly allocated to the public infrastructure project will be considered as a local public match.

Example: If the EDSTF request is \$200,000, the applicant is required to secure \$100,000 in the local public match. In the case for the City of Prescott and City of Waitsburg, if the EDSTF request is \$200,000, the applicant is required to secure \$20,000 in the local public match.

6. Each public infrastructure project approved for EDSTF will need to enter into a performance contract and/or inter-local agreement guaranteeing performance.
7. Public infrastructure projects that can substantiate the creation of new direct family wage jobs (defined as \$25,000 per year plus a benefits package), private sector capital investment, and new taxes will have the best chance in securing an EDSTF grant and/or loan.

8. Public infrastructure projects that cannot identify the creation of new direct family wage jobs (defined as \$25,000 per year plus a benefits package), private sector capital investment, and new taxes are encouraged to apply for an EDSTF loan. If the applicant is requesting an EDSTF grant, and an EDSTF grant is awarded, the applicant will be restricted in applying for an EDSTF grant for 5 years from the date of award. However, during this 5-year restricted period, the applicant has a public infrastructure project that can demonstrate the creation of new direct family wage jobs (defined as \$25,000 per year plus a benefits package), private sector capital investment, and new taxes, their application would be considered for funding.
9. Public infrastructure-related projects that can substantiate the retention of existing family wage jobs (defined as \$25,000 per year plus a benefits package) are encouraged to apply for EDSTF grant and/or loan. To substantiate job retention, the applicant must fully demonstrate that a specific business would have a reduction in its labor force without the public infrastructure improvement.
10. Projects approved for funding must start drawing down the appropriated funds for the proposed public infrastructure project within 1 year from the date the application is approved. All appropriated funds must be fully expended within 2 years from the date the application is approved. If the applicant cannot meet said deadlines, the application must resubmit their application for consideration. All existing approved public infrastructure projects will have priority funding over the new resubmitted application.

Approved by the Port Commission on the 25th day of September 2014

Concurrence by the Walla Walla County Commissioners on the 20th day of October 2014



U.S. DEPARTMENT OF COMMERCE

Economic Development Administration
Jackson Federal Building, Room 1890
915 Second Avenue
Seattle, Washington 98174
206-220-7660

June 18, 2024

In reply refer to:
EDA-APP#0004317

Micheal Rizzitiello
City Administrator
City of College Place
625 S. College Ave
College Place, WA, 99324

Dear Mr. Rizzitiello:

The Economic Development Administration (EDA) is pleased to inform you that your application has been reviewed for merit and selected for further consideration. **Please note that this notification of further consideration is intended to inform you of EDA's competitive preliminary selection of your project but does not guarantee final approval or legally bind EDA to make an award.**

Subject to the availability of funds, your proposed project, estimated to cost \$80,000, will be considered for \$40,000 in EDA funding.

By acceptance of this letter, you agree to provide all additional information requested below, and any other additional information that may be requested subsequently. You also acknowledge that final approval and the timing of such an approval are subject to EDA's acceptance of all required information and the availability of EDA funding.

Additional Information: Please provide the following information to Sharon Metiva, Economic Development Specialist, by **June 30, 2024**.

- A Revised Staffing Plan, identifying the period of performance, the staff by name and position and the amount of salary, contributed.
- A revised scope of work detailing the tasks to develop a CEDS.

The information requested above will supplement your application and enable EDA to proceed with processing your application. Failure to meet this deadline, or the submission of incorrect or incomplete information, will jeopardize approval of your application. If you cannot meet this deadline, please advise Sharon Metiva, Economic Development Specialist, as soon as possible.

EDA will assess the additional information provided upon receipt. EDA's assessment of this information may determine one of the following:

1. No additional information is necessary;

2. Additional information is required, because the submission is incomplete, inaccurate, or otherwise unacceptable to EDA, and the applicant(s) must revise the submission before EDA will consider processing the application further; or
3. EDA will discontinue considering the application for funding, because the information submitted does not present a project that complies with applicable law(s), regulations or policies.

Please note that your organization must comply with EDA's regulations for the agency's investment programs, which are set out at 13 CFR chapter III, as well as the FY 2021 – FY 2023 EDA Planning and Local Technical Assistance Programs Notice of Funding Opportunity (NOFO).

Final approval of an award is conditioned upon EDA's assessment of the additional information requested, project feasibility, funding priorities, and the availability of funds for obligation.

If you have questions regarding the status of your application, please do not hesitate to contact Sharon Metiva, Economic Development Specialist, at smetiva@eda.gov or (206) 473-9909.

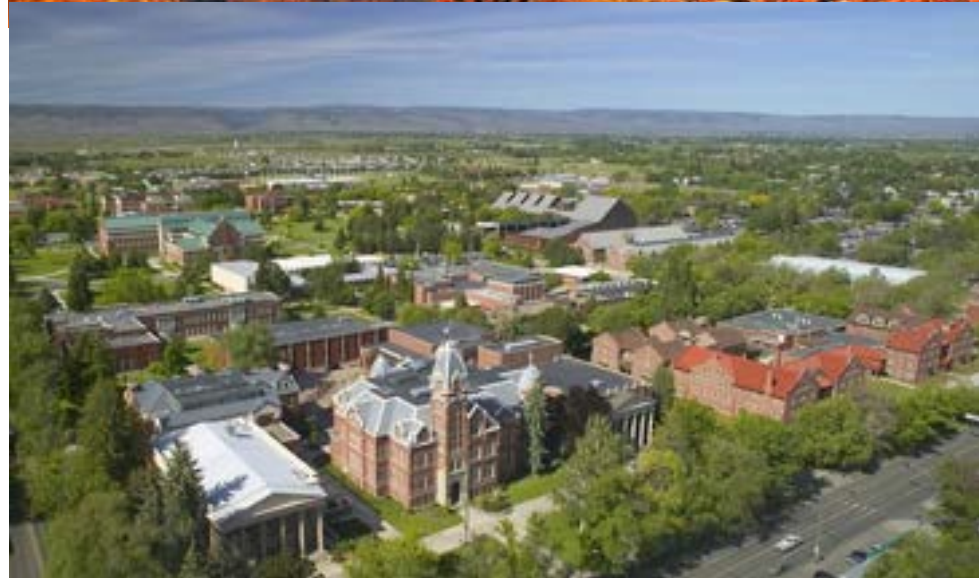
Sincerely,

Sheba Person-Whitley
Regional Director

cc: Wes Cochran, EDR

2015

Yakima and Kittitas Counties Regional Comprehensive Economic Development Plan



Prepared by:

Yakima County Development Association &
Kittitas County Chamber of Commerce

September 21, 2015

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Process Overview

The Comprehensive Economic Development Strategy (CEDS) Process: Community-Based Economic Development Planning



Over the past ten months organizations and individuals in Central Washington have been developing a Comprehensive Economic Development Strategy. This CEDS will help Kittitas and Yakima Counties in Central Washington focus their energies on economic diversification. The CEDS identifies issues, needs and critical priorities that impact the region's ability to advance the local economy. The need for a CEDS is not driven solely by a desire for federal Economic Development Administration (EDA) funding. Rather, this strategy and the process formed to complete it, serves as a platform for future economic development planning in the region.

To drive and shape the planning process, Yakima and Kittitas County Commissioners appointed a special CEDS steering committee. This group has met frequently during the CEDS process and has been instrumental in developing the plan and encouraging public involvement. The CEDS committee is comprised of:

Jim Armstrong, Kittitas County Chamber of Commerce	Luz Gutierrez, Las Milpas, LLC
Jean Brown, Yakima County Development Assn.	Larry Mattson, Yakima Valley Conference of Governments
Karen Cunningham, Confederated Tribes and Bands of the Yakama Nation	Mario Martinez, Mayor, City of Mabton
Rand Elliot, Yakima County Commissioner	Obie O'Brien, Kittitas County Commissioner
Jesse Farias, Mayor, City of Wapato	Dr. Bill Provaznick, CWU Institute for Innovation and Entrepreneurship
David Gonzales, South Central Workforce Council	

The steering committee was first appointed in May 2012 and initially helped Dr. Roy Savoian from Central Washington University develop an economic and demographic portrait of the region. The group then developed a list of SWOT (Strengths, Weaknesses, Opportunities, Threats) for Yakima and Kittitas Counties that became the basis for public forums and discussions.



During the fall of 2015 the CEDS committee organized six public forums to share information about the planning process and generate input regarding the region's SWOT. Forum

participants were also asked to identify strategies that could help diversify the regional economy. One of these forums was held in Spanish to ensure that the area's large Latino population was encouraged to participate in the planning process.



An electronic survey was also developed to provide the public another alternative for providing input into the planning process. Between the public forums and the online survey, the CEDS committee was able to generate significant public participation in the planning process. Public and CEDS committee input helped shape the key goals and objectives outlined in this plan.

Each year the Counties plan and in the summer of 2015 the CEDS committee evaluated economic development projects submitted by local governments and non-profit organizations. The group has also been extremely helpful as reviewers and editors of the final plan.

In December 2015 the draft plan was presented to both County Commissions and posted on each County's website (in addition to economic development websites within the region). The public was again invited to review and comment on the draft plan.

In December-January 2015-2016 each County Commission held public hearings on the plan before adopting it via joint resolutions.

Thank You!

As we finish the second 12-month planning period a debt of gratitude goes to the members of the CEDS steering committee. They spent countless hours driving the planning process and making it work. Thanks also go to each County Commission for supporting the CEDS. Each Commission saw the benefits of regional collaboration and is to be commended for supporting the process. We also appreciate all the people who participated in public forums during the planning process, or touched our CEDS development at some point over the last year.

Executive Summary



The Kittitas-Yakima Economic Region is a beautiful region of lakes, rivers, and national parks with all four seasons. Hot and dry summers contrasted with cool and wet winters provide a climate suitable for a variety of interests and lifestyles. This diverse landscape of rivers to plains to forests and mountains is only rivaled by the diversity of its residents.

With a population of 292,640 and population density of 76.76 per square mile as of 2015, the Kittitas Yakima Economic Region can be described as a rural community. Similar to most rural areas, agriculture is an economic mainstay that fosters a consistent business climate built around agriculture. Unlike many rural communities, agriculture in the Kittitas Yakima Economic Region has a fair market value of over \$1 billion dollars sold locally, nationally and internationally. Other significant industries or clusters in the region include health services, warehouse/distribution, manufacturing, alternative energy and tourism.

Some of the Kittitas Yakima region's economic strengths include:

- ✓ its proximity to the major metropolitan area of Seattle and Portland markets
- ✓ a strong and diverse natural resource based economy;
- ✓ a concentration of higher education institutions; and
- ✓ an outstanding quality of life featuring great weather and outdoor recreation options.

Some of the region's weaknesses include:

- ✓ Lack of family-wage employment opportunities
- ✓ Low K-16+ education attainment and corresponding occupational skill gaps
- ✓ Complacency towards growth and economic diversification

Despite some of the region's challenges, the Kittitas Yakima area has enormous economic potential. The CEDS outlines six key goals to advance the regional economy.

KITTITAS YAKIMA COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY GOALS (2013-2017)

Goal One: Support the Retention and Expansion of Regional Clusters and Industries

Goal Two: Support Small Business Success and Entrepreneurship

Goal Three: Develop a Talented Workforce

Goal Four: Invest in Capital Facilities and Infrastructure

Goal Five: Promote Tourism and Develop Visitor Amenities

Goal Six: Enhance Downtown and Neighborhood Business District Vitality

These broad objectives align closely with the Washington state's economic development plan and workforce development plans for the region. Each of the goals has a number of accompanying actions and strategies that are expected to unfold over the following five years.

During the planning process, local jurisdictions and nonprofit organizations were invited to submit projects that could create jobs, stimulate private investment or set the stage for future development. Twenty projects were submitted and the CEDS steering committee ranked the projects in terms of their readiness and potential to boost jobs and the regional economy.

TOP CEDS PROJECTS FOR KITTITAS-YAKIMA REGION

Below is a ranked list of all submitted projects. Projects were ranked based on several criteria, listed here in order of importance: job creation, funding leverage, readiness to proceed, likelihood of success, and the overall need for the project. In the event there was a tie, the project that created the most jobs and showed the greatest readiness to proceed received superior ranking.

1. City of Mabton, Extend Natural Gas Service

This 13 mile natural gas pipeline extension would bring natural gas provided by Williams Northwest Pipeline (WNP) from Prosser to Mabton. The extension of services to Mabton would allow Northwest Horticulture (NWH) to add a 3rd gas boiler to expand production.

2. City of Yakima, Cascade Mill Project

Redevelopment of the 225-acre former Boise Mill, which closed in 2006, into a mixed use, office park, light industrial and entertainment area. The entire property is privately owned, current landowners are engaged in supporting successful implementation of the project.

3. Ellensburg Business Development Authority, Airport Business Park

The goal of this project is to create additional manufacturing space to attract companies and create family wage jobs. Phase 2 of 2.

4. Vision Cle Elum, Main Street Redevelopment

The project will bring improvements that will attract business, enhance current business, and tap into the 28,000 vehicles per day traveling on I-90. The project will create an inviting downtown with wider sidewalks, parallel parking, pedestrian bump outs, and enhanced storm water drainage.

5. Hopesource, Hope Healthy Homes

This project comprises the development, construction and operation of a modular home manufacturing assembly plant with an auxiliary construction and installation services division in Kittitas County.

6. City of Union Gap, Regional Beltway Connector

The beltway connector is designed to connect the South Union Gap interchange to Ahtanum Road thereby providing a more direct limited access route as an alternative to traveling on Main Street.

7. Rural Community Development Resources, Business Development Funding

The key goal of this project is to obtain an EDA grant for an expanded regional Community Loan Fund Investment into the region to provide bigger loans to ethnically diverse business enterprises.

8. City of Yakima, North 1st Street Façade & Sign Replacement Program

This is an Incentive program to upgrade and improve private development along this key corridor, encourage property reinvestment, and enhance comprehensive clean-up efforts of the City.

9. Yakama Nation Cultural Heritage Center, Cultural Heritage Center Remodel

Remodel and update 35 year old Yakama Nation Cultural Heritage facility in Toppenish.

10. Kittitas/Yakima Valley Community Land Trust, Water Street Project

The Water Street Project will create the opportunity for 12 families at or below 80% of the area median income to become first time home owners. This project is a multi-faceted economic development tool. Jobs are created during all phases of the build out—street improvements, infrastructure construction, home design, and project development. The homebuyer, who would not qualify for a traditional home purchase, will own the house and build equity and stability as a contributing member of the community.

11. CWFA/State Fair Park, Yakima Valley SunDome Project

State Fair Park wants to attract events to Yakima by becoming a regional events center. The project would consist of adding full catering services and an indoor covered vehicle and storage area.

12. City of Union Gap, Main Street Redevelopment

The redevelopment of Main Street within Union Gap would provide new economic opportunities along this old state route corridor. The current roadway is flanked with used car lots, old roadside motels and sparse retail and does not provide pedestrian access or parking.

13. City of Yakima, Public Market/Incubator

The project is designed to provide individuals with a place to test out business opportunities. The market would ideally encompass two stories and a basement totaling 27,500 square feet.

14. City of Yakima, Yakima Airport

This project is included in the Airport Master plan and is designed to replace the Yakima airport passenger terminal building.

15. YCDA & Educational Service District 105, Business Education Partnership

This project will create, coordinate and manage a partnership between STEM businesses, school districts, colleges and universities, and other training providers.

16. Kittitas Environmental Ed. Network, Yakima River Canyon Interpretive Center

The Yakima River Canyon Scenic Byway Interpretive Center will serve as a resource to visitors and community members, providing science based education for all ages and connecting our communities to nature through quality environmental education.

17. City of Yakima, Downtown Farmers' Market

One of the elements of the Yakima Downtown Master Plan is to identify locations for additional public amenities including a permanent location for Farmer's Market and other Downtown events in the core downtown area.

The CEDS also contains an implementation plan that identifies the key activities that will be addressed during 2016. This part of the plan identifies the parties responsible for implementation and specific outcomes expected from each initiative.



A number of evaluation measures have also been developed around each key goal and strategy. The CEDS Steering committee or its successor group will periodically review the plan's implementation to determine whether key objectives and outcomes are being met over time. A critical part of sustaining economic development within the region is understanding which strategies are working and producing growth and economic diversification.

Integration of State Economic Priorities

The Washington Economic Development Commission (WEDC) identifies five key drivers of the innovation economy upon which Washington's global competitiveness hinges. These drivers are certainly germane to the Kittitas-Yakima Region.

1. Create jobs for Washingtonians and address industry needs by expanding the capacity of community and technical colleges and four-year universities to achieve a post-secondary education attainment rate to at least 60 percent by the year 2025.
2. Increase the pool of qualified workers by giving greater emphasis to STEM proficiencies and career and technical education at the high school level.
3. Fill critical skills gaps and grow new enterprises by attracting and retaining the world's best and brightest minds and entrepreneurs through fact-based visa related reform and funding education in high demand occupations.
4. Upgrade skills of the unemployed through expanded flexibility of unemployment programs to support training in fields where job vacancies exist.



INTEGRATION IN KITTITAS YAKIMA REGION

The WEDC's Talent and Workforce goal speaks to creating jobs and to addressing "... industry needs by expanding the capacity of community and technical colleges and four-year universities to achieve a post-secondary education attainment rate to at least 60 percent." With relatively low educational rates, the Kittitas-Yakima Region is also ramping up to address this goal. In addition, the WEDC also recommends to: "Increase the pool of qualified workers by giving greater emphasis to STEM" The culmination of Education Service District's STEM plan provides a focus for STEM education in Central Washington and this plan's key elements are incorporated into our CEDS for Yakima and Kittitas Counties.

1. Target improvements to regulatory and tax policy to foster growth of start-ups and job creating business clusters.
2. Invest in world class research talent, assist new enterprise formation and connect the state's research base to industry, entrepreneurs and investors.
3. Leverage the job creating potential of the Washington innovation ecosystem through large scale collaboration and competing aggressively for federal, foundation and private investment support.

Investment & Entrepreneurship *Adding Horsepower*



INTEGRATION IN KITTITAS YAKIMA REGION

The WEDC goal surrounding investment and entrepreneurship dovetails closely with regional aspirations in Central Washington. Manufacturing is a sector in Central Washington with considerable potential for entrepreneurial ventures either through new products, redesigned products and innovation in production/assembly processes. WEDC Driver #2 alludes to investing in entrepreneurship by "... improvements to regulatory and tax policy to foster growth of start-ups and job creating business clusters." Metals, plastics, food processing, and alternative energy sectors hold promise for job creating potential of start-ups and innovations as recommended by the WEDC "... through large scale collaboration and competing aggressively for federal, foundation and private investment support."

1. Implement alternative financing mechanisms for transportation infrastructure to preserve basic assets, freight mobility and investment in critical economic corridors to ensure jobs, supply chain productivity and trade expansion.
2. Prioritize the most critical infrastructure challenges and lead globally in such areas as energy efficiency, clean-water solutions, advanced manufacturing, cyber-security sustainable in urban design and broadband deployment.
3. Require the use of economic development and long term job creation criteria in the capital budgeting process.

Infrastructure
Paving the Way



INTEGRATION IN KITTITAS YAKIMA REGION

The WEDC infrastructure goal resonates strongly with needs and opportunities in Central Washington. One of the top goals in the CEDS speaks to investing in capital facilities and infrastructure. The state plan provides a strong reference to infrastructure with the call to: “Implement alternative financing mechanisms for transportation infrastructure to preserve basic assets, freight mobility and investment in critical economic corridors to ensure jobs, supply chain productivity and trade expansion.” Local governments in Central Washington are particularly interested in creating or tapping creative financing mechanisms for capital facilities since their own source of funding are quite limited.

1. Initiate systematic sector-by-sector review of state regulations for their cost-effectiveness and determine overlaps, excessive costs, obsolescence, redundancy and solutions.
2. Expand agency use of lean process improvements to lower the cost of regulatory compliance and reduce time delays.
3. Create “navigator service” for industry to manage their interaction with the regulatory system, including a comprehensive, user-friendly, online portal for regulatory compliance as recommended by State Auditor’s Office Regulatory Reform report.

INTEGRATION IN KITTITAS YAKIMA REGION

The Economic Development Commission’s goal to streamline regulations is very important in Yakima and Kittitas Counties. Promoting good customer service, transparency, and predictability in local permitting offices is tantamount. Quite a few local governments in Central Washington have taken steps to streamline regulations and make compliance easier for business. The Yakima County Development Association routinely provides ombudsman-type support to companies and their work can serve as a model to communities and nonprofit organizations interested in helping companies comply with or get through regulatory processes.

1. Intensify innovation collaboration in the Pacific Northwest economic region and support cross-border projects that can lead to economic diversification, expanded trade opportunities and jobs.
2. Drive job creation through a coordinated system of trade services between the programs of Washington State and regional and federal programs.
3. Strengthen export assistance services and re-establish overseas representation to augment Washington's international competitiveness and realize the state's export goals.
4. Double the number of state-led, new-to-market, cluster-based trade missions (including services) to increase the number of new-to-market exporting firms.

International Business

Firing on all cylinders



INTEGRATION IN KITTITAS YAKIMA REGION

The WEDC Driver #3 resonates strongly with needs and opportunities in Central Washington. One of the top goals in the Kittitas Yakima CEDS is to support local industries and clusters. A key part of this goal is to help companies develop export markets for their products. The Central Washington region is already a crossroads for international trade as a result of farm commodities that are shipped to countries around the world. Many local manufacturers also have well developed export markets so the region has a good level of experience to help other firms realize international opportunities.

Workforce Development Integration

A critical component impacting economic development is the quality and availability of the region's workforce. Investments in human capital drive business growth and are more important today than ever before. Similarly a region's economic success is now heavily dependent on how well it educates its population and how well it responds to key industries or clusters' labor and specific occupational demands.

Our planning team worked closely with the South Central Workforce Development Council as we developed the CEDS to ensure that key workforce training and education goals were incorporated into our plan.

We also worked with Education Service District 105 to ensure their new STEM education plan for Central Washington is incorporated into the CEDS plan.

As a result of this collaboration our CEDS contains a specific goal to develop a world class workforce. Actions and strategies within this broader goal reflect priorities in the Workforce Council and ESD 105 STEM plan.

Collaboration with these workforce and educational institutions has been invaluable during the planning process. Our team has been able to discuss the importance of business education partnerships with respect to developing a future workforce and both partner entities now embrace this initiative within their respective plans.

SOUTH CENTRAL WORKFORCE DEVELOPMENT COUNCIL STRATEGIC PLAN GOALS (2015)

Goal 1: Improve the quality of education in area school districts through collaboration with business to prepare youth for entry into the workforce.

Goal 2: Prepare adults in transition (TANF, disadvantaged adults, dislocated workers, and older workers) for successful participation in the workforce.

Goal 3: Support the current economic base and promote future business growth through the development of a well-trained workforce.

Goal 4: Improve access to and quality of workforce training and employment programs to meet existing and future business needs.

EDUCATIONAL SERVICE DISTRICT 105 STEM EDUCATION PLAN (2015)

Goal 1: Establish and support STEM-based educational experiences that ensure students graduate from High school STEM literate and College/Career Ready

Goal 2: Develop strong partnerships between the business community and education institutions that help students in South Central Washington become STEM literate and College/Career ready

Goal 3: Develop a communications capability that clearly and effectively advocates and conveys the need for STEM literacy, and connects the business community, education community, families and the public at large about the regional STEM initiatives

Demographics and Economic Overview

Current Overview

The Kittitas-Yakima Economic Region is a beautiful region of lakes, rivers, and national parks with all four seasons. Hot and dry summers contrasted with cool and wet winters provide a climate suitable for a variety of interests and lifestyles. This diverse landscape of rivers to plains to forests and mountains is only rivaled by the diversity of its residents.

The Kittitas Yakima Economic Region is so named due to the counties it is composed of, Kittitas and Yakima Counties. Situated in central and south-central Washington State, these counties are crossed by Interstate 90 and 82 as well as major freight rail routes. The land area of these counties is a combined 6,592 square miles which comprise almost 10% of the entire land of Washington State¹. Major geographical features include the Columbia and Yakima Rivers which

¹ Washington State is 66,455 sq. mi, U.S. Census Quickfacts

flow through the central and eastern sections of the two county Region. To the west is the Cascade Mountain Range, conserved by the Snoqualmie and Wenatchee National Forests, which towers to the height of 12,281 feet in Mount Adams. Scenic view of Mount Adams, Mount Stuart, and Mount Rainier are commonplace in this region. Natural beauty is something that residents of the region enjoy all year round.

Profile of Counties			
Variable	Kittitas	Yakima	Ki-Yak
Population, 2015	42,670	249,970	292,640
Land Area (sq. miles)	2,297	4,295	6,592
Population Density (per. sq. mile)	18.57	58.19	76.76
Per Capita Income, 2013	\$37,775	\$36,497	\$74,272
Total County Revenues, 2014	\$44,222,159	\$150,624,000	\$194,649,159
Total County Expenditures, 2014	42,511,395	\$133,587,000	\$176,098,395
Per Cap. County Revenues, 2014	\$1,036.37	\$602.57	\$1638.94
Per Cap. County Expenditures, 2014	996.28	\$534.41	\$1530.69
Source: Washington Office of Financial Management, Yakima County Auditor's Office, Kittitas County Auditor's Office			

With a population of 292,640 and population density of 76.76 per square mile as of 2015, the Kittitas Yakima Economic Region can be described as a rural community. Similar to most rural areas, agriculture is an economic mainstay that fosters a consistent business climate built around agriculture. Unlike many rural communities, agriculture in the Kittitas Yakima Economic Region has a fair market value of over \$1 billion dollars sold locally, nationally and internationally. Other significant industries in the region include health services, manufacturing, finance and insurance and accommodation and food services. All revenues generated in the region total to \$195 million dollars in the year of 2014 with per capita revenues at approximately \$1,600. Notably, the cost of doing business in the Kittitas Yakima Economic Region seems to produce a 9% return, on average, of revenues above expenditures.

There are multiple cities that add their own diverse labor pool into the Kittitas Yakima Economic Region. These cities are situated along the highways of Interstate 90 and Interstate 82, primarily, with communities surrounding them. Yakima, Ellensburg and Sunnyside are the most populace cities in the region of approximately 93,220, 18,810 and 16,280, respectively². The residents of the Kittitas Yakima Economic Region are composed of many different backgrounds and traditions. Many of these differences can begin to be understood in later

² Washington Office of Financial Management, 2015

sections articulating their race, sex, occupations, age, and other factors. The Kittitas Yakima Economic Region is as diverse geographically as its people are which is one of the region's strongest attributes.

Population by Race

The current Population by Race of the Kittitas Yakima Region is a factor that contributes to the region's uniqueness. A total of 47.7% of the region is identified as 'White, non-Hispanic or Latino.'³ The second largest population category is 'Hispanic or Latino' and totals 123,474 or 42% of the population, followed by 'American Indian and Alaskan Native' who make-up 14,842 or 5% of the population. The percentage of 'American Indian and Alaskan Native' in the region is explained by the presence of the Yakama Nation in Yakima County.

Population by Race, 2014					
	Kittitas	Yakima	Ki-Yak	Washington	U.S.
Total Population	42,100	248,800	290,900	6,968,170	308,745,538
White	39,036	218,979	258,015	5,656,119	241,937,061
Black/African American	409	3,543	3,952	270,420	40,250,635
American Indian/Alaska Native Asian	456	14,386	14,842	127,578	3,739,506
Asian	876	3,655	4,531	538,828	15,159,156
Native Hawaiian/Pacific Islander	62	483	545	48,369	674,625
Two or More	1,261	7,755	9,016	326,856	6,984,195
Hispanic or Latino (Included in above totals)	3,479	119,995	123,474	850,276	69,214,742
Source: Washington Office of Financial Management, U.S. Census Bureau					

By comparison, for the state of Washington, the 'White' population is 81%, 'Hispanic or Latino' is 12%, and 'American Indian and Alaska Native' is 1.8%. For the U.S., the 'White' population is 78%, 'Hispanic or Latino' is 22.4% and 'American Indian and Alaska Native' is 1.2%. As reflected in the table above, the Kittitas Yakima Economic Region is a richly diverse region by race.

Employment by Industry

Employment statistics represent important measures of the state of the regional economy. Total Employment in the Kittitas Yakima Economic Region is 144,172 jobs. This amounts to a

³ US Census Bureau

labor force participation rate of approximately 91.3%, higher than the national average.⁴ Employment in the Kittitas Yakima Economic Region is primarily composed of private, non-farm employment with 144,172 jobs. Of these jobs, the industries with the most employed are 'Government (with 23,060 people employed), 'Trade, Transportation, & Utilities (with 21,810) and 'Education & Health (with 18,660). 'Leisure & Hospitality' has grown the most since 2014 at 15.4%.

Farm employment has a long history of employment in the Kittitas Yakima Economic Region, often marked by volatile output and employment fluctuations. 'Government' constitutes 15.9% of all employment in the Kittitas Yakima Economic Region, which is slightly above the national average of 11%.⁵

Employment by Industry Summary July 2015			
Industry	Kittitas	Yakima	Ki-Yak
Total Employment	20,940	123,232	144,172
Farm	4,200	41,032	45,232
Nonfarm	16,740	82,200	98,940
Government	6,760	16,300	23,060
Private	9,980	65,900	75,880
Education & Health	1,460	17,200	18,660
Leisure & Hospitality	2,820	7,700	10,520
Trade, Transportation, & Utilities	2,410	19,400	21,810
Manufacturing	500	8,400	8,900
Source: Employment Security Department			

Average Annual Wages per Sector

Another measure of the regional economy is the wages earned by those participating in it. In the Kittitas Yakima Economic Region, average annual wages range from approximately \$13,000 to \$79,000. Average annual wages earned in each of the counties of the Kittitas Yakima Economic Region, Kittitas and Yakima counties, were \$39,404 and \$40,173 respectively. These wages are substantially lower than the Social Security Administration's most recent national average wage of \$44,888.16. The sectors that pay the lowest annual wage in Kittitas and Yakima counties are 'Arts, Entertainment, & Recreation' and 'Accommodation & Food Services' where employees earn on average \$13,838.95 and \$17,046.94, respectively. We can reasonably assume that these occupations would be based on the minimum wage of 201, \$9.47.⁶

Sectors that pay the highest annual wage in Kittitas and Yakima counties are 'Finance & Insurance' and 'Utilities' where employees earn on average \$54,209.56 and \$83,787.12, respectively. The occupations that would increase the average of those employed in the 'Utilities' sector would be Electrical Engineers, Control Valve Starters, and their supervisors⁷. In Kittitas County, the occupations that attribute to the greater average annual wage in the

⁴ Bureau of Labor Statistics - <http://www.bls.gov/news.release/pdf/empsit.pdf>

⁵ Employment Security Department

⁶ Washington State Labor and Industries

⁷ Bureau of Labor Statistics

'Finance & Insurance' sector are Securities & Commodities Sales Agents, Insurance Sales Agents, and Accountants and Auditors⁸.

Average Annual Wages Per Sector, 2014		
	Kittitas	Yakima
<i>All Industries</i>	\$39,404.12	\$40,173.28
Agriculture, Forestry, Fishing, and Hunting	-	\$26,450.32
Mining	-	\$41,038.89
Utilities	\$88,520.79	\$79,053.46
Construction	\$45,076.40	\$44,125.05
Manufacturing	\$33,967.22	\$42,333.18
Wholesale Trade	\$53,424.65	\$50,490.95
Retail Trade	\$24,218.96	\$27,335.65
Transportation and Warehousing	\$40,533.98	\$40,050.73
Information	\$39,075.33	\$42,687.44
Finance and Insurance	\$55,134.06	\$53,285.07
Real Estate, Rental, and Leasing	\$22,525.08	\$28,175.52
Professional and Technical Services	\$47,949.15	\$42,836.96
Management of Companies and Enterprises	-	\$68,466.02
Administrative and Waste Services	-	\$25,372.86
Educational Services	\$30,561.78	\$34,381.45
Health Care and Social Assistance	\$26,875.89	\$38,376.40
Arts, Entertainment, and Recreation	\$13,838.95	\$20,050.35
Accommodation and Food Services	\$17,046.94	\$15,362.42
Other Services, except Public Administration	\$24,372.44	\$38,755.51
Government	\$67,344.32	\$44,837.43
Source: US Bureau of Labor Statistics		

Future economic growth of the Kittitas Yakima Economic Region is dependent on the area's ability to create higher paying jobs compared to that of the nation. This will make the Kittitas Yakima Economic Region more attractive to highly educated workers to contribute to the labor diversity already present in the area.

Agricultural Impact

Agriculture has long been a vital part of the Kittitas Yakima Economic Regional economy. The diversity of agricultural goods that are made in the region range from cattle, wine, apples, hay, to many other goods. The 2007 Census of Agriculture calculated that Yakima County was the producer of the highest value of total agricultural goods sold in the nation totaling \$1.2 billion. The same census calculated that Kittitas County sold the 20th most agricultural goods, per their value of \$60.9 million.⁹ 'Fruits, Nuts, and Berries' alone constitute over \$500 million market value of products alone.

⁸ Bureau of Labor Statistics

⁹ USDA, 2007 Agricultural Census

There are many varieties of agriculture cultivated. The top crop items are: apples, hay and similar crops, corn, wheat, and grapes.¹⁰ With high land utilization and high revenue streams, agriculture has played a pivotal role in the Kittitas Yakima Economic Regional economy.

Top 10 Occupational Opportunities

In the Kittitas Yakima Economic Region, there are well-defined occupations that share a similar bright outlook. The occupation with the brightest outlook is ‘Accountants and Auditors’ who, on average, earn \$64,132

and have an anticipated long-term growth rate of 1.4% over the next ten years. It wouldn’t be unreasonable to assume that this trend will continue or even increase because of the increased responsibility

Top 10 Job Opportunities in the Ki-Yak Region					
Occupation Title	2009 Employ-ment	Avg. Annual Wage	Avg annual openings (2009-2019)	Short term Trend	Long Term Trend
Accountants and Auditors	605	64,132	20	0.6%	1.4%
Agricultural Workers, All Other	20,019	40,085	621	0.3%	0.4%
Assemblers and Fabricators, All Other	186	25,484	8	3.1%	1.6%
Bill and Account Collections	157	34,310	7	2.9%	2.2%
Billing and Posting Clerks	474	31,847	16	1.5%	1.5%
Bookkeeping, Accounting, and Auditing Clerks	2,071	36,374	53	1.2%	1.2%
Bus and Truck Mechanics and Diesel Engine Specialists	258	42,270	8	1.7%	0.8%
Business Operations Specialists, All Other	323	64,344	11	-0.9%	1.1%
Carpenters	1,293	39,273	40	1.1%	1.6%
Cashiers	2,584	22,067	139	0.6%	0.7%
Source: Employment Security Department					

of financial reporting of firms to regulators. Another growing occupation is for ‘Carpenters’ who currently earn \$39,273 with an anticipated long-term growth rate of 1.6%. According to the Employment Security Department, an average annual of 40 openings for this position are estimated to occur through 2009. Considering the proximity of the Kittitas Yakima Economic Region to timber resources, it is reasonable to think that timber would be processed within the region. For the occupations that see the greatest opportunities are those whose long-term trend is comparable or greater than the population growth rate of the Kittitas Yakima Economic Region of 1.3% (calculated from 1970 through 2011). Many of the opportunities for employment require at least a high-school diploma and preferably a college degree¹¹. The occupations that show the most promise are either jobs that require a technical skill or training in that particular field such as ‘Diesel Engine Specialist’ or ‘Auditing Clerks’. It is evident that a strong training and education will be necessary for a long term occupational outlook in the Kittitas Yakima Economic Region.

Firm size

The entrepreneurial spirit is alive in Kittitas and Yakima counties. Based on data from the Washington State Employment Security Department, there are 930 firms with less than 10 employees (1-4 and 5-9 employees, taken together) for Kittitas County and 3,330 firms with less than 10 employees in Yakima County. In the 10-49 employees range, there are 196 firms in

¹⁰ USDA, 2012 Agricultural Census

¹¹ Washington State Employment Security

Kittitas County and 1,052 firms in Yakima County. There is a disproportionately larger number of small businesses in Yakima County.

# of Employees	Kittitas	Yakima	Ki-Yak	Washington	U.S.
1-4	679	2,381	3,060	99,380	4,088,288
5-9	251	949	1,200	33,695	1,400,383
10-19	127	651	778	21,916	951,221
20-49	69	401	470	13,905	652,075
50 and more	23	224	247	7,919	396,386
Total Firms	1,149	4,606	5755	176,815	7,488,353
Source: US Census Bureau					

In the combined Kittitas Yakima Economic Region, 74% of the firms employ less than 10 employees. This percentage is comparable to the state of Washington (with 75.26%) and the nation (73.29%). The Kittitas Yakima Economic Region has a slightly higher percentage of 10-19 employees (13.52%) compared the Washington (12.39%) and the U.S. (12.70%).

It is reasonable to assume that small businesses in the Kittitas Yakima Economic Region are subject to the same issues faced by small businesses in the state and across the nation. The past few years have been tough for small business, particularly regarding access to credit and government regulation. Matthew Yglesias reported that "... a tightening of credit standards during the high point of the fiscal crunch seems to have disproportionately impacted small firms and is continuing to hold them back during the recession."¹²

The Small Business Economic Impact Alliance (SBEIA) reported that small businesses are hurt by government over-regulation and that reducing "... the number of existing regulations by one-third ... will result in an economic climate that will help small business to thrive."¹³ There is a case for optimism. William Dunkleberg, Chief Economist for the National Federation of Independent Business, notes that labor-market sentiment is improved as small business expects to add workers in anticipation of improved sales.¹⁴

Educational Attainment

There is a mix of similarities and differences regarding Educational Attainment of the Kittitas Yakima Economic Region compared to Washington State and the entire nation.

¹² Small Companies, Big Credit Problems, Slate; January 9, 2012

¹³ Karla Lyngvar and Bill Gausewitz; September 11, 2012

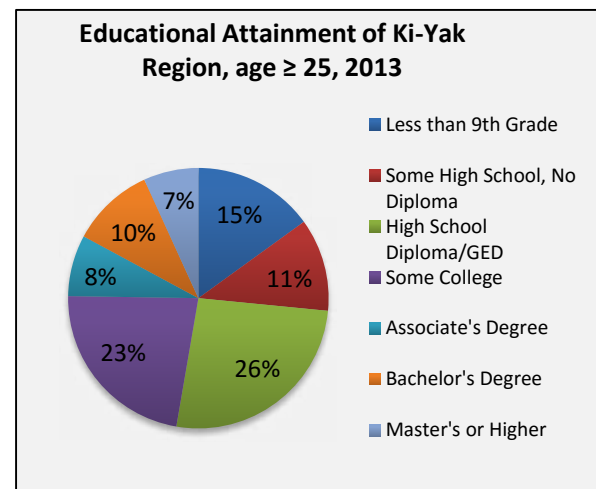
¹⁴ Alex Kowalski, Small Business Optimism in U.S. Rises from Nine-Month Low, Bloomberg, September 11, 2012

Similarities are reflected in the percentage of those who graduate High School with a Diploma or GED at a rate of 81%. The region's population with 'Some College' or an 'Associate's Degree' is 22% and 15% respectively. The percentage of "Some College" completion is similar to the stat average. Associate Degree completion is above the national average.

Educational Attainment of Ki-Yak Region, age ≥ 25, 2013							
	Less than 9 th Grade	Some High School, No Diploma	High School Diploma/GED	Some College	Associate's Degree	Bachelor's Degree	Master's or Higher
Kittitas	3.1%	6.2%	91.1%	22.7%	7.2%	33.6%	11.3%
Yakima	16.9%	12.4%	71%	21.7%	22.9%	15.5%	6.2%
Ki-Yak	15%	11.5%	81%	22%	15%	24.5%	8.7%
Washington	4.1%	6.2%	90.2%	25.4%	9.4%	31.9%	11.3%
U.S.	6.1%	8.5%	81%	21%	7.6%	40%	10.5%

Source: Employment Security Department, Census.gov and NCES.edu.gov

The primary differences in Educational Attainment appear at the higher and lower ends of educational attainment spectrum. Most strikingly is the percentage of those in the Kittitas Yakima Economic Region who have an education of 'Less than 9th Grade' at 15% of the population. The Kittitas Yakima Economic Region is about ten percentage points above the state rate and the national rate. A less extreme comparison can be drawn between those who have 'Some High School, No Diploma.' However, it is still significantly lower than the national and state percentages.



Populations by Age

The population of the Kittitas Yakima Economic region is a similar distribution to that of larger populations, but has a few significant deviations from the national and state populations for age groups. One of the most substantial differences is the juvenile population of ages zero to nineteen. As presented in the table below, the percentages of each state and U.S. populations of juveniles ranges in the mid-twentieth percent. If this can be assumed as the normal distribution of juveniles, the Kittitas Yakima Economic Region has an above-average percentage

of juveniles that constitute its population. Not only does this promote a younger, more vibrant community but it also ensures a healthy consumer base for the future.

Other deviations from the national and state norms are the ages of younger, working-age adults (25-49) and older, working-age adults (50-64). For working-age adults, the Kittitas Yakima Economic Region has a greater percentage of its population in this category, while for the older, working-age adults have a less percentage of its population compared to State and National figures.

Population by Age, 2014					
	Kittitas	Yakima	Ki-Yak		
<i>Total Population</i>	40,915	243,231	284,146		
24 and under	16,922	98,218	115,140		
25-49	11,286	76,724	88,010		
50-64	7,495	40,167	47,662		
65 and over	5,212	28,122	33,334		
Source: US Census					

The Kittitas Yakima Economic Region is very different in its population distribution compared to the state of Washington or the Nation as a whole. This is striking because it is dissimilar to the National trend towards an older population. In the Kittitas Yakima Economic Region the population is relatively young.

Institutions of Higher Education

There are two primary institutions of higher education in the Kittitas Yakima Economic Region; Central Washington University (CWU) and Yakima Valley Community College (YVCC). These institutions provide opportunities for members of the community and those outside of the region to gain the necessary skills and education to work in higher paying occupations.

Approximately 8,250 students attend Yakima Valley Community College to earn their Associate's Degree or selected Bachelor's Degree. Of these students, an overwhelming number of them, 63%, are female and only 37% are male. The average age of the student who attends Yakima Valley Community College is 27 years old. In addition, the race of the students is similar

to the population of the county that YVCC resides, with 36.6% 'White', 55.9% 'Hispanic or Latino' and 2.8 % 'American Indian and Alaska Native'.

Central Washington University, located in Ellensburg, Kittitas County, is a baccalaureate degree institution, with selected graduate degree programs. It pulls attendance from its own county like Yakima Valley Community College, but also from all over the Pacific Northwest.

Approximately 10,964 students attend CWU and the average age of those students is 23. The race composition of students that attend CWU mirrors the population of the state of Washington and less of their own community. 'White' students constitute 61.7% of the student body with 'Hispanic or Latino' and 'Some other Race' at 12.5% and 9.7% of the population, respectively.

Each of these institutions of higher education assists in the educational development of young talent in the Kittitas Yakima Economic Region. The existence of these institutions maintains a potential stream of educated, young workers to join the labor force.

	2014-15 YVCC	2014-15 CWU
Enrollment	8,250	10,964
Average Age of Students	27	23
Student/Faculty Ratio	23.2	25
Male	37%	48.4%
Female	63%	51.6%
White	36.6%	61.7%
Black or African American	1.7%	3.1%
American Indian/Alaska Native	2.8%	0.5%
Asian	1.4%	4.3%
Native Hawaiian/Other Pacific Islander	1.4%	1.2%
Some Other Race	1.8%	9.7%
Two or More	-	6.1%
Hispanic Latino	55.9%	12.5%
Sources: YVCC Office of Institutional Effectiveness and CWU Office of Institutional Research		

Strategic Analysis

Part of creating comprehensive economic development strategies involves the development of SWOT analysis for the Kittitas Yakima region. SWOT analysis is a technique for identifying and analyzing strengths (S), weaknesses (W), opportunities (O) and threats (T) as it is applied to a community or geographic region. SWOT analysis is an important element of strategic planning and for the task at hand of determining economic development priorities and strategies.

SWOT analysis needs to look at both internal and external regional factors. Typically, Strengths (S) and weaknesses (W) refer to internal factors that the community or region has some control over while opportunities (O) and threats (T) refer to external factors that are likely to influence outcomes from initiatives, projects or programs undertaken as a result of the CEDS Report.

Strengths produce an advantage or benefit for the region while weaknesses produce obstacles or limitations for regional economic development. Opportunities are factors that can favorably impact or spark regional economic development, but are not necessarily under the direct control of the community. Finally, threats refer to external factors that can limit economic development and under limited community control.

The CEDS Steering Committee developed the table on the following page that provides an analysis of SWOT for the Kittitas Yakima region. SWOT analysis can offer helpful perspectives for economic development by exploring possibilities for new efforts or solutions to regional problems and by making decisions about the best path for regional/joint initiatives, projects and programs. It can also help to determine where change is possible since SWOT can reveal priorities as well as possibilities. Finally, SWOT offers a simple way of communicating about initiatives, projects or programs, and to organize information about the community or region.

Regional SWOT Overview

Strengths	Weaknesses
▪ Diversified industry makeup ○ Renewable and alternative energy ○ Strong agricultural markets ○ Support of small business and the microenterprise culture. ▪ Proximity to major metro areas; Seattle, Portland, Spokane. ○ Strong capabilities in logistics and distribution ○ Highway Accessibility ▪ University Presence: CWU, YVCC, PTI Heritage U, PNWU ▪ Quality of life: ○ Abundance of outdoor recreation ○ Diverse interesting culture ○ Climate ○ Exceptional Community Healthcare ▪ Downtown vitality ▪ Abundant [sustainable] natural resources ▪ Strong and diverse labor force ▪ Young demographic ▪ Premier sports facilities and event location	▪ Lack of family-wage employment opportunities ▪ Low K-16+ education attainment ○ Workforce skill gaps ▪ Complacency towards growth and economic diversification ▪ Environmental obstacles and regulations ○ Predictability of legislation ▪ Crime rate perception ▪ Bilingual challenges ▪ Few industrial and commercial development sites ▪ Loss of natural resource jobs ▪ Limited night life and entertainment amenities ▪ Recreation for children is limited ▪ Professional services including CPA's, dentists, consultants, doctors, and engineers somewhat limited ▪ Water capacity ▪ Pay disparity to major metro areas ▪ No port district in Ellensburg or Yakima
Opportunities	Threats
▪ Capture spin-off growth from businesses from western WA metro areas. ○ Capture overflow from neighboring metro areas ▪ Improve visibility of available sites ○ GIS inventory available ▪ Raise educational attainment ○ Growth of talent, research, and facilities for higher education ○ Business education partnerships ○ Alternative workforce education options ▪ Collaborative inter-county cooperation ○ Work together to create a unified regional vision ▪ Develop and promote tourism ○ Outdoor recreation options ○ Capitalize on developing industries like wineries, breweries, that focus on tourism in the region ▪ Facilitate small business development ○ Accelerate small business through incubators and small business network ○ Promote and support downtown redevelopment efforts. ▪ Develop renewable and alternative energy facilities ▪ Cultivate and promote bilingual workforce ▪ Creative arts culture	▪ Environmental challenges and regulations ○ Water supply scarcity ○ Declining forest health, fire danger ○ Water quality uncertainty ○ Planning and zoning barriers to new investment and alternative energy innovations or facilities ▪ Regulations and permitting business responsiveness ▪ Lack of economic resilience ○ Diversification of industries ▪ Loss of young talent ▪ Limited economic development tools and financing options ○ Lack of economic development resources and incentives ○ Limited small business advancement opportunities ▪ Distribution impacts from urban traffic congestion

Strengths & Weaknesses

Major Strengths

The region enjoys a diverse economy. Private nonfarm employment is comprised of *education & health* (12.9% of total Kittitas-Yakima employment in 2015), *manufacturing* (6.2%) and *leisure & hospitality* (7.3%). *Government* account for 15.9%. Strong agricultural markets are reflected in *farm* employment at 31.4%. The region is also noted for renewable and alternative energy (e.g. wind power, hydroelectric power). There is support of small business and the microenterprise culture.

Kittitas and Yakima counties are in close proximity to major metro areas. There are strong capabilities in logistics and distribution. Highway accessibility (I-90 and I-82) is easy and provides proximity to major metro areas. Yakima is 142 miles to Seattle, 186 miles to Portland and 202 miles to Spokane. For Ellensburg, Seattle is 107 miles, Portland is 221 miles and Spokane is 173 miles.

There are several universities and colleges in the Kittitas and Yakima area. CWU operates the main campus in Kittitas County (Ellensburg) and a university center (CWU-Yakima) in Yakima County on the YVCC campus. CWU, YVCC and Heritage University provide opportunities for members of the community and those outside the region to gain the necessary skills and education to work in higher paying jobs. PNWU of Health Sciences is an accredited, private graduate medical school to train physicians and other health care providers.

The region enjoys a young, diverse, bilingual workforce and expanding educational opportunities to nurture and position communities and people in preparation for economic opportunities and future development.

Major Weaknesses

There is a lack of family-wage employment opportunities in the region. Average annual wages in Kittitas-Yakima region (\$39,788 in 2015) are significantly lower than the national average annual wage (\$44,888 in 2014).¹⁵ Pay disparity between major metro areas that are nearby offer higher wages for similar work and draw local talent.

There is a perceived crime rate issue. Although the crime rate has decreased, perception of crime has not.

Educational attainment in the region is low for K-16+. In 2013, Educational attainment for the Kittitas-Yakima region with *less than 9th grade education* is 15%, which is significantly higher than Washington (4.1%) and the U.S. (6.1%). This is likely to produce workforce skill gaps. For

¹⁵ US Department of Social Security

high school diploma/GED, Kittitas-Yakima (at 26.1%) is above Washington (23.9%), but lower than the U.S. (28.6%).

Water capacity at treatment plants is becoming limited.

The region experiences a sense of complacency towards growth and economic diversification. Agriculture has long been a vital part of the Kittitas-Yakima regional economy and includes cattle, wine, apples, hay and other agricultural and processed goods. Yakima County has one of the highest values of total agricultural goods sold in the nation. This role of agriculture may produce complacency about diversifying the regional economy.

No port district in Yakima or Kittitas. Although there are two partial port districts in Yakima County, the majority of Yakima County and all of Kittitas County are not covered by port districts.

Opportunities & Threats

Major Opportunities

The region can capture spin-off growth from businesses from Western WA metro areas. Focused economic development efforts can target suppliers, vendors and other spin-offs associated with companies from Western WA.

Increase visibility of available sites and buildings throughout the district by presenting them on a GIS based property search platform.

The region can raise educational attainment. Educational attainment for *some college* in Kittitas-Yakima (22.5%) is lower than Washington (25.4%), but above the U.S. (21%). For *associate's degree* and *bachelor's degree*, Kittitas-Yakima is below Washington and the U.S. for both levels of educational attainment. There is room for improvement by taking advantage of growth in talent, research and facilities from the strength in university presence (CWU, YVCC, Heritage University, Perry Technical Institute and PNWU of Health Sciences). Continue to develop partnerships between private business and education and develop alternative workforce education plans.

Kittitas and Yakima can enjoy the benefits of collaborative inter-county cooperation. The development of the Yakima River Basin Integrated Water Resource Management Plan and other collaborative efforts can provide the experience of working together for the common good and the basis for creating a unified regional vision.

The region can develop and promote tourism. *Leisure & hospitality* accounted for 7,429 employees in 2001 (or 5.7% of total employment). By 2015, it accounts for 10,520 employees (or 7.3%). This stable employment provides a foundation for enhancing tourism as an economic-driver for the Kittitas-Yakima region. The region can capitalize on further developing

and promoting industries like wineries and breweries that focus on regional tourism. There are also outdoor recreation options.

The region can facilitate small business development. In the Kittitas-Yakima region, 74% of the firms employ less than 10 employees. This percentage is comparable to the state of Washington and the nation. Kittitas-Yakima has slightly higher percentage of 10-19 employees (12.4%) than Washington and the U.S. Incubators and small business networks can accelerate small business growth and development. A focused approach can also promote and support downtown development efforts.

Major Threats

In Yakima County, annual average unemployment remains at 10% for 2015 while the state unemployment rate declined from 9.2% to 5.3% between 2010 and 2015. (Don Meseck, ESD/LMEA, August 2012) The Kittitas County unemployment rate was unchanged at 8.8% from July 2011 to July 2012. (Don Meseck, ESD/LMEA, July 2012).

Planning and zoning barriers to new investments and alternative energy innovation or facilities. There is significant investments across the nation for alternative energy but no clear processes locally for developing these kinds of projects here.

There are environmental challenges and regulations that characterize the region. The region is marked by water supply scarcity and declining forest health. There is also water quality uncertainty. Planning and zoning regulations are creating barriers to new investment.

There are several large industry sectors that dominate the local economies. Without diversification, an event that adversely affects one or more of these industries can adversely impact our region far more than if we have a more diversified industrial base.

Locally produced and grown products are shipped out of the ports in Seattle and Tacoma as congestion increases at these ports and in the metro areas, the ability for local business to access export markets has become increasingly difficult and is impacting their profitability.

There is a loss of young talent from the regional workforce. The Kittitas-Yakima region 25-49 age population is 35.1% of the total regional population and above the state of Washington (33.5%) and the U.S. (32.9%). The loss of young talent in the region is due, in large part, to the lack of family-wage employment opportunities.

There are limited economic development tools and financing options. This threat is due to the lack of economic development resources and incentives, and limited small business advancement opportunities. Small businesses in the Kittitas-Yakima region are subject to the same issues faced by small businesses in the state and across the country – access to credit and the effect of government regulations.

Key Industry Clusters

There are several existing economic clusters of significance in Central Washington. These economic sectors and their support industries drive the regional economy. The Yakima-Kittitas region has also identified the alternative energy cluster as particularly important in the future.

Key industry clusters serve as engines of economic activity for the region and consist of:

- Agriculture
- Healthcare
- Manufacturing
- Tourism
- Warehouse/Distribution
- Alternative Energy (renewable)

Agriculture

The region is the undisputed agricultural leader in Washington state and ranks as one of the highest agricultural producers in the U.S.

Yakima County ranked 12th in the nation in 2007 and Kittitas County ranked 20th in the nation. In 2012, the market value of agricultural products sold rose to over \$1.7 billion.¹⁶ Yakima County is ranked #1 nationally in apple, hop and mint production. As noted earlier in the report, the diversity of agricultural goods in the region ranges from cattle to wine, apples to hay—over 40 different commodities. Timothy hay production in Kittitas County has a strong international history and represents a source of economic stability to the region.

The Kittitas-Yakima Region produces high value of agricultural products and pays fairly similar wages to comparable counties in agricultural-rich states, California and Texas.

Farm employment totals 45,232 in 2015 and accounts for 31 percent of the Ki-Yak region's total employment of 144,172. Farm employment in Washington grew by 2.3 percent during the first decade of the 21st century while nonfarm employment increased by 8.2 percent.

Healthcare

¹⁶ USDA, 2012 Agricultural Census

Healthcare is comprised of a wide-range of service-related jobs and consists primarily of employment in hospitals and non-governmental social assistance services. Two of the largest hospitals are located in Yakima County – Yakima Valley Memorial Hospital and Yakima Regional Medical & Cardiac Center. Kittitas Valley Healthcare is the largest hospital in Kittitas County. For the Kittitas-Yakima Region, healthcare represents the largest private sector employment of 16,500 or 11.8 percent of total regional employment in 2010. For the region, this sector experienced robust growth of 19.5 percent during the first decade of the 21st century. The region typically pays less than the state and nation as a whole.



Healthcare is one of the increasingly more important employment sectors while it faces increasing physical strains from a growing and aging population. The impact is reflected in the shortage of healthcare professionals in the face of growing pressure to reduce cost to save money, many times through staff reduction. Any shortage of new people coming into the field due to moderate wages and long hours can be addressed, in part, by “home grown” healthcare professionals. For example, this can be found in graduates from the Pacific Northwest University of Health Sciences, a graduate program located in Yakima County that produced its first graduates in 2012.

Manufacturing

Historically, manufacturing is a key industry in any regional economy. The region has depended upon manufacturing to provide stable employment and living wage jobs, particularly in metals and plastics. In 2001, manufacturing accounted for slightly more than 9 percent of total employment for the Kittitas-Yakima Region compared to 7 percent in King County and 6 percent nationwide. However, during the decade, manufacturing employment declined by 26.2 percent and represents slightly more than 6 percent of total regional employment in 2010.



Quality Control at Magic Metals

Investment in education and technology infrastructure is essential to the success of manufacturing. A skilled and educated workforce related to manufacturing (e.g., industrial and engineering technology) requires post-secondary education and training that is provided by Yakima Valley Community College and baccalaureate institutions at Central Washington University and Heritage University.

Tourism

Tourism in the state of Washington is a multi-billion dollar industry. Despite the downturn in the state and national economy, Washington continues to see tourism spending as a vital economic engine across the state. This is certainly the case in the Kittitas-Yakima Region.

An assessment of tourism employment reveals its importance to the region. Accommodations and Food services industries account for 6.1 percent of the total regional employment in 2010. During 2001-2010, tourism employment increased 15.7 percent – making tourism one of the most significant growth sectors.

Given the quality of life in the region, a variety of recreational, leisure, cultural and entertainment activities have emerged and attracted visitors to the area from the Puget Sound region as well as the eastern region of the state, Canada, Idaho, Oregon and other locations are within a 5-hour drive of central Washington and the Kittitas-Yakima Region. An increasing number of special events and activities draw visitors to Kittitas and Yakima Counties.

With the emergence of “staycations,” many families are taking vacations closer to home by driving rather than flying. County fairs, rodeo, wine tasting, Spirit of the West, brew fests, art walks, music, performing arts, convention centers, camping, hiking, snowmobiling, golf, youth sports, and so much more continue to draw increasing numbers of visitors to the Kittitas and Yakima Valleys each year.



Suncadia Resort

Workforce development and education providers should look to industry and occupational growth estimates to determine where to expand or contract their training programs that will serve the many facets of tourism.

Alternative (Renewable) Energy



New Wind Turbines in Kittitas County

Investment in alternative sources of energy is increasing. Global warming, dependence on foreign sources of oil and rising fuel prices have captured the attention of the public and governments across the country and within states and regions. There is a tremendous potential for growth in alternative energy products, services and employment. In particular, wind power has emerged as an efficient and effective energy source and the Kittitas-Yakima Region is well-suited for

development of wind power and, to a lesser extent, hydro and solar power. The most prominent wind power site is located in Kittitas County and operated by the Puget Sound Energy (PSE) Wild Horse Wind and Solar Facility.

The Central Washington Resource Energy Collaborative (CWREC) was created to focus attention on alternative (renewable) energy and provide leadership for promoting the regional advantages. As noted in the T.I.P. Strategies Report “Economic Development Strategic Plan” (*Release 1.0*, July 2009), there are opportunities for supporting workforce training and the recruitment and expansion of businesses related to energy research and development. CWREC represents a suitable organization to work with the New Vision/Yakima County Development Association to cultivate alternative, renewable energy initiatives for the Kittitas-Yakima Region.

Warehouse/Distribution

In the “Blueprint Yakima Report” (March 2008), Angelou Economics conducted a supply chain analysis of logistics and distribution. The Report identified sub-industries; truck transportation, warehousing and storage. Warehousing and distribution, particularly through truck transportation, are still quite relevant for the Kittitas-Yakima Region.



The Region is a Natural Distribution Hub

Goals & Objectives

GOAL ONE: SUPPORT THE RETENTION AND EXPANSION OF REGIONAL CLUSTERS AND INDUSTRIES

Retention of existing industry is a cornerstone of an effective regional economic development program. Generally, it requires less effort and resources to be effective in retaining good-quality jobs than in creating new ones. The data varies, but it is widely reported that between 75-85 percent of all new jobs created are in existing companies. As a community is able to build, improve and sustain its retention program, it will be better able to hold onto businesses and jobs to build upon overall prosperity.



Liberty Bottles Production Line

Retention and expansion efforts should be given a clear priority by not just the economic development organizations, but also by a cross-section of community partners. Efforts directed toward existing businesses should come in the form of team efforts among area Chambers of Commerce, local city/town governments, and education and workforce development providers. All of these entities are heavily reliant on the local business community and should place emphasis on ensuring their needs are met.



Lean Manufacturing Seminar

In an economy driven by innovation and entrepreneurship, there also needs to be a continued focus on building further collaboration between the region's higher education institutions and the region's businesses. Promoting STEM education, ensuring students gain exposure to real world work settings, commercializing valuable research, providing management and workforce training are all important steps towards supporting key companies in Central Washington.

Part of growing the regional economy also includes attracting new companies to Central

Washington. Some economic development resources should be dedicated towards raising the region's image as a business location and responding to companies interested in expanding within Central Washington. An effective business recruitment initiative can complement industry retention programs and generate new jobs, wealth and tax revenues within the area.

STRATEGY: DEVELOP AND DELIVER RESOURCES THAT HELP BUSINESSES EXPAND OR STAY COMPETITIVE

- **Action:** *Develop or expand outreach efforts to companies in key sectors (or cluster) to help identify issues and opportunities facing specific firms or industries within the region;*

- **Action:** Provide information and assistance to companies on financing options and programs;
- **Action:** Develop and/or broker worker recruitment, placement and training programs that meet employer needs;
- **Action:** Help companies secure tax credits and other resources that help them expand or sustain operations;
- **Action:** Help local industries address key regulatory or permitting challenges;

STRATEGY: DEVELOP OPPORTUNITIES AND ENCOURAGE COMPANIES TO WORK WITHIN INDUSTRY CLUSTERS TO IMPROVE COMPETITIVENESS

- **Action:** Identify and organize companies into cluster or target industry groups.
- **Action:** Organize periodic cluster based networking sessions to bring key companies together around key topics including exporting, access to capital, regulatory assistance, etc.
- **Action:** Identify service companies or industries (ex. Health services) that could support key clusters
- **Action:** Identify productive capacities of cluster companies to facilitate business to business commerce.

STRATEGY: ATTRACT NEW COMPANIES TO THE REGION THAT COMPLEMENT EXISTING INDUSTRIES AND BOOST THE REGIONAL ECONOMY

- **Action:** Administer public relations and marketing efforts that promote Kittitas and Yakima Counties to prospective businesses seeking to expand, both locally and in target markets.
- **Action:** Work with existing businesses to identify support industries needed in the region.
- **Action:** Maintain up-to-date information on available commercial and industrial properties within the region.
- **Action:** Create and maintain community profiles, demographic reports, and other statistical databases that help respond to prospective businesses.
- **Action:** Create and maintain pertinent web sites and marketing materials.



Walmart's Distribution Center Employs 600

GOAL TWO: SUPPORT SMALL BUSINESS SUCCESS AND ENTREPRENEURSHIP



Business Plan Contestants

Encouraging entrepreneurship and helping small businesses thrive is a critical part of advancing the Central Washington economy. Across the nation, small businesses generate a lion's share of new jobs. Local communities from Roslyn to Grandview all depend on these enterprises to provide key goods and services to their residents. More importantly these small businesses generate wealth and tax revenues for their resident communities and the region as a whole.

The region's burgeoning Hispanic population brings new entrepreneurial energy to the region. Latino businesses have helped stabilize rural communities like Tieton and Wapato. Their artisan enterprises also add character to local communities and these businesses add to the overall visitor and quality of life experience for the area.

In parts of the Kittitas Yakima region professional services are in particular demand. Accountants, lawyers, dentists and other services are scarce in smaller communities. They are an excellent target market to fill small spaces in downtown areas because of the smaller office needs, and stream of clients that brings more customers downtown.

The Yakima-based Small Business Development Center (SBDC), Rural Community Development Resources (RCDR), the SCORE business counseling chapter and area chambers of commerce have supported small businesses with advice, management training, and information and referral for several years. Their professional staffs have assisted clients of all types throughout the region. Collaboration between RCDR, the SBDC, chambers of commerce, CWU, Heritage University and municipal economic development offices will continue to nurture the entrepreneurial community.



STRATEGY: PROVIDE TRAINING AND MENTORING SUPPORT TO SMALL BUSINESS AND ENTREPRENEURS

- **Action:** Bring small business service providers together to identify training needs and opportunities that support small business success;
- **Action:** Expand training for business start-ups and expansion including disadvantaged business enterprises;
- **Action:** Use University and College Faculty expertise and other community resources to provide small business education workshop;
- **Action:** Sustain and expand SCORE business counseling chapter; and
- **Action:** Create and maintain pertinent web sites and marketing materials.

STRATEGY: ADDRESS ACCESS TO CAPITAL ISSUES FACING SMALL BUSINESS

- **Action:** Expand local revolving loan funds and other sources of capital for new or expanding businesses;
- **Action:** Effectively broker alternative financing programs (ex. New Market Tax Credits, Craft 3, etc.) that can support small business lending;
- **Action:** Market unique loan programs and services to banks, accountants, attorneys and other professionals that work with small business; and
- **Action:** Explore how angel and equity funding programs could be created or tapped to support promising ventures in Central Washington.



STRATEGY: BUILD AND SUSTAIN INCUBATOR FACILITIES WITHIN THE REGION

- **Action:** Create facilities where businesses can share space and services;
- **Action:** Establish incubator operating policies that help ensure that incubator tenants eventually get established in other facilities; and
- **Action:** Develop additional small business incubator facilities based on community specific demand and opportunity within the region.

STRATEGY: IDENTIFY AND SUPPORT ENTREPRENEURS AND INVENTORS WHO HAVE SIGNIFICANT IDEAS OR VENTURES THAT COULD GROW INTO SIZEABLE ESTABLISHED COMPANIES

- **Action:** Continue business plan contests for students and entrepreneurs within Central Washington;
- **Action:** Work to expand scope of existing business plan contests to the two-county region as a whole;
- **Action:** Explore expanding existing business plan contest to encourage innovation within established businesses and early stage ventures; and
- **Action:** Network with Northwest Entrepreneur Network and other groups that can add value and help support entrepreneurs in Central Washington.



Enterprise Challenge Contest Winners

GOAL THREE: DEVELOP A TALENTED WORKFORCE



Workforce development and education are essential components of an economic development plan. Since human capital and innovation are keys to success in the new economy, skilled and flexible workers are a company's primary assets. No community can be globally competitive without an educated workforce. Therefore, workforce issues including labor availability, productivity, and costs have become a critical factor in site selection decisions over the past few years as today's jobs demand more skills and education.

Our region already has significant assets with which to prepare our workforce, with the number of students attending and graduating from the area's colleges and universities growing each year. The Kittitas-Yakima CEDS calls for continued strengthening of our region's higher education institutions, fostering of greater connections between these public and private institutions and the private sector, and retaining the graduates of those institutions within the region's workforce.

A world-class public school system is the foundation of our regional higher education institutions, and a skilled workforce. While the educational attainment levels are boosted in Kittitas County with the presence of Central Washington University, Yakima County's low educational attainment levels are a hindrance to workforce development. The percentage of the population over the age of 25 without a high school diploma increased between the 2000 and 2010 census. Improving kindergarten to 12th-grade education is an important long term economic development strategy. Fortunately, several school districts in the region, including the largest in Yakima, have or are making significant investments in STEM education that can position them to better address our educational attainment and workforce readiness issues.



Fabricator at Magic Metals

The region's steady growth, coupled with the strong influence of the agriculture economy, has created a challenging environment for employers to find ample and quality workers. Because employers' workforce needs change rapidly with technological improvements and increased competition, they need to have responsive workforce training programs that can adjust quickly to changing needs.

The regional economy has potential for continued diversification, with strong growth in health care, education, viticulture and tourism. In addition, over the years, several emerging industry

sectors have been identified as sources of potential growth, including but not limited to aerospace, renewable energy and wine support services and products. Agriculture continues to provide a strong base for the region, not just in terms of employment and commerce, but in technology and innovation. The regional workforce development and higher education systems must continue to work as a unit to target the workforce needs of those sectors while providing the most effective education, training and workplace readiness programs that will help individuals not only secure employment in these industry sectors but to also have a clearly defined career path in their chosen occupation.

STRATEGY: SUPPORT THE CURRENT ECONOMIC BASE AND PROMOTE FUTURE BUSINESS GROWTH THROUGH THE DEVELOPMENT OF A WELL-TRAINED WORKFORCE.

- **Action:** Provide opportunities for adult and incumbent workers to further their education in job-related skills or education beyond basic level;
- **Action:** Develop incumbent worker training that builds skills for entry-level employees to move to higher skilled jobs within businesses;
- **Action:** Support industry cluster skills panels to assess emerging and declining skill needs for development of training programs to meet those needs; and
- **Action:** Develop specific vocational/technical programs based on industry demand.
- **Action:** Maintain workforce placement and training programs that enhance business development, expansion, and retention.

STRATEGY: EXPAND STEM (SCIENCE, TECHNOLOGY, ENGINEERING & MATH) CURRICULA THROUGHOUT CENTRAL WASHINGTON TO ENSURE THAT STUDENTS IN K-12 AND POSTSECONDARY EDUCATION PROGRAMS CAN ACCESS APPROPRIATE COURSES THAT HELP THEM PREPARE FOR HIGH DEMAND OCCUPATIONS.

- **Action:** Provide training and staff development opportunities to increase the understanding and skills of teachers, counselors, and administrators in applied academics instruction, comprehensive counseling, and competency based career pathway development;
- **Action:** Increase the number of applied academics courses and number of students taking applied math, principles of technology, applied biology/chemistry, applied economics, and applied communication;
- **Action:** Identify and share STEM best practices and curricula so it is uniformly available throughout Central Washington;
- **Action:** Market career pathway programs to students and parents to motivate and recruit students to plan and complete a more rigorous and useful program of studies; and
- **Action:** Develop and implement public informational campaigns that educate the community on the importance of workforce preparation.



JR Achievement Builds Career Awareness

STRATEGY: IMPROVE THE QUALITY OF EDUCATION IN ALL LOCAL AREA SCHOOL DISTRICTS THROUGH COLLABORATION WITH BUSINESS TO PREPARE YOUTH FOR ENTRY INTO THE WORKFORCE.



Students at YV Tech

- **Action:** Expand school-to-work and workforce readiness credential programs to better prepare high school students to enter the workforce or higher education institutions;
- **Action:** Develop alliances to connect the private sector with the local education and workforce development system;
- **Action:** Recruit and maintain a pool of employers (business people) who can serve as resource speakers and mentors for job readiness classes;
- **Action:** Develop business education partnerships to help local educators develop relevant curricula, classes, and programs that are centered on STEM education and work-based learning opportunities;
- **Action:** Develop a network of employers who will provide first-hand work-based learning experience to youth through internships, work experience, and job shadowing; and
- **Action:** Expand apprenticeship training to non-traditional fields and expand pre-apprenticeship programs.

STRATEGY: DEVELOP PROGRAMS THAT WILL HELP ALL STUDENTS, INCLUDING DROPOUTS AND STUDENTS AT RISK, SUCCEED.

- **Action:** Expand career counseling so that younger students (ex. 4th graders) gain awareness of what coursework is needed for specific jobs or occupations;
- **Action:** Develop programs and organize efforts to assist the dropout students with school re-entry to achieve a high school diploma or access alternative education opportunities for GED completion;
- **Action:** Develop programs that focus on development of basic-education skills for high mobility students, migratory students, and students of farm families;
- **Action:** Develop tutoring programs that will assist students in mastering reading, writing, and math skills; and
- **Action:** Expand mentoring/counseling programs to help dropout and at-risk youth understand their employment potential.



GOAL FOUR: INVEST IN CAPITAL FACILITIES AND INFRASTRUCTURE



Interstate 82 - the Region's Key Connector

A region's capital improvement plan is analogous to a business plan. It identifies where investments and growth should occur in the months and years ahead. Roadway projects, waterline extensions, and wastewater treatment plant upgrades may not be glamorous, but they nonetheless often direct and facilitate where private investments are made.

Kittitas and Yakima Counties enjoy a sound transportation system. A network of streets, highways, and rail lines help move people and goods efficiently within and through the region. Local governments have also made significant improvements in water and wastewater facilities that enhance and sustain the regional economy.

Like roads and water systems, telecommunications services provide links between Central Washington and the world, and between our remotest rural communities and our urban centers. Sections of Yakima and Ellensburg boast excellent telecommunications infrastructure but there are gaps in services affecting the region's rural areas and communities. Continued development of affordable, advanced telecommunications services is essential to help the region remain competitive in the global marketplace.

Enhancing and maintaining all forms of infrastructure – from our roads, buses, sewer lines, and energy services to commercial space, broadband internet, and cellular technology – is an essential part of sustaining the regional economy. The quality of our public and private utilities will have a far reaching impact on the quality of life for our residents and on the economic health of the Kittitas-Yakima region.

STRATEGY: MAKE INFRASTRUCTURE IMPROVEMENTS THAT PREPARE INDUSTRIAL AND COMMERCIAL LANDS FOR IMMEDIATE DEVELOPMENT.

- **Action:** *identity sites suitable for new industrial and commercial development.*
- **Action:** *Determine which sites need public or private utility investments in order to support new development*
- **Action:** *Ensure that both Kittitas and Yakima Counties have a variety of commercial and industrial sites that can support new or expanding businesses;*
- **Action:** *Work with private land owners and real estate representatives to identify costs of preparing priority sites as well as cost sharing alternatives.*
- **Action:** *Secure state and federal funds for necessary infrastructure (water, sewer, etc.) at top priority sites within the region*

STRATEGY: MAKE IMPROVEMENTS TO WATER AND SEWER SYSTEMS THAT SUPPORT NEW AND EXISTING INDUSTRIES WITHIN THE REGION:

- **Action:** Identify necessary and desirable improvement projects.
- **Action:** Ensure that economic development needs are incorporated in community capital improvement plans.
- **Action:** Analyze potential industrial wastewater treatment demand throughout the two county region; and.
- **Action:** Evaluate water system needs for local manufacturers and processors.



STRATEGY: PROMOTE AND DEVELOP LONG TERM WATER STORAGE AND MANAGEMENT SYSTEMS THAT CAN HELP SUSTAIN THE REGIONAL ECONOMY:

- **Action:** Support implementation of the Yakima Basin Integrated Water Resource Management Plan



STRATEGY: IMPROVE COMMERCIAL AIR SERVICE OPTIONS FOR RESIDENTS IN CENTRAL WASHINGTON:



- **Action:** Analyze local demand for new or enhanced flights from Yakima or Ellensburg
- **Action:** Work with Alaska Airlines and other commercial carriers to add more local flight options;
- **Action:** Organize and fund airline service banks that can help attract and retain new flights within region.

STRATEGY: MAKE IMPROVEMENTS TO KEY SEGMENTS OF THE STATE HIGHWAY SYSTEM WITHIN YAKIMA AND KITTITAS COUNTIES.

- **Action:** Identify improvements that will enhance freight and labor force mobility;
- **Action:** Develop priorities for key improvements based on collaboration with local government and other stakeholders;
- **Action:** Unite local communities within the region around key transportation projects.

STRATEGY: ENHANCE LABOR FORCE MOBILITY WITHIN CENTRAL WASHINGTON:

- **Action:** Expand public transit system in Yakima and Kittitas Counties;
- **Action:** Identify new pick up points that can enhance bus and public transit ridership;
- **Action:** Tie bus service to commute trip reduction plans being formulated; and
- **Action:** Enhance car and van pool options and utilization

GOAL FIVE: PROMOTE TOURISM AND DEVELOP VISITOR AMENITIES

Tourism is one of the Kittitas-Yakima's key industries, bringing substantial dollars into the region's economy. According to a 2011 impact study by Dean Runyan and Associates, tourism generates approximately \$350 million in economic activity each year in Yakima County, and \$124 million in Kittitas. Nearly 5000 jobs within the region are supported by the travel industry.



The Kittitas and Yakima Valleys have an extraordinarily diverse array of tourist attractions, events, and destinations that draw people to visit the region throughout the year. The competition for visitor dollars is fierce though and the region must work together aggressively to generate repeat traffic and attract new travelers.

Communities and organizations continue to develop and promote the tourism industry, and public and private investments in hotels, resorts, convention centers, cultural centers, fairs, and other facilities have helped increase the region's drawing power. New signature events are added to the regional calendar from different communities each year, and businesses that support the tourism industry continue to grow.



Outdoor recreational opportunities continue to be Yakima and Kittitas Counties' biggest draw. Four distinct seasons and ample sunshine compliment the region's natural splendor and make it a year round destination for tourists. Maintaining outdoor recreation facilities, including campgrounds, trails, and parks is important. The region also needs to develop new pathways, interpretive centers, and amenities that provide access to and enrich outdoor experiences.

Another big opportunity for tourism is driven by the growing wine industry. The Yakima-Kittitas region is well positioned to capture a significant share of this market's growth and popularity. Estate wineries and production facilities are now complemented by microbreweries and distilleries which add to the region's allure. Adding bistros, specialty shops, spas, and other enterprises that complement wine tourism is an important part of positioning the region for more affluent travelers that want a full experience.



Piety Flats Winery

Agriculture based tourism is also popular in Kittitas and Yakima Counties. Many people are interested in seeing farm operations and buying fresh produce during our growing season. Farmers' markets, wineries, and U-Pick farms can provide a total agricultural experience for visitors interested in reconnecting with our agrarian heritage.

STRATEGY: INVEST IN PUBLIC FACILITIES THAT SUPPORT TOURISM.

- **Action:** Secure state and federal funds to complete linkages between trails like William O. Douglas Trail and Cowiche Canyon, Yakima Canyon and the John Wayne Trail;
- **Action:** Establish maintenance and upgrade plans for the region's trails and outdoor facilities;
- **Action:** Protect access to public lands;
- **Action:** Clean up and maintain the region's key highway and road corridors;
- **Action:** Pursue master plan improvements at State Fair Park and the Kittitas County Fairgrounds to ensure these historic facilities are visually attractive and capable of supporting large audiences; and
- **Action:** Develop sports fields and improve amenities (ex lighting) and existing facilities.



Kittitas County Fairgrounds

STRATEGY: MARKET THE YAKIMA AND KITTITAS VALLEYS AS A LOCATION FOR CONVENTIONS AND SPORTING EVENTS.

- **Action:** Increase usage of public and private convention and meeting spaces
- **Action:** Market facilities to meeting planners and association managers.
- **Action:** Develop and submit bids for major conventions or meetings.
- **Action:** Develop coordination/cooperation between Kittitas & Yakima CVB's
- **Action:** Promote and expand sporting activities and events

STRATEGY: PROMOTE AND BUILD UPON THE REGION'S WINE AND SPECIALTY ALCOHOL INDUSTRIES

- **Action:** Continue to market wineries and wine country in target markets (Seattle and Portland)
- **Action:** Develop or expand winery events, get-aways, and activities.
- **Action:** Incorporate local breweries, products and events into tourism marketing initiatives;
- **Action:** Incorporate distilleries (and their products) into promotional initiatives; and
- **Action:** Coordinate marketing efforts between wineries, breweries and distilleries.



The New Bale Breaker Brewery

STRATEGY: PROMOTE THE REGION'S CULTURAL AND AGRARIAN ASSETS FOR TOURISM

- **Action:** Promote existing cultural attractions within the region.
- **Action:** Develop or enhance events that celebrate our unique cultural heritages.
- **Action:** Promote farm-based tourism activities; and
- **Action:** Develop agriculture amenities and events for visitors.

STRATEGY: DEVELOP EVENTS AND ACTIVITIES THAT DRAW MORE VISITORS TO THE REGION BETWEEN NOVEMBER AND MARCH

- **Action:** Develop or enhance off season events and activities;
- **Action:** Package activities and events together for increased drawing power.
- **Action:** Develop a plan to build on winter recreational activities

GOAL SIX – ENHANCE DOWNTOWN AND NEIGHBORHOOD BUSINESS DISTRICT VITALITY

The image and sense of a community is often defined by the condition of its downtown. As a result the condition of central business districts and key commercial neighborhoods can enhance or hinder economic development efforts.

Several Kittitas-Yakima communities have made steady progress to revitalize and maintain the viability of their downtowns in the faces of both changing local demographics and visitor expectations. Downtown Ellensburg has continued to progress as a historic district and attractive draw for tourists and the diverse university population. Its commitment to following the Main Street approach and maintain professional management continues to pay dividends for the community.



Ellensburg's Downtown is a Regional Hub



City of Yakima Streetscape Plan

Downtown Yakima continues to be Central Washington's regional hub for banking, government, and medicine, despite the exodus of major retailers and closure of the Yakima Mall in the early 2000's. Yakima's downtown has had to reinvent itself, starting with a facelift of its streetscape and infrastructure, changing its approach to retail and returning to its regional main street roots.

Businesses, residents, and government officials have worked diligently for several years to shape a vision for other downtowns through efforts such as Grandview Alive, Sunnyside's Centennial Square, Roslyn RDA, Vision Cle Elum and Toppenish's Old West and Murals.

In each of these communities, the growth of Hispanic businesses and customers is a key component to new businesses that will be the cornerstone of future growth. The emergence of the wine and microbrew industries, their power to attract tourists, and the proximity of the region's smaller communities to hops, vineyards, breweries, distilleries and wineries also provide tremendous long term opportunities for revitalization and growth

STRATEGY: DEVELOP COMMUNITY AWARENESS AND SUPPORT FOR DOWNTOWN/NEIGHBORHOOD REVITALIZATION

- **Action:** Complete master planning activities that focus downtown revitalization efforts and investments;
- **Action:** Promote downtown revitalization efforts through merchant meetings, public relations, and public forums; and
- **Action:** Prioritize key actions needed to redevelop downtown and neighborhood districts in Central Washington.
- **Action:** Maintain and improve the stock of historic buildings in downtown and neighborhood business districts



Historic Front Street in Yakima

STRATEGY: DEVELOP MORE DOWNTOWN AND NEIGHBORHOOD EVENTS THAT DRAW PEOPLE AND TOURISTS TO CENTRAL OR SPECIALIZED BUSINESS DISTRICTS

- **Action:** Provide seed funding to groups that can develop and stage successful events;
- **Action:** Develop and publicize a year round calendar of downtown or neighborhood events; and
- **Action:** Stage events in concert with retail promotions.



Ellensburg's First Friday Art Walk

STRATEGY: SUPPORT CONTINUED INVESTMENTS IN THE INFRASTRUCTURE OF DOWNTOWN AREAS IN YAKIMA AND KITTITAS COUNTIES.

- **Action:** Continue upgrading infrastructure to improve competitiveness of downtowns, including fiber optic and wireless telecommunications, street and landscape improvements, public spaces and entertainment centers; and
- **Action:** Enhance infrastructure serving and accenting neighborhood business districts;

STRATEGY: RECRUIT NEW BUSINESSES TO DOWNTOWN/NEIGHBORHOOD DISTRICTS AND HELP EXISTING MERCHANTS SUSTAIN OR EXPAND OPERATIONS

- **Action:** complete research to identify target businesses that fit well in the downtown or community at-large;
- **Action:** Develop marketing materials and sales strategies that promote downtown/neighborhood business development opportunities;
- **Action:** Develop an inventory of available properties in downtown/neighborhood business districts;
- **Action:** visit downtown or neighborhood merchants to determine how they are doing and whether they can or want to expand operations; and
- **Action:** provide appropriate follow-up assistance to new or existing businesses



STRATEGY: ORGANIZE DOWNTOWN AND NEIGHBORHOOD BUSINESS DISTRICT MERCHANTS TO SHARE BEST PRACTICES, POOL RESOURCES, AND PROMOTE THEMSELVES COLLECTIVELY.

Strategic Projects

Key Investments and Projects Supporting a Strong Regional Economy

Over the past decade a number of projects and investments have helped boost the region's economic fortunes. Some of these projects include:

The Ellensburg Business Incubator

was conceived and built in 1988 by the Ellensburg Business Development Authority a PDA focused on Economic Development for the City of Ellensburg. The 10,000 sq. ft. building houses 5 individual bays designated for light industrial manufacturing. The successful business incubator program offers reduced rent, shared office equipment and technical assistance.



Bowers Airport Business Park - The Ellensburg Business Development Authority built the Airport Business Park utilizing CERB funds. The building has four units for light industrial manufacturing. Currently all four bays are leased.

Rotary Park in West Ellensburg – The 60 acre park & baseball complex constructed in 2004 draws a large number of sports tournaments and brings tourism revenue to the county. The park was developed adjacent to two major city parks in Ellensburg linking the Irene Rhinehart Park to the West Ellensburg Park creating a major recreational asset for the community and visitors.



Washington Horse Park – An equine recreational park with trails, arenas, barns and overnight RV spaces. The Cle Elum park was developed in 2008 and is a growing tourism draw.

Water & Wastewater Infrastructure Improvements in Cle Elum – Multimillion dollar investments in water and wastewater systems support Suncadia Resort, a 70 acre mixed use development just

outside of Cle Elum on Bull Frog Rd.

State Fair Park Infrastructure – Investments have been made over time to support the development of the SunDome in Yakima and to upgrade electrical utilities that support the fairgrounds.

Port District Land Preparation – Yakima County and Washington State have helped the Ports of Grandview and Sunnyside improve road access and utilities supporting over 300 acres of industrial property in Yakima County;

State 24 Highway Industrial Area Development – Funds have been invested by the City of Moxee, Yakima County and the State Department of Transportation to prime over 500 acres of light industrial property immediately east of Yakima.

Downtown Streetscape improvements – Both Yakima and Grandview have made extensive investments in street and sidewalk improvements within their central business districts. These public investments are helping revitalize these cities' downtown areas and serving as a model for other local jurisdictions;

Yakima Convention Center Improvements – The City of Yakima has expanded its convention center several times to capture the convention and meeting market within the region;



Kiwanis Park - Local service clubs worked with the City of Yakima to develop new baseball fields and sporting facilities in East Yakima. This park enhances the region's draw for sports tournaments.

Port of Sunnyside Anaerobic Incubator—This anaerobic treatments facility, completed in 2015, doubled the size of the Port of Sunnyside's wastewater treatment capacity, supporting new industries and expansion of current facilities.

City of Yakima River Road Industrial Area Project—The City of Yakima was installed to accommodate industrial land use with high discharge rate characteristics and to preserve the capacity of the existing wastewater collection system.

Kittitas Economic Development Coalition Start Up Program—Downtown Retail Business Incubator—This initiative created a multi-use downtown retail incubator program to assist early stage business growth.

Port of Sunnyside—Sunnyside Ecosystem Restoration—This project discharges clean water to the Yakima River via a wetland to add capacity of expansion.

Port of Grandview, Wallace Way Business Park—Constructed interior roadways and utilities in order to increase the property available to new businesses and facilities.

Proposed Investments and Projects to Build the Regional Economy (2015)

City of Mabton, Extend Natural Gas Service

This 13 mile natural gas pipeline extension would bring natural gas provided by Williams Northwest Pipeline (WNP) from Prosser to Mabton. The extension of services to Mabton would allow Northwest Horticulture (NWH) to add a 3rd gas boiler to expand production.

City of Yakima, Cascade Mill Project

Redevelopment of the 225-acre former Boise Mill, which closed in 2006, into a mixed use, office park, light industrial and entertainment area. The entire property is privately owned, current landowners are engaged in supporting successful implementation of the project.

Ellensburg Business Development Authority, Airport Business Park

The goal of this project is to create additional manufacturing space to attract companies and create family wage jobs. Phase 2 of 2.

Vision Cle Elum, Main Street Redevelopment

The project will bring improvements that will attract business, enhance current business, and tap into the 28,000 vehicles per day traveling on I-90. The project will create an inviting downtown with wider sidewalks, parallel parking, pedestrian bump outs, and enhanced storm water drainage.

Hopesource, Hope Healthy Homes

This project comprises the development, construction and operation of a modular home manufacturing assembly plant with an auxiliary construction and installation services division in Kittitas County.

City of Union Gap, Regional Beltway Connector

The beltway connector is designed to connect the South Union Gap interchange to Ahtanum Road thereby providing a more direct limited access route as an alternative to traveling on Main Street.

Rural Community Development Resources, Business Development Funding

The key goal of this project is to obtain an EDA grant for an expanded regional Community Loan Fund Investment into the region to provide bigger loans to ethnically diverse business enterprises.

City of Yakima, North 1st Street Façade & Sign Replacement Program

This is an Incentive program to upgrade and improve private development along this key corridor, encourage property reinvestment, and enhance comprehensive clean-up efforts of the City.

Yakama Nation Cultural Heritage Center, Cultural Heritage Center Remodel

Remodel and update 35 year old Yakama Nation Cultural Heritage facility in Toppenish.

Kittitas/Yakima Valley Community Land Trust, Water Street Project

The Water Street Project will create the opportunity for 12 families at or below 80% of the area median income to become first time home owners. This project is a multi-faceted economic development tool. Jobs are created during all phases of the build out—street improvements, infrastructure construction, home design, and project development. The homebuyer, who would not qualify for a traditional home purchase, will own the house and build equity and stability as a contributing member of the community.

CWFA/State Fair Park, Yakima Valley SunDome Project

State Fair Park wants to attract events to Yakima by becoming a regional events center. The project would consist of adding full catering services and an indoor covered vehicle and storage area.

City of Union Gap, Main Street Redevelopment

The redevelopment of Main Street within Union Gap would provide new economic opportunities along this old state route corridor. The current roadway is flanked with used car lots, old roadside motels and sparse retail and does not provide pedestrian access or parking.

City of Yakima, Public Market/Incubator

The project is designed to provide individuals with a place to test out business opportunities. The market would ideally encompass two stories and a basement totaling 27,500 square feet.

City of Yakima, Yakima Airport

This project is included in the Airport Master plan and is designed to replace the Yakima airport passenger terminal building.

YCDA & Educational Service District 105, Business Education Partnership

This project will create, coordinate and manage a partnership between STEM businesses, school districts, colleges and universities, and other training providers.

Kittitas Environmental Ed. Network, Yakima River Canyon Interpretive Center

The Yakima River Canyon Scenic Byway Interpretive Center will serve as a resource to visitors and community members, providing science based education for all ages and connecting our communities to nature through quality environmental education.

City of Yakima, Downtown Farmers' Market

One of the elements of the Yakima Downtown Master Plan is to identify locations for additional public amenities including a permanent location for Farmer's Market and other Downtown events in the core downtown area.

Implementation Plan 2016 -2017

GOAL ONE: Support the Retention and Expansion of Regional Clusters and Industries		
Implementation Initiatives	Lead Organization	Related Project #
Increase participation in business and industry roundtable to cultivate local business and serve as focal point for delivering services to key companies.	YCDA, Kittitas Chamber	
Provide assistance to expanding or troubled companies in an effort to support jobs and private investment within Yakima County.	YCDA, Kittitas Chamber, South Central Workforce Council	
Package funding and other resources to support expansion or retention of local companies.	YCDA, Kittitas Chamber, RCDR, Evergreen Business Capital	
Market the region as a business location using e-newsletters, websites prospecting trips, public relations and other strategies.	YCDA, Kittitas Chamber, Port districts	
Update content on key business development websites so that new and existing companies can identify the benefits of doing business and resources available in Central Washington	YCDA, Kittitas Chamber, port districts, RCDR, SBDC, SCORE	
Implement cooperative marketing initiatives that raise the region's image and reputation as a business location	YCDA, Kittitas Chamber, Port Districts	
Generate leads from expanding businesses, respond to prospect businesses, and continue to follow up on longer-term business expansion leads.	YCDA, Kittitas Chamber, Port Districts	
Stay in contact with site selection professionals through e-newsletters, direct mail, and special trips or events.	YCDA, Kittitas Chamber	
GOAL TWO: Support Small Business Success and Entrepreneurship		
Implementation Initiatives	Lead Organization	Related Project #
Implement business plan contests for entrepreneurs and emerging businesses in Kittitas and Yakima Counties	YCDA, CWU	
Investigate the feasibility of expanding existing business plan contests and other initiatives that support entrepreneurs and emerging businesses in the two county region	YCDA, Kittitas Chamber, local Colleges & Universities	

Create a multi use downtown retail incubator program in Kittitas County and explore opportunities to implement this model in Yakima County.	Kittitas Chamber, YCDA, City of Yakima	
Organize and offer periodic seminars for entrepreneurs and established businesses that provide help in the areas of finance, marketing, management, getting started, etc.	YCDA, SBDC, SCORE, Ellensburg Downtown Association, RCDR, Kittitas Chamber	
Market unique loan programs and services and explore angel and equity funding programs that will support promising ventures in the region.	RCDR	
GOAL THREE: Develop a World Class Workforce		
Implementation Initiatives	Lead Organization	Related Project #
Implement strategies to help local employers attract technical and professional employees to Central Washington.	YCDA, Kittitas Chamber	
Finalize STEM Education Plan for Central Washington and focus on initial implementation.	ESD 105	
Develop business education partnerships for K-12 and postsecondary schools	ESD 105, YCDA, SCWDC, CWU, Kittitas Chamber	
Develop web based information and resources that identify current STEM education initiatives while connecting business, education, families and public at large to current and future STEM initiatives.	ESD 105, YCDA	
Implement a series of topical seminars to support key local industry clusters and their key employees.	YCDA, Kittitas Chamber, SCWDC	
Implement Employment Roundtables to prepare and support adults in the transition to new career opportunities in demand occupations.	SCWDC	
Increase technical training opportunities by expanding the Yakima Vocational Technical Skills Center and building a satellite facility in Sunnyside.	YVTECH, Yakima School District	
Start a Medical Assistant technical certificate program in response to industry needs.	Perry Technical Institute (PTI)	
Initiate a Machining Apprenticeship Program to provide in depth training to the areas incumbent workforce and support the state's aerospace industry	YVCC	

Initiate a combined professional technical degree program where a student will receive an Associates of Applied Science Degree.	YVCC, PTI	
GOAL FOUR: Invest in Capital Facilities and Infrastructure		
Implementation Initiatives	Lead Organization	Related Project #
Secure funding for development of infrastructure improvements including, roadway, water, sewer, utilities and pedestrian access at top priority sites within the region.	Cities, Counties and Port Districts, Kittitas Chamber	1, 2, 3, 4, 6
Secure 1st phase funding to implement the Yakima Basin Integrated Water Resource Management Plan.	YBIP, Yakima County, WA State, Kittitas County	
Fund appropriate infrastructure projects with each County's 0.09% sales tax funding dedicated towards economic development projects	YCDA, Yakima County, Kittitas County, Kittitas Chamber	1, 2, 6
GOAL FIVE: Promote Tourism and Develop Visitor Amenities		
Implementation Initiatives	Lead Organization	Related Project #
Seek to secure funds to enhance trail and green belt systems in the Region.	Kittitas Environmental Ed. Network, Greenway Association	
Incorporate local breweries and distilleries into promotional and tourism marketing initiatives.	YVCB, YCDA, Kittitas Chamber	
Develop and promote agritourism and cultural activities within the region.	YVCB, Yakama Nation, area museums & cultural groups/societies	9, 16
Pursue securing funds to make improvement to fairgrounds and other landmark facilities in the region to enhance their capabilities to support enhanced tourism.	YCDA, Kittitas Chamber, Kittitas county Fairgrounds,	11

Enhance commercial flight opportunities in and out of Yakima	City of Yakima	14
GOAL SIX: Enhance Downtown and Neighborhood Business District Vitality		
Implementation Initiatives	Lead Organization	Related Project #
Complete City of Yakima master planning activities for downtown revitalization and secure funding to begin implementation actions detailed in the plan.	City of Yakima	
Assess and inventory the City's current retail offerings and create a recruitment and marketing strategy for downtown retail redevelopment.	City of Yakima, Ellensburg Downtown Association	
Organize and develop new events that will draw people to downtown business districts	City of Yakima, Ellensburg Downtown Association	13, 17, 4
Determine possible locations for parks, plazas and a permanent location for an annual farmer's market that enhances overall downtown revitalization efforts.	City of Yakima	
Ensure that land use, mobility, and parking requirements support current street level retail with a forecast of downtown growth.	City of Yakima, City of Ellensburg, Ellensburg Downtown Association	13, 17
Develop marketing and promotional materials that highlight downtown and neighborhood business development opportunities.	City of Yakima, Ellensburg Downtown Association	4
Redevelopment of Main Street, Union Gap	City of Union Gap YCDA	12
Implement planned infrastructure improvements that support North 1st Street Revitalization	City of Yakima	8

Performance Measures and Evaluation

In accordance with EDA guidelines, annual reports detailing progress achieved on economic development activities will be prepared. The yearly reports will effectively adjust the CEDS as needed to anticipate new opportunities, address new issues, identify new projects and strategies and remove finished projects and strategies.

Since the CEDS is a living document, annual reports will provide details regarding the previous year's efforts toward defined goals. Key objectives will be tracked and "next steps" will be stated for the coming year. These projected plans will continue to identify specific projects, estimated costs and timeframes, funding mechanisms, responsible parties, and project partners.

The following performance measures will be used to evaluate how well strategies and projects are producing desired outcomes and impacts for the Kittitas Yakima region.

GOAL ONE: Support the Retention and Expansion of Regional Clusters and Industries

- Number of new jobs created
- Number of jobs retained
- Increase in private investment
- Number of key companies receiving in-depth counseling (4 or more hours)
- Number and \$ value of key industry/business capital expansion projects
- Number and types of Federal and State investments secured to support specific cluster or industry collaborative initiatives
- \$ loan capital packaged to support expanding businesses
- \$ value of tax credits secured to support expanding businesses



GOAL TWO: Support Small Business Success and Entrepreneurship

- Number of new ventures created
- Number of workshops offered for small business and entrepreneurs
- Number of small businesses receiving in-depth counseling (4 or more hours)

- Number of jobs created by small businesses receiving help from intermediaries
- Number and types of Federal and State investments secured to support small business development
- \$ Increase in private investment from expanding small businesses
- \$ loan capital packaged to support expanding businesses

GOAL THREE: Develop a World Class Workforce

- Number of companies investing in customized workforce training
- Number of employees participating in customized training activities
- \$ value of company investments in customized worker training
- \$ value of funds secured for general or customized workforce training
- Number and type of new training/education degree programs and certificates
- Number and types of Federal and State investments secured to support workforce training or development
- Number of STEM graduates from area colleges and technical schools
- Number of disadvantaged workers successfully placed into jobs

GOAL FOUR: Invest in Capital Facilities and Infrastructure

- Number and types of Federal and State investments made to support specific companies or prepare for economic development opportunities
- Number and \$ amount of funded water/sewer improvement projects
- Number of new jobs created
- \$ private investment triggered
- Number of acres of industrial property improved or readied



GOAL FIVE: Promote Tourism and Develop Visitor Amenities

- Number of visitors using websites, visitor centers, etc.
- \$ value of publicity generated in support of tourism amenities and attractions
- # days of conventions/meetings booked at key public facilities
- Number of events created/supported & estimated economic impact
- Increase in overall economic impact from visitor spending

GOAL SIX: Enhance Downtown and Neighborhood Business District Vitality

- Number of businesses started or recruited to targeted business districts
- Number of companies expanding within targeted business districts
- Number of key companies receiving in-depth counseling (4 or more hours)
- Number of events created/supported & estimated economic impact
- Number of new jobs created
- Number and \$ amount of Federal and State investments in revitalization projects
- Number of jobs retained
- \$ Increase in private investment from expanding businesses



The Yakima and Kittitas County Commissions will maintain a CEDS committee or use the Board of a regional Economic Development District to evaluate the CEDS plan on an annual basis. The group will update performance measures as necessary based upon actual experience with plan implementation.

APPENDIX

- **Newspaper articles and advertisements**
- **CEDS Steering Committee Agendas**
- **CEDS Project Application**
- **Resolutions**
- **Forum Handouts**

EXAMPLE **SAMPLE** STAFFING PLAN

	Economic development District or Tribal Nation					
Time Period:		April 1, 2013 – March 31, 2014				
	Maximum	%EDA	\$EDA	% Applicant	\$ Applicant	
Position	Annual					
<u>Name</u>	<u>Salary</u>					
Director, Sam Smith	\$10,000	0%	\$0	0%	\$0	
Planner, Sam Smith	\$6,000	0%	\$0	0%	\$0	
Total			*\$0			

SCOPE OF WORK

Organization

1. Develop the Comprehensive Economic Development Strategy (CEDS) for the **Organization** which is designed to guide the country's economic growth IAW 13 CFR Part 303.
 - Creation and retention of high-quality jobs.
 - Diversification of the economy
 - Workforce investment and mitigation of the low-skilled labor force to high-skilled or specialized trade fields.
 - Financing of the economic infrastructures that would solidify economic prosperity and growth.
2. Collect regional economic data:
 - a. Determine local economic conditions and activity such as, but not limited to employment, demographics, and existing industry data.
 - b. Data will be collected from information through a variety of sources, which may include surveys, one-on-one interviews, focus groups and open public input.
3. Perform a market analysis identifying the most likely economic opportunities available to the community, as well as those opportunities that have significant community drivers. Analysis may include some form of location quotient, cluster or share shift analysis.
4. Perform regional SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis identify regional and local assets, gaps, and weaknesses:
 - a. Economic problems and constraints for consideration include.
 - i. Federal laws, policies and regulations.
 - ii. Land and Labor availability.
 - iii. Limited public facilities and services.
 - iv. Identify outside competition or internal issues that hinder regional and local economic development.
 - b. Identify economic opportunities
 - i. Exploration of current businesses
 - ii. Tourism- Development, visitor support, air and water transportation
 - iii. e-Commerce
 - iv. Small Business Development
 - v. Fish Processing and other maritime development efforts
 - vi. Other natural resources
 - vii. New opportunities that result in competitive advantages
 - c. Realign and demonstrate compatibility with previous efforts
 - i. Identify key economic clusters in region
 - ii. Consolidate other master plans and workforce investment strategies
 - iii. Analyze past, present, and projected future economic development plans

5. Economic Resilience: Establishing economic resilience in a local or regional economy requires the ability to anticipate risk, evaluate how that risk can impact key economic assets, and build a responsive capacity.
6. Develop the economic strategies and implementations plans for achieving CEDS goals in coordination:
 - a. Review prior goals achieved.
 - b. Develop strategies, plans, resource needs, and tasks for:
 - promoting economic development and opportunity;
 - developing transportation access;
 - enhancing and protecting the environment;
 - workforce development with other regional workforce development strategies;
 - promoting the use of technology in economic development;
 - balancing resources;
 - providing services to the community;
 - obtaining funds and resources for CEDS implementation.
7. Develop the Strategic Direction/Action Plan
 - a. Develop the vision statement and goals/objectives
 - b. Conceptualize the implementation of the goals and objectives
 - c. Identify priority activities that can be successful
8. Evaluation:
 - a. Develop performance measures that will gauge the progress
 - b. Perform ongoing process evaluation of progress toward meeting project goals;
 - c. Hold regular community meetings to solicit input;
9. Develop CEDS in coordination with tribal community and the region:
 - a. Draft initial CEDS including - regional economic data; results of SWOT analysis; goals and objectives; CEDS participants, projects and jobs; prioritized projects and funding sources; plan of action; performance measures to evaluate development and implementation of the CEDS;
 - b. Evaluate Draft CEDS incorporating community input and assessing for and addressing gaps, challenges, and limitations;
 - c. Prepare Final CEDS;
 - d. Submit Final CEDS to EDA
10. Submit progress and financial reports to EDA as required.
11. Work closely with EDA's Economic Development Representative and staff.

City of College Place Reservoir No. 4 Update

Council Workshop Presentation

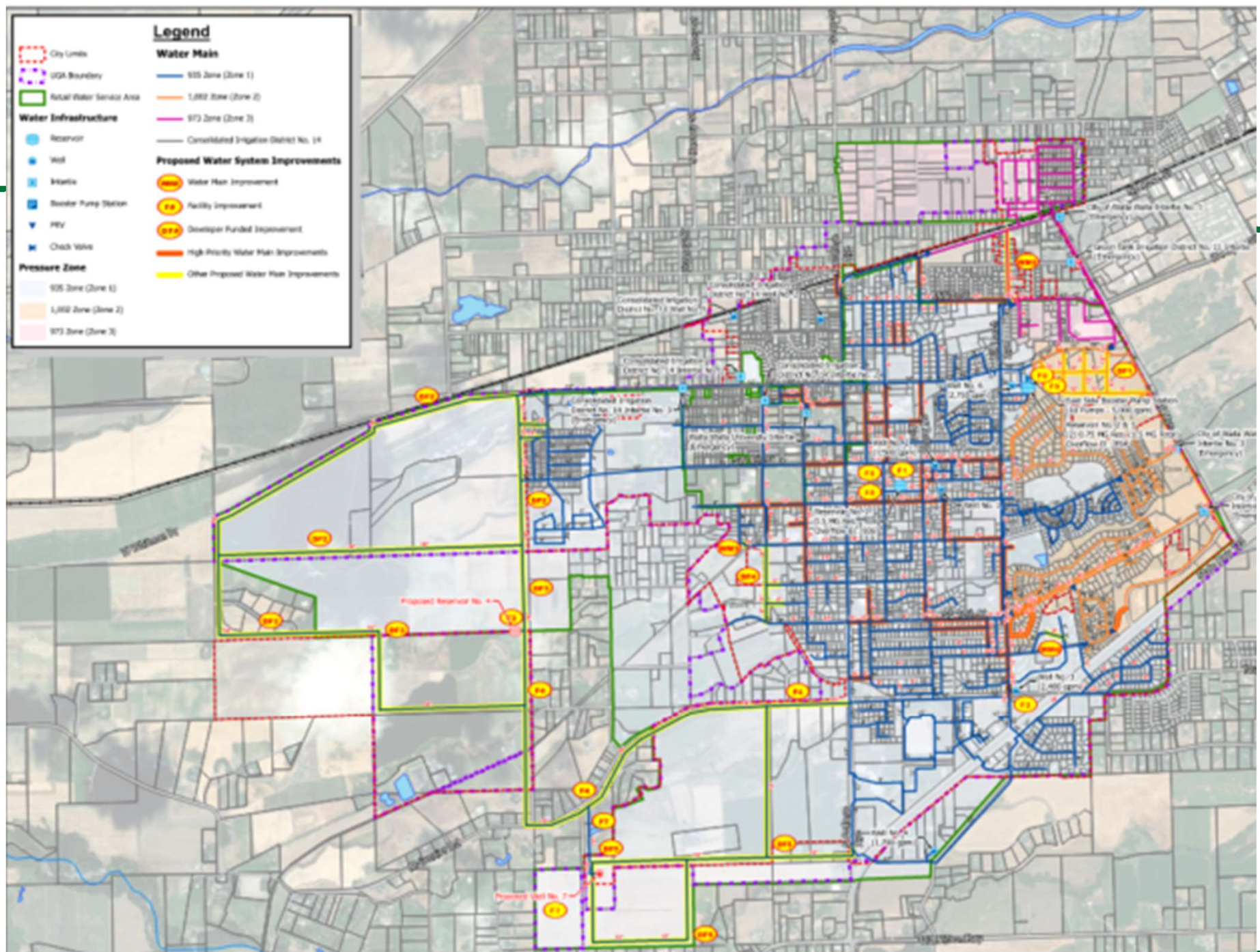
May 7, 2024

Agenda

- Project need
- Project location
- Planning efforts
- Funding
- Status update
- Proposed schedule

Project Need

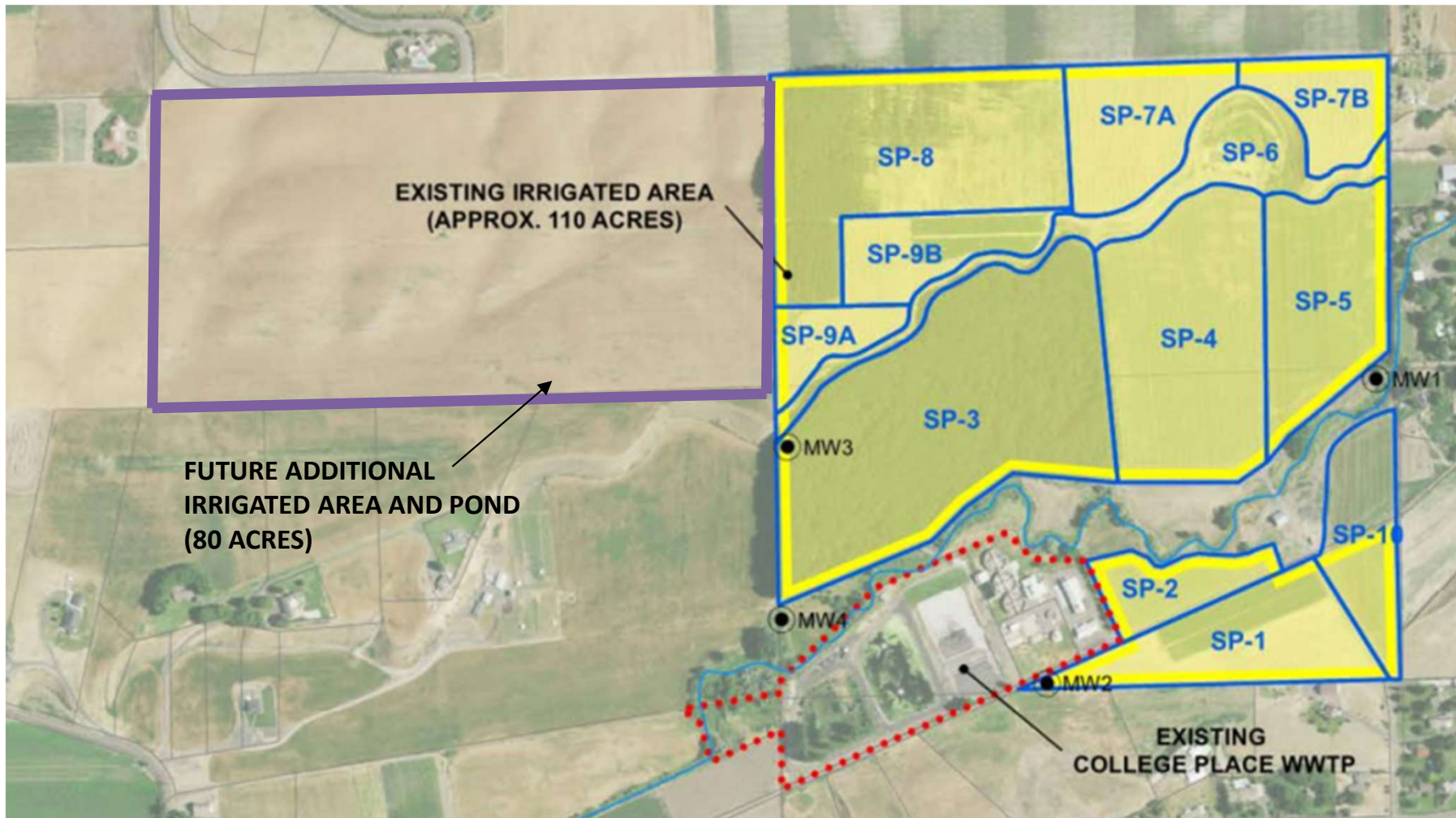
- Water system currently has 2.0 MG of storage capacity (0.5 in Z1, 1.5 in Z 2/3)
- 2021 Water System Plan identified existing storage deficiency of 0.6 MG.
- CIP Project identified to construct new Reservoir No. 4 on west side of Zone 2 and Transmission Main to connect to system
 - Redundancy when existing tank offline
 - Limit water level fluctuations in Reservoir No. 1
 - More fire flow capability
 - Near area of future growth



Location

- City-owned property on bluff above shooting range
- Minimize disruption to WWTP land application area.
- Minimize height of tank to reduce cost
- Meet setback requirements

WWTP Spray Fields



SP-7B

4.6 Acres

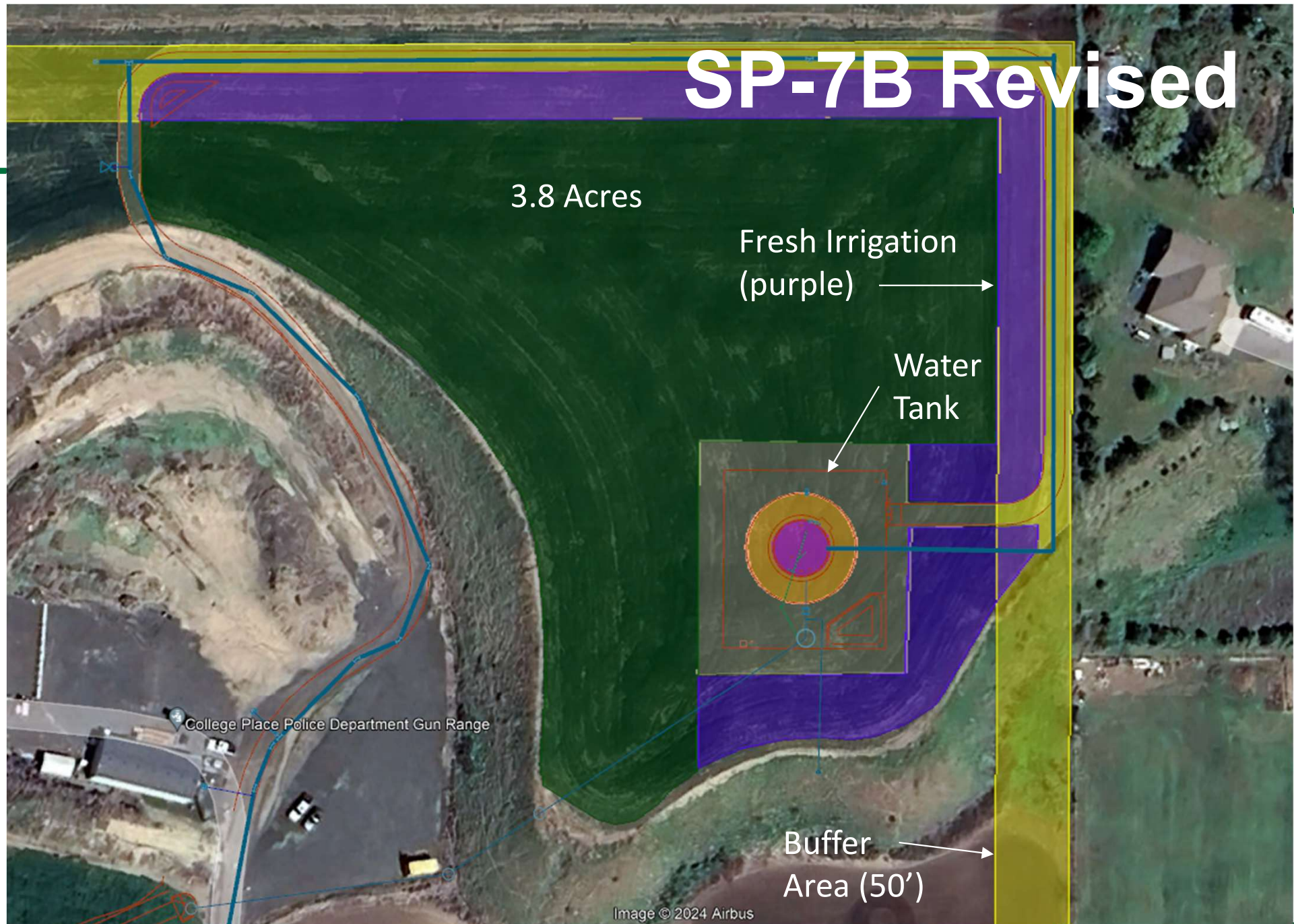
College Place Police Department Gun Range

Buffer
Area (50')

Image © 2024 Airbus

243 ft

SP-7B Revised



Planning

- Increased size to 1.0 MG to accommodate potential growth near Martin Airfield.
- Coordination with Well 7 (RH2) and Mojonner Road Reconstruction (PBS)

Funding

- Opinion of probable cost is \$17,930,000.
- PWTF loan is funding design.
- Applied for \$10M construction funding from WDOH – on the draft offer list.
- Appears likely to get \$5M grant from USACE.

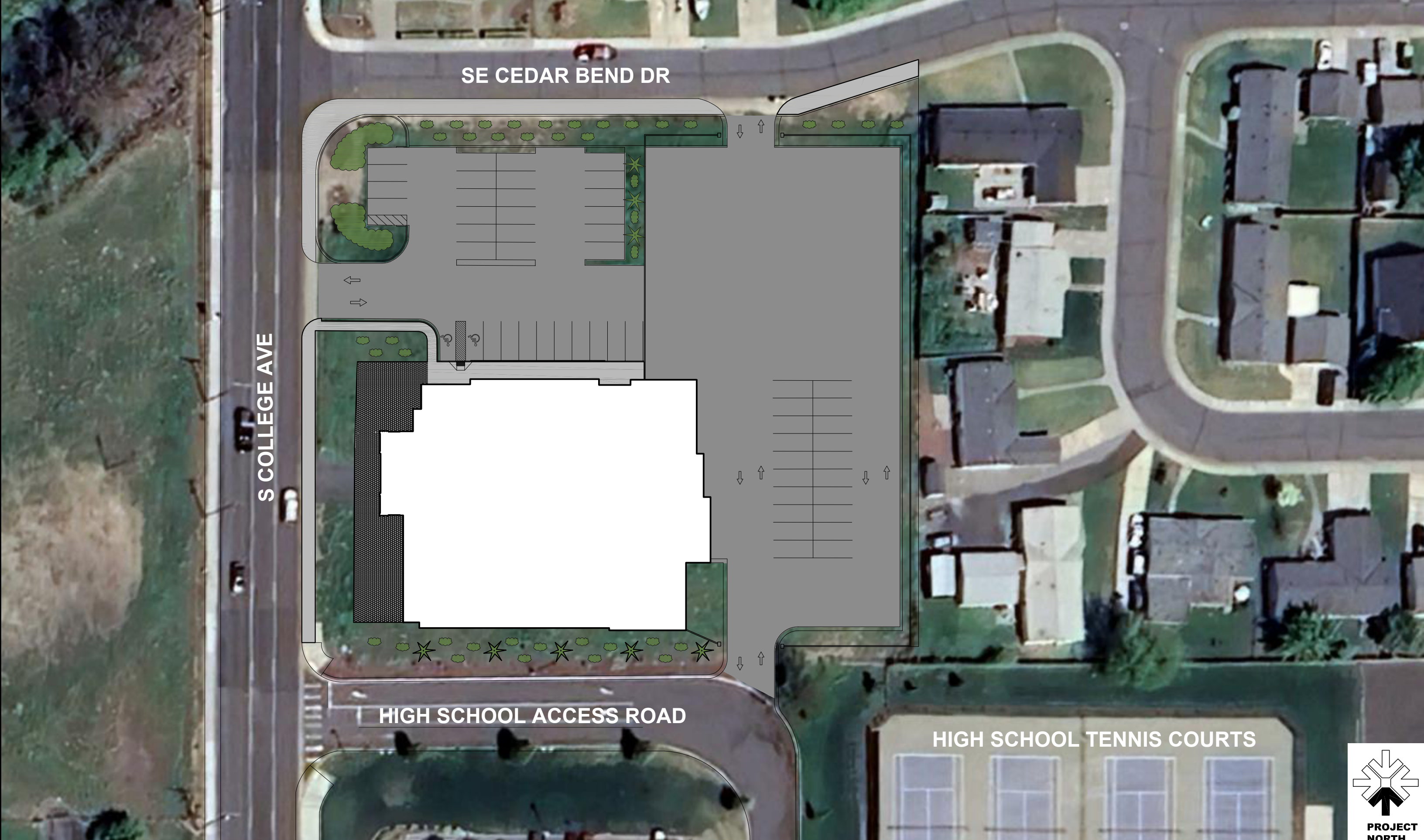
Status

- Project Report approved by WDOH
- Working on 90% design. Will submit to WDOH for review in Summer 2024.
- Beginning permitting in May – SEPA.

Schedule

- Advertise for bids this fall/winter, depending on status of Mojonnier Road project.
- Construct in 2025.

Questions, Comments?



SE CEDAR BEND DR

S COLLEGE AVE

HIGH SCHOOL ACCESS ROAD

HIGH SCHOOL TENNIS COURTS



PROJECT
NORTH



APRIL 5, 2024

APPROXIMATE SQUARE FOOTAGE: 19,000 SF

Conceptual Project Schedule

[illegible]



PROJECT
NORTH



JUNE 11, 2024

APPROXIMATE BUILDING SQUARE FOOTAGE: 19,000 SF

Project Name: *College Place
Police Station*

Project Number: *23072*

Design West Architects

Preliminary Concept Estimate

6/17/2024 7:19

		TOTAL (rounded)
TOTAL CONSTRUCTION COST (see attached detail breakdown)		11,166,000
TOTAL CONSTRUCTION COST, less sales tax		10,342,000
OTHER PROJECT EXPENSES		
Property Purchase Cost		-
Legal Fees		-
Design Team services (WA State OFM Fee Schedule)	8.01%	828,000
Specialty services (estimated)	1.50%	155,000
Management & Commissioning		
Project Management	2.50%	259,000
Building Commissioning (estimated amount)	0.55%	57,000
Construction Testing		
Constr. Special Inspection/Testing (estimated amount)	0.45%	47,000
Furniture and Equipment		
Furniture, & Fixtures	3.00%	310,000
Equipment		-
Owner Related Services		
Topographic Survey		25,000
Geotechnical Investigation		20,000
Industrial Hygeinist - Haz. Mat Good Faith Survey	0.40%	NA
Contingency		
Owner's Contingency	10.00%	1,117,000
Misc.		
Reimbursables & Construction Document Print Costs		25,000
Bid Advertisement Costs		3,000
Misc Costs		-
Total Project Soft Costs (estimated) =	\$	2,846,000
Total Project Budget (estimated) =	\$	14,012,000

General Information

Project Scope

New construction Police Station

19,000 SF

Project Schedule

Anticipated Construction Duration =

16 Months

Anticipated NTP / Calendar Day Duration / Completion Dates :

9/1/2025 480 12/25/2026

Estimate Summary

Division	Title	Unit Cost	Unit	ROUNDED Division Total
Division 01	General Requirements	\$ 44.90	SF	\$ 596,000
Division 02	Existing Conditions	\$ 1.23	SF	\$ 16,000
Division 03	Concrete	\$ 22.70	SF	\$ 301,000
Division 04	Masonry	\$ 16.78	SF	\$ 223,000
Division 05	Metals	\$ 28.12	SF	\$ 373,000
Division 06	Wood, Plastics, and Composites	\$ 13.57	SF	\$ 180,000
Division 07	Thermal and Moisture Protection	\$ 27.63	SF	\$ 367,000
Division 08	Openings	\$ 34.04	SF	\$ 452,000
Division 09	Finishes	\$ 54.03	SF	\$ 717,000
Division 10	Specialties	\$ 8.39	SF	\$ 111,000
Division 11	Equipment	\$ 5.92	SF	\$ 79,000
Division 12	Furnishings	\$ 2.47	SF	\$ 33,000
Division 13	Special Construction	\$ -	SF	\$ -
Division 14	Conveying Equipment	\$ -	SF	\$ -
Division 21	Fire Suppression	\$ 6.41	SF	\$ 85,000
Division 22	Plumbing	\$ 24.18	SF	\$ 321,000
Division 23	Heating, Ventilating, and Air Conditioning	\$ 69.57	SF	\$ 924,000
Division 25	Integrated Automation	\$ -	SF	\$ -
Division 26	Electrical	\$ 65.38	SF	\$ 868,000
Division 27	Communications	\$ 15.30	SF	\$ 203,000
Division 28	Electronic Safety and Security	\$ -	SF	\$ -
Division 31	Earthwork	\$ 18.75	SF	\$ 249,000
Division 32	Exterior Improvements	\$ 25.16	SF	\$ 334,000
Division 33	Utilities	\$ 8.88	SF	\$ 118,000
MATERIALS & LABOR COST				\$ 6,552,000
	Contractor Taxes, Bonds, & Insurance	2.30% percentage		\$ 216,000
	Contractor Overhead & Profit	9.00% percentage		\$ 844,000
	Design/Construction Contingency (local adjustment)	10.00% percentage		\$ 937,000
ESTIMATED CONTRACT COST (current 2023 values)				\$ 9,375,000
	Escalation (estimated 6% annual = 0.5% monthly)	8.81% 14.7 months		\$ 826,000
	Permits & Inspections	1.50% percentage		\$ 141,000
	Sales Tax (WA State tax)	8.80% percentage		\$ 825,000
ESTIMATED TOTAL CONSTRUCTION COST (including sales tax)				\$ 11,166,000

City of College Place, WA - Strategic Plan Detailed Phases, Tasks, and Pricing

Phases and Tasks		Deliverable	Proposed Dates (To be determined by client)	Proposed Cost	Notes
Phase 1 - Project Kick-Off and Background Information Review					
Task 1.1	Project Initiation Meeting (in-person) - 2 hour meeting)	Logistics meeting to review framework, process, milestones and deliverables. Develop schedule for meetings	Week of May 27	\$ 300.00	On Site, would like a tour as well
Task 1.2	Weekly planning meetings (Zoom) and emails throughout the project	For updates, feedback, course correction (held w/ Staff)	Throughout Project	Included	Virtual, on Zoom
Task 1.3	Develop Detailed Project Schedule	Finalize list of meetings, input sessions, proposed Council date	May 31.	Included	
Task 1.4	Obtain and Review Background Info, Plans, and relevant Data	Review applicable plans, documents, budgets, and other items determined by the client.	May-June	\$ 300.00	Independent Research by Sageland, documents provided by College Place
			TOTAL PHASE 1	\$ 600.00	
Phase 2 - Community and Stakeholder Engagement					
Task 2.1	Up to 30 Confidential Interviews of Council, Staff, Board/Commission Members, and community stakeholders as identified by the client.	Interviews to gain insights into the town's priorities, challenges, and opportunities. \$200ea (virtual or in-person)	June 3 - June 21	\$ 6,000.00	Virtual. In-person interviews (if any) would be scheduled while already on site to save travel costs.
Task 2.2	2 Online Surveys, one for Staff and one for the Community	Survey to assess the viewpoint of a broader audience, determine opinions on state of the city, future trends, and priorities.	June 3 - June 28	\$ 2,000.00	
Task 2.3	Develop Marketing Flyers, QR Codes, and Social Media Posts for Survey	Marketing Materials to Promote Survey as Needed.	May 31.	\$ 300.00	
Task 2.3	Develop Detailed Report on Board Engagement outlining findings and conclusions	Written Report to Strategic Planning team prior to retreat workshops	2-Jul-24	\$ 250.00	Deliverable
			TOTAL PHASE 2	\$ 8,550.00	
Phase 3 - Strategic Plan Retreat Sessions (City Council)					
Task 3.1	Facilitated Workshops with Council using the results of the engagement report to craft Mission, Vision, and Values Statements, form Priorities and Goals for the Community	Review Community Engagement Results (Community Priorities) and Outline Process	July 9.	\$ 1,000.00	1 hour
		Craft Mission, Vision, and Values Statements	August 6.	\$ 2,000.00	2 Hours
		Define 5-7 Overall Community Priorities	Sept 3.	\$ 2,000.00	2 Hours
		Goal Setting	Oct. 1.	\$ 3,000.00	3 Hours
		Strategic Plan Review	Nov 5.	\$ 1,000.00	1 Hour
			TOTAL PHASE 3	\$ 9,000.00	
Phase 4 - Staff Implementation Meeting/Retreat					
Task 4.1	Facilitated meeting with staff based on the Council workshops. Affirm the Council priorities and goals. Conduct an Implementation planning meeting to determine action steps, projects, and other items to achieve the vision of Council.	Recommend Half Day Retreat or Extended Staff Meeting	November	\$ 5,000.00	In person, on site
Task 4.2	Develop Implementation Plan	Written Report provided one week after retreat	End of November	\$ 300.00	Document provided as appendix to Strategic Plan
			TOTAL PHASE 3	\$ 5,300.00	
Phase 5 - Creation and Approval of Plan					

Task 3.1	Draft the Strategic Plan document for review by College Place. This document will be drafted through a graphic designer (included in cost).	Graphic Design Plan Document	August - Oct	\$ 1,500.00	Begin framework and design while retreats are taking place. Have Draft plan ready for review by Oct. 15
Task 3.2	Review of Draft by College Place	Client Review Period	Oct 15-Oct 22	Included	
Task 3.3	Correction of Draft and Development of Final Document	Sageland creates final plan based on client review and feedback.	Oct 22- Oct 29	\$ 250.00	Sageland Revises Document
Task 3.4	Submittal of Draft Strategic Plan for Council Workshop Nov. 5	Sageland provides College Place with electronic file of Final Plans, all reports, documents, and data	Oct 29.	Included	Document to Administraor and Clerk for Council Packet
Task 3.5	Presentation of Final Plan to College Place City Council	In Person Presentation of Final Plan in Council workshop for adoption	November 5.	Included Above	In-Person Workshop Presentation
Task 3.6	Virtual Attendance at Council Adoption Hearing	Virtual Attendance at City Council Adoption	November 12 or 26	\$ 250.00	Virtual
			TOTAL PHASE 3	\$ 2,000.00	
	Total Cost			\$ 25,450.00	
	Travel Costs for onsite meetings (est 7 trips, Richland to College Place)	Includes travel time, mileage, lodging (if needed), meals at GSA per diem rate. Billed at not-to-exceed unless advised otherwise.	Est \$500/trip Richland, WA to College Place, WA	\$ 3,500.00	
	Total Not To Exceed Cost		Scoped Project	\$ 28,950.00	

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City of College Place

Strategic Plan, 2017-2026



Where small-town living and learning meet

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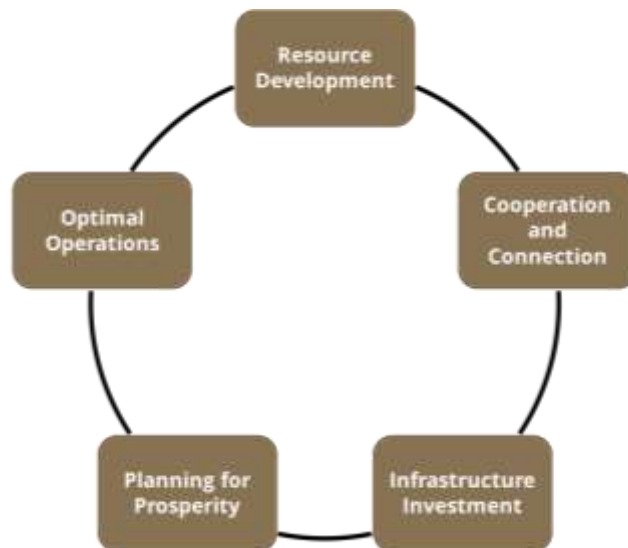
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Introduction

The College Place Strategic Plan was developed in 2017 by listening to the community about its aspirations. Through surveys, focus groups and one-on-one conversations a picture developed for the City's current position and where it wants to be. What emerges is a picture beyond annual budgeting processes to a vision for what the City could be in 2027.

This vision together with the City's core values provide a compass. The Strategic Plan provides a foundation for prioritizing the use of resources and identifies how the City makes progress toward achieving the community's goals and objectives.

Following vision and values are key areas of activities, called Core Themes. Under each of these themes are goals and objectives laid out over the next decade which set out the work of City Council and Staff.



Objectives are supported by outcomes, the key measure of progress and milestones by year. The Strategic Plan is designed to be updated annually to reflect changing priorities and resources.

Vision

By 2027, College Place is noted for its vibrant downtown with a mix of small businesses and housing that interfaces with Walla Walla University that give residents and a growing tourist trade the feeling of a small town. The City has attracted large-scale commercial development along its most trafficked roads, thus growing its tax base.

Resourceful in the use of finance tools and grant opportunities, the City gets extra value from every dollar of local taxes. Resources support a staff of dedicated, competent employees adequate to provide safety and responsiveness. Deferred maintenance is a thing of the past as depreciation is funded and cash reserves prepare the city to pursue opportunities without excess risk.

Mutual respect is shared between the City Council, residents, and staff. Residents, retirees, students, professionals, and young families feel safe; they know their neighbors and many of the city employees by name. Citizens are engaged and knowledgeable of the affairs of the City due to the character of staff and the quality, timeliness, and context through which information is shared; cooperation is a community norm. Volunteerism is high across the commissions of the City.

People circulate easily irrespective of mode, whether car, foot or bike; a system of sidewalks and trails make foot traffic a preferred method to get around town. The community turns out regularly for the events calendared throughout the year, co-hosted in partnership with the municipality and institutions such as: businesses, volunteer organizations, College Place Public Schools, Rogers School, Walla Walla Valley Academy, and Walla Walla University.

Values

In its expression of civic leadership and service, Council and staff hold these core values.

Open and Honest

The City is transparent and fair in its dealings. It is plain spoken in its communication. The City is engaged with its citizens in two-way communication and desires an aware and informed citizenry. The municipality is accountable for its actions and choices.

Cooperation

College Place works well with others and values mutually-beneficial outcomes for the City and its partners.

Respect

The City fosters respect between its Council and staff, Citizens, neighbors, its natural resources and built environment, its resident businesses to bind College Place into a sustainable and prosperous community. The City honors its heritage.

Service

The City exists to provide services to its constituents. It is an organized, learning organization that makes data-driven decisions. It's employees and Council are empathetic and humble.

Diversity

The City recognizes differences between people and values these differences as an asset. College Place fosters an environment where individuals find safety, dignity, and acceptance.

Optimal Operations

People of high character and capability power successful City operations. The City Council values its staff and sees Human Resources as its greatest asset. Integrating infrastructure and people are systems and tools that are current and people know how to use.

Goals and Objectives

1. The City is staffed to reflect state-recognized human resource levels.
 - a. The City Police department is staffed to State governing agency criteria and sustainably funded. (Council)
 - b. The City Fire department is staffed State governing agency criteria and sustainably funded. (Council)
 - c. The City Public Works, Community Development, and Public Works departments are adequately staffed and sustainably funded. (Council)
 - d. The City Finance, Clerk, and Human Resource Departments are adequately staffed and sustainably funded (Council).
2. The City constructs new and modifies existing City facilities based on nationally-recognized standards. (Public Works)
3. The City has a robust Human Resource function.
 - a. Staff have opportunities for professional development and training. (Human resources)
 - b. The City is prepared for succession in key leadership positions. (Human Resources)
 - c. A learning culture is fostered. (Mayor and administrator)
4. GIS is used for comparative advantage and municipal leadership. (Administrator)
5. Technology is employed when increasing staff efficiency or public facing services (Administrator).

Timeline and Outcomes

Year	Activity	Result
2021	1. 2. 3-a. 4.	Incremental changes in staffing levels Capital facility plan recognizes changing space and use requirements for City services. Number of professional training classes conducted and attended are reported annually. Total number of GIS uses reported.
2022	1. 3-a. 4.	Incremental changes in staffing levels Number of professional training classes conducted and attended are reported annually. Total number of GIS uses reported.
2023	1. 3-a. 4.	Incremental changes in staffing levels Number of professional training classes conducted and attended are reported annually. Total number of GIS uses reported.
2024	1. 3-a. 4.	Incremental changes in staffing levels Number of professional training classes conducted and attended are reported annually. Total number of GIS uses reported.
2025	1. 3-a. 4.	Incremental changes in staffing levels Number of professional training classes conducted and attended are reported annually. Total number of GIS uses reported.
2026	1. 3-a. 4.	Incremental changes in staffing levels Number of professional training classes conducted and attended are reported annually. Total number of GIS uses reported.

Resource Development

To maintain its comparative advantage as a municipal government, College Place pursues new revenue streams not from increasing property tax rates, but from increasing local valuation through new commercial and residential development, while supporting not impeding development.

Goals and Objectives

1. The City develops and deploys a written Economic Development strategy to guide expansion of the commercial tax base.
 - a. Land is identified for commercial and residential development. (Planning)
 - b. Lodging development is pursued including the feasibility of meeting space.
(Administrator)

-
- c. A diversity of housing options is pursued including single-family, apartments, duplexes, condos, manufactured homes, accessory dwelling units and mixed-use. (Planning)
 - d. The City pursues a big box/chain retail development. (Administrator)
 - 2. Downtown develops as a mixed-use zone with design standards that offer the developer a menu of possibilities rooted in a “main street” character.
 - a. Business opportunities are developed with a focus on local residents so that the local economy and indigenous wealth grows. (Economic Development Commission)
 - b. The inventory of mixed-use buildings in the downtown core increases. (Economic Development Commission)
 - c. Parking lots are developed in the downtown core close to College Avenue. (Planning)
 - 3. The City develops a venture with the Port of Walla Walla to develop incubator properties in the community, ideally near and in association with Walla Walla University. (Mayor)
 - 4. The City pursues change to countywide planning policies, urban growth expansion and an infill strategy. (Planning)
 - 5. The City develops tourism opportunities with its partners including Visit Walla Walla, Walla Walla University, Walla Walla Valley Chamber of Commerce, and local service businesses.

Timeline and Outcomes

Year	Activity	Result
2021	1-a. 1-a 1-b 1-c 1-c 1-c. 1-d 2-a.	The land inventory is updated. Figure out land use game plan for Martin Airfield site. City attempts to recourt lodging operators/developers for Whitman or Meadowbrook areas Countywide Housing Needs Assessment is Completed and Accepted by City Council City participates in formation of Common Roots Land Trust Housing Chapter action plan is reviewed. City petitions state to pursue Tax Increment Financing in key areas of town. The number of business starts on and near College Ave. are tracked and reported to Council at

	2-b. 3 4 5	least annually. The number of mixed-use properties on and near College Ave. are tracked and reported to Council at least annually. City working on Flex Space Assessment with CERB Grant Countywide Planning Policies are reviewed Continued joint marketing effort with Visit Walla Walla. Work with Downtown WW Foundation, City of WW, and others on Creative District designation.
2022	1-a. 1-a 1-b 1-c. 1-c 1-d 1-d 2-a. 2-b. 3 4 5 5.	The land inventory is updated. Work with owner of Martin Airfield on Zoning designation and get it finalized. Work with lodging developer to finalize deal to establish facility in College Place. Housing Chapter action plan is reviewed. City works with Common Roots Land Trust, BMAC. And Housing Authority on development of Affordable Housing Courting big boxes for Whitman Drive (Price Property) and Stone Creek development areas. State and other taxing agencies allow us to establish TIF covering key commercial areas in town. The number of business starts on and near College Ave. are tracked and reported to Council at least annually. The number of mixed-use properties on and near College Ave. are tracked and reported to Council at least annually. City work on identifying key components of flex space as well as partners. Secure land and financing for it. Updated Countywide Planning Policies are adopted. Continued joint marketing effort with Visit Walla Walla Region gets accepted by Arts Washington as a Creative District.
2023	1-a. 1-b. 1-c 1-c. 1-d. 2-a. 2-b. 3. 4. 5.	The land inventory is updated. Ground breaks on lodging property development City works with Common Roots Land Trust, BMAC, and Housing Authority on development of Affordable Housing. Housing Chapter action plan is reviewed. Commercial big box development opens. The number of business starts on and near College Ave. are tracked and reported to Council at least annually. The number of mixed-use properties on and near College Ave. are tracked and reported to Council at least annually. City and/or partners begin work on engineering/architecture work for Flex Building County opens up urban growth boundary adjustment process. Work on adjustment. Conduct and adopt residential and commercial building land capacity inventories. Continued joint marketing effort with Visit Walla Walla
2024	1-a. 1-a. 1-b 1-c. 1-c 1-d. 2-a. 2-b. 3. 4. 5.	The land inventory is updated. Martin Airfield land use designation is finalized. Lodging development opens. Housing Chapter action plan is reviewed. City works with Common Roots Land Trust, BMAC, and Housing Authority on development of Affordable Housing. Big-box store opens. The number of business starts on and near College Ave. are tracked and reported to Council at least annually. The number of mixed-use properties on and near College Ave. are tracked and reported to Council at least annually. City and/or partners begin construction on Flex facility. Amended Urban Growth Area is accepted by Walla Walla County. Continued joint marketing effort with Visit Walla Walla.
2025	1-a. 1-c.	The land inventory is updated. Housing Chapter action plan is reviewed.

	1-c. 1-d 2-a. 2-b. 3. 5.	City works with Common Roots Land Trust, BMAC, and Housing Authority on development of Affordable Housing Attract pad retail and hospitality establishments near new big boxes. The number of business starts on and near College Ave. are tracked and reported to Council at least annually. The number of mixed-use properties on and near College Ave. are tracked and reported to Council at least annually. City & partners Flex Space is under construction. Continued joint marketing effort with Visit Walla Walla.
2026	1-a. 1-c. 1-c. 1-d. 2-a. 2-b. 2.c. 3. 5.	The land inventory is updated. Housing Chapter action plan is reviewed. City works with Common Roots Land Trust, BMAC, and Housing Authority on development of Affordable Housing Attract pad retail and hospitality establishments near new big boxes. The number of business starts on and near College Ave. are tracked and reported to Council at least annually. The number of mixed-use properties on and near College Ave. are tracked and reported to Council at least annually. A plan for parking lot development is complete. City & partners Flex Space is complete. Continued joint marketing effort with Visit Walla Walla.

Cooperation and Connection

The City values connection with its residents and to its heritage. The City strives for win-win outcomes in relationships and partnerships internally and externally. The City's residents value connection to each other, which the City fosters and grows.

Goals and Objectives

1. Create annual community events
 - a. Identify opportunity for specific College Place events that are tied to Walla Walla University, Adventist Schools, or College Place Public Schools activities like Alumni Weekend and graduations. (Economic Development Commission)
 - b. Create events which draw visitors from neighboring communities and regions. (Economic Development Commission)
2. The City's outreach program effectively reaches all of its population.
 - a. Develop a City Brand guidelines (Administrator)

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- b. Students are actively involved in College Place City Council meetings and Council is involved at schools. (Council)
 - c. The City increases the use and effectiveness of social media channels that are used by stakeholders. (Departmental Social Media Managers)
 - d. The City maintains an active release of news to local media outlets for regularly occurring items and crisis communication. (City Administrator & Departmental PIO's)
 - e. School events are promoted to the Community. (Departmental Social Media Managers)
 3. The City explores the feasibility of a multi-use community center. (Parks, Arbor & Recreation Commission)
 4. The City shares leadership with its residents through volunteer service on Commissions, as follows. (City Clerk & Human Resources)
 - a. Planning Commission
 - b. Historic Preservation Commission
 - c. Civil Service Commission
 - d. Economic Development, Tourism, and Events Commission
 - e. Parks, Arbor, and Recreation Board
 - f. Utilities & Transportation Advisory Commission
 - g. Diversity & Inclusion Advisory Board
 - h. Youth Advisory Commission
 5. Walla Walla University and City of College Place staff and administration participate on each other's boards and commissions in order to mutually aid their missions. (Mayor)
 6. College Place builds and fosters interlocal partnerships in the following areas. (Mayor and Administrator)
 - a. Utilities
 - b. Bidding on joint construction projects
 - c. Library

- d. Court
- e. Information Technology
- f. Emergency Management
- g. School security
- h. Park and Recreation programs
- i. Police Training (Ex: Regional Shooting Range)
- j. Fire Training (Ex: Fire Training Tower)
- k. Economic Development
- l. Broadband
- m. Housing

Timeline and Outcomes

Year	Activity	Result
2021	2. 2-d 2-e. 4. 6. 6-f 6-h 6-l 6-m	Staff provides social media report to Council highlighting channels, number of followers and number of posts. Administrator presents annual report of news coverage and reporting. School event information is included in utility statement mailings. All Commissions are fully appointed with local residents by Council who also monitor calendaring of commission meetings. The number of interlocal agreements increases. Work with County and other partners to secure grant funds to move Emergency Management. City & partners establish youth recreation programming. City partners with area agencies to pursue grant funding for regional public dark fiber system. Common Roots Land Trust officially forms.
2022	1-a. 1-b. 2-c. 2-d. 2-e. 4. 6. 6-h. 6-i. 6-j. 6-l	Work to bring back Block Party or similar event in which University, Public Schools, Private Schools, and Library can partner. Partner with City of Walla Walla to bring regional events (Music Festivals, etc) here to the Valley. Staff provides social media report to Council highlighting channels, number of followers and number of posts. Administrator presents annual report of news coverage and reporting. School event information is included in utility statement mailings. All Commissions are fully appointed with local residents by Council who also monitor calendaring of commission meetings. The number of interlocal agreements increases. Youth recreation programming grows. Regional Police Shooting Range facility is complete. Regional Fire Training Tower is under construction. City and partners secure funding for publicly owned dark-fiber system. Begin engineering.

	6-m.	First property for Common Roots to possess affordable housing on is sighted.
2023	2-c 2-d 2-e. 4. 6. 6-f. 6-h. 6-j. 6-l. 6-m.	Staff provides social media report to Council highlighting channels, number of followers and number of posts. Administrator presents annual report of news coverage and reporting. School event information is included in utility statement mailings. All Commissions are fully appointed with local residents by Council who also monitor calendaring of commission meetings. The number of interlocal agreements increases. Emergency Management is at new, safe, secure location. Youth recreation programming grows. Regional fire training tower is fully constructed and operational. City and partners wrap up engineering and begin construction of publicly owned dark fiber system. Increase in affordable housing development through land trust, BMAC, and Housing Authority.
2024	2-c.. 2-d. 2-e. 4. 6. 6-h. 6-l. 6-m.	Staff provides social media report to Council highlighting channels, number of followers and number of posts. Administrator presents annual report of news coverage and reporting. School event information is included in utility statement mailings. All Commissions are fully appointed with local residents by Council who also monitor calendaring of commission meetings. The number of interlocal agreements increases. Youth Recreation Programming offerings grows. Construction of publicly owned dark fiber system wraps. Is ready to be leased and lit. Increase in affordable housing development through land trust, BMAC, and Housing Authority.
2025	2-c. 2-d. 2-e. 4. 6. 6-h. 6-l. 6-m.	Staff provides social media report to Council highlighting channels, number of followers and number of posts. Administrator presents annual report of news coverage and reporting. School event information is included in utility statement mailings. All Commissions are fully appointed with local residents by Council who also monitor calendaring of commission meetings. The number of interlocal agreements increases. Youth Recreation Programming offerings grows. Number of internet providers increases and monthly cost of internet decreases. Increase in affordable housing development through land trust, BMAC, and Housing Authority.
2026	2-c. 2-d. 2-e. 4. 6. 6-h. 6-l. 6-m.	Staff provides social media report to Council highlighting channels, number of followers and number of posts. Administrator presents annual report of news coverage and reporting. School event information is included in utility statement mailings. All Commissions are fully appointed with local residents by Council who also monitor calendaring of commission meetings. The number of interlocal agreements increases. Youth Recreation Programming offerings grows. Number of internet providers increases and monthly cost of internet decreases Increase in affordable housing development through land trust, BMAC, and Housing Authority.

Infrastructure Investment

A healthy and vital College Place requires new and renewing investments above and below ground. Residents expect and receive reliable and safe services from these investments.

Goals and Objectives

1. The City strives to attain a fully-funded storm water utility via a combination of utility rates and external grants. (Public Works/On-Call Engineer)
2. The City has a fully-funded drinking water utility via a combination of utility rates and external grants. (Public Works)
 - a. Water treatment infrastructure is replaced in the next ten years (Public Works)
 - b. Water rights and water availability are secured. (Public Works)
 - c. A conservation program is developed and in place to a point where the aquifer is recharging (Public Works).
 - d. Explore consolidation with neighboring irrigation districts if fiscally responsible (Public Works).
 - e. The City will monitor closely aquifer levels and develop conservation programs, additional water acquisition infrastructure as needed.
3. The City has a fully-funded wastewater utility via a combination of utility rates and external grants. (Public Works)
 - a. The City has a plan to replace aging collection system. (Public Works)
 - b. The City has a plan in place to finance the Wastewater Treatment Plan improvements mandated by the State Department of Ecology by the end of 2023 for Phase 1.
4. All local streets are refurbished and/or rebuilt.
 - a. The Transportation Benefit District has a funding mechanism that begins to fund renewal. (Administrator)

- b. There are sidewalks, bike lanes and sharrows where practicable, preserving character of historic neighborhoods. (Planning)
 - c. Fully-controlled intersections are constructed at important crossings. (Engineering)
 - d. LED Street lights expands LED Street lights throughout the City. (Public Works)
5. Working with partners, the City promotes sustainability and conservation in the use of renewable resources, such as facilitating solar array installation on roofs and walls. (Planning)
6. Revise development regulations to further incorporate community needs and smart growth principles. (Planning)
7. The City provides internet access as key infrastructure. (Mayor and Administrator)
 - a. Community-wide Wi-Fi improves access to internet.
 - b. Fiber cable is installed wherever development occurs.
8. The City works with partners to develop a true recycling program.

Timeline and Outcomes

Year	Activity	Result
2021	1. 2. 2. 3. 3. 4. 4b. 7.	The linear feet of stormwater lines replaced or relined is reported to Council. The linear feet of water lines replaced or relined is reported to Council. Energy costs related to increased number and better utilization of drinking water wells reported to Council. The linear feet of wastewater pipe replaced or relined is reported to Council. Southwest Wastewater Trunk Line is constructed and operational. The linear feet of roadway refurbished or rebuilt is reported to Council. The linear feet of sidewalk refurbished or rebuilt is reported to Council. The linear feet of dark fiber constructed is reported to Council
2022	3-c. 1. 2. 2. 3. 3.	LED lights power all City street lights The linear feet of stormwater lines replaced or relined is reported to Council. The linear feet of water lines replaced or relined is reported to Council. Energy costs related to increased number and better utilization of drinking water wells reported to Council. The linear feet of wastewater pipe replaced or relined is reported to Council. Construction begins at Wastewater Treatment Plant /Amount of Sewage treated at WTPP The linear feet of roadway refurbished or rebuilt is reported to Council.

	4. 4a. 4b. 7. 8.	Council begins identification of financing strategies for Transportation Benefit District. The linear feet of sidewalk refurbished or rebuilt is reported to Council. The linear feet of dark fiber constructed is reported to Council Workgroup established to begin figuring out challenges to restarting Recycling program.
2023	1. 2. 2. 3. 3. 4. 4a. 4b. 7. 8.	The linear feet of stormwater lines replaced or relined is reported to Council. The linear feet of water lines replaced or relined is reported to Council. Energy costs related to increased number and better utilization of drinking water wells reported to Council. The linear feet of wastewater pipe replaced or relined is reported to Council. Construction concludes at Wastewater Treatment Plant/Amount of Sewage treated at WTP. The linear feet of roadway refurbished or rebuilt is reported to Council. Council selects financing strategy for Transportation Benefit District/is monetized. The linear feet of sidewalk refurbished or rebuilt is reported to Council. The linear feet of dark fiber constructed is reported to Council Number of strategies identified by workgroup to deal with Recycling.
2024	. 1. 2. 2. 3. 3. 4. 4b. 7. 8.	The linear feet of stormwater lines replaced or relined is reported to Council. The linear feet of water lines replaced or relined is reported to Council. Energy costs related to increased number and better utilization of drinking water wells reported to Council. The linear feet of wastewater pipe replaced or relined is reported to Council. Amount of Sewage treated at WTP. The linear feet of roadway refurbished or rebuilt is reported to Council. The linear feet of sidewalk refurbished or rebuilt is reported to Council. The linear feet of dark fiber constructed is reported to Council Number of strategies identified by workgroup to deal with Recycling.
2025	1. 2. 2. 2. 3. 3. 3. 4. 4b. 7. 8.	The linear feet of stormwater lines replaced or relined is reported to Council. All residents have access to municipal water supply. The linear feet of water lines replaced or relined is reported to Council. Energy costs related to increased number and better utilization of drinking water wells reported to Council. The wastewater utility meets WA Department of Ecology requirements. The linear feet of wastewater pipe replaced or relined is reported to Council. Amount of Sewage treated at WTP. The linear feet of roadway refurbished or rebuilt is reported to Council. The linear feet of sidewalk refurbished or rebuilt is reported to Council. The linear feet of dark fiber constructed is reported to Council Pilot recycling strategy implemented.
2026	1. 2. 2. 3. 3. 4. 4b. 7. 8..	The linear feet of stormwater lines replaced or relined is reported to Council. The linear feet of water lines replaced or relined is reported to Council. Energy costs related to increased number and better utilization of drinking water wells reported to Council. The linear feet of wastewater pipe replaced or relined is reported to Council. Amount of Sewage treated at WTP. The linear feet of roadway refurbished or rebuilt is reported to Council. The linear feet of sidewalk refurbished or rebuilt is reported to Council. The linear feet of dark fiber constructed is reported to Council Recycling program operational/Tons of material recycled.

Planning for Prosperity

The City uses transparent and accountable planning processes so residents understand how College Place grows and changes. Planning documents are clear with a vision for how to sustainably fund services while maintaining high levels of citizen satisfaction and add to the local population as well as the Urban Growth Area (UGA).

Goals and Objectives

1. The City produces and adopts a Comprehensive Plan
 - a. There is a written redevelopment strategy for the College Avenue corridor. (Planning)
 - b. An historic preservation strategy is developed. (Historic preservation commission)
 - c. The City develops, maintains and funds a sustainable infrastructure replacement plan. (Finance)

The City has a Parks master plan that meets RCO standards and integrates the Blue Mountain Regional Trail Network (Parks, Arbor and Recreation Board)
 - d. The Walla Walla University Master Plan is integrated. (Mayor and Administrator)
2. City government is flexible enough to permit innovation.
 - a. Lean methodologies are applied to continuously improve the City's development processes. (Mayor and Administrator)
 - b. Municipal code is simplified to improve usability. (City Clerk)
3. By 2027, the City will complete its third Comprehensive plan.

Timeline and Outcomes

Year	Activity	Result
2021	2.	Report to Council on the number of process improvement groups formed.

2022	2.	Report to Council on the number of process improvement groups formed. Urban Growth Area reviewed by the Planning Commission and City Council.
2023	2.	Report to Council on the number of process improvement groups formed.
2024	2.	Report to Council on the number of process improvement groups formed.
2025	2.	Report to Council on the number of process improvement groups formed.
2026	2. 3.	Report to Council on the number of process improvement groups formed. Comprehensive Plan development commences.

Revising the Plan

The plan will be reviewed and updated annually. Recommendations for any interim changes to the plan should address the following questions:

- Why should the changes be made?
- What specific changes should be made, including to areas, goals, objectives, strategies timelines and responsibilities?

City of College Place: Development Activity - June 2024

Project Name	Use	Location	Status	Lead Generated
Commercial/Industrial				
Jersey Mike's	Fast Food Restaurant	Meadowbrook	- Sept 2023 Another fast food sandwich tenant will go in space next to Chipotle. - Dec 2023 Awaiting building permit app. - May 2024 Getting building plan submittals. - June 2024 Filed Sign Permit. - July 2024 Working on buiding rehab plans.	ICSC Las Vegas
WalMart	BigBox	Meadowbrook	- July 2024 Filed permits to repave parking lot, renovate store, and do generate site improvements.	Walmart
Project Beyond	Gas Station & Food Mart	Rose Corridor or Meadowbrook	- June 2024 Met at Retail Convention. Interested in serving community. - July 2024 Continuing due diligence.	ICSC Las Vegas
Project Tom	Car Wash	Meadowbrook	- June 2024 Interested in Meadowbrook sites. - July 2024 Pursuing option argreement for a site.	ICSC Las Vegas

Project Murph	Gas Station	Meadowbrook	- June 2024 Interested in establishing gas station in outlot of Walmart. - July 2024 Getting permission from corporate.	ICSC Las Vegas
Project Boise	Grocer	Myra Rd	- June 2024 Interested in establishing a facility either at 12th Myra or Garrison Myra. Will start due diligence. - July 2024 No update.	ICSC Las Vegas
Project Palouse	Commercial Developer	South College Avenue	- June 2024 Interested in partnering with Lakeside and buying properties along South College (south of Mojonner) - July 2024 Continuing due diligence.	ICSC Las Vegas
Project Cobble	Hotel	Whitman & Myra	- November 2023 Hotelier working out development agreement with property owner. Still trying to hammer out road access. - February 2024 Still working out development agreement. - May 2024 Purchase and Sale agreement in place. Dependent upon roundabout. - July 2024 Providing city with materials to go after State assistance for roundabout.	ICSC Las Vegas

Project Hammer	Big Box Hardware	South College Avenue	- June 2024 Big Box hardware store interested in serving area. - July 2024 Doing due diligence on a site.	ICSC Las Vegas
Project Bullseye	Big Box	Whitman & Myra	- November 2023 Option purchased on site by a big box retailer. - March 2024 Option agreement exists. - July 2024 Tied to project Cobble and its success.	ICSC Las Vegas
Project OPH	Breakfast Restaurant	Whitman & Myra	- November 2023 Option for breakfast restaurant. Dependent upon hotel. - March 2024 Signed agreement based on hotel coming in adjacent. - July 2024 Tied to Project Cobble.	Property Owner.
Project DE	Brunch Restaurant	Meadowbrook	- June 2024 Interested in serving market. - July 2024 Doing site evaluations.	ICSC Las Vegas
Project Q	Fast Food Restaurant	WWU Area	- November 2023 National mexican fast food franchise is looking at entering area adjacent to WWU Campus. - July 2024 No Update	WWU Contact
Project Y	Grocer	Whitman & Myra	- December 2023 option for regional grocer at play. - June 2024 Is going to Board of Company for site approval. - July 2024 No update.	Cold Call

Project MP	Hotel	Meadowbrook	- December 2023 National hotel brand looking at going adjacent to HopThief. Should have plans turned in by Summer. -July 2024 No Change.	ICSC Las Vegas
Project Bed	Hotel	Meadowbrook or Near University	- July 2024 National hotel brand looking at putting medium end extended stay chain in City.	ICSC Las Vegas
Project FM	Medium sized grocery and general merchandise store.	College Avenue, across from College Place High School.	- Jan 2019 This site is shortlisted with another site at end of Myra Rd in Walla Walla. User would like to open up by 2021/2022. -Dec 2022 Awaiting if Feds will approve merger of Kroger/Safeway. Will have impact on viability of this deal. - June 2024 Continue monitoring progress of Lakeside development before making decision. - July 2024 Evaluating property near SR 125 and College.	ICSC Las Vegas
Project Flight	Aerospace	Martin Airfield	- Nov 2023 Project is now annexed into the City. Working with property owner on future planning. - Dec 2023 No Update. - July 2024 Working with developer via State CERB Grant for infrastructure planning.	Property owner.

Project Lawn	Lawn care	Commercial Drive	- July 2024 Headquarters for a small lawn care business. Working through submission issues with site engineer.	Property owner.
Residential				
Homestead Subdivision Phase 3C, 3D, and 3E.	Residential subdivision constructed by Hayden Homes.	Homestead and Doans Street south of Fourth Street.	- December 2021 Reviewing plans for wise size. - April 2022 No change. - October 2022 Planning to break ground this Fall. - Dec 2022 Wise size development got moved to next Spring. - July 2024 Will start to develop wise size once done with Avery Estates in WW.	Hayden Homes has owned property for the last decade.
Dawson Cottages	6 cottages	Birch between 4th and 6th	- June 2024 Developing cottages. - July 2024 Still building out cottages.	Ben Dawson
NW Residential	20 Apartments	SW Oakwood Pl off of SW 6th	- June 2024 Going through entitlement process. - July 2024 Company decided to buy eight homes on market in town to rehab and will be putting site with plans up for sale.	NW Residential Properties

Villages at Fort Walla Walla	180 multi-family apartment units.	South side of Whitman Drive/Deccion intersection.	- Jan 2019 Plan submittal is being reviewed by development staff. Spring 2019 construction. - Nov 2022 Revizing development plans. Likely will develop in 2023. - Feb 2023 Developer paid us bill due. Will turn in new, different plans. Likely will petition for MFTE. - May 2023 Continue going through permitting. Getting near end. - - Dec 2023 Grading underway. Planned for full groundbreaking in March. - February 2024 Processing MFTE Form. - May 2024 Supposed to break ground this month on forms for buildings. - June 2024 Getting last minute additional financing to make reality.	Port of Walla Walla was approached by Farran Group about property and was directed to Bob Price and the City.
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Sirmon Development	Multi-family apartments.	942 NE Spitzenburg St	- Jan 2019 Plan submittal is being reviewed by development staff. - April 2021 Awaiting final engineering drawings. - Dec 2022 Project appears to be on ice for now. Tad asked about vesting rights. - Feb 2024 Talked to developer. Expecting dirt to be turned this year. - July 2024 Buildings are being built.	Property owner.
Lakeside/College Holdings Development	Single & Multi-Family	197 Mojonner Rd	- July 2024 Expecting Master Planned Development application is planned for July 2024. Engineering on East-West Rd has started.	Property owner.
Villages at Garrison Creek Phase 11 and 13	Single Family	Villages at Garrison Creek development.	- December 2021 Received submittal for 72 lot single family in vacant middle donut hole to finish up development. - Sept 2023 Engineer for developer is working on site issues. - Dec 2023 Expecting infrastructure to go in soon. - May 2024 Infrastructure being installed. - July 2024 Still working on site infrastructure.	Property developer.

VESPR	Mixed-Use	8th & College	- February 2022 Still in due diligence. - April 2022 Developer out of Prosser closed on property. Plans to construct mixed-use building. - December 2022 Incentive granted. Going through final permitting. Expected to break ground early 2023. - Feb 2023 Expecting to break ground by Q2. - May 2023 Broke ground. Plumbing and foundation is in. - June 2023 Foundation is in. - Nov 2023 Construction Continues. - May 2024 Sould be complete in Q2 2024. - June 2024 Certificate of Occupancy issued. - July 2024 Leasing.	Property owner.
Deer Meadows Subdivision	Townhome	SW 12th	- December 2021 Developer Jeff Kelly out of Tri Cities is planning townhomes for site purchased from Marc Maiuri - Sept 2022 SEPA out now. 13 lot subdivision proposed by Jeff Kelly out of Pasco. - October 2022 Hearing Examiner meeting held. - December 2022 Going through final entitlements. - February 2023 Planning for a Summer start. - May 2024 Have turned in plans for grading permits. - July 2024 Getting close to grading.	Developer

Martin Airfield/Tarragon Development	Airfield Update, Flex Facilities, Residential	West Whitman Drive	- Feb 2024 Project is now annexed into the City. Working with property owner on future planning. - May 2024 Martin Airfield study is starting. - July 2024 Working with City on area study. Also, Tarragon bought Hinshaw Ranch property.	Developer
Salerno Estates	Single Family Homes	359 SW 12th	- May 2023 Had public comment period for this development. 8 homes on approximately half acres. Reviewing comments and finalizing conditions of approval. - June 2023 Site plans approved. Past appeal period. - Dec 2023 Working with developer on issues. - Feb 2024 Infrastructure plans getting turned in. - March 2024 Expecting construction to start soon. - May 2024 Working on site utilities. - June 2024 Getting ready to record plat. - July 2024 Working on area utilities.	Developer