

**UMATILLA CITY COUNCIL MEETING  
AGENDA  
COUNCIL CHAMBERS 700 6TH STREET, UMATILLA, OR 97882  
JULY 20, 2021  
6:00 PM**

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1. **MEETING CALLED TO ORDER**

2. **ROLL CALL**

3. **PLEDGE OF ALLEGIANCE**

4. **APPROVAL OF AGENDA**

5. **CITY MANAGER REPORT**

5.a [Umatilla Police Department Quarterly Report](#) *Suggested Action: Discussion only. Click [HERE](#) for the full report.*

5.b [Council Policies & Procedures Refresher - Consent Agenda](#) *Suggested Action: This is a new item, "Council Policies & Procedures Refresher," that will appear at the beginning of each quarter under City Manager's Report. It is intended to keep us well versed in our collective knowledge of our own adopted procedures.*

*"Consent Agenda. In order to make more efficient use of meeting time, the City Manager shall place all items of a routine nature on which no debate is expected on a consent agenda. Any item placed on the consent agenda shall be disposed of by a single motion "to adopt the consent agenda" which shall not be debatable. With the approval of the Council, any Councilor or the Mayor can remove an item from the Consent Agenda. An item removed from the consent agenda shall not receive public testimony unless agreed to by a majority of the quorum. Any item removed from the Consent Agenda will be discussed and considered as the first business item of the meeting."*

6. **PUBLIC COMMENT**

7. **NEW BUSINESS**

8. **PUBLIC HEARING**

8.a [City of Umatilla Plan Amendment PA-1-20](#): The applicant, City of Umatilla, is proposing to amend Chapters 9 of the City of Umatilla Comprehensive Plan. Johnson Economics recently completed an Economic Opportunities Analysis and Buildable Lands Inventory for the City of Umatilla. The text amendment will incorporate relevant portion of the Economic Opportunities Analysis, the City's Destination Management Plan and Downtown Vision and Framework Plan into the Comprehensive Plan. *Suggested Action: The City of Umatilla Planning Commission at their August 2020 public hearing unanimously voted to recommend approval of Plan Amendment PA-1-20. A sample motion for approval is provided below.*

*I move to approved City of Umatilla Plan Amendment PA-1-20 and adopt the Planning Commissions Report and Recommendation as the City Councils Findings.*

- 8.b *City of Umatilla Plan Amendment PA-3-20: The applicant, Cleaver Land, LLC, is requesting approval of a Comprehensive & Zoning Map change to convert 294 acres of Single Family Residential to Light Industrial. The applicant also submitted an Urban Growth Boundary Expansion and Annexation applications with the desired outcome to have approximately 450 acres of land planned and zoned for industrial use. Suggested Action: The City of Umatilla Planning Commission at their August 2020 public hearing unanimously voted to recommend approval of Plan Amendment PA-3-20. A sample motion for approval is provided below.*

*I move to approved Cleaver Land Plan Amendment PA-3-20 and adopt the Planning Commissions Report and Recommendation as the City Councils Findings.*

- 8.c *Cleaver Land Plan Amendment PA-2-20: The applicant, Cleaver Land, LLC, is requesting approval of an Urban Growth Boundary Expansion to include approximately 146.69 acres land. The applicant also submitted an Annexation and Zone Change applications with the desired outcome to have approximately 450 acres of land planned and zoned for industrial use. Suggested Action: The City of Umatilla Planning Commission at their August 2020 public hearing unanimously voted to recommend approval of Plan Amendment PA-2-20. The County Planning Commission has scheduled a public hearing on this joint application on July 22, 2021. Staff recommends leaving the record open to allow any new testimony submitted at the County Planning Commission meeting to be address. A sample motion for a continuance is provided below*

*I move to continue Cleaver Land Plan Amendment PA-2-20 to the City Council meeting on August 2nd beginning at 7:00 pm and leave the record open.*

9. **PUBLIC COMMENT**
10. **MAYOR'S MESSAGE**
11. **COUNCIL INFORMATION & DISCUSSION**
12. **ADJOURN**

*This institution is an equal opportunity provider. Discrimination is prohibited by Federal law. Special accommodations to attend or participate in a city meeting or other function can be provided by contacting City Hall at (541) 922-3226 or use the TTY Relay Service at 1-800-735-2900 for appropriate assistance.*



CITY OF UMATILLA, OREGON

# AGENDA BILL

<b>Agenda Title:</b> Umatilla Police Department Quarterly Report	<b>Meeting Date:</b> 2021-07-20
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<b>Department:</b> Police	<b>Director:</b> Darla Huxel	<b>Contact Person:</b> Darla Huxel	<b>Phone Number:</b>
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<b>Cost of Proposal:</b> N/A	<b>Fund(s) Name and Number(s):</b> N/A
<b>Amount Budgeted:</b> N/A	

<b>Reviewed by Finance Department:</b> No	<b>Previously Presented:</b> N/A
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**Attachments to Agenda Packet Item:**

[Police Dept 4th Quarter FY20-21.pdf](#)

<b>Summary Statement:</b> Discussion only. Click <a href="#">HERE</a> for the full report.
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<b>Consistent with Council Goals:</b> Goal 4: Increase Public Involvement, Create a Culture of Transparency with the Public, and Enhance Cultural Diversity.
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# POLICE DEPARTMENT

## QUARTERLY REPORT

Fourth Quarter, Fiscal Year 2020-2021  
Quarter Ended June 30, 2021

Greetings,

It has been a busy fourth quarter for the Umatilla Police Department. With more and more of the COVID-19 restrictions being lifted, our activity numbers have increased. A good example of that is our arrests - in the fourth quarter last year we had 46 arrests. The fourth quarter this year we had 95. That number can be reflected on the jail space opening up as well as being fully staffed with all officers out on their own. I do not see those numbers decreasing in the near future.

The current collective bargaining agreement (CBA) expired the end of June, 2021. We had regular meetings with the CBA negotiators, completed the process and presented it to the City Council who approved the agreement at the May 4, 2021 City Council Meeting.

Our officers are out making contacts with people in the community at all levels. You will see us out patrolling and at different events throughout the community. Take advantage of meeting the officers and sharing information if you so desire. One of our Bilingual officers will be at the Saturday Market on May 24th. We will have information on emergency preparedness, National Night Out and other items of interest (and even some free goodies to hand out) so stop by!

While reading through this quarterly report, if you have any questions or want additional information, please contact me at the police department by phone (541-922-3789) or by email.

Darla Huxel  
Chief of Police  
[Huxel@umatilla-city.org](mailto:Huxel@umatilla-city.org)

## Umatilla Police Department Activity Summary

### Patrol

During the fourth quarter of FY20/21, calls for service/self-initiated activity increased to 2617 calls from 2274 during the fourth quarter of FY19/20.

The average response time during this quarter decreased compared to last years fourth quarter time. The average time per incident showed a slight increase from last years fourth quarter time.

	<u>FY20/21</u>	<u>FY19/20</u>
Total Dispatched Incidents	2456	1821
Average Response Time	8:21	8:34

### **Staff Meetings**

During the fourth quarter of FY20/21, regular staff meetings and Supervisor meetings were conducted on April 12th and June 7th. There was no staff meeting in May due to annual training.

### **Training**

This quarter included our annual, multi-agency training. Other agencies participating in the training included the Morrow County Sheriff's Office, Boardman Police and Stanfield Police. The total training hours during this quarter for all UPD department personnel was approximately 427 hours; 31 hours of instruction from our department members and 396 hours of received training. Annual training allows us to complete requirements to maintain certification as police officers or telecommunicators. The majority of our officers are able to fulfill their requirements during this time. This number does not reflect different policy refresher training that is included in our monthly staff meetings. Topics during staff meetings include areas such as high risk/low frequency issues, mandated annual topics such as harassment in the workplace and case reviews or debriefing of officer involved incidents.

Fourth quarter FY20/21 training included:

- LEADS Certification = 12 hours training
- Taser = 4 hours instruction and 48 hours training
- Below 100 = 17 hours training
- Officer Wellness = 18 hours training
- Emergency Vehicle Operation = 36 hours training
- MILO training (scenerio based simulation training) = 13 hours instruction and 20 hours training
- Defensive Tactics = 4 hours instruction and 48 hours training
- Ethical decision making = 4 hours instruction and 25 hours training
- Laser shot scenerios = 26 hours training
- Building Searches = 24 hours training
- Traffic Stops = 24 hours training
- Legal Updates = 52 hours training
- RISS/WSIN:Etrace (Investigative techniques) = 48 hours training
- Northwest Leadership = 4 hours training

### **Reserve Officers**

Our Police Reserve Officers were once again able to put time in assisting the full time officers. Although down to just three Reserve Officers, they were still able to volunteer hours this quarter. We have been recruiting for Reserve Officers to fill vacant positions and will begin the testing and background checks in July. The testing and checks for Reserve Officers are the same used for hiring any full time officer. In June, Reserve Officer Kieron Carlson accepted a full time position with Hermiston Police Department. We wish him the best in his new endeavor.

### **School Resource Officer Activities**

- April Events – SRO Wilson was involved in school administrative meetings as school partially resumed. He performed directed patrols in the school zones for crosswalk and speed control. As a result, SRO Wilson issued four citations, three for speeding and one for not stopping at a stop sign. Three warnings were also given during this time.
- May Events – SRO Wilson handled two criminal calls at the school which resulted in the school taking action. He performed directed patrols in the school zones for crosswalk enforcement and speeding. There were three citations issued, two for speeding and one for not stopping at a stop sign. One verbal warning was also given.
- June Events – Participated in security related tasks relating to graduation, both during the actual event and with the senior parade. SRO Wilson was involved with one vaping citation at the middle school and the investigation of four ex-high school students trespassing and vandalizing the football field the night before graduation.



SRO Officer Wilson is assigned to regular patrol duties for the months of June, July and August due to no regular school during this time.

**Community/School Activities**

- April Events – Participated in the community cleanup.
- May Events – Participated in Law Enforcement memorial service activity.
- June Events – Participated in the high school senior graduation events and the 9th annual UPOA golf tournament.

**Juvenile Activity**

During the fourth quarter of FY20/21, calls involving juveniles increased from fourth quarter FY19/20 from 18 to 22. Cases/incidents involving juveniles include all juvenile complaints/contacts, runaways and minor in possession of alcohol or tobacco. Some of these cases/incidents are referred to our Community Accountability Board which generally will see cases/incidents for first time offenders of violations or misdemeanor classed crimes. There were two referrals to the CAB and no referrals to the Community Truancy Board during the fourth quarter of FY20/21.

**Sex Crimes/Registrations**

- There were a total of five sex crimes reported this quarter showing an increase from the three in fourth quarter FY 19/20. Due to COVID - 19, we were still referring sex offender registrations directly to the sex offender registry handled by the Oregon State Police, however, in July we will begin doing in person registrations as time permits.

**Traffic Infractions**

- During the fourth quarter of FY20/21, we conducted 1011 self-initiated traffic stops/traffic complaints. As a result, 339 traffic citations were issued, which resulted in a traffic infraction citation being issued approximately 33% of the time. This figure includes both criminal and non-criminal traffic infractions.
- There were no special enforcement operations during this quarter.

Traffic Citations – During the fourth quarter of FY20/21, there were 339 traffic citations issued and 672 warnings given compared to 187 citations issued and 452 warnings given in the fourth quarter of FY19/20. Offenses that are tracked include:

- Speed
- Traffic Control Devices
- Insurance/Registration
- No Operators License
- Driving While Suspended
- Equipment violations

**Traffic Crashes** – Fourth quarter of FY20/21 indicates a increase from fourth quarter of FY19/20 from 15 to 32. A large number of these crashes occurred at, or around, the Highway 730/Interstate 82 intersections.

**Person Crimes/Incidents** - Fourth Quarter Comparisons.

FY20/21	FY19/20
68	52

**Property Crimes/Incidents** - Fourth Quarter Comparisons.

FY20/21	FY19/20
108	79

**Arrests** - Fourth Quarter comparisons.

FY20/21	FY19/20
95	46

**Other Notable Items of Interest**

Office Administrator workload – In addition to the daily dispatching duties, our office personnel completed 73 records requests. In March 2020, due to COVID, we stopped providing fingerprinting services for the public. We now have our automated fingerprint system in place and will be able to fully utilize this equipment with the reduction of COVID-19 restrictions. In April, we began resuming fingerprint services to the public and completed 19 requests for this quarter.

Mental health – Officers continue to have contact with persons who are having mental health issues or are in crisis. Our FY20/21 number for calls dealing with mental/suicidal subjects have increased FY19/20 quarter from 2 to 16. Recently, Umatilla County announced they will be changing their mental health provider from Lifeways to Community Counseling Solutions. We hope to see a more positive response to our request for assistance in dealing with those who are in a mental health crisis.

Grant award status – No current grants pending.

**Summary of Offenses**

A review of the offenses from this fourth quarter compared to last fourth quarter shows an overall increase in activity except in abuse, burglary, fraud/forgery and UUMV/UEMV cases.

Property crimes saw an overall increase this quarter compared to FY 19/20 fourth quarter from 79 to 108. We generally saw increases in the majority of categories in property related crimes. The largest increases were in trespassing calls and theft calls.

Person crimes saw an overall increase this quarter compared to FY 19/20 fourth quarter from 52 to 68. The main increase was in harassment/stalking reports.

Snapshot All Offenses Q1 FY20/21		Snapshot All Offenses Q1 FY 19/20	
Offense	Amount	Offense	Amount
Abuse	5	Abuse	2
Assaults	8	Assaults	6
Burglary	1	Burglary	5
Criminal Mischief	16	Criminal Mischief	11
Domestic Disturbance/VRO	36	Domestic Disturbance/VRO	34
Drug Activity	10	Drug Activity	7
DUII	9	DUII	6
Fraud/Forgery	2	Fraud/Forgery	6
Harassment/Stalking	18	Harassment/Stalking	10
Kidnapping	0	Kidnapping	0
Menacing	1	Menacing	0
Robbery	0	Robbery	0
Thefts	31	Thefts	21
Trespassing	35	Trespassing	17
UUMV/UEMV	4	UUMV/UEMV	6
Warrants	58	Warrants	15
<b>Total</b>	<b>234</b>	<b>Total</b>	<b>146</b>
Assists	111	Assists	80
Person Crimes		Property Crimes	



## Code Enforcement - Property



In this last quarter, we responded to 94 property calls with the majority involving weeds and/or overgrown vegetation. During this fire season, it is especially important to address this issue.

The City has numerous opportunities to assist in cleanup efforts during the year and strongly encourages people to take advantage of those events. During this quarter, the City sponsored one of those cleanups on April 10th, which allowed people to bring their items to a dumpster located at the Public Works area for free! Many people took advantage of this opportunity and we hope that you will use these type of events in the future.

## Code Enforcement - Animals



In this last quarter, we responded to 89 animal related calls, the majority of which involved dogs running at large or excessive barking.

We would like to remind you to get your dogs licensed. This allows the Code Officer to safely return your dog should it escape from your property.

The dogs in the picture above are happy because they are home and not running loose without the owner watching over them. They are also not being directly exposed to the extreme heat and have water accessible to them throughout the day. Please watch over your furry family members.

## Code Enforcement - Vehicles



In this last quarter, we responded to 52 vehicle calls with the majority involving parking complaints.

Just a reminder, with the summer season brings an opportunity for friends and family to get together, however, campers, trailers (any kind) and RV's are not allowed to be parked on the street. There is a grace period that allows for people who may be visiting you to be parked over a weekend (3 days) but that is the only exception.

Please slow down especially in our residential areas.

### Use of Force Review Committee

At the beginning of this year, a Use of Force Review Committee was established at the request of Chief Huxel. The role of the committee is to review the use of force incidents that the police department is involved with on a quarterly basis. This not only provides transparency but will also allow an outside view of the police department policies and practices and how they are applied. The committee is comprised of the Mayor, two City Council members (Police Committee), the City Manager, the police Lieutenant and two citizen volunteers.

In this last quarter, UPD had a total of two use of force incidents for the months of April, May and June, both of which occurred in April. The first incident involved two officers who pointed a firearm during the search of a building and used a control hold to effect an arrest. As per training and policy, building searches require that

the officer(s) have their weapon out while clearing buildings or structures. The second incident involved four officers who were involved with a pursuit and pointing their firearm at the suspects to effect an arrest.

Included in the report to the committee, UPD personnel were involved with a total of 142 hours of training in just use of force. Included in this training were 46 hours of MILO/Laser Shot training (scenerio based training using a simulator), 48 hours of Taser training and 48 hours of defensive tactics training.



## Law Enforcement Memorial Day, May 15th



### Law Enforcement Memorial Day

In 1963, President John F. Kennedy signed a bill into law designating May 15th to honor law enforcement officers. Several Umatilla Police Department staff recently attended a funeral service for Deputy Jason Post, from the Umatilla County Sheriffs' Office. Though it was a privilege to participate in his service as part of his law enforcement family, it is certainly not an experience we wish to repeat anytime soon.

There have been 162 law enforcement line of duty deaths so far this year. Simply said, it is a dangerous time to be a law enforcement officer. We appreciate the establishment of Law Enforcement Memorial Day and the opportunity to honor our nations fallen officers.

- An End of Watch radio call says it best -  
**"Rest easy officer, we've got the watch from here!"**

## Lexipol Agency Recognition



### Lexipol Agency Recognition

The Umatilla Police Department has been involved with Lexipol for several years with policy management. Twice per year (January and July) we update our policy manual to keep current and up to date with legislation and best practices. This year, we were presented with their Bronze Award for "Excellence in Law Enforcement Policy Management".

"The primary mission of Lexipol is to provide law enforcement agencies with direction through constitutionally sound policies, training, and information. Incumbent upon every law enforcement agency is the mission to support community safety while respecting individual rights. By providing a product that is legally sound and reflects best practices across the nation, Lexipol has placed its clients in the best position to fulfill their duties better and safer. A key component of this process is Lexipol's commitment to continuous improvement. The process has always included diligent review of local, state, and federal statutes and case law to identify and develop best practices."

In addition to policy management, Lexipol also provides Daily Training Bulletins to assist officers with different aspects of our policies by posing different scenarios, asking questions and following up with specific verbiage from our policy manual.

Our goal for next year is to obtain Lexipol's Gold status award.



## UPD Employee Highlight

Officer Katie Skillman has been with the department since 2017. She is currently assigned as a Patrol Officer and has advanced training as a Field Training Officer and is the department Taser Instructor.

Officer Skillman graduated from Logan-Rogersville High School in Missouri. After spending a short time in the Army, she came back to this area and received her Associates Degree in Agriculture from Blue Mountain Community College.

Officer Skillman enjoys crafting and quilting and has donated her creations to several local causes such as the Guardian Care Center. She is also a great photographer and has provided numerous pictures that the department has posted on our Facebook page.

Officer Skillman and her husband enjoy the outdoors and the many activities that the wilderness provides.



## Umatilla Police Officer's Association Activities

The Umatilla Police Officer's Association continues to be actively involved in events, sponsorships and activities. During this quarter their involvement included:

- Donation to Domestic Violence
- Donation to the Conrad Skinner Memorial
- Donation to the Agape House

Other activities involved:

- Assisting with the American Legion Auxilary in placing flags at the Pioneer and Sunset Cemetery's for Memorial Day
- Sponsoring a law enforcement picnic for the police department in honor of Law Enforcement Memorial Day on May 15th
- Hosting the Ninth Annual UPOA Golf Tournament





POLICE DEPARTMENT QUARTERLY REPORT

[www.umatilla-city.org](http://www.umatilla-city.org)

CITY OF UMATILLA, OREGON

# AGENDA BILL

<b>Agenda Title:</b> Council Policies & Procedures Refresher - Consent Agenda	<b>Meeting Date:</b> 2021-07-20
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<b>Department:</b> City Administration	<b>Director:</b> David Stockdale	<b>Contact Person:</b> David Stockdale	<b>Phone Number:</b>
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<b>Cost of Proposal:</b> n/a	<b>Fund(s) Name and Number(s):</b> N/A
<b>Amount Budgeted:</b> n/a	

<b>Reviewed by Finance Department:</b> No	<b>Previously Presented:</b> 01/19/21
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**Attachments to Agenda Packet Item:**

**Summary Statement:**

This is a new item, "Council Policies & Procedures Refresher," that will appear at the beginning of each quarter under City Manager's Report. It is intended to keep us well versed in our collective knowledge of our own adopted procedures.

"**Consent Agenda.** In order to make more efficient use of meeting time, the City Manager shall place all items of a routine nature on which no debate is expected on a consent agenda. Any item placed on the consent agenda shall be disposed of by a single motion "to adopt the consent agenda" which shall not be debatable. With the approval of the Council, any Councilor or the Mayor can remove an item from the Consent Agenda. An item removed from the consent agenda shall not receive public testimony unless agreed to by a majority of the quorum. Any item removed from the Consent Agenda will be discussed and considered as the first business item of the meeting."

**Consistent with Council Goals:**

Goal 5 : Perform at the Highest Levels of Operational Excellence

CITY OF UMATILLA, OREGON

**AGENDA BILL**

<b>Agenda Title:</b> <b>City of Umatilla Plan Amendment PA-1-20:</b> The applicant, City of Umatilla, is proposing to amend Chapters 9 of the City of Umatilla Comprehensive Plan. Johnson Economics recently completed an Economic Opportunities Analysis and Buildable Lands Inventory for the City of Umatilla. The text amendment will incorporate relevant portion of the Economic Opportunities Analysis, the City’s Destination Management Plan and Downtown Vision and Framework Plan into the Comprehensive Plan.	<b>Meeting Date:</b> 2021-07-20
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<b>Department:</b> Community Development	<b>Director:</b> Brandon Seitz	<b>Contact Person:</b> Brandon Seitz	<b>Phone Number:</b>
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<b>Cost of Proposal:</b> NA	<b>Fund(s) Name and Number(s):</b> N/A
<b>Amount Budgeted:</b> NA	

<b>Reviewed by Finance Department:</b> Yes	<b>Previously Presented:</b> NA
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**Attachments to Agenda Packet Item:**

[PA-1-20 CC Report \(w exhibits\).pdf](#)

<b>Summary Statement:</b> The City of Umatilla Planning Commission at their August 2020 public hearing unanimously voted to recommend approval of Plan Amendment PA-1-20. A sample motion for approval is provided below.  I move to approved City of Umatilla Plan Amendment PA-1-20 and adopt the Planning Commissions Report and Recommendation as the City Councils Findings.
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<b>Consistent with Council Goals:</b> Goal 2: Promote Economic Development and Job Growth.
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**UMATILLA CITY COUNCIL  
REPORT AND RECOMMENDATION  
FOR  
PLAN AMENDMENT PA-1-20**

**DATE OF HEARING:** July 20, 2021

**REPORT PREPARED BY:** Brandon Seitz, Community Development Director

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**I. GENERAL INFORMATION AND FACTS**

**Applicant:** City of Umatilla, 700 6<sup>th</sup> Street, Umatilla, OR 97882.

**Land Use Review:** Plan amendment to update Goal 9 (Economic Development) of the comprehensive plan.

**II. NATURE OF REQUEST AND GENERAL FACTS**

The City of Umatilla hired a private consultant Johnson Economics to conduct an Economic Opportunities Analysis (EOA). This analysis includes an inventory of employment land, which provides a snapshot of the currently local capacity to accommodate more business and jobs. The analysis reflects changes in employment, land supply, and macro-economic trends since the City of Umatilla last reviewed local economic development policies. With the new data and information about the City of Umatilla's economic development rises a need to update Goal 9 the Economic Development section of the city's comprehensive plan.

**NOTE:** The EOA identified the City has a projected need of two 100+ acre sites and two 50-99.9 acres sites. The EOA also identified that the City had one 100+ acres site in our inventory. The 160-acre site is located at the Port of Umatilla's McNary Industrial Park and is identified as Tax Lot 5N28B00000600. The City has now issued permits and construction has commenced for development of the site. The EOA's analysis for the city's project land use need is less than two years old and the best available data. The City will move forward with adopt of the EOA but note the change in inventory for the pending UGB expansion application (PA-2-20). Given the historic level of new growth within the City a complete BLI updated will likely be necessary well before the end of the 20 year planning period.

**III. ANALYSIS**

The criteria applicable to this request are shown in underlined text and the responses are shown in standard text. All of the following criteria must be satisfied in order for this request to be approved.

**CUZO 10-13-3: AMENDMENTS TO THE ZONING TEXT OR MAP:**

- A. Approval Criteria: An amendment to this title or official map shall comply with the following criteria:
1. The proposed designation is consistent with and supports the purposes of the portions of the city's comprehensive plan not proposed for amendment, or circumstances have changed



to justify a change in the comprehensive plan.

**Findings:** The proposed plan amendment will amend Chapter 9 (Economic Development) of the city's comprehensive plan. A draft of the proposed text changes is attached to this report. To summarize Section 9.1 would be replaced in its entirety with the EOA completed by Johnson Economics. Section 9.1 had not been updated since the city's comprehensive plan was acknowledged in 1978 and the information is now outdated. Section 9.2, the Downtown Revitalization and Circulation Plan will not be amended. Section 9.3 was also added to provide a brief overview of the Destination Management Plan completed the City and Chamber.

**Conclusion:** The primary updates to the comprehensive plan are to updated Section 9.1 based on the Johnson Economics EOA. As address above the previous version had not been amended since 1978 and was no longer relevant. Therefore, the proposed change to the comprehensive plan is considered justified as the plan had not be updated in over 30 years and was no longer relevant. The updated information in the EOA and Destination Management Plan will support the continued development of employment lands located within the UGB and increase opportunities for tourism development.

2. The proposed change will not affect the land supply for the existing zoning designation as related to projected need for the particular land use.
3. The proposed designation will not negatively impact existing or planned public facilities and services. In particular, pursuant to the Oregon transportation planning rule, proposed text and map amendments shall determine whether the proposed change will significantly affect a collector or arterial transportation facility and must comply with the requirements of Oregon administrative rule (OAR) 660-012-0060 as applicable. In the I-82/U.S. 730 interchange area management plan (IAMP) management area, proposed access shall be consistent with the access management plan in section 7 of the IAMP.

**Findings:** The proposed plan amendment will not change the existing zoning designation for any property with the city's UGB. The proposed plan amendment will be a text amendment to the city's comprehensive plan to update Chapter 9 (Economic Development) with current employment and land supply numbers by incorporating the recently completed EOA.

**Conclusion:** The proposed plan amendment will not change the existing zoning designations for any property within the city's Urban Growth Boundary (UGB). Therefore, the proposed text amendment will not affect the land supply of the existing zoning designations or negatively impact existing or planned public facilities and services.

4. The site is suitable for the proposed use, considering the topography, adjacent streets, access, size of the site, availability of public facilities, and any other pertinent physical features.
5. Other sites in the city or the vicinity are unsuitable for the proposed use. In other words, ownership and desire to develop a particular use in themselves provide insufficient rationale for changing a zoning designation that does not support the interests of the city as a whole.

**Findings:** The intent of these standards is to show that a proposed amendment is necessary to accommodate a proposed use and to show that other sites within the city are not readily available to develop the propose use.



**Conclusion:** The proposed plan amendment does not apply to a specific site or property, rather applies to the city as a whole. In addition, as addressed above no properties will be rezoned as a result of this plan amendment.

**OREGON ADMINISTRATIVE RULES CHAPTER 660, DIVISION 009**  
**660-009-0015 - Economic Opportunities Analysis**

Cities and counties must review and, as necessary, amend their comprehensive plans to provide economic opportunities analyses containing the information described in sections (1) to (4) of this rule. This analysis will compare the demand for land for industrial and other employment uses to the existing supply of such land.

(1) Review of National, State, Regional, County and Local Trends. The economic opportunities analysis must identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends. This review of trends is the principal basis for estimating future industrial and other employment uses as described in section (4) of this rule. A use or category of use could reasonably be expected to expand or locate in the planning area if the area possesses the appropriate locational factors for the use or category of use. Cities and counties are strongly encouraged to analyze trends and establish employment projections in a geographic area larger than the planning area and to determine the percentage of employment growth reasonably expected to be captured for the planning area based on the assessment of community economic development potential pursuant to section (4) of this rule.

(2) Identification of Required Site Types. The economic opportunities analysis must identify the number of sites by type reasonably expected to be needed to accommodate the expected employment growth based on the site characteristics typical of expected uses. Cities and counties are encouraged to examine existing firms in the planning area to identify the types of sites that may be needed for expansion. Industrial or other employment uses with compatible site characteristics may be grouped together into common site categories.

(3) Inventory of Industrial and Other Employment Lands. Comprehensive plans for all areas within urban growth boundaries must include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use.

(a) For sites inventoried under this section, plans must provide the following information:

(A) The description, including site characteristics, of vacant or developed sites within each plan or zoning district;

(B) A description of any development constraints or infrastructure needs that affect the buildable area of sites in the inventory; and

(C) For cities and counties within a Metropolitan Planning Organization, the inventory must also include the approximate total acreage and percentage of sites within each plan or zoning district that comprise the short-term supply of land.

(b) When comparing current land supply to the projected demand, cities and counties may inventory contiguous lots or parcels together that are within a discrete plan or zoning district.

(c) Cities and counties that adopt objectives or policies providing for prime industrial land pursuant to OAR 660-009-0020(6) and 660-009-0025(8) must identify and inventory any vacant or developed prime industrial land according to section (3)(a) of this rule.

(4) Assessment of Community Economic Development Potential. The economic opportunities analysis must estimate the types and amounts of industrial and other employment uses likely to

occur in the planning area. The estimate must be based on information generated in response to sections (1) to (3) of this rule and must consider the planning area's economic advantages and disadvantages. Relevant economic advantages and disadvantages to be considered may include but are not limited to:

- (a) Location, size and buying power of markets;
- (b) Availability of transportation facilities for access and freight mobility;
- (c) Public facilities and public services;
- (d) Labor market factors;
- (e) Access to suppliers and utilities;
- (f) Necessary support services;
- (g) Limits on development due to federal and state environmental protection laws; and
- (h) Educational and technical training programs.

(5) Cities and counties are strongly encouraged to assess community economic development potential through a visioning or some other public input based process in conjunction with state agencies. Cities and counties are strongly encouraged to use the assessment of community economic development potential to form the community economic development objectives pursuant to OAR 660-009-0020(1)(a).

**Findings:** A majority of the findings and analysis relied on for the proposed amendment are included in the attached Economic Opportunities Analysis (EOA) prepared by Johnson Economics dated October 2019 and is hereby incorporated into the record.

**Conclusion:** An Economic Opportunities Analysis in compliance with the Oregon Administrative Rule 660-009-0015 prepared by Johnson Economic date October 2019 is attached and hereby incorporated into the record.

### **660-009-0020 - Industrial and Other Employment Development Policies**

(1) Comprehensive plans subject to this division must include policies stating the economic development objectives for the planning area. These policies must be based on the community economic opportunities analysis prepared pursuant to OAR 660-009-0015 and must provide the following:

- (a) Community Economic Development Objectives. The plan must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Policy objectives may identify the level of short-term supply of land the planning area needs. Cities and counties are strongly encouraged to select a competitive short-term supply of land as a policy objective.
- (b) Commitment to Provide a Competitive Short-Term Supply. Cities and counties within a Metropolitan Planning Organization must adopt a policy stating that a competitive short-term supply of land as a community economic development objective for the industrial and other employment uses selected through the economic opportunities analysis pursuant to OAR 660-009-0015.
- (c) Commitment to Provide Adequate Sites and Facilities. The plan must include policies committing the city or county to designate an adequate number of sites of suitable sizes, types and locations. The plan must also include policies, through public facilities planning and transportation system planning, to provide necessary public facilities and transportation facilities for the planning area.

**Findings:** The City of Umatilla's comprehensive plan is implemented through the economic

development policies. The adopted policies state the economic development objectives and strategies implemented within the planning area. The policies implement the economic development objectives of the city by committing to provide adequate supply of land to support employment growth (Policy 9.4.101). To coordinate with local partners on local and regional economic development projects (Policy 9.4.102). To establish districts that incentives development within the city (Policy 9.4.103) and to establish flexible zoning to encourage redevelopment of downtown (Policies 9.4.104 -9.4.107).

The city is not located within a Metropolitan Planning Organization and is not proposing to adopt policies relating to the short-term supply of land. The city has adopted policies relating to public facilities (Chapter 11) and transportation facilities (Chapter 12).

**Conclusion:** The proposed comprehensive plan policies implement the economic development objectives of the city. Specifically, Policy 9.4.101 will commit the city to maintain and adequate supply of employment lands to meet the projected need of the city. The city is not located within a Metropolitan Planning Organization and is not proposing to adopt policies relating to the short-term supply of land. The city has adopted polices to provide public facilities and services and implement the city’s Transportation System Plan.

**NOTE:** While the city is not adopted policies to identify a level of short term land supply the city has received 3 applications that would will meet the city’s need for additional large lot industrial sites as identified in the EOA by a UGB expansion, rezone and annexation applications. The result would be approximately 450 acres of land zoned for industrial use that would meet the projected need for large lot industrial sites.

(2) Plans for cities and counties within a Metropolitan Planning Organization or that adopt policies relating to the short-term supply of land, must include detailed strategies for preparing the total land supply for development and for replacing the short-term supply of land as it is developed. These policies must describe dates, events or both, that trigger local review of the short-term supply of land.

**Findings:** The city is not located within a Metropolitan Planning Organization and is not proposing to adopt policies relating to the short-term supply of land.

**Conclusion:** The city is not located within a Metropolitan Planning Organization and is not proposing to adopt policies relating to the short-term supply of land. This criterion is not applicable.

(3) Plans may include policies to maintain existing categories or levels of industrial and other employment uses including maintaining downtowns or central business districts.

**Findings:** As addressed above the city has an adopted downtown revitalization plan that is implemented by four Polices (Policies 9.9.104 -9.9.107). These Policies directly refer to the maintenance and development of the downtown business district.

**Conclusion:** Policies 9.9.104-9.9.107 emphasis development of a pedestrian oriented downtown business districts.

(4) Plan policies may emphasize the expansion of and increased productivity from existing industries and firms as a means to facilitate local economic development.

(5) Cities and counties are strongly encouraged to adopt plan policies that include brownfield redevelopment strategies for retaining land in industrial use and for qualifying them as part of the local short-term supply of land.

(6) Cities and counties are strongly encouraged to adopt plan policies pertaining to prime industrial land pursuant to OAR 660-009-0025(8).

(7) Cities and counties are strongly encouraged to adopt plan policies that include additional approaches to implement this division including, but not limited to:

(a) Tax incentives and disincentives;

(b) Land use controls and ordinances;

(c) Preferential tax assessments;

(d) Capital improvement programming;

(e) Property acquisition techniques;

(f) Public/private partnerships; and

(g) Intergovernmental agreements.

**Findings:** These criteria allow a city to adopt policies related to brownfield redevelopment, prime industrial land and other policies to encourage development. The City is not proposed to implement policies as allowed by these criteria. Therefore, these criteria are not considered applicable to this amendment.

**Conclusion:** The above criteria allow a city to adopt policies related to specific economic development conditions but are not required. Therefore, these criteria are not considered applicable to this request.

### **660-009-0025 - Designation of Lands for Industrial and Other Employment Uses**

Cities and counties must adopt measures adequate to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementing measures include amendments to plan and zone map designations, land use regulations, public facility plans, and transportation system plans.

(1) Identification of Needed Sites. The plan must identify the approximate number, acreage and site characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies. Plans do not need to provide a different type of site for each industrial or other employment use. Compatible uses with similar site characteristics may be combined into broad site categories. Several broad site categories will provide for industrial and other employment uses likely to occur in most planning areas. Cities and counties may also designate mixed-use zones to meet multiple needs in a given location.

**Findings:** As addressed above the proposed text amendment will incorporate the EOA into Chapter 9 of the comprehensive plan. The EOA addresses the number, size and characteristics of sites needed to meet the city projected need during the planning period. As addressed above, Policy 9.4.101 will commit the City to maintain and adequate supply of employment lands to meet the projected need of the City.

**Conclusion:** Approval of the proposed text amendment would incorporate the recently completed EOA into the comprehensive plan. The EOA identifies the City's projected needs for industrial and commercial sites and identifies specific site deficits (size).

(2) Total Land Supply. Plans must designate serviceable land suitable to meet the site needs

identified in section (1) of this rule. Except as provided for in section (5) of this rule, the total acreage of land designated must at least equal the total projected land needs for each industrial or other employment use category identified in the plan during the 20-year planning period.

**Findings:** As addressed above the proposed text amendment will incorporate the EOA into chapter 9 of the comprehensive plan. Appendix B of the EOA is a buildable lands inventory that identifies lands that are consider serviceable (vacant or redevelopable parcels) and could meet the site needs for the planning period.

**Conclusion:** Approval of this amendment will incorporate the EOA into the city's comprehensive plan. The proposed text amendment identifies the current land supply located within the UGB that could meet the projected need for industrial and commercial sites.

(3) Short-Term Supply of Land. Plans for cities and counties within a Metropolitan Planning Organization or cities and counties that adopt policies relating to the short-term supply of land must designate suitable land to respond to economic development opportunities as they arise. Cities and counties may maintain the short-term supply of land according to the strategies adopted pursuant to OAR 660-009-0020(2).

(a) Except as provided for in subsections (b) and (c), cities and counties subject to this section must provide at least 25 percent of the total land supply within the urban growth boundary designated for industrial and other employment uses as short-term supply.

(b) Affected cities and counties that are unable to achieve the target in subsection (a) above may set an alternative target based on their economic opportunities analysis.

(c) A planning area with 10 percent or more of the total land supply enrolled in Oregon's industrial site certification program pursuant to ORS 284.565 satisfies the requirements of this section.

**Findings:** The city is not proposing to adopt policies relating to short-term land supply and is not located within a metropolitan planning organization.

**Conclusion:** The city is not located within a metropolitan planning organization and is not proposing to adopt policies relating to the short-term supply of land. Therefore, these criteria are not applicable.

(4) If cities and counties are required to prepare a public facility plan or transportation system plan by OAR chapter 660, division 011 or division 012, the city or county must complete subsections (a) to (c) of this section at the time of periodic review. Requirements of this rule apply only to city and county decisions made at the time of periodic review. Subsequent implementation of or amendments to the comprehensive plan or the public facility plan that change the supply of serviceable land are not subject to the requirements of this section. Cities and counties must:

(a) Identify serviceable industrial and other employment sites. The affected city or county in consultation with the local service provider, if applicable, must make decisions about whether a site is serviceable. Cities and counties are encouraged to develop specific criteria for deciding whether or not a site is serviceable. Cities and counties are strongly encouraged to also consider whether or not extension of facilities is reasonably likely to occur considering the size and type of uses likely to occur and the cost or distance of facility extension;

(b) Estimate the amount of serviceable industrial and other employment land likely to be needed during the planning period for the public facilities plan. Appropriate techniques for

estimating land needs include but are not limited to the following:

(A) Projections or forecasts based on development trends in the area over previous years; and

(B) Deriving a proportionate share of the anticipated 20-year need specified in the comprehensive plan.

(c) Review and, if necessary, amend the comprehensive plan and the public facilities plan to maintain a short-term supply of land. Amendments to implement this requirement include but are not limited to the following:

(A) Changes to the public facilities plan to add or reschedule projects to make more land serviceable;

(B) Amendments to the comprehensive plan that redesignate additional serviceable land for industrial or other employment use; and

(C) Reconsideration of the planning area's economic development objectives and amendment of plan objectives and policies based on public facility limitations.

(d) If a city or county is unable to meet the requirements of this section, it must identify the specific steps needed to provide expanded public facilities at the earliest possible time.

**Findings:** The proposed text amendment is not part of periodic review. Therefore, the requirements of this rule are not applicable to this request.

**Conclusion:** The proposed text amendment is not part of period review. Therefore, as requirements of this rule are not applicable.

(5) Institutional Uses. Cities and counties are not required to designate institutional uses on privately owned land when implementing section (2) of this rule. Cities and counties may designate land in an industrial or other employment land category to compensate for any institutional land demand that is not designated under this section.

**Findings:** Institutional uses are considered in the EOA and included in the forecast for needed site. However, the EOA finds that the city has a sufficient land supply to meet the city's projected with the exception of large lot industrial sites.

**Conclusion:** As addressed in the EOA the city has sufficient land to meet the city's land supply needs through the planning period with the exception of large lot industrial sites. Therefore, the city finds that the institutional land demand can be met with the existing supply of employment lands located within the UGB.

(6) Compatibility. Cities and counties are strongly encouraged to manage encroachment and intrusion of uses incompatible with industrial and other employment uses. Strategies for managing encroachment and intrusion of incompatible uses include, but are not limited to, transition areas around uses having negative impacts on surrounding areas, design criteria, district designation, and limiting non-essential uses within districts.

**Findings:** The city has implemented zoning regulation for all of the existing commercial and industrial zones that require additional setback and other measures to limit the impact uses not compatible with industrial or commercial uses.

**Conclusion:** The city has implemented design, development standards in all of the existing employment land (industrial and commercial) zoning districts. These standards minimum the potential encroachment and intrusion of uses not compatible with employment uses. Therefore, no change are necessary to comply with this requirement.

(7) Availability. Cities and counties may consider land availability when designating the short-term supply of land. Available land is vacant or developed land likely to be on the market for sale or lease at prices consistent with the local real estate market. Methods for determining lack of availability include, but are not limited to:

- (a) Bona fide offers for purchase or purchase options in excess of real market value have been rejected in the last 24 months;
- (b) A site is listed for sale at more than 150 percent of real market values;
- (c) An owner has not made timely response to inquiries from local or state economic development officials; or
- (d) Sites in an industrial or other employment land category lack diversity of ownership within a planning area when a single owner or entity controls more than 51 percent of those sites.

**Findings:** The availability of land within the UGB is identified in the buildable land inventory (appendix B of the EOA). Appendix B of the EOA is included as part of exhibit b and incorporated here by reference.

**Conclusion:** The methodology for determining the availability of land within the UGB is identified in the buildable land inventory (appendix B of the EOA).

(8) Uses with Special Siting Characteristics. Cities and counties that adopt objectives or policies providing for uses with special site needs must adopt policies and land use regulations providing for those special site needs. Special site needs include, but are not limited to large acreage sites, special site configurations, direct access to transportation facilities, prime industrial lands, sensitivity to adjacent land uses, or coastal shoreland sites designated as suited for water-dependent use under Goal 17. Policies and land use regulations for these uses must:

- (a) Identify sites suitable for the proposed use;
- (b) Protect sites suitable for the proposed use by limiting land divisions and permissible uses and activities that interfere with development of the site for the intended use; and
- (c) Where necessary, protect a site for the intended use by including measures that either prevent or appropriately restrict incompatible uses on adjacent and nearby lands.

**Findings:** The EOA considers the availability of land within the city's UGB and considers the need for uses that required special siting characteristics (size). The EOA identifies the need for two additional 50 to 99 acres sites and one 100+ acres parcel within the UGB to meet the city project land supply need. However, the city is not proposing to adopt objectives or policies providing for uses with special site needs. Therefore, these criteria are not applicable.

**Conclusion:** The proposed text amendment does not include objective or policies providing for uses with special site needs. Therefore, these criteria are not applicable.

### **660-009-0030 - Multi-Jurisdiction Coordination**

(1) Cities and counties are strongly encouraged to coordinate when implementing OAR 660-009-0015 to 660-009-0025.

(2) Jurisdictions that coordinate under this rule may:

- (a) Conduct a single coordinated economic opportunities analysis; and
- (b) Designate lands among the coordinating jurisdictions in a mutually agreed proportion.

**Findings:** These criteria allow for counties and cities to coordinate when implementing OAR



660-009-0015 to 660-009-0025 but are not required. The City recently completed and adopted a Residential and Housing Needs Assessment (HNA) and proceeded with the EOA to update the city's inventory and need for both residential and employment lands. The County was provided notice of the of the Goal 10 update, adoption of the HNA, and was provided notice of the prosed update. In addition, as required by the joint management agreement between the city and county the city will seek to have the county co-adopt both amendments.

**Conclusion:** These criteria allow of coordination when implementing OAR 660-009-0015 to 660-009-0025 but are not required. Therefore, these criteria are not applicable.

#### **IV. SUMMARY AND RECOMMENDATION**

The applicant, City of Umatilla, is proposing to amend the City of Umatilla Comprehensive Plan. The economic opportunity analysis has six primary sections. Economic trends, target industries, employment land needs, capacity, reconciliation, and economic development potential and conclusions. The proposed plan amendment will incorporate the relevant sections of the Umatilla economic opportunity analysis into Chapter 9 of the Comprehensive Plan. The request appears to meet all of the applicable criteria and standards for this type of request. Therefore, based on the information in Sections I and II of this report, and the above criteria, findings of fact and conclusions addressed in Section III, the City of Umatilla Planning Commission recommends approval of Plan Amendment (PA-1-20).

#### **VI. EXHIBITS**

Exhibit A – Draft Text Change  
Exhibit B – Economic Opportunity Analysis

## Exhibit A – Draft Text Change

Chapter 9 of the City of Umatilla Comprehensive Plan will be replaced in its entirety as provided below.

### CHAPTER 9

#### GOAL 9: ECONOMIC DEVELOPMENT

##### **SECTION 9.0 ECONOMIC DEVELOPMENT GOAL**

To provide for employment opportunities, revenue generation and economic stability.

##### **SECTION 9.1. ECONOMIC DEVELOPMENT BACKGROUND AND DISCUSSION**

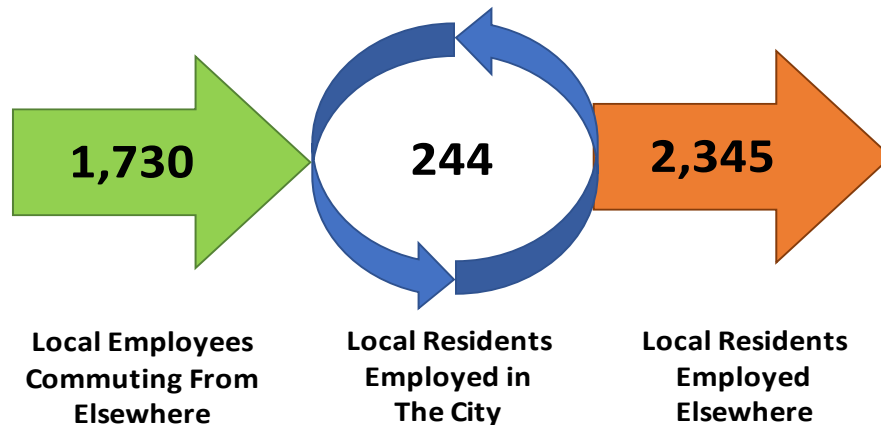
The regional economy has been relatively stable over the past 20 years. Irrigated agriculture and agri-business have been a sustaining economic force, as well as government sector employment (Two-Rivers Correctional Facility, Umatilla School District are the largest public sector employers). More recently, large industrial facilities including data centers and small manufacturing, have helped create a more diverse local economy. Meanwhile, retail and commercial developments have been stagnant.

Commuting has a significant impact on employment and employment opportunities. In the 2019 Employment Lands Analysis conducted for the city, Johnson Economics found that “local residents and employees commute broadly within Umatilla County and beyond. In the City of Umatilla, the local workforce was estimated at roughly 2,589 in 2017, of which 2,345 (90%) travelled outside of the city for employment while an estimated 244 both lived and worked within the city limits.” See Figure 9.1 Below

At the same time, an estimated 1,730 workers commuted into the city for employment, making up over 85% of the local job base of roughly 1,975. (These figures include covered employment and do not capture all forms of self-employment or contracting. Therefore, these figures are best used as an imprecise indicator of the overall pattern.)

This pattern is familiar to many communities across the state, but the extent to which local residents commute elsewhere for employment, and residents of other communities commute in for local jobs, seems somewhat more stark in the case of Umatilla. Commuting patterns are an important element in the local economy. They are indicative of the labor shed from which companies can draw workers, the extent to which job creation translates into increased demand for housing, goods, and services and the overall balance of population and employment in the community.” Johnson Economics, Employment Opportunities Analysis, September 2019.

Figure 9.1



### 9.1.100 INDUSTRIAL AND JOB GROWTH OPPORTUNITIES

A number of projects are anticipated for Umatilla and the surrounding area. The Umatilla Chemical Depot with approximately 1,000 acres zoned for commercial and industrial use will be available for development as soon as the land is transferred from the United States Army to the Columbia Development Authority. The Port of Umatilla has small and medium sized parcels zoned for industrial development. The Bureau of Indian Affairs owns a 200 acre parcel to the east of Umatilla. Data center development is likely to continue in the region, as well as small manufacturing, food processing and retail and commercial revitalization.

According to the 2019 Johnson Economics report, there are a number of target industries for city, based on the strengths and advantages and established economic development goals. Target industries include data center and cloud storage services, manufacturing (traditional and advanced), tourism and retail, transportation, warehousing and distribution and health care industries.

## SECTION 9.2 DOWNTOWN REVITALIZATION AND CIRCULATION PLAN

### 9.2.010 Introduction

The Downtown Revitalization and Circulation Plan will help the City of Umatilla redevelop the downtown as a vital, pedestrian-oriented center and create an efficient transportation system. The plan identifies a series of projects and strategies that will enhance the pedestrian environment in the community and improve the transportation system.

The plan identifies opportunities for downtown redevelopment, transportation improvements and defines a project implementation strategy, which if properly implemented, should result in significant revitalization of the downtown area. The plan is intended to function as a specific plan with key policies, projects, and programs that guide public and private investment in the community.

### 9.2.020 *Project Study Area*

The downtown revitalization plan has a general study area defined by the Columbia River to the north, Umatilla River to the south, Powerline Road to the west, and Umatilla River Road to the east. The interchange improvement component of the project will be documented in a separate report and encompasses a study area east of Umatilla River Road to the I-82 interchange with Highway 730. More specific elements of the downtown revitalization plan focused on Highway 730 (6<sup>th</sup> Street) and one block north to 5<sup>th</sup> Street and one block south to 7<sup>th</sup> Street. *Figure 9.2-1* shows the study area.

While plan recommendations are focused on the downtown area of the City, the project study area includes the downtown area and its immediate surroundings. Activities of influence and connections surrounding the downtown were considered to be important factors during the development of the plan.

### 9.2.030 *Planning Process*

The planning process used to produce the City of Umatilla's Downtown Revitalization Plan is unique in several respects. First, a market analysis was integrated into the study to provide a strategic basis for implementing elements of the Plan. Concepts and design ideas were expressed graphically, to make them more understandable and help the community envision elements of the Plan. The public involvement process was designed to reach a broad segment of the local community and to include people of all age groups in the development of the Plan. During the early stages of the planning process, a broad spectrum of revitalization ideas was considered, but only practical and achievable ideas were included listed as project goals and objectives. Finally, the Plan has been coordinated with the Circulation Plan aimed at alleviating traffic issues associated with the Downtown Revitalization Plan.

More detailed information that resulted from the charrette and public workshops is provided later. Listed below are the major steps included in the planning process and the project meetings that were held.

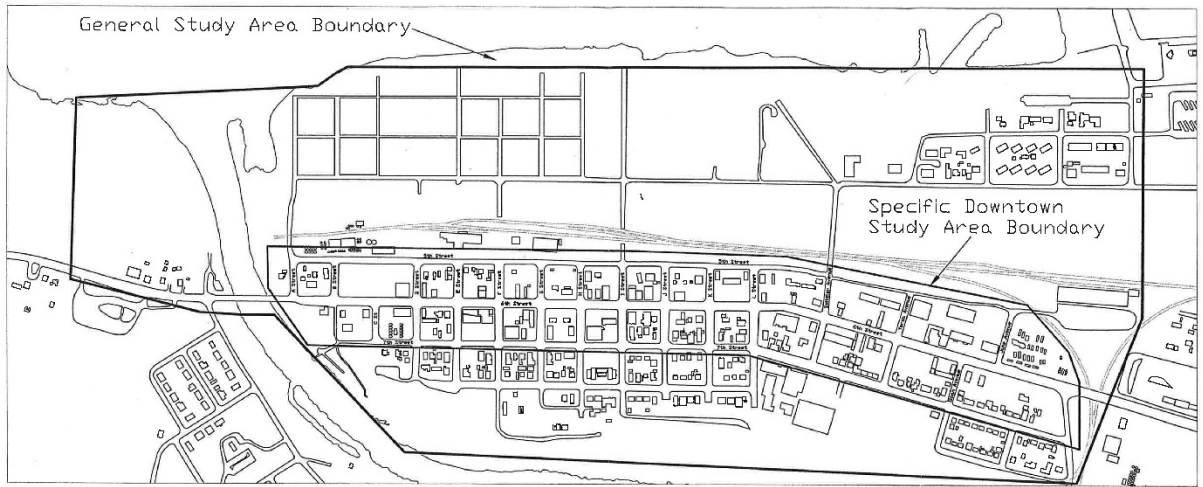
#### Project Steps

- 1) Project initiation, data collection, meeting preparation
- 2) Project reconnaissance and meetings
- 3) Base map and sections
- 4) Opportunities and Constraints Report
- 5) Community Involvement
- 6) Options for downtown development
- 7) Downtown Development Workshop (consensus)
- 8) Strategic Plan
- 9) Strategic Plan Presentation
- 10) Code amendments – review and adoption

#### Meetings

October 2000 – Distribute Public Questionnaire

2 November 2000 – Walking Tour and Community Visioning Exercise  
2 November 2000 – Management Team Meeting  
8 November 2000 - McNary Heights Elementary School Charrette  
8 November 2000 – Clara Brownell Middle School Charrette  
8 November 2000 – Advisory Committee Meeting  
8 November 2000 – Umatilla High School – Adult Charrette  
9 November 2000 – Downtown Workshop  
22 January 2001 – Dinner Meeting with City Council and Planning Commission  
25 January 2001 – Management Team Meeting  
25 January 2001 – Interchange Refinement Planning Meeting #1  
25 January 2001 – Joint Planning Commission/City Council Work Session  
26 April 2001 – Management Team Meeting  
26 April 2001 – Interchange Refinement Planning Meeting #2  
26 April 2001 – Strategic Plan Presentation to Planning Commission  
31 May 2001 – Planning Commission Hearing  
4 June 2001 – City Council Hearing



City of Umatilla Downtown  
Revitalization and Circulation Study

Figure 9.2-1  
Study Area Boundary  
Page 50

9.2.100            *OPPORTUNITIES AND CONSTRAINTS*

The planning team determined opportunities and constraints for the downtown revitalization study through site analysis, research, and public involvement techniques. Team findings are documented in detail in the Opportunities and Constraints Report dated June, 2001. Included in this chapter is a summary of the most significant findings of that report.

When developing opportunities and constraints for downtown Umatilla, a wide range of topics was considered. These topics included:

- Questionnaire results and results from the walking tour
- Historic sites
- Inventory and evaluation of pedestrian facilities
- Identification of significant sources of pedestrian traffic
- Location of public buildings and uses
- Analysis of buildings fronting 6<sup>th</sup> Street
- Inventory of DEQ cleanup sites, sites that store hazardous material and potentially contaminated sites
- Survey of vacant or underutilized land and facilities
- Evaluation of existing neighborhood boundaries and land use
- Street layout and traffic control facilities
- On-street and off-street parking
- Public utilities
- Waterways
- Streetscape
- Pedestrian linkages, and
- Planned public facility improvement projects

After analyzing opportunities and constraints, the team concluded that there does not exist a distinct node or center in downtown around which focus future redevelopments efforts. Alternatively, the downtown is effectively a ‘blank slate,’ allowing great flexibility for future redevelopment.

Table 9.2-1 summarizes the most significant findings of the Opportunities and Constraints report.

The opportunities and constraints were considered in developing the framework for the concept plan. They are also important in determining factors when devising a strategic approach to downtown revitalization.

Because no clearly defined town center exists, members of the planning team, together with community participants, selected a focus area for downtown redevelopment. While about half of the twelve public buildings are scattered in the downtown area, there is a cluster of public uses along Sixth Street between “I” Street and “J” Street. The corner of Sixth and “I” Streets was selected as the focus area for redevelopment and is envisioned as the central place of Umatilla’s



downtown. A long-term opportunity for Umatilla is to cluster public uses near the downtown center.

The opportunities and constraints for downtown Umatilla indicate that immediate results will be difficult to achieve, and that the best results might be realized by implementing a long-term revitalization strategy.

Table 9.2-1. Opportunities and Constraints Summary

<b>Opportunities</b>	<b>Constraints</b>
<ul style="list-style-type: none"> <li>▪ Schools and the grocery store are pedestrian generators.</li> <li>▪ Downtown has two nodes of buildings with frontage on Sixth Street.</li> <li>▪ There is a concentration of buildings around the museum and library.</li> <li>▪ Downtown vacant and underdeveloped lands offer redevelopment potential.</li> <li>▪ Downtown has potential linkages to surrounding neighborhoods.</li> <li>▪ The street grid in downtown provides good access.</li> <li>▪ Plenty of parking capacity exists in the downtown.</li> <li>▪ Generally, Sixth Street is well served by improvements such as sidewalks and curbs.</li> <li>▪ Extension and expansion of the Heritage Trail</li> </ul>	<ul style="list-style-type: none"> <li>▪ There are numerous missing ramps and sidewalks along Sixth Street.</li> <li>▪ Downtown blocks are underdeveloped and public and private buildings are scattered.</li> <li>▪ Abandoned gas stations are potentially contaminated sites.</li> <li>▪ There is no concentration of opportunities in downtown.</li> <li>▪ Few distinct neighborhoods exist in downtown.</li> <li>▪ There is no identifiable center in the downtown.</li> <li>▪ Perceived street crossing problems for pedestrians in downtown.</li> <li>▪ Side streets lack sidewalks, curbs and other improvements.</li> <li>▪ The downtown lacks cohesion.</li> </ul>

9.2.200 *MARKET ANALYSIS*

This section provides an overview of the current commercial and residential markets in the City of Umatilla and a brief assessment of the economic opportunities and constraints for revitalizing the downtown. This work recognizes the notable social and economic changes in Western Umatilla County in the last five years. Much of the recent economic activity is related directly or indirectly to the addition of four major employers to the region. Many of the impacts of these employers were anticipated and discussed in the HUES<sup>1</sup> Growth Impact Study, February 1998.

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<sup>1</sup> Hermiston, Umatilla, Echo and Stanfield

9.2.210 *Housing Market*

Housing construction in the City of Umatilla has experienced a significant upswing in recent years. The housing needs analysis completed for the City in 1999 identified over 1,200 existing housing units and indicated permitting for new units had been relatively sparse from 1987 through 1998 (approximately 78 permits over 11 years). However, in the last two and half years, 144 new housing units have been permitted (nearly twice that of the previous 11 year period). This trend can be seen from the data summarized in Table 9.2-2.

Recent developments have included Phase 1 of Riverview Estates and Telleron. Phase 1 of Riverview included 49 lots, of which three remain (two with new homes on them).

Table 9.2-2. Housing Permits (1987-2001)

Unit Type	Prior to 1987	1987-1998	1999-March 2001
Single Family	767	68	63
Multi-Family	75	8	44
Manufactured	359	2	37
<b>Total</b>	<b>1,201</b>	<b>78</b>	<b>144</b>

Note: Adjustment made to 1987-1998 multi-family units permit number to account for reporting variations.

Source: *City of Umatilla Housing Needs Analysis*, Benkendorf Associates Corp., *Oregon Building Permit Reports*, CPRC Portland State University, and City of Umatilla.

Properties were sold both with Hayden Homes and as vacant lots. Twenty-six Hayden homes sold in the last 18 months. The majority of these single-family homes had three bedrooms and two baths. Sales prices ranged from \$78,715 – for a two bedroom two bath home – to \$116,240 – for a four bedroom two bath home. Phase 3 is expected to begin soon.

Eight Telleron properties (which feature Penbrook homes) sold over the same period. Again the majority of the homes included three bedrooms and two baths. Sales prices ranged from \$102,000 to \$164,000.

Other residential development projects include construction of twelve 4-plexes for rental housing, a 265 unit manufactured home park, and conversion of an existing single-family rental community to owner occupied units.

A review of existing and new single-family home sales in the City over the last 18 months indicates a strong market for starter homes priced \$125,000 or less. This data is shown in Table 9.2-3. Of the 96 sales identified, only 6 came in at prices above \$125,000. The least expensive homes were previously owned manufactured units – the majority of which were priced at \$50,000 or less.

Table 9.2-3 City of Umatilla Home Sales for Single Family Units Under \$300,000  
(November 1999 to March 2001)

Sales Price	Unit Type	
	Standard	Manufactured
Less than \$50,000	3	10
\$50,000 to \$75,000	18	3
\$75,001 to \$100,000	31	2
\$100,001 to \$125,000	23	0
\$125,001 to \$215,000	6	0
<b>Total</b>	<b>81</b>	<b>15</b>

Note: Sales include existing and new standard housing units and existing manufactured housing resales that include land in price.

Source: Local real estate agent contact.

Table 9.2-4 summarizes the multi-family rent range in the City of Umatilla. Most apartment units in the City were constructed in the 1970s. Multi-family rents range from \$355 to \$700 per month depending on the unit size, furnishings, and/or subsidization. Landlords report that there are many short-term renters associated with temporary employment such as construction projects and agricultural or factory employment. This results in fluctuations in vacancy rates.

With the exception of subsidized housing (which tends to have fewer vacancies), vacancy rates range between 4% and 15%. Landlords comment that there seems to be noticeable excess supply of apartment rentals at the moment.

Table 9.2-4 City of Umatilla Multi-Family Rents

Unit Size	Rent Range
Studio & 1 Bedroom	\$355 to \$450
2 Bedroom	\$410 to \$700
3 Bedroom	\$470 to \$675

Note: Low-end of rent range generally associated with subsidized housing units, some of higher-end units are furnished.

Source: Local property managers.

### 9.2.220 Commercial Space Market

Currently there is little apparent demand for commercial space in the City of Umatilla. Reportedly no new commercial construction has occurred recently and about half of the recent existing commercial building sales in the City were to the School District.

Commercial rents for the region are summarized in Table 9.2-5. Vacant commercial space is available in both the 6<sup>th</sup> Street commercial area and in McNary. As a result of the lack of demand, rental rates for commercial space in Umatilla range from \$2.40 to \$6.00 per square foot per year, less than half the cost of space in nearby Hermiston. These rental rates are typically not adequate to support new construction or significant improvements to existing buildings.

Table 9.2-5 Commercial Rents (2001)

City/Area	Annual Rent per Square Feet
Hermiston	
- Downtown	\$12.00 to \$16.80
- Hermiston Plaza	\$10.00 to \$13.00
- Other	\$10.20 to \$12.00
Umatilla	\$2.40 to \$6.00

Note: Detail on condition of commercial spaces not readily available.

Source: Local real estate tenants, appraisers, agents.

Commercial rents in Hermiston reportedly are highest in the downtown (\$12.00 to \$16.80 per SF per year) and drop by as much as 25% (to a range of \$10.00 to \$13.00 per SF per year) for areas outside the downtown. The market for commercial space also appears to be quite price sensitive. An increase in rents at Hermiston Plaza apparently has been accompanied by a loss of tenants including anchor tenant Rite Aid Drugs. Some remaining businesses report a significant drop in sales as a result of this loss and that the quality of incoming businesses and merchandise has lowered.

On the other hand, demand for warehouse or flex space for storage and/or light manufacturing businesses has been noted in both the Umatilla and Hermiston markets.

#### 9.2.230 Economic Assessment

The City of Umatilla has a number of *strengths* but also faces numerous challenges in its attempt to develop a stronger commercial core and city center. The strengths include:

- Successful marketing of port industrial property is bringing in new light industrial and transportation businesses such as trucking, farm tool & implement, and rustic furniture companies.
- Residential development occurring in just the last two plus years has already outpaced development over the previous decade.
- On the demographic side, strong population growth and increasing incomes for households in their prime employment years are being experienced.
- The existing commercial business mix includes some key anchor businesses (such as the grocery, drugstore and bank) and provides a good base from which to build future commercial expansion and investment.

However, despite these strengths, tenant based locally driven commercial development isn't occurring in Umatilla. The following *challenges* are likely reasons for the apparent lack of commercial interest/development:

- The downtown commercial area is a mile-long rectilinear district and is most likely still too large for the number of commercial businesses supportable by the City population and incomes.
- The downtown commercial district is west of both the I-82 freeway and the port of entry.

- Area businesses face direct competition from national and local stores in nearby Hermiston. For at least some forms of retail, the Umatilla trade area is too small to support competing businesses that can generate industry standard sales volumes.
- The downtown commercial area is currently characterized by a significant number of vacant and underutilized commercial properties (including several prominent former gas station sites).
- Based on a series of conversations with local business proprietors, property owners, city and development corporation staff, it appears these groups have a variety of agendas and at times are working against each other – whether intentionally or inadvertently.
- In some instances it has been suggested Umatilla has a poor business climate making entry and start-ups difficult by discouraging potential tenants.
- Commercial rents in Umatilla are not sufficient to support new construction or significant improvement to existing structures.

In summary, there is nothing on the immediate horizon to suggest vacant or underutilized commercial properties in Umatilla will fill absent a program of proactive public/private investment strategies.

#### 9.2.300 *PUBLIC INVOLVEMENT*

The public involvement program for the Downtown Redevelopment Plan involved several components. First, in October 2000, 2900 project newsletters with a community questionnaire were distributed. The second step in the public involvement program was to conduct a walking tour of the study area with local stakeholders. Also included in this tour was an educational presentation of downtown planning concepts and a community visioning exercise. The third step was a series of charettes to generate ideas to revitalize the downtown Umatilla. Three charettes were conducted. Two of the charettes involved elementary and middle school children. The third and final charette was for the general public and held at the Umatilla High School. Following the charettes the next day was a downtown workshop. The downtown workshop summarized the public input and developed alternative concepts to revitalize the downtown area.

#### 9.2.310 *Community Questionnaire*

In October 2000, 2,900 questionnaires were mailed to area residents. The questionnaire was part of a project newsletter and listed a series of open-ended questions. In the six weeks following the mailing, approximately 28 questionnaires were returned. A copy of questionnaire responses is included in Appendix 9A-1. Key observations include the following:

*Downtown Identity* - Respondents provided a wide variety of answers to a question that asked people to list the landmarks and buildings that best identify downtown. Responses ranged from businesses and buildings in the core area (Carlson’s Drug Store, City Hall, and the Red Apple Cowboy) to outlying uses, such as the Port of Entry and the Umatilla Marina RV Park. Clearly, there was no consensus about what defines downtown Umatilla.

*Positive Characteristics* - In response to a question regarding the positive characteristics that should be maintained, there were few responses that focused on positive attributes. Some of the positive features included: parks, new high school, craft shops, murals, Umatilla Museum, library, and the MOR Theater.

*Negative Characteristics* - A longer list of negative characteristics was generated when people were asked to list the features that needed to be improved. Examples included: retail along main street, ugly buildings and signs, trees, green areas, old gas stations, and storm drains.

*Commercial Development* - In response to a question asking what type of commercial development is desired, people listed the following uses often found in a downtown area: bakery, hardware store, restaurants, a deli, real estate office, professional offices, a bowling alley, clothing store, and shoe store. People also listed uses that are not typically found in downtowns, including a lumber yard, Fred Meyer, Wal-Mart, Bi-Mart, and drive-through restaurants. Again, there was no clear consensus about what should occur in the downtown and what type of businesses should locate there.

*Traffic Issues* - Public response ranged from general to very specific improvements when asked if there were traffic problems related to pedestrian safety, speeding, parking, and congestion. A number of respondents mentioned the high levels of truck traffic in the downtown and problems for pedestrians attempting to cross Sixth Street.

*General Comments* - A variety of general comments was provided. Comments addressed issues such as signage, tourism, retail opportunities, and public involvement.

The results of the community questionnaire are included in Appendix 9A-1 with a copy of the questionnaire questions.

#### 9.2.320 *Walking Tour*

On November 2, 2000, the consultant team conducted a walking tour of downtown with a number of downtown stakeholders. As part of that process, a work session was held with participants. Notes from the work session are included in Appendix 9A-2. Key observations included:

##### *Constraints:*

- Downtown businesses are too spread out.
- The downtown is a highway with sidewalks.
- There is no reason for visitors to stop in the downtown.
- Hazardous materials at abandoned gas stations limit development.
- There are numerous absentee owners in the downtown.

##### *Opportunities:*

- The museum should have a strong presence on Sixth Street.
- Recruit the post office back to the downtown.
- Parking is available on the street.

- Gaps between existing buildings are an opportunity for development.
- “E” Street provides an opportunity to link to the park.
- The tour boats bring many visitors to Umatilla.
- Lots of small improvements will provide a realistic strategy for successful revitalization.

9.2.330 *Charette and Downtown Workshop*

On November 8 and 9, 2000, the H. Lee and Associates team held a two-day charrette that culminated in a downtown workshop attended by stakeholders, city officials, and citizens. The charrette activities on November 8 included two workshops with school children, a meeting with the project advisory committee, and an evening community workshop. On November 9, the consultant team synthesized information collected on the previous day and conducted a downtown workshop in the evening. Two separate reports document the workshop activities. The Charrette Report documents activities on November 8. The Downtown Workshop Report addresses activities on November 9.

9.2.331 *Charrette Report*

Charrette activities conducted on November 8, 2000, are summarized below. Each event is described separately.

Children’s Charrette – McNary Heights Elementary School.



The consultant team met with 16 elementary school children on the morning of November 8, 2000. Before the meeting, teachers had students draw pictures of uses and activities that children envisioned for downtown Umatilla. At the workshop, students took turns describing their drawings. A sampling of student drawings is included in *Figure 9.2-2*. As children talked about their desires, Bob Foster sketched images depicting the type of activities described. Following the discussion, the ideas that were most commonly stated were listed. The students

were then given five adhesive dots and were asked to vote for their favorite ideas. The results are provided in Table 9.2-6 below. Elementary school students had a strong desire to see better parks and playing fields. They also wanted a local swimming pool and the MOR movie theatre reopened. There was interest in creating a science museum. This idea received further discussion later in the day as citizens discussed local natural and archeological features. A sample of the elementary school children design charrette drawings is shown in *Figure 9.2-2*.

Children’s Charrette – Clara Brownell Middle School.

During the afternoon of November 8, 2000, the consultant team met with approximately 10 middle school children. As was done with the elementary school children, students prepared drawings before the workshop. Each child took a turn describing their vision of downtown Umatilla. Again, as students presented ideas, Bob Foster sketched concepts. Common ideas were listed and students voted to identify their preferences. The results are included in



Table 9.2-6 below. Samples of student drawings are shown in *Figure 9.2-3*. The most popular idea among middle school students was establishment of a skating rink - the Skate O’ Rama. Other popular ideas included a swimming pool, movie theater, and skate park.

Table 9.2-6 Summary of Results of Elementary School Children Design Charrette

Idea of Improvements to Umatilla	<i>Number of Votes for Idea</i>
Additional Parks and Sports Fields	17
Swimming Pool	13
Rehabilitate the Movie Theatre and Open	13
Mall	11
Science Museum	9
Teen Center	8
Restaurants	8
Arcade	5
Skate Park	4



Figure 9.2-2 Sample of Ideas from Elementary School Children Design Charrette



Table 9.2-7 Summary of Results of Middle School Children Design Charrette

Idea of Improvements to Umatilla	<i>Number of Votes for Idea</i>
Skate o' Rama	22
Movie Theatre	9
Swimming Pool	9
Skate Park	6
Bike Trails	3
Bowling Alley	3
New Middle School	3
Window Decorations	2
Fitness Center	1
Take Down Cowboy and Put Up Viking	1
More Shops	1

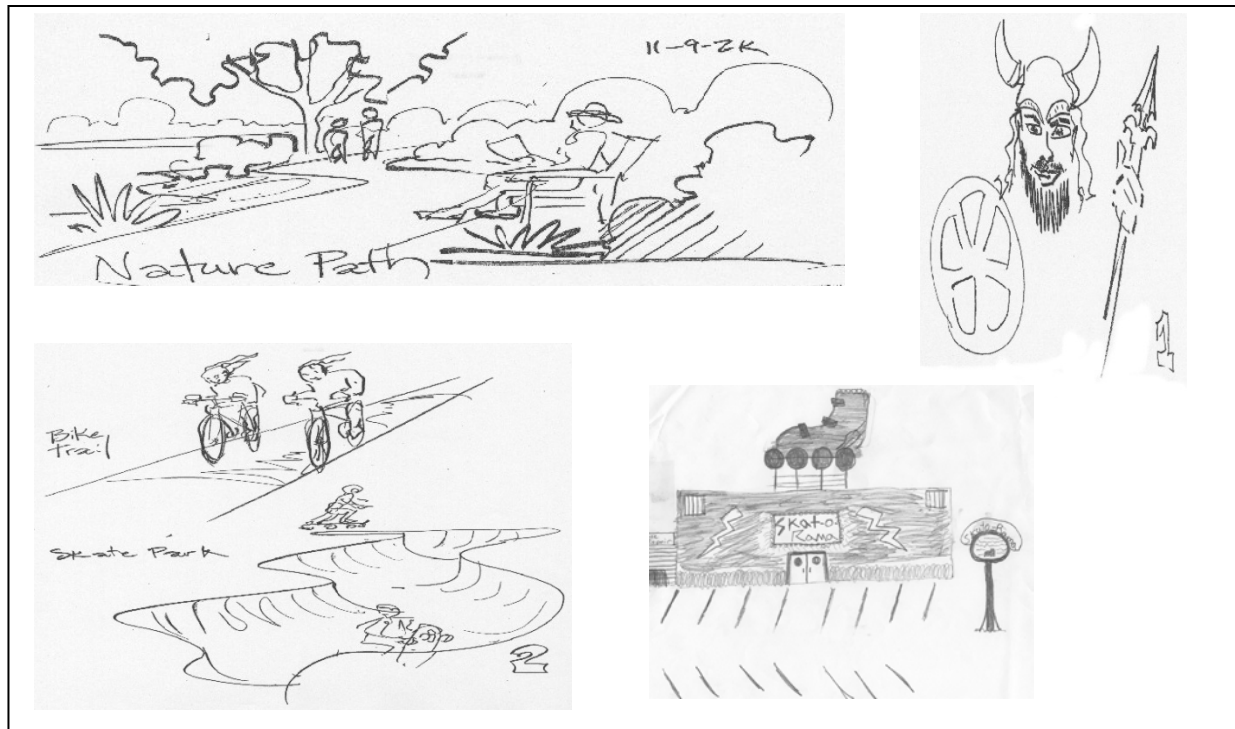
9.2.332 *Project Advisory Committee Meeting*

On November 8, 2000, a project advisory committee meeting was held after the children's workshops and before the evening adult charrette event. The focus of the meeting was to review

activities of the day and identify key concerns of the committee. The following list represents the key concerns of the committee:

- There is a major concern of how traffic will affect the downtown core. Three basic options exist. They are 1) move truck traffic away from downtown via an alternative route, 2) move the downtown center away from 6<sup>th</sup> Street, and 3) slow traffic down on 6<sup>th</sup> Street.
- The downtown needs to be separate from the major traffic corridor.
- More commercial development is needed to support the Columbia River tour boats. These developments need to be such as to keep patrons of the tour boats occupied for stops of one to two hours. Ideas for these developments include museums and small shops.
- The tribe should consider developing an interpretive center in town.
- No commercial kitchen exists in town. One should be sought to be developed in conjunction with other retail uses.
- There is a safety concern on 6<sup>th</sup> Street regarding truck traffic. The preference is to move truck traffic away from the downtown core.
- A traffic light should be considered to be installed along 6<sup>th</sup> Street to slow truck and general traffic down.
- Timing is critical in any redevelopment of downtown. The major issues are when, where, and how.
- The bridge on the west end of town is in need of replacement. It is tentatively scheduled to be replaced in 2005.

Figure 9.2-3 Sample of Ideas from Middle School Children Design Charrette



9.2.333 *Adult Charrette*

As part of the charrette process, a workshop was held with the general public on the evening of November 8, 2000. The session was held in the Umatilla High School and was attended by approximately 30 people. At the session, the consultant team presented background information on downtown planning principles. The student workshops were described, and the drawings were displayed. Charrette activities included prioritizing goals and providing comments at four workstations. One of the work stations is shown in *Figure 9.2-4*.

Draft downtown goals were prioritized by voting with adhesive dots. Participants were given four dots. Results are presented in Table 9.2-8. Goals that received the most votes were to cluster public and civic uses in downtown and to encourage improvement of downtown buildings. The goals that received the fewest votes were to provide more housing and mixed-use development in the downtown.

*Figure 9.2-4* One of Four Workstations at Community Workshop



Four workshop stations were provided. Participants made comments and noted ideas on post-it notes and applied the notes to large aerial photographs. The stations included the following topic areas:

- Urban design, building improvements, and land use.
- Pedestrian improvements.
- Circulation and parking.
- Streetscape improvements.

A transcript of comments from each station is included in Appendix 9A-3. Select comments from the workstations include the following:



*Urban Design, Building Improvements, and Land Use.*

- Murals/green walls
- Awnings
- Signage/sign controls
- Fix up movie theater
- Skate park
- Move post office downtown
- Town garden
- Accent the “cowboy” – light him at night

Table 9.2-8 Downtown Goals

Downtown Goals
1. Cluster public and civic uses (Post Office/City Hall) in downtown.
2. Encourage improvement of downtown buildings.
3. Enhance the pedestrian environment by providing a community gathering place and minimizing conflicts between pedestrians and highway traffic.
4. Improve city park (e.g. add a skate park and playing field) near downtown.
5. Define the downtown by creating landmarks, focal points, or other features. Use landscaping, lighting, and street furniture to improve downtown streetscapes.
6. Create a focused core area in the downtown by concentrating new pedestrian oriented development in key locations.
7. Improve pedestrian connections between the downtown and surrounding residential areas.
8. Improve parking in the downtown.
9. Discourage auto-oriented business in the core area of downtown.
10. Provide more housing and mixed-use development in and near the downtown.

*Streetscape Improvements.*

- Gateways
- Public art
- Bulb-outs at crosswalks
- Drinking fountains
- Historic pedestrian lighting
- City center gathering spot
- Street trees



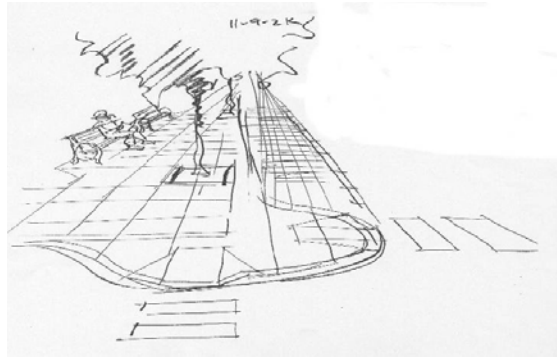
*Circulation and Parking.*

- Public parking lots
- Parking available on side streets

- Screen parking
- Parking signage
- One-way couplet
- Traffic lights

*Pedestrian Improvements.*

- Bulb-outs at crosswalks
- Accent paving/raised pavements
- Medians/islands
- Improved sidewalks
- Handicap ramps
- Stop light



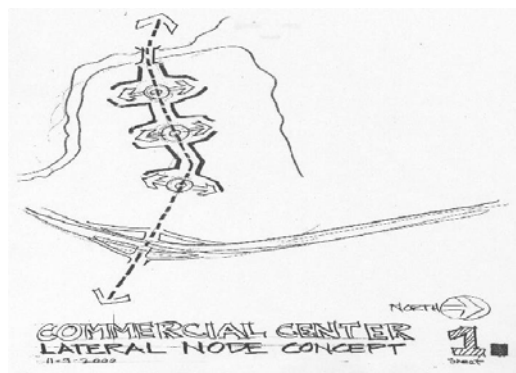
9.2.334 *Downtown Workshop*

On November 9, 2000, a downtown workshop was held at city hall. Approximately 25 people attended the workshop. Participants included stakeholders, city officials, and the general public. The purpose of the workshop was to test a series of downtown alternatives and develop a conceptual framework for development of the downtown plan. The team summarized the work of the previous day and presented four basic concepts for how the downtown could develop including: a nodal commercial center, a truck bypass on Fifth Street, a Seventh Street commercial center, and a new town center. The team presented three variations of the nodal commercial center, which resulted in a total of six alternatives. Each of the six alternatives is discussed below.



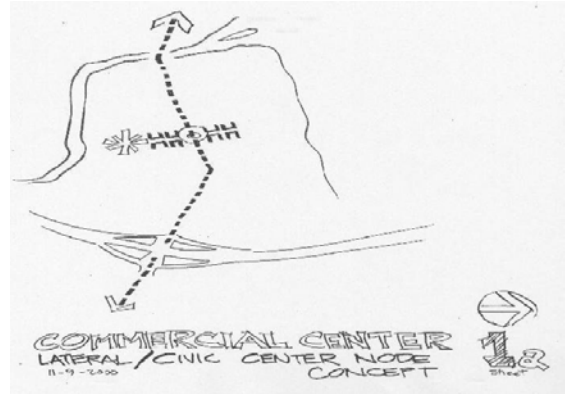
9.2.334(1) *Alternative 1. Commercial Center - Lateral Node Concept*

This alternative is intended to focus new pedestrian-oriented commercial development at three nodes along Sixth Street in the downtown area. The nodes are likely to include Switzler Street, I Street, and E Street. The basic nodal concept emphasizes development and pedestrian improvements perpendicular to the highway along the side streets. These streets offer a better, quieter, more pedestrian-friendly environment for people walking or sitting downtown. They also provide linkages to the surrounding residential areas.

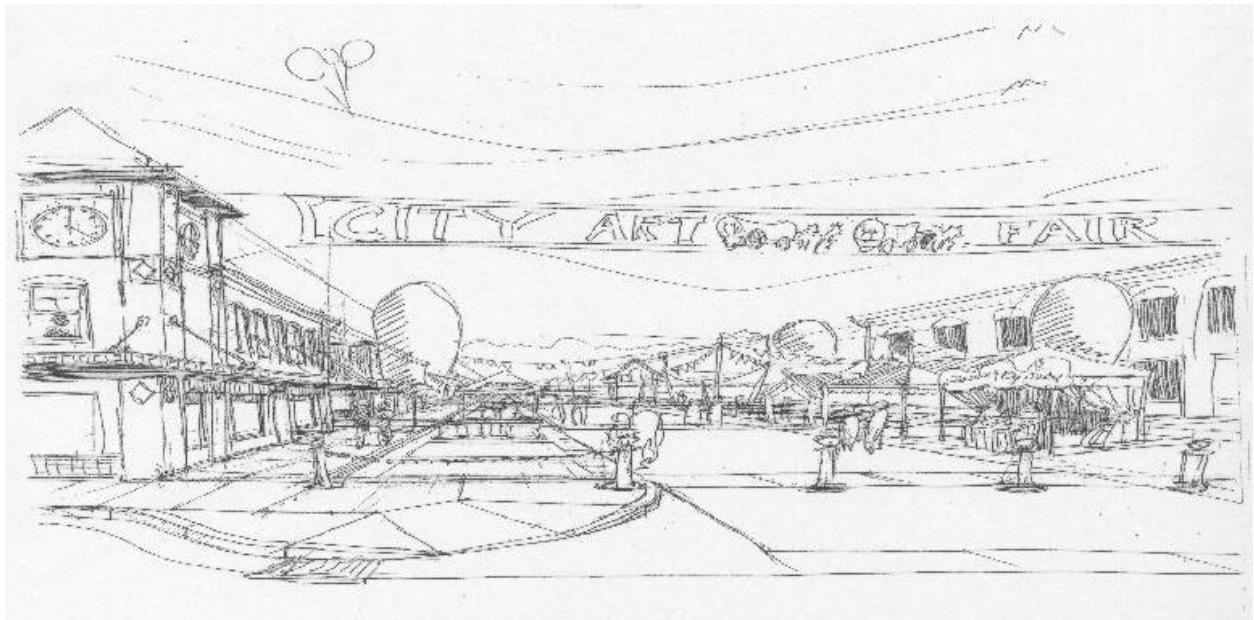


9.2.334(2) *Alternative 1A. Commercial Center - Lateral/Civic Center Node Concept*

Alternative 1a is a variation of Alternative 1, but all development is focused on a single node at I Street. This alternative includes the idea of building a new civic center as part of the node. The civic center would include a new city hall and library and would anchor the southern end of the node to the south of Seventh Street. This concentration of activity would help encourage new storefront development along I Street to create a high-quality pedestrian environment perpendicular to the highway. Under this alternative, I Street would become an active gathering place that could be closed at certain times to accommodate events such as a city art fair. This illustration is shown below in *Figure 9.2-5*.



*Figure 9.2-5 City Art Fair Concept with Alternative 1A*





9.2.334(3) *Alternative 1B. Commercial Center - Linear and Nodal Concept*

Alternative 1b builds on the ideas included in Alternatives 1 and 1a. It emphasizes creation of a pedestrian-friendly shopping area along I Street perpendicular to the highway, but it also emphasizes pedestrian-oriented development between I Street and E Street to take advantage of existing commercial buildings along Sixth Street. The two most distinctive commercial buildings on Sixth Street are the MOR Theater at E Street and the Wards building at I Street. This alternative links the two buildings by encouraging additional development on underdeveloped lots along Sixth Street. The concept is intended to concentrate pedestrian-oriented retail development along a corridor no greater than 1,000 feet in length. The length is critical, because typically shoppers will not walk more than 1,000 feet. Creating a concentration of activity is important if the area is to be a successful pedestrian district. Another feature of this alternative is the location of a new civic center along Sixth Street at the E Street intersection.

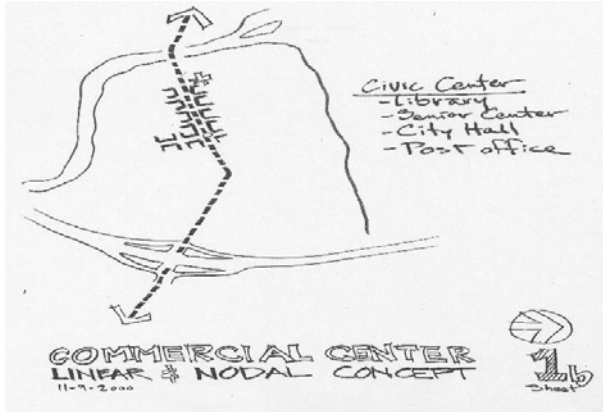
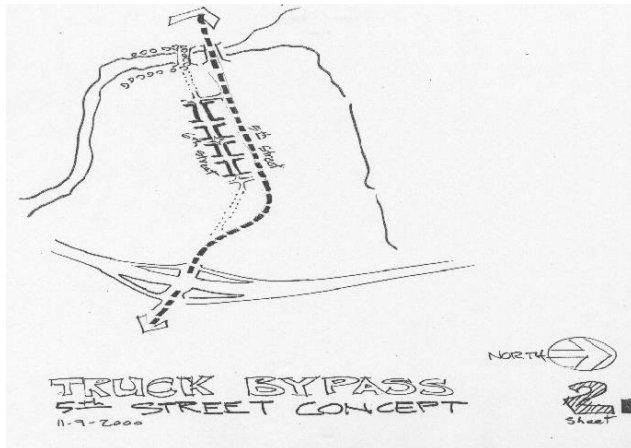


Figure 9.2-6 illustrates a new civic center concept with Alternative 1b.



9.2.334(4) *Alternative 2. Truck Bypass – Fifth Street Concept*

Under Alternative 2, highway traffic would be rerouted along Fifth Street crossing the Umatilla River at a new bridge. The old bridge would continue to provide a pedestrian connection. Downtown development could be enhanced and concentrated by removing the noisy truck traffic from Sixth Street.

Pedestrian-oriented commercial activity would be concentrated to an approximately 1,000-foot-long area along Sixth Street between I Street and E Street.

9.2.334(5) *Alternative 3. Commercial Center Concept - Seventh Street Concept*

Alternative 3 would maintain Sixth Street as an auto-oriented corridor and concentrate pedestrian-focused commercial uses along Seventh Street. This concept was mentioned at previous meetings.

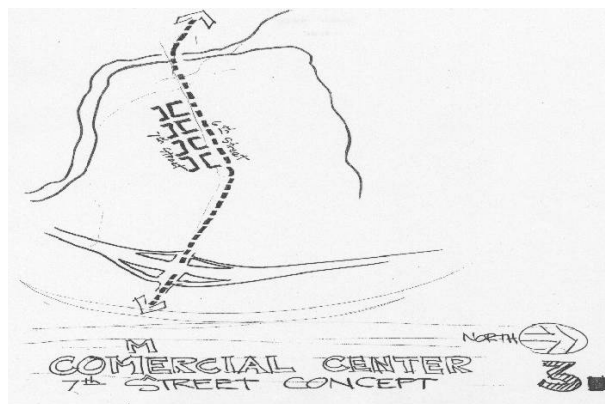


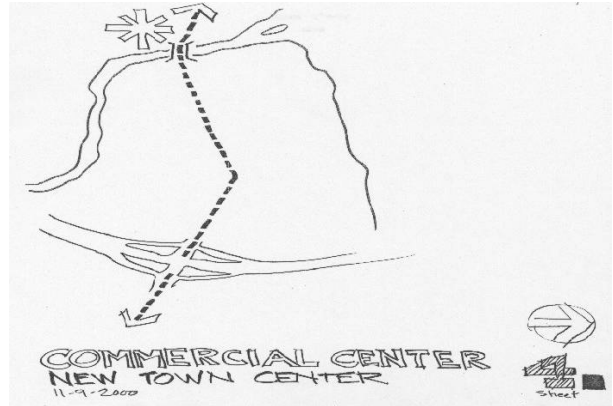
Figure 9.2-6 City Square Concept with Alternative 1B





9.2.334(6) *Alternative 4. Commercial Center - New Town Center*

Like Alternative 3, Alternative 4 would maintain Sixth Street as an auto-oriented corridor. This concept proposes a new pedestrian-oriented town center at a new site west of the Umatilla River.



9.2.335 *Workshop Activity - Prioritize Alternatives*

Following the presentation of the alternatives, workshop participants were given one adhesive dot to vote for their preferred alternative. A second adhesive dot was provided so participants could vote to locate a new civic center. A limited number of participants voted, but of those that did, Alternative 1b was the preferred alternative and I Street was the preferred location for a new civic center.

9.2.336 *Pedestrian and Streetscape Improvements*

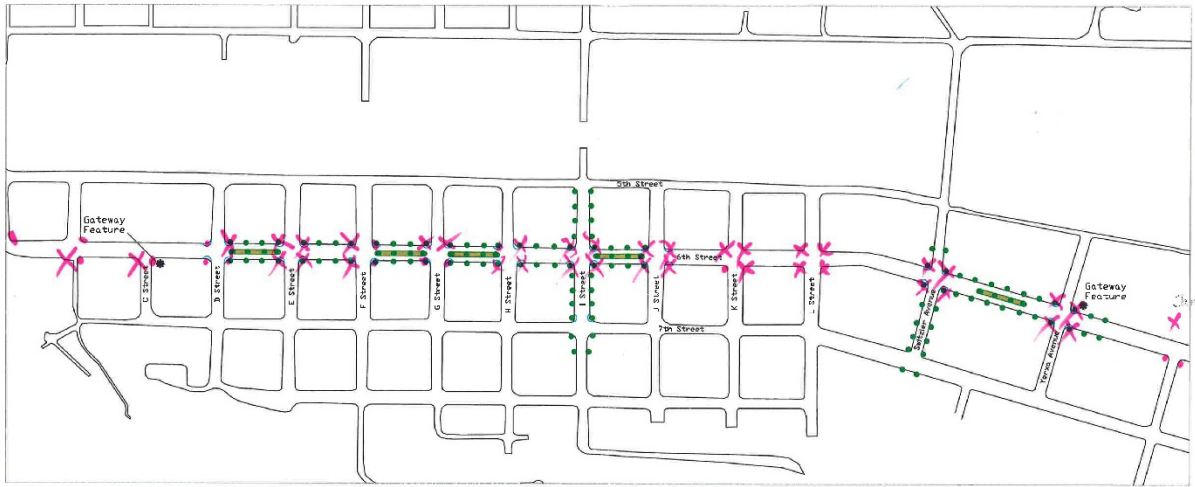
In addition to alternatives, workshop activities focused on pedestrian and streetscape improvements that could be implemented along Sixth Street. Diagrams were used with aerial photographs to identify potential locations for new bulb-out pedestrian crossings, textured crosswalks, medians, and street trees. *Figure 9.2-7* illustrates these diagrams. Participants were generally supportive of all concepts.

9.2.337 *Land Use Districts*

New land use districts were identified for the downtown. A key element of the district concept is the downtown core area that extends from D Street to I Street. In the downtown core, pedestrian-oriented retail and service development would be encouraged, and auto-oriented uses would be discouraged. To the east and west of the downtown core along the highway, a “downtown transition district” would be formed that would allow some auto-oriented commercial uses. Flanking the downtown would be districts that would allow higher density housing. New housing in the downtown can help enliven the area and bring more customers to retail businesses. *Figure 9.2-8* shows the land use district map described above.

9.2.338 *Conclusion*

The two-day charrette and workshop process produced a wealth of ideas for the downtown. These ranged from large-scale projects, such as a science museum, to simple projects, such as improved flower boxes. The key to success for Umatilla will be to identify projects and programs that are realistic and can truly be implemented, given the financial capability of the community. A concept plan was developed after the downtown workshop. This concept plan is shown in *Figure 9.2-9*.



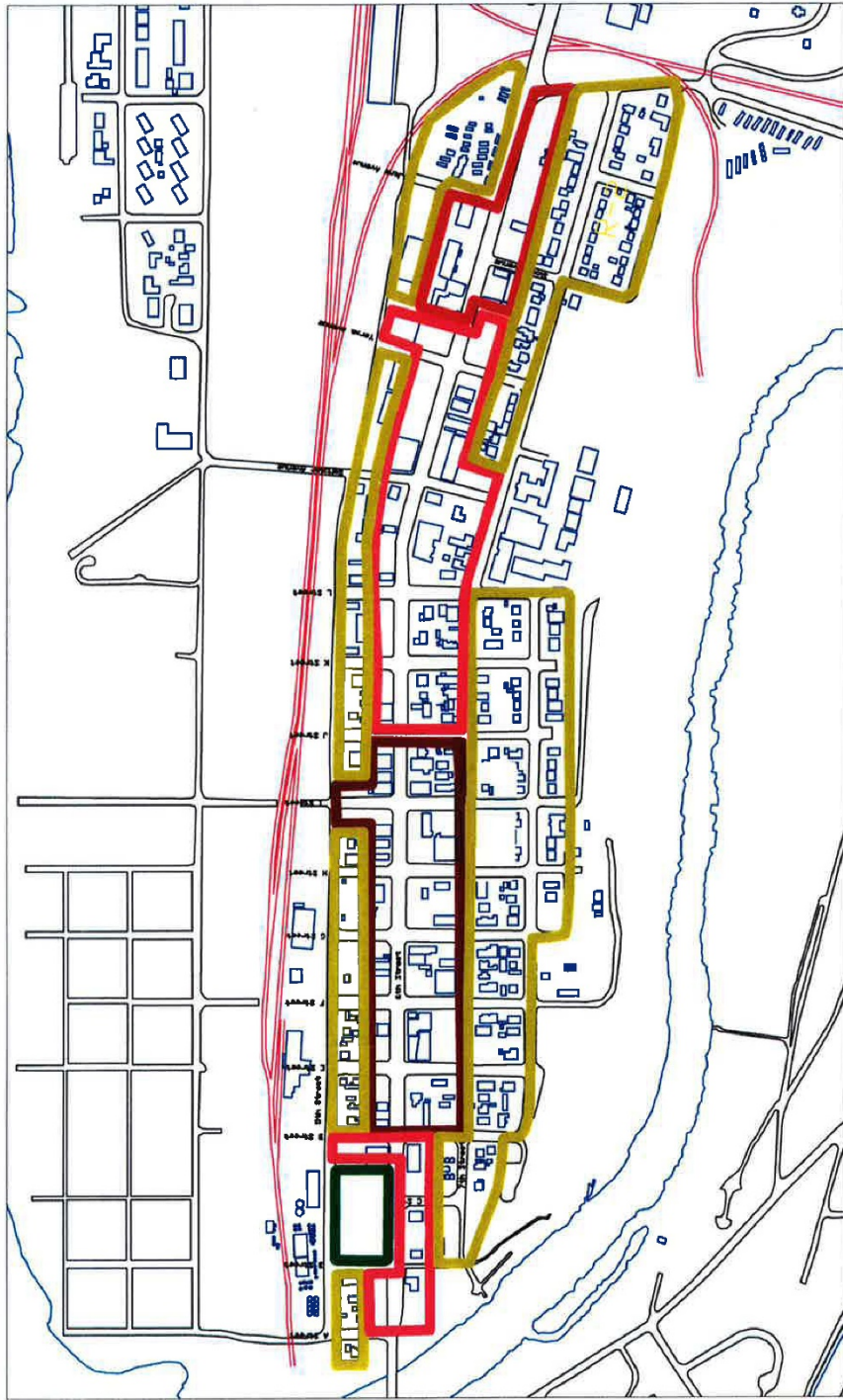
**LEGEND**

- Bulbouts
- Street Trees
- Median



City of Umatilla  
 Downtown Revitalization and  
 Circulation Study

Figure 9.2-7 Pedestrian and  
 Streetscape Improvements  
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City of Umatilla  
 Downtown Revitalization and  
 Circulator Study  
 As amended by Ordinance #731

Figure 9.2-8 Land Use District Map

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9.2.400 *DOWNTOWN REVITALIZATION PLAN*

The purpose of the project is to create a strategic plan for the revitalization of the downtown core area of the City. The plan is intended to enable the community to benefit from an improved and efficient transportation system and redevelopment of the downtown core area as a vital, pedestrian-oriented center.

Objectives of the Downtown Revitalization Plan are to:

- Create incentives for businesses to locate in the core area of the City;
- Create a pleasant pedestrian experience in the core area;
- Identify streetscape improvements that will enhance the character of the City, including sidewalk treatments and lighting.
- Mitigate the effects of truck traffic along U.S. Route 730; and
- Identify redevelopment opportunities.

The greatest challenge for the City is to find a way to attract significant private investment in the downtown over a long period of time. The revitalization plan is a blueprint to achieve this goal.

One of the guiding principles of the Downtown Revitalization Plan is to concentrate redevelopment efforts. A key problem with the existing pattern of development is that it is scattered over a large area. By first focusing the community's efforts on a small area, the City can later expand the area of focus to other locations throughout downtown. The intent of concentrating redevelopment efforts is to achieve a critical mass of business activity and investment that will trigger a cycle of economic growth.

Commercial opportunities are often present at intersections that have high rates of flow of either vehicles or pedestrians. The intersection of U.S. Route 730 and Interstate 82 is the primary vehicular intersection in the City. During the planning workshop, members of the community identified the primary pedestrian intersection in downtown as the junction of 6<sup>th</sup> Street (U.S. Route 730) and I Street. The Downtown Revitalization Plan recommends that the City focus on the potential of the 6<sup>th</sup> Street/I Street intersection. The US Route 730 and Interstate 82 intersection improvements are a part of the Interchange Refinement report that is a separate report.

Public improvements and redevelopment can help attract new businesses. Because downtown Umatilla lacks sufficient investment to attract other commercial activities, the City should commit public resources to improvements and redevelopment that make the downtown a viable and attractive location for businesses. In addition to investing in civic improvements, the City should also attempt to concentrate jobs, commercial activities, and housing in the downtown.

9.2.410 *Redevelopment Opportunities*

This section presents a summary of redevelopment opportunities envisioned to help revitalize downtown Umatilla. Together, these opportunities establish a conceptual framework for redevelopment that is consistent with the vision and goals of the community identified during the planning process.

### *9.2.410(1) Town Center*

Town Center is envisioned as a pedestrian friendly district. To help concentrate future development and make the area pedestrian friendly, a 1,000-foot distance was used create alternative development concepts for downtown Umatilla. This is a comfortable walking distance for most pedestrians.

The Downtown Revitalization Plan proposes that future development be concentrated along 6<sup>th</sup> Street between E and J streets. Town Center also would extend along I Street one block to the north of 6<sup>th</sup> Street and along I Street to the south; a site for a proposed Civic Center. Retail and commercial infill projects would be the most desirable type of development for Town Center. New structures would typically include commercial storefronts that abut the sidewalk.

Pedestrian and streetscape improvement projects, including street furnishings such as benches, lights and fountains, would be focused in the Town Center. To improve the pedestrian environment, sidewalk bulb-outs would be added at critical intersections along 6<sup>th</sup> Street, as well as crosswalks and accent pavements.

### *9.2.410(2) Intersection of 6<sup>th</sup> and I Streets*

The Downtown Revitalization Plan identifies the intersection of 6<sup>th</sup> and I streets as potentially the strongest pedestrian node within the community. The intersection is the commercial center for the downtown area because 6<sup>th</sup> Street is the primary vehicular route through town and I Street is considered to have the greatest potential as a pedestrian-oriented cross street. Improvements to this intersection would include accent pavement, benches, and possibly a raised intersection with pedestrian crossings designated with wide crossing strips.

Two infill sites are adjacent to this intersection, one on the northwest corner, the other on the southwest corner. An underutilized property also is identified at the southeast corner of the intersection. As the revitalization plan is implemented, redevelopment of these properties is likely. New structures at these locations should follow the commercial storefront model by building to the edge of the sidewalks and having facades orienting toward both 6<sup>th</sup> and I streets, including display windows and awnings.

*Figure 9.2-10* illustrates a vision of what 6<sup>th</sup> Street east of I Street could look like with the improvements described above.



Figure 9.2-10 6<sup>th</sup> Street Future Concept with Streetscape and Building Improvements



### 9.2.410(3) *I Street*

Participants at the community workshops identified I Street as a likely place for a pedestrian center. I Street should be redeveloped as a commercial street strongly oriented to pedestrians. Commercial storefronts would abut the sidewalk. Street parking can be supplemented by off-street parking located behind buildings that face I Street. The street would be designed for both vehicle and pedestrian use by using accent paving, historic lights, benches and fountains. As a pedestrian street, I Street could be closed to vehicular traffic for special events or festivals.

### 9.2.410(4) *MOR Theatre*

One of the most significant buildings located in downtown is the MOR Theatre. While some community participants commented on the building's poor appearance, others suggested that the theatre was worth keeping. Renovation of the building may serve both of these ends. *Figure 9.2-11* illustrates how the exterior of the building might look after a major renovation. It should be noted that building renovation is typically more expensive than new construction. Major renovation of existing structures may not be economically viable until the revitalization of downtown is well underway.

### 9.2.410(5) *First Interstate Bank Building*

The First Interstate Bank building, which now houses the school district offices, is of relatively new construction. The building is a utilitarian structure that lacks the detail and architectural character that are appropriate for a pedestrian-oriented downtown. *Figure 9.2-12* shows a sketch illustrating how architectural detailing applied to the building's exterior might enhance its appeal to pedestrians in a manner suitable for its downtown location.

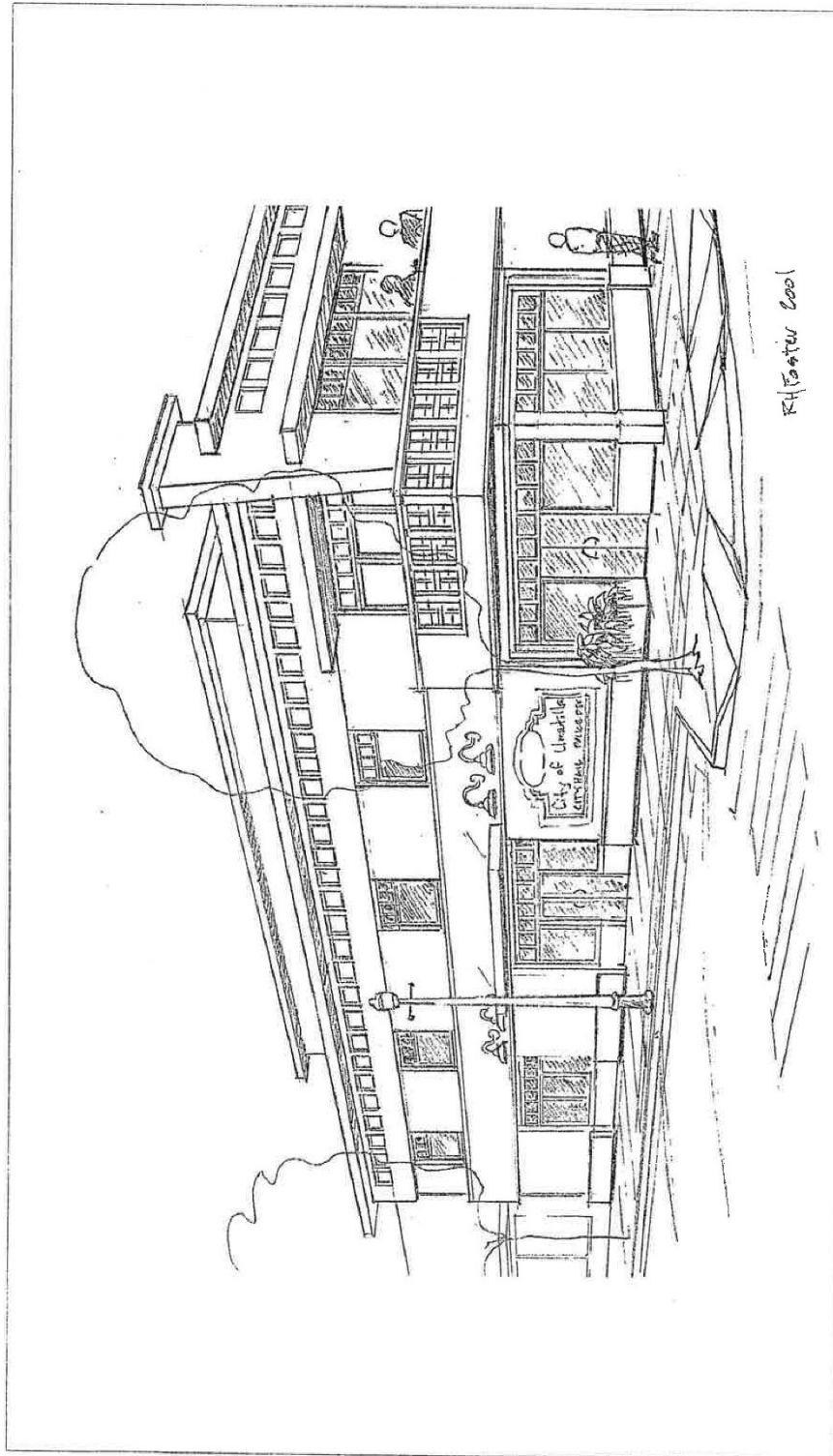
### 9.2.410(6) *Civic Center*

To anchor I Street as the primary pedestrian axis, the plan envisions a Civic Center located at the intersection of 7<sup>th</sup> and I Streets. This complex of buildings would include a new city hall, library, post office, senior center, and recreation center. The plan presents two options for development of the Civic Center. One concept closes 7<sup>th</sup> Street west of the intersection of I Street and creates a Civic Center complex with new buildings oriented toward a park. Option 1 is illustrated in *Figure 9.2-13*. The second concept closes I Street immediately south of 7<sup>th</sup> Street and centers the Civic Center complex and park on the axis of I Street. Option 2 is illustrated in *Figure 9.2-14*.

### 9.2.410(7) *Library Square*

The plan identifies an open space located between the library and 6<sup>th</sup> Street that might become an attractive pedestrian gathering place. The plan proposes that this space be developed as a joint-use space that allows parking during the week, but is available for pedestrian use on weekends. The Library Square project would likely reduce the number of existing parking spaces, planting shade trees and landscaping, and street furnishings such as benches, streetlights, and bollards. *Figure 9.2-15* shows an improvement concept for the existing library parking lot where the area is accented with an archway façade and pedestrian plaza.





MOR Theatre Renovation Concept  
Figure 9.2-11

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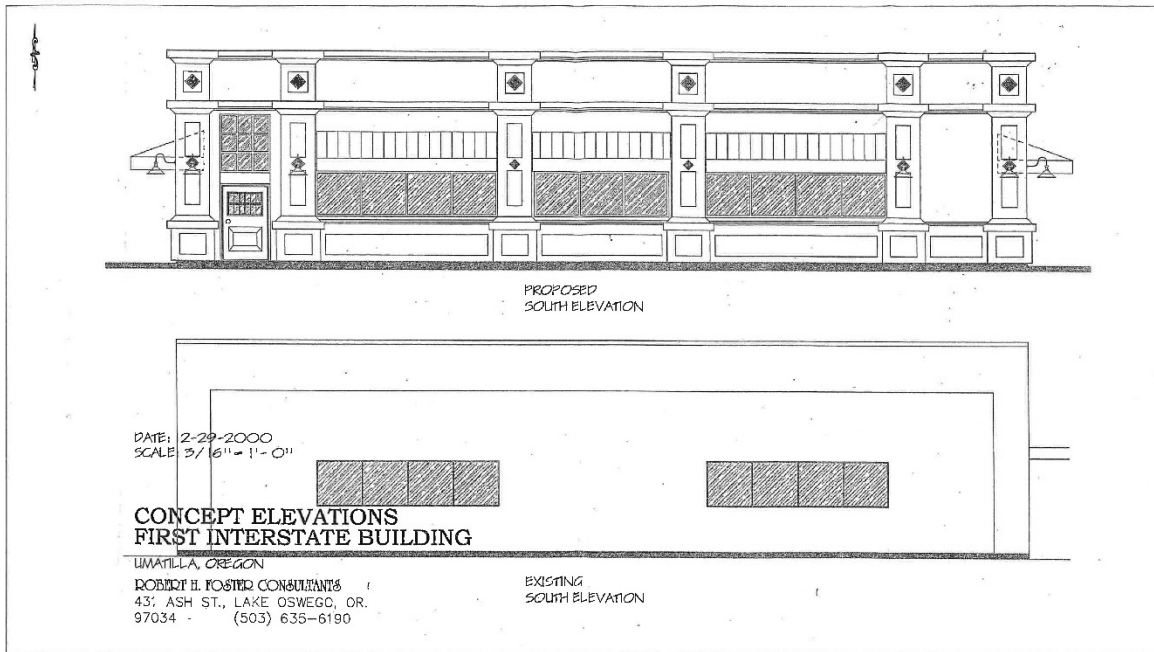


Figure 9.2-12

City of Umatilla Downtown  
Revitalization and Circulation Study

First Interstate  
Building Renovation Concept Page 77

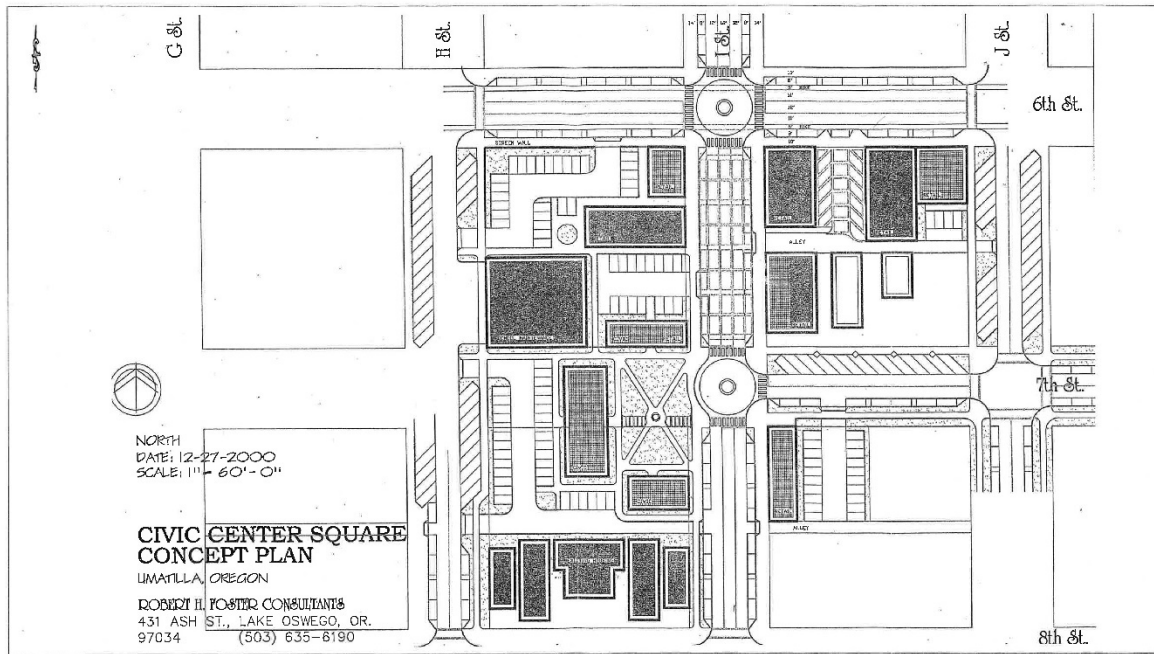
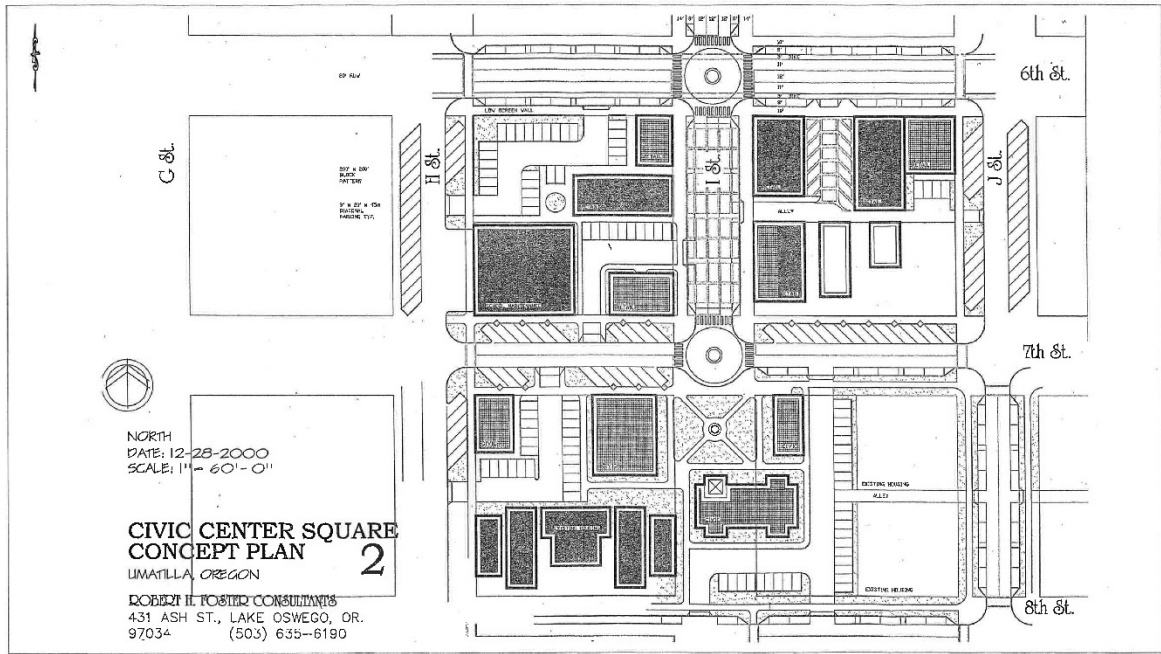


Figure 9.2-13

Civic Center  
 Concept - Option 1

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 Revitalization and Circulation Study

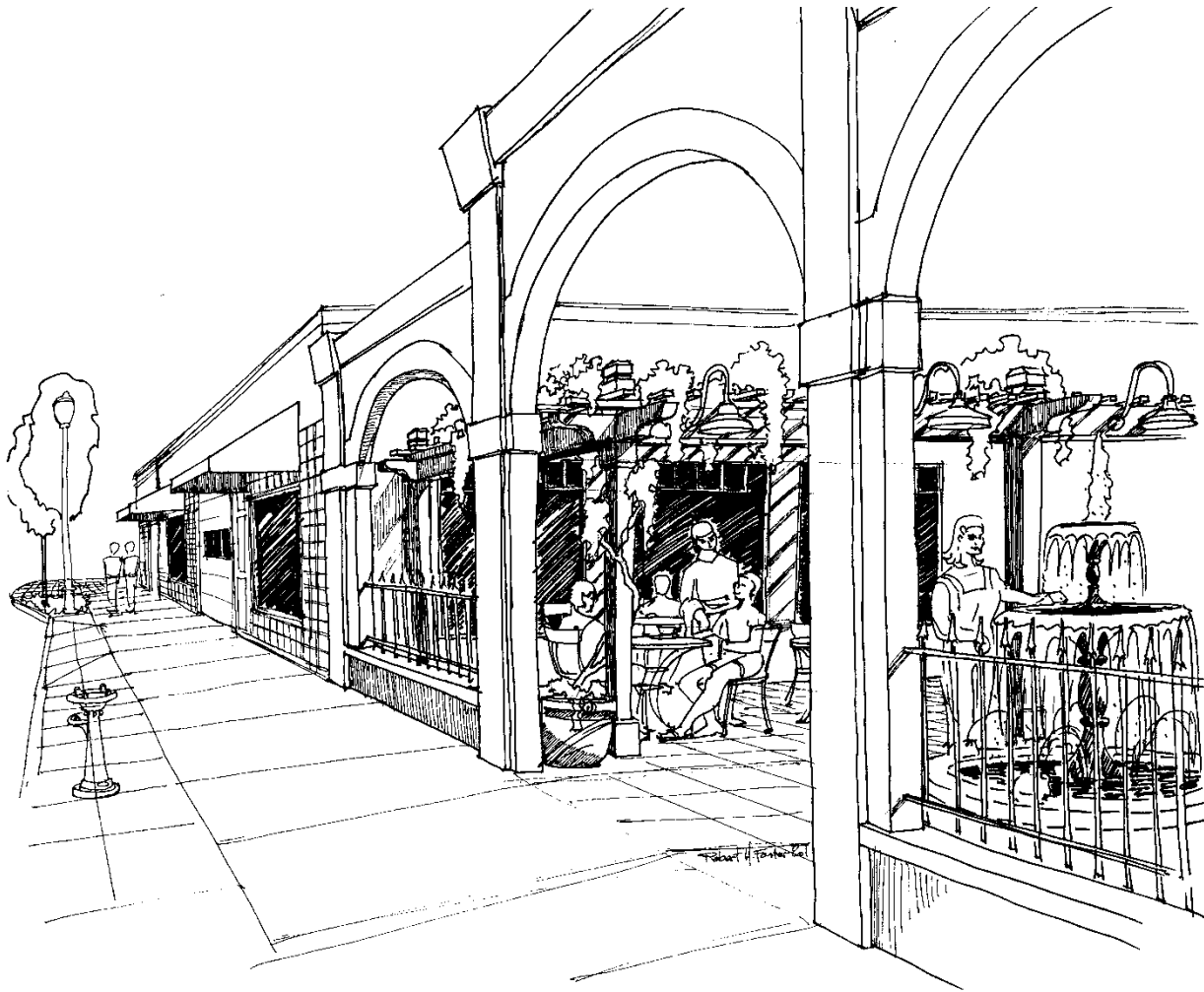


City of Umatilla Downtown  
 Revitalization and Circulation Study

Figure 9.2-14  
 Civic Center  
 Concept - Option 2

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Figure 9.2-15. Library Plaza Concept with Archway Façade



#### 9.2.410(8) *Downtown Residential*

Creating residential housing opportunities downtown will help the City establish a stronger downtown neighborhood. New residents will build a market for new downtown businesses. Downtown housing development should be oriented toward the street with parking in the center of the block. Access to center block parking lots would be by alleys running east to west between the numbered streets. New housing development would be encouraged to follow this typical pattern of development.

#### 9.2.410(9) *Downtown Mixed-Use*

The Downtown Revitalization Plan proposes a new development pattern for downtown Umatilla that combines office and residential uses. This new pattern would allow office and commercial uses at street level with housing on the second floor or behind the storefront. Parking would be available on the street with off-street parking located in the middle of the block. Access to mid-block parking would be by alleys running east to west between the numbered streets and driveways located at the center of the block.

This mixed-use development concept is illustrated with typical plan and section drawings in *Figure 9.2-16*. The plan and section drawings illustrate how retail or office space might be located on the first floor with housing on the second floor. The drawings also illustrate how off-street parking can be included in this type of development.

#### 9.2.410(10) *Auto-Oriented Commercial*

A portion of the east side of downtown Umatilla is suitable for car- and truck-oriented uses. The plan proposes that truck- and car-oriented uses be located along 6<sup>th</sup> Street from a point west of the intersection of Yerxa Avenue running east to the Union Pacific Railroad bridge. Given that this location is near the Port of Entry and the Interstate 82 interchange, it provides an opportunity for commercial development in this area.

#### 9.2.420 *Streetscape and Pedestrian Improvements*

This section describes streetscape and pedestrian improvements that are a part of the Downtown Revitalization Plan. Sketches were developed to depict streetscape design elements, based on “typical” conditions. Recommended improvements have been broken down into illustrative projects, which include estimated project costs the City can use for the purposes of planning.

#### 9.2.421 *Design Elements*

To develop a schematic streetscape plan, it was assumed that a typical block measured 200 feet by 200 feet and that the typical street right of way measured 80 feet in width, with streets measuring 60 feet from curb to curb. The existing 6<sup>th</sup> Street cross section is illustrated in *Figure 9.2-17*. The section view shows an 8-foot-wide parking lane on both sides of the street, one 15-foot-wide travel lane in each direction and a 14-foot-wide center turning lane.

The proposed 6<sup>th</sup> Street cross section design reduces the width of the travel lanes and adds center medians to slow traffic. Bike lanes have also been designated. The proposed 6<sup>th</sup> Street section, see *Figure 9.2-18*, shows a 7-foot-wide parking lane on both sides of the street, one 6-foot-wide

bike lane in each direction, one 11-foot-wide travel lane in each direction, and a 12-foot-wide center turning lane or median.

A concept plan was developed for the 6<sup>th</sup> and I Streets intersection. I Street should become the City's "Pedestrian Street." Sixth Street is already considered to be the City's "Main Street." The concept plan shows curb extensions and crosswalks, 10-foot-wide sidewalks along 6<sup>th</sup> Street, and 14-foot-wide sidewalks along I Street. Each curb extension depicts ramps to meet requirements of the American's with Disabilities Act (ADA) and planting areas for landscape plants or trees. The concept plan also depicts concrete scoring patterns used on the paving surface. The 6<sup>th</sup> Street and I Street intersection concept plan is shown in *Figure 9.2-19*.

A "typical" sidewalk pavement sketch in *Figure 9.2-20* illustrates the sidewalk design proposed for new improvement projects. The sketch depicts a sidewalk that varies from 8- to 10-feet wide, curb and gutter, street trees, and parking. A second sketch shown in *Figure 9.2-21* illustrates the need for added width to include streetscape furnishings and other amenities. This sketch defines a 4-foot wide furniture zone adjacent to the curb where street trees, lights, signage, benches, trashcans, and drinking fountains should be located. The sketch also shows how storefront awnings (from 4- to 6-feet-wide) can make the street more attractive to pedestrians.

A new proposed local side street cross section in the downtown core area is shown in *Figure 5-13*. This cross section shows angle parking on both sides of the roadway and two travel lanes within a pavement width of 64 feet and 80-foot right of way. The angle parking lanes each take 20 feet and the two travel lanes are 12 feet each. The remaining right of way is comprised of 6 foot sidewalks. An additional two feet of right-of-way is available for utilities behind the sidewalks on each side of the street.

#### 9.2.422 *Illustrative Improvement Projects*

Using the design concepts described above, a list of illustrative improvement projects was developed to help the City budget and plan for implementation of the pedestrian and streetscape improvements (see the Pedestrian and Streetscape Improvement Plan, *Figure 9.2-7*). Recognizing that financial resources to implement the improvements might be limited, a large number of small projects were created. The series of cost estimates for typical improvements were used to develop the costs for illustrative improvement projects. The cost estimates are intended to be used by the City for planning and budgeting purposes and are not intended to reflect the actual cost of the improvements. A sequence of small projects allows the City greater flexibility in implementing the improvements. If financial resources are limited, fewer projects can be implemented. If funding is readily available, then the improvement schedule can be accelerated.



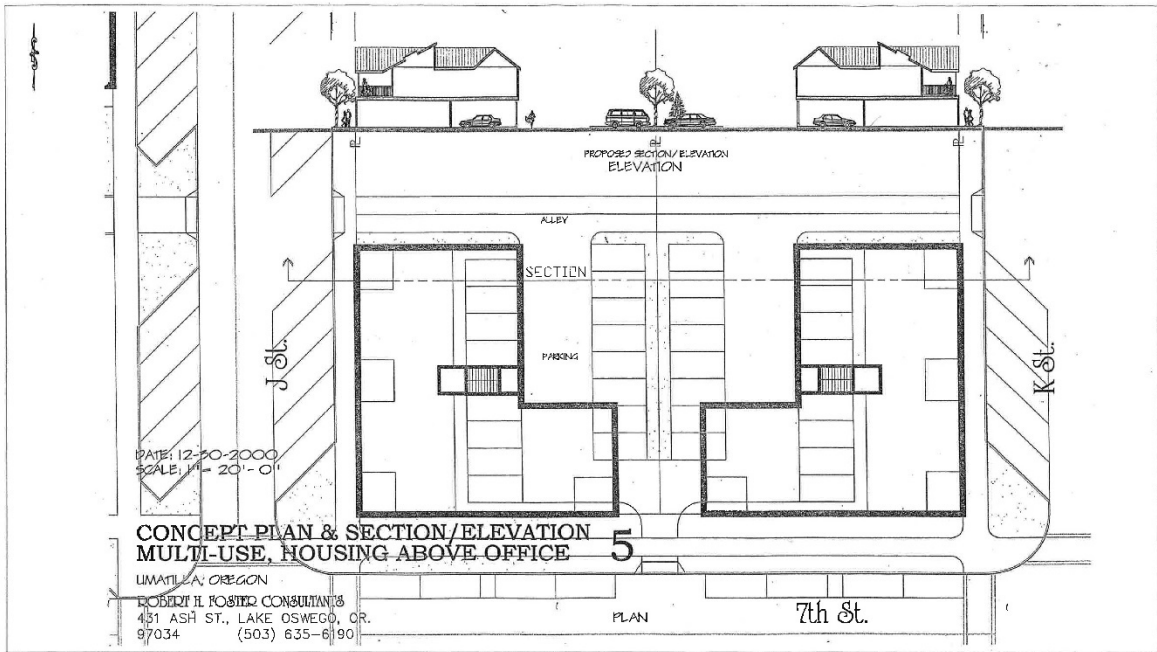
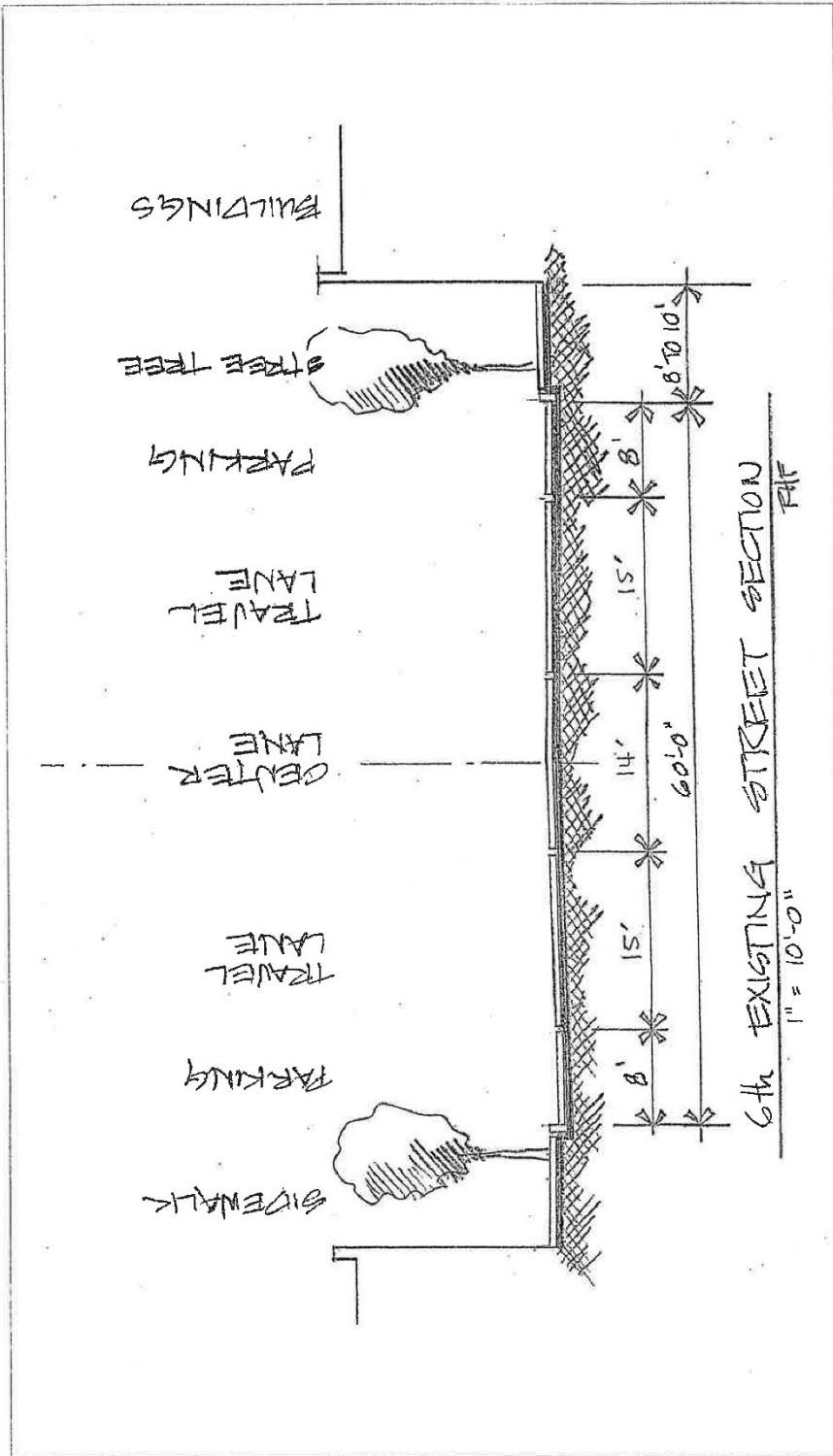


Figure 9.2-16

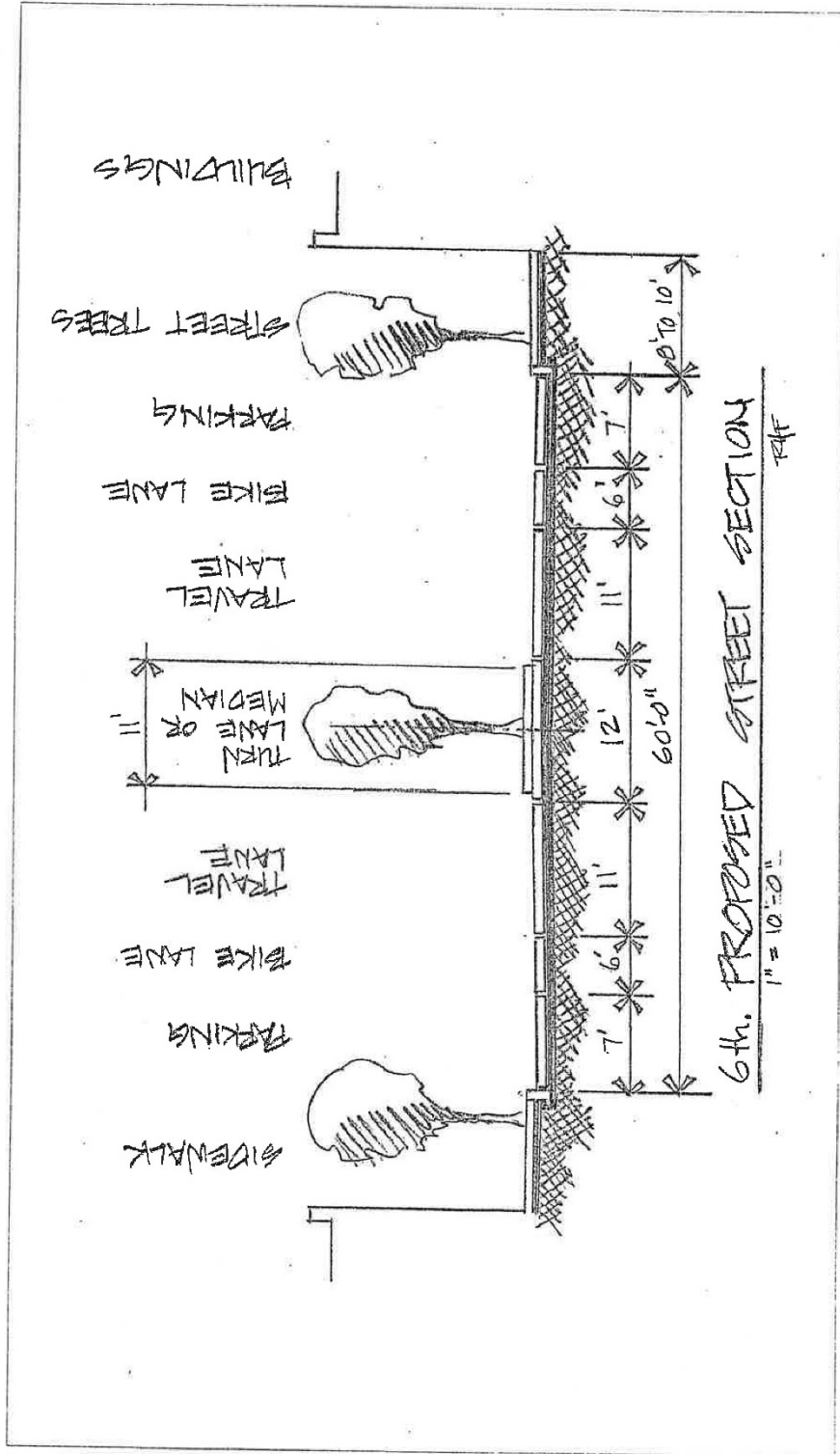
City of Umatilla Downtown  
 Revitalization and Circulation Study

Downtown Housing  
 Concept Using Mixed Use Page 83



Typical Existing 6th Street Cross Section  
 Figure 9.2-17

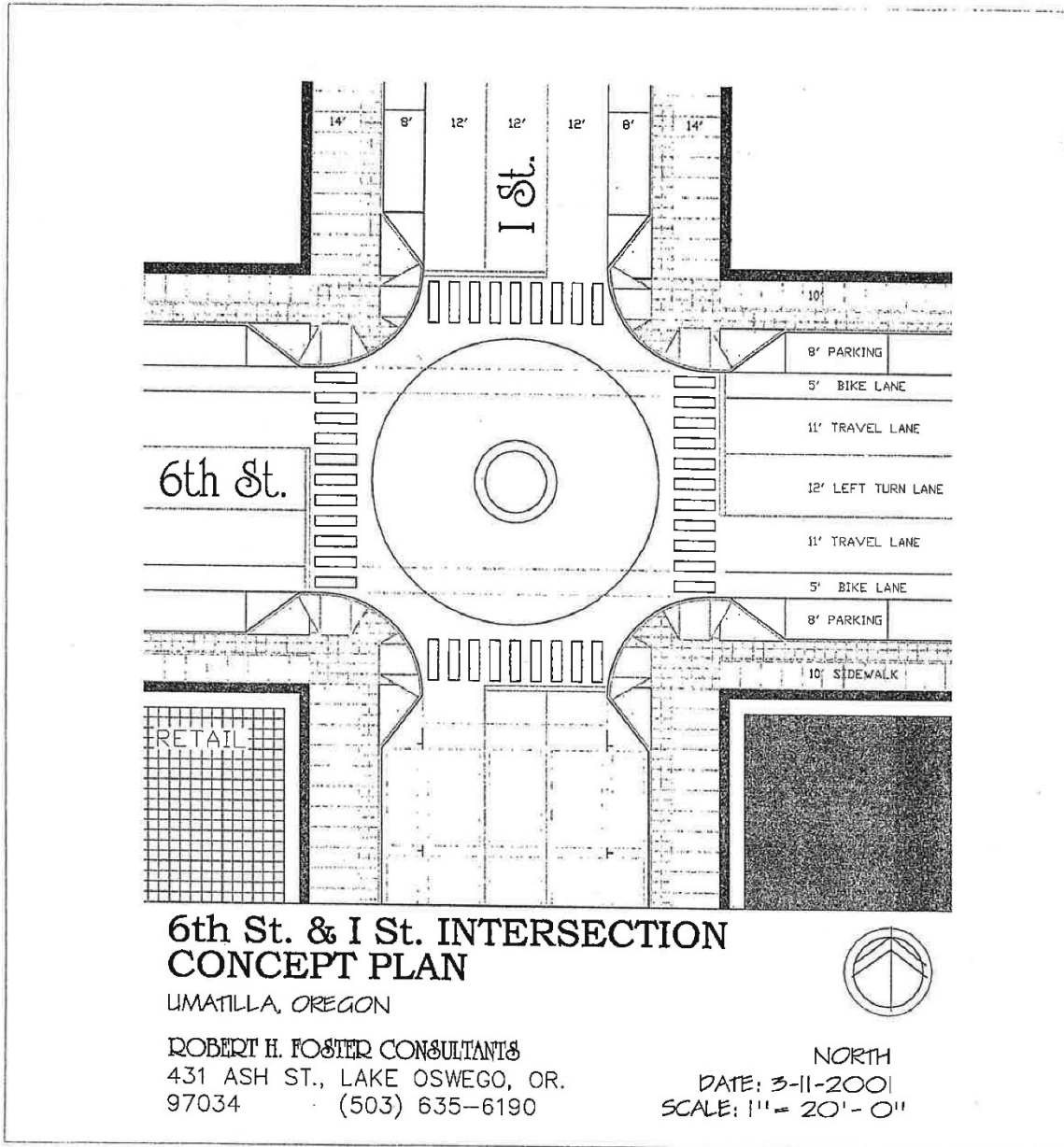
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Proposed 6th Street Cross Section  
 Figure 9.2-18

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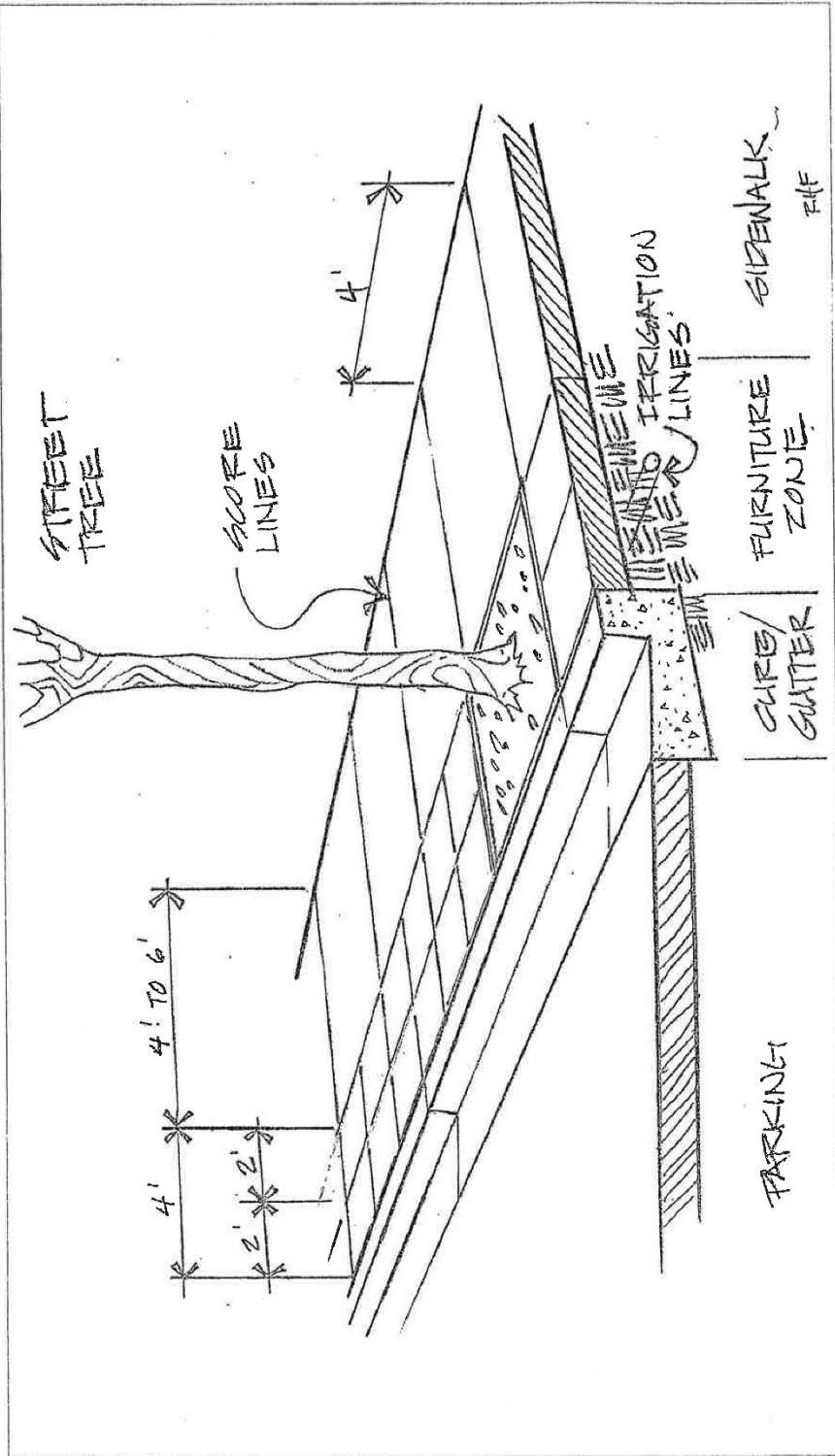
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6th Street and "I" Street  
 Intersection Concept Plan  
 Figure 9.2-19

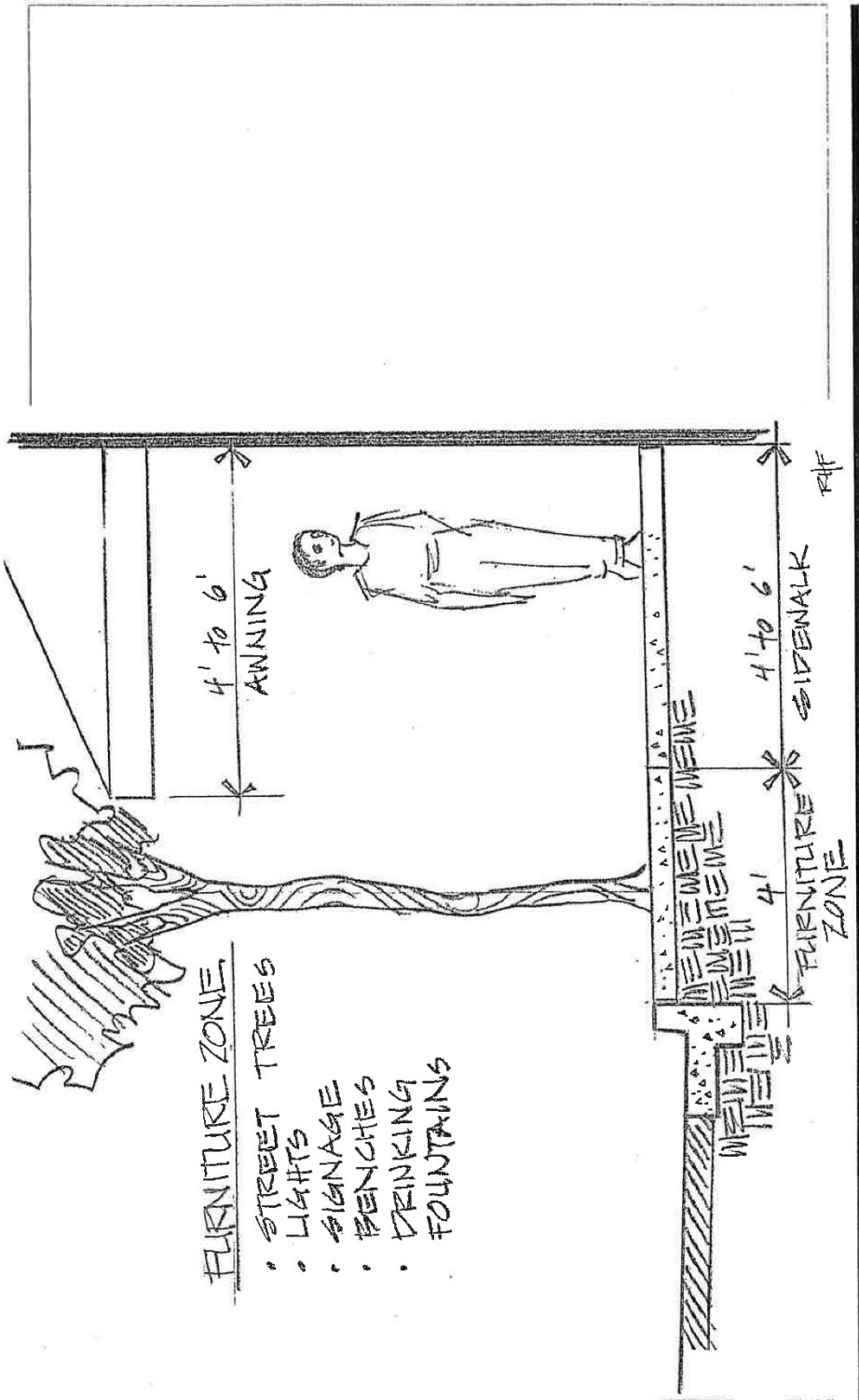
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Typical Sidewalk Pavement Section  
 Figure 9.2-20

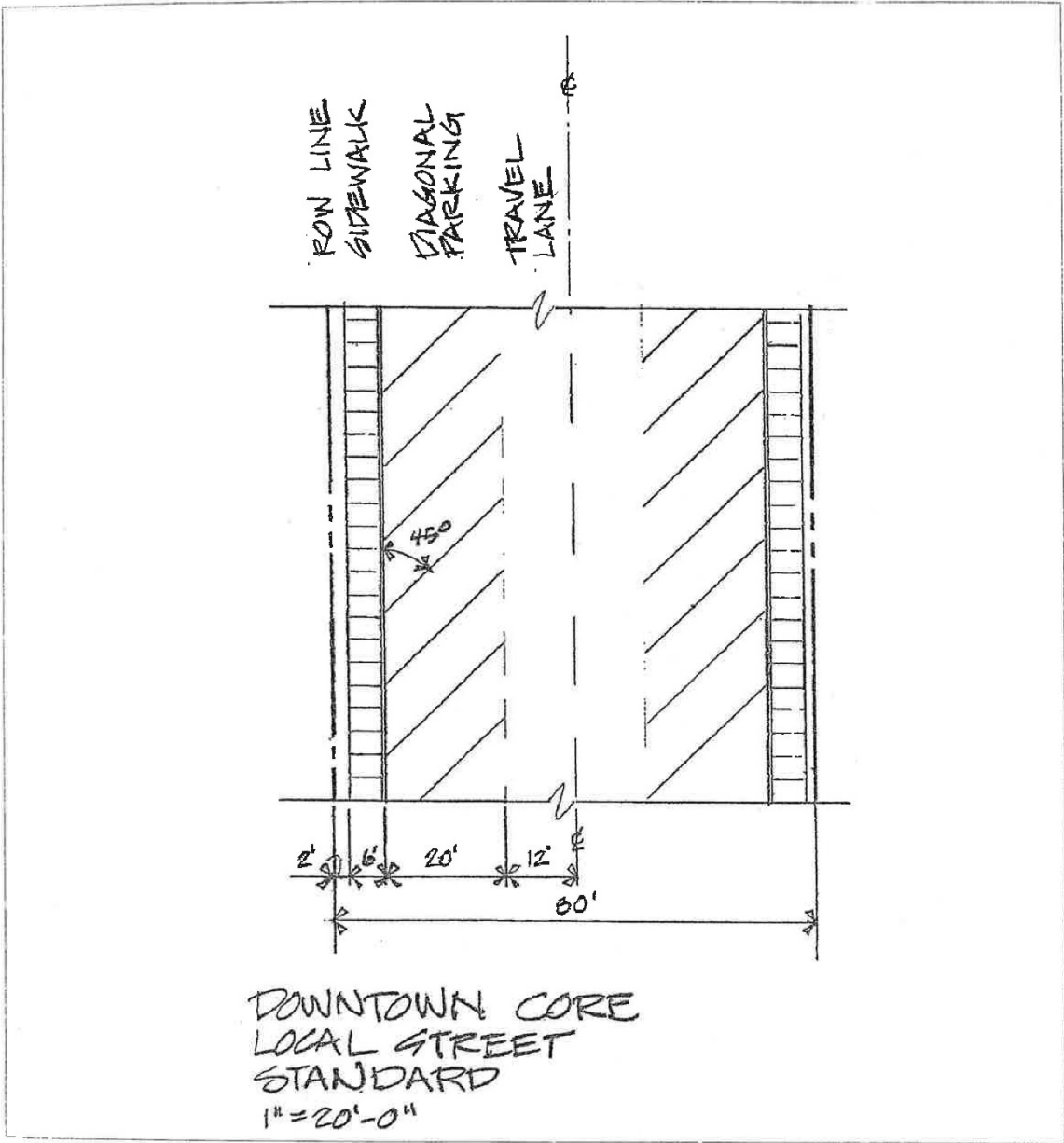
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Typical Furniture Zone on Sidewalk Section  
 Figure 9.2-21

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Downtown Core Local Street Standard  
Figure 9.2-22

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Unit costs used to prepare the estimates are summarized in Table 9.2-9. Many of the items listed area available in a range of different prices. For example, the sample prices for tree grates ranged from \$100 to \$275 per grate. Sample street lights prices ranged between \$1,700 to \$3,000 per light. Median prices are shown in the table below and are adjusted to include installation.

Table 9.2-9. Unit Costs of Improvement Project Items

ITEM	UNIT	COST/UNIT
Demolition	SF	\$1.00
Curbs	LF	\$15.00
Street Patching	SF	\$6.00
Trenching	LF	\$15.00
Sidewalk	SF	\$7.00
Trees	EA	\$500.00
Tree Grates	EA	\$190.00
Irrigation (drip system)	LF	TBD
Landscaping	SF	\$5.00
Planters (trough)	EA	\$600.00
Street Lights	EA	\$2,250.00
Trash Cans	EA	\$750.00
Bench	EA	\$1,000.00
Drinking Fountain	EA	\$3,000.00
Bike Rack	EA	\$500.00
Painted Crosswalk	SF	\$1.00
Concrete Crosswalk	SF	\$8.00

Table 9.2-10 summarizes the improvement projects by phase and estimated total cost. The Streetscape and Pedestrian Improvements Phasing Plan in *Figure 9.2-23* illustrates how the projects might be implemented through a sequence of many projects.

Table 9.2-10. Streetscape Improvement Projects by Phase

<u>Project Name/Phase</u>	<u>Estimated Total Cost</u>
<i>Phase 1 Projects</i>	
<i>Intersection at 6<sup>th</sup> and I Streets with Curb Extensions</i>	<i>\$65,000</i>
<i>Intersection at 6<sup>th</sup> and H Streets with Curb Extensions</i>	<i>\$61,000</i>
<i>Intersection at 6<sup>th</sup> and G Streets with Curb Extensions</i>	<i>\$61,000</i>
<u><i>Subtotal</i></u>	<u><i>\$187,000</i></u>
<i>Phase 2 Projects</i>	
<i>6<sup>th</sup> Street Sidewalks between H and I Streets</i>	<u><i>\$106,000</i></u>
<i>6<sup>th</sup> Street Sidewalks between G and H Streets</i>	<u><i>\$106,000</i></u>
<i>6<sup>th</sup> Street Median between G and H Streets</i>	<u><i>\$30,000</i></u>
<u><i>Subtotal</i></u>	<u><i>\$242,000</i></u>
<i>Phase 3 Projects</i>	
<i>6<sup>th</sup> Street Median between I and J Streets</i>	<i>\$30,000</i>
<i>Intersection at 6<sup>th</sup> and J Streets with Curb Extensions</i>	<i>\$57,000</i>
<i>6<sup>th</sup> Street Sidewalks between I and J Streets</i>	<i>\$106,000</i>
<u><i>Subtotal</i></u>	<u><i>\$193,000</i></u>
<i>Phase 4 Projects</i>	
<i>I Street Sidewalks between 6<sup>th</sup> and 7<sup>th</sup> Streets</i>	<i>\$133,000</i>
<i>I Street Sidewalks between 5<sup>th</sup> and 6<sup>th</sup> Streets</i>	<i>\$133,000</i>
<i>South of Intersection at Corner of 5<sup>th</sup> and I Street</i>	<i>\$66,500</i>
<u><i>Subtotal</i></u>	<u><i>\$332,500</i></u>
<i>Phase 5 Projects</i>	
<i>6<sup>th</sup> Street Median between F and G Streets</i>	<i>\$30,000</i>
<i>Intersection at 6<sup>th</sup> and F Streets with Curb Extensions</i>	<i>\$61,000</i>
<i>6<sup>th</sup> Street Sidewalks between F and G Streets</i>	<i>\$106,000</i>
<i>6<sup>th</sup> Street Sidewalks between E and F Streets</i>	<i>\$106,000</i>
<u><i>Subtotal</i></u>	<u><i>\$303,000</i></u>

Table 9.2-10. Streetscape Improvement Projects by Phase (Continued)

<i>Phase 6 Projects</i>	
<i>Gateway Feature (West End)</i>	<i>\$42,000</i>
<i>Intersection at 6<sup>th</sup> and E Streets with Curb Extensions</i>	<i>\$61,000</i>
<i>Intersection at 6<sup>th</sup> and D Streets with Curb Extensions</i>	<i>\$57,000</i>
<i><u>Subtotal</u></i>	<i><u>\$160,000</u></i>
<i>Phase 7 Projects</i>	
<i>6<sup>th</sup> Street Sidewalks between D and E Streets</i>	<i>\$106,000</i>
<i>6<sup>th</sup> Street Median between D and E Streets</i>	<i>\$30,000</i>
<i>Intersection at 7<sup>th</sup> and I Street (Special Condition)</i>	<i>\$57,000</i>
<i>Sidewalks south of 7<sup>th</sup> and I Street Intersection</i>	<i>\$66,500</i>
<i><u>Subtotal</u></i>	<i><u>\$153,500</u></i>
<i>Phase 8 Projects</i>	
<i>Intersection of 6<sup>th</sup> and Switzler Avenue</i>	<i>\$61,000</i>
<i>Intersection of 6<sup>th</sup> and Yerxa Avenue</i>	<i>\$61,000</i>
<i>Intersection of 7<sup>th</sup> and Switzler Avenue</i>	<i>\$34,000</i>
<i>6<sup>th</sup> Street Sidewalks east of Yerxa Avenue</i>	<i>\$106,000</i>
<i><u>Subtotal</u></i>	<i><u>\$262,000</u></i>
<i>Phase 9 Projects</i>	
<i>Sidewalks north of 6<sup>th</sup> Street and Switzler Avenue</i>	<i>\$53,000</i>
<i>Sidewalks east of Intersection of 6<sup>th</sup> Street and Yerxa Avenue</i>	<i>\$106,000</i>
<i><u>Subtotal</u></i>	<i><u>\$159,000</u></i>
<i>Phase 10 Projects</i>	
<i>6<sup>th</sup> Street Sidewalks between Switzler and Yerxa Avenues</i>	<i>\$176,000</i>
<i>6<sup>th</sup> Street Median between Switzler and Yerxa Avenues</i>	<i>\$30,000</i>
<i><u>Subtotal</u></i>	<i><u>\$206,000</u></i>
<i>Phase 11 Projects</i>	
<i>Switzler Avenue Sidewalks between 6<sup>th</sup> and 7<sup>th</sup> Streets</i>	<i>\$102,000</i>
<i>Gateway Feature (East End)</i>	<i>\$42,000</i>
<i><u>Subtotal</u></i>	<i><u>\$144,000</u></i>
<i><u>Total Estimated Cost for all Phases</u></i>	<i><u>\$2,395,000</u></i>



**LEGEND**  
 Bulbouts  
 Street Trees  
 Median

City of Umatilla  
 Downtown Revitalization and  
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Figure 9.2-23 Improvement  
 Phasing Plan

### 9.2.423 *Improvement Descriptions*

#### 9.2.423(1) *Switzler and Yerxa Avenues*

Two intersections on the east side of downtown Umatilla should be improved: the intersection of 6<sup>th</sup> Street and Switzler Avenue, and the intersection of 6<sup>th</sup> Street and Yerxa Avenue. The intersection of 6<sup>th</sup> Street and Switzler Avenue is important because Switzler Avenue provides a link to the neighborhoods to the north. It is also a link to bicycle trail on 3<sup>rd</sup> Avenue. *Figure 9.2-24* illustrates a park concept that could be constructed on the northwest corner of the 6<sup>th</sup> Street/Switzler Avenue intersection. The intersection of 6<sup>th</sup> Street and Yerxa Avenue is important because Yerxa Avenue offers a connection between the High School and commercial establishments on 6<sup>th</sup> Street. Improvements should include, sidewalk bulb outs, street trees, and striped pedestrian crossings.

#### 9.2.423(2) *West City Entrance*

The City can define the entrance to the City by creating a monument, sculpture, or other type of landmark feature. The feature can be further enhanced using accent lighting, paving and landscape elements. The location of the entrance feature should be along 6<sup>th</sup> Street near the intersection of C Street. *Figure 9.2-25* illustrates a gateway concept that could be implemented on the west city entrance.

#### 9.2.423(3) *East City Entrance*

The bridge over the Union Pacific Railroad creates an entrance on the east side of the City. Adding a landmark or symbol can enhance this entrance. The landmark or symbol might take the form of a sculpture, monument, or sign. The entrance can be accented with historic lights. *Figure 9.2-26* illustrates a gateway feature for the east city entrance.

#### 9.2.423(4) *Intersection of 6<sup>th</sup> and I Street*

The plan envisions the corner of 6<sup>th</sup> and I Streets as the commercial center for the downtown area because 6<sup>th</sup> Street is the primary vehicular route through town, and I Street is considered to have the greatest potential as a pedestrian-oriented cross street. Improvements to this intersection would include accent pavement, benches, and possibly a raised intersection.

#### 9.2.423(5) *Close A Street Intersection*

To increase safety at the Umatilla River Bridge it is recommended that the intersection of A Street and 6<sup>th</sup> Street be closed by creating a cul-de-sac or dead end at the south end of A Street.

#### 9.2.423(6) *Heritage Trail/Senior Center Parking*

A new parking area is proposed to serve both users of the Lewis and Clark Heritage Trail and the Senior Center. The joint parking lot is to be located at the intersection of B and 7<sup>th</sup> Streets.

Figure 9.2-24 Park Concept at the Northwest Corner of 6<sup>th</sup> Street/Switzler Avenue

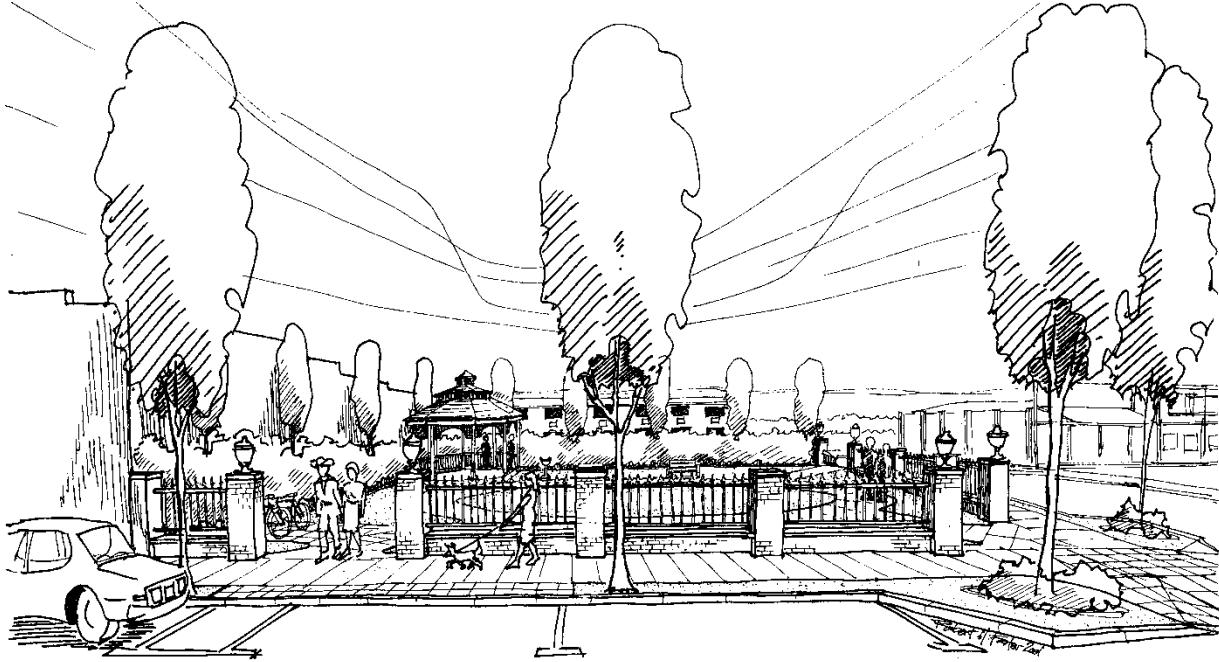
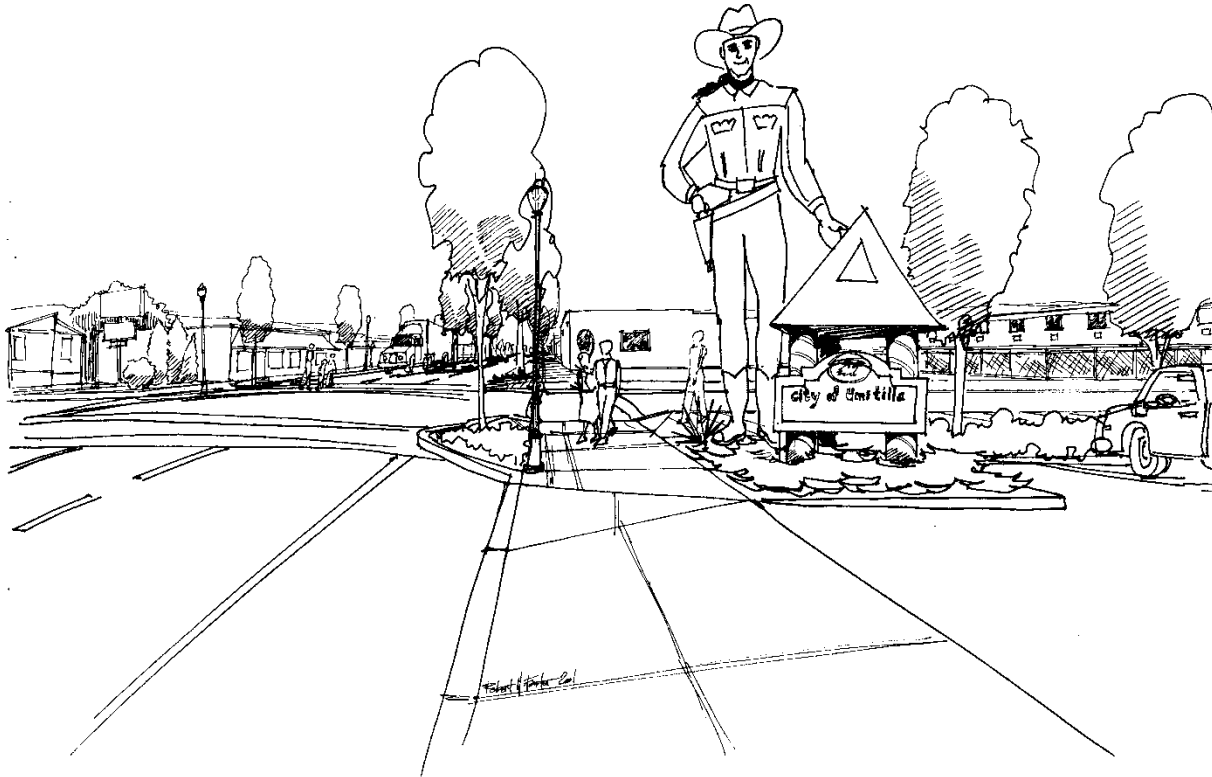


Figure 9.2-25 West City Entrance Gateway Feature





Figure 9.2-26 East City Entrance Gateway Feature



### 9.2.500 *CIRCULATION PLAN*

The circulation plan for the downtown study area is comprised of the following sections: functional classification, parking, street improvements, and access management. The supporting information used to create this information can be found in the Appendix. The majority of the supporting information can be found in the Opportunities and Constraints Report.

#### 9.2.510 *Functional Classification*

The functional classification for the study area was taken from the 1999 City of Umatilla Transportation System Plan (TSP). In the study area, 6<sup>th</sup> Street (Highway 730) is the only major arterial. Five collectors exist in the study area. They are 7<sup>th</sup> Street from “B” Street to Umatilla River Road, “B” Street from 6<sup>th</sup> Street to 7<sup>th</sup> Street, “F” Street from 3<sup>rd</sup> Street to 7<sup>th</sup> Street, Switzler Avenue from 3<sup>rd</sup> Street to 7<sup>th</sup> Street, and 3<sup>rd</sup> Street. The remaining study area streets are local streets.

No streets are being proposed to be reclassified by this study. However, consideration should be given to create a pedestrian-oriented environment around “I” Street and portions of 6<sup>th</sup> Street within the downtown core area. This can be done by considering this area as a Special Transportation Area (STA).

#### 9.2.511 *Parking*

The parking survey summarized in the Opportunities and Constraints report has documented that sufficient on-street parking exists on 6<sup>th</sup> Street to support the existing commercial uses.

Of the 160 on-street parking spaces along 6<sup>th</sup> Street between A Street and Jane Avenue, the peak usage occurred at 3:00 PM with only 23 spaces used. This is a maximum overall utilization of 14 percent. At the maximum overall parking utilization, 137 on-street parking spaces were available.

Based on the parking survey conducted, there seems to be more than sufficient parking supply for the immediate future. Should the City of Umatilla encounter parking problems in the distant future, a two tiered strategy could be implemented to meet any future demand. First, on-street parking spaces are not marked on the side streets. Additional spaces could be sought by striping parking spaces on the side streets. Conservatively, at least 100 spaces could be added from side street parking. Considerably more side street parking spaces could be developed if the local street cross-section depicted in *Figure 9.2-22* was implemented. Should the City of Umatilla add additional side street parking spaces, then it should consider installing curb, gutter, and storm drains at that time. The second strategy to add parking in the downtown area is to close one or two side streets between 6<sup>th</sup> and 7<sup>th</sup> Streets and develop surface street public parking lots. The closure of one or two side streets should not have a significant impact to traffic since the downtown area has a well-developed grid system. There is a side street approximately every 200 hundred feet. The only consideration are to avoid closure of the collector side streets which include “B” Street, “F” Street, and Switzler Avenue and “I” Street which is the center of the downtown revitalization concept. Each side street block has a right-of-way dimension of 80 feet by 200 feet and could accommodate at least 30 new parking stalls.

### 9.2.512 *TSP Street Improvements*

There are no roadway improvement projects planned in Umatilla's Transportation System Plan (TSP) for the study area. However, based on discussions with ODOT, the Umatilla River Bridge may be rebuilt in the next five or six years. Should this occur, the City of Umatilla would like to consider a new alignment for the bridge. The new alignment would cross the Umatilla River at 5<sup>th</sup> Street. Highway 730 would be re-aligned with 6<sup>th</sup> Street between "C" Street and "E" Street to the east. To the west, Highway 730 would be re-aligned to the current highway alignment west of Powerline Road. Powerline Road could then be re-aligned to the new highway alignment further west of the new bridge.

There are three traffic signal projects planned for the study area at the eastern and western boundaries of the study area. The three intersections identified in the TSP as needing signalization by 2017 are the Powerline Road/Highway 730, Umatilla River Road/Highway 730 (6<sup>th</sup> Street), and "J" Street/Highway 730 (fire signal) intersections.

Other than the streetscape plan and pedestrian improvements, no new street improvement project is proposed.

### 9.2.513 *Median Improvements Created by the Downtown Revitalization Plan*

In order to enhance the pedestrian friendliness, attractiveness and traffic calming along 6<sup>th</sup> Street, medians and bulb-outs are proposed. Medians narrow the area of pavement and may provide a refuge area for pedestrians. Bulb-outs create a perception of narrowing the street to the motorist. They are also used to make pedestrian crossings shorter, and therefore easier and safer. Both medians and bulb-outs narrow the area of pavement and travel lane widths providing a visual cue to the driver to slow down. When used in conjunction they can have a significant impact on travel speeds along the roadway. *Figure 9.2-7* shows the proposed Pedestrian and Streetscape Improvements, which illustrate the proposed locations of medians and bulb-outs.

The proposed medians will eliminate left turn pockets along 6<sup>th</sup> Street the following locations:

- Westbound left at D Street
- Eastbound left at E Street
- Westbound left at F Street
- Eastbound left at G Street
- Westbound left at G Street
- Eastbound left at H Street
- Westbound left at I Street
- Eastbound left at J Street

Although the proposed medians may replace the left turn pocket in several locations along 6<sup>th</sup> Street, left turn movements would still be allowed. No turn restrictions are being proposed.

Even though a median is proposed between Switzler Avenue and Yerxa Avenue, left turn pockets along 6<sup>th</sup> Street have been retained to provide access to the local businesses including the Red

Apple grocery store. Bulb-outs along 6<sup>th</sup> Street are proposed at all intersections where medians are proposed.

Replacing the left turn pockets with the proposed medians is not expected to have a significant impact on left turns from 6<sup>th</sup> Street to side streets for several reasons. There are side streets approximately every 200 feet. This provides numerous opportunities to make left turns, thereby spreading the left turn volumes on several intersections. Also, left turn volumes do not constitute a large percentage of traffic along 6<sup>th</sup> Street between D Street and J Street (there are less than 5 percent of the traffic at 6<sup>th</sup> Street/Switzler Avenue).

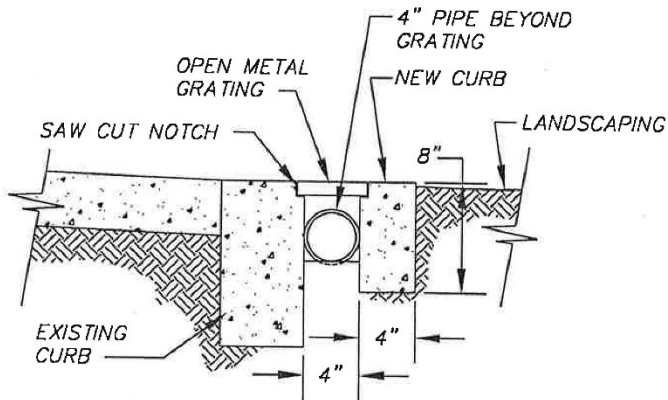
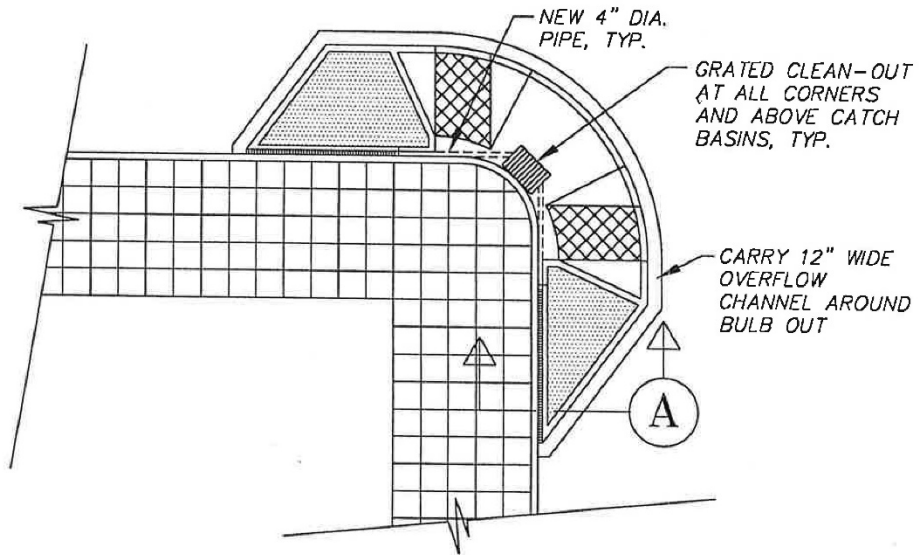
The redevelopment along 7<sup>th</sup> Street between H Street and I Street is expected to close 7<sup>th</sup> Street in this section permanently. Since 7<sup>th</sup> Street will no longer provide a continuous alternative to 6<sup>th</sup> Street through Umatilla, little or no diversion is expected in through traffic from 6<sup>th</sup> Street to local streets.

It is estimated that the reductions in travel speeds on 6<sup>th</sup> Street will also increase delay on the side streets by approximately five (5) to ten (10) percent. In addition, round-the-block circulation should not be impeded by the proposed medians and bulb-outs.

#### 9.2.514 *Bulb-Out Design Detail*

The intent of the proposed bulb-out detail is to provide a compact layout for pedestrian access beyond the existing curbs in the downtown area. Seventy-five percent of the corners have no catch basins, and runoff is primarily directed to the north and west following the slope of the existing ground and adjacent highway grade. A small tapered landscaped area would be provided on either side of handicap ramps, with these ramps faced in two directions, set out from the present curb line. The bulb-out design detail described above is shown in *Figure 9.2-27*.

Drainage would pass underneath this bulb-out following the current flow line of the existing curb, utilizing a combination of an open top metal grated trough behind the landscaped area to provide for ease of cleanout, connections between this trough and around the corner with a grated hatch into a 4-inch pipe, with the additional construction of a 12-inch wide concrete apron around the bulb-out to carry overflows in the event of plugging of the drainage trough or 4-inch diameter pipe.



Bulb Out Design Standard Detail  
 Figure 9.2-27

### 9.2.515 *Access Management*

Appendix 9A-4 has a detailed discussion of Umatilla's access management practice. The City's TSP documents the access management standards. The only proposed change to those standards by this plan is to update the ODOT facility standards to meet the standards set in the recently adopted 1999 Oregon Highway Plan (OHP). Also, the Downtown Core and Downtown Transitional areas should be considered as a Special Transportation Area (STA).

### 9.2.520 *Special Transportation Area Designation in Downtown Umatilla*

Access management is important to promoting safe and efficient travel for both local and long distance users along State Highway 730 in the City of Umatilla. The 1999 *Oregon Highway Plan* specifies an access management spacing standards and policies for state facilities. Although the City of Umatilla may designate state highways as arterial roadways within their transportation system, access management for these facilities follows the Access Management Spacing Standards of the 1999 Oregon Highway Plan. These spacing standards are based on highway classification, type of area and speed, which are shown in the appendix to this document. This section describes the state highway access management objectives and specific highway segment where special access spacing standards apply.

Highway 730 through the City of Umatilla is categorized in the 1999 Oregon Highway Plan as a Regional Highway. The primary function of these highways is to provide connections and links to regional centers, Statewide or Interstate Highways, or economic or activity centers of regional significance. The management objective of Regional Highways is to provide safe and efficient, high speed, continuous-flow operation in rural areas and moderate to high-speed operations in urban and urbanizing areas. A secondary function is to serve land uses in the vicinity of these highways. Inside STAs (Special Transportation Areas), local access is also a priority. Inside Urban Business Areas, mobility is balanced with local access.

To assist in implementing state access management standards and policies, the 1999 Oregon Highway Plan also recognizes that state highways serve as main streets of many communities, such as downtown Umatilla. Shorter block lengths and a well-developed grid system are important to a downtown area, along with convenient and safe pedestrian facilities. In general, downtown commercial arterial streets typically have blocks 200 to 400 feet long, driveway access sometimes as close as 100-foot intervals and occasionally, crosswalks, along with on street parking. The need to maintain these typical downtown characteristics must be carefully considered along with the need to maintain the safe and efficient movement of through traffic. The Oregon Highway Plan recognizes the main street function through the designation of Special Transportation Areas (STAs).

### 9.2.521 *Special Transportation Area*

A Special Transportation Area (STA) is a designation that may be applied to a state highway, when a downtown, business district or community center straddles the state highway within a community's urban growth boundary. STAs can include central business districts but they do not apply to whole cities or strip development areas along individual highway corridors.

The primary objective of a STA is to provide access to community activities, businesses and residences, and to accommodate pedestrian, and bicycle movements along and across the highway

in a compact central business district. An STA designation will allow reduced mobility standards, accommodate existing public street spacing and compact development patterns, and enhance opportunities to provide improvements for pedestrians and bicyclists in the downtown area. Inclusion in an STA allows for redevelopment with exception to the proposed access management standards.

Access management in STAs corresponds to the existing city block for public road connections and discourages private driveways. However, where driveways are allowed and land use patterns permit, the minimum spacing for driveways is 175 feet or mid-block if the current city block spacing is less than 350 feet. In addition, the need for local street connections may outweigh the consideration of maintaining highway mobility within an STA.

In Umatilla, the area along Highway 730 between “A” Street (milepost (M.P.) 182.66) and River Road (M.P. 183.52) exemplifies the design features that would be consistent of an urban downtown area designated as an STA. Within this mile segment, buildings are spaced close together, parking is on street, and the posted speed limit is 25 m.p.h. The compact development pattern qualifies this area for an STA highway segment designation.

After adoption of the TSP by the Umatilla City Council and a finding of compliance with the Oregon Highway Plan, the City of Umatilla and ODOT Region 5 may jointly designate this segment of Highway 730 as an STA through a Memorandum of Understanding (MOU). The MOU should incorporate by reference the TSP and the following STA Management Plan provisions.

*9.2.522 Special Transportation Area Management Plan*

The Umatilla STA is located on the portion of Highway 730 (6<sup>th</sup> Street) between the intersections of “A” Street (M.P. 182.66) and River Road (M.P. 183.52), which is located completely within the urban growth boundary and city limits of the City of Umatilla.

The primary objective of the Umatilla STA is to provide access to community activities, businesses and residences, and to accommodate pedestrian, and bicycle movements along and across the highway in the city’s central business district.

The designation of an STA in Umatilla is intended to accommodate the existing public street spacing and compact development pattern. Specific access management conditions for the Umatilla STA on Highway 730 include:

- a) Minimum spacing for public road connections at the current city block spacing of 200 feet.
- b) Public road connections are preferred over private driveways. Private driveways are discouraged in an STA.
- c) Where land use patterns permit, ODOT will work with the City and property owners to identify appropriate access to adjacent property owners within the STA.
- d) Where a right to access exists, access will be allowed to property at less than the designated spacing standard only if the property does not have reasonable alternative. If possible, other options should be considered, such as joint access.



- e) Where a right to access exists, the number of driveways to a single property shall be limited to one. ODOT will work with the City and property owners if additional driveways are necessary to accommodate and service the traffic to the property, and will not interfere with driver expectancy and the safety of through traffic on the highway.
- f) Driveways shall be located where they do not create undue interference or hazard to the free movement of normal highway or pedestrian traffic. Locations in areas of restricted sight distance or at points that interfere with the placement and proper functioning of traffic control signs, lighting or other devices that affect traffic operation will not be permitted.
- g) If a property is landlocked (no reasonable alternative exists) because a driveway cannot be safely constructed and operated and all other alternatives have been explored and rejected, ODOT might be required to purchase the property. However, if a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT has no responsibility for purchasing the property.

Traffic on the state highway operates at LOS C or better, which correlates to maximum volume to capacity ratio of 0.69. Increase in traffic volumes over the 20-year projection period is expected to increase significantly based on Umatilla's Transportation System Plan in Chapter 12. The level of service and correlating volume to capacity ratio is projected at LOS E and F which correlates to a volume to capacity ratio greater than 0.80 which is the maximum standard for Highway 730 within the city's urban growth boundary. This projection from the TSP is based on an aggressive growth assumption, which may not occur. The volume to capacity ratio of Highway 730 through the STA area of Umatilla should be monitored periodically to assure that the state highway is operating at or better than the established standard.

To maintain highway mobility through an STA in Umatilla, land use development decisions (within the urban growth boundary) shall not cause traffic flow to exceed a volume to capacity ratio of 0.80. The posted speed limit in the STA is currently and will remain at 25 miles per hour as allowed by state statute in a business district. Curb (parallel or perpendicular) parking is permitted in the STA, provided minimum sight distance requirements are met for all public road connections and private driveways. Parking in this area is adequate at this time. No signals or traffic control devices currently exist in this area.

To enhance Highway 730 for pedestrians and bicycles, there is a proposal to change the use of the existing street cross-section. Highway 730 is currently a three-lane roadway with parallel parking on both sides of the street. Sidewalks generally exist along the highway but no bike lanes exist. The proposal is to restripe Highway 730 to include one travel lane in each direction, maintain the on-street parking, and stripe bicycle lanes on both sides of the highway. In addition, medians are planned in place of the center turn lane in certain sections. The proposed cross-section was shown previously in *Figure 9.2-18*.

The designation of an STA in Umatilla further identifies the need to accommodate pedestrian, and bicycle movements along and across the highway in the central business district. The recommended urban arterial standard within the STA consists of an 80-foot right-of-way with a paved width of 60 feet that includes two 11-foot travel lanes, 6-foot bike lanes, 7-foot parking strip on each side of the road, and a center median of 12 feet. The standard includes 8 to 10 foot

sidewalks on each side of the road that includes a four-foot furniture zone that can accommodate street lighting and street trees. To accommodate bicycle movements along the highway, bike lanes should be installed along the entire length of the STA boundary. Bulb-outs have also been proposed throughout most of the STA area. *Figure 9.2-23*, shows the locations where bulb-outs are being proposed. There are no other bicycle and pedestrian improvements identified in this area.

Another essential component to accommodate pedestrians in an STA is street crossings. There is one crosswalk enhancement proposed. *Figure 9.2-19* shows the proposed crosswalk improvements to the intersection of Highway 730 (6<sup>th</sup> Street) and “I” Street. There are no other specific crosswalk enhancements or safety improvements recommended within the STA at this time other than the bulb-outs previously mentioned. Future improvements and modifications to the highway within the STA and within the curb line, or if no regular established curb, to the right-of-way utilized for highway purposes will be made in accordance with the Oregon Highway Design Manual and with ODOT approval.

Existing maintenance and operational strategies along Highway 730 will be employed within the STA, consistent with Oregon Revised Statute 373.020, as follows:

- ODOT shall be responsible for the ongoing maintenance of: a) the roadway surface between curbs, or if no regular established curb, to that portion of right-of-way utilized for highway purposes b) painting centerline stripe, c) designated school crosswalk delineation, directional and regulatory signs except those signs described as the City’s responsibility and d) plowing snow one blade-width of centerline stripe provided there are no conflicts with utilities.
- City shall be responsible for the on-going maintenance of: a) storm sewer system, b) sidewalks, c) landscaping, d) luminaries, e) U-turn signs, parking signs, and street name signs, f) painting parking-stripes and other pavement delineation not described as ODOT’s responsibility, and g) snow removal from parking strip.

Future improvements and modifications to the highway within the STA will include maintenance and operational strategies with ODOT and City approval.

### 9.2.600 *IMPLEMENTATION*

Implementation concepts can be broadly categorized as either downtown redevelopment strategies or changes to policies and plans. Redevelopment strategies will enable the City to create an economic development program to make it more attractive to commercial and industrial businesses. The strategies also identify funding sources to assist with implementation of public improvement projects defined in the Plan. Ideally, changes in regulatory policies should remove any regulatory obstacles to development within downtown Umatilla and guide prospective development to achieve the community's goals. This chapter begins with a discussion of downtown redevelopment strategies and then identifies recommended changes in regulatory policies such as the Comprehensive Plan and Zoning Ordinance.

#### 9.2.610 *Downtown Redevelopment Strategies*

The civic center concept and other conceptual design work done to date for this project will be helpful in the creation of a more compact downtown and a sense of place. However, it appears the City of Umatilla also needs to address commercial development and business recruitment and retention at a more basic level. This section primarily speaks to those issues, but also identifies potential funding sources for both proposed improvements to the downtown and commercial development.

While undergoing efforts to improve the physical appearance of the City and encourage commercial development it will be important to keep in mind that getting the first few new businesses in will be the most difficult. Also, it will most likely be easier to get new businesses in than to get existing businesses to relocate.

Development of tools for marketing and business recruitment will be a necessary first step.

#### 9.2.611 *Getting Ready for Economic Development/Marketing*

Most economic development and marketing activities begin with compilation and interpretation of background data. Getting the work done can be challenging because of the time commitment required and what often seems a lack of immediate results. However, long-term success at improving the economic vitality of Umatilla may hinge on getting this up-front homework done. Key development/marketing tools could be expected to include:

1. *Business and property inventories.* Such an inventory would include information on land and building sizes, current use, and property ownership. A database can be used to store this information. Periodic updating of the business and property database is recommended as information about individual properties change, or at least once a year.
2. *Contact and survey Umatilla business and property owners.* Surveying these groups both provides key information and a critical opportunity to get their buy-in on the City's efforts. Completed questionnaires should be entered into a computer database. A brief report summarizing results should be prepared and made available to City staff as well as participants. Care should be taken to assure 1) that questions are limited in number and will provide usable results, and 2) results are aggregated in the report in such a way that confidential information is not attributed to any particular business or property owner.

3. *Coordinate customer survey(s)*. Two optional approaches may be taken to surveying current and/or prospective customer bases. The first technique involves use of *intercept* surveys — targeted to those who already come to area businesses. Examples of ways to conduct intercept surveys include: 1) distribution of survey cards by business owners to customers passing through the premises (with drop boxes available for completed survey cards); or 2) posting volunteers who ask survey questions at cooperating businesses and/or strategic places such as key street corners.

A second optional approach involves gathering a *random sample* of the population of Umatilla trade area and (potentially) beyond. The most common way to conduct this type of survey is through a telephone survey, with as many completed responses as possible obtained for statistical validity.

4. *Organizing economic and demographic data in a form useful for marketing Umatilla*. The final piece of the data collection effort involves organizing key information into a marketing piece useful to the City's marketing efforts. The purpose is to provide statistical indicators of business potential to market to possible investors. Demographic and economic indicators typically covered include:

- Population — and change over time.
- Age of population — compared with county or city-wide averages.
- Number of households — and household size.
- Household incomes — and change over time.
- Business cluster analysis — to define the mix that is uniquely Umatilla.
- Umatilla employment — and change over time.
- Sales leakage estimates — both for retail and services.

Focus should be placed on the positive trends; for instance increasing incomes, households with family needs, product orientation to take advantage of growing Hispanic population. In addition, updates to this information should be made as needed; especially when there are significant new data sources available (such as the year 2000 Census).

#### 9.2.612 *Marketing Approach & Products*

What should be done with all this market information? Several specific products and activities are recommended. For each step recommended here, it will be necessary to identify responsible parties.

1. *Assemble a business development/marketing package*. Whether the target is the owner of an existing business or a prospective investor or developer, the best results are obtained by *customizing* information to the needs and interests of the recipient. Economic development organizations often find that a well-designed folder with pockets for a variety of materials provides the greatest flexibility together with ease of presentation.

Examples of materials that could be readily compiled follow. These could be available on computer and provided as needed. Each particular insert might be anywhere from 1-4 pages long:

- Summary results of customer, business and property owner surveys -- with particular focus on identified business gaps/opportunities.
  - Business inventory/directory and map.
  - Target business list — with reasons why Umatilla represents a good location choice for each business type targeted.
  - Success stories — highlighting examples of businesses that have done well in Umatilla and why (ideally with photos and quotes from the owners).
  - Listing of available properties together with rental rates and/or sales prices -- prepared in collaboration with property owners, management companies or realtors as appropriate.
  - Historical information and general description of the City of Umatilla -- including incentive programs and other financial assistance available.
  - Summary of community demographic and economic trends.
2. *Prepare a business directory.* The directory should include a map of the district showing business locations, cross-referenced by type. If possible, the directory should be updated annually. A completed business directory can serve multiple audiences — including visitors, regular customers and employees, though its intended use may be primarily for insertion in business development/recruitment folders.
  3. *Organize a business recruitment program.* Once the data tools and marketing package are in place, it is time to put all of this information to good use. The most effective recruitment program begins locally and expands outward. First, identify current district business and property owners who may have the resources or know-how to open targeted business. After local contacts have been made, identify and contact successful businesses operating elsewhere in the county that might represent a *good fit* for a Umatilla location. Final areas of contact may include selected comparable businesses elsewhere in the Northeast Oregon/ Southwest Washington region.

For maximum effectiveness, a *tag team* approach is suggested for contacting desired businesses. This approach involves a recruitment coordinator and an individual who has an existing or potential peer relationship with the type of business being solicited (such as members of a local chamber of commerce or merchants association or even an ad hoc committee). A database of business contacts should be maintained with a tickler file for follow-up as warranted.

4. *Define and activate business finance and incentive programs.* Business finance programs may include anything from a façade improvement program to the possibility of setting up a shared risk pool focused on business lines of credit for existing or start-up businesses.

For instance the City of Pendleton created an incentive and marketing program for a four-block area in the downtown. The City, Pacific Power, RCDC, but primarily a grant from Oregon Economic and Community Development Department funded this program. It is a one-time program that continues until the \$45,000 is spent. The incentive program is structured so that if a business moves into the four-block area it receives \$1.00 for every square foot (SF) leased,

\$0.25 per SF for advertising, and \$200 for educational purposes. The goal is to cut vacancies in the four-block area in half. Funds are also going toward the downtown's share of freeway billboard cost and promotions of main street area. Reportedly the incentive program is probably not bringing in businesses to downtown Pendleton but businesses coming in are getting off to a stronger start.

5. *Plan and execute Umatilla promotions and events.* Specific business district-related events and promotions could play an important role, especially as the commercial district becomes more active. Potential events may be focused toward the general public or customers, or aimed at business recruitment targets. Results of the surveys and demographic and economic analysis may suggest opportunities for events that address Umatilla's best market prospects (for instance a Cinco de Mayo event).
6. *Jointly promote and advertise.* Promotional efforts need not be limited to events. Better information on business/property owner and customer interests should make it possible to fashion cooperative business promotion and advertising campaigns. Whatever the opportunity, the decision of where to spend marketing resources will be more informed and have a greater chance for success if based on solid marketing data. Celebrate the City's racial and ethnic diversity, the history of Umatilla, and the City's roles as the location where the Columbia River reaches Oregon and as a gateway to the state.
7. *Cultivate strategic partners.* Let potential financial partners know about efforts being made, including results of studies and surveys. One of the goals should be to increase awareness of the City of Umatilla and the potential role that the City can play in the overall economic development of county and region. Cultivating this interest is important, because it can evolve into financial partnerships required for complex public/private development.

In addition to the aforementioned marketing approaches, it is important to make the process for starting a business in Umatilla as easy and pleasant as possible. Providing clear zoning codes/ordinances without too much room for administrative discretion, including specific use lists with a limited number of uses relegated to conditional use. In order to stimulate activity, the City may want to be liberal in that most uses are allowed somewhere. For instance, auto related uses may not be allowed in the downtown core but should be allowed at interchange. The focus should be to make it simple and straightforward to locate in Umatilla.

#### 9.2.620 *Potential Funding Sources*

The following two tables list potential funding sources for strategic investment in downtown Umatilla. The first table includes the most commonly used or high-priority funding resources and the next table includes other or secondary resources.



Table 9.2-11. Potential Funding Sources for City of Umatilla Strategic Investment

<b>Commonly Used/High Priority Funding Sources</b>	
<b>Funding Resource</b>	<b>Description</b>
<b>City of Umatilla</b>	City funds for downtown projects can come from the general fund or a dedicated fund. Examples of dedicated funds include transient room tax, meal tax, etc. Detailed descriptions of some of dedicated funding resources follow.
<b>Local Improvement District (LID)</b>	LIDs are used to finance public improvements and facilities by distributing the cost of the improvements to surrounding property owners. Costs are typically distributed to property owners by street footage or land area, but can also be allocated based on size or assessed value of property or building. LIDs allow property owners to finance their assessment over time at the cost of public borrowing.
<b>Economic Improvement District (EID)</b>	EIDs are an alternative to type of assessment district exclusive to commercial and industrial areas. EIDs can be used to fund intangible improvements such as planning, management, promotion or maintenance in addition to development or improvement activities. Assessments cannot exceed 1% of real market value of property located within the district in any given year.
<b>Revolving Loan Funds</b>	The City can develop and provide revolving loan funds for infill projects. Specific eligibility requirements can be attached to these funds. This is especially useful where attention to detail is required.
<b>Tax Increment Financing (TIF)</b>	Tax increment financing provides dedicated public funds for planned physical improvements in a specific geographic area. This process requires designation of a “blighted”* Urban Renewal Area, creation of an Urban Renewal Agency and development of Urban Renewal Plan. Tax increment funds accumulate through increases in property values in the renewal district. Recent small town strategies have included structuring the URA to include both downtown commercial areas and those along highways. In this way development along the highway also functions as a source of tax increment funding that can be utilized for redevelopment of the downtown.
<b>Business License Fee</b>	Business license fees are placed on businesses within certain boundaries (for instance within an EID). The business license fee may be in the form of a surcharge on an existing license fee. The City is responsible for collection of fees and disbursement of funds.
<b>Transient Room Tax</b>	Additional funding could also potentially come from reallocating a percentage of the transient room tax (TRT) for debt service on revenue bonds or by increasing the tax rate.
<b>Community Development Block Grants (CDBG)</b>	Funds are available on a competitive basis for public improvements that benefit low/moderate income households. Some cities have received funding for public improvement projects or loans for private businesses for economic development purposes.
<b>Oregon Housing and Community Services (OHCS) Community Incentive Fund</b>	This fund is one part of the “Oregon Livability Initiative” and provides financing for development projects which help communities meet one or more of the following objectives: 1) Create more jobs in distressed <sup>2</sup> communities that want economic growth; 2) increase the supply of affordable housing near jobs and transportation; 3) Reduce sprawling development patterns; 4) Revitalize urban centers, downtowns, and main streets. Awards have been determined for the current biennium. The earliest new applications would be accepted is fall of this year subject to legislative refunding of the program. A well-defined project scope and budget and committed financial resources on the part of submitters is necessary to compete effectively for these funds.

<sup>2</sup> The economic distress index as employed by Oregon Economic and Community Development is used.

Table 9.2-11. Potential Funding Sources for City of Umatilla Strategic Investment - (continued)

<b>Commonly Used/High Priority Funding Sources</b>	
<b>Funding Resource</b>	<b>Description</b>
<b>Oregon Department of Transportation (ODOT), Transportation Enhancement Program</b>	Oregon Department of Transportation (ODOT) has financial assistance programs, such as the Transportation Enhancement Program, to help implement projects such as the pedestrian and streetscape improvements. This program allocates federal TEA-21 funding for projects to enhance the cultural, esthetic, and environmental value of the state's transportation system. Federal funding is available to a maximum of 89.73%. Matching funds are a minimum of 10.27% of the project cost.

Table 9.2-12 Potential Secondary Funding Sources

<b>Other Possible Sources</b>	
<b>Funding Resource</b>	<b>Description</b>
<b>Business Gross Receipts Tax</b>	This is an excise tax on gross or net income earned by business activity. The fee amount can be based on the net income or gross receipts minus cost of goods sold. Gross receipts subject to such a tax must usually be based on local transactions. For example, Portland's tax is based on net income and is currently at a rate of 2.2%
<b>County/Municipal Bonds</b>	These are bonds issued by a county or municipality. The tax-exempt bonds are used to finance public capital improvements. The bonds may either be voted or non-voted. Bonds must fall within the city's allowable debt capacities.
<b>Current Employee Tax</b>	This can be a payroll tax or a tax on businesses in which the fee scale is based in part on the number of employees or employee income.
<b>Fuels Tax</b>	This is a tax on gasoline and diesel fuel. In Oregon, two counties and three cities have their own local fuels tax. Rates range from 1-3 cents per gallon. These funds are typically dedicated to transportation improvements. In Umatilla's case could be allocated to improvements on 6 <sup>th</sup> Street/ Hwy 730.
<b>Restaurant Meals Tax</b>	A selective sales tax on the purchase price of meals served in public establishments, this tax is added onto the patron's bill. Revenues are based on rates typically ranging from 1% to 5%. It appears the State has preempted the possibility of including alcoholic beverages in the tax. Ashland is currently the only city in the state with a meal tax. Corvallis and Seaside failed when they tried to enact this tax.
<b>Special Assessments for Street Lighting, Maintenance and Cleaning</b>	Subject to voter approval a city may collect assessments on property within its boundaries for street lighting, maintenance or cleaning which benefit the property. The associated measure needs to focus on the provision of one service. Assessments for street lighting can include an amount sufficient to pay for construction, reconstruction, modification, installation, operating and maintenance costs
<b>Private Donations</b>	Occasionally funds are made available from private sources. An endowment fund, one time or ongoing contributions can fund a position, program or street furnishing. These private contributors may include major employers or citizens. This kind of funding strategy is usually most successful for: (a) A non-profit facility like museum or interpretive center; (b) arts and cultural organizations / events, (c) for a critical economic development initiative with major private sector leadership; or (d) beautification items such as benches or fountains which can bear a plaque with the name of the contributor.

\*Note: "Blighted" indicates that because of unsafe structures, deterioration, faulty planning, harmful land use or inadequate facilities the area is detrimental to the welfare of the community.

9.2.630 *Policies and Plans*

Generally, the Downtown Revitalization Plan is consistent with the goals, findings and policies adopted in the City's Comprehensive Plan; however, the City's Plan, published in December of 1977, is outdated. To implement the Downtown Revitalization Plan, revisions to the Umatilla Comprehensive Plan and Zoning Ordinance are included under Sections 9.2.631 and 9.2.632.

9.2.631 *Umatilla Comprehensive Plan*

9.2.631(1) *Land Use:*

The Downtown Revitalization Plan is consistent with the Land Use section (Chapter 2) of the Comprehensive Plan for the reasons listed below.

The Downtown Revitalization Plan was based on the 1990 Census figures, preliminary figures released from the 2000 Census, and locally developed data from stakeholder interviews. Combined, the census figures provided sufficient information on projected population growth and economic development to use in the Downtown Revitalization Plan. As additional 2000 Census data becomes available, it may provide additional insight needed for implementation.

The location and capacity of city services is not anticipated to be an issue with the implementation of the improvements proposed in the Downtown Revitalization Plan due to the nature of the improvements. The improvements are confined to streetscape projects that should not significantly affect the physical location of utilities or their capacity. Utility location and capacity issues should be investigated at the time of new building construction or building renovation.

Information on the existing land use patterns in downtown Umatilla and surrounding areas was incorporated during the planning and analysis process. Plan recommendation carefully considered the existing land use pattern and developed recommendations based on city goals and findings.

Projected land use needs for Umatilla are documented in Chapter 14, Sections 14.2 and 14.3. This information is deemed reliable. The Downtown Revitalization Plan is consistent with the Buildable Lands Analysis. The Plan assumes growth that is well within the range outlined in the Buildable Lands Analysis. Based on this Comprehensive Plan policy, the City should consider whether the policy is met, particularly with respect to findings on natural resources and public services capacity. The City should also consider a complete revision of the Comprehensive Plan, given it was completed twenty-four years ago and the planning time horizon used was 2000.

The Downtown Revitalization Plan was developed in a manner consistent with the Comprehensive Plan goal for citizen involvement. Several means of soliciting citizen involvement were used including a questionnaire, community visioning, and numerous public workshops. More information about the citizen involvement process is included in Section 9.2.300.

Because the Downtown Revitalization Plan encourages compact growth in the downtown area, it supports the City's land use Finding 2.5.101 of minimizing development costs. The Plan is also consistent with the City's policy of encouraging new development within the area served by public utilities.

Revisions to downtown zoning designations recommended by the Downtown Revitalization Plan are intended to improve neighborhood quality and identity, as stated in Comprehensive Plan land use Finding 2.5.103. Creation of a new Downtown Residential zone in downtown Umatilla is intended to promote new types of housing compatible with Downtown Commercial activities. The zoning supports the housing policy stated in the Comprehensive Plan to provide a diversity of housing types.

The Downtown Revitalization Plan functions as an Area Plan for the downtown. The study area for the Downtown Revitalization Plan shall be used to establish the Area Plan boundary for the purposes of the Comprehensive Plan amendment and changes to the Comprehensive Plan map. The Plan boundary is described below.

The study area, or Area Plan boundary, consists of a portion of the City of Umatilla, bounded on the north by the Union Pacific Railroad and on the west and south by the Umatilla River. The area extends eastward ending at the Highway 730 overpass over the railroad tracks. The southeast portion of the area includes public school properties and playing fields and also includes two city blocks west of Sloan Avenue. The southeast portion of the area does not include land located beyond the railroad spur, which loops to the southeast to a point south of Sloan Avenue.

#### *9.2.631(2) Transportation*

The Downtown Revitalization Plan supports the transportation policies stated in the Comprehensive Plan by:

- Encouraging pedestrians circulation;
- Providing transportation alternatives to personal vehicles by creating a pedestrian and transit-friendly downtown;
- Limiting points of access along U.S. 730;
- Reviewing pedestrian circulation problems downtown; and
- Promoting adequate linkages between uses.

#### *9.2.631(3) Urbanization*

The purpose of the Downtown Revitalization Plan is directed at achieving urbanization objectives and policies stated in the Comprehensive Plan; specifically Policy 14.9.102, to promote “functional efficiency and visual attractiveness of public and private properties.”

#### *9.2.632 Umatilla Zoning Ordinance*

A careful review of the Umatilla Zoning Ordinance indicates that a few important changes to the Ordinance are required to implement the development concepts envisioned by the Downtown Revitalization Plan. No revisions to regulatory processes are required or desirable. The development approval process should remain relatively simple to encourage development.

Generally, the ordinance revisions are intended to achieve three objectives:

- Focus Downtown Commercial development where it is likely to be most successful,
- Create opportunities for a vital mixture of commercial and residential activities, and
- Define a transition of land uses from the interchange to the downtown core that will provide a wide variety of opportunities for commercial development.

The following changes implement the Plan. First, the Downtown Commercial zone has been reduced in size to concentrate development in an area that is more pedestrian in scale. Second, a new Downtown Residential zone has been designated to allow a mixture of professional office and residential uses that are compatible with the downtown core. Another new zone, Downtown Transitional (DT), has been developed that can accommodate either an extension of Downtown Commercial uses, or as a conditional use small-scale auto-oriented commercial activities. Finally, minor revisions to the Downtown Commercial zone were made to increase density and create an environment more suitable for pedestrians.

### **SECTION 9.3 DESTINATION MANAGEMENT PLAN**

Tourism industry has significant potential in Umatilla. In 2018 City and Chamber worked together with a private consultant to identify opportunities for tourism development. After a robust public involvement process, a Destination Management Plan recommended focus on four key areas of destination development, fishing and river activities, expansion of outdoor sports complex and activities, development of a trail along the Umatilla River and clearing of invasive species along the Umatilla and Columbia Rivers to open up the viewshed to and from the river. City is working to implement the plan, which will in turn increase demand and opportunity for restaurants and retail and lodging as well as enhance the overall livability of the city.

### **SECTION 9.4 ECONOMIC DEVELOPMENT POLICIES**

- 9.4.101 The City will provide an adequate supply of development sites, as per State requirements, to accommodate anticipated employment growth with the public and private sectors and will encourage new and continuous employment opportunities. The City will provide lands with a variety of sizes, zoning and other characteristics needed by firms likely to locate in the City of Umatilla and maintain a 20-year supply of such lands.
- 9.4.102 The City will coordinate with the Port of Umatilla, Umatilla County, Business Oregon and other local partners on local and regional economic development projects.
- 9.4.103 The City will establish districts with tax abatements, loans, subsidized infrastructure, reduced regulations or other incentives available to businesses in the district that met specified criteria.

- 9.4.104 Within the downtown area, the City of Umatilla shall encourage development of a pedestrian-oriented town center that combines both commercial and public activities and is intended to become a community gathering place.
- 9.4.105 The Downtown Commercial (DC) District is intended to provide a concentrated central business district centered on 6th Street, Highway 730. The district allows a mix of civic, retail, service, and office uses, designed to be pedestrian-friendly and oriented towards fronting streets and sidewalks.
- 9.4.106 In portions of the downtown area, the City of Umatilla shall allow for a variety of commercial opportunities accessible by pedestrians and vehicles alike that are compatible with the pedestrian scale of downtown. The Downtown Transitional (DT) District provides for a transition of uses between General Commercial uses found near the interchange and Downtown Commercial uses, which are more pedestrian in scale. The District is primarily intended to accommodate Downtown Commercial uses, which are pedestrian-friendly and oriented toward the street; however, the District is designed for greater flexibility by allowing certain General Commercial uses that require sites located closer to the downtown.
- 9.4.107 Within the downtown area, the City of Umatilla shall establish a Downtown Residential (DR) District to encourage improved land use compatibility between Downtown Commercial and residential uses. The intent of the DR District is to accommodate residential or professional office projects near the downtown core.



# Exhibit B – Economic Opportunity Analysis



## **ECONOMIC OPPORTUNITIES ANALYSIS (OREGON STATEWIDE PLANNING GOAL 9)**

Prepared For:  
The City of Umatilla, Oregon

October 2019



# Acknowledgments

Johnson Economics prepared this report for the City of Umatilla. Johnson Economics and the City of Umatilla thank the many people who helped to develop this document.

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# I. INTRODUCTION

This report introduces analytical research presenting an Economic Opportunities Analysis (EOA) for the City of Umatilla, Oregon.

Cities are required to periodically reconcile estimates of future employment land demand with existing inventories of vacant and redevelopable employment land within their Urban Growth Boundary (UGB). The principal purpose of the analysis is to provide an adequate land supply for economic development and employment growth. The intent is to conduct this through a linkage of planning for an adequate land supply to infrastructure planning, community involvement and coordination among local governments and the state.

To this end, this report is organized into six primary sections:

- **Economic Trends:** Overview of national, state and local economic trends affecting Umatilla County and the city of Umatilla, including population projections, employment growth and a demographic profile.
- **Target Industries:** Analysis of key industry typologies the City should consider targeting as economic opportunities over the planning period.
- **Employment Land Needs:** Examines projected demand for industrial and commercial land based on anticipated employment growth rates by sector.
- **Capacity:** Summarizes the City's inventory of vacant and redevelopable industrial and commercial land (employment land) within the City of Umatilla's UGB.
- **Reconciliation:** Compares short- and long-term demand for employment land to the existing land inventory to determine the adequacy and appropriateness of capacity over a five and twenty-year horizon.
- **Economic Development Potential and Conclusions:** Summary of findings and policy implications.

This analysis reflects changes in employment, land supply, and macro-economic trends since the city of Umatilla last reviewed local economic development policies.

## II. ECONOMIC TRENDS

This report section summarizes long and intermediate-term trends at the national, state, and local level that will influence economic conditions in Umatilla over the 20-year planning period. This section is intended to provide an economic context for growth projections and establish a socioeconomic profile of the community. This report’s national evaluation has a focus on potential changes in structural socioeconomic conditions both nationally and globally. Our localized analysis considers local growth trends, demographics, and economic performance.

### NATIONAL TRENDS

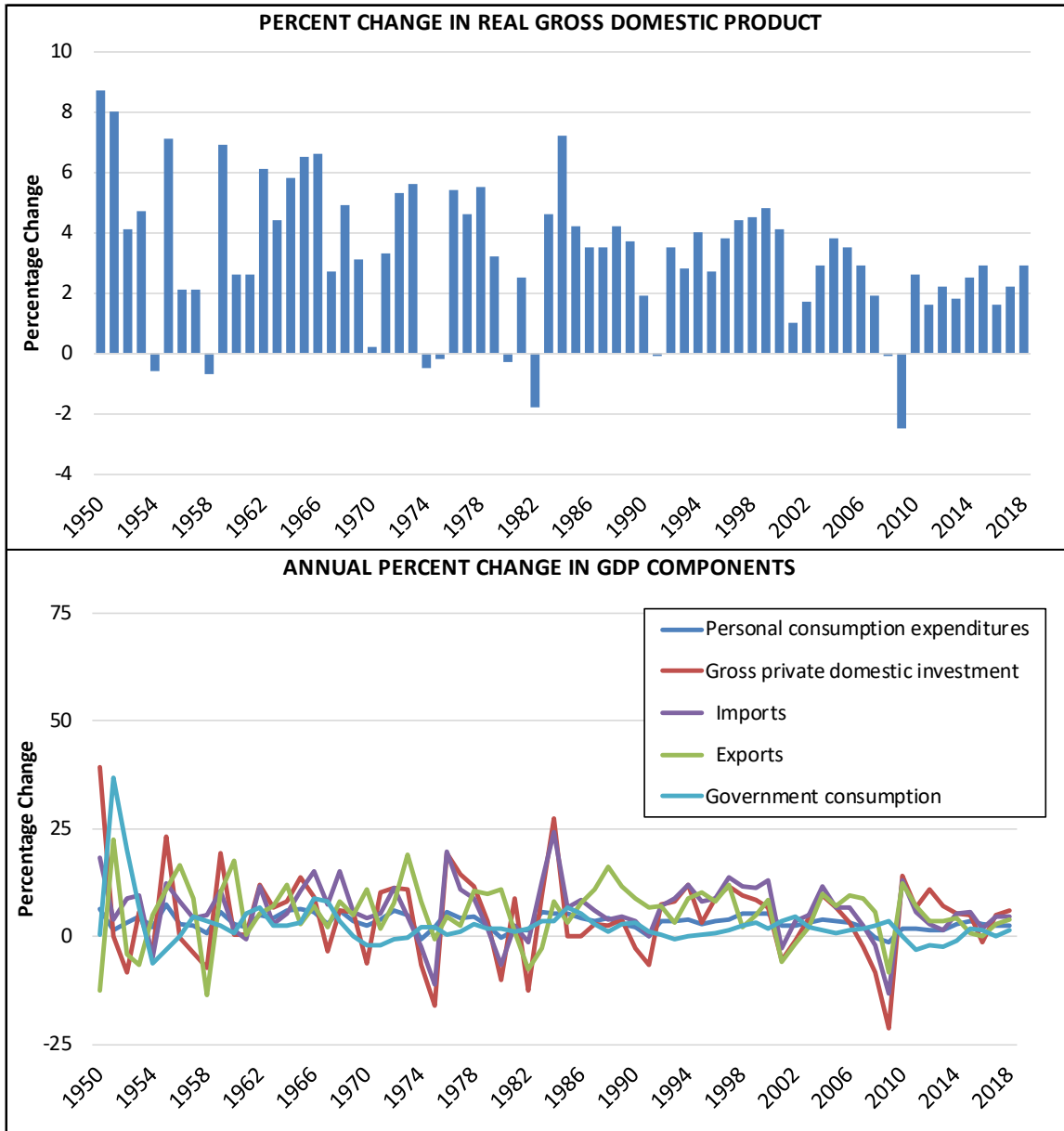
The long-term trend indicates that the United States economy has settled into a moderate growth trajectory at around 2.0% per year, after growing at above 4.0% per year during the 1960s and above 3.0% per year between 1970 and 2000. While the overall growth pace is moderating, there has been a shift within the economy from consumption of goods to consumption of services, especially services oriented around personal wellbeing (health, private education, finance). This reflects increasing levels of wealth and discretionary income in the population. Growth in fixed investment (equipment and structures) and government defense spending is also moderating – making manufactured goods a less significant part of the economy.

Increasing international trade led to strong growth in imports during the 1990s and 2000s, partly due to U.S. firms offshoring operations to lower-cost markets. Exports also grew over the period, but at a slower pace. The offshoring trend has partially reversed in the current decade, due to rising costs and greater awareness of cultural barriers and various associated risks. Greater emphasis on leaner and more agile supply chains, combined with demand for customized products and rapid delivery, has also contributed to growth in domestic production. This impact has been greatest in auto manufacturing. Despite this “reshoring” trend, imports from Asia continue to grow at a faster clip than domestic manufacturing.

The most commonly used measure of economic prosperity is real gross domestic product (GDP) per capita. Real GDP per capita is essentially a measure of national wealth considered on an individual basis, and the increased purchasing power of the population translates into greater investment in health care, education, housing, leisure, and many other sectors. U.S. real GDP per capita remains stable. Over the last century, the average annual growth rate has been 1.8%, despite considerable shifts in economic and social conditions—a finding that suggests long-term economic growth is more closely related to broad trends, such as population growth and investment in physical and human capital, than temporary economic fluctuations, like the recent recession and government policy.

The “Great Recession” officially spurred six consecutive quarters of negative economic growth in 2008 and early 2009. The depth and duration of this downturn was the most pronounced since World War II. The current expansion cycle has been sustained yet the pace of growth is modest to date. Credit markets have been more stringent, businesses are more cautious, and housing construction has yet to emerge as a driving catalyst.

**FIGURE 2.01: NATIONAL GROSS DOMESTIC PRODUCT TRENDS**

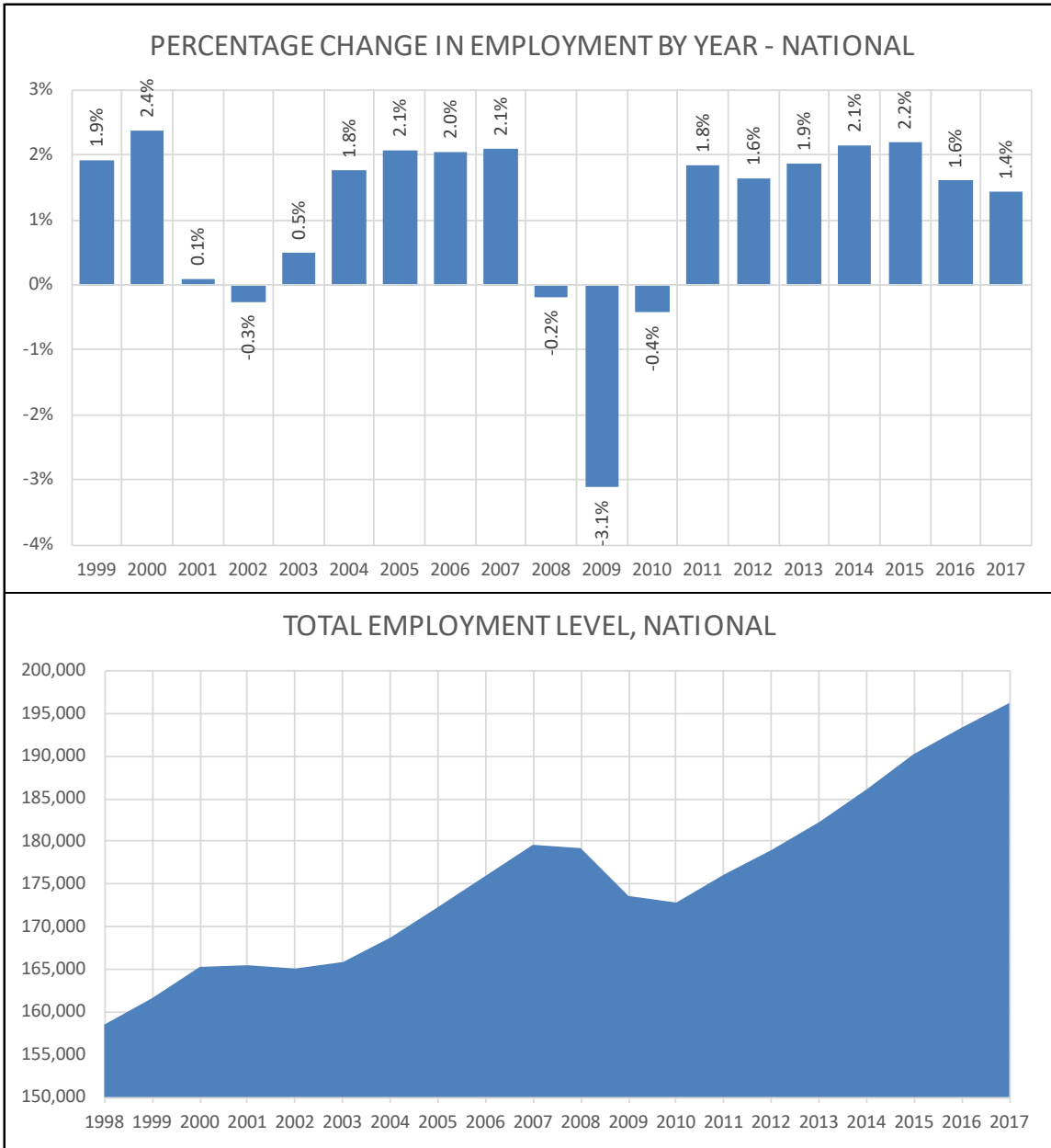


SOURCE: US Bureau of Economic Analysis

Overall, national economic output has seen a notable moderation in growth over the past two decades, with most of the current business cycle hovering around 2.0% growth per year. Economic forecasters generally expect a cyclical moderation over the 2020-23 period, reflecting downward pressures from the maturing of our decade-long economic expansion. Potential GDP growth, which measures the GDP growth that can be sustained at a constant rate of inflation, indicates future long-term growth will remain around 2.0% per year. In the near-term, considerable economic uncertainty exists due to global trade and currency conflicts among the US and many of its traditional trading partners.

The expansion in GDP has been reflected in employment growth, which has ranged between 1.4% and 2.2% in the current expansion cycle. Preliminary estimates indicate an acceleration in the rate of GDP as well as employment growth in 2018. While overall trends have been positive for almost a decade, there will likely be two to three downturns at the national level over the next twenty years.

**FIGURE 2.02: NATIONAL EMPLOYMENT TRENDS**



SOURCE: US Bureau of Economic Analysis

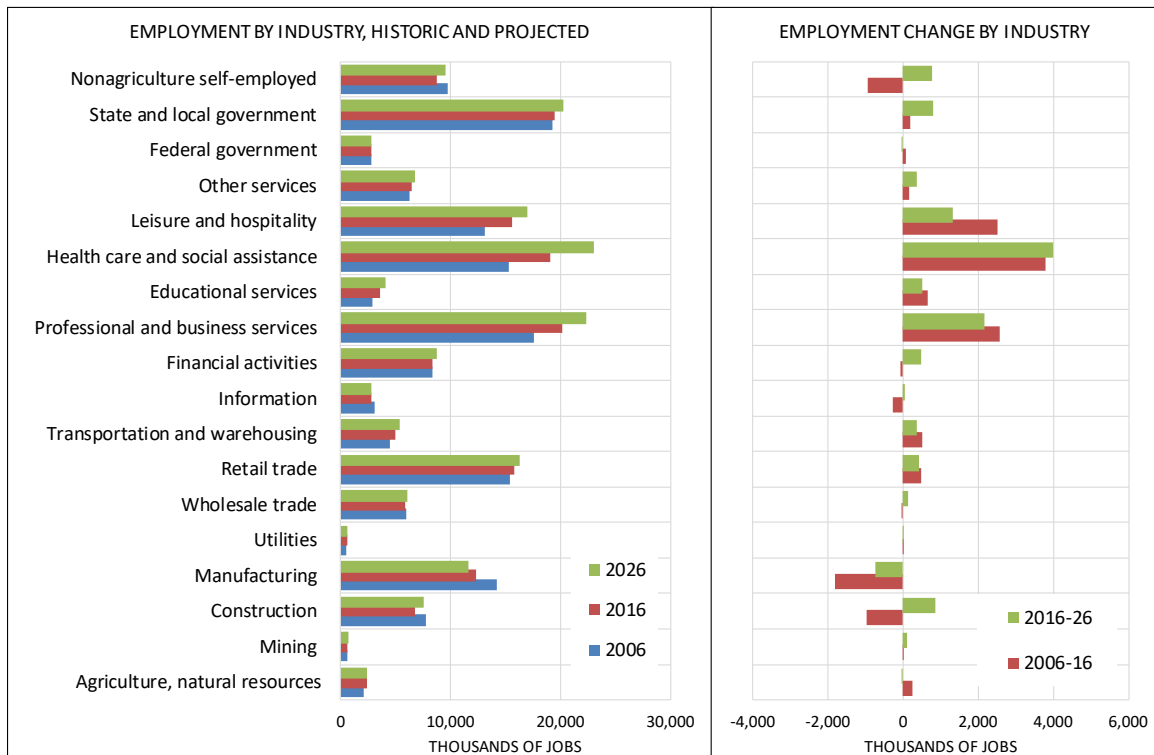
A few additional trends have significant implications for the industrial real estate market: E-commerce is rapidly taking market share from brick-and-mortar retailers, approaching 10% of all retail sales. This has caused a shift in storage needs from retail stores to warehouses and distribution centers. At the same time,



automation is causing a consolidation within the warehousing and distribution industry, leading to increasing reliance on larger third-party operators capable of making heavy investments in capital and expertise. Automation is also impacting the manufacturing industry, though to a lesser extent and primarily among larger industry leaders. Finally, changes in the use of electronic devices and growth in online services are causing a shift in the tech sector, from hardware manufacturing to software development.

Due to limited growth in demand for domestic goods and competition from low-cost markets, the U.S. manufacturing sector has lost one-third of its jobs since its peak in the late 1970s, with its share of total employment falling from 24% to 8%. With a strong dollar relative to the currencies of key trading partners, there remains significant headwinds for manufacturers that export a considerable level of product. Sectors seeing significant expansion over the prior decade include health care, professional and business services, and leisure and hospitality. Projections call for all major sectors except for manufacturing and federal government will see growth over the coming decade.

**FIGURE 2.03: NATIONAL EMPLOYMENT GROWTH BY SECTOR, HISTORIC AND PROJECTED**



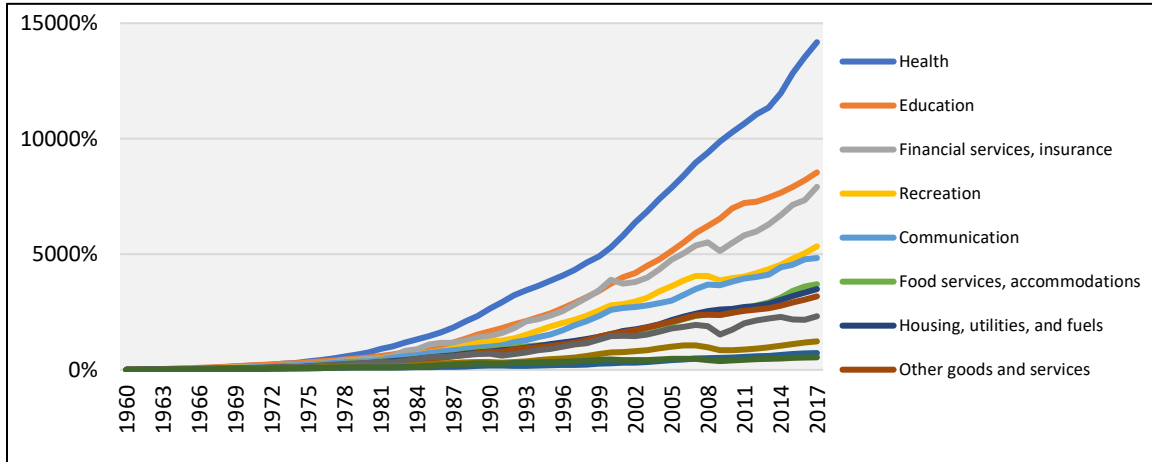
SOURCE: US Bureau of Economic Analysis

Recent trends and current forecasts reflect a shift from a goods economy, featuring manufacturing and natural resources, towards a service economy, which emphasizes technological innovation, research, and design.

Consumer spending accounts for more than two-thirds of the U.S. economy, therefore changing spending patterns dictate much of the shifts in the economy. The post-war era has been marked by increasing wealth and discretionary spending, which has shifted spending away from necessities and led households to buy goods and services that used to be produced in-house. The strongest spending growth over recent decades

has come in categories that represent investments in personal wellbeing, with healthcare/health products at the top of the list, followed by private education and financial services. Categories that represent more short-term enjoyment, like recreation, food services, and accommodations, occupy the middle segment, while necessities like groceries, clothing, transportation, and housing have seen only moderate growth. Spending on health is expected to continue to increase strongly over the coming decades as the baby boomer cohort ages.

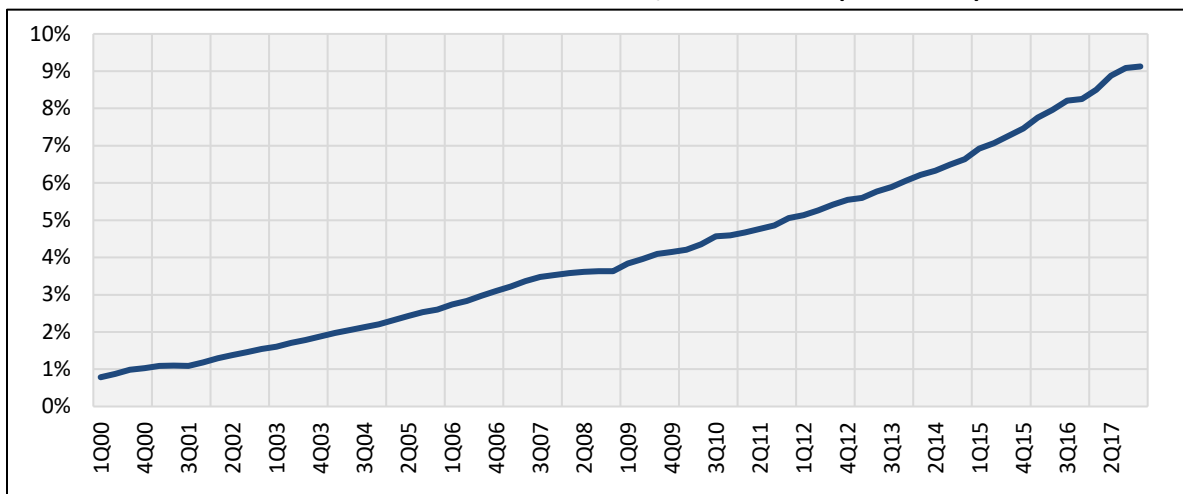
**FIGURE 2.04: CONSUMER SPENDING GROWTH SINCE 1960, BY CATEGORY, UNITED STATES (1960-2017)**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

The most dramatic spending shift in the context of real estate in recent times is the growth in online shopping, which has reduced the overall need for brick-and-mortar space, especially from retailers selling physical goods, while increasing the need for warehousing and distribution space. Online retailing accounted for an estimated 10% of all retail spending in 2018, at around \$500 billion in annual sales on a national level. Since the last recession, the segment has grown by around 15% per year, and it is currently taking market share from brick-and-mortar stores at a rate of nearly one percentage point annually.

**FIGURE 2.05: ONLINE RETAIL MARKET SHARE, UNITED STATES (2000-2017)**

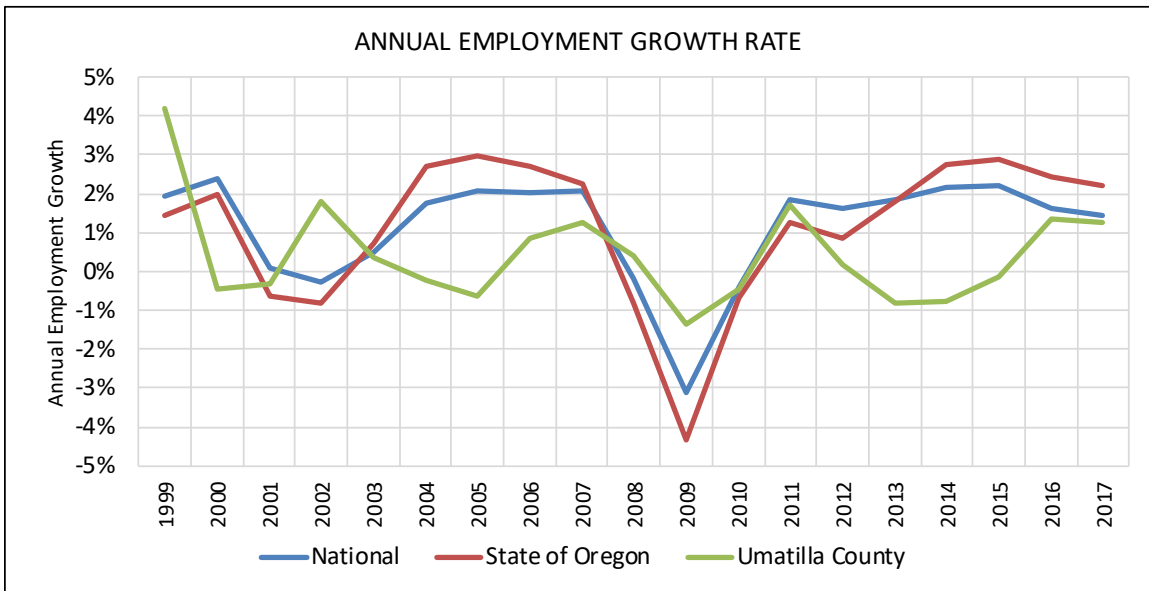


SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

## UMATILLA COUNTY & CITY OF UMATILLA ECONOMIC TRENDS

The annual rate of employment growth in Umatilla County has mirrored the broad national and statewide trends. However, after the emerging from the recession in 2008/2009, the county again experienced job losses until 2016. In recent years, county employment has been growing at roughly 1% per year.

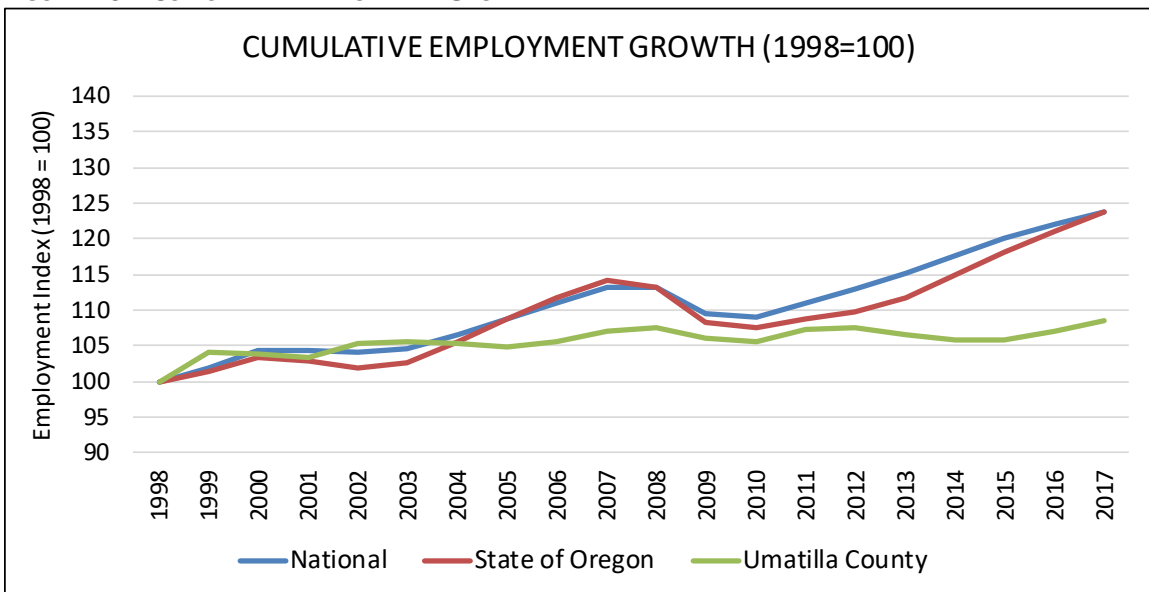
**FIGURE 2.06: COMPARISON OF ANNUAL EMPLOYMENT GROWTH RATES**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

On a cumulative basis Umatilla County has fallen behind the national and statewide averages, with the employment base up less than 10% over the last twenty years.

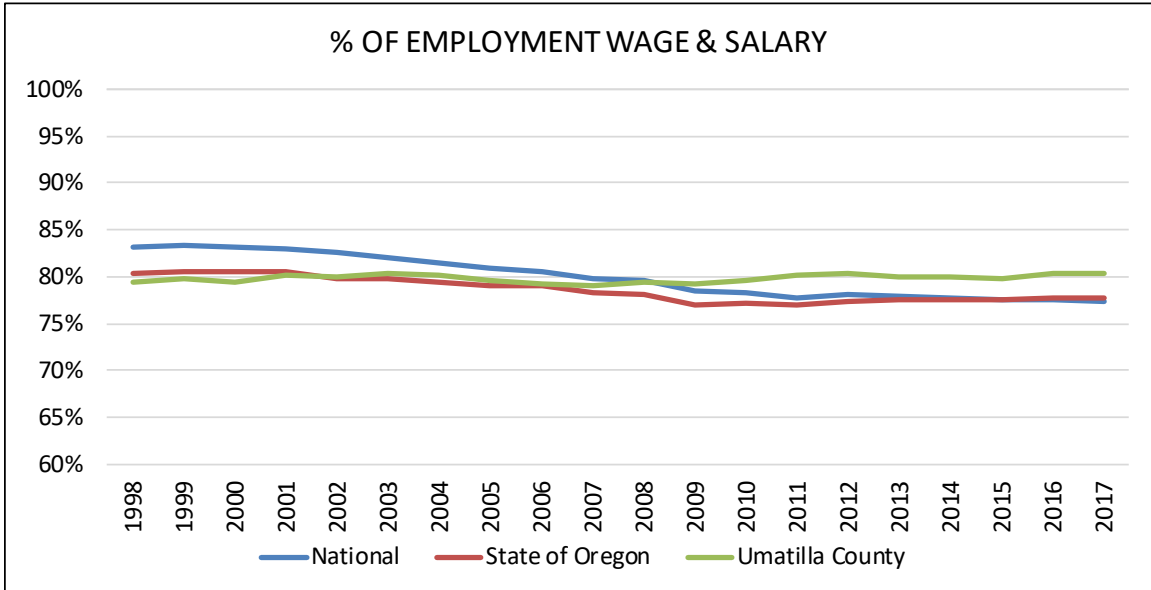
**FIGURE 2.07: CUMULATIVE EMPLOYMENT GROWTH**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

The employment base in Umatilla County has a somewhat lower share of self-employed than the national and state averages, with wage and salary employment accounting for roughly 80% of overall estimated employment in the county. This compares to rates approaching 78% statewide as well as nationally.

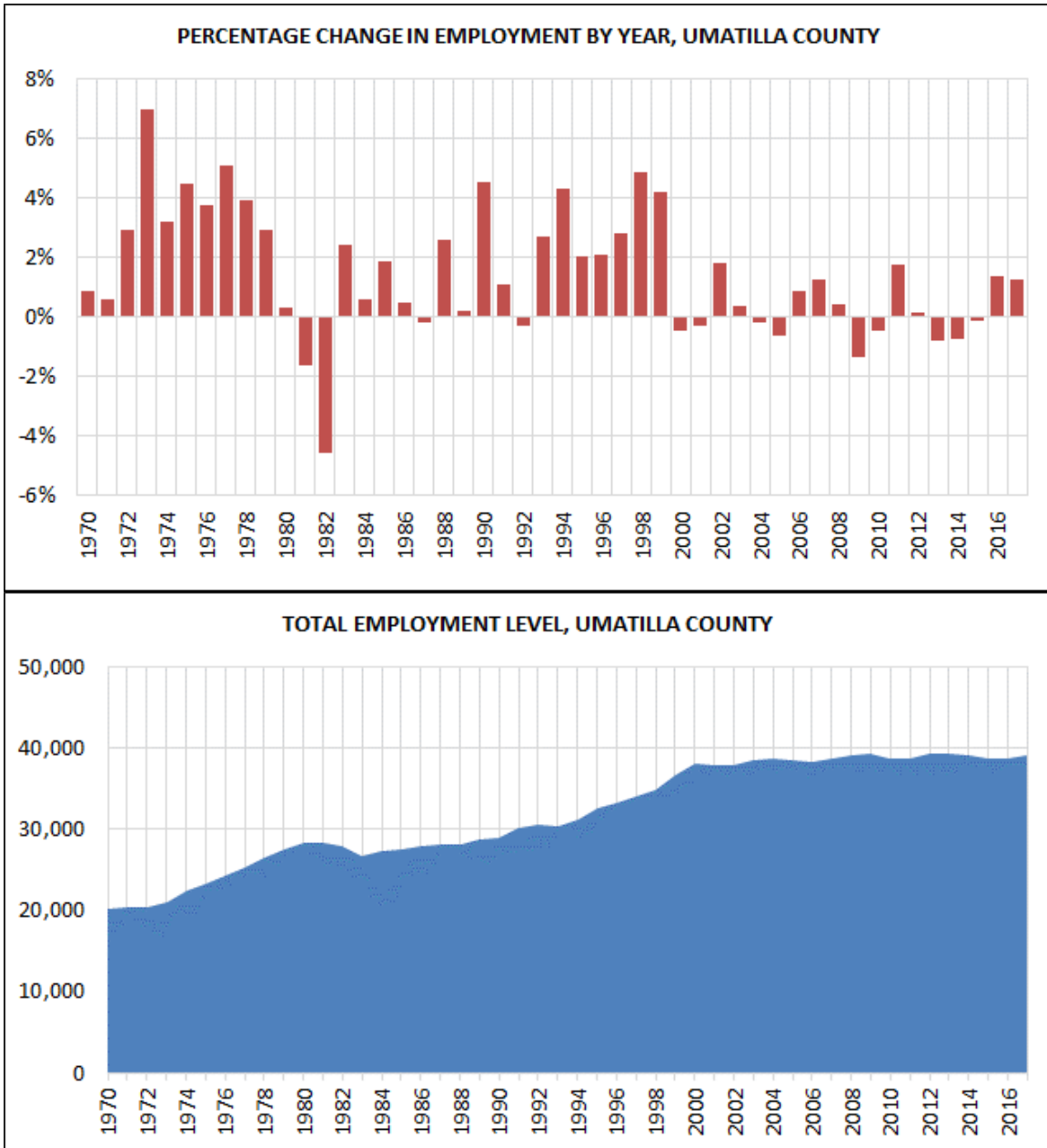
**FIGURE 2.08: % OF TOTAL EMPLOYMENT REPRESENTED BY WAGE & SALARY**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

Umatilla County’s employment base has been relatively stable since 2000, with the economic expansion adding a notable number of new jobs since 2016. The local employment level is at an all-time high, with average employment levels approaching 40,000 in 2017. However, this level does not greatly exceed the employment level seen in 2008 prior to the outset of the recession.

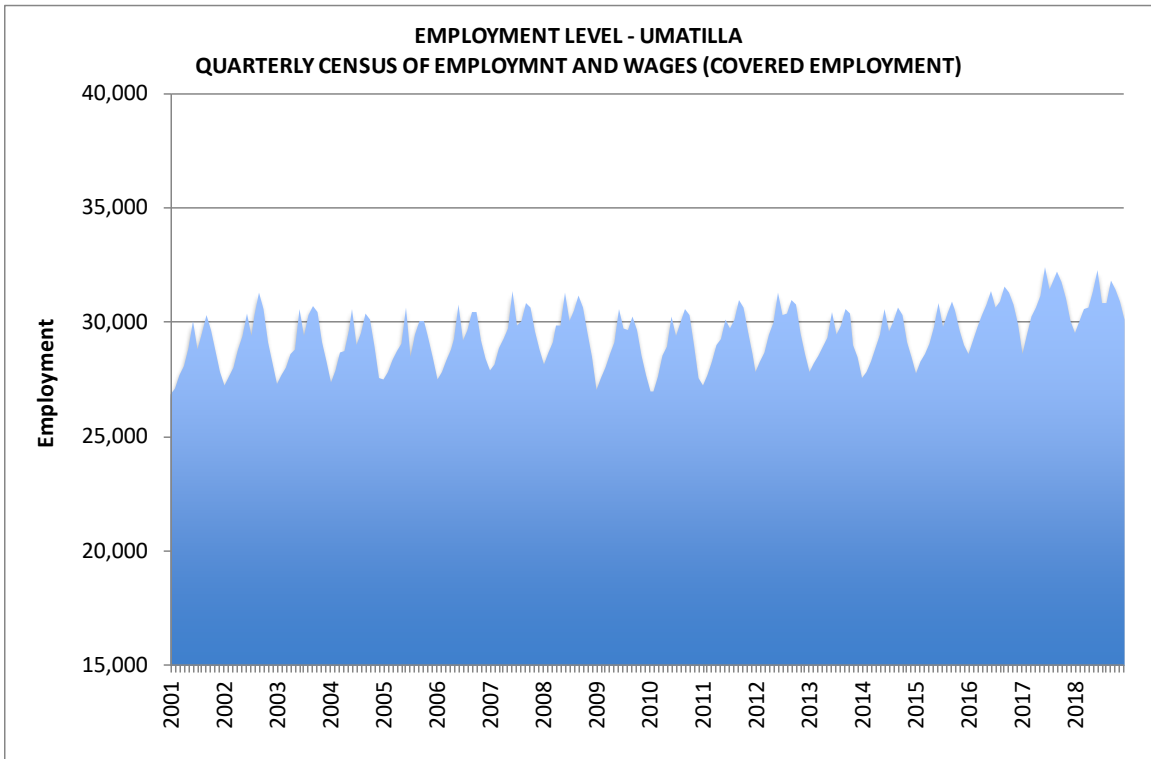
**FIGURE 2.09: UMATILLA COUNTY EMPLOYMENT TRENDS**



SOURCE: U.S. Bureau of Economic Analysis

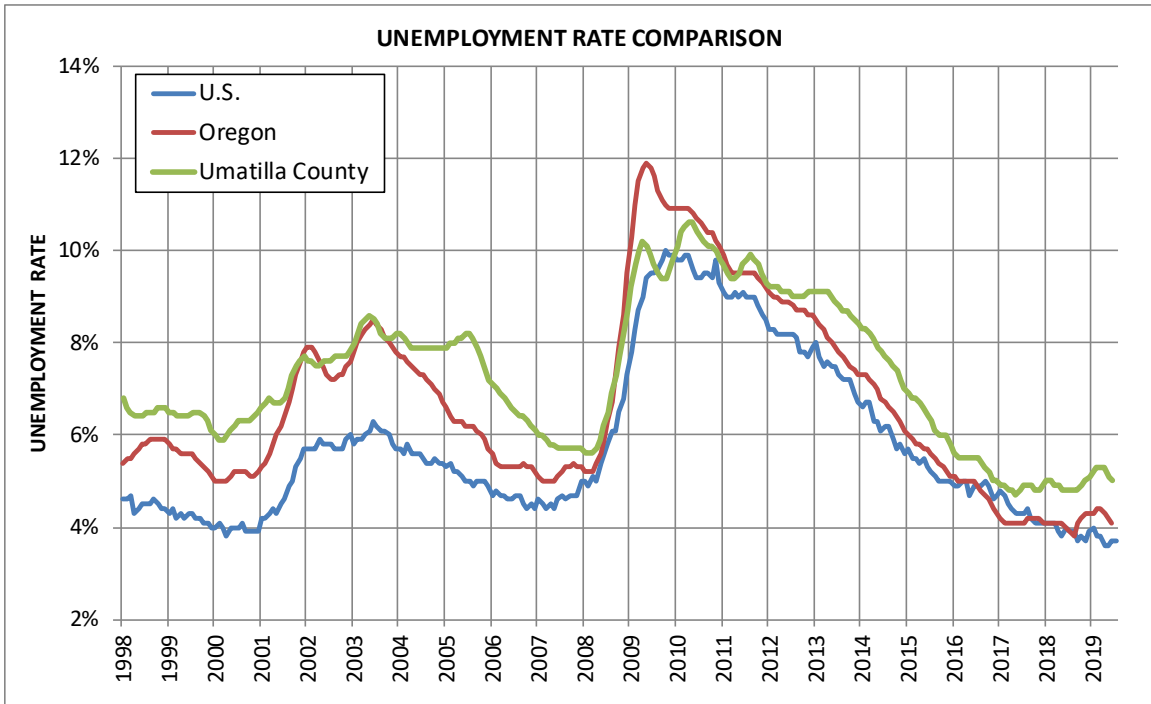
The local employment profile is highly seasonal, reflecting the area’s relatively high proportion of agricultural employment.

**FIGURE 2.10: UMATILLA COUNTY EMPLOYMENT LEVEL BY MONTH**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

**FIGURE 2.11: UNEMPLOYMENT RATE TRENDS**

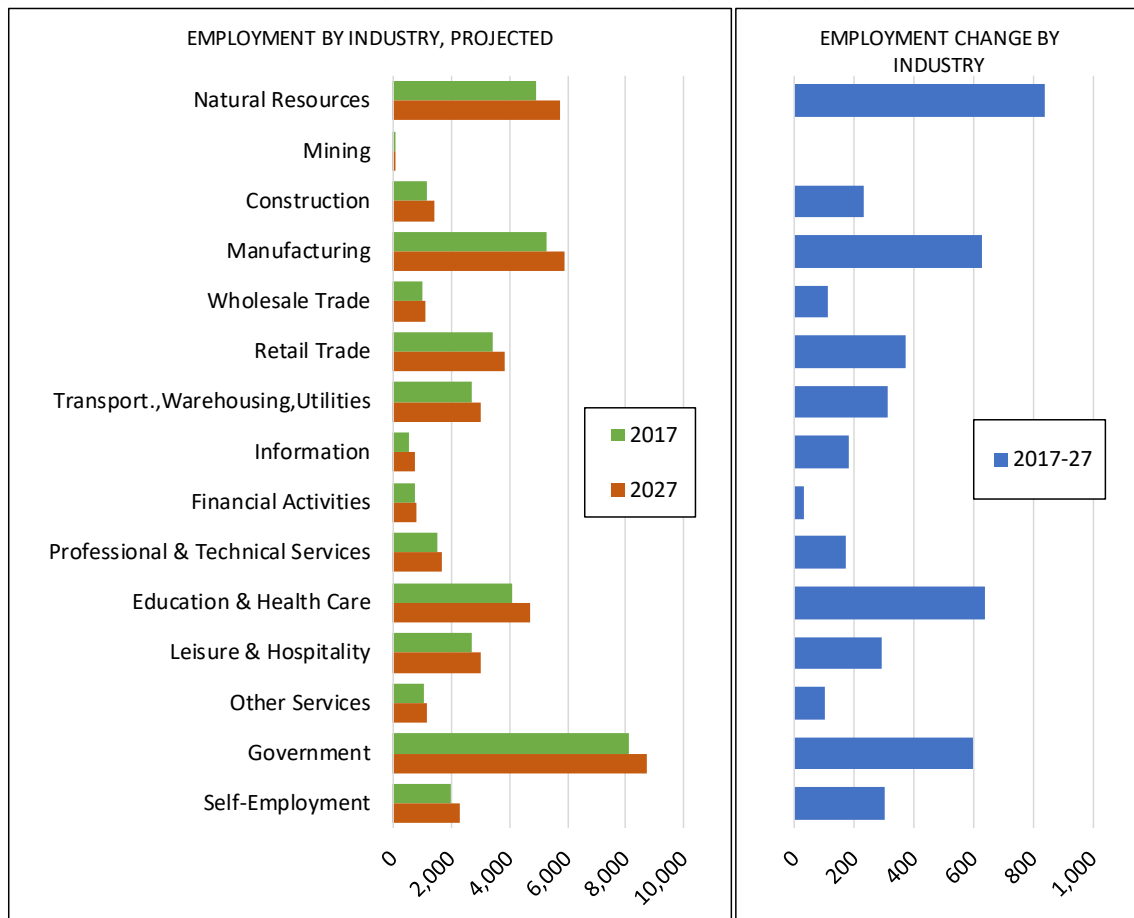


SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

The economic expansion has facilitated a commensurate drop in the unemployment rate, with Umatilla County following the national and statewide patterns. Tight labor market conditions are likely to limit growth potential in the future both locally and nationally. The local area’s ability to attract and retain workforce will be critical to sustaining economic growth going forward. In mid-2019, the countywide unemployment rate had fallen to a healthy 5%, slightly higher than the statewide rate of 4%.

According to the Oregon Employment Department, most industries are forecast to expand at a modest rate over the next decade in the broader area (Morrow and Umatilla Counties). On an absolute basis, the greatest gains are forecast in professional and business services, leisure and hospitality, and construction. On a rate of growth basis, the most rapid expansion is expected in the natural resources, manufacturing, government, and education and health services sectors.

**FIGURE 2.12: PROJECTED EMPLOYMENT GROWTH BY SECTOR, MORROW & UMATILLA COUNTIES**



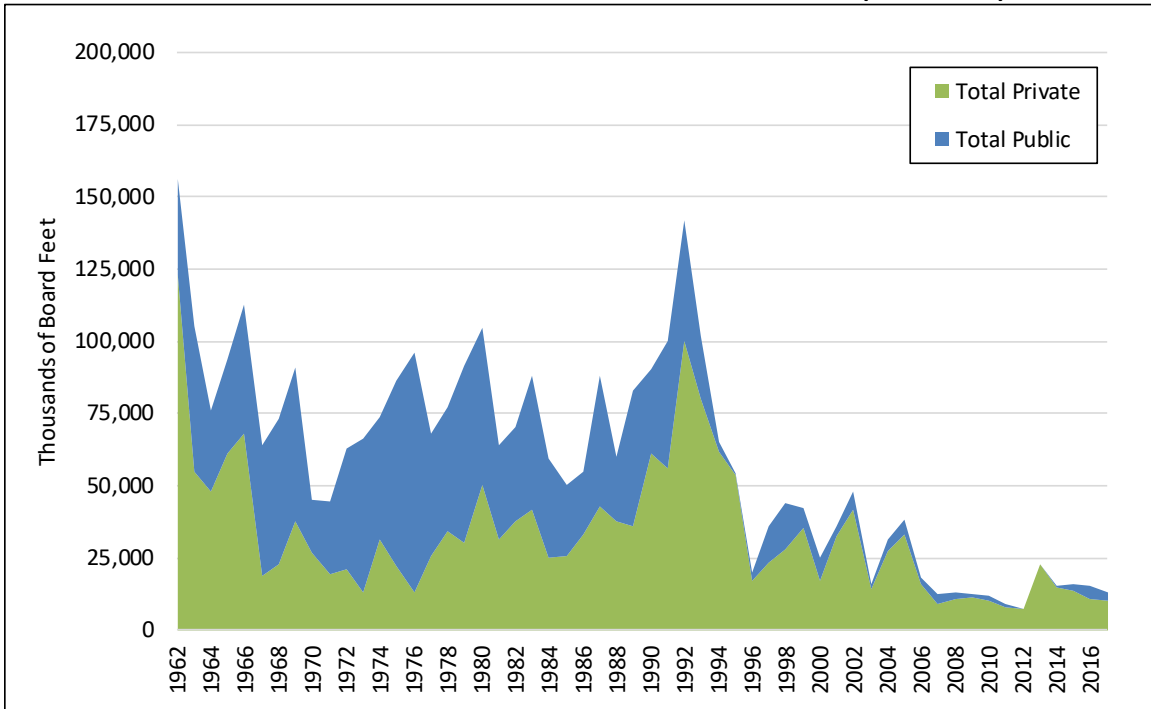
SOURCE: State of Oregon Employment Department

Like much of eastern and central Oregon, the forestry industry has seen a sharp decline in production, which is largely attributable to declines in production from public lands since 1993 (Figure 2.13). The broader region has been actively pursuing new and ongoing opportunities in the industry, including small diameter timber, biomass, and engineered wood products. Forestry is a smaller factor in communities along the river



gorge, such as Umatilla, however timber activity to the south can create some opportunities in wood manufacturing and shipping.

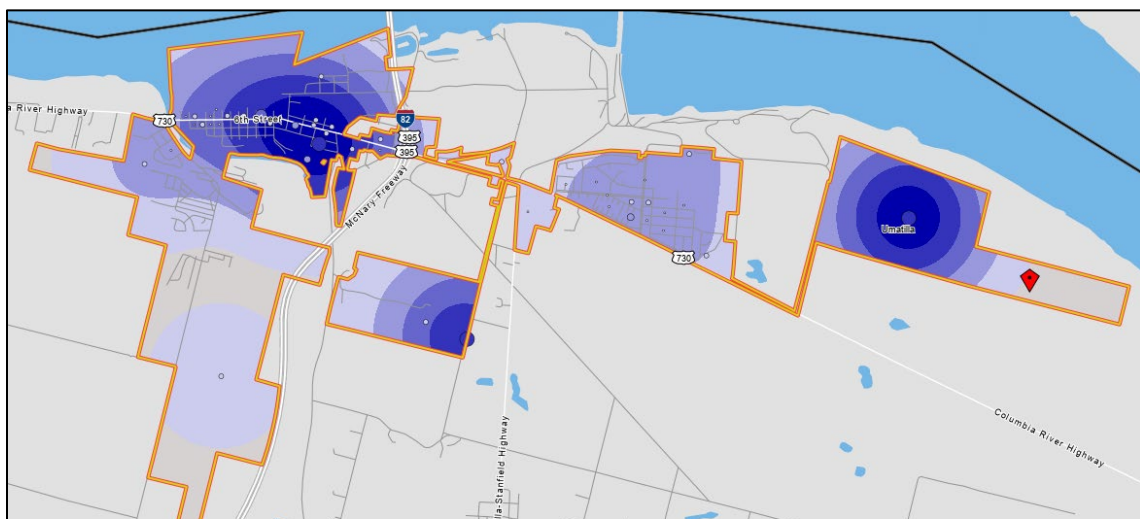
**FIGURE 2.13: ANNUAL TIMBER PRODUCTION IN UMATILLA COUNTY (1962-2017)**



SOURCE: Oregon Department of Forestry

Employment in Umatilla County is concentrated in the Hermiston/Umatilla corridor, as well as in the Pendleton area. Employment in the city of Umatilla is concentrated in the downtown area, in the area of the correctional facility and Port properties, and along Lind Road (Figure 2.14).

**FIGURE 2.14: DISTRIBUTION OF EMPLOYMENT, CITY OF UMATILLA CITY, 2017**



SOURCE: Census Bureau, LEHD Data

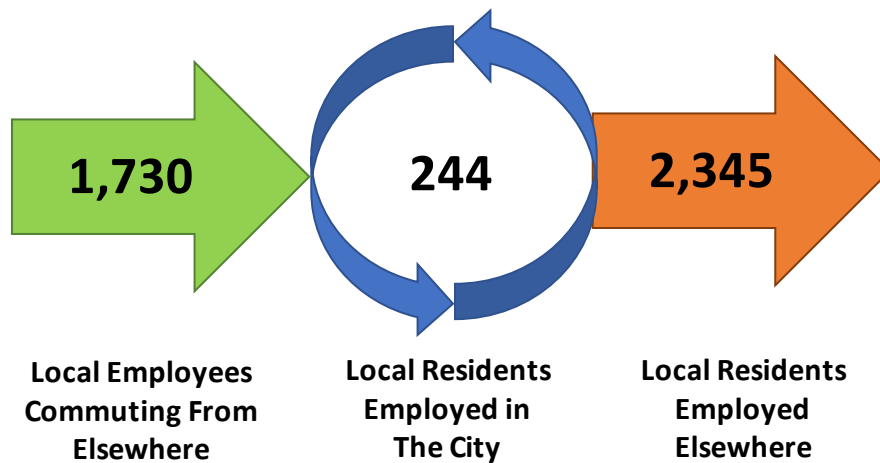
**Commuting**

Residents and employees commute broadly within Umatilla County and beyond. In the City of Umatilla, the local workforce was estimated at roughly 2,589 in 2017, of which 2,345 (90%) travelled outside of the city for employment while an estimated 244 both lived and worked within the city limits (Figure 2.15).

At the same time, an estimated 1,730 workers commuted into the city for employment, making up over 85% of the local job base of roughly 1,975. (These figures include covered employment and do not capture all forms of self-employment or contracting. Therefore, these figures are best used as an imprecise indicator of the overall pattern.)

This pattern is familiar to many communities across the state, but the extent to which local residents commute elsewhere for employment, and residents of other communities commute in for local jobs, seems somewhat starker in the case of Umatilla.

**FIGURE 2.15: NET INFLOW-OUTFLOW OF EMPLOYEES, CITY OF UMATILLA, 2017**



SOURCE: Census Bureau, LEHD Data

Commuting patterns are an important element in the local economy. They are indicative of the labor shed from which companies can draw workers, the extent to which job creation translates into increased demand for housing, goods, and services, and the overall balance of population and employment in the community.

Income and age demographics of the workforce commuting into and out of Umatilla are similar (Figure 2.16).

**FIGURE 2.16: NET INFLOW-OUTFLOW DETAIL, CITY OF UMATILLA, 2017**

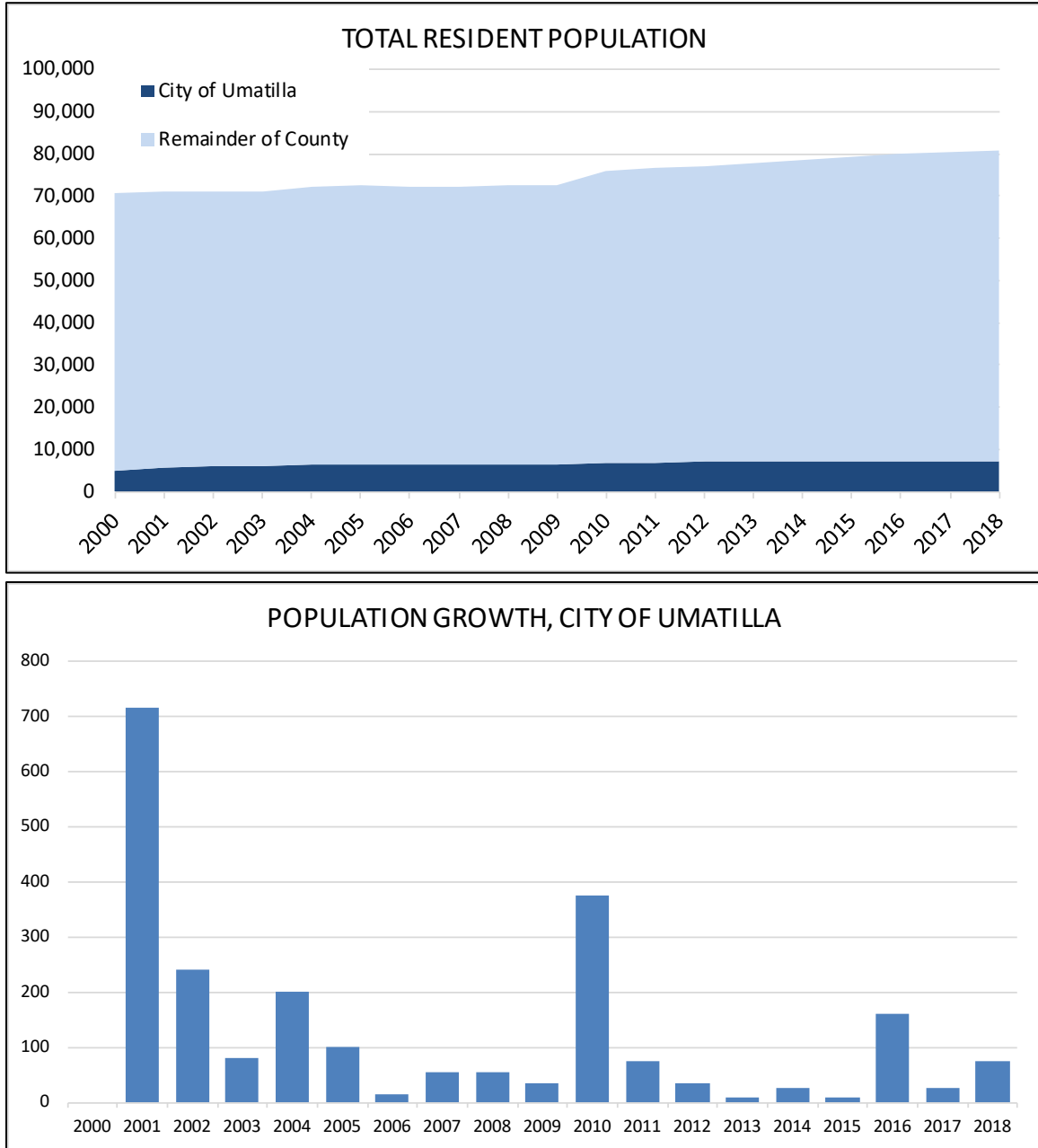
	Umatilla		Umatilla County	
	2017		2017	
	Count	Share	Count	Share
<b>Selection Area Labor Market Size (Primary Jobs)</b>				
Employed in the Selection Area	1,974	100.0%	31,226	100.0%
Living in the Selection Area	2,589	131.2%	31,621	101.3%
Net Job Inflow (+) or Outflow (-)	(615)	-	(395)	-
<b>In-Area Labor Force Efficiency (Primary Jobs)</b>				
Living in the Selection Area	2,589	100.0%	31,621	100.0%
Living and Employed in the Selection Area	244	9.4%	21,396	67.7%
Living in the Selection Area but Employed Outside	2,345	90.6%	10,225	32.3%
<b>In-Area Employment Efficiency (Primary Jobs)</b>				
Employed in the Selection Area	1,974	100.0%	31,226	100.0%
Employed and Living in the Selection Area	244	12.4%	21,396	68.5%
Employed in the Selection Area but Living Outside	1,730	87.6%	9,830	31.5%
<b>Outflow Job Characteristics (Primary Jobs)</b>				
External Jobs Filled by Residents	2,345	100.0%	10,225	100.0%
Workers Aged 29 or younger	570	24.3%	2,445	23.9%
Workers Aged 30 to 54	1,192	50.8%	5,222	51.1%
Workers Aged 55 or older	583	24.9%	2,558	25.0%
Workers Earning \$1,250 per month or less	443	18.9%	2,301	22.5%
Workers Earning \$1,251 to \$3,333 per month	1,010	43.1%	3,820	37.4%
Workers Earning More than \$3,333 per month	892	38.0%	4,104	40.1%
Workers in the "Goods Producing" Industry Class	835	35.6%	3,119	30.5%
Workers in the "Trade, Transportation, and Utilities" Industry Class	578	24.6%	2,235	21.9%
Workers in the "All Other Services" Industry Class	932	39.7%	4,871	47.6%
<b>Inflow Job Characteristics (Primary Jobs)</b>				
Internal Jobs Filled by Outside Workers	1,730	100.0%	9,830	100.0%
Workers Aged 29 or younger	318	18.4%	2,325	23.7%
Workers Aged 30 to 54	970	56.1%	5,078	51.7%
Workers Aged 55 or older	442	25.5%	2,427	24.7%
Workers Earning \$1,250 per month or less	372	21.5%	2,262	23.0%
Workers Earning \$1,251 to \$3,333 per month	594	34.3%	3,953	40.2%
Workers Earning More than \$3,333 per month	764	44.2%	3,615	36.8%
Workers in the "Goods Producing" Industry Class	715	41.3%	2,600	26.4%
Workers in the "Trade, Transportation, and Utilities" Industry Class	143	8.3%	2,683	27.3%
Workers in the "All Other Services" Industry Class	872	50.4%	4,547	46.3%
<b>Interior Flow Job Characteristics (Primary Jobs)</b>				
Internal Jobs Filled by Residents	244	100.0%	21,396	100.0%
Workers Aged 29 or younger	58	23.8%	4,975	23.3%
Workers Aged 30 to 54	128	52.5%	11,242	52.5%
Workers Aged 55 or older	58	23.8%	5,179	24.2%
Workers Earning \$1,250 per month or less	63	25.8%	4,566	21.3%
Workers Earning \$1,251 to \$3,333 per month	99	40.6%	9,214	43.1%
Workers Earning More than \$3,333 per month	82	33.6%	7,616	35.6%
Workers in the "Goods Producing" Industry Class	78	32.0%	5,105	23.9%
Workers in the "Trade, Transportation, and Utilities" Industry Class	26	10.7%	3,882	18.1%
Workers in the "All Other Services" Industry Class	140	57.4%	12,409	58.0%

SOURCE: US Census Bureau, LEHD Origin-Destination Employment Statistics

**Population and Workforce**

The population base in Umatilla County and Umatilla have grown at a rate of slightly under 1% since 2010, according to the Population Research Center at Portland State University. The growth rate is estimated to have increased in more recent years and is projected to accelerate over the coming 20-year period. The City of Umatilla had an estimated population of 7,320 in 2018, or 9% of the Umatilla County total of nearly 81,000 people.

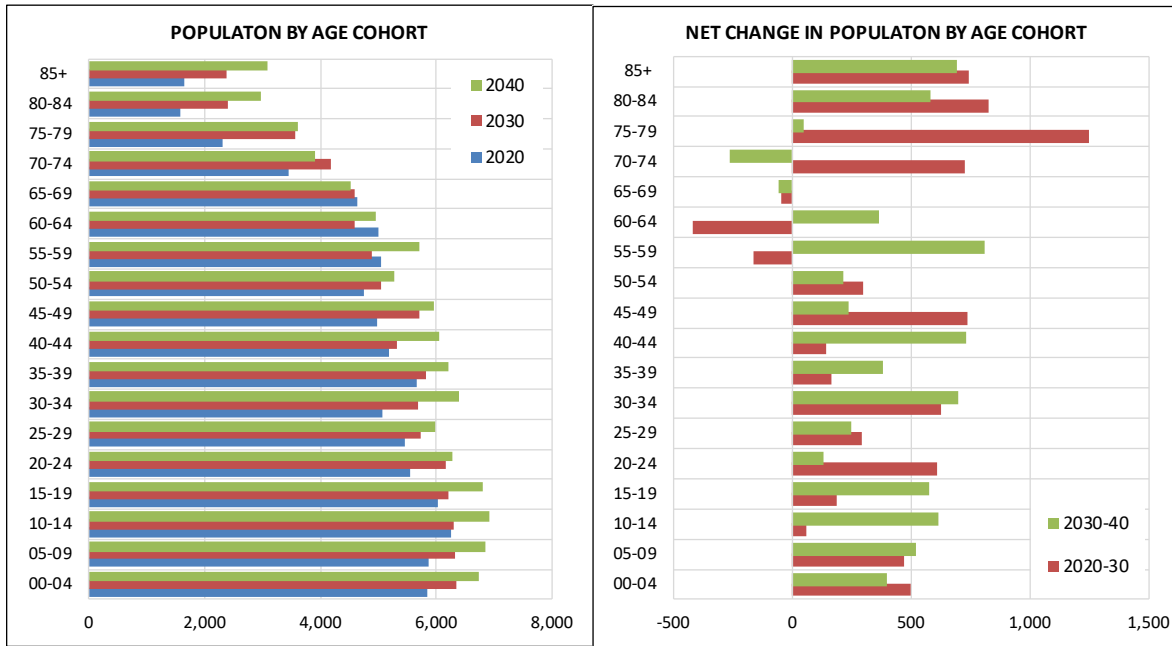
**FIGURE 2.17: HISTORIC POPULATION TRENDS, UMATILLA COUNTY AND CITY OF UMATILLA**



SOURCE: Population Research Center, Portland State University

The composition of the population base is expected to become generally older. The trend is most pronounced for residents over 75 years of age, but modest growth is also anticipated in age categories that are traditionally in the workforce.

**FIGURE 2.18: HISTORIC AND PROJECTED DISTRIBUTION OF POPULATION BY AGE COHORT, UMATILLA COUNTY**



SOURCE: Population Research Center, Portland State University

**Race and Ethnicity:** The population of Umatilla County is estimated to be 85% white and 15% minority or bi-racial, a very similar minority share as Oregon. The County is estimated to have a higher share of Native Americans, and a somewhat lower share of Black and Asian residents. Latinos are estimated to make up 26% of the county population, compared to 13% statewide.

**FIGURE 2.19: DISTRIBUTION OF POPULATION BY RACE & ETHNICITY, UMATILLA COUNTY**

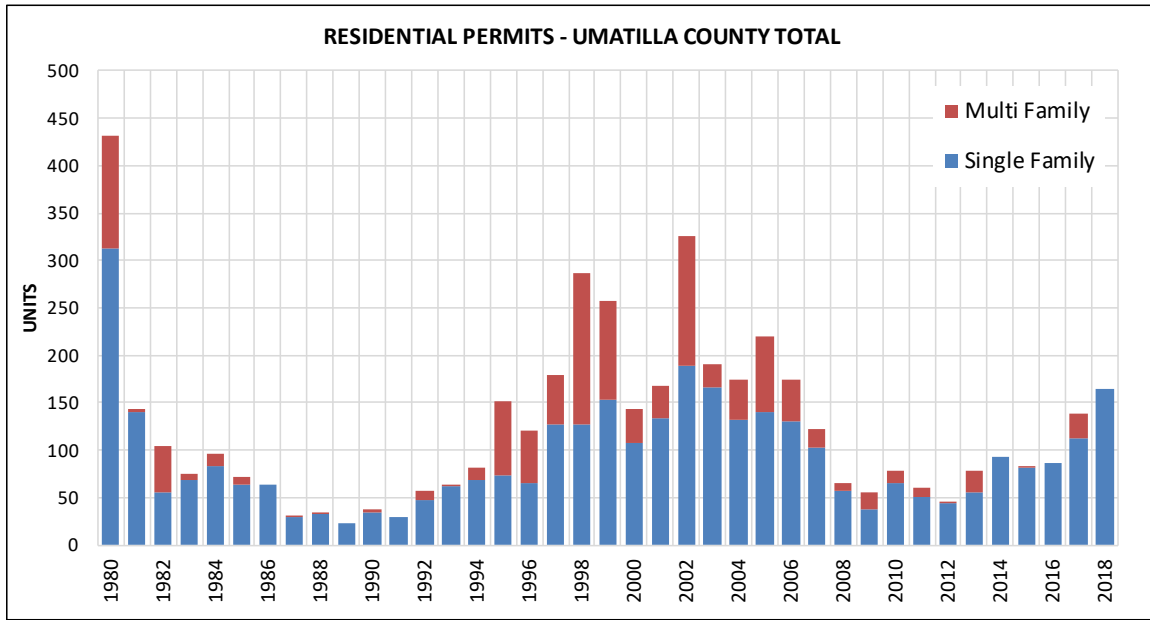
Distribution of Population	Umatilla County				Oregon			
	2000	2017	Change	Share	2000	2017	Change	Share
Total:	70,548	80,500	14%	100%	3,421,399	4,025,127	18%	100%
White	57,852	68,585	19%	85%	2,961,623	3,416,776	15%	85%
Black	582	626	8%	1%	55,662	76,347	37%	2%
Native American	2,375	2,514	6%	3%	45,211	45,332	0%	1%
Asian	530	635	20%	1%	101,350	166,351	64%	4%
Hawaiian or Pac. Islander	124	140	13%	0%	7,976	15,157	90%	0%
Other Race	7,529	4,263	-43%	5%	144,832	121,000	-16%	3%
Two or More Races	1,556	3,738	140%	5%	104,745	184,164	76%	5%
Latino (of any race)	11,366	20,917	84%	26%	275,314	509,507	85%	13%

SOURCE: Census (Tables QT-P3, B02001, B03002) Population Research Center, Portland State University

\* 2017 Total county population is based on PSU 2017 estimate, applying the distribution of race and ethnicity from 2017 ACS.

With steady growth in population, residential permits in Umatilla County have averaged 137 per year since 2000, with the majority being single-family homes. After experiencing some multi-family development prior to the 2008 recession, permitting has been slow for the past decade.

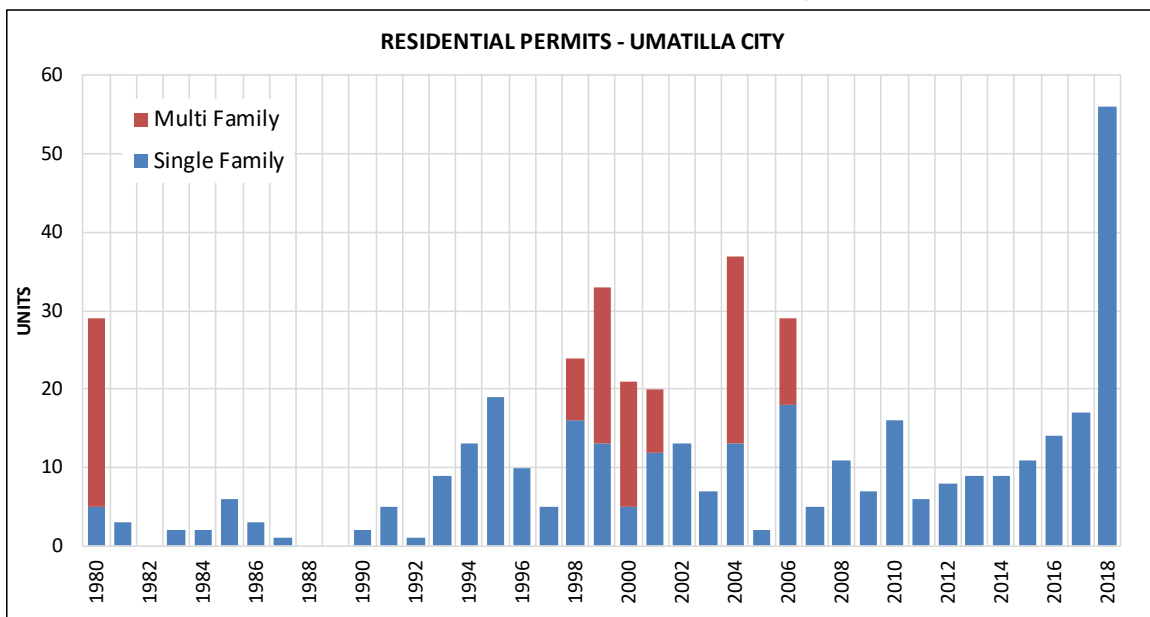
**FIGURE 2.20: HISTORIC AND PROJECTED RESIDENTIAL PERMITS, UMATILLA COUNTY**



SOURCE: HUD

The city of Umatilla has accounted for roughly 12% of the total county residential permits since 2000. Nearly 300 units have been permitted since 2000, with 20% being multi-family units permitted prior to 2008.

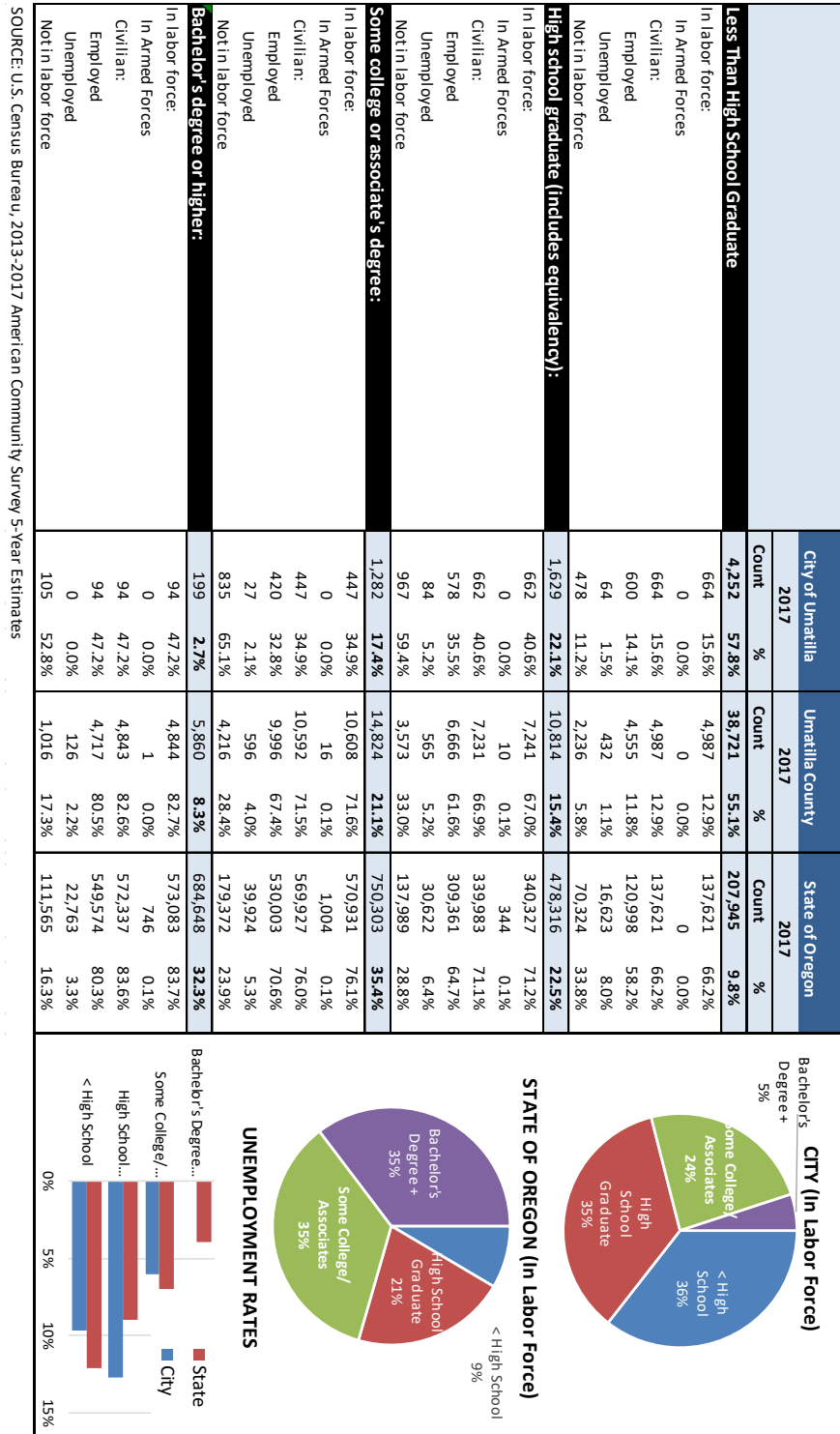
**FIGURE 2.21: HISTORIC AND PROJECTED RESIDENTIAL PERMITS, CITY OF UMATILLA**



SOURCE: HUD

The educational attainment level of the local workforce is lower in the city and county as the statewide profile. Residents of working age are more likely to have a high-school education, and less likely to have a college degree.

**FIGURE 2.23: EDUCATIONAL ATTAINMENT PROFILE BY EMPLOYMENT STATUS, 2017**



SOURCE: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

### III. TARGET INDUSTRY ANALYSIS

This element of the Economic Opportunities Analysis uses analytical tools to assess the economic landscape in Umatilla and Umatilla County. The objective of this process is to identify a range of industry types that can be considered targeted economic opportunities over the 20-year planning period.

A range of analytical tools to assess the local and regional economic landscape are used to determine the industry typologies the City should consider targeting over the planning period. Where possible, we look to identify the sectors that are likely to drive growth in current and subsequent cycles.

#### ECONOMIC SPECIALIZATION

The most common analytical tool to evaluate economic specialization is a location quotient (LQ) analysis. This metric compares the concentration of employment in an industry at the local level to a larger geography. All industry categories are assumed to have a quotient of 1.0 on the national level, and a locality’s quotient indicates if the local share of employment in each industry is greater or less than the share seen nationwide. For instance, a quotient of 2.0 indicates that locally, that industry represents twice the share of total employment as seen nationwide. A quotient of 0.5 indicates that the local industry has half the expected employment.

We completed a location quotient analysis for Umatilla County, which compares the distribution of local employment relative to national averages, as well as average annual wage levels by industry (Figure 3.1). The most over-represented industries were natural resources and mining, manufacturing and government.

**FIGURE 3.1: INDUSTRY SECTOR SPECIALIZATION BY MAJOR INDUSTRY, UMATILLA COUNTY, 2018<sup>1</sup>**

Industry	Annual Establishments	Avg. Annual Employment	Total Annual Wages	Avg. Annual Wages	Employment Loc. Quotient
1011 Natural resources and mining	193	3,386	\$111,161,727	\$32,832	8.3
1012 Construction	193	1,176	\$61,441,498	\$52,265	0.8
1013 Manufacturing	74	3,415	\$139,497,112	\$40,849	1.3
1021 Trade, transportation, and utilities	402	6,341	\$260,936,079	\$41,149	1.1
1022 Information	23	175	\$7,251,966	\$41,479	0.3
1023 Financial activities	153	698	\$32,889,517	\$47,137	0.4
1024 Professional and business services	201	1,403	\$55,157,349	\$39,319	0.3
1025 Education and health services	218	3,778	\$159,564,205	\$42,233	0.8
1026 Leisure and hospitality	211	2,578	\$44,250,408	\$17,166	0.8
1027 Other services	421	999	\$26,607,848	\$26,634	1.1
Federal Government	32	485	\$36,873,687	\$76,002	0.8
State Government	44	1,391	\$90,039,107	\$64,730	1.4
Local Government	104	5,047	\$216,324,995	\$42,861	1.7
<b>Total</b>	<b>2,269</b>	<b>30,872</b>	<b>\$1,241,995,498</b>	<b>\$40,231</b>	

SOURCE: Bureau of Labor Statistics

<sup>1</sup> QCEW Data, Annual Average 2018 Data



In terms of total employment, the largest sectors are government, transportation/warehousing/utilities, education and health services, and manufacturing. Natural resources (agriculture and forestry, and support services to these industries) as well as leisure and hospitality (tourism-related industry) are also major employment sectors in the county.

Figure 3.2 shows a more detailed analysis of the top 20 local industry subsectors in the county, as ranked by their LQ. The LQ shows that agricultural subsectors have the highest share of employment in comparison to nationwide averages, but also food manufacturing and wood product manufacturing. Various transportation and distribution-related industries are also well represented, as are utilities. Nursing and residential care, construction, and retailers are some of the subsectors rounding out the list.

The average wage LQ (right column) is an indicator of how much local wages paid in these industries are paid relative to the total wages in that industry typical across the nation. For instance, the agricultural and forestry subsector in Umatilla County represents 28.5 times the share of total wages paid as would be expected by looking at the national average.

**FIGURE 3.2: INDUSTRY SECTOR SPECIALIZATION BY DETAILED INDUSTRY, UMATILLA COUNTY, 2018**

Rank	NAICS	Description	Employment	Emp. L.Q.	Average Wage	Total Wages L.Q.
1	115	Agriculture and forestry support activities	1,685	20.6	\$32,950	28.5
2	111	Crop production	1,393	12.0	\$31,030	15.6
3	311	Food manufacturing	1,711	5.0	\$41,909	6.2
4	112	Animal production and aquaculture	237	4.2	\$38,318	5.9
5	321	Wood product manufacturing	357	4.2	\$44,516	5.8
6	814	Private households	235	3.9	\$18,252	3.8
7	484	Truck transportation	789	2.5	\$60,964	4.1
8	447	Gasoline stations	450	2.3	\$19,028	2.8
9	485	Transit and ground passenger transportation	151	1.5	\$23,353	1.4
10	221	Utilities	170	1.5	\$109,579	2.1
11	623	Nursing and residential care facilities	985	1.4	\$28,869	1.8
12	236	Construction of buildings	422	1.2	\$52,518	1.4
13	452	General merchandise stores	787	1.2	\$26,238	1.8
14	441	Motor vehicle and parts dealers	484	1.1	\$46,121	1.5
15	813	Membership associations and organizations	331	1.1	\$22,670	0.8
16	811	Repair and maintenance	295	1.1	\$34,824	1.2
17	445	Food and beverage stores	684	1.1	\$24,680	1.5
18	424	Merchant wholesalers, nondurable goods	449	1.0	\$56,184	1.1
19	312	Beverage and tobacco product manufacturing	54	0.9	\$24,687	0.6
20	562	Waste management and remediation services	85	0.9	\$45,727	1.0

SOURCE: Bureau of Labor Statistics

Sectors such as local government, education, health care and retail trade, are industries that are driven by serving a local population. The county also has a significant amount of employment in export or “traded sector” industries that send their products beyond the county, and thus bring new dollars into the region. These industries include manufacturing, utilities, and data centers.

## ECONOMIC DRIVERS

The identification of the economic drivers of a local or regional economy is critical in informing the character and nature of future employment, and by extension land demand over a planning cycle. To this end, we employ a shift-share analysis of the local economy emerging out of the current expansion cycle<sup>2</sup>.

A shift-share analysis measures local effect of economic performance within an industry or occupation. The process considers local economic performance in the context of national economic trends—indicating the extent to which local growth can be attributed to unique regional competitiveness or simply growth in line with broader trends.

For example, assume that Widget Manufacturing is growing at a 1.5% rate locally, about the same rate as the local economy. On the surface we would consider the Widget Manufacturing industry to be healthy and contributing soundly to local economic expansion. However, consider also that Widget Manufacturing is booming across the country, growing at a robust 4% annually. In this context, local widget manufacturers are struggling, and some local or regional condition is stifling economic opportunities.

We can generally classify industries, groups of industries, or clusters into four groups:

- **Growing, Outperforming:** Industries that are growing locally at a rate faster than the national average. These industries have local characteristics leading them to be particularly competitive.
- **Growing, Underperforming:** Industries that are growing locally but slower than the national average. These industries generally have a sound foundation, but some local factor is limiting growth.
- **Contracting, Outperforming:** Industries that are declining locally but slower than the national average. These industries have structural issues that are impacting growth industry wide. However, local firms are leveraging some local or regional factor that is making them more competitive than other firms on average.
- **Contracting, Underperforming:** Industries that are declining locally at a rate faster than the national average. These industries have structural issues that are impacting growth industry wide. However, some local or regional factor is making it increasingly tough on local firms.

We evaluated the average annual growth rate by industry from 2008 through 2017 for Umatilla County relative to the national rate. The observed local change was compared to a standardized level reflecting what would be expected if the local industry grew at a rate consistent with national rates for that industry.

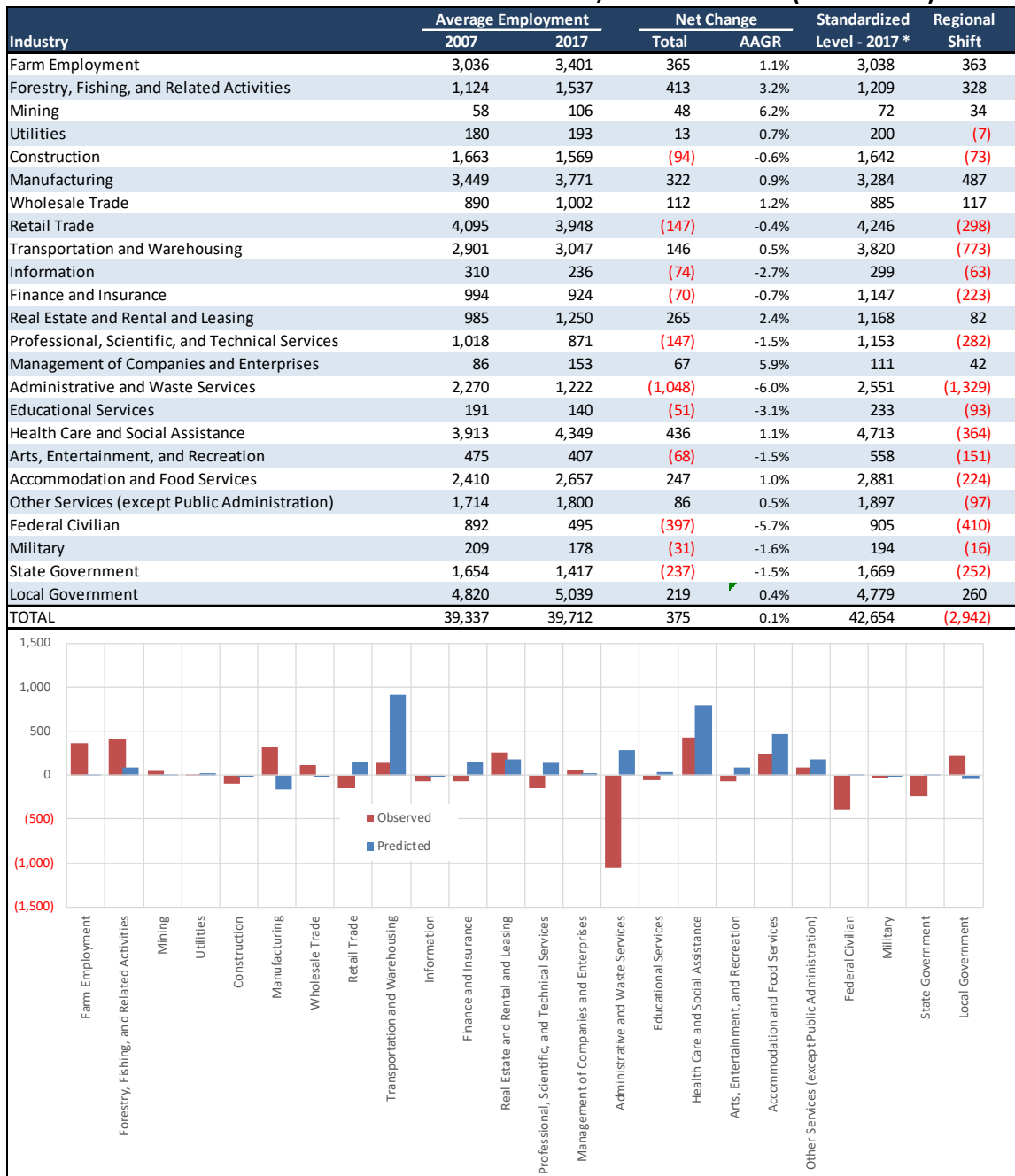
As shown in Figure 3.3, only a few industries showed growth in excess of national rates. These include manufacturing, natural resources industries, real estate rental and leasing, and wholesale trade.

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<sup>2</sup> Measured from the trough of recent recession to 2017, the most recent period available for local employment data.

It is also known that in the last few years, Umatilla County has added significant employment and investment in the data center industry. This employment is not yet reflected in the most recent QCEW data (2017) of covered employment where it would appear under the “Information” sector. It is known that this industry has experienced significant and rapid growth in the county and the city of Umatilla itself. (This target industry is discussed more in the following section.)

**FIGURE 3.3: INDUSTRY SECTOR SHIFT SHARE ANALYSIS, UMATILLA COUNTY (2008 – 2017)**



\* Employment level in each industry had it grown at the same rate as its counterparts at the national level over the same period.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis

## ECONOMIC DEVELOPMENT ASSETS

In this section, we summarize some of the key economic development assets of the city and the area, which will shape the nature of economic growth in the foreseeable future.

### 1. *Abundance of Energy & Water*

Availability of quality power will continue to increase regional competitiveness over the long-term. This provides an advantage when pursuing users requiring large power sources, including data center investments, as well as durable goods manufacturing. While much of the local power production is exported outside of the region, there is substantial loss in transmission. Average electrical rates in Oregon are 23% below national levels, but higher than those in Washington or Idaho.

### 2. *Transportation Linkages*

Along with abundant affordable power, transportation linkages are arguably the region's best asset. The city of Umatilla is positioned near one of only five confluences of major interstates in Oregon and is the only one outside of the Willamette Valley. The City is also located at the border with Washington State, with the next nearest bridge crossings of the Columbia located 50 miles north, or 80 miles to the west. Further, the Port terminals and regional rail linkages provide access to world-wide shipping networks, particularly for the region's agricultural products.

### 3. *Amenity Values*

Amenity values are encompassed in the concept of livability. Amenity values are often characterized in the field of Economics and Economic Geography because amenity values have real economic impacts on attracting residents, employers and workforce to an area. The Columbia Basin has abundant natural amenities, with scenery and proximity to nature and recreational activities. However, the region is lacking in some urban amenities given the size of its communities.

### 4. *Proximity to a Large Well-Educated Workforce*

While the local workforce is underrepresented in higher skilled laborers, regional economic growth can tap into a large population base with above average training levels. Both Umatilla (15.6%) and Morrow Counties (10.7%) have lower rates of persons aged 25 and older holding bachelor's degrees than the State of Oregon (29.0%). In Benton County, the ratio is 27.7% while the State of Washington ratio is 31.4%.<sup>3</sup> Benton and Franklin Counties in Washington combine for 42,000 adults with an Associate Degree or better. The size and commuting patterns of the greater region, allows for large new employers to draw sufficient workforce from beyond the immediate community if needed.

### 5. *Flat, Developable Land*

The study area has a diversity of potentially available land to accommodate a range of uses and intensity of uses. This diversity can expand regional marketability and offers the flexibility to plan uses meeting specific site criteria. Within the State of Oregon, there are very limited opportunities for large-lot industrial development. The region's potential supply of large sites can provide a strong competitive advantage, if it is made available. While the land in the county may be hypothetically suitable however, the right amount, location, and sizes of development sites for different employers may not be currently available within the Urban Growth Boundary. The suitability of buildable land in Umatilla is discussed elsewhere in this report.

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<sup>3</sup> 2010 Census

## 6. *Economic Development Support & Partnerships*

The region benefits from an aggressive and well-organized economic development climate. The Port Districts have had noted economic development success and local communities have undertaken countless initiatives to improve economic competitiveness. The Confederated Tribes of the Umatilla Indian Reservation also is an active participant in regional economic development efforts. The end result has been a region that has significantly outperformed non-metropolitan areas of the State over the last decade in terms of economic growth.

## TARGET INDUSTRY CLUSTERS

This section discusses potential target industries for the City of Umatilla based on the community's historical strengths and advantages, established economic development goals, and discussion of community priorities through this process. These are industries where the city might focus efforts to grow local business and attract new businesses. At the end of this section is a more detailed glossary of potential community partners for economic development.

### Data Centers/ Cloud Storage Services

The City of Umatilla, along with other locations in Umatilla and Morrow Counties has quickly grown as a hub for large, very-high investment data center users who seek ready access to ample inexpensive power and water, as well as large suitable development sites.

These types of industrial land users make very large capital investments in facilities and equipment. They can employ hundreds of people at each site and pay wages far above the average income for the area.

This sector is a major target industry identified by the community. There are currently nine major data centers located in the Columbia Basin, demonstrating the suitability and desirability of the area and its infrastructure. The nation's largest tech companies continue to express interest in locating new data center and cloud-computing facilities in the area, and in Umatilla specifically. There have been recent real-world opportunities to recruit these types of businesses to Umatilla if suitable sites are available.



#### *Cluster Strengths*

- Proximity to abundant and inexpensive power and water sources
- Excellent fiber optic telecom connectivity
- Suitability of land for large, flat industrial sites
- Establishment of successful examples and building of skilled workforce in this sector
- Strong economic development support from local and regional partners

#### *Cluster Challenges*

- Limited supply of appropriately large, shovel-ready development sites, within the UGB
- Need to continually recruit and grow trained workforce and supply workforce housing.

#### *Potential Opportunities*

- Recruitment of additional data center facilities
- Ensure sufficient adequately-sized shovel-ready industrial parcels within UGB and/or City limits

- Partnerships with local education sector to train and recruit additional workforce

### **Manufacturing (Traditional and Advanced)**

Manufacturing is typically a highly desirable sector, which creates considerable value, pays good wages, and often exports the bulk of its output. The manufacturing sector currently accounts for a relatively small share of the current employment base in the city of Umatilla but is targeted by the community as a potential growth sector in the future.



Umatilla has been home to food, wood and metals product manufacturers. Going forward, these will remain good opportunities for growth taking advantage of available industrial lands, power and water resources. These export industries also benefit from the ample transportation connections and shipping options in the area.

Advanced manufacturing is also expected to be an increasing opportunity. In general, this refers to modern manufacturers who use advanced technologies such as robots and software to increase productivity and make traditional methods more efficient. Like data centers, these manufacturers also benefit from ample power and their facilities may rely on significant mechanization. Despite the automation, these industries typically require a sizable trained workforce to run the advanced processes.

Manufacturing firms can be a full range of sizes with differing land needs from small sites to very large. Potential large-site manufacturers have made inquiries in the Umatilla area.

#### *Cluster Strengths*

- Proximity to abundant and inexpensive power and water sources
- Existing food and wood products industries with workforce expertise.
- Available and serviced land supply of smaller and medium sites

#### *Cluster Challenges*

- Limited supply of larger shovel-ready development sites, for largest manufacturers
- Need to continually recruit and grow trained workforce and supply workforce housing.

#### *Potential Manufacturing Opportunities*

- Food products/value-added specialty foods
- Advanced agricultural technology, such as robotics, precision tools, indoor-growing technology
- Specialty river recreation or other recreation equipment
- Drones and robotics
- Recruitment of other large-lot, large-power users

### **Tourism and Retail**

Umatilla has physical and locational attributes that make recreation and hospitality an attractive target sector. The city offers access to the river and recreation and has plans to redevelop the marina to encourage more visitors, concessions, tours and related activity. Regional outdoor recreation includes camping, hiking,

hunting, fishing, and rafting. Major regional draws such as the Pendleton Round Up and tribal gaming also provide an opportunity to market to new visitors.

Tourism growth can be mutually reinforcing with new business development along the city's main downtown corridor of 6<sup>th</sup> Street, and elsewhere in the community. While retail trade is typically viewed as a function of growth in local population and buying power, developing a strong retail trade base in an area helps limit spending from leaking out of the market, retaining dollars in the local economy.

The amenities that tourism traffic supports are also largely consistent with what is desirable to local residents. Quality retail, restaurant, recreation, and hospitality businesses make a community an attractive place to live and work. Studies have shown that tourism-related supportive uses have a positive impact on housing values and attract residents and businesses alike. This is a growing phenomenon in the context of emerging consumer preferences observed across Millennial and Boomer generations. Attraction of these types of businesses would offer Umatilla the opportunity to raise its amenity profile.



*Cluster Strengths*

- Recreational amenities, river location
- Location on freeway, at state border
- Historic Oldtown site
- Investment in trails, and outdoor and recreation events

*Cluster Challenges*

- Need to raise awareness/visibility beyond the region

*Cluster Opportunities*

- Drawing visitors from other regional attractions
- Improved access use of the marina/river

**Transportation, Warehousing and Distribution**

Currently, Transportation & Warehousing is among the largest sectors in the county. The location quotient analysis indicated that the study area's concentration in truck transportation is more than two and a half times the national average. The region has succeeded in attracting and retaining large transportation firms, including three firms with 100-249 employees and two additional firms with more than 250 employees.

The reason for the emergence of this industry cluster is intuitively clear. The area's geographic position and transportation linkages afford a reasonable (distribution) drive-time from major population centers throughout the Northwest, Northern California, British Columbia, and the Western Mountain States. Other regional attributes include a refrigerator cargo dock on the Columbia River, fiber optic telecommunications, and the location of the Union Pacific switching station.



The area's strong transportation access and multi-modal opportunities makes it ideal for transportation and warehousing uses. Umatilla County has successfully attracted multiple large distribution centers, including a Walmart Distribution Center and Fed Ex Freight distribution facility. One or more such distribution facilities are a viable target recruitment for Umatilla City, if appropriate sites are available.

*Cluster Strengths*

- Multi-modal transportation connections, confluence of two freeways
- Port/rail access

*Cluster Challenges*

- Need for additional large, shovel-ready sites near the freeway and within the UGB

*Cluster Opportunities*

- Distribution centers
- Central hub for transportation/freight/logistics businesses

**Health Care**

Demand for health services tends to follow demographic trends. The local population and workforce are projected to continue growing at a strong rate. At the same time, a major segment of the population will be aging in place, increasing the demand for health services and continuing care. The following are key industry trends:

- Emphasis on leveraging cost advantages.
- Strong growth in utilization of mobile health systems, software, and access to information.
- Emerging care models including smaller, distributed clinics (i.e. Zoomcare).
- Video or phone appointments.
- An estimated 5% to 8% of Boomers will age in multi-family retirement and care facilities.



The community has identified a need for more local health services located in Umatilla for the local households, many of whom currently travel to Hermiston or beyond for needed health care. Needed services include urgent care, additional clinics, dental care and other specialists. As the population grows, there should be increasing opportunities for health care providers to locate in the community to serve the local population.

*Cluster Strengths*

- Growth and aging of population will support health services.
- Dedicated service area.
- Identified need and captive market.

*Cluster Weakness*

- Sector is concentrated in Hermiston.

*Cluster Opportunities*

- Development of expanded and/or new medical office clusters
- Expansion of training offerings for nurses and other medical professionals.



# IV. FORECAST OF EMPLOYMENT AND LAND NEED

## CITY OF UMATILLA EMPLOYMENT FORECASTS

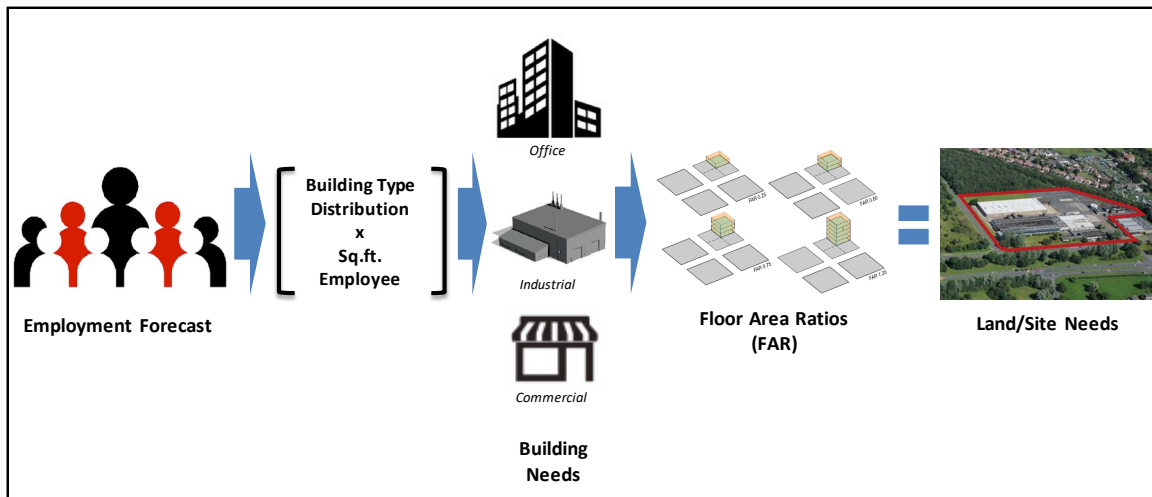
Goal 9 requires that jurisdictions plan for a 20-year supply of commercial and industrial capacity. Because employment capacity is the physical space necessary to accommodate new workers in the production of goods and services, employment needs forecasts typically begin with a forecast of employment growth in the community. The previous analysis of economic trends and targeted industries set the context for these estimates. This analysis translates those influences into estimates of employment growth by broad industry. Forecasts are produced at the sector or subsector level (depending on available information) and are subsequently aggregated to two-digit NAICS sectors. Estimates in this analysis are intended for long-range land planning purposes and are not designed to predict or respond to business cycle fluctuation.

The projections in this analysis are built on an estimate of employment in 2019, the commencement year for the planning period. Employment growth will come as the result of net-expansion of businesses in the community, new business formation, or the relocation/recruitment of new firms. Forecast scenarios consider a range of factors influencing growth. Long-range forecasts typically rely on a macroeconomic context for growth. Inflections in business cycles or the impact of a major shift in employment (i.e. a major unknown recruitment) are not considered.

### Overview of Employment Forecast Methodology

Our methodology starts with employment forecasts by major commercial and industrial sector. Forecasted employment is allocated to building type, and a space demand is a function of the assumed square footage per employee ratio multiplied by projected change. The need for space is then converted into land and site needs based on assumed development densities using floor area ratios (FARs).

**FIGURE 4.01: CONVERSION OF EMPLOYMENT FORECAST TO LAND NEED FORECAST - METHODOLOGY**



Source: Johnson Economics

The first step of the analysis is to update covered employment to the 2019 base year. Our City of Umatilla Quarterly Census of Employment and Wages (QCEW) dataset provides covered employment by industry

through 2017. To update these estimates, we use observed industry specific growth rates for the region between 2017 and 2019.

The second step in the analysis is to convert “covered”<sup>4</sup> employment to “total” employment. Covered employment only accounts for a share of overall employment in the economy. Specifically, it does not consider sole proprietors or some contracted workers. Covered employment was converted to total employment based on observed ratios at the national level derived from the Bureau of Economic Analysis from 2010 through 2017.

The differential is the most significant in construction, professional, and administrative services. The adjusted 2019 total non-farm employment base for the City of Umatilla is an estimated 1,968 jobs.

**FIGURE 4.02: UPDATE TO 2019 BASELINE AND CONVERSION OF COVERED TO TOTAL EMPLOYMENT**

Major Industry Sector	QCEW Employment			Total Emp. Conversion <sup>2</sup>	2019 Estimate
	2017 Employment	'17-'19 County Δ <sup>1</sup>	2019 Estimate		
Construction	172	1.8%	178	73.5%	243
Manufacturing	59	1.1%	60	97.6%	62
Wholesale Trade	88	1.0%	90	97.3%	92
Retail Trade	145	1.0%	148	94.4%	157
T.W.U.	93	1.1%	95	91.3%	104
Information*	0	2.9%	200	94.7%	211
Finance & Insurance	8	0.4%	8	91.6%	9
Real Estate	11	0.4%	11	91.6%	12
Professional & Technical Services	9	1.1%	9	88.5%	10
Administration Services	20	1.1%	20	88.5%	23
Education	215	1.5%	221	94.5%	234
Health Care	126	1.5%	130	94.5%	137
Leisure & Hospitality	79	1.0%	81	94.4%	85
Other Services	45	0.9%	46	82.7%	55
Government	525	0.7%	533	100.0%	533
<b>TOTAL</b>	<b>1,595</b>	<b>7.1%</b>	<b>1,830</b>	<b>93.0%</b>	<b>1,968</b>

<sup>1</sup> Forecasted AAGR from 2017-2024 for Umatilla County. Oregon Employment Department

<sup>2</sup> Bureau of Economic Analysis. Calculated as an eight-year average between 2010 and 2017

T.W.U. = Transportation, Warehousing, and Utilities

\*Information sector: Employment in 2019 is estimated from local sources

Source: Johnson Economics, Oregon Employment Department, BEA

**Scenario 1: Safe Harbor Forecast**

The Goal 9 statute does not have a required method for employment forecasting. However, OAR 660-024-0040(9)(a) outlines several safe harbor methods, which are intended to provide jurisdictions a methodological approach that will not be challenged. The most applicable for Umatilla County jurisdictions is 660-024-0040(9)(a)(B), which recommends reliance on the adopted projected population growth rate as determined by the Portland State University Population Research Center. This method applies the projected

<sup>4</sup> The Department of Labor’s Quarterly Census of Employment and Wages (QCEW) tracks employment data through state employment departments. Employment in the QCEW survey is limited to firms with employees that are “covered” by unemployment insurance.

population growth rate to the 2019 Umatilla County base, essentially reflecting that employment growth is expected to keep track with population growth. For individual industries, the projected growth rate is based on the most recent regional forecast (2017-2027) published by the Oregon Employment Department for Morrow and Umatilla Counties.

This method results in an average annual growth rate of 1.7%, with total job growth of 805 jobs over the forecast period when applied to the employment profile in Umatilla.

### **Scenario 2: Alternative Employment Forecast**

A second prepared forecast scenario was influenced by the research and analysis conducted in the EOA. This scenario formulates an employment growth trajectory based on identified trends, the growth outlook for targeted industries, and input from the project advisory committee. Further, the alternative scenario recognizes that the city's policy direction has influence over realized growth in targeted sectors. This scenario considers the influence of known or anticipated development over a near and medium-term horizon. The following identified factors that are expected to influence growth informed the forecast

Target Industries – The key industries that the community has identified for targeted growth and focused economic development efforts. Known real-world business interest and location scouting from industries have also been considered. The most significant changes were to reflect targeted growth in the information (data centers) and transportation & warehousing (distribution centers).

Power, Water and Fiber Resources – Umatilla has excellent infrastructure resources that have proven attractive to large, high-investment industrial users such as data centers.

Location - Umatilla's location within the region will influence the mix of employment uses it can attract. Transportation, labor shed, recreation, and livability are some key locational factors.

Household Growth - Growth in many sectors, including retail, hospitality, banking, and real estate, is a direct function of population and households in a community.

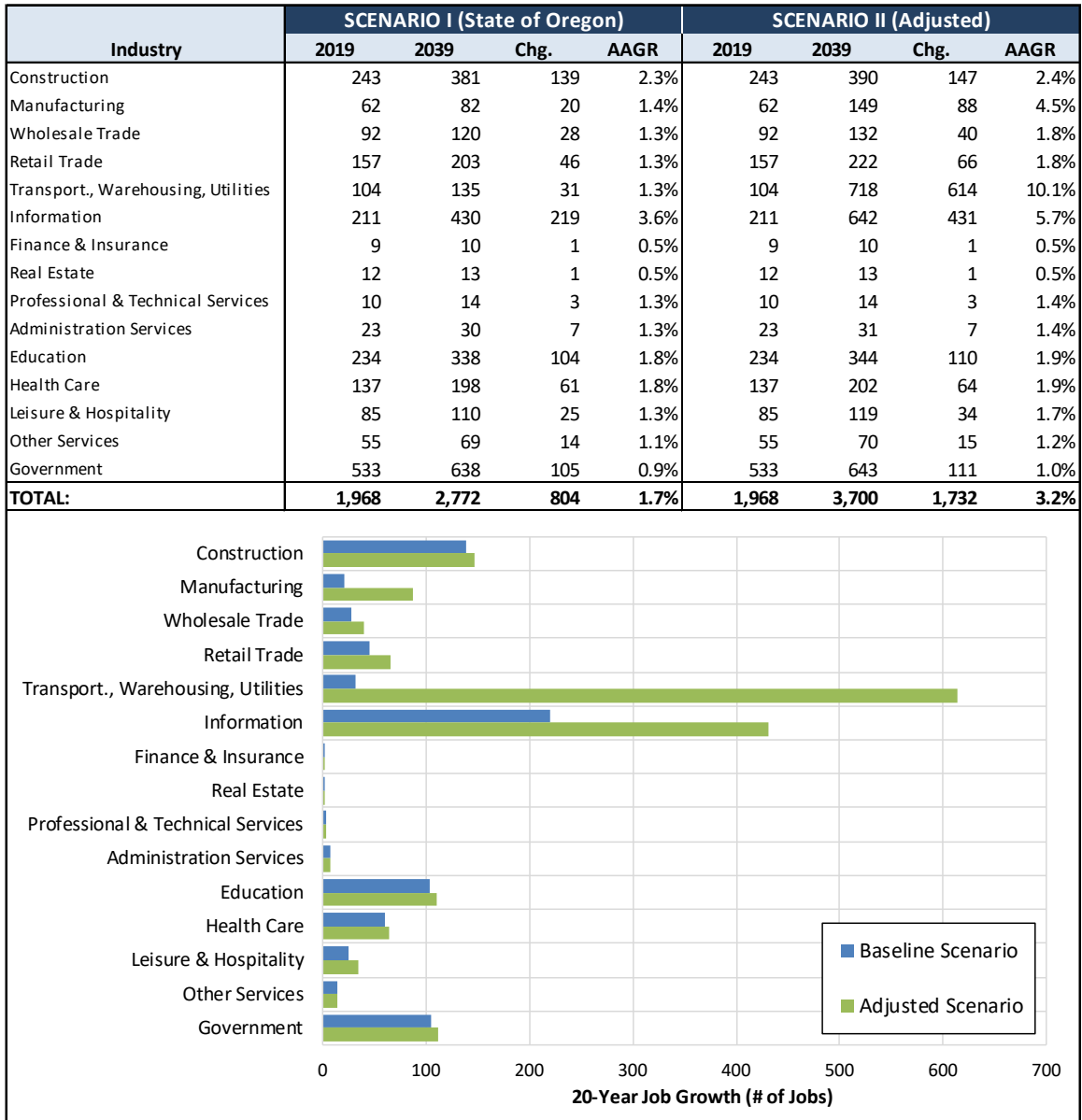
Taken together, the 20-year forecast in this scenario projects 3.2% average annual growth. Our outlook for growth in information, manufacturing, transportation and distribution, retail, and leisure & hospitality is more optimistic than macroeconomic forecasts indicate—reflecting the area's recent strength in these sectors.

### **Summary of Employment Forecast Scenarios**

The two forecast scenarios in this analysis range from 1.7% to 3.1% average annual growth. Job growth estimates range from roughly 805 to 1,730 jobs. The first scenario is useful in creating a baseline understanding of macroeconomic growth prospects. These are common and broadly accepted approaches when looking at large geographic regions.

However, forecasts grounded in broad-based economic variables do not account for the realities of local businesses and trends among evolving industries. The second scenario is meant to reflect these unique circumstances along with local economic development goals. Any long-term forecast is inherently uncertain and should be updated on a regular basis to reflect more current information.

**FIGURE 4.03: COMPARISON OF ALTERNATIVE FORECASTS, CITY OF UMATILLA**



Source: Johnson Economics, Oregon Employment Department, BEA

**FIGURE 4.04: SUMMARY OF PROJECTION SCENARIOS, CITY OF UMATILLA (5-YEAR INCREMENTS)**

Industry	Overall Employment					Net Change by Period				Total 19-39
	2019	2024	2029	2034	2039	19-24	24-29	29-34	34-39	
<b>SCENARIO 1 (State of Oregon)</b>										
Construction	243	272	304	341	381	29	32	36	41	139
Manufacturing	62	66	71	77	82	5	5	5	6	20
Wholesale Trade	92	99	105	112	120	6	7	7	8	28
Retail Trade	157	167	178	190	203	10	11	12	13	46
Transport, Warehousing, Utilities	104	111	119	127	135	7	8	8	9	31
Information	211	252	302	360	430	41	49	59	70	219
Finance & Insurance	9	9	9	9	10	0	0	0	0	1
Real Estate	12	12	13	13	13	0	0	0	0	1
Professional & Technical Services	10	11	12	13	14	1	1	1	1	3
Administration Services	23	25	26	28	30	2	2	2	2	7
Education	234	257	281	308	338	22	25	27	30	104
Health Care	137	150	165	181	198	13	14	16	17	61
Leisure & Hospitality	85	91	97	103	110	6	6	6	7	25
Other Services	55	59	62	65	69	3	3	4	4	14
Government	533	557	583	610	638	25	26	27	28	105
<b>TOTAL:</b>	<b>1,968</b>	<b>2,138</b>	<b>2,327</b>	<b>2,537</b>	<b>2,772</b>	<b>170</b>	<b>189</b>	<b>210</b>	<b>234</b>	<b>804</b>
<b>SCENARIO 2 (Modified)</b>										
Construction	243	273	308	346	390	31	34	39	44	147
Manufacturing	62	77	96	120	149	15	19	24	30	88
Wholesale Trade	92	101	110	121	132	9	9	10	11	40
Retail Trade	157	171	187	204	222	14	16	17	19	66
Transport, Warehousing, Utilities	104	169	273	443	718	65	105	170	275	614
Information	211	279	368	486	642	68	89	118	156	431
Finance & Insurance	9	9	9	10	10	0	0	0	0	1
Real Estate	12	12	13	13	13	0	0	0	0	1
Professional & Technical Services	10	11	12	13	14	1	1	1	1	3
Administration Services	23	25	27	28	31	2	2	2	2	7
Education	234	258	284	313	344	24	26	29	32	110
Health Care	137	151	166	183	202	14	15	17	18	64
Leisure & Hospitality	85	93	101	110	119	7	8	9	10	34
Other Services	55	59	62	66	70	3	4	4	4	15
Government	533	558	585	614	643	26	27	28	30	111
<b>TOTAL:</b>	<b>1,968</b>	<b>2,246</b>	<b>2,602</b>	<b>3,069</b>	<b>3,700</b>	<b>278</b>	<b>356</b>	<b>467</b>	<b>631</b>	<b>1,732</b>

Source: Johnson Economics, Oregon Employment Department, BEA

### EMPLOYMENT LAND NEED FORECAST – CITY OF UMATILLA

The next step in our analysis is to convert projections of employment into forecasts of land demand over the planning period. The generally accepted methodology for this conversion begins by allocating employment by sector into a distribution of building typologies that typically house those economic activities. As an example, insurance agents commonly locate in a traditional office space, usually along commercial corridors. However, a percentage of these firms locate in commercial retail space adjacent to retail anchors. Cross tabulating this distribution provides an estimate of employment in each typology.

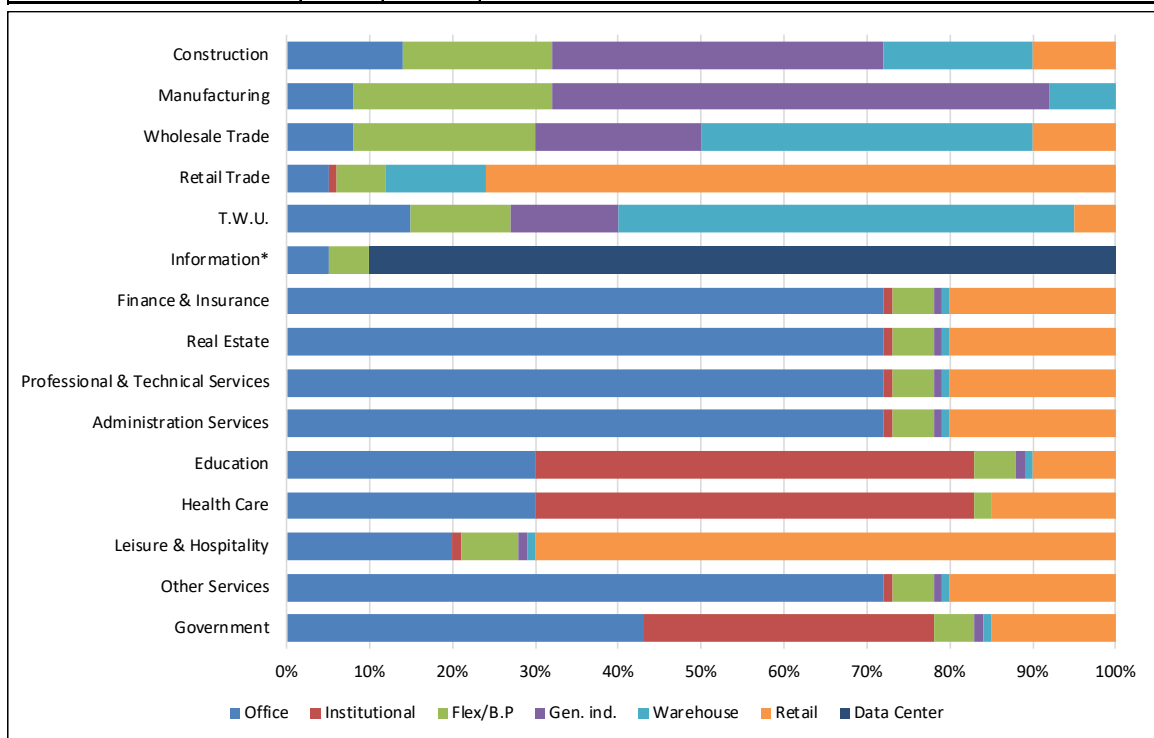
The next step converts employment into space using estimates of the typical square footage exhibited within each typology. Adjusting for market clearing vacancy we arrive at an estimate of total space demand for each building type. Finally, we can consider the physical characteristics of individual building types and the amount of land they typically require for development. The site utilization metric commonly used is referred to as a “floor area ratio” or FAR. For example, assume a 25,000-square foot general industrial building requires approximately two acres to accommodate its structure, setbacks, parking, and necessary yard/storage space. This building would have an FAR. of roughly 0.29. Demand for space is then converted to net acres using a standard FAR for each development form.

**Land Demand Analysis (Adjusted Forecast)**

To demonstrate the methodology used, this report will develop land need estimates in a step-by-step process, clearly presenting underlying assumptions. In this analytical step we allocate employment growth into standard building typologies. The building typology matrix represents the share of sectoral employment that locates across various building types.

**FIGURE 4.05: DISTRIBUTION OF EMPLOYMENT BY SPACE TYPE, CITY OF UMATILLA**

Industry Sector	20-year Job Forecast		BUILDING TYPE MATRIX						
	Number	AAGR	Office	Institutional	Flex/B.P	Gen. ind.	Warehouse	Data Center	Retail
Construction	147	2.3%	14%	0%	18%	40%	18%	0%	10%
Manufacturing	88	1.4%	8%	0%	24%	60%	8%	0%	0%
Wholesale Trade	40	1.3%	5%	0%	5%	10%	75%	0%	5%
Retail Trade	66	1.3%	5%	1%	6%	0%	12%	0%	76%
Transport, Warehousing, Utilities	614	1.3%	15%	0%	12%	13%	55%	0%	5%
Information	431	3.6%	5%	0%	5%	0%	0%	90%	0%
Finance & Insurance	1	0.5%	72%	1%	5%	1%	1%	0%	20%
Real Estate	1	0.5%	72%	1%	5%	1%	1%	0%	20%
Professional & Technical Services	3	1.3%	72%	1%	5%	1%	1%	0%	20%
Administration Services	7	1.3%	72%	1%	5%	1%	1%	0%	20%
Education	110	1.8%	30%	53%	5%	1%	1%	0%	10%
Health Care	64	1.8%	30%	53%	2%	0%	0%	0%	15%
Leisure & Hospitality	34	1.3%	20%	1%	7%	1%	1%	0%	70%
Other Services	15	1.1%	72%	1%	5%	1%	1%	0%	20%
Government	111	0.9%	43%	35%	5%	1%	1%	0%	15%
<b>TOTAL</b>	<b>1,732</b>	<b>1.7%</b>	<b>16%</b>	<b>8%</b>	<b>10%</b>	<b>11%</b>	<b>24%</b>	<b>22%</b>	<b>9%</b>



Source: Johnson Economics, Oregon Employment Department

Under the employment forecast scenario, employment housed in data center, office, retail, and general industrial space accounts for the greatest share of growth.

**FIGURE 4.06: NET CHANGE IN EMPLOYMENT ALLOCATED BY BUILDING TYPE, CITY OF UMATILLA – 2019-2039**

Industry Sector	20-year Job Forecast		NET CHANGE IN EMPLOYMENT BY BUILDING TYPE - 2019-2039							Total
	Number	AAGR	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
Construction	147	2.3%	21	0	27	59	27	0	15	147
Manufacturing	88	1.4%	7	0	21	53	7	0	0	88
Wholesale Trade	40	1.3%	2	0	2	4	30	0	2	40
Retail Trade	66	1.3%	3	1	4	0	8	0	50	66
Transport., Warehousing, Utilities	614	1.3%	92	0	74	80	338	0	31	614
Information	431	3.6%	22	0	22	0	0	388	0	431
Finance & Insurance	1	0.5%	1	0	0	0	0	0	0	1
Real Estate	1	0.5%	1	0	0	0	0	0	0	1
Professional & Technical Services	3	1.3%	2	0	0	0	0	0	1	3
Administration Services	7	1.3%	5	0	0	0	0	0	1	7
Education	110	1.8%	33	58	5	1	1	0	11	110
Health Care	64	1.8%	19	34	1	0	0	0	10	64
Leisure & Hospitality	34	1.3%	7	0	2	0	0	0	24	34
Other Services	15	1.1%	11	0	1	0	0	0	3	15
Government	111	0.9%	48	39	6	1	1	0	17	111
<b>TOTAL</b>	<b>1,732</b>	<b>1.7%</b>	<b>273</b>	<b>132</b>	<b>165</b>	<b>198</b>	<b>412</b>	<b>388</b>	<b>164</b>	<b>1,732</b>

Source: Johnson Economics, Oregon Employment Department

Employment growth estimates by building type are then converted into demand for physical space. This conversion assumes the typical space needed per employee on average. This step also assumes a market clearing vacancy rate, acknowledging that equilibrium in real estate markets is not 0% vacancy. We assume a 10% vacancy rate for office, retail, and flex uses, as these forms have high rates of speculative multi-tenant usage. A 5% rate is used for general industrial, warehouse, and data centers—these uses have higher rates of owner occupancy that lead to lower overall vacancy. Institutional uses are assumed to have no vacancy.

The demand for space is converted into an associated demand for acreage using an assumed Floor Area Ratio (FAR). The combined space and FAR assumptions further provide estimates indicative of job densities, determined on a per net-developable acre basis.

**FIGURE 4.07: NET ACRES REQUIRED BY BUILDING TYPOLOGY**

ADJUSTED SCENARIO	DEMAND BY GENERAL USE TYPOLOGY, 2019-2039							Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
<b>Employment Growth</b>	273	132	165	198	412	388	164	1,732
<b>Avg. SF Per Employee</b>	350	600	990	600	1,850	8,000	500	2,542
<b>Demand for Space (SF)</b>	95,600	79,400	163,100	118,900	761,900	3,101,100	81,900	4,401,900
<b>Floor Area Ratio (FAR)</b>	0.35	0.35	0.30	0.30	0.35	0.35	0.25	0.32
<b>Market Vacancy</b>	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	10.0%	5.6%
<b>Implied Density (Jobs/Acre)</b>	39.2	22.9	11.9	20.7	7.8	1.8	19.6	5.6
<b>Net Acres Required</b>	<b>7.0</b>	<b>5.8</b>	<b>13.9</b>	<b>9.6</b>	<b>52.6</b>	<b>214.1</b>	<b>8.4</b>	<b>311.3</b>

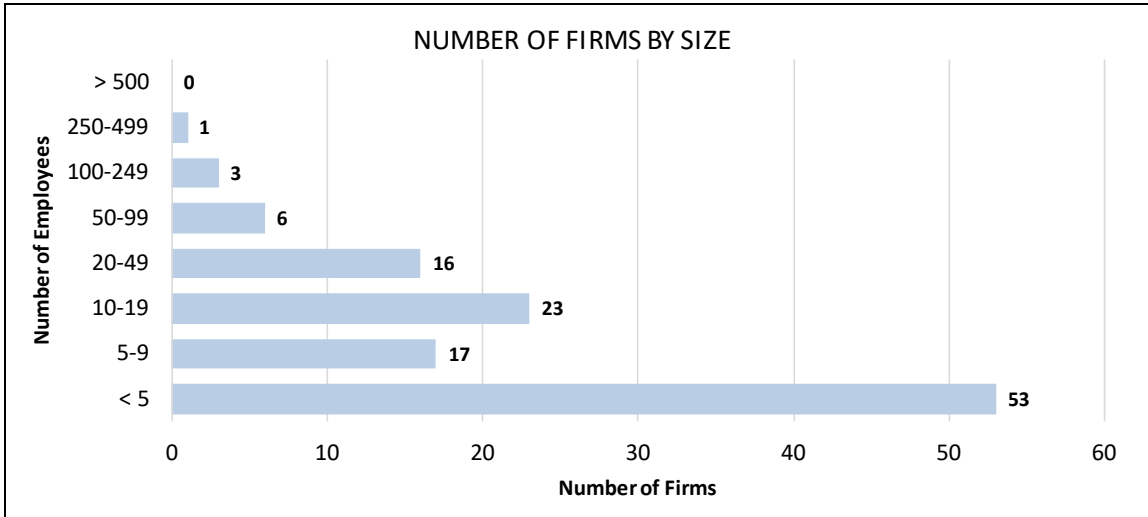
Source: Johnson Economics, Oregon Employment Department

Commercial office and retail densities are 39 and 20 jobs per acre, respectively. Industrial uses range from 21 jobs per acre for general industrial to 8 jobs per acre for warehouse/distribution to as few as 2 jobs per acre for data center users. The projected 1,730 job expansion in the local employment base would require an estimated 311 net acres of employment land to house.

## EMPLOYMENT LAND NEED FORECAST – NEEDED SITE SIZES

The local employment base is largely dominated by small firms of 10 or fewer employees, with four employers currently accounting for more than 100 employees and one accounting for more than 250 (Figure 4.08).

**FIGURE 4.08: DISTRIBUTION OF CURRENT FIRMS BY SIZE, UMATILLA OREGON**



Source: Johnson Economics, Oregon Employment Department

Figure 4.09 presents the projected need for new commercial and industrial sites based on the industry growth projections presented above. These site needs are an estimate of future needs to aid comparison to available supply (see following Section.)

**FIGURE 4.09: ESTIMATED SITE NEEDS (ACRES) OF FUTURE EMPLOYERS, UMATILLA OREGON**

LAND USE	0 TO .9 acres	1 to 4.9 acres	5 to 9.9 acres	10 to 19.9 acres	20 to 29.9 acres	30 to 49.9 acres	50 to 99.9 acres	100+ acres	TOTAL
Office	10	1	0	0	0	0	0	0	11
Institutional	2	2	0	0	0	0	0	0	4
Retail	5	2	0	0	0	0	0	0	7
<b>Commercial:</b>	<b>17</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>
Flex/B.P	3	2	1	0	0	0	0	0	6
Gen. Ind.	5	3	1	0	0	0	0	0	9
Warehouse	2	3	2	0	0	0	1	0	8
Data Center	0	0	0	0	0	0	1	2	3
<b>Industrial:</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>26</b>
<b>TOTAL:</b>	<b>27</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>48</b>

Source: Johnson Economics, Oregon Employment Department



The estimates presented in Figure 4.09 are based on the average firm sizes of businesses in the different industry subsectors in Umatilla County. *However, economic development and job growth are dynamic, and this estimate of site needs is unlikely to match actual future needs exactly. Communities should maintain flexibility and ensure a supply of a variety of site types with short-term availability, as allowed through the Goal 9 EOA process.*

Local and regional employment trends in Umatilla and Morrow Counties support the likely ability to continue to recruit larger users such as data centers and larger manufacturers going forward. At the same time, there will be a continued demand for real estate space and sites of all size to accommodate the full range of employers across sectors.

### **Additional Considerations in Land Demand**

Beyond a consideration of gross acreage, there is a significantly broader range of site characteristics that industries would require to accommodate future growth. We summarize some key findings here:

- Industrial buildings are generally more susceptible to slope constraints due to larger building footprints. For a site to be competitive for most industrial uses, a 5% slope is the maximum for development sites. Office and commercial uses are generally smaller and more vertical, allowing for slopes up to 15%.
- Most industries require some direct access to a major transportation route, particularly manufacturing and distribution industries that move goods throughout the region and beyond. A distance of 10-to-20 miles to a major interstate is generally acceptable for most manufacturing activities, but distribution activities require five miles or less and generally prefer a direct interstate linkage. Visibility and access are highly important to most commercial activities and site location with both attributes from a major commercial arterial is commonly required.
- Access and capacity for water, power, gas, and sewer infrastructure is more important to industrial than commercial operations. Water/sewer lines of up to 10" are commonly required for large manufacturers. Appendix A details utility infrastructure requirements by typology.
- Fiber telecommunications networks are likely to be increasingly required in site selection criteria for most commercial office and manufacturing industries. Medical, high-tech, creative office, research & development, and most professional service industries will prefer or require strong fiber access in the coming business cycles.

**Section VI and Appendix A of this report discuss industry-specific site requirements in greater detail.**

## V. CURRENT EMPLOYMENT LAND SUPPLY

### BUILDABLE LAND INVENTORY

The inventory of employment land provides a snapshot of the currently local capacity to accommodate more business and jobs. This current available land will be compared to the forecasted need for new land over the 20-year planning period.

Employment land includes land zoned for industrial, retail or other commercial use (i.e. office), and may also include mixed-use zoning that allows for employment uses. This inventory includes vacant parcels with the proper zoning, as well as “redevelopable” parcels. (The methodology used in this analysis is described in detail below.)

#### Methodology

The Buildable Lands Inventory (BLI) used in this analysis is based on tax account data from the County, supplemented with data from the State of Oregon. The data was provided in Geographic Information Systems (GIS) compatible format, providing information on land use, parcel size and other relevant data categories on the taxlot level. Zoning information was also provided by the City.

The tax account data was used to identify vacant and redevelopable parcels in the city and its UGB. Environmental constraints including wetlands, floodplain and steep slopes that might impact developability were also considered. The identified candidate parcels were then further screened and refined by Johnson Economics.

In keeping with State requirements, the BLI includes an assessment of vacant buildable lands and redevelopable parcels. This analysis applied the “safe harbor” assumptions allowed under state rules to determine the infill potential of developed parcels (OAR 660-024-0050):

**FIGURE 5.01: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY METHODOLOGY**



Appendix B provides an in-depth summary of the Buildable Lands Inventory, including methodology and mapping of the identified parcels of employment land. The results are summarized below.

**FIGURE 5.02: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY (UMATILLA)**

ZONE	VACANT		REDEVELOPABLE		TOTAL	
	Parcels	Acreage	Parcels	Acreage	Parcels	Acreage
C-1	4	8.5	2	1.0	6	9.5
DC	11	2.2	3	0.4	14	2.6
DT	8	1.4	0	0.0	8	1.4
GC	6	10.0	2	3.6	8	13.5
MC	3	4.1	0	0.0	3	4.1
NC	3	31.4	0	0.0	3	31.4
<b>Commercial Total:</b>	<b>35</b>	<b>57.6</b>	<b>7</b>	<b>4.9</b>	<b>42</b>	<b>62.5</b>
M1	6	23.5	5	27.6	11	51.1
M2	16	247.9	3	16.8	19	264.7
<b>Industrial Total:</b>	<b>22</b>	<b>271.3</b>	<b>8</b>	<b>44.5</b>	<b>30</b>	<b>315.8</b>
<b>TOTAL:</b>	<b>57</b>	<b>328.9</b>	<b>15</b>	<b>49.4</b>	<b>72</b>	<b>378.3</b>

Source: Umatilla County, Umatilla, Johnson Economics LLC

The inventory identifies over 378 acres of vacant or potentially redevelopable land in both commercial and industrial zones. A smaller share is in the Commercial zones, while the majority has Industrial zoning. 80% of the sites are identified as “vacant”, and 20% are potential “redevelopment” sites.

**FIGURE 5.03: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**

ZONE	0 TO .99 acres		1 to 4.99 acres		5 to 9.99 acres		10 to 19.99 acres		20 to 29.99 acres		30 to 49.99 acres		50+ acres		TOTALS	
	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage
C-1	4	2.2	1	1.9	1	5.5	0	0.0	0	0.0	0	0.0	0	0.0	6	9.5
DC	14	2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	14	2.6
DT	8	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	1.4
GC	2	1.7	3	5.0	1	6.9	0	0.0	0	0.0	0	0.0	0	0.0	6	13.5
MC	1	0.7	2	3.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	4.1
NC	0	0.0	0	0.0	2	13.4	1	18.0	0	0.0	0	0.0	0	0.0	3	31.4
<i>Commercial Total:</i>	<i>29</i>	<i>8.6</i>	<i>6</i>	<i>10.2</i>	<i>4</i>	<i>25.8</i>	<i>1</i>	<i>18.0</i>	<i>0</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>40</i>	<i>62.5</i>
M1	0	0.0	8	20.7	2	13.4	1	17.0	0	0.0	0	0.0	0	0.0	11	51.1
M2	0	0.0	3	10.3	6	39.7	4	53.3	0	0.0	0	0.0	1	161.4	14	264.7
<i>Industrial Total:</i>	<i>0</i>	<i>0.0</i>	<i>11</i>	<i>31.0</i>	<i>8</i>	<i>53.2</i>	<i>5</i>	<i>70.3</i>	<i>0</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>1</i>	<i>161.4</i>	<i>25</i>	<i>315.8</i>
<b>TOTAL:</b>	<b>29</b>	<b>8.6</b>	<b>17</b>	<b>41.2</b>	<b>12</b>	<b>78.9</b>	<b>6</b>	<b>88.2</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>161.4</b>	<b>65</b>	<b>378.3</b>

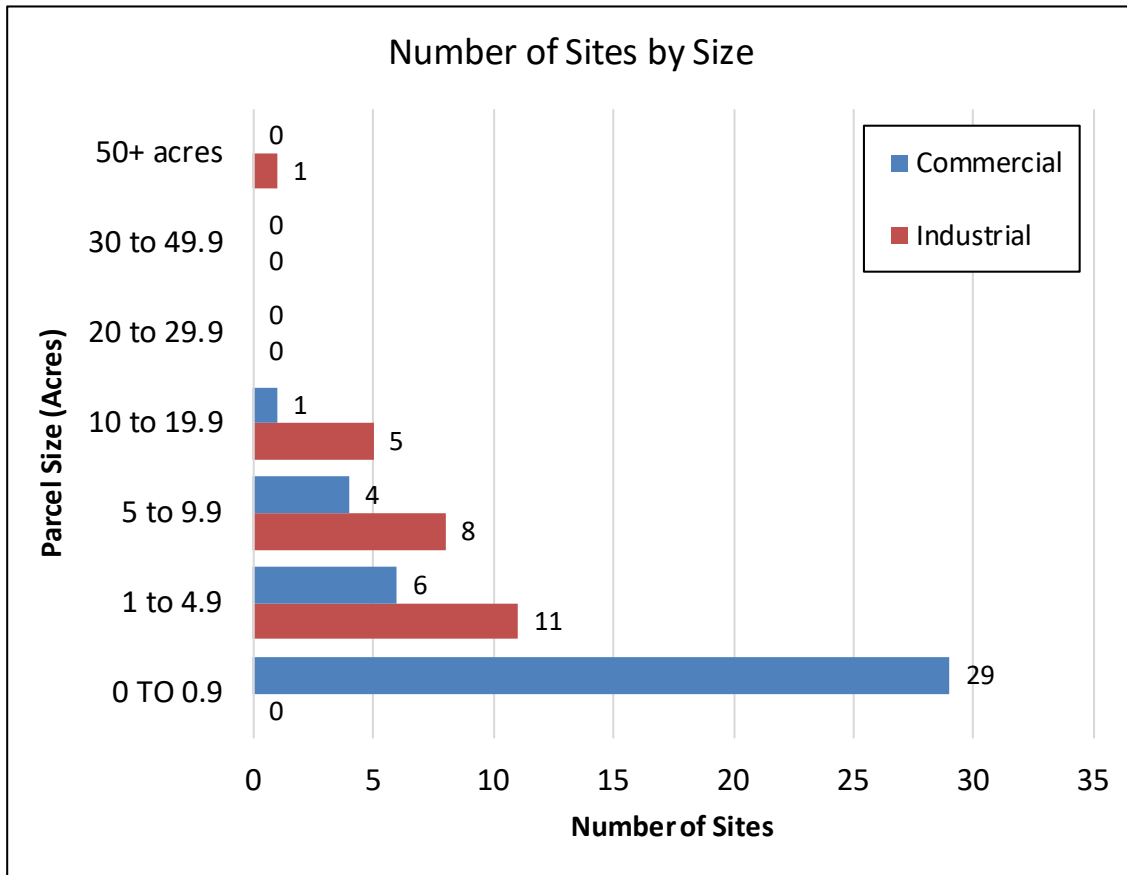
Source: Umatilla County, Umatilla, Johnson Economics LLC

Figure 5.03 presents the inventory broken down by the size of parcels. Most of the buildable unconstrained parcels identified are smaller than 20 acres, with the largest share of commercial parcels being smaller than

one acre in size. The largest share of industrial parcels (over one third) are between one and five acres. There is one large industrial parcel of roughly 160 acres located at the Port.

The following chart provides a visual presentation of the site-size data.

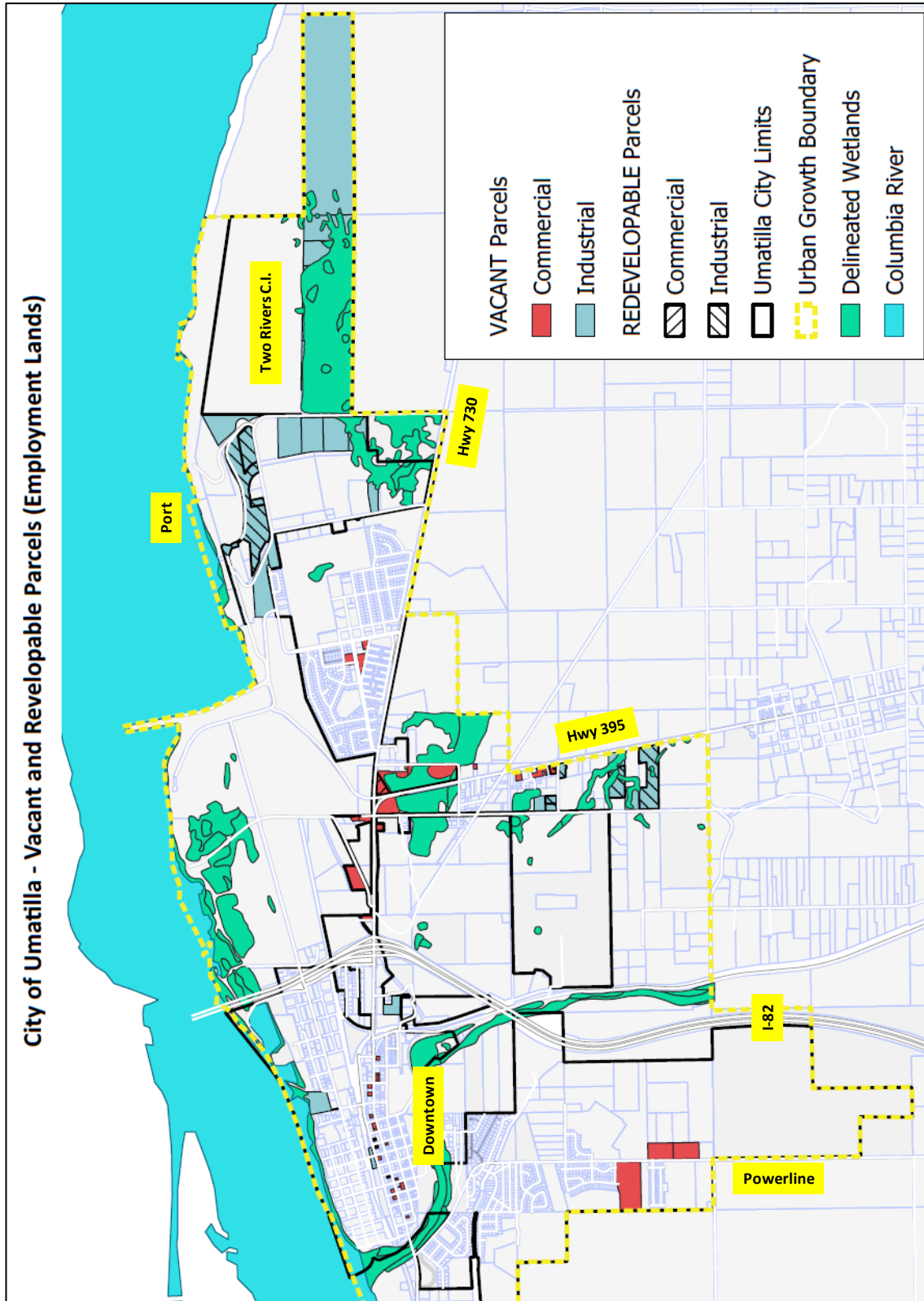
**FIGURE 5.04: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**



Source: Umatilla County, Umatilla, Johnson Economics LLC

The following figure shows a map of the Buildable Land Inventory for commercial and industrial parcels. Wetland constraints are highlighted to show how they hamper some of nominally vacant land supply. Where wetlands constrain a parcel, these parcels may be partially or wholly discounted from the inventory.

FIGURE 5.05: MAP OF EMPLOYMENT BUILDABLE LAND INVENTORY (UMATILLA)



Source: Umatilla County, State of Oregon, Johnson Economics LLC

## BUILDABLE LAND INVENTORY VS. 20-YEAR LAND NEED

The inventory of employment land provides a snapshot of the currently local capacity to accommodate more business and jobs. This current available land is compared to the forecasted need for new land over the 20-year planning period, generated in a previous step of this project (Section IV).

The estimate of future land need is presented below. A total need for 309 net acres was identified across a range of building types.

**FIGURE 5.06: SUMMARY OF FORECASTED 20-YEAR LAND NEED BY BUILDING TYPOLOGY (UMATILLA)**

ADJUSTED SCENARIO	DEMAND BY GENERAL USE TYPOLOGY, 2019-2039							Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
Employment Growth	273	132	165	198	412	388	164	1,732
Avg. SF Per Employee	350	600	990	600	1,850	8,000	500	2,542
Demand for Space (SF)	95,600	79,400	163,100	118,900	761,900	3,101,100	81,900	4,401,900
Floor Area Ratio (FAR)	0.35	0.35	0.30	0.30	0.35	0.35	0.25	0.32
Market Vacancy	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	10.0%	5.6%
Implied Density (Jobs/Acre)	39.2	22.9	11.9	20.7	7.8	1.8	19.6	5.6
<b>Net Acres Required</b>	<b>7.0</b>	<b>5.8</b>	<b>13.9</b>	<b>9.6</b>	<b>52.6</b>	<b>214.1</b>	<b>8.4</b>	<b>311.3</b>

Source: Oregon Employment Department, Umatilla, Johnson Economics LLC

There is a total projected 20-year need for 309 acres of buildable employment land in industrial and commercial zones. Roughly 90% of this projected need is for uses most appropriate to industrial zones (Flex, General Industrial, Warehouse, and Data Center), while the remainder is for uses most appropriate for commercial zones (Office, Retail, Institutional).

### Conclusion

This combined identified need (311 acres) is less than the 378 acres of combined buildable employment land noted in Figure 5.02. **It is important to remember that the different categories of employment land are not (necessarily) substitutable.** For instance, a shortage of 10 acres of commercial land, and a surplus of 10 acres of industrial land do not cancel each other.

Also, this does not address the more specific site needs from specific categories of employment land users. **Some of the forecasted growth includes employers who may have specific site needs and preferences that are not reflected in the available buildable inventory, even though *in total* the available parcels sum to a significant amount.**

In particular, there is forecasted demand for more suitable large-lot industrial sites while relatively few of these sites were found in the inventory. This is discussed in greater detail below.

## VI. EMPLOYER SITE NEEDS VS. BUILDABLE LAND SUPPLY

This section compares the more specific site requirements of projected future commercial and industrial users with the specific inventory of prospective employment sites identified within the UGB. Oregon Administrative Rules requires a determination of 20-year employment land need, as well as a determination of need for suitable, readily serviceable land to meet short-term demand.

The following definitions from OAR 660-009-005 are relevant to this discussion:

(2) "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas....

(10) "Short-term Supply of Land" means suitable land that is ready for construction within one year of an application for a building permit or request for service extension. Engineering feasibility is sufficient to qualify land for the short-term supply of land. Funding availability is not required. "Competitive Short-term Supply" means the short-term supply of land provides a range of site sizes and locations to accommodate the market needs of a variety of industrial and other employment uses.

(11) "Site Characteristics" means the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.

(12) "Suitable" means serviceable land designated for industrial or other employment use that provides, or can be expected to provide the appropriate site characteristics for the proposed

As noted in the previous section, the Buildable Land Inventory was screened for major constraints, including current development, floodways, wetlands, steep slopes, and federal ownership. The remaining parcels in the inventory may be buildable but may not meet the specific site requirements of certain users. Others may be part of the long-term supply, but not be well-suited for the short-term supply.

### **Estimated 20-Year Site Needs vs. Current Supply**

The following figures re-present the findings of estimated need and current supply of sites by size, as presented in the preceding sections. Note that the estimate of future needs is approximate, as economic growth is dynamic and difficult to predict. Communities should maintain flexibility and ensure a supply of a variety of site types with short-term availability, as allowed through the Goal 9 EOA process.

As Figure 6.01 presents there is currently estimated to be a sufficient supply of commercial (retail/office/institutional) parcels to meet the projected demand. Most of the demand is estimated to be from employers seeking relatively small sites of five acres or less. Due to higher employment density for commercial uses, some of these may still have sizable workforces, despite smaller sites.

For industrial users, there is an estimated deficit of sites of some sizes. Most notably there is a deficit of suitable large industrial sites, and a deficit of small industrial sites.

**FIGURE 6.01: SUMMARY OF FORECASTED 20-YEAR SITE NEED VS. SITE SUPPLY  
BY LAND USE AND SITE SIZE (ACRES), UMATILLA**

**Estimated 20-year Site NEED**

LAND USE	0 TO .9 acres	1 to 4.9 acres	5 to 9.9 acres	10 to 19.9 acres	20 to 29.9 acres	30 to 49.9 acres	50 to 99.9 acres	100+ acres	TOTAL
Office	10	1	0	0	0	0	0	0	11
Institutional	2	2	0	0	0	0	0	0	4
Retail	5	2	0	0	0	0	0	0	7
<b>Commercial:</b>	<b>17</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>
Flex/B.P	3	2	1	0	0	0	0	0	6
Gen. Ind.	5	3	1	0	0	0	0	0	9
Warehouse	2	3	2	0	0	0	1	0	8
Data Center	0	0	0	0	0	0	1	2	3
<b>Industrial:</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>26</b>
<b>TOTAL:</b>	<b>27</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>48</b>

**Estimated Employment Land SUPPLY (BLI)**

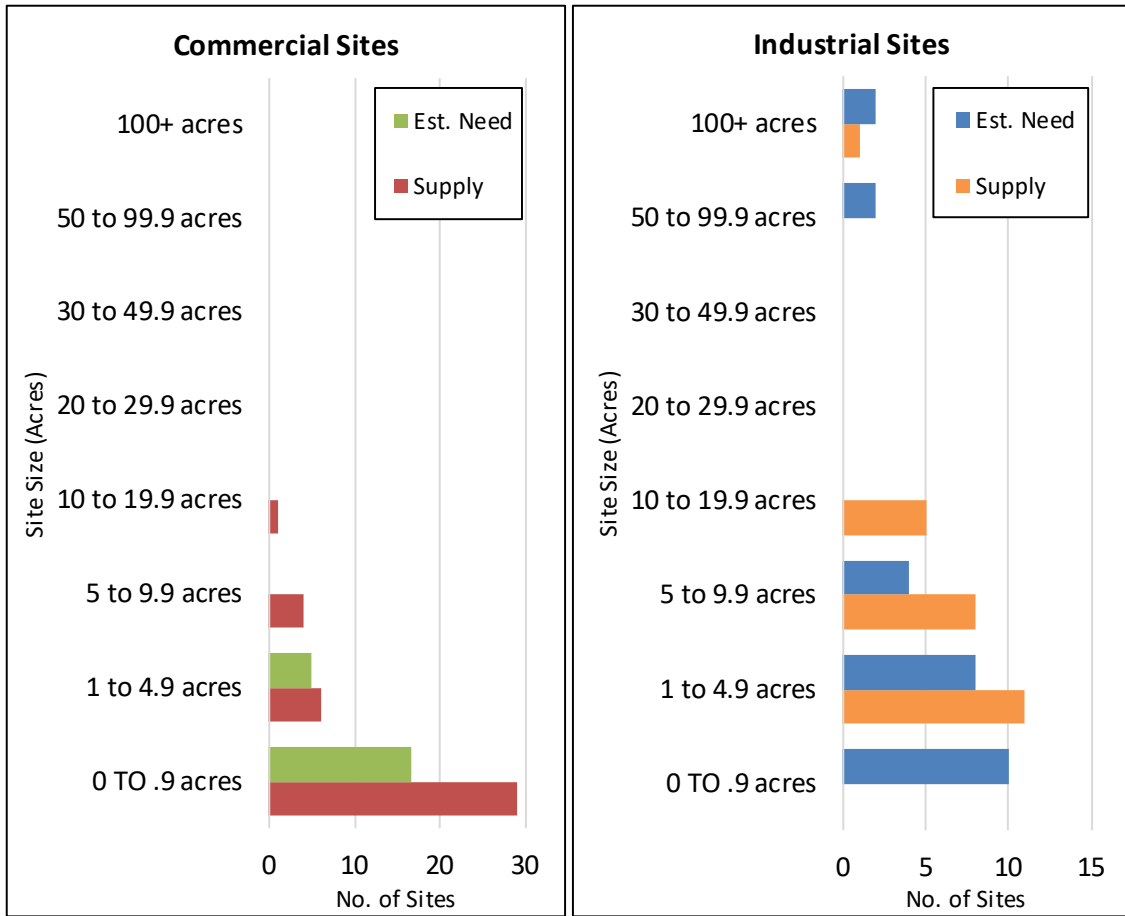
LAND USE	0 TO .9 acres	1 to 4.9 acres	5 to 9.9 acres	10 to 19.9 acres	20 to 29.9 acres	30 to 49.9 acres	50 to 99.9 acres	100+ acres	TOTAL
C-1	4	1	1	0	0	0	0	0	6
DC	14	0	0	0	0	0	0	0	14
DT	8	0	0	0	0	0	0	0	8
GC	2	3	1	0	0	0	0	0	6
MC	1	2	0	0	0	0	0	0	3
NC	0	0	2	1	0	0	0	0	3
<b>Commercial:</b>	<b>29</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>
M1	0	8	2	1	0	0	0	0	11
M2	0	3	6	4	0	0	0	1	14
<b>Industrial:</b>	<b>0</b>	<b>11</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>25</b>
<b>TOTAL:</b>	<b>29</b>	<b>17</b>	<b>12</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>65</b>

Source: Oregon Employment Department, Umatilla, Johnson Economics LLC

Figure 6.02 presents the same data in chart form.



**FIGURE 6.02: SUMMARY OF FORECASTED 20-YEAR SITE NEED VS. SITE SUPPLY  
BY LAND USE AND SITE SIZE (ACRES), UMATILLA**



Source: Oregon Employment Department, Umatilla, Johnson Economics LLC

**Identified Industrial Site Deficits**

**Large Lot:** The specific site deficits identified are for large industrial parcels. This finding is the result of strong projected growth in the information sector, and specifically data centers and cloud computing facilities. The Umatilla and Morrow County regions are now established centers for these facilities in Oregon due to a confluence of available infrastructure and workforce that have attracted these employers over the past decade. These facilities represent huge capital investments and offer high average wages for the region. There are known prospective opportunities to attract more of these facilities in the Umatilla area, which are excellent candidates for a ready short-term supply of suitable sites.

As outlined in the matrix of site requirements presented in Appendix A, these users seek large-lot industrial land with excellent power, water, and fiber access. These facilities have thus far used sites of 30 to over 100 acres. These users have stated a preference for very large sites in order to allow for future expansion. The most recent data center development in Umatilla sought a 120-acre site.

Given the projected short-term growth, and prospective long-term growth in this industry, Johnson Economics estimates a need for at least two sites of 100+ acres meeting serviceability requirements for data center or large manufacturing users, and at least two sites of 50+ acres.

In addition, there is a need for an additional large site or sites for potential distribution facilities. This is an identified target industry based on local economic goals, and the Umatilla area provides strong advantages for this type of facility based on its location at the connection of two interstate freeways.

Distribution centers require large sites for warehousing and truck staging, with ready freeway or major highway access for the receiving and shipping of large volumes of goods. For example, the nearby Walmart Distribution Center uses a 190-acre site, while the Fed Ex Freight distribution facility uses a 62.5-acre site. The currently available industrial sites are generally too limited in size and most are too distant from the freeway to serve as suitable candidates for this use.

**Small Lot:** There is also a projected future need from small industrial firms for smaller sites. It is also common for these types of users to also be accommodated in multi-tenant industrial buildings on larger sites. Given the supply of industrial sites in the 5- to 20-acre range that can be subdivided or built with multi-tenant space, it may be less critical to designate new land for these small users at this time. However, policies which facilitate availability of space for small industrial firms within current zones may be warranted.

# APPENDIX A: SITE REQUIREMENTS

The following series of tables summarize key site requirements for a range of prospective tenant types.<sup>5</sup>

CRITERIA		PROFILE	A	B	C	D	E	F	G	H	I	J
		Computer & Electronic Manufacturing (High-Tech R&D)	Software & Media	Multi-Tenant Office	Food Processing	Other Manufacturing	Life/Bioscience R&D Campus	Wholesaling	Retail	Data Center	Incubator	
<b>GENERAL REQUIREMENTS</b>		Use is permitted outright, located in UGB or equivalent and outside flood plain; and site (NCDA) does not contain contaminants, wetlands, protected species, or cultural resources or has mitigation plan(s) that can be implemented in 180 days or less.										
<b>PHYSICAL SITE</b>												
1	TOTAL SITE SIZE* Competitive Acreage**	5 - 100+	5 - 15	5 - 20	5 - 25+	5 - 50+	20 - 100+	10 - 100+	5 - 20	10 - 100+	5 - 25+	
2	COMPETITIVE SLOPE: Maximum Slope	0 - 5%	0 - 7%	0 - 7%	0 - 5%	0 - 5%	0 - 7%	0 - 3%	0 - 7%	0 - 7%	0 - 5%	
<b>TRANSPORTATION</b>												
3	TRIP GENERATION: Average Daily Trips per Acre	40 - 60	80 - 200 <sub>1</sub>	120 - 240 <sub>2</sub>	50 - 60	40 - 50	60 - 150	50 - 60 <sub>3</sub>	400 - 500 <sub>4</sub>	20 - 30	40 - 50	
4	MILES TO INTERSTATE OR FREIGHT ROUTE: Miles	w/in 10	w/in 5	w/in 5	w/in 30	w/in 20	w/in 5	w/in 5	w/in 5	w/in 30	N/A	
5	MILES TO FREQUENT TRANSIT SERVICE (15 MIN OR LESS) Miles	0.6	0.5	0.8	< 0.1	0.2	0.1	0.3	< 0.1	0.1	< 0.1	
6	RAILROAD ACCESS: Dependency	Preferred	Not Required	Not Required	Preferred	Preferred	Preferred	Preferred	Preferred	Avoid	Avoid	N/A
7	PROXIMITY TO MARINE PORT: Dependency	Preferred	Not Required	Not Required	Preferred	Preferred	Preferred	Preferred	Preferred	Not Required	Not Required	N/A
8	PROXIMITY TO INTERNATIONAL/REGIONAL AIRPORT: Dependency	Competitive	Required	Preferred	Preferred	Preferred	Required	Not Required	Not Required	Competitive	N/A	
	Distance (Miles)	This criteria cannot be met in Eastern Oregon										

<sup>5</sup> Business Oregon, Mackenzie.

PROFILE		A	B	C	D	E	F	G	H	I	J	
		Computer & Electronic Manufacturing (High-Tech R&D)	Software & Media	Multi-Tenant Office	Food Processing	Other Manufacturing	Life/Bioscience R&D Campus	Wholesaling	Retail	Data Center	Incubator	
CRITERIA												
<b>UTILITIES</b>												
9	WATER:	Min. Line Size (Inches/Dmtr)	12" - 16"	6" - 8"	8" - 10"	12" - 16"	6" - 10"	8" - 12"	6" - 10"	8" - 12"	16"	4" - 8"
		Min. Fire Line Size (Inches/Dmtr)	12" - 18"	8" - 10"	8" - 12"	10" - 12"	8" - 10"	8" - 12"	8" - 10"	8" - 12"	10"-12"	6" (or alternate source)
		High Pressure Water Dependency	Required	Not Required	Not Required	Required	Not Required	Preferred	Not Required	Not Required	Required	Not Required
		Flow (Gallons per Day per Acre)	5,200	1,200	1,500	3,150	1,850	2,450	1,200	1,800 <sub>s</sub>	50 - 200 <sup>+</sup>	1,200
10	SEWER:	Min. Service Line Size (Inches/Dmtr)	12" - 18"	6" - 8"	8" - 10"	10" - 12"	6" - 8"	10" - 12"	6" - 8"	6" - 10"	8" - 10"	4" - 6" (or on-site source)
		Flow (Gallons per Day per Acre)	4,700	1,000	2,000	2,600	1,700	2,000	1,000	1,500 <sub>s</sub>	1,000 <sup>±</sup>	1,000
11	NATURAL GAS:	Preferred Min. Service Line Size (Inches/Dmtr)	6"	4"	4"	4"	4"	6"	4"	4" - 6"	4"	N/A
		On Site	Competitive	Preferred	Competitive	Preferred	Competitive	Competitive	Preferred	Competitive	Preferred	Preferred
12	ELECTRICITY:	Minimum Service Demand	4 - 6 MW	1 - 2 MW	0.5 - 1 MW	2 - 6 MW	0.5 MW	2 - 6 MW	0.5 MW	0.5 - 1 MW	5 - 25 MW	1 MW
		Close Proximity to Substation	Competitive	Competitive	Preferred	Not Required	Preferred	Competitive	Not Required	Preferred	Required, could be on site	Not Required
		Redundancy Dependency	Preferred	Preferred	Preferred	Not Required	Not Required	Competitive	Not Required	Preferred	Required	Not Required
13	TELECOMMUNICATIONS:	Major Communications Dependency	Required	Required	Required	Preferred	Required	Required	Preferred	Required	Required	Preferred
		Route Diversity Dependency	Required	Required	Required	Not Required	Not Required	Required	Preferred	Preferred	Required	Not Required
		Fiber Optic Dependency	Required	Required	Required	Preferred	Preferred	Required	Competitive	Preferred	Required	Not Required

PROFILE	A	B	C	D	E	F	G	H	I	J
	Computer & Electronic Manufacturing (High-Tech R&D)	Software & Media	Multi-Tenant Office	Food Processing	Other Manufacturing	Life/Bioscience R&D Campus	Wholesaling	Retail	Data Center	Incubator
14 <b>SPECIAL CONSIDERATIONS:</b>	<p>Acreage allotment includes expansion space (often an exercisable option). Very high utility demands in one or more areas common. Sensitive to vibration from nearby uses.</p>	<p>1: Research &amp; Development @ 80 ADTs per acre on the low end, estimated 200 ADTs per acre for general office on the high end.</p> <p>Location specific.</p>	<p>2: Range represents FAR 0.25 - 0.5 of office uses</p> <p>Location to other cluster industries.</p>	<p>May require high volume/supply of water and sanitary sewer treatment. Often needs substantial storage/yard space for input storage. Onsite water pre-treatment needed in many instances.</p>	<p>Adequate distance from sensitive land uses (residential, parks) necessary. Moderate demand for water and sewer. Higher demand for electricity, gas, and telecom.</p>	<p>High diversity of facilities within business parks. R&amp;D facilities benefit from close proximity to higher education facilities. Moderate demand on all infrastructure systems.</p>	<p>3: General warehousing rates</p>	<p>4: Based on discount warehouse @ 0.25 FAR</p> <p>5: Dependent on use, i.e., brewery vs. restaurant</p> <p>Location to cluster industries.</p>	<p>Site size differs due to land cost and availability. Urban-area centers may require 10-20 acres, while E. Oregon centers will typically use larger sites. Also the trend is towards increasing site size as cloud storage needs continue to increase. Power delivery, water supply, and security are critical. Surrounding environment (vibration, air quality, etc.) is crucial. May require high volume/supply of water and sanitary sewer treatment.</p>	<p>Often established by municipalities and have symbiotic relationships with colleges and/or universities.</p>

**Terms:**

More Critical ↑	'Required' factors are seen as mandatory in a vast majority of cases and have become industry standards.
	'Competitive' significantly increases marketability and is <i>highly recommended by Business Oregon</i> . May also be linked to financing in order to enhance the potential reuse of the asset in case of default.
Less Critical	'Preferred' increases the feasibility of the subject property and its future reuse. Other factors may, however, prove more critical.
	'Not Required' does not apply for this industry and/or criteria.
	'Avoid' factors act as deterrents to businesses in these industries because of negative impacts.
*Total Site: Building footprint, including buffers, setbacks, parking, mitigation, and expansion space.	
**Competitive Acreage: Acreage that would meet the site selection requirements of the majority of industries in this sector.	
† Data Center Water Requirements: Water requirement is reported as gallons per MWh to more closely align with the Data Center industry standard reporting of Water Usage Effectiveness (WUE).	
‡ Data Center Sewer Requirements: Sewer requirement is reported as 200% of the domestic usage at the Data Center facility. Water and sewer requirements for Data Centers are highly variable based on new technologies and should be reviewed on a case-by-case basis for specific development requirements.	

The 14 site requirements listed on the matrix provide a basis for establishing a profile of the physical and other site needs of the identified industry. The site requirements are intended to address the typical needs of each of the industry categories, and it is recognized that there will likely be unique or non-typical needs of a specific user that will need to be evaluated by on a case-by-case basis.

The following describes a few general requirements that apply to *all* industry type categories under consideration and then an overview of the 14 site requirements listed on the matrix.

### **General Requirements:**

- The underlying zoning on the site must allow the use outright within the identified category. For example, no zone change, conditional use and/or similar land use review is necessary. Many jurisdictions typically require a design or development review which is acceptable, since the timeframe for obtaining such design-related approvals will be addressed in the State's rating system.
- The site under consideration must be located geographically within a UGB.
- The site is not located within a 100-year floodplain as mapped by FEMA, although sites with approved FEMA map amendments (e.g., LOMA & LOMR) are acceptable.
- The net contiguous developable area (NCDA) of the site does not include hazardous contaminants as verified by a Level 1 Environmental Report, or a Level 2 Report that has received a No Further Action approval from DEQ; or existing wetlands or other natural features which are regulated at the State, Federal or local level; or federally endangered species.
- The NCDA does not contain any cultural or historical resources that have been identified for protection at the State, Federal or local level.
- The NCDA does not have mitigation plans that can be implemented in 180 days or less.

### **Site Requirements:**

1. **Total Site Size:** The site size is taken to mean the size of the building footprint and includes buffers, setbacks, parking, mitigation, and expansion space.
2. **Competitive Slope:** Most industrial uses require relatively large building footprints that do not accommodate steps in floor slabs, and sloping topography will require extensive excavation and retaining systems that increase development cost over flat sites. The figures given are the preferred maximum average slope across the developable portion of the site, recognizing that sites with additional area outside the building, or developments with multiple building pads, generally will have lower slope earthwork costs than sites with limited space outside the building footprint.
3. **Trip Generation:** Sites are frequently limited by a jurisdiction to a specified total number of vehicle trips entering and exiting the site. This site requirement is an estimate of the minimum number of average daily trips per acre (based on the range of building coverage) that should be available for each of the industrial categories based on the Institute of Traffic Engineers (ITE) Manual-Ninth Edition. The following table lists the ITE codes used to estimate average trips for the industry profiles represented in the matrix.

4. **Miles to Interstate or Freight Route:** With few exceptions, access to major freeways or freight routes is critical for the movement of goods. This site requirement indicates the typical maximum range of distance, in miles, from the site to the freeway or highway access. The roadways/intersections between the site and freeway/highway must generally operate at a level of service 'D' or better in accordance with the Highway Capacity Manual methodologies and general engineering standards.
5. **Miles to Frequent Transit Service:** Businesses located walking distance (within one-quarter of a mile) to a bus stop that is serviced by a frequent bus line enjoy a competitive advantage over others that are more limited in transportation access options.<sup>6</sup>
6. **Railroad Access:** The need for access to railroad for the movement of goods within each industrial category is dependent upon individual users, so the site requirements are identified as either "Preferred," "Not Required," or "Avoid" in some cases where the presence of rail may be considered a deterrent to business.
7. **Proximity to Marine Port:** The need for access to a marine port for the movement of goods within each industrial category is dependent upon individual users.
8. **Proximity to International/Regional Airport:** The need for access to a regional airport for the movement of goods or business travel within each industrial category is dependent upon individual users.
9. **Availability of Water:** This requirement indicates the minimum sizes of domestic water and fire lines immediately available to the site. In certain rural cases, a comparable supply from an on-site water system (i.e., well or reservoir with available water rights) may be acceptable. In addition to lines sizes, preference for high-pressure water capabilities and average flow demand in gallons per day is specified for each industry type.
10. **Availability of Sanitary Sewer:** This requirement indicates the minimum size of public sanitary sewer service line immediately available to the site. In certain rural cases, an on-site subsurface system providing a comparable level of service may be acceptable. Sewer flow requirements were determined by calculating a percentage of the water flow for each industry type.
11. **Natural Gas:** This requirement indicates the minimum size natural gas line that is immediately available to the site. It is assumed that the pressure demand for all industry categories is 40-60 psi.
12. **Electricity:** This requirement indicates the minimum electrical demand readily available to each industry and where proximity to a substation and redundancy dependency rank on the continuum of less critical to more critical. Estimated demand is based on review of existing usage from local utility providers, referencing industrial NAICS codes for the various profiles.
13. **Telecommunications:** This requirement indicates whether the availability of telecommunication systems are readily available, and where major commercial capacity, route diversity and fiber optic lines rank on the continuum of less critical to more critical. All sites are assumed to have a T-1 line readily available.

## INDUSTRY PROFILES

The following provides supplemental information for the attached Industrial Development Profile Matrix. The preceding matrix identifies 10 industry type categories (labeled A-J on the matrix) and 14 "site needs" which will assist in evaluating selected sites using the criteria of a given industry type.

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<sup>6</sup> We have defined "frequent bus line" as one with service occurring in no longer than 15 minute intervals.

The industry categories have been established based primarily on Business Oregon information (including input from various state agencies). Due to the wide range and constantly evolving characteristics of uses, borderline and/or non-typical applications will likely arise and will be evaluated on a case-by-case basis. It should be noted that certain industry types might have unique requirements, such as proximity to an international airport, which may require an additional category. It should also be noted that the industry types represent the primary use of the industry, and exclude secondary/accessory uses (e.g., training facilities, etc.) at this

## **A: Food Processing**

### *a) Description:*

Generally, this category includes industries that manufacture or process foods and beverages for human or animal consumption. Although this category has similar siting characteristics as Other Manufacturing, the unique needs associated with food processing, such as high-volume water and/or pressure demand, warrant this separate category. Broadly, there are two types of food processing categories:

- (1) raw materials; and
- (2) assembling.

Additionally, there is a packaging and warehousing component to these facilities.

### *b) Representative Industry Types:*

- Production foods/goods (e.g., bakeries)
- Fruits and vegetables
- Breweries and wineries
- Dairy
- Bottling/beverages

### *c) Representative Companies:*

- Ajinomoto (Portland)
- Beaverton Foods Inc. (Hillsboro)
- Cabroso (Medford)
- Rogue Creamery
- Hermiston Foods (Hermiston)
- Nancy's Yogurt (Eugene)
- Reser's Foods (Beaverton)
- Norpac (Salem and Stayton)
- Tillamook Dairy (Tillamook)
- Coca Cola bottling (statewide)
- Pepsi bottling (statewide)
- Full Sail Brewing (Hood River)
- Hood River Juice Company (Hood River)

## **B: Other Manufacturing**

### *a) Description:*

This category is intended to include industries that utilize relatively less intensive manufacturing processes, more assembly activities, and direct transfer to wholesale and domestic consumers. Typically, these facilities are freestanding, devoted to a single use, and emphasize manufacturing space over office space. Generally, these non-high-tech industries may be located on individual sites or in business/industrial parks and have less effect on surrounding uses. This category also includes some industrial service uses that are engaged in serving other businesses, such as an industrial laundry facility.

### *b) Representative Industry Types:*

- Electronic assembly support



- Wood products
  - Automobile products
  - Steel/metals
  - Building materials fabrication and processing
- c) *Representative Companies:*
- Warn Industries (Clackamas)
  - JV Northwest (Canby)
  - Hartung Glass (Wilsonville)
  - Oregon Iron Works (Clackamas)
  - Daimler Trucks North America (Portland)
  - Maxim Integrated (Beaverton and Hillsboro)
  - Oregon Steel Mills (Portland)

### **C: Wholesaling**

- a) *Description:*  
 The wholesale industry comprises companies involved in wholesaling merchandise and other goods such as mining, agriculture, manufacturing, and certain information industries. This industry typically represents an intermediate step in the production and distribution of goods and merchandise, as wholesalers generally sell goods intended for resale by a retailer. In some cases, users and customers may purchase these goods directly from a wholesaler with a retailer.
- b) *Representative Industry Types:*
- Automobile and Other Motor Vehicle Merchant Wholesalers
  - Furniture Merchant Wholesalers
  - Office Equipment Merchant Wholesalers
  - Hardware Merchant Wholesalers
  - Farm and Garden Machinery and Equipment Merchant Wholesalers
  - Sporting and Recreational Goods and Supplies Merchant Wholesalers
- c) *Representative Companies:*
- Cascade Wholesale Hardware
  - Costco Wholesale
  - Pearlier Auto Wholesale

### **D: Retail**

- b) *Description:*  
 This industry contains businesses that sell merchandise, largely without any transformation of the good, with services largely being ancillary to the sale of said merchandise. The businesses usually receive goods from wholesalers, and typically do not transform the good before its final sale to the user or customer. There are sixty-nine subsectors of retail trade, some of which are reflected in the bulleted list below.
- c) *Representative Industry Types:*
- Specialty food/grocery
  - Coffee shops/cafes
  - Theater/recreation/entertainment
  - Brew pub/wine or bottle shops
  - Full service local restaurants
  - Food car pods
  - Bookstores and boutiques
  - Wellness and spa services
  - Hotel & hospitality
  - Niche manufacturing (bike, bakery, outdoor, etc.)

d) *Representative Companies:*

- New Seasons
- Dutch Bros. Coffee
- McMenamins Cornelius Pass Roadhouse
- P.F. Chang's
- Barnes & Noble
- Align Wellness Center
- Embassy Suites
- Orenco Station Cyclery

**E: Incubator**

a) *Description:*

This industry type is often established by local municipalities and has a symbiotic relationship with colleges and universities within the vicinity. Business incubators are designed to help new and small businesses in the start-up and early growth phases of development, through providing a flexible combination of business development tools, facilities and resources, and personal contacts.

b) *Representative Industry Types:*

- Not applicable for this industry type, as the incubators serve as cultivating space for several uses to grow in their nascent business stages.

c) *Representative Examples:*

- Launch Pad Baker City
- Microenterprise Investors Program of Oregon (Portland)
- BESThq (Beaverton)
- Forge Portland
- WeWork (Portland)

**F: Data Center**

a) *Description:*

Data centers are classified under NAICS 5182: Data Processing, Hosting, and Related Services. We consider them separately from other "information and software" activities because the land and utility needs are far different. Over the just the last five years, unprecedented growth in demand for data hosting has developed an entirely new segment of the industrial landscape in Oregon attracted to a generally temperate climate, low overall disaster risk, low utility rates from renewable sources, and abundant water.

The growth outlook for data center siting is strong, as high growth rates for streaming, software as a service (SaaS), and cloud data and processing across the industry creates an accelerating need for hosting services. Global data center demand is expected to grow threefold over just the next five years.<sup>7</sup> Key areas like the Columbia Basin, Central Oregon and Hillsboro compete for these industrial users.

b) *Representative Companies:*

- Vadata
- Google
- Apple
- Facebook
- ViaWest
- Adobe

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<sup>7</sup> Cisco Global Cloud Index (2015).

## Appendix B: Buildable Land Inventory

### MEMORANDUM

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To: Tamra Mabbott, Community Development Director  
Technical Advisory Committee

From: Johnson Economics

Subject: Economic Opportunities Analysis, City of Umatilla, OR  
Inventory of Buildable Employment Lands

#### INTRODUCTION

This memo summarizes an interim step in the Economic Opportunities Analysis. The inventory of employment land provides a snapshot of the currently local capacity to accommodate more business and jobs. This current available land will be compared to the forecasted need for new land over the 20-year planning period.

Employment land includes land zoned for industrial, retail or other commercial use (i.e. office), and may also include mixed-use zoning that allows for employment uses. This inventory includes vacant parcels with the proper zoning, as well as “redevelopable” parcels. (The methodology used in this analysis is described in detail below.)

For planning purposes, this type of inventory is often called a Buildable Lands Inventory (BLI).

#### METHODOLOGY

The Buildable Lands Inventory (BLI) used in this analysis is based on tax account data, zoning and other key mapping information provided by the City of Umatilla, Umatilla County, and the state. The data was provided in Geographic Information Systems (GIS) compatible format, providing information on land use, parcel size and other relevant data categories on the taxlot level.

The tax account data was used to identify vacant and redevelopable parcels in Umatilla with their Urban Growth Boundary (UGB). The identified candidate parcels were then further screened and refined by JOHNSON ECONOMICS.

In keeping with State requirements, the BLI includes an assessment of vacant buildable lands and redevelopable parcels. This analysis applied the “safe harbor” assumptions allowed under state rules to determine the infill potential of developed parcels (OAR 660-024-0050).

The Buildable Lands Inventory relied on the following sources:

- Umatilla County Geographic Information System (GIS) data
- DLCDC GIS data
- Google Earth
- Assessment of environmental constraints
- City staff input



## Appendix B

- Advisory Committee input
- Site visits

### **Identification of Vacant Parcels**

JOHNSON ECONOMICS used the most recent available tax account data from Umatilla County to identify those parcels located in appropriate commercial or industrial zones and determine whether they are developed or undeveloped. The County supplied taxlot data in GIS format. Johnson Economics applied the following steps to further refine the Buildable Lands Inventory:

- 1) Isolate the taxlots located within Umatilla's UGB. The shapefile contains data on the individual property tax accounts associated with each taxlot in the county.
- 2) Using zoning layers, isolate those taxlots that are located in appropriate employment zones, including industrial and commercial areas.
- 3) Through a combination of parsing individual taxlot data and aerial map surveying, develop preliminary list of qualified vacant parcels. For this preliminary analysis, all vacant lots were included regardless of size.
- 4) Using staff and advisory committee feedback, additional GIS data and surveying, and site visits, the vacant inventory was further refined to remove anomalies or misidentified parcels.

### **Identification of Redevelopable Parcels**

In order to identify those developed parcels which might accommodate additional development, JOHNSON ECONOMICS applied the so-called "safe harbor" provisions of the Oregon Administrative Rules, which provide cities a systematic means to estimate the development capacity of larger parcels with a limited amount of existing development:

#### **OAR 660-024-0050**

#### **Land Inventory and Response to Deficiency**

...

- (3) As safe harbors when inventorying land to accommodate industrial and other employment needs, a local government may assume that a lot of parcel is vacant if it is:
  - (a) Equal to or larger than one-half acre, if the lot or parcel does not contain a permanent building;  
or
  - (b) Equal to or larger than five acres, if less than one-half acre of the lot or parcel is occupied by a permanent building.

Source: Oregon Administrative Rules, 660-024

Using GIS data, the above criteria were applied to the developed parcels in Umatilla in order to identify those developed parcels which are prospective candidates for infill development or redevelopment.

The Buildable Lands Inventory of Employment Lands was prepared following the preceding steps by JOHNSON ECONOMICS LLC. The findings are presented below with additional discussion.



## Appendix B

### BUILDABLE LANDS INVENTORY – EMPLOYMENT LANDS

The methodology as described above finds an existing buildable employment lands inventory as follows in Umatilla:

#### 1. UMATILLA

**FIGURE 1: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY (UMATILLA)**

ZONE	VACANT		REDEVELOPABLE		TOTAL	
	Parcels	Acreage	Parcels	Acreage	Parcels	Acreage
C-1	4	8.5	2	1.0	6	9.5
DC	11	2.2	3	0.4	14	2.6
DT	8	1.4	0	0.0	8	1.4
GC	6	10.0	2	3.6	8	13.5
MC	3	4.1	0	0.0	3	4.1
NC	3	31.4	0	0.0	3	31.4
<b>Commercial Total:</b>	<b>35</b>	<b>57.6</b>	<b>7</b>	<b>4.9</b>	<b>42</b>	<b>62.5</b>
M1	6	23.5	5	27.6	11	51.1
M2	16	247.9	3	16.8	19	264.7
<b>Industrial Total:</b>	<b>22</b>	<b>271.3</b>	<b>8</b>	<b>44.5</b>	<b>30</b>	<b>315.8</b>
<b>TOTAL:</b>	<b>57</b>	<b>328.9</b>	<b>15</b>	<b>49.4</b>	<b>72</b>	<b>378.3</b>

Source: Umatilla County, State of Oregon, Johnson Economics LLC

The inventory identifies 378 acres of vacant or potentially redevelopable land in the commercial and industrial zones. 87% of the acreage is identified as “vacant”, and 13% in potential “redevelopment” sites. Roughly 62.5 of the acres are in commercial zones, while nearly 316 acres are industrial.

**FIGURE 2: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**

ZONE	0 TO .99 acres		1 to 4.99 acres		5 to 9.99 acres		10 to 19.99 acres		20 to 29.99 acres		30 to 49.99 acres		50+ acres		TOTALS	
	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage
C-1	4	2.2	1	1.9	1	5.5	0	0.0	0	0.0	0	0.0	0	0.0	6	9.5
DC	14	2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	14	2.6
DT	8	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	1.4
GC	2	1.7	3	5.0	1	6.9	0	0.0	0	0.0	0	0.0	0	0.0	6	13.5
MC	1	0.7	2	3.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	4.1
NC	0	0.0	0	0.0	2	13.4	1	18.0	0	0.0	0	0.0	0	0.0	3	31.4
<b>Commercial Total:</b>	<b>29</b>	<b>8.6</b>	<b>6</b>	<b>10.2</b>	<b>4</b>	<b>25.8</b>	<b>1</b>	<b>18.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>40</b>	<b>62.5</b>
M1	0	0.0	8	20.7	2	13.4	1	17.0	0	0.0	0	0.0	0	0.0	11	51.1
M2	0	0.0	3	10.3	6	39.7	4	53.3	0	0.0	0	0.0	1	161.4	14	264.7
<b>Industrial Total:</b>	<b>0</b>	<b>0.0</b>	<b>11</b>	<b>31.0</b>	<b>8</b>	<b>53.2</b>	<b>5</b>	<b>70.3</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>161.4</b>	<b>25</b>	<b>315.8</b>
<b>TOTAL:</b>	<b>29</b>	<b>8.6</b>	<b>17</b>	<b>41.2</b>	<b>12</b>	<b>78.9</b>	<b>6</b>	<b>88.2</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>161.4</b>	<b>65</b>	<b>378.3</b>

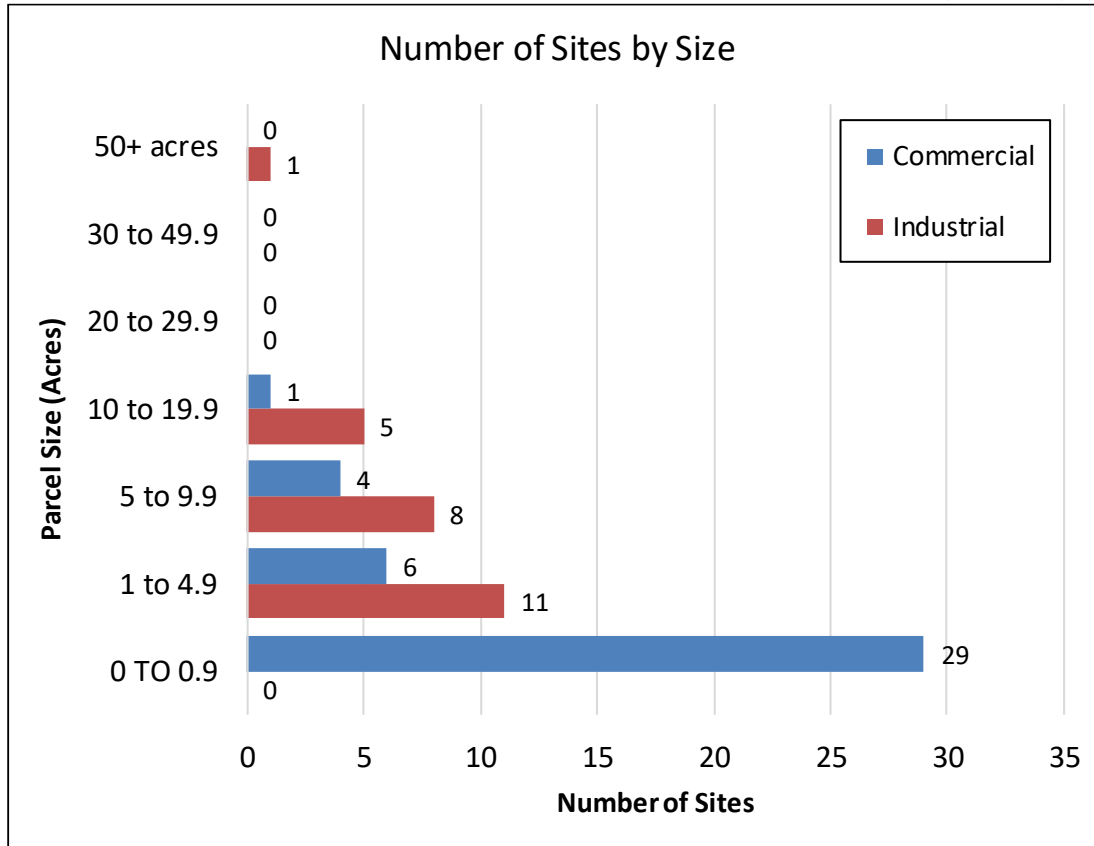
Source: Umatilla County, State of Oregon, Johnson Economics LLC



## Appendix B

Figure 2 presents the inventory broken down by the size of parcels. The distribution is weighted towards smaller parcels, with few unconstrained parcels over 20 acres in size. Figure 3 presents the same data in chart form.

**FIGURE 3: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**



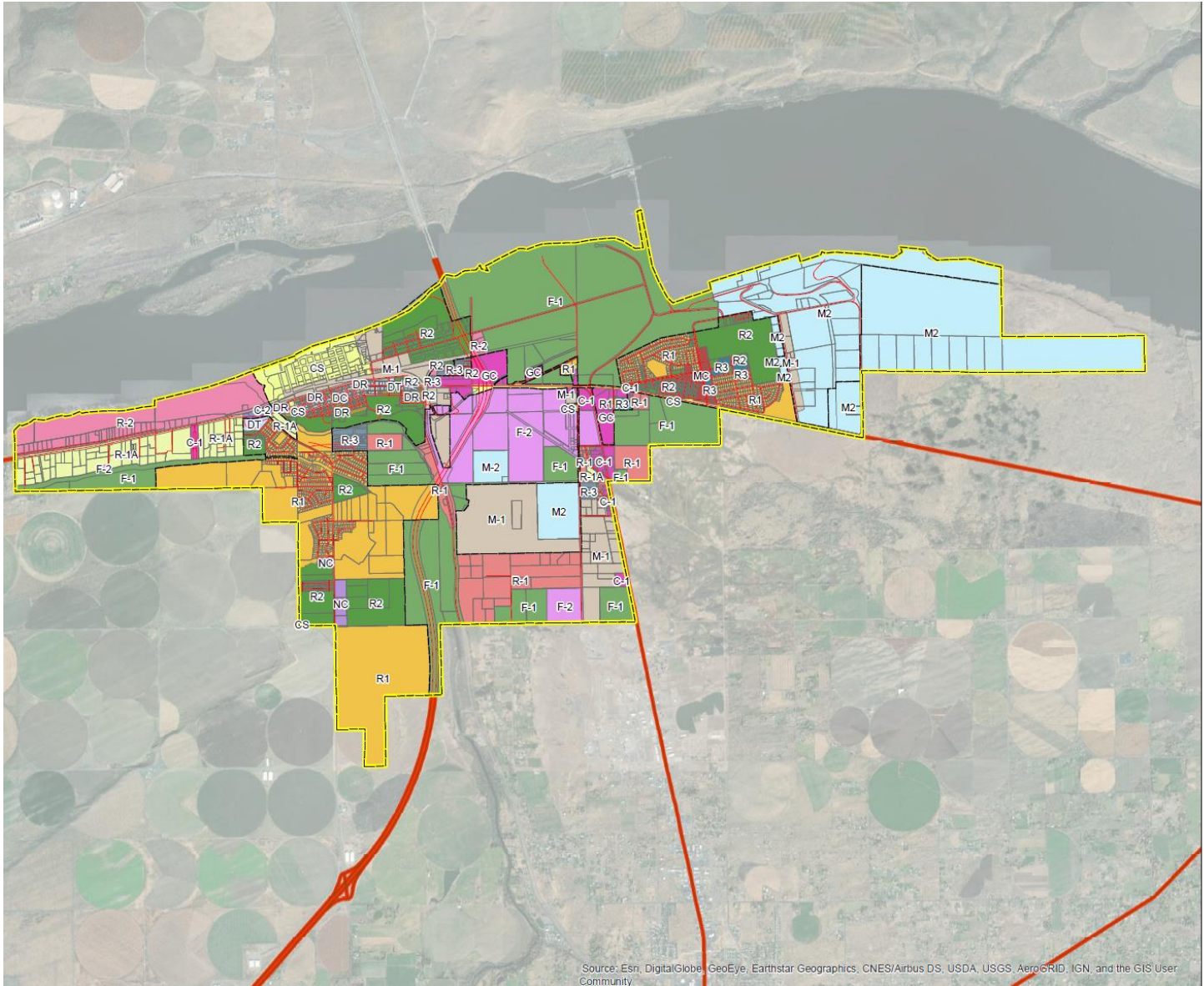
Source: Umatilla County, State of Oregon, Johnson Economics LLC

The following set of maps presents the Buildable Land Inventory and some reference information. The maps include:

- Figure 4: City Zoning Map
- Figure 5: Constrained Lands
- Figure 6: Buildable Employment Lands

# Appendix B: Buildable Land Inventory

FIGURE 5: ZONING MAP, UMATILLA



## West Umatilla Cities Buildable Lands Inventory

City of Umatilla:

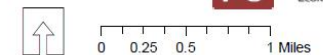
### Zoning

- Streets
- Taxlot
- City Limits
- Umatilla\_UGB

**Zone**

- Agricultural Residential, R-1
- Community Services, CS
- Downtown Commercial, DC
- Downtown Residential, DR
- Downtown Transitional, DT
- Exclusive Farm Use, F-1
- General Commercial, C-1, GC
- General Rural, F-2
- Heavy Industrial, M-2
- Light Industrial, M-1
- McNary Center Commercial, MC
- Medium Density Residential, R2
- Multi-Family Residential, R3
- Neighborhood Commercial, NC
- Single-Family Residential, R1
- Suburban Residential, R-2
- Tourist Commercial, C-2
- Two Acre Residential, R-1A
- Urban Residential, R-3

Prepared by:  
Angelo Planning Group  
Date: 01/15/19



Coordinate System:  
NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl

This map is intended for informational purposes only. While this map represents the best data available at the time of publication, APG makes no claims, representations, or warranties as to its accuracy or completeness. Metadata available upon request.

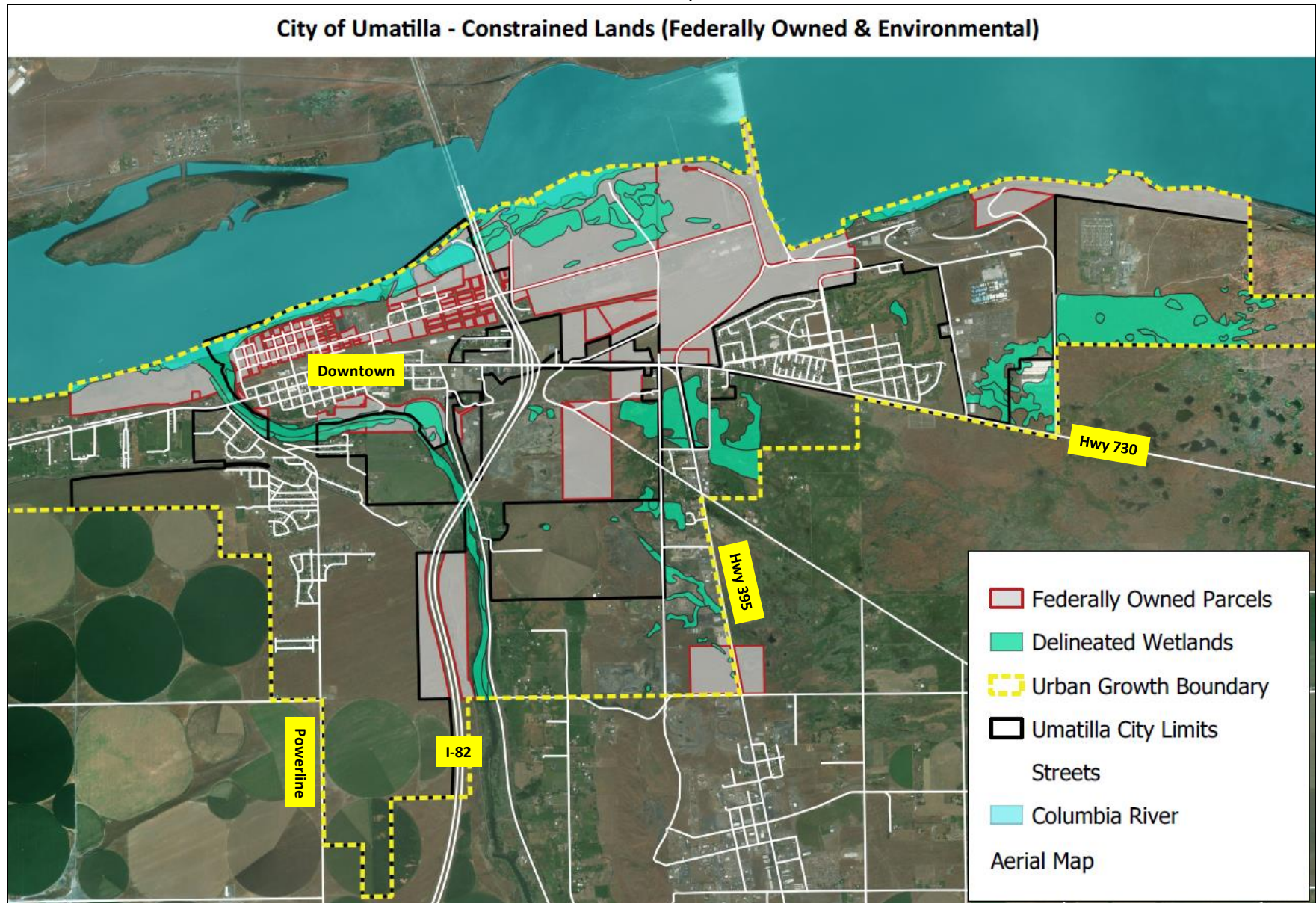
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Source: Angelo Planning Group (2019)





FIGURE 6: CONSTRAINED LAND, UMATILLA

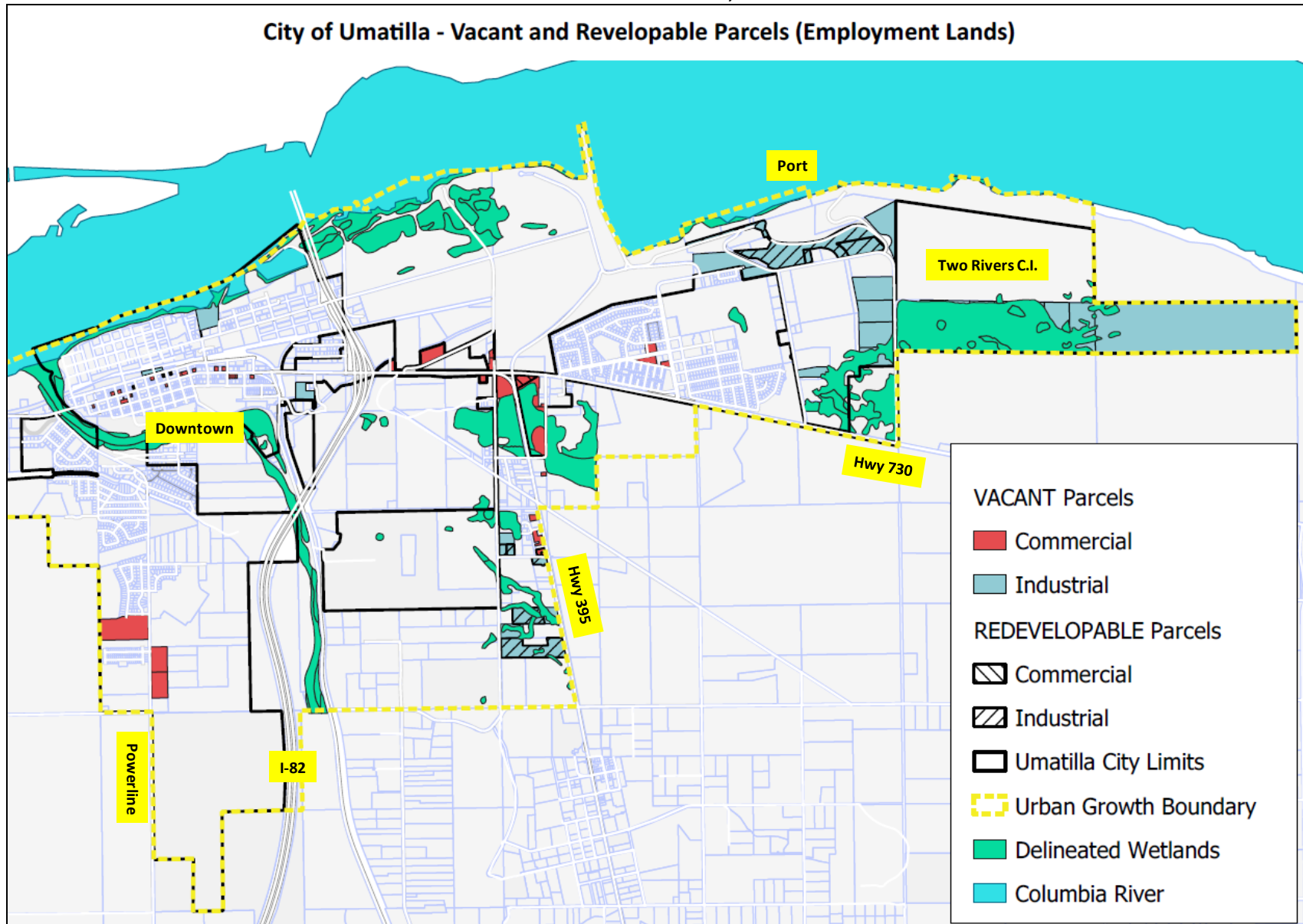


Source: Umatilla County, State of Oregon, Johnson Economics LLC





FIGURE 7: BUILDABLE EMPLOYMENT LANDS, UMATILLA



Source: Umatilla County, State of Oregon, Johnson Economics LLC

CITY OF UMATILLA, OREGON

# AGENDA BILL

**Agenda Title:**

**City of Umatilla Plan Amendment PA-3-20:**  
The applicant, Cleaver Land, LLC, is requesting approval of a Comprehensive & Zoning Map change to convert 294 acres of Single Family Residential to Light Industrial. The applicant also submitted an Urban Growth Boundary Expansion and Annexation applications with the desired outcome to have approximately 450 acres of land planned and zoned for industrial use.

**Meeting Date:**

2021-07-20

**Department:**

Community Development

**Director:**

Brandon Seitz

**Contact Person:**

Brandon Seitz

**Phone Number:**

**Cost of Proposal:**

NA

**Amount Budgeted:**

NA

**Fund(s) Name and Number(s):**

N/A

**Reviewed by Finance Department:**

Yes

**Previously Presented:**

NA

**Attachments to Agenda Packet Item:**

[PA-3-20 CC Report \(w Exhibits\).pdf](#)

**Summary Statement:**

The City of Umatilla Planning Commission at their August 2020 public hearing unanimously voted to recommend approval of Plan Amendment PA-3-20. A sample motion for approval is provided below.

I move to approved Cleaver Land Plan Amendment PA-3-20 and adopt the Planning Commissions Report and Recommendation as the City Councils Findings.

**Consistent with Council Goals:**

Goal 2: Promote Economic Development and Job Growth.

**UMATILLA CITY COUNCIL  
REPORT AND RECOMMENDATION  
FOR  
PLAN AMENDMENT PA-3-20**

**DATE OF HEARING:** July 20, 2021

**REPORT PREPARED BY:** Jacob Foutz, Associate Planner

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**I. GENERAL INFORMATION AND FACTS**

**Applicant:** Cleaver Land, LLC, 78757 Westland Rd, Hermiston, OR 97838

**Land Use Review:** A Zone Change application.

**II. NATURE OF REQUEST AND GENERAL FACTS**

The applicant, Cleaver Land, LLC, is requesting approval of a Zone Change that would rezone 294 acres of Single-Family Residential designation to Light Industrial. The proposed zoning designation of Light Industrial will support the types of uses – data centers, warehousing and light manufacturing – outlined in the Economic Opportunities Analysis completed by Johnson Economics that clearly indicates that the City of Umatilla needs large lot industrial parcels. The applicant also submitted an Annexation and UGB applications with the desired outcome to have approximately 450 acres of land planned and zoned for industrial use. Current use of the property is agricultural. Crops under circle pivot irrigation regularly in rotation are potatoes, onions, corn, and grass seed. Improvements to the property include circle pivot irrigation systems and a general use storage building.

**Applicants Intended Outcomes of Application Process:**

The applicant is working with the City of Umatilla to achieve approval of three applications – an Urban Growth Boundary (UGB) expansion, an Annexation, and a Zone Change – with the desired outcome to have some 450 acres of available land planned and zoned for industrial use. The UGB expansion will add about 150 acres to the UGB; the Annexation will add those same acres within the City Limits; and those actions combined with a Zone Change will add about 450 acres to the industrial land supply. The proposed zoning designation of Light Industrial will support the types of uses – data centers, warehousing and light manufacturing – outlined in the Economic Opportunities Analysis completed by Johnson Economics that indicates that the City of Umatilla is in need of large lot industrial parcels. On page 43 of the Economic Opportunities Analysis it states, “For industrial users, there is an estimated deficit of sites of some sizes. Most notably there is a deficit of suitable large industrial sites, and a deficit of small industrial sites.” This statement is expanded on pages 44 and 45 providing more definition to the needs. At the top of page 45 the report states, “Given the projected short-term growth, and prospective long-term growth in this industry [data centers], Johnson Economics estimates a need for at least two sites of 100+ acres meeting serviceability requirements for data center or large manufacturing users, and at least two sites site of 50+ acres.” Johnson Economics also states on page 41 the following,

“...this does not address the more specific site needs from specific categories of employment land users. Some of the forecasted growth includes employers who may have specific site needs and preferences that are not reflected in the available buildable inventory, even though *in total* the available parcels sum to a significant amount. In particular, there is forecasted demand for more suitable large-lot industrial sites while relatively few of these sites were found in the inventory.” The Johnson Economics provided Economic Opportunities Analysis, while using acreage ranges to discuss needs, does acknowledge that needs for large lots over 100 acres might easily mean upwards of 200 acres for any single user. Examples are a data center request at more than 120 acres and the Walmart Distribution Center at 190 acres. This would also be applicable to the range of 50 to 99.9 acres which could result in users needing 65 acres or 92 acres, an example being the FedEx freight distribution facility at 62.5 acres.

This suite of applications seeks to add 450 acres to the industrial land inventory for the City of Umatilla, meeting this need with the ability to also meet future needs for smaller lot or clustered industrial development which is also identified as a need. The Johnson Economics report on page 45 states the following about small lots, “There is also a projected need from small industrial firms for smaller sites. It is also common for these types of users to also be accommodated in multi-tenant industrial buildings on larger sites.”

The zone change component of this suite of applications does propose to rezone approximately 294 acres from Residential to Industrial. In 2019 the City of Umatilla completed a Goal 10 update that included a buildable lands inventory and a Housing Strategies Report (2019) that indicates an overabundance of residential land. Removal of 294 acres of residential land from the inventory does not negatively impact the land supply for residential development in the 20-year planning period, leaving a continuing surplus of approximately 750 acres.

### **III. ANALYSIS**

The criteria applicable to this request are shown in underlined text and the responses are shown in standard text. All of the following criteria must be satisfied in order for this request to be approved.

#### **City of Umatilla Title 10 Zoning Chapter 14 Administrative Provisions Section 10-14-4: APPLICATION provides the following requirements.**

*A permit application may only be initiated by the record property owner or contract purchaser, the City Council, or the Planning Commission. The City will not accept an application without the signed authorization from all record owners.*

**Applicants Response:** Included with this application package is the required form signed by the record owner.

**Conclusion:** This application was initiated and signed by the record owner.

*A. All permit applications shall be submitted on a form provided by the City, along with all necessary supporting documentation and information sufficient to demonstrate compliance with all applicable approval criteria and standards, and the appropriate fee. The applicant has the burden of demonstrating, with evidence, that all approval criteria and standards are, or can be, met.*

**Applicants Response:** The City of Umatilla required application is included along with narratives with responses discussing how the applicant has or can meet the requirements. Also included are the attachments referenced throughout.

**Conclusion:** The included application and narratives meet the above criterion.

*B. A complete application includes all the materials listed in this Section and any specific information requested for a particular permit. The City Administrator may waive the submission of any of the materials if not deemed to be applicable to the specific review sought. Likewise, within thirty (30) days of submission of the application, the City Administrator may require additional information beyond that listed in this subsection, such as a traffic report or other study prepared by an appropriate expert. The applicant is responsible for the completeness and accuracy of the application and all supporting documentation.*

**Applicants Response:** Submitted to the City of Umatilla are the narratives which includes responses providing evidence of the applicant's ability to meet the criteria, the required application form, the City of Umatilla Economic Opportunities Analysis dated November 2019 and other attachments in support of this request.

**Conclusion:** The application has been deemed complete.

*1. A completed City application form that includes:*

- a. An accurate legal description, tax account number(s), map number, and street location of all properties that are the subject of the application.*
- b. Name, address, telephone number, and authorized signature(s) of all record property owners or contract owners, and the name, address, and telephone number of the applicant, if different from the property owner(s).*

**Applicants Response:** The required applications, including this information and required signatures, is included with these narratives.

**Conclusion:** The application has been deemed complete.

*2. A complete list of all City permit approvals sought by the applicant in this application.*

**Applicants Response:** The applicant is requesting an urban growth boundary expansion, annexation of that same property, and a change in zoning of the subject property, proposing to apply a Comprehensive Plan and Zoning designation of M1 Light Industrial. No specific developments are proposed at this time.

**Conclusion:** The application has been deemed complete.

*3. A complete and detailed narrative describing the proposed development, existing site conditions, public facilities and services, natural features including wetlands and steep slopes, a discussion of the approval criteria and standards for all permits explaining how the criteria and standards are, or can be, met, and any other information indicated by the City at the pre-application conference as being required.*

**Applicants Response:** The applicant is requesting concurrently an urban growth boundary expansion, an annexation of that same property, and a change in Comprehensive Plan and Zoning designation to Light Industrial of the subject site. Provided to the City of Umatilla are the necessary applications signed by the landowner, narratives in support of each application, and various attachments that support the requests which includes the 2019 Economic Opportunities Analysis.

**Conclusion:** The application has been deemed complete.

4. A site plan or plans and a vicinity map, drawn to scale. The site plan shall include at least the following features, along with any other information necessary to understand the proposal:

- a. Dimensions of the site and all structures, existing and proposed.
- b. Existing conditions, including topography and any other physical features such as vegetation, wetlands, watercourses, slopes, etc.
- c. Rights of way abutting the site, whether public or private, and access to the site.
- d. Locations and sizes of all public utilities, existing and proposed, on and in the vicinity of the site.
- e. Locations, dimensions, and purposes of all recorded easements.
- f. Size of areas (in square feet) and percentages of the total site area devoted to structures, parking, landscaping, open space, dedication of right of way, and any other proposed feature.
- g. Proposed landscaping plan, including size, species, and location of plants or other elements.
- h. Parking plan.
- i. Detail of screening and fencing.
- j. Exterior lighting, including location, type, height, and areas of illumination.
- k. Service areas for trash collection, mail delivery, etc.

**Applicants Response:** Included with these applications are vicinity maps that include the identified features currently in place and a conceptual layout of proposed uses (see the Umatilla Industrial Area Utility Technical Memorandum for representation of the potential future development of the subject property). There is no proposed development with this request for a change in zoning. Future development components such as landscaping, parking, fences, lighting and service areas are difficult to locate with certainty. Those features would be evaluated under the Light Industrial M1 zoning at the time of development. Both the Umatilla Industrial Area Utility Technical Memorandum and the Traffic Impact Analysis provide evidence that industrial development is feasible and can be accomplished safely.

**Conclusion:** There is no proposed development with this request for a change in zoning. A site plan is not required for a change in zoning.

5. The applicant shall provide the City with up to twenty (20) copies of all reports, plans, site plans, and other documents required by this Section. The number of copies will be determined at the pre-application conference. One copy of all plans and maps reduced to

eight and one-half inches by eleven inches (8 1/2" x 11") or eleven inches by seventeen inches (11" x 17"), and suitable for reproduction.

**Applicants Response:** The applicant has provided to the City of Umatilla the required and requested components in support of these applications for an urban growth boundary expansion, annexation, and change of zoning.

**Conclusion:** The application is deemed complete.

6. All required application fees.

**Applicants Response:** The applicant has provided to the City of Umatilla the required application fees in support of these applications for an urban growth boundary expansion, annexation, and a change of zoning.

**Conclusion:** All required application fees have been received.

**City of Umatilla Title 10 Zoning Chapter 13 Other Permits and Actions Section 10-14-4: AMENDMENTS TO THE ZONING TEXT OR MAP provides the following requirements.**

A. Type IV Procedure: Amendments to the zoning title text or Official Map are considered a Type IV procedure. A Map change may be legislative or quasi-judicial, depending on the number of properties and area involved. A text change is always a legislative decision.

**Applicants Response:** This is a single owner application for a change in zoning and can be considered as a quasi-judicial request.

**Conclusion:** This application has been processed as both quasi-judicial as well as legislative. At the base level it is a legislative application because of the map change, but due to the specificity of where it is located it has also been processed using the quasi-judicial process. Both methods have been applied in the application making it a “quasi-judicial legislative decision”. The Planning Commission will make a recommendation to the City Council and not make the final decision.

B. Initiation of Application: An application may be initiated by a property owner or authorized agent, the Planning Commission, or the City Council.

**Applicants Response:** The landowner is the applicant for this change in zoning (and other related actions).

**Conclusion:** The property owner submitted the application for a change in zoning.

C. Narrative, Identification Required: An application shall include a narrative that demonstrates compliance with the approval criteria and a site and vicinity map identifying the property and adjacent properties.

**Applicants Response:** This serves to meet the narrative requirement.

**Conclusion:** A sufficient narrative was submitted for this application.

D. Approval Criteria: An amendment to this Title or Official Map shall comply with the following criteria:

1. The proposed designation is consistent with and supports the purposes of the portions of the City's Comprehensive Plan not proposed for amendment, or circumstances have changed to justify a change in the Comprehensive Plan.

**Applicants Response:** Since the City of Umatilla initially adopted the Comprehensive Plan and Zoning Ordinance several changes have taken place that should be considered when reviewing this application – the Oregon Department of Transportation, in cooperation with the Federal Highway Administration, has built Interstate 82 and in October 2019 the City of Umatilla completed an Economic Opportunities Analysis revealing a need for additional large lot industrial land. This request seeks to amend the Comprehensive Plan and Zoning designation to Light Industrial on approximately 450 acres of land to meet that need for large lot industrial lands at a location that has easy access to Interstate 82.

**Conclusion:** This application is consistent with and supports the City of Umatilla's Comprehensive Plan not proposed for amendment. PA-1-20 will amend the Comprehensive plan to adopt the EOA. This request is consistent with the EOA.

2. The proposed change will not affect the land supply for the existing zoning designation as related to projected need for the particular land use.

**Applicants Response:** A portion of the subject property is concurrently being added to the urban growth boundary, with approximately 300 acres of residential land being proposed to be converted. Based upon the included Housing and Residential Land Needs Assessment, adopted by the City of Umatilla in 2019, there is a significant oversupply of residential land specific to single family residential use. This proposed change in zoning from Residential to Industrial would reduce that need, but not below the 20-year planning horizon required to be included in an inventory under Oregon law. There would still be approximately 750 acres of overabundance in the inventory.

**Conclusion:** Based on the 2019 Housing Strategies Report, adopted by the City of Umatilla as part of a Goal 10 update, there is an overabundance of land zoned for single family residential development. The Housing and Residential Land Need Assessment (HNA) found that the City currently has an 873 acres surplus of residential lands in our single-family residential zone. All of the land proposed to be rezoned is currently zoned single family residential and the City would retain a 550+ acres surplus in the single-family zone, and a 750+ acre surplus of residential lands in general. The needed inventory of residential lands will not be negatively affected by the approval of this application. The proposed change will affect the land supply but not reduce it below the 20-year planning horizon required to be included in an inventory under Oregon law.

3. The proposed designation will not negatively impact existing or planned public facilities and services.



**Applicants Response:** The City of Umatilla evaluated the subject property for delivery of public services – potable water, sanitary sewer, potable water storage and industrial wastewater – and has determined that services can be provided to support the types of large lot industrial uses being proposed (data centers, warehousing and light manufacturing). The Umatilla Industrial Area Utility Technical Memorandum, dated March 9, 2020, is attached to support this conclusion.

**Conclusion:** Public facilities and services will be able to be provided to the subject site according to The Umatilla Industrial Area Utility Technical Memorandum.

4. The site is suitable for the proposed use, considering the topography, adjacent streets, access, size of the site, availability of public facilities, and any other pertinent physical features.

**Applicants Response:** The site is mostly flat with significant frontage along Powerline Road, providing access to a minor arterial with direct access to Interstate 82. There is a portion of the 450-acre site that is limited by steep slopes on the eastern edge as the property slopes to Interstate-82. Depending on how development proceeds internal streets could be considered to limit impacts to Powerline Road and facilitate development of the 450-acre site. Based on earlier responses public facilities are or can be available and have the capacity to serve the types of proposed uses.

**Conclusion:** There is no proposed use at this time. The proposed rezone is to meet the need for large lot industrial sites. The submitted documents show it is feasible to provide services to the site.

5. Other sites in the City or the vicinity are unsuitable for the proposed use. In other words, ownership and desire to develop a particular use in themselves provide insufficient rationale for changing a zoning designation that does not support the interests of the City as a whole.

**Applicants Response:** The companion application for an urban growth boundary expansion includes significant discussion that addresses this criterion, specifically the discussion around study areas and the alternatives analysis. The applicant has concluded in that application that this location is the best, and possibly only, location that could accommodate large lot industrial opportunities.

**Conclusion:** PA-2-20 addresses how other sites are considered and shown to not meet the needs of a location that could accommodate large lot industrial opportunities. As part of the UGB analysis no other sites were identified that could accommodate the need for large lot industrial.

**The City of Umatilla Rezone Application poses the following additional questions when a rezone is requested.**

Explain why this particular parcel(s) of property should be rezoned as opposed to utilizing existing zoned property for proposed use.

**Applicants Response:** The October 2019 Economic Opportunities Analysis discusses the need for additional large lot industrial land. That need, with the access the subject property has to Powerline Road and Interstate 82, creates a location that can create employment opportunity within the City of Umatilla with limited impacts. The alternatives analysis in the Urban Growth Boundary application concludes that this location is best, and possibly only site, suited to the identified needs.

**Conclusion:** The applicants above response is sufficient for the purposes of the question.

*What is the land use plan designation for this property on the Comprehensive Plan map?*

**Applicants Response:** A portion is not zoned currently by the City of Umatilla as it is part of the companion request for an urban growth boundary expansion and annexation. Its current zoning is Exclusive Farm Use. The balance is designated and zoned for single family residential uses.

**Conclusion:** The applicants above response is sufficient for the purposes of the question.

*If there is a conflict between the plan map and the desired zone, how can a change be justified?*

**Applicants Response:** There are two considerations in resolving any conflict. First the October 2019 Economic Opportunities Analysis discusses a lack of land for large lot industrial uses. The focus of potential uses for the subject property is data centers, warehousing and light manufacturing, meeting the outlined needs. The second consideration is that the reduction of land zoned for residential purposes will not negatively impact the 20-year supply of residential land based on the analysis in the Housing Strategies Report (2019).

**Conclusion:** The applicants above response is sufficient for the purposes of the question.

*What policies or facts in the Comprehensive Plan and/or Zoning Code relate to use of the property after the zone is changed?*

**Applicants Response:** The City of Umatilla is in the process of updating the Comprehensive Plan relative to Goal 9 with the intent of adopting the Economic Opportunities Analysis, which includes findings supportive of this application to create large lot industrial opportunities. New policies that are suggested for adoption would be applicable to future development.

The Development Code, specifically Title 10 Zoning, would have several factors that would relate to the use of the subject property after these applications have been approved and are in place. Within the Industrial Districts of Chapter 5, the Light Industrial Uses Permitted and Conditional Uses Permitted lists would define those allowable uses; the Development Standards would outline a variety of development criteria and would require screening and a variety of dimensional standards. Other provisions of the Zoning Ordinance would be applicable including Chapter 9 Off-Street Parking and Loading, Chapter 11 Supplementary Provisions and Chapter 13 Other Permits and Actions. All these provisions would be applied under the requirements of Chapter 14 Administrative Provisions.

**Conclusion:** The applicants above response is sufficient for the purposes of the question. Goal 9

updates can be found in PA-1-20.

Explain how the surrounding property is zoned.

**Applicants Response:** The property to the north will retain its residential zoning, most of which is zoned R1 Single Family Residential. To the south and west, land outside the urban growth boundary is zoned Exclusive Farm Use with zoning south of Interstate 82 a combination of 20 and 40-acre Exclusive Farm Use designations. This application is not proposing changes to those areas or current designations.

**Conclusion:** The applicants above response is sufficient for the purposes of the question.

Explain how this same property is used at present.

**Applicants Response:** The subject property is currently farmed with circle pivot irrigation improvements in place. That use would continue until such time that a development opportunity is identified.

**Conclusion:** The applicants above response is sufficient for the purposes of the question.

If the zone of your property is changed, explain how any permitted use of that district will be compatible with the surrounding property.

**Applicants Response:** Light Industrial zoning, with a focus on data centers, warehousing and light manufacturing, located along Powerline Road with access to Interstate 82 within a mile or so to the south allows for employment and economic opportunities with limited impacts to residential uses to the north along Powerline Road and downtown activities in the core of the City of Umatilla. Traffic along Powerline Road will increase over time based on the Traffic Impact Analysis (J-U-B Engineers, May 2020). However, that same Traffic Impact Analysis also found that the change in zoning from residential to industrial decreased future traffic volumes at buildout as traffic impacts are lower for the industrial uses proposed when compared to residential uses. The proposed industrial activities are compatible with the agricultural uses to the west and south of the subject property; the potential development of food processing would be allowable under current exclusive farm use zoning to the west and south. This proposal would create an opportunity for that type of development with the support of city services that otherwise would not be available. The anticipated activities, as outlined in the October 2019 Economic Opportunities Analysis, do not tend to have associated negative impacts such as noxious odors, steam or other discharges. Landscaping requirements of the Light Industrial use zone would provide vegetative or other barriers to residential activities to the north.

**Conclusion:** Any potential development would mitigate any negative effects by enforcing standards through a Site Plan Review. There is no reason to believe that a light industrial zoning designation would not be compatible with the surrounding property.

Have any changes taken place which would make the zone change appropriate now rather than at an earlier date? You may consider such things as development of surrounding properties or similarly zoned property, new streets, sewer or water lines, and so forth. Please explain more fully.

**Applicants Response:** The release of the Economic Opportunities Analysis in October 2019 is a significant input into the decision to consider this zone change. Recent increases in residential development along Powerline Road and in the McNary area also provide evidence that the City of Umatilla is growing, which provides additional workforce that can reasonably lead to more interest from companies seeking new development opportunities. Also, to be considered is the effort to provide public services to the Umatilla Army Depot property further to the south, with proposed improvements to be installed along Powerline Road, creating possible synergy around economic development.

**Conclusion:** The Economic Opportunities Analysis completed in October 2019 identified new needs that were not known or identified at an earlier date.

Additional Information to be Furnished by Applicant:

Evidence that applicant is owner or purchaser of the property or has written permission from the owner to file the application.

**Applicants Response:** The application form is signed by the property owner.

**Conclusion:** The applicants above response is sufficient for the purposes of the criterion.

Two copies of plans and specifications, drawn to scale, showing the actual shape and dimensions of the lot to be built upon; the sizes and locations on the lot of existing and proposed structures; the intended use of each structure, the number of families, if any, to be accommodated thereon; the relationship of the property to the surrounding area, the location of any existing highways, streets, easements and public utilities.

**Applicants Response:** The applicant has provided the application forms, this narrative and the required maps and exhibits to the City of Umatilla as requested.

**Conclusion:** The City has received the required application forms, narrative, maps, and exhibits.

**Portions of Oregon Revised Statute 227.175 concerned with applications to local governments for a permit or zone change are applicable. Much of ORS 227. 175 has already been incorporated into the City of Umatilla Zoning Ordinance and is implemented through a variety of measures including notice provisions and hearing procedures.**

227.175 Application for permit or zone change; fees; consolidated procedure; hearing; approval criteria; decision without hearing.

(1) When required or authorized by a city, an owner of land may apply in writing to the hearings officer, or such other person as the city council designates, for a permit or zone change, upon such forms and in such a manner as the city council prescribes. The governing body shall establish fees charged for processing permits at an amount no more than the actual or average cost of providing that service.

**Applicants Response:** The applicant is submitting three applications, this one for the change in

zoning, on the forms prescribed, paying the required fees, and providing this narrative addressing these and the other requirements in both Oregon law and the law of the City of Umatilla. The two companion applications are for an urban growth boundary expansion and an annexation of the same property.

**Conclusion:** The correct forms and fees have been submitted to the City of Umatilla as required by the City of Umatilla City Council.

(2) The governing body of the city shall establish a consolidated procedure by which an applicant may apply at one time for all permits or zone changes needed for a development project. The consolidated procedure shall be subject to the time limitations set out in ORS 227.178. The consolidated procedure shall be available for use at the option of the applicant no later than the time of the first periodic review of the comprehensive plan and land use regulations.

**Applicants Response:** The applicant is using this provided opportunity to apply for an urban growth boundary expansion, annexation, and change in zoning in a consolidated process. The urban growth boundary expansion does require co-adoption by Umatilla County.

**Conclusion:** The established procedure in the JMA has been and will continue to be followed. The City will submit subsequent application to the County for co-adoption.

(3) Except as provided in subsection (10) of this section, the hearings officer shall hold at least one public hearing on the application.

**Applicants Response:** The applicant understands that these actions will be heard by the Planning Commission and the City Council as they are legislative in nature.

**Conclusion:** The City of Umatilla Planning Commission will hold a hearing on this and the other applications on August 25, 2020. The City of Umatilla City Council will hold a hearing on this and the other applications on September 15, 2020.

(4)

(a) A city may not approve an application unless the proposed development of land would be in compliance with the comprehensive plan for the city and other applicable land use regulation or ordinance provisions. The approval may include such conditions as are authorized by ORS 227.215 or any city legislation.

(b)

(A) A city may not deny an application for a housing development located within the urban growth boundary if the development complies with clear and objective standards, including clear and objective design standards contained in the city comprehensive plan or land use regulations.

(B) This paragraph does not apply to:

(i) Applications or permits for residential development in areas described in ORS 197.307 (5); or

(ii) Applications or permits reviewed under an alternative approval process adopted under ORS 197.307 (6).

(c) A city may not condition an application for a housing development on a reduction in

density if:

(A) The density applied for is at or below the authorized density level under the local land use regulations; and

(B) At least 75 percent of the floor area applied for is reserved for housing.

(d) A city may not condition an application for a housing development on a reduction in height if:

(A) The height applied for is at or below the authorized height level under the local land use regulations;

(B) At least 75 percent of the floor area applied for is reserved for housing; and

(C) Reducing the height has the effect of reducing the authorized density level under local land use regulations.

(e) Notwithstanding paragraphs (c) and (d) of this subsection, a city may condition an application for a housing development on a reduction in density or height only if the reduction is necessary to resolve a health, safety or habitability issue or to comply with a protective measure adopted pursuant to a statewide land use planning goal.

Notwithstanding ORS 197.350, the city must adopt findings supported by substantial evidence demonstrating the necessity of the reduction.

(f) As used in this subsection:

(A) "Authorized density level" means the maximum number of lots or dwelling units or the maximum floor area ratio that is permitted under local land use regulations.

(B) "Authorized height level" means the maximum height of a structure that is permitted under local land use regulations.

(C) "Habitability" means being in compliance with the applicable provisions of the state building code under ORS chapter 455 and the rules adopted thereunder.

**Applicants Response:** The applicant has, primarily through this application narrative and the urban growth boundary narrative, provided evidence that the City of Umatilla Comprehensive Plan is considered and can be met when this request is approved. There are no housing developments requested as part of this application.

**Conclusion:** As found in this narrative and the UGB narrative, there is evidence that the City of Umatilla Comprehensive Plan is considered and can be met.

(5) Hearings under this section may be held only after notice to the applicant and other interested persons and shall otherwise be conducted in conformance with the provisions of ORS 197.763.

**Applicants Response:** The applicant supports compliance with required notice provisions and meeting the needs of Statewide Planning Goal 1 Citizen Involvement.

**Conclusion:** The City of Umatilla has sent notice to the required recipients in conformance with the provisions ORS 197.763.

(6) Notice of a public hearing on a zone use application shall be provided to the owner of an airport, defined by the Oregon Department of Aviation as a "public use airport" if:

(a) The name and address of the airport owner has been provided by the Oregon Department of Aviation to the city planning authority; and

(b) The property subject to the zone use hearing is:

(A) Within 5,000 feet of the side or end of a runway of an airport determined by the Oregon Department of Aviation to be a “visual airport”; or

(B) Within 10,000 feet of the side or end of the runway of an airport determined by the Oregon Department of Aviation to be an “instrument airport.”

**Applicants Response:** The applicant is not aware of any airports within the identified distance of the subject property. To the east the Hermiston Airport and to the west the Boardman Airport are both several miles away, neither within 10,000 feet. There is a farm-based gravel airstrip to the west and south of the subject site that would function as a “visual airport” but does not further meet the definition of an airport.

**Conclusion:** There are no airports within 10,000 feet of the subject property.

(7) Notwithstanding the provisions of subsection (6) of this section, notice of a zone use hearing need only be provided as set forth in subsection (6) of this section if the permit or zone change would only allow a structure less than 35 feet in height and the property is located outside of the runway “approach surface” as defined by the Oregon Department of Aviation.

**Applicants Response:** This is not applicable.

**Conclusion:** The above criterion is not applicable.

(8) If an application would change the zone of property that includes all or part of a mobile home or manufactured dwelling park as defined in ORS 446.003, the governing body shall give written notice by first class mail to each existing mailing address for tenants of the mobile home or manufactured dwelling park at least 20 days but not more than 40 days before the date of the first hearing on the application. The governing body may require an applicant for such a zone change to pay the costs of such notice.

**Applicants Response:** No mobile homes or manufactured dwelling park is located on the subject property.

**Conclusion:** The above criterion is not applicable.

(9) The failure of a tenant or an airport owner to receive a notice which was mailed shall not invalidate any zone change.

**Applicants Response:** No tenants are on the property and no airports are adjacent to the subject property.

**Conclusion:** The above criterion is not applicable.

(10)

(a)

(A) The hearings officer or such other person as the governing body designates may approve or deny an application for a permit without a hearing if the hearings officer or other designated person gives notice of the decision and provides an

opportunity for any person who is adversely affected or aggrieved, or who is entitled to notice under paragraph (c) of this subsection, to file an appeal.

(B) Written notice of the decision shall be mailed to those persons described in paragraph (c) of this subsection.

(C) Notice under this subsection shall comply with ORS 197.763 (3)(a), (c), (g) and (h) and shall describe the nature of the decision. In addition, the notice shall state that any person who is adversely affected or aggrieved or who is entitled to written notice under paragraph (c) of this subsection may appeal the decision by filing a written appeal in the manner and within the time period provided in the city's land use regulations. A city may not establish an appeal period that is less than 12 days from the date the written notice of decision required by this subsection was mailed. The notice shall state that the decision will not become final until the period for filing a local appeal has expired. The notice also shall state that a person who is mailed written notice of the decision cannot appeal the decision directly to the Land Use Board of Appeals under ORS 197.830.

(D) An appeal from a hearings officer's decision made without hearing under this subsection shall be to the planning commission or governing body of the city. An appeal from such other person as the governing body designates shall be to a hearings officer, the planning commission or the governing body. In either case, the appeal shall be to a de novo hearing.

(E) The de novo hearing required by subparagraph (D) of this paragraph shall be the initial evidentiary hearing required under ORS 197.763 as the basis for an appeal to the Land Use Board of Appeals. At the de novo hearing:

(i) The applicant and other parties shall have the same opportunity to present testimony, arguments and evidence as they would have had in a hearing under subsection (3) of this section before the decision;

(ii) The presentation of testimony, arguments and evidence shall not be limited to issues raised in a notice of appeal; and

(iii) The decision maker shall consider all relevant testimony, arguments and evidence that are accepted at the hearing.

(b) If a local government provides only a notice of the opportunity to request a hearing, the local government may charge a fee for the initial hearing. The maximum fee for an initial hearing shall be the cost to the local government of preparing for and conducting the appeal, or \$250, whichever is less. If an appellant prevails at the hearing or upon subsequent appeal, the fee for the initial hearing shall be refunded. The fee allowed in this paragraph shall not apply to appeals made by neighborhood or community organizations recognized by the governing body and whose boundaries include the site.

(c)

(A) Notice of a decision under paragraph (a) of this subsection shall be provided to the applicant and to the owners of record of property on the most recent property tax assessment roll where such property is located:

(i) Within 100 feet of the property that is the subject of the notice when the subject property is wholly or in part within an urban growth boundary;

(ii) Within 250 feet of the property that is the subject of the notice when the subject property is outside an urban growth boundary and not within a farm or forest zone; or

(iii) Within 750 feet of the property that is the subject of the notice when the subject property is within a farm or forest zone.



(B) Notice shall also be provided to any neighborhood or community organization recognized by the governing body and whose boundaries include the site.

(C) At the discretion of the applicant, the local government also shall provide notice to the Department of Land Conservation and Development.

**Applicants Response:** The applicant is anticipating that the City of Umatilla will hold a public hearing to consider this and the associated applications to be considered.

**Conclusion:** The City of Umatilla Planning Commission will hold a hearing on this and the other applications on August 25, 2020. The City of Umatilla City Council will hold a hearing on this and the other applications on July 20, 2021.

(11) A decision described in ORS 227.160 (2)(b) shall:

(a) Be entered in a registry available to the public setting forth:

(A) The street address or other easily understood geographic reference to the subject property;

(B) The date of the decision; and

(C) A description of the decision made.

(b) Be subject to the jurisdiction of the Land Use Board of Appeals in the same manner as a limited land use decision.

(c) Be subject to the appeal period described in ORS 197.830 (5)(b).

**Applicants Response:** The applicant is aware of these requirements and supports city staff providing such notice as required by Oregon law and provisions of the City of Umatilla Development Code.

**Conclusion:** Notice has been sent as required by Oregon law and provisions of the City of Umatilla Development Code.

(12) At the option of the applicant, the local government shall provide notice of the decision described in ORS 227.160 (2)(b) in the manner required by ORS 197.763 (2), in which case an appeal to the board shall be filed within 21 days of the decision. The notice shall include an explanation of appeal rights.

**Applicants Response:** The applicant is aware of these requirements.

**Conclusion:** The applicants above response is sufficient for the purposes of the criterion.

(13) Notwithstanding other requirements of this section, limited land use decisions shall be subject to the requirements set forth in ORS 197.195 and 197.828.

**Applicants Response:** The applicant would provide that this is a legislative decision, subject to those requirements in both Oregon law and the City of Umatilla Development Code.

**Conclusion:** The applicants above response is sufficient for the purposes of the question.

## **Applicants Conclusion:**

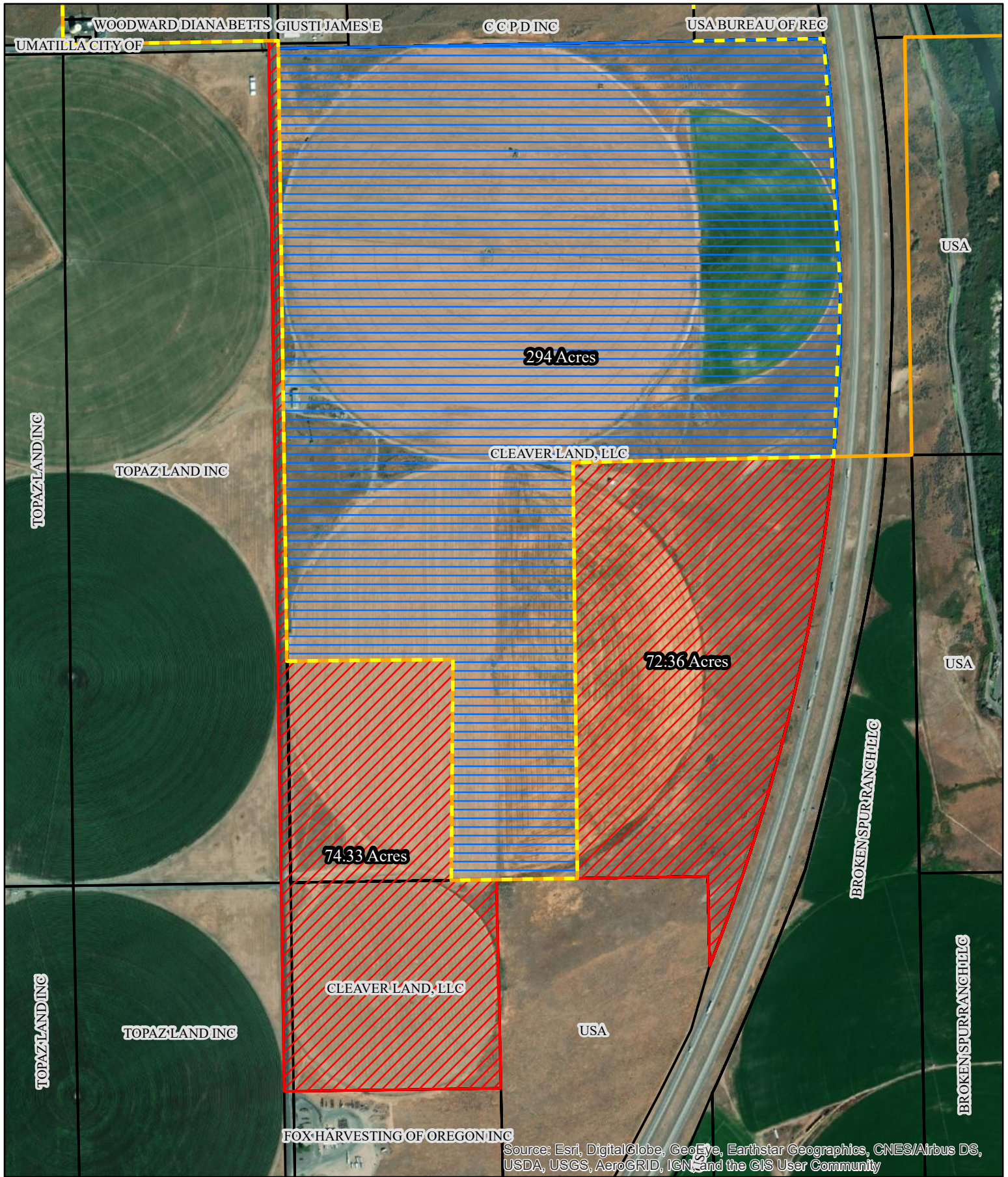
In conclusion the applicant encourages the Planning Commission and City Council to approve this request for a change in Comprehensive Plan and Zoning designation to Light Industrial on the subject property, as a part of the package of requests that also include an urban growth boundary expansion and annexation of a portion of the subject property. Evidence has been provided in the Economic Opportunities Analysis (dated October 2019) that large lot industrial land is needed. Further the J-U-B Engineers report, Umatilla Industrial Area Utility Technical Memorandum, dated March 9, 2020, provides evidence that the area can be served with the necessary services to allow industrial development. It should also be noted that the change from Residential to Industrial for the subject approximately 300 acres does not negatively impact the land inventory for residential uses. The Housing and Residential Land Needs Assessment (2019) identifies an overabundance of residential land of over 1,000 acres. When this action is concluded there will still be an overabundance of approximately 750-acres. For discussion about traffic impacts and the Traffic Impact Study, please see the Urban Growth Boundary Expansion application which evaluates the criteria of both Umatilla County and the City of Umatilla. An evaluation of the 14 Statewide Planning Goals can also be found in that application and are also appropriate to be considered here as well. Those portions of the Urban Growth Boundary Expansion application are incorporated by this reference.

## **IV. SUMMARY AND RECOMMENDATION**

The applicant, Cleaver Land LLC, is proposing to amend the City of Umatilla Comprehensive Plan. Evidence has been provided in the form of the Economic Opportunities Analysis, Umatilla Industrial Area Utility Technical Memorandum, and Traffic Impact Study to support this and the associated requests. These documents show a clear need for large lot industrial land and indicated that need can be met with city services and without impacts to the transportation system that cannot be mitigated. The request appears to meet all of the applicable criteria and standards for this type of request. Therefore, based on the information in Sections I and II of this report, and the above criteria, findings of fact and conclusions addressed in Section III, the City of Umatilla Planning Commission recommends approval of Plan Amendment (PA-3-20).

## **VI. EXHIBITS**

Exhibit A - Draft Map Change  
Exhibit B - Economic Opportunity Analysis  
Exhibit C - Umatilla Industrial Area Utility Technical Memorandum  
Exhibit D - Traffic Impact Study



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## CLEAVER LAND REZONE SITE PLAN

### Legend

- New Light Industrial Add By UGB Expansion
- Proposed Plan/Map Amendment Area
- City Limits
- Urban Growth Boundary
- Tax Lots (3/23/20)

Feet

0    500    1,000    1,500

Map should be used for reference purpose: **175**  
Not survey grade or for legal use.

### Exhibit A - Draft Map Change



# Exhibit B - Economic Opportunity Analysis



## **ECONOMIC OPPORTUNITIES ANALYSIS (OREGON STATEWIDE PLANNING GOAL 9)**

Prepared For:  
The City of Umatilla, Oregon

October 2019



# Acknowledgments

Johnson Economics prepared this report for the City of Umatilla. Johnson Economics and the City of Umatilla thank the many people who helped to develop this document.

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# I. INTRODUCTION

This report introduces analytical research presenting an Economic Opportunities Analysis (EOA) for the City of Umatilla, Oregon.

Cities are required to periodically reconcile estimates of future employment land demand with existing inventories of vacant and redevelopable employment land within their Urban Growth Boundary (UGB). The principal purpose of the analysis is to provide an adequate land supply for economic development and employment growth. The intent is to conduct this through a linkage of planning for an adequate land supply to infrastructure planning, community involvement and coordination among local governments and the state.

To this end, this report is organized into six primary sections:

- **Economic Trends:** Overview of national, state and local economic trends affecting Umatilla County and the city of Umatilla, including population projections, employment growth and a demographic profile.
- **Target Industries:** Analysis of key industry typologies the City should consider targeting as economic opportunities over the planning period.
- **Employment Land Needs:** Examines projected demand for industrial and commercial land based on anticipated employment growth rates by sector.
- **Capacity:** Summarizes the City's inventory of vacant and redevelopable industrial and commercial land (employment land) within the City of Umatilla's UGB.
- **Reconciliation:** Compares short- and long-term demand for employment land to the existing land inventory to determine the adequacy and appropriateness of capacity over a five and twenty-year horizon.
- **Economic Development Potential and Conclusions:** Summary of findings and policy implications.

This analysis reflects changes in employment, land supply, and macro-economic trends since the city of Umatilla last reviewed local economic development policies.

## II. ECONOMIC TRENDS

This report section summarizes long and intermediate-term trends at the national, state, and local level that will influence economic conditions in Umatilla over the 20-year planning period. This section is intended to provide an economic context for growth projections and establish a socioeconomic profile of the community. This report’s national evaluation has a focus on potential changes in structural socioeconomic conditions both nationally and globally. Our localized analysis considers local growth trends, demographics, and economic performance.

### NATIONAL TRENDS

The long-term trend indicates that the United States economy has settled into a moderate growth trajectory at around 2.0% per year, after growing at above 4.0% per year during the 1960s and above 3.0% per year between 1970 and 2000. While the overall growth pace is moderating, there has been a shift within the economy from consumption of goods to consumption of services, especially services oriented around personal wellbeing (health, private education, finance). This reflects increasing levels of wealth and discretionary income in the population. Growth in fixed investment (equipment and structures) and government defense spending is also moderating – making manufactured goods a less significant part of the economy.

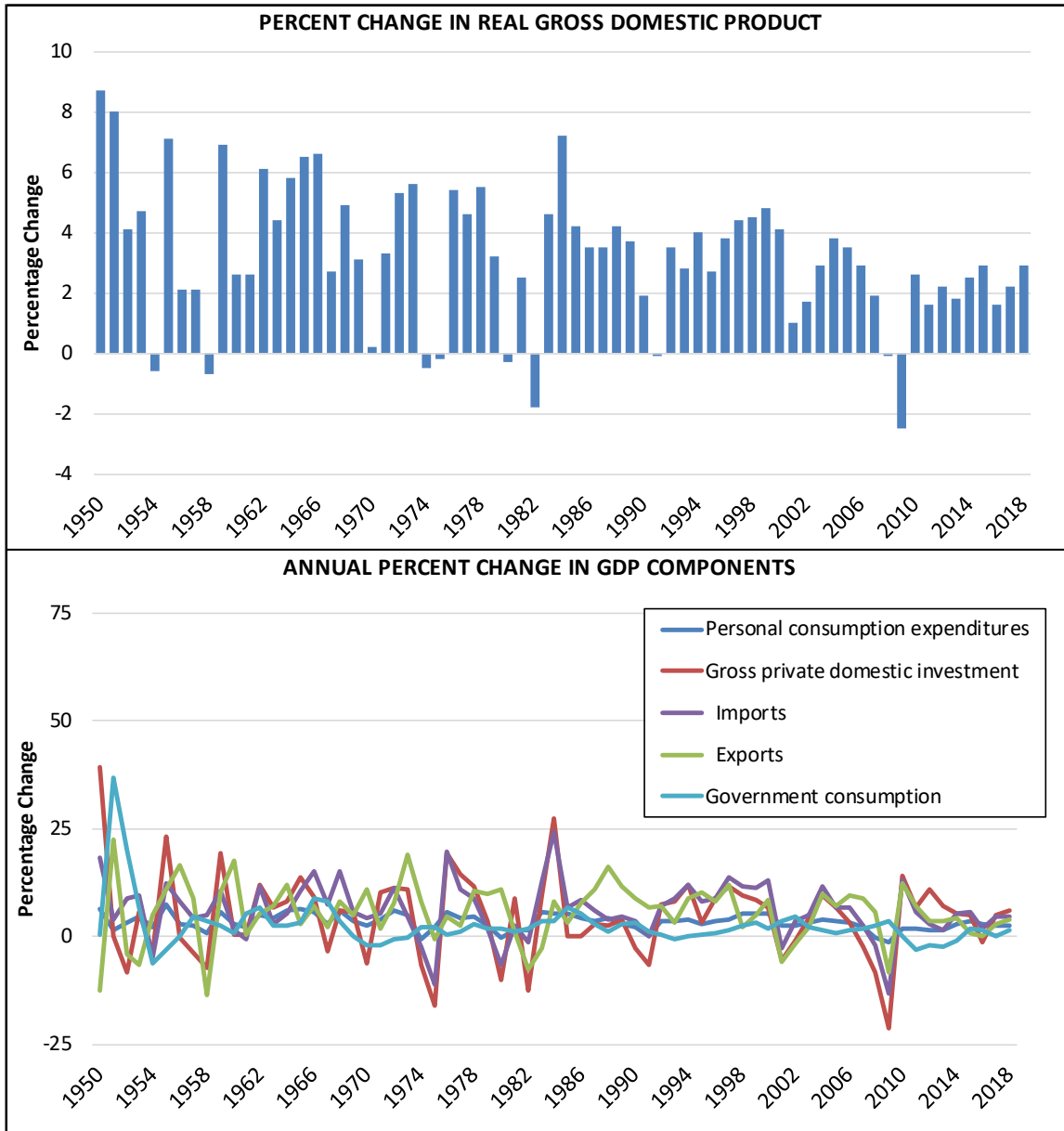
Increasing international trade led to strong growth in imports during the 1990s and 2000s, partly due to U.S. firms offshoring operations to lower-cost markets. Exports also grew over the period, but at a slower pace. The offshoring trend has partially reversed in the current decade, due to rising costs and greater awareness of cultural barriers and various associated risks. Greater emphasis on leaner and more agile supply chains, combined with demand for customized products and rapid delivery, has also contributed to growth in domestic production. This impact has been greatest in auto manufacturing. Despite this “reshoring” trend, imports from Asia continue to grow at a faster clip than domestic manufacturing.

The most commonly used measure of economic prosperity is real gross domestic product (GDP) per capita. Real GDP per capita is essentially a measure of national wealth considered on an individual basis, and the increased purchasing power of the population translates into greater investment in health care, education, housing, leisure, and many other sectors. U.S. real GDP per capita remains stable. Over the last century, the average annual growth rate has been 1.8%, despite considerable shifts in economic and social conditions—a finding that suggests long-term economic growth is more closely related to broad trends, such as population growth and investment in physical and human capital, than temporary economic fluctuations, like the recent recession and government policy.

The “Great Recession” officially spurred six consecutive quarters of negative economic growth in 2008 and early 2009. The depth and duration of this downturn was the most pronounced since World War II. The current expansion cycle has been sustained yet the pace of growth is modest to date. Credit markets have been more stringent, businesses are more cautious, and housing construction has yet to emerge as a driving catalyst.



**FIGURE 2.01: NATIONAL GROSS DOMESTIC PRODUCT TRENDS**

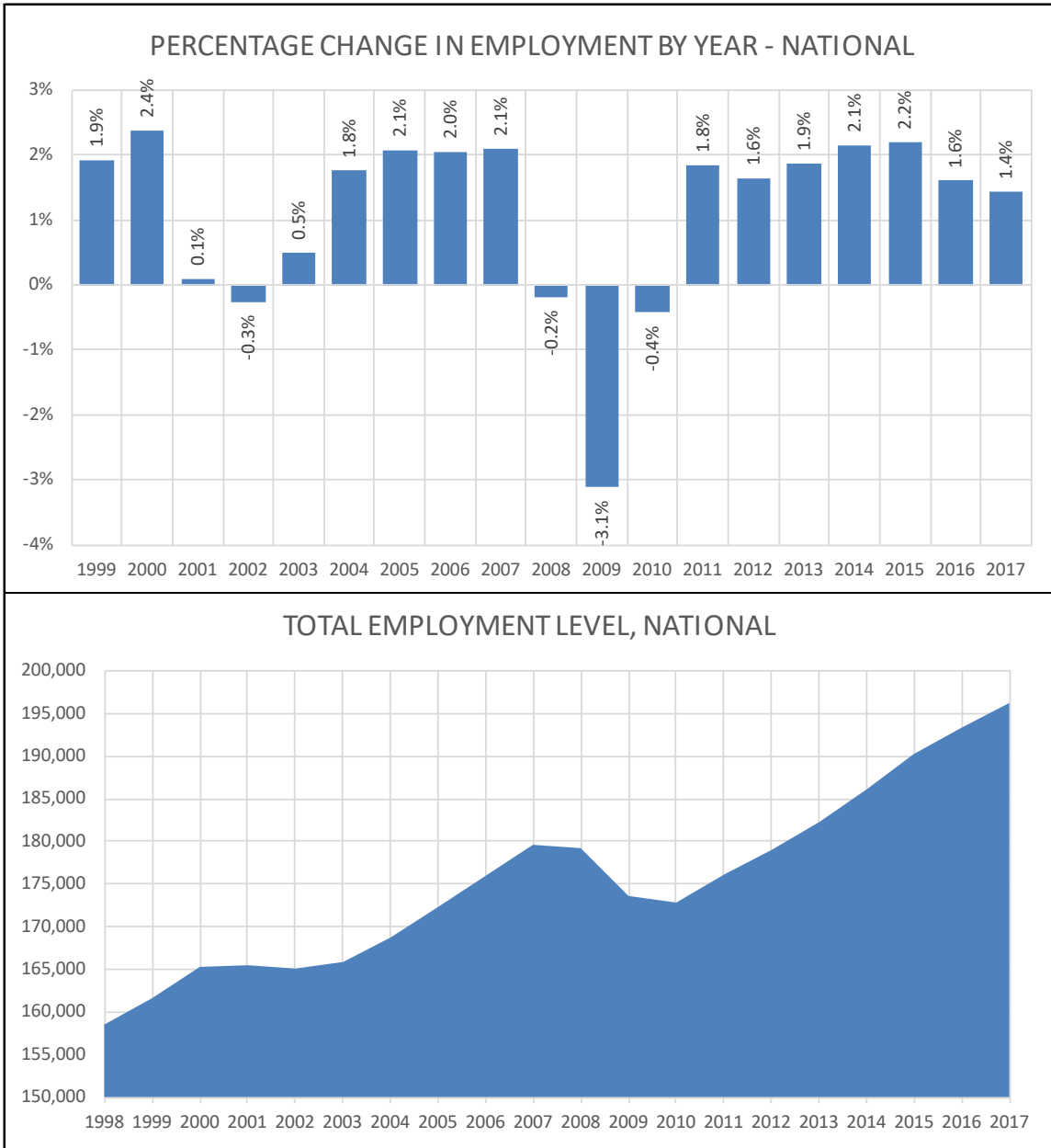


SOURCE: US Bureau of Economic Analysis

Overall, national economic output has seen a notable moderation in growth over the past two decades, with most of the current business cycle hovering around 2.0% growth per year. Economic forecasters generally expect a cyclical moderation over the 2020-23 period, reflecting downward pressures from the maturing of our decade-long economic expansion. Potential GDP growth, which measures the GDP growth that can be sustained at a constant rate of inflation, indicates future long-term growth will remain around 2.0% per year. In the near-term, considerable economic uncertainty exists due to global trade and currency conflicts among the US and many of its traditional trading partners.

The expansion in GDP has been reflected in employment growth, which has ranged between 1.4% and 2.2% in the current expansion cycle. Preliminary estimates indicate an acceleration in the rate of GDP as well as employment growth in 2018. While overall trends have been positive for almost a decade, there will likely be two to three downturns at the national level over the next twenty years.

**FIGURE 2.02: NATIONAL EMPLOYMENT TRENDS**



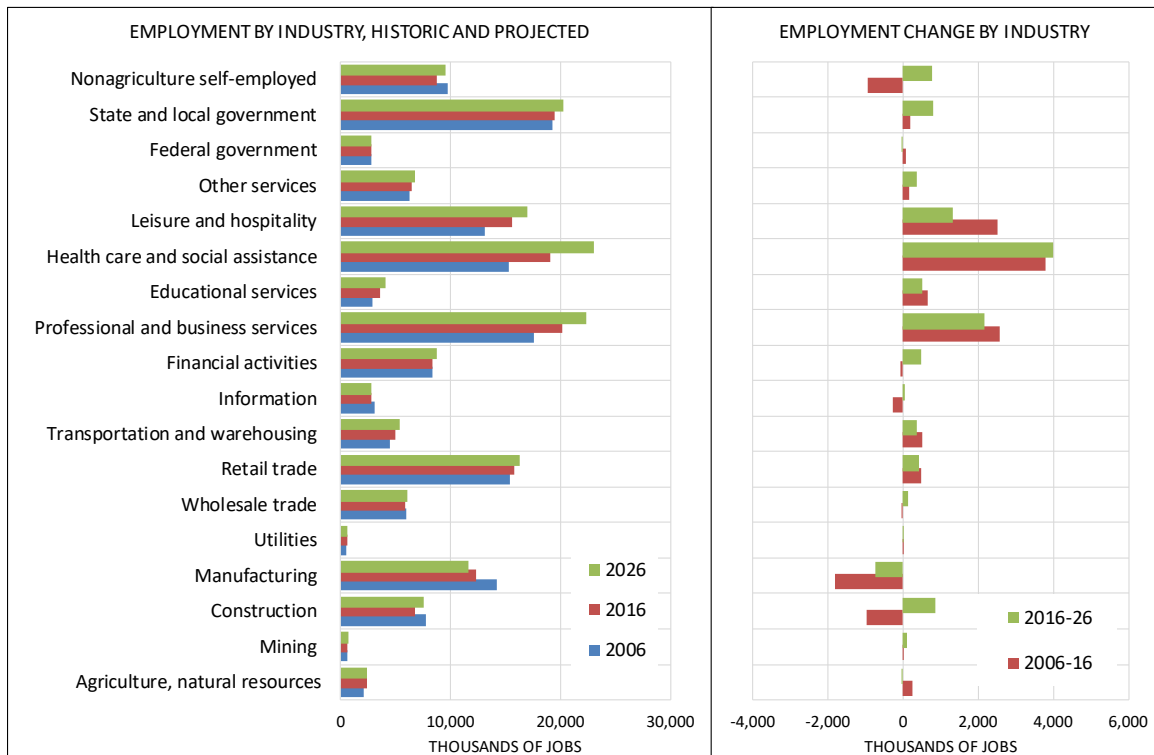
SOURCE: US Bureau of Economic Analysis

A few additional trends have significant implications for the industrial real estate market: E-commerce is rapidly taking market share from brick-and-mortar retailers, approaching 10% of all retail sales. This has caused a shift in storage needs from retail stores to warehouses and distribution centers. At the same time,

automation is causing a consolidation within the warehousing and distribution industry, leading to increasing reliance on larger third-party operators capable of making heavy investments in capital and expertise. Automation is also impacting the manufacturing industry, though to a lesser extent and primarily among larger industry leaders. Finally, changes in the use of electronic devices and growth in online services are causing a shift in the tech sector, from hardware manufacturing to software development.

Due to limited growth in demand for domestic goods and competition from low-cost markets, the U.S. manufacturing sector has lost one-third of its jobs since its peak in the late 1970s, with its share of total employment falling from 24% to 8%. With a strong dollar relative to the currencies of key trading partners, there remains significant headwinds for manufacturers that export a considerable level of product. Sectors seeing significant expansion over the prior decade include health care, professional and business services, and leisure and hospitality. Projections call for all major sectors except for manufacturing and federal government will see growth over the coming decade.

**FIGURE 2.03: NATIONAL EMPLOYMENT GROWTH BY SECTOR, HISTORIC AND PROJECTED**



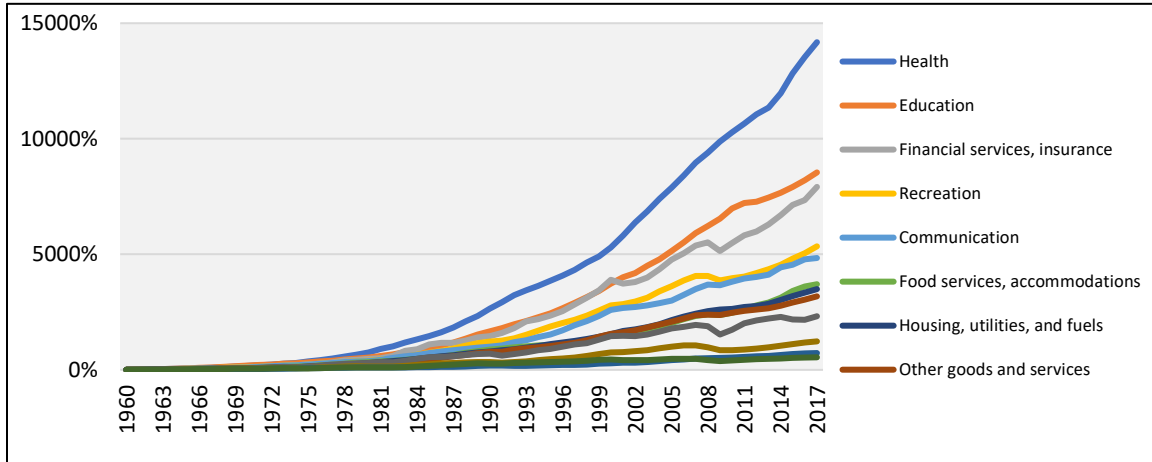
SOURCE: US Bureau of Economic Analysis

Recent trends and current forecasts reflect a shift from a goods economy, featuring manufacturing and natural resources, towards a service economy, which emphasizes technological innovation, research, and design.

Consumer spending accounts for more than two-thirds of the U.S. economy, therefore changing spending patterns dictate much of the shifts in the economy. The post-war era has been marked by increasing wealth and discretionary spending, which has shifted spending away from necessities and led households to buy goods and services that used to be produced in-house. The strongest spending growth over recent decades

has come in categories that represent investments in personal wellbeing, with healthcare/health products at the top of the list, followed by private education and financial services. Categories that represent more short-term enjoyment, like recreation, food services, and accommodations, occupy the middle segment, while necessities like groceries, clothing, transportation, and housing have seen only moderate growth. Spending on health is expected to continue to increase strongly over the coming decades as the baby boomer cohort ages.

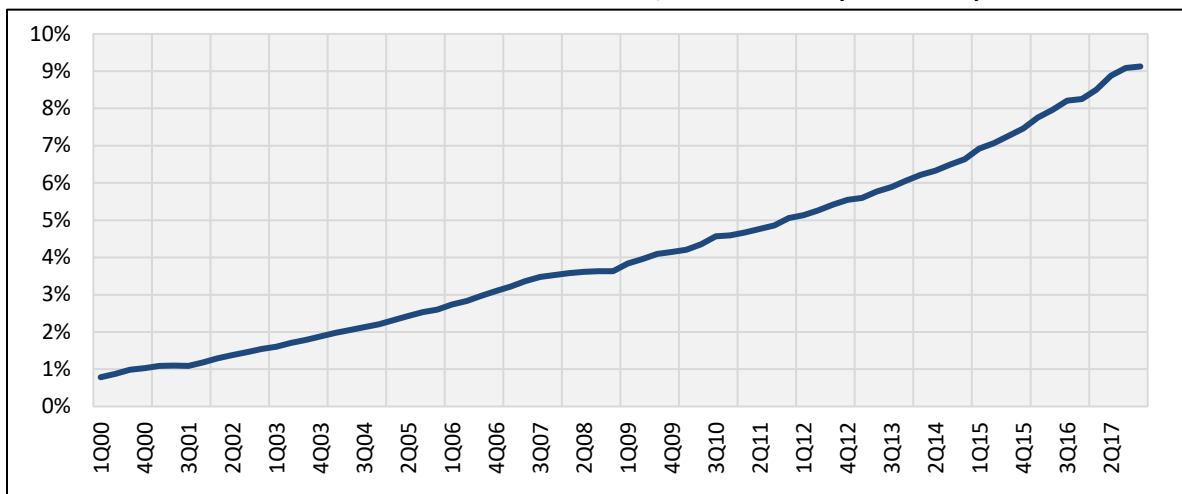
**FIGURE 2.04: CONSUMER SPENDING GROWTH SINCE 1960, BY CATEGORY, UNITED STATES (1960-2017)**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

The most dramatic spending shift in the context of real estate in recent times is the growth in online shopping, which has reduced the overall need for brick-and-mortar space, especially from retailers selling physical goods, while increasing the need for warehousing and distribution space. Online retailing accounted for an estimated 10% of all retail spending in 2018, at around \$500 billion in annual sales on a national level. Since the last recession, the segment has grown by around 15% per year, and it is currently taking market share from brick-and-mortar stores at a rate of nearly one percentage point annually.

**FIGURE 2.05: ONLINE RETAIL MARKET SHARE, UNITED STATES (2000-2017)**

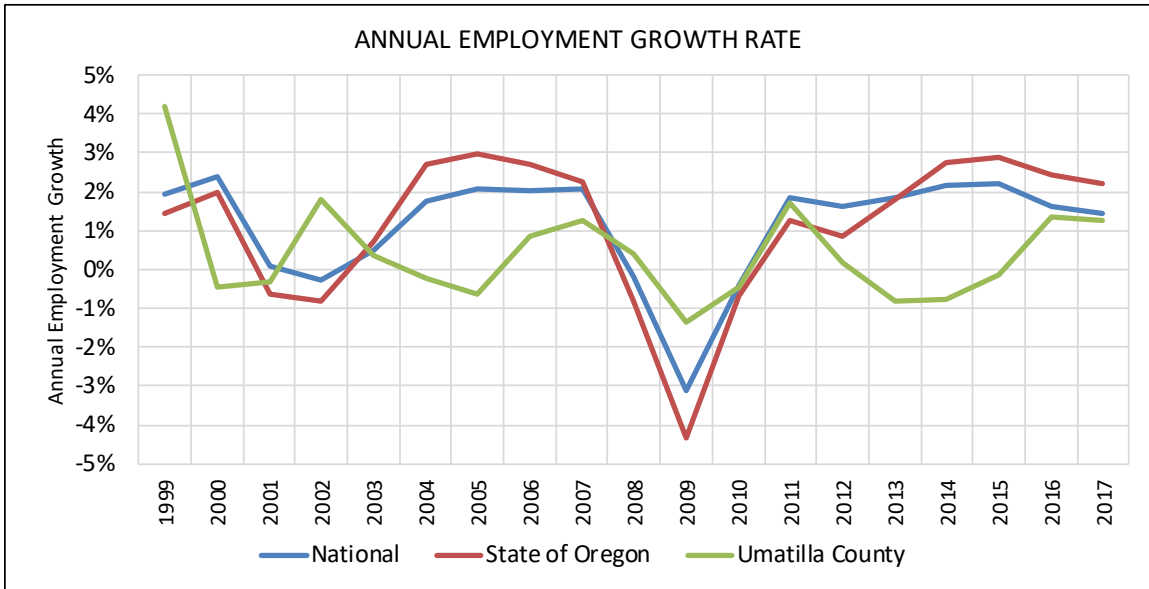


SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

## UMATILLA COUNTY & CITY OF UMATILLA ECONOMIC TRENDS

The annual rate of employment growth in Umatilla County has mirrored the broad national and statewide trends. However, after the emerging from the recession in 2008/2009, the county again experienced job losses until 2016. In recent years, county employment has been growing at roughly 1% per year.

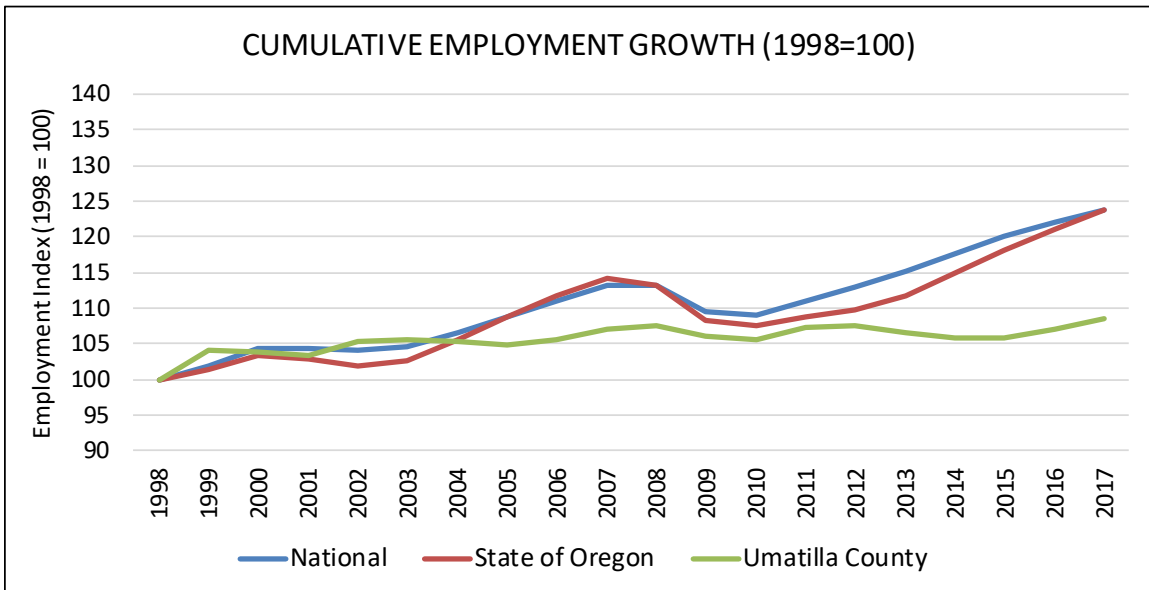
**FIGURE 2.06: COMPARISON OF ANNUAL EMPLOYMENT GROWTH RATES**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

On a cumulative basis Umatilla County has fallen behind the national and statewide averages, with the employment base up less than 10% over the last twenty years.

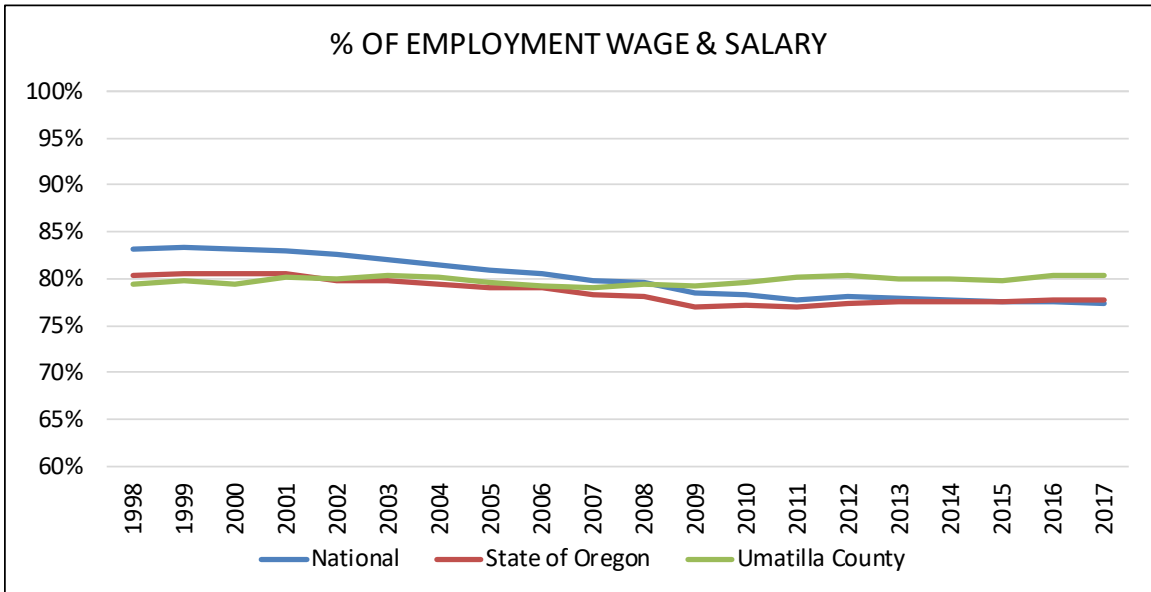
**FIGURE 2.07: CUMULATIVE EMPLOYMENT GROWTH**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

The employment base in Umatilla County has a somewhat lower share of self-employed than the national and state averages, with wage and salary employment accounting for roughly 80% of overall estimated employment in the county. This compares to rates approaching 78% statewide as well as nationally.

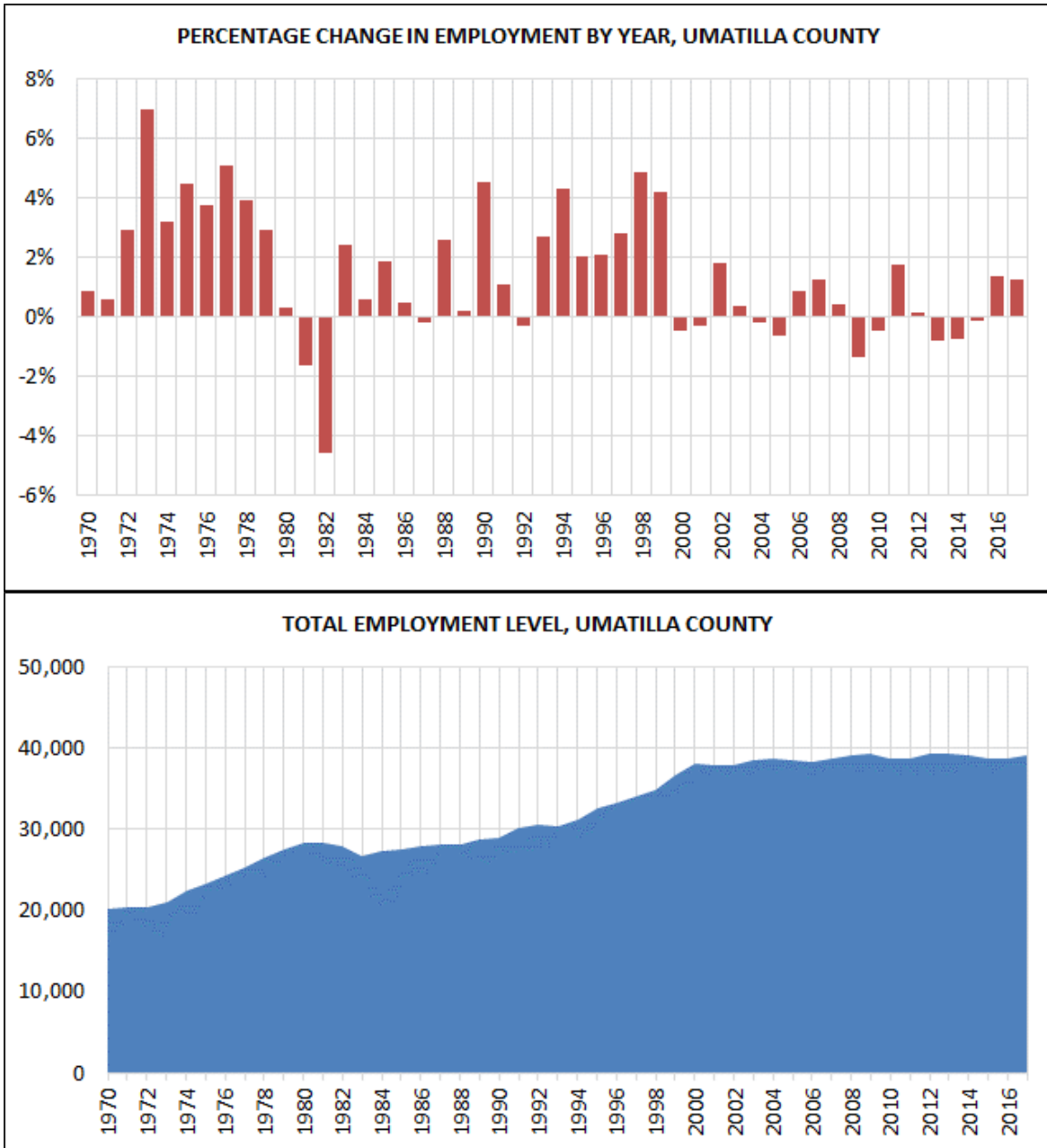
**FIGURE 2.08: % OF TOTAL EMPLOYMENT REPRESENTED BY WAGE & SALARY**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

Umatilla County’s employment base has been relatively stable since 2000, with the economic expansion adding a notable number of new jobs since 2016. The local employment level is at an all-time high, with average employment levels approaching 40,000 in 2017. However, this level does not greatly exceed the employment level seen in 2008 prior to the outset of the recession.

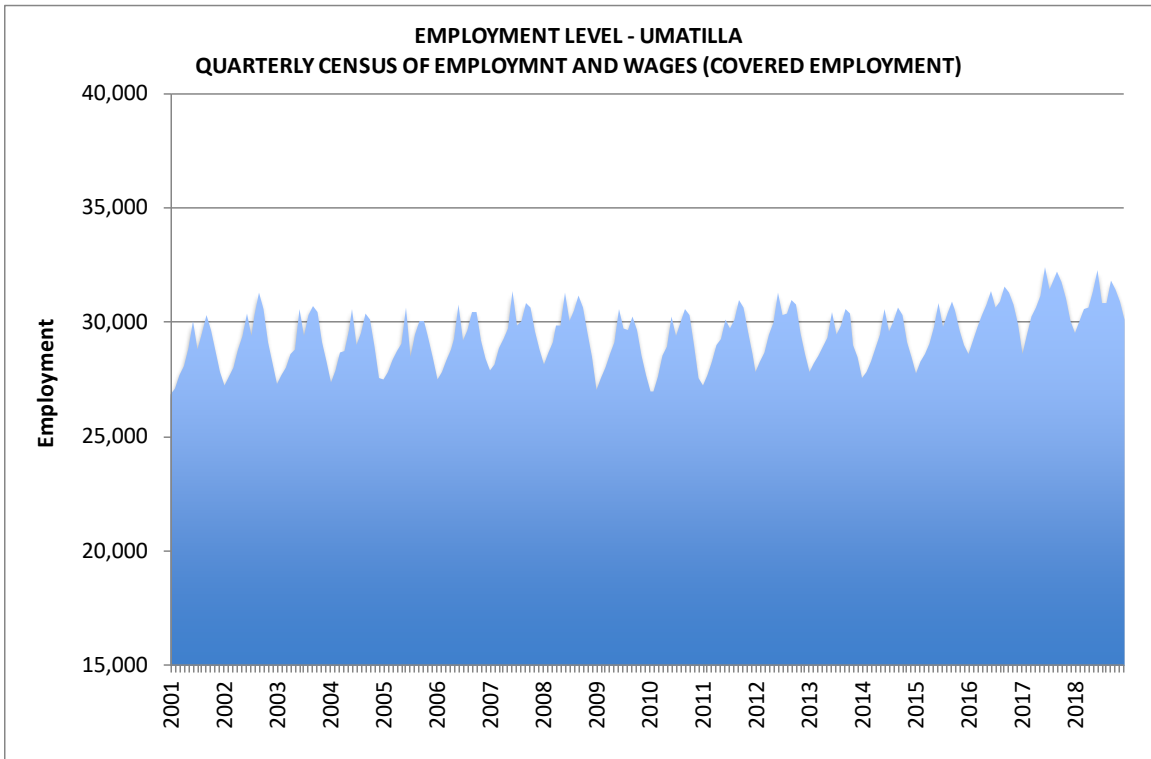
**FIGURE 2.09: UMATILLA COUNTY EMPLOYMENT TRENDS**



SOURCE: U.S. Bureau of Economic Analysis

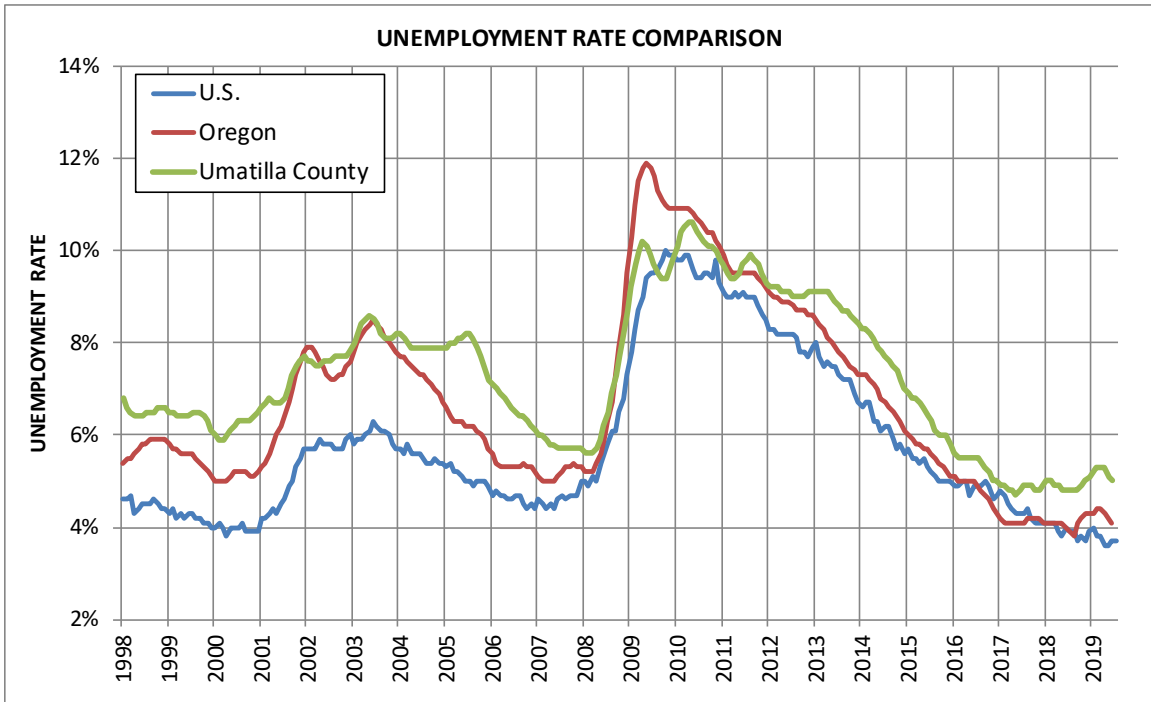
The local employment profile is highly seasonal, reflecting the area’s relatively high proportion of agricultural employment.

**FIGURE 2.10: UMATILLA COUNTY EMPLOYMENT LEVEL BY MONTH**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

**FIGURE 2.11: UNEMPLOYMENT RATE TRENDS**



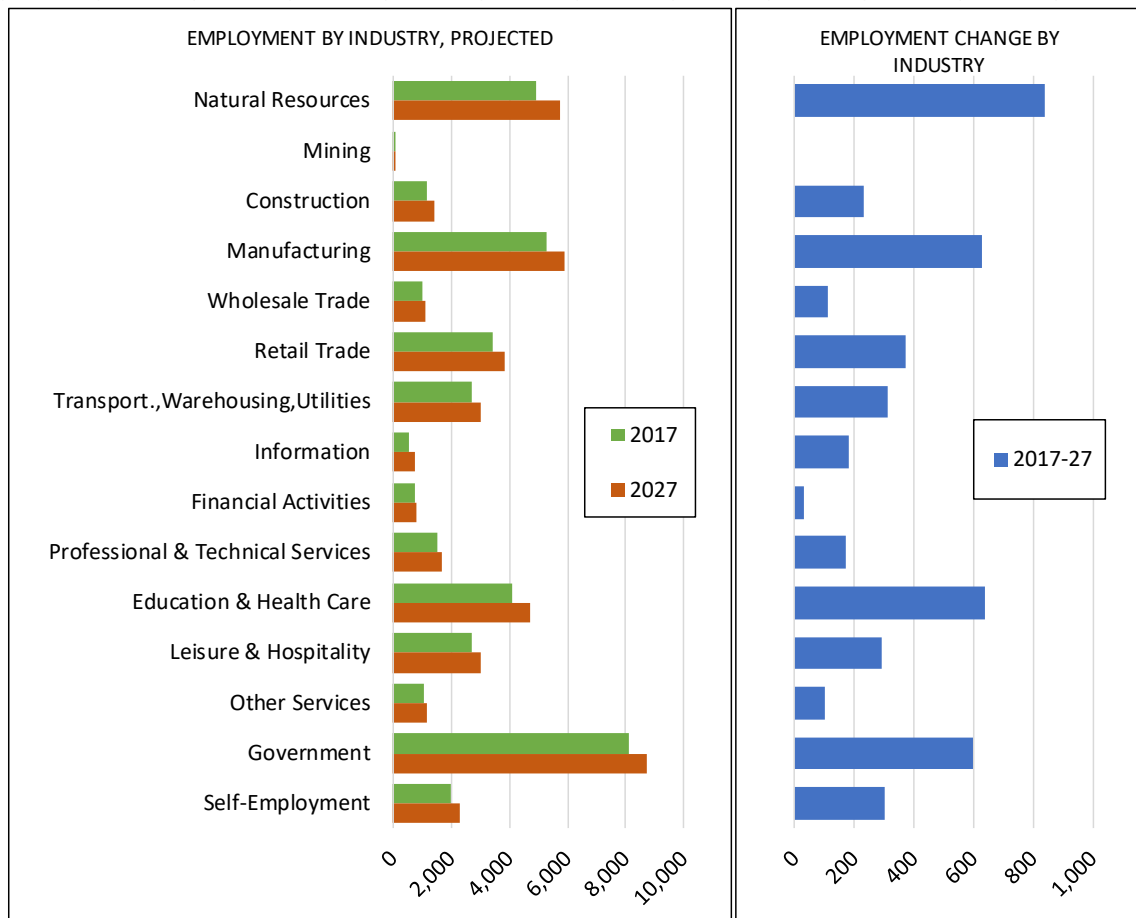
SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS



The economic expansion has facilitated a commensurate drop in the unemployment rate, with Umatilla County following the national and statewide patterns. Tight labor market conditions are likely to limit growth potential in the future both locally and nationally. The local area’s ability to attract and retain workforce will be critical to sustaining economic growth going forward. In mid-2019, the countywide unemployment rate had fallen to a healthy 5%, slightly higher than the statewide rate of 4%.

According to the Oregon Employment Department, most industries are forecast to expand at a modest rate over the next decade in the broader area (Morrow and Umatilla Counties). On an absolute basis, the greatest gains are forecast in professional and business services, leisure and hospitality, and construction. On a rate of growth basis, the most rapid expansion is expected in the natural resources, manufacturing, government, and education and health services sectors.

**FIGURE 2.12: PROJECTED EMPLOYMENT GROWTH BY SECTOR, MORROW & UMATILLA COUNTIES**

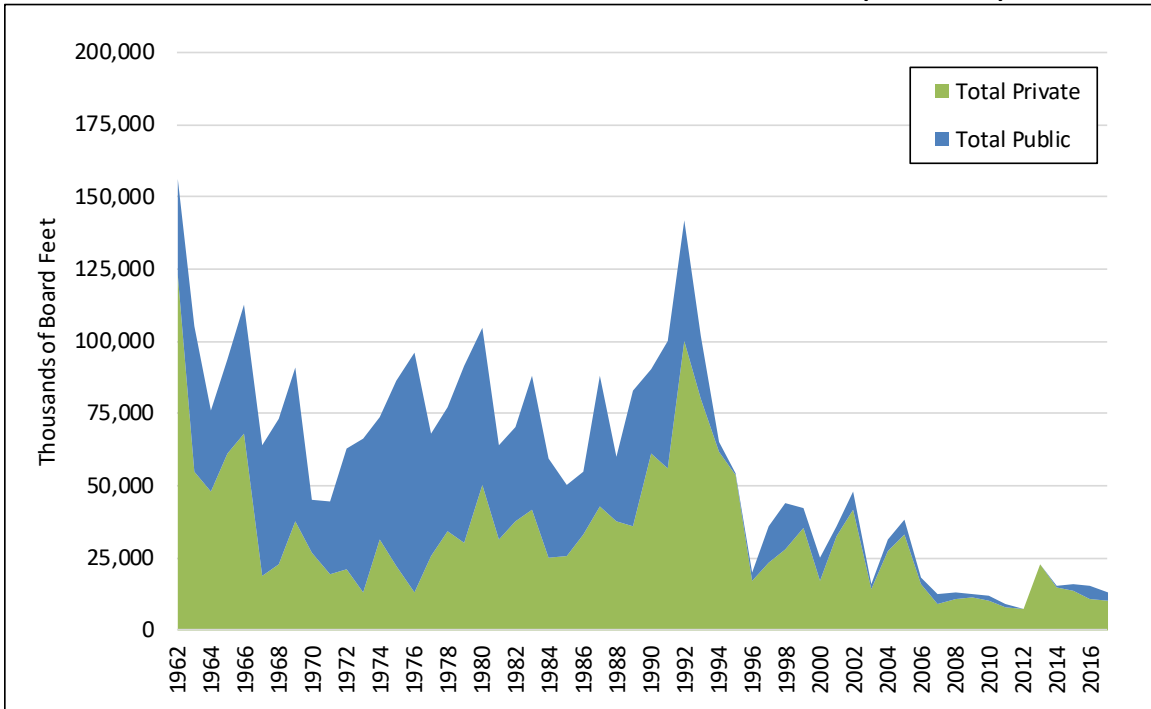


SOURCE: State of Oregon Employment Department

Like much of eastern and central Oregon, the forestry industry has seen a sharp decline in production, which is largely attributable to declines in production from public lands since 1993 (Figure 2.13). The broader region has been actively pursuing new and ongoing opportunities in the industry, including small diameter timber, biomass, and engineered wood products. Forestry is a smaller factor in communities along the river

gorge, such as Umatilla, however timber activity to the south can create some opportunities in wood manufacturing and shipping.

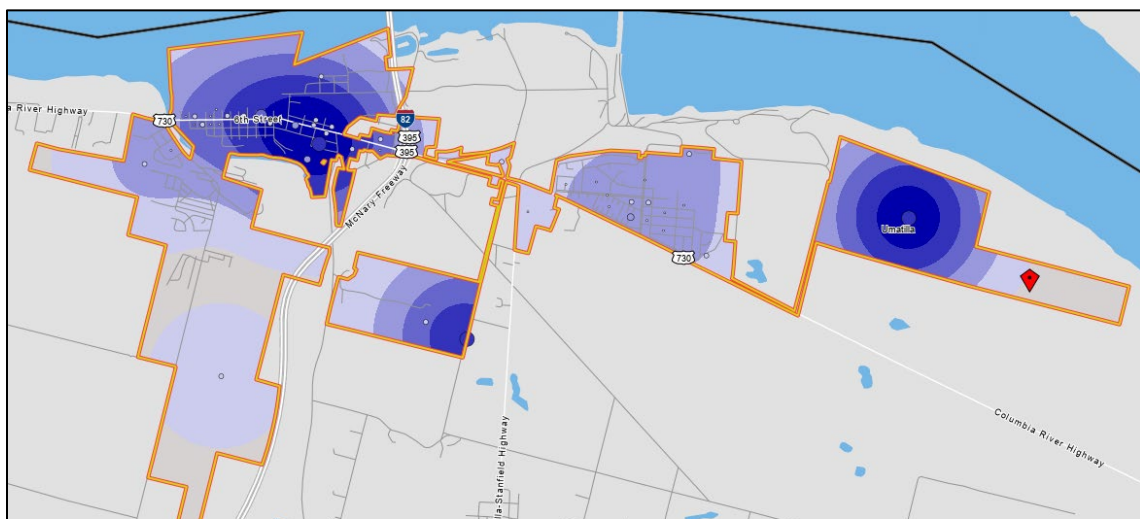
**FIGURE 2.13: ANNUAL TIMBER PRODUCTION IN UMATILLA COUNTY (1962-2017)**



SOURCE: Oregon Department of Forestry

Employment in Umatilla County is concentrated in the Hermiston/Umatilla corridor, as well as in the Pendleton area. Employment in the city of Umatilla is concentrated in the downtown area, in the area of the correctional facility and Port properties, and along Lind Road (Figure 2.14).

**FIGURE 2.14: DISTRIBUTION OF EMPLOYMENT, CITY OF UMATILLA CITY, 2017**



SOURCE: Census Bureau, LEHD Data

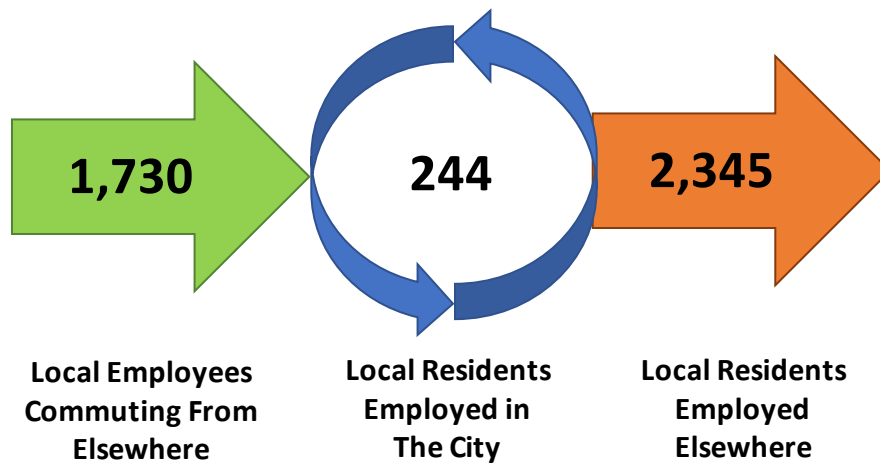
**Commuting**

Residents and employees commute broadly within Umatilla County and beyond. In the City of Umatilla, the local workforce was estimated at roughly 2,589 in 2017, of which 2,345 (90%) travelled outside of the city for employment while an estimated 244 both lived and worked within the city limits (Figure 2.15).

At the same time, an estimated 1,730 workers commuted into the city for employment, making up over 85% of the local job base of roughly 1,975. (These figures include covered employment and do not capture all forms of self-employment or contracting. Therefore, these figures are best used as an imprecise indicator of the overall pattern.)

This pattern is familiar to many communities across the state, but the extent to which local residents commute elsewhere for employment, and residents of other communities commute in for local jobs, seems somewhat starker in the case of Umatilla.

**FIGURE 2.15: NET INFLOW-OUTFLOW OF EMPLOYEES, CITY OF UMATILLA, 2017**



SOURCE: Census Bureau, LEHD Data

Commuting patterns are an important element in the local economy. They are indicative of the labor shed from which companies can draw workers, the extent to which job creation translates into increased demand for housing, goods, and services, and the overall balance of population and employment in the community.

Income and age demographics of the workforce commuting into and out of Umatilla are similar (Figure 2.16).

**FIGURE 2.16: NET INFLOW-OUTFLOW DETAIL, CITY OF UMATILLA, 2017**

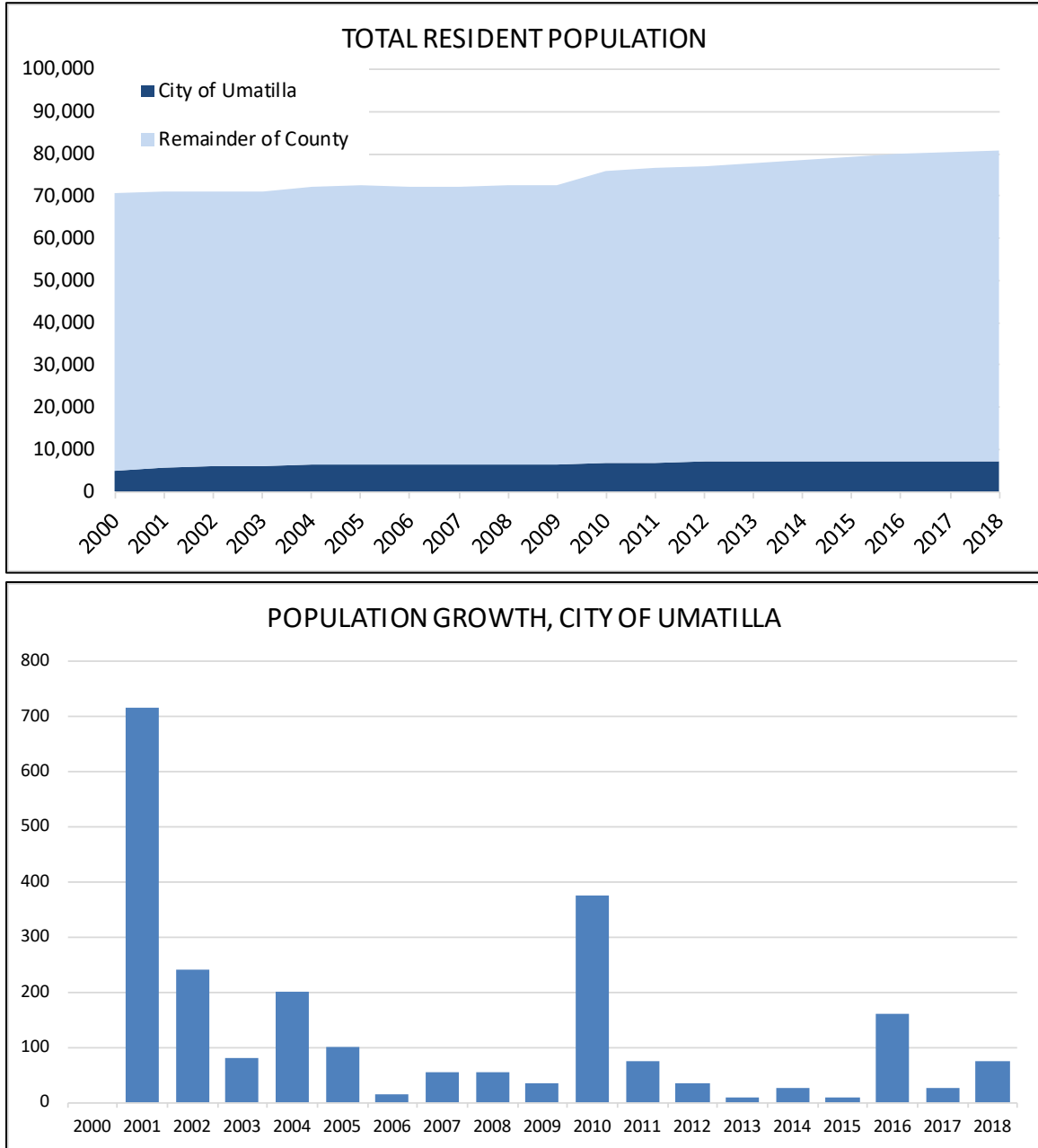
	Umatilla		Umatilla County	
	2017		2017	
	Count	Share	Count	Share
<b>Selection Area Labor Market Size (Primary Jobs)</b>				
Employed in the Selection Area	1,974	100.0%	31,226	100.0%
Living in the Selection Area	2,589	131.2%	31,621	101.3%
Net Job Inflow (+) or Outflow (-)	(615)	-	(395)	-
<b>In-Area Labor Force Efficiency (Primary Jobs)</b>				
Living in the Selection Area	2,589	100.0%	31,621	100.0%
Living and Employed in the Selection Area	244	9.4%	21,396	67.7%
Living in the Selection Area but Employed Outside	2,345	90.6%	10,225	32.3%
<b>In-Area Employment Efficiency (Primary Jobs)</b>				
Employed in the Selection Area	1,974	100.0%	31,226	100.0%
Employed and Living in the Selection Area	244	12.4%	21,396	68.5%
Employed in the Selection Area but Living Outside	1,730	87.6%	9,830	31.5%
<b>Outflow Job Characteristics (Primary Jobs)</b>				
External Jobs Filled by Residents	2,345	100.0%	10,225	100.0%
Workers Aged 29 or younger	570	24.3%	2,445	23.9%
Workers Aged 30 to 54	1,192	50.8%	5,222	51.1%
Workers Aged 55 or older	583	24.9%	2,558	25.0%
Workers Earning \$1,250 per month or less	443	18.9%	2,301	22.5%
Workers Earning \$1,251 to \$3,333 per month	1,010	43.1%	3,820	37.4%
Workers Earning More than \$3,333 per month	892	38.0%	4,104	40.1%
Workers in the "Goods Producing" Industry Class	835	35.6%	3,119	30.5%
Workers in the "Trade, Transportation, and Utilities" Industry Class	578	24.6%	2,235	21.9%
Workers in the "All Other Services" Industry Class	932	39.7%	4,871	47.6%
<b>Inflow Job Characteristics (Primary Jobs)</b>				
Internal Jobs Filled by Outside Workers	1,730	100.0%	9,830	100.0%
Workers Aged 29 or younger	318	18.4%	2,325	23.7%
Workers Aged 30 to 54	970	56.1%	5,078	51.7%
Workers Aged 55 or older	442	25.5%	2,427	24.7%
Workers Earning \$1,250 per month or less	372	21.5%	2,262	23.0%
Workers Earning \$1,251 to \$3,333 per month	594	34.3%	3,953	40.2%
Workers Earning More than \$3,333 per month	764	44.2%	3,615	36.8%
Workers in the "Goods Producing" Industry Class	715	41.3%	2,600	26.4%
Workers in the "Trade, Transportation, and Utilities" Industry Class	143	8.3%	2,683	27.3%
Workers in the "All Other Services" Industry Class	872	50.4%	4,547	46.3%
<b>Interior Flow Job Characteristics (Primary Jobs)</b>				
Internal Jobs Filled by Residents	244	100.0%	21,396	100.0%
Workers Aged 29 or younger	58	23.8%	4,975	23.3%
Workers Aged 30 to 54	128	52.5%	11,242	52.5%
Workers Aged 55 or older	58	23.8%	5,179	24.2%
Workers Earning \$1,250 per month or less	63	25.8%	4,566	21.3%
Workers Earning \$1,251 to \$3,333 per month	99	40.6%	9,214	43.1%
Workers Earning More than \$3,333 per month	82	33.6%	7,616	35.6%
Workers in the "Goods Producing" Industry Class	78	32.0%	5,105	23.9%
Workers in the "Trade, Transportation, and Utilities" Industry Class	26	10.7%	3,882	18.1%
Workers in the "All Other Services" Industry Class	140	57.4%	12,409	58.0%

SOURCE: US Census Bureau, LEHD Origin-Destination Employment Statistics

**Population and Workforce**

The population base in Umatilla County and Umatilla have grown at a rate of slightly under 1% since 2010, according to the Population Research Center at Portland State University. The growth rate is estimated to have increased in more recent years and is projected to accelerate over the coming 20-year period. The City of Umatilla had an estimated population of 7,320 in 2018, or 9% of the Umatilla County total of nearly 81,000 people.

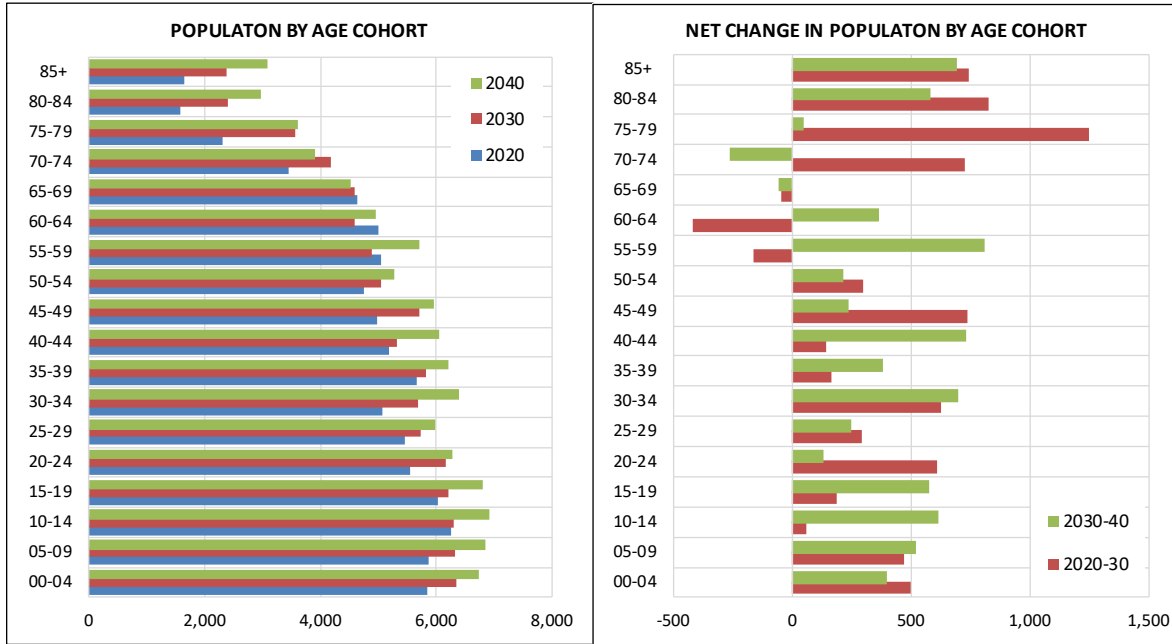
**FIGURE 2.17: HISTORIC POPULATION TRENDS, UMATILLA COUNTY AND CITY OF UMATILLA**



SOURCE: Population Research Center, Portland State University

The composition of the population base is expected to become generally older. The trend is most pronounced for residents over 75 years of age, but modest growth is also anticipated in age categories that are traditionally in the workforce.

**FIGURE 2.18: HISTORIC AND PROJECTED DISTRIBUTION OF POPULATION BY AGE COHORT, UMATILLA COUNTY**



SOURCE: Population Research Center, Portland State University

**Race and Ethnicity:** The population of Umatilla County is estimated to be 85% white and 15% minority or bi-racial, a very similar minority share as Oregon. The County is estimated to have a higher share of Native Americans, and a somewhat lower share of Black and Asian residents. Latinos are estimated to make up 26% of the county population, compared to 13% statewide.

**FIGURE 2.19: DISTRIBUTION OF POPULATION BY RACE & ETHNICITY, UMATILLA COUNTY**

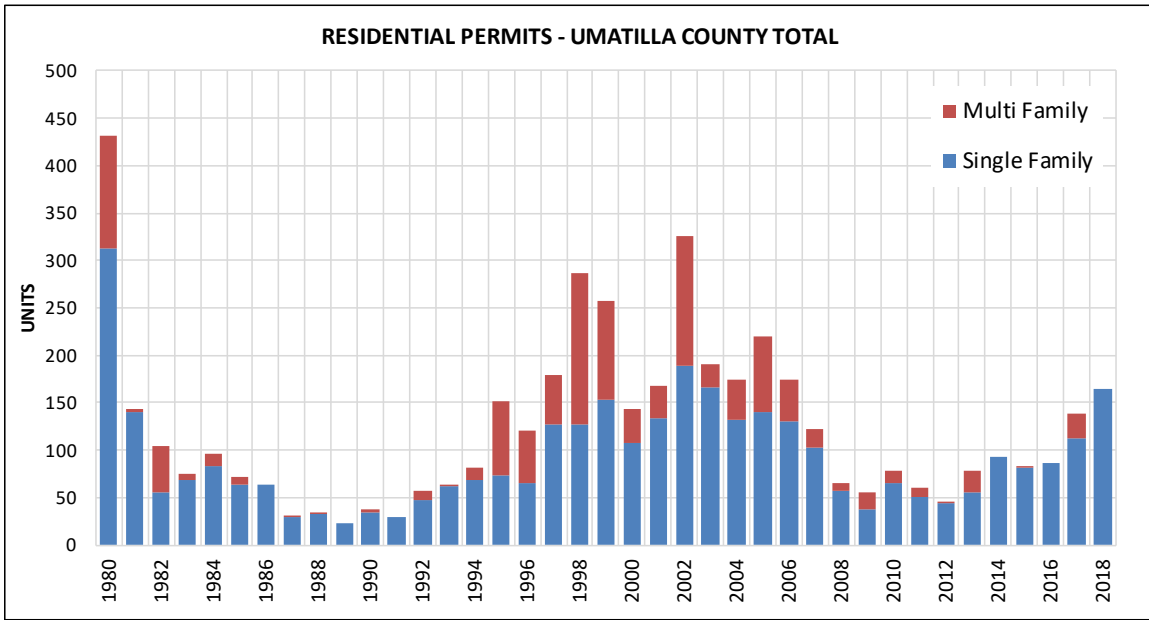
Distribution of Population	Umatilla County				Oregon			
	2000	2017	Change	Share	2000	2017	Change	Share
<b>Total:</b>	70,548	80,500	14%	100%	3,421,399	4,025,127	18%	100%
White	57,852	68,585	19%	85%	2,961,623	3,416,776	15%	85%
Black	582	626	8%	1%	55,662	76,347	37%	2%
Native American	2,375	2,514	6%	3%	45,211	45,332	0%	1%
Asian	530	635	20%	1%	101,350	166,351	64%	4%
Hawaiian or Pac. Islander	124	140	13%	0%	7,976	15,157	90%	0%
Other Race	7,529	4,263	-43%	5%	144,832	121,000	-16%	3%
Two or More Races	1,556	3,738	140%	5%	104,745	184,164	76%	5%
Latino (of any race)	11,366	20,917	84%	26%	275,314	509,507	85%	13%

SOURCE: Census (Tables QT-P3, B02001, B03002) Population Research Center, Portland State University

\* 2017 Total county population is based on PSU 2017 estimate, applying the distribution of race and ethnicity from 2017 ACS.

With steady growth in population, residential permits in Umatilla County have averaged 137 per year since 2000, with the majority being single-family homes. After experiencing some multi-family development prior to the 2008 recession, permitting has been slow for the past decade.

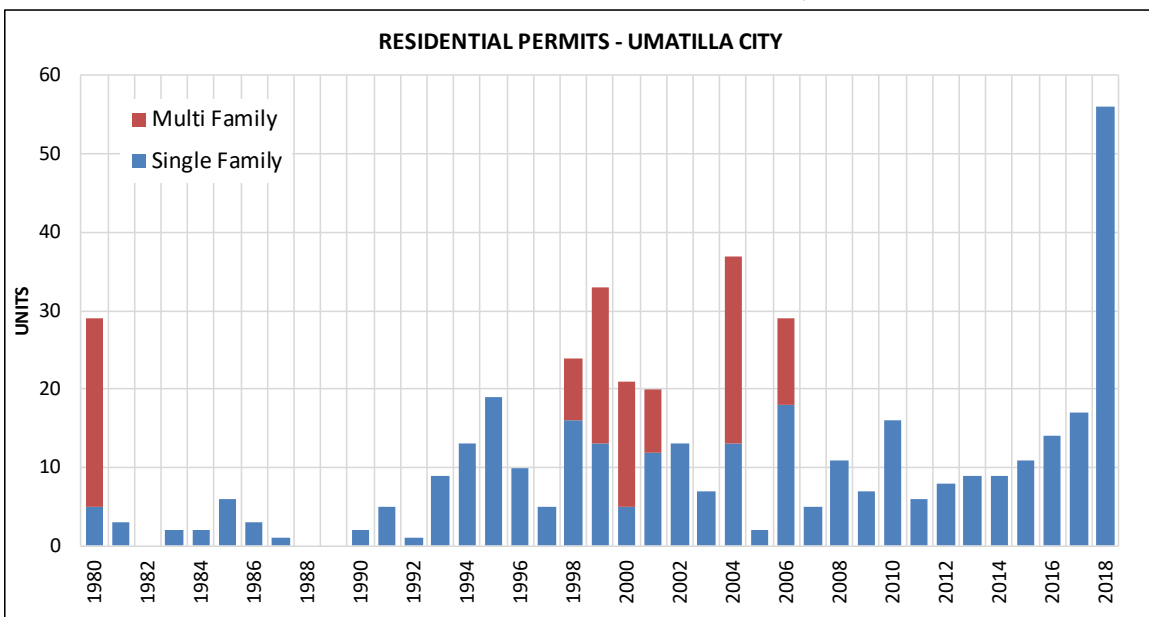
**FIGURE 2.20: HISTORIC AND PROJECTED RESIDENTIAL PERMITS, UMATILLA COUNTY**



SOURCE: HUD

The city of Umatilla has accounted for roughly 12% of the total county residential permits since 2000. Nearly 300 units have been permitted since 2000, with 20% being multi-family units permitted prior to 2008.

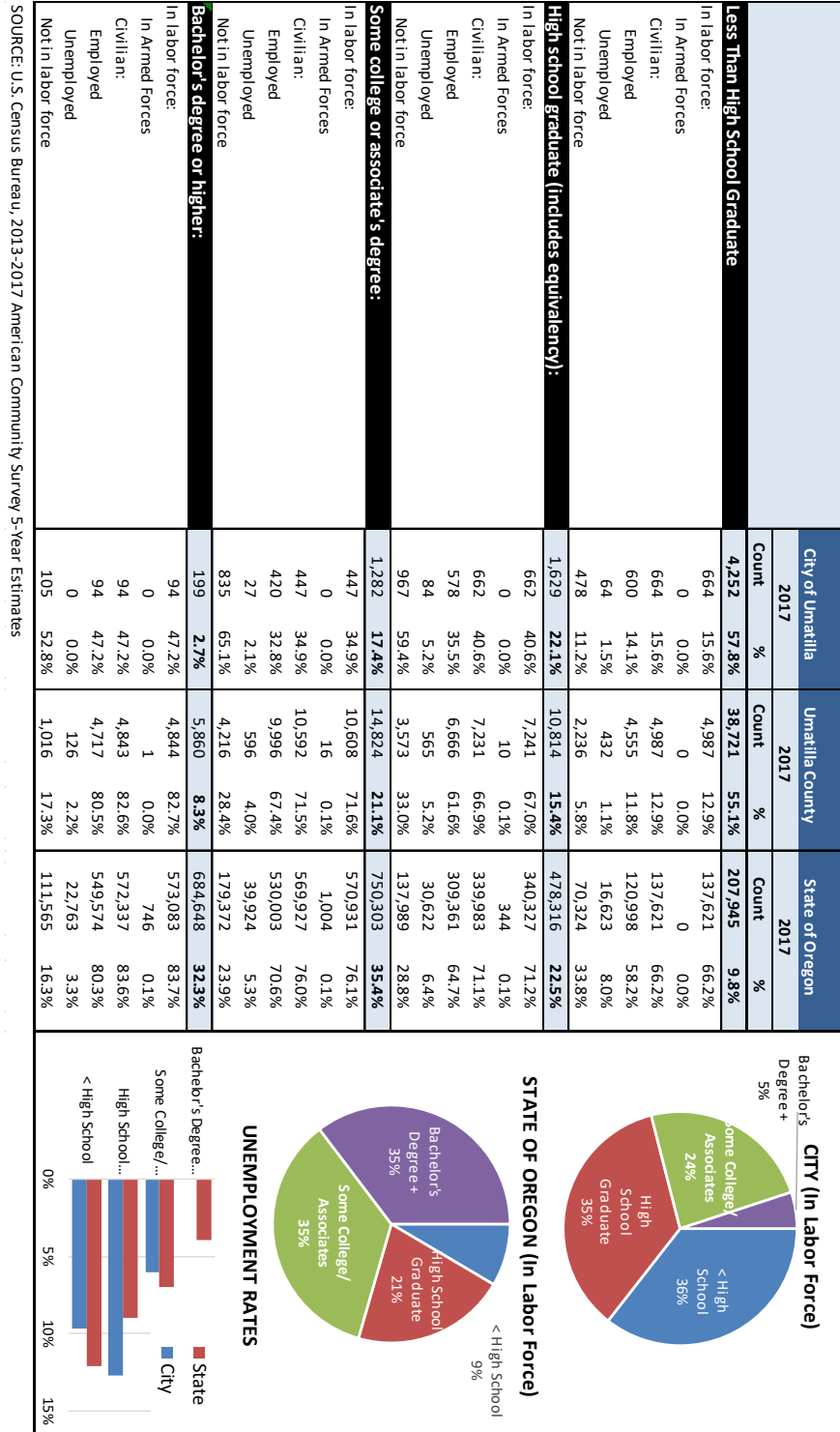
**FIGURE 2.21: HISTORIC AND PROJECTED RESIDENTIAL PERMITS, CITY OF UMATILLA**



SOURCE: HUD

The educational attainment level of the local workforce is lower in the city and county as the statewide profile. Residents of working age are more likely to have a high-school education, and less likely to have a college degree.

**FIGURE 2.23: EDUCATIONAL ATTAINMENT PROFILE BY EMPLOYMENT STATUS, 2017**



SOURCE: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates



### III. TARGET INDUSTRY ANALYSIS

This element of the Economic Opportunities Analysis uses analytical tools to assess the economic landscape in Umatilla and Umatilla County. The objective of this process is to identify a range of industry types that can be considered targeted economic opportunities over the 20-year planning period.

A range of analytical tools to assess the local and regional economic landscape are used to determine the industry typologies the City should consider targeting over the planning period. Where possible, we look to identify the sectors that are likely to drive growth in current and subsequent cycles.

#### ECONOMIC SPECIALIZATION

The most common analytical tool to evaluate economic specialization is a location quotient (LQ) analysis. This metric compares the concentration of employment in an industry at the local level to a larger geography. All industry categories are assumed to have a quotient of 1.0 on the national level, and a locality’s quotient indicates if the local share of employment in each industry is greater or less than the share seen nationwide. For instance, a quotient of 2.0 indicates that locally, that industry represents twice the share of total employment as seen nationwide. A quotient of 0.5 indicates that the local industry has half the expected employment.

We completed a location quotient analysis for Umatilla County, which compares the distribution of local employment relative to national averages, as well as average annual wage levels by industry (Figure 3.1). The most over-represented industries were natural resources and mining, manufacturing and government.

**FIGURE 3.1: INDUSTRY SECTOR SPECIALIZATION BY MAJOR INDUSTRY, UMATILLA COUNTY, 2018<sup>1</sup>**

Industry	Annual Establishments	Avg. Annual Employment	Total Annual Wages	Avg. Annual Wages	Employment Loc. Quotient
1011 Natural resources and mining	193	3,386	\$111,161,727	\$32,832	8.3
1012 Construction	193	1,176	\$61,441,498	\$52,265	0.8
1013 Manufacturing	74	3,415	\$139,497,112	\$40,849	1.3
1021 Trade, transportation, and utilities	402	6,341	\$260,936,079	\$41,149	1.1
1022 Information	23	175	\$7,251,966	\$41,479	0.3
1023 Financial activities	153	698	\$32,889,517	\$47,137	0.4
1024 Professional and business services	201	1,403	\$55,157,349	\$39,319	0.3
1025 Education and health services	218	3,778	\$159,564,205	\$42,233	0.8
1026 Leisure and hospitality	211	2,578	\$44,250,408	\$17,166	0.8
1027 Other services	421	999	\$26,607,848	\$26,634	1.1
Federal Government	32	485	\$36,873,687	\$76,002	0.8
State Government	44	1,391	\$90,039,107	\$64,730	1.4
Local Government	104	5,047	\$216,324,995	\$42,861	1.7
<b>Total</b>	<b>2,269</b>	<b>30,872</b>	<b>\$1,241,995,498</b>	<b>\$40,231</b>	

SOURCE: Bureau of Labor Statistics

<sup>1</sup> QCEW Data, Annual Average 2018 Data

In terms of total employment, the largest sectors are government, transportation/warehousing/utilities, education and health services, and manufacturing. Natural resources (agriculture and forestry, and support services to these industries) as well as leisure and hospitality (tourism-related industry) are also major employment sectors in the county.

Figure 3.2 shows a more detailed analysis of the top 20 local industry subsectors in the county, as ranked by their LQ. The LQ shows that agricultural subsectors have the highest share of employment in comparison to nationwide averages, but also food manufacturing and wood product manufacturing. Various transportation and distribution-related industries are also well represented, as are utilities. Nursing and residential care, construction, and retailers are some of the subsectors rounding out the list.

The average wage LQ (right column) is an indicator of how much local wages paid in these industries are paid relative to the total wages in that industry typical across the nation. For instance, the agricultural and forestry subsector in Umatilla County represents 28.5 times the share of total wages paid as would be expected by looking at the national average.

**FIGURE 3.2: INDUSTRY SECTOR SPECIALIZATION BY DETAILED INDUSTRY, UMATILLA COUNTY, 2018**

Rank	NAICS	Description	Employment	Emp. L.Q.	Average Wage	Total Wages L.Q.
1	115	Agriculture and forestry support activities	1,685	20.6	\$32,950	28.5
2	111	Crop production	1,393	12.0	\$31,030	15.6
3	311	Food manufacturing	1,711	5.0	\$41,909	6.2
4	112	Animal production and aquaculture	237	4.2	\$38,318	5.9
5	321	Wood product manufacturing	357	4.2	\$44,516	5.8
6	814	Private households	235	3.9	\$18,252	3.8
7	484	Truck transportation	789	2.5	\$60,964	4.1
8	447	Gasoline stations	450	2.3	\$19,028	2.8
9	485	Transit and ground passenger transportation	151	1.5	\$23,353	1.4
10	221	Utilities	170	1.5	\$109,579	2.1
11	623	Nursing and residential care facilities	985	1.4	\$28,869	1.8
12	236	Construction of buildings	422	1.2	\$52,518	1.4
13	452	General merchandise stores	787	1.2	\$26,238	1.8
14	441	Motor vehicle and parts dealers	484	1.1	\$46,121	1.5
15	813	Membership associations and organizations	331	1.1	\$22,670	0.8
16	811	Repair and maintenance	295	1.1	\$34,824	1.2
17	445	Food and beverage stores	684	1.1	\$24,680	1.5
18	424	Merchant wholesalers, nondurable goods	449	1.0	\$56,184	1.1
19	312	Beverage and tobacco product manufacturing	54	0.9	\$24,687	0.6
20	562	Waste management and remediation services	85	0.9	\$45,727	1.0

SOURCE: Bureau of Labor Statistics

Sectors such as local government, education, health care and retail trade, are industries that are driven by serving a local population. The county also has a significant amount of employment in export or “traded sector” industries that send their products beyond the county, and thus bring new dollars into the region. These industries include manufacturing, utilities, and data centers.

## ECONOMIC DRIVERS

The identification of the economic drivers of a local or regional economy is critical in informing the character and nature of future employment, and by extension land demand over a planning cycle. To this end, we employ a shift-share analysis of the local economy emerging out of the current expansion cycle<sup>2</sup>.

A shift-share analysis measures local effect of economic performance within an industry or occupation. The process considers local economic performance in the context of national economic trends—indicating the extent to which local growth can be attributed to unique regional competitiveness or simply growth in line with broader trends.

For example, assume that Widget Manufacturing is growing at a 1.5% rate locally, about the same rate as the local economy. On the surface we would consider the Widget Manufacturing industry to be healthy and contributing soundly to local economic expansion. However, consider also that Widget Manufacturing is booming across the country, growing at a robust 4% annually. In this context, local widget manufacturers are struggling, and some local or regional condition is stifling economic opportunities.

We can generally classify industries, groups of industries, or clusters into four groups:

- **Growing, Outperforming:** Industries that are growing locally at a rate faster than the national average. These industries have local characteristics leading them to be particularly competitive.
- **Growing, Underperforming:** Industries that are growing locally but slower than the national average. These industries generally have a sound foundation, but some local factor is limiting growth.
- **Contracting, Outperforming:** Industries that are declining locally but slower than the national average. These industries have structural issues that are impacting growth industry wide. However, local firms are leveraging some local or regional factor that is making them more competitive than other firms on average.
- **Contracting, Underperforming:** Industries that are declining locally at a rate faster than the national average. These industries have structural issues that are impacting growth industry wide. However, some local or regional factor is making it increasingly tough on local firms.

We evaluated the average annual growth rate by industry from 2008 through 2017 for Umatilla County relative to the national rate. The observed local change was compared to a standardized level reflecting what would be expected if the local industry grew at a rate consistent with national rates for that industry.

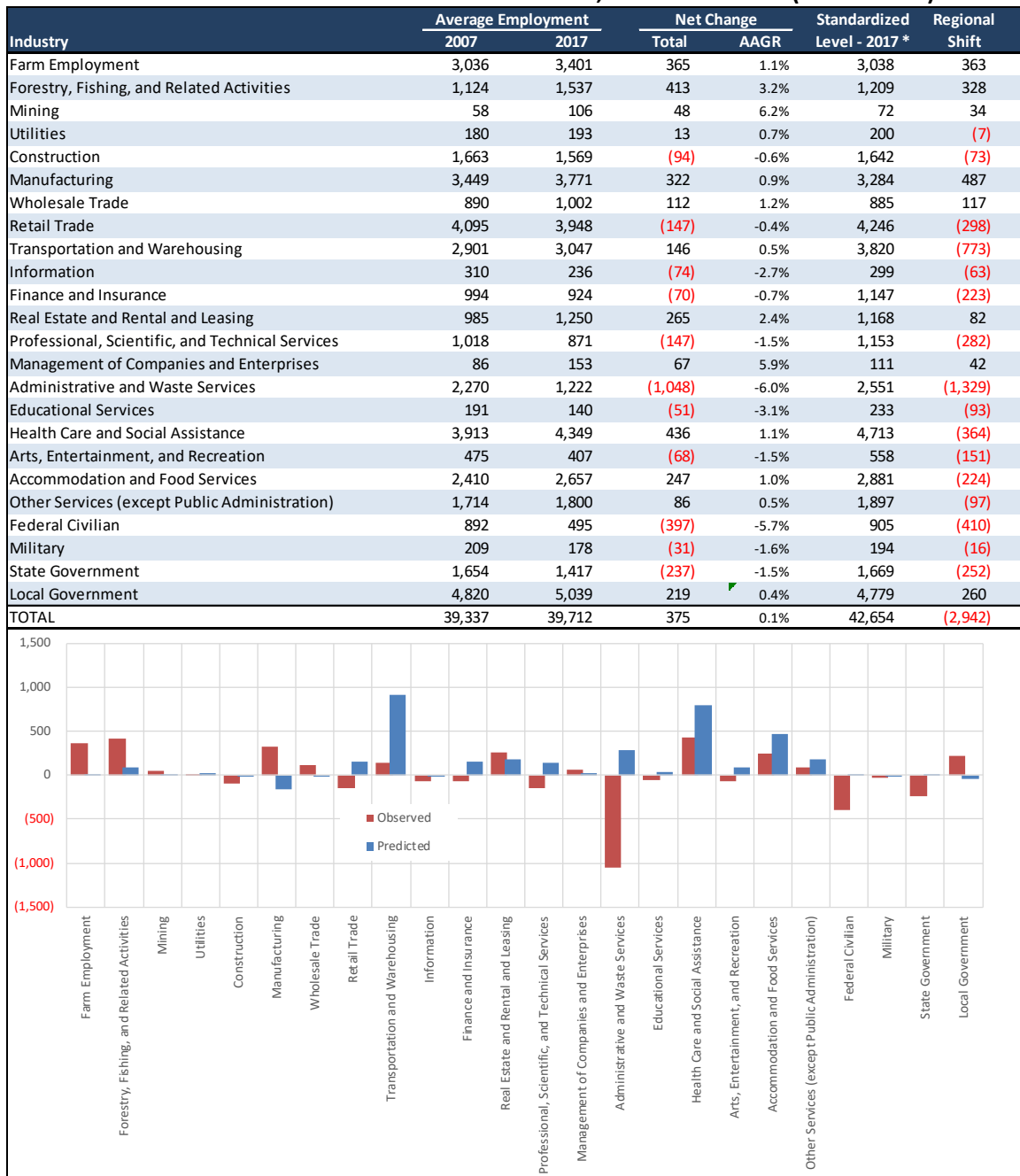
As shown in Figure 3.3, only a few industries showed growth in excess of national rates. These include manufacturing, natural resources industries, real estate rental and leasing, and wholesale trade.

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<sup>2</sup> Measured from the trough of recent recession to 2017, the most recent period available for local employment data.

It is also known that in the last few years, Umatilla County has added significant employment and investment in the data center industry. This employment is not yet reflected in the most recent QCEW data (2017) of covered employment where it would appear under the “Information” sector. It is known that this industry has experienced significant and rapid growth in the county and the city of Umatilla itself. (This target industry is discussed more in the following section.)

**FIGURE 3.3: INDUSTRY SECTOR SHIFT SHARE ANALYSIS, UMATILLA COUNTY (2008 – 2017)**



\* Employment level in each industry had it grown at the same rate as its counterparts at the national level over the same period.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis

## ECONOMIC DEVELOPMENT ASSETS

In this section, we summarize some of the key economic development assets of the city and the area, which will shape the nature of economic growth in the foreseeable future.

### 1. *Abundance of Energy & Water*

Availability of quality power will continue to increase regional competitiveness over the long-term. This provides an advantage when pursuing users requiring large power sources, including data center investments, as well as durable goods manufacturing. While much of the local power production is exported outside of the region, there is substantial loss in transmission. Average electrical rates in Oregon are 23% below national levels, but higher than those in Washington or Idaho.

### 2. *Transportation Linkages*

Along with abundant affordable power, transportation linkages are arguably the region's best asset. The city of Umatilla is positioned near one of only five confluences of major interstates in Oregon and is the only one outside of the Willamette Valley. The City is also located at the border with Washington State, with the next nearest bridge crossings of the Columbia located 50 miles north, or 80 miles to the west. Further, the Port terminals and regional rail linkages provide access to world-wide shipping networks, particularly for the region's agricultural products.

### 3. *Amenity Values*

Amenity values are encompassed in the concept of livability. Amenity values are often characterized in the field of Economics and Economic Geography because amenity values have real economic impacts on attracting residents, employers and workforce to an area. The Columbia Basin has abundant natural amenities, with scenery and proximity to nature and recreational activities. However, the region is lacking in some urban amenities given the size of its communities.

### 4. *Proximity to a Large Well-Educated Workforce*

While the local workforce is underrepresented in higher skilled laborers, regional economic growth can tap into a large population base with above average training levels. Both Umatilla (15.6%) and Morrow Counties (10.7%) have lower rates of persons aged 25 and older holding bachelor's degrees than the State of Oregon (29.0%). In Benton County, the ratio is 27.7% while the State of Washington ratio is 31.4%.<sup>3</sup> Benton and Franklin Counties in Washington combine for 42,000 adults with an Associate Degree or better. The size and commuting patterns of the greater region, allows for large new employers to draw sufficient workforce from beyond the immediate community if needed.

### 5. *Flat, Developable Land*

The study area has a diversity of potentially available land to accommodate a range of uses and intensity of uses. This diversity can expand regional marketability and offers the flexibility to plan uses meeting specific site criteria. Within the State of Oregon, there are very limited opportunities for large-lot industrial development. The region's potential supply of large sites can provide a strong competitive advantage, if it is made available. While the land in the county may be hypothetically suitable however, the right amount, location, and sizes of development sites for different employers may not be currently available within the Urban Growth Boundary. The suitability of buildable land in Umatilla is discussed elsewhere in this report.

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<sup>3</sup> 2010 Census

## 6. *Economic Development Support & Partnerships*

The region benefits from an aggressive and well-organized economic development climate. The Port Districts have had noted economic development success and local communities have undertaken countless initiatives to improve economic competitiveness. The Confederated Tribes of the Umatilla Indian Reservation also is an active participant in regional economic development efforts. The end result has been a region that has significantly outperformed non-metropolitan areas of the State over the last decade in terms of economic growth.

## TARGET INDUSTRY CLUSTERS

This section discusses potential target industries for the City of Umatilla based on the community's historical strengths and advantages, established economic development goals, and discussion of community priorities through this process. These are industries where the city might focus efforts to grow local business and attract new businesses. At the end of this section is a more detailed glossary of potential community partners for economic development.

### **Data Centers/ Cloud Storage Services**

The City of Umatilla, along with other locations in Umatilla and Morrow Counties has quickly grown as a hub for large, very-high investment data center users who seek ready access to ample inexpensive power and water, as well as large suitable development sites.

These types of industrial land users make very large capital investments in facilities and equipment. They can employ hundreds of people at each site and pay wages far above the average income for the area.

This sector is a major target industry identified by the community. There are currently nine major data centers located in the Columbia Basin, demonstrating the suitability and desirability of the area and its infrastructure. The nation's largest tech companies continue to express interest in locating new data center and cloud-computing facilities in the area, and in Umatilla specifically. There have been recent real-world opportunities to recruit these types of businesses to Umatilla if suitable sites are available.



#### *Cluster Strengths*

- Proximity to abundant and inexpensive power and water sources
- Excellent fiber optic telecom connectivity
- Suitability of land for large, flat industrial sites
- Establishment of successful examples and building of skilled workforce in this sector
- Strong economic development support from local and regional partners

#### *Cluster Challenges*

- Limited supply of appropriately large, shovel-ready development sites, within the UGB
- Need to continually recruit and grow trained workforce and supply workforce housing.

#### *Potential Opportunities*

- Recruitment of additional data center facilities
- Ensure sufficient adequately-sized shovel-ready industrial parcels within UGB and/or City limits

- Partnerships with local education sector to train and recruit additional workforce

### **Manufacturing (Traditional and Advanced)**

Manufacturing is typically a highly desirable sector, which creates considerable value, pays good wages, and often exports the bulk of its output. The manufacturing sector currently accounts for a relatively small share of the current employment base in the city of Umatilla but is targeted by the community as a potential growth sector in the future.



Umatilla has been home to food, wood and metals product manufacturers. Going forward, these will remain good opportunities for growth taking advantage of available industrial lands, power and water resources. These export industries also benefit from the ample transportation connections and shipping options in the area.

Advanced manufacturing is also expected to be an increasing opportunity. In general, this refers to modern manufacturers who use advanced technologies such as robots and software to increase productivity and make traditional methods more efficient. Like data centers, these manufacturers also benefit from ample power and their facilities may rely on significant mechanization. Despite the automation, these industries typically require a sizable trained workforce to run the advanced processes.

Manufacturing firms can be a full range of sizes with differing land needs from small sites to very large. Potential large-site manufacturers have made inquiries in the Umatilla area.

#### *Cluster Strengths*

- Proximity to abundant and inexpensive power and water sources
- Existing food and wood products industries with workforce expertise.
- Available and serviced land supply of smaller and medium sites

#### *Cluster Challenges*

- Limited supply of larger shovel-ready development sites, for largest manufacturers
- Need to continually recruit and grow trained workforce and supply workforce housing.

#### *Potential Manufacturing Opportunities*

- Food products/value-added specialty foods
- Advanced agricultural technology, such as robotics, precision tools, indoor-growing technology
- Specialty river recreation or other recreation equipment
- Drones and robotics
- Recruitment of other large-lot, large-power users

### **Tourism and Retail**

Umatilla has physical and locational attributes that make recreation and hospitality an attractive target sector. The city offers access to the river and recreation and has plans to redevelop the marina to encourage more visitors, concessions, tours and related activity. Regional outdoor recreation includes camping, hiking,

hunting, fishing, and rafting. Major regional draws such as the Pendleton Round Up and tribal gaming also provide an opportunity to market to new visitors.

Tourism growth can be mutually reinforcing with new business development along the city's main downtown corridor of 6<sup>th</sup> Street, and elsewhere in the community. While retail trade is typically viewed as a function of growth in local population and buying power, developing a strong retail trade base in an area helps limit spending from leaking out of the market, retaining dollars in the local economy.

The amenities that tourism traffic supports are also largely consistent with what is desirable to local residents. Quality retail, restaurant, recreation, and hospitality businesses make a community an attractive place to live and work. Studies have shown that tourism-related supportive uses have a positive impact on housing values and attract residents and businesses alike. This is a growing phenomenon in the context of emerging consumer preferences observed across Millennial and Boomer generations. Attraction of these types of businesses would offer Umatilla the opportunity to raise its amenity profile.



#### *Cluster Strengths*

- Recreational amenities, river location
- Location on freeway, at state border
- Historic Oldtown site
- Investment in trails, and outdoor and recreation events

#### *Cluster Challenges*

- Need to raise awareness/visibility beyond the region

#### *Cluster Opportunities*

- Drawing visitors from other regional attractions
- Improved access use of the marina/river

### **Transportation, Warehousing and Distribution**

Currently, Transportation & Warehousing is among the largest sectors in the county. The location quotient analysis indicated that the study area's concentration in truck transportation is more than two and a half times the national average. The region has succeeded in attracting and retaining large transportation firms, including three firms with 100-249 employees and two additional firms with more than 250 employees.

The reason for the emergence of this industry cluster is intuitively clear. The area's geographic position and transportation linkages afford a reasonable (distribution) drive-time from major population centers throughout the Northwest, Northern California, British Columbia, and the Western Mountain States. Other regional attributes include a refrigerator cargo dock on the Columbia River, fiber optic telecommunications, and the location of the Union Pacific switching station.



The area's strong transportation access and multi-modal opportunities makes it ideal for transportation and warehousing uses. Umatilla County has successfully attracted multiple large distribution centers, including a Walmart Distribution Center and Fed Ex Freight distribution facility. One or more such distribution facilities are a viable target recruitment for Umatilla City, if appropriate sites are available.

*Cluster Strengths*

- Multi-modal transportation connections, confluence of two freeways
- Port/rail access

*Cluster Challenges*

- Need for additional large, shovel-ready sites near the freeway and within the UGB

*Cluster Opportunities*

- Distribution centers
- Central hub for transportation/freight/logistics businesses

**Health Care**

Demand for health services tends to follow demographic trends. The local population and workforce are projected to continue growing at a strong rate. At the same time, a major segment of the population will be aging in place, increasing the demand for health services and continuing care. The following are key industry trends:

- Emphasis on leveraging cost advantages.
- Strong growth in utilization of mobile health systems, software, and access to information.
- Emerging care models including smaller, distributed clinics (i.e. Zoomcare).
- Video or phone appointments.
- An estimated 5% to 8% of Boomers will age in multi-family retirement and care facilities.



The community has identified a need for more local health services located in Umatilla for the local households, many of whom currently travel to Hermiston or beyond for needed health care. Needed services include urgent care, additional clinics, dental care and other specialists. As the population grows, there should be increasing opportunities for health care providers to locate in the community to serve the local population.

*Cluster Strengths*

- Growth and aging of population will support health services.
- Dedicated service area.
- Identified need and captive market.

*Cluster Weakness*

- Sector is concentrated in Hermiston.

*Cluster Opportunities*

- Development of expanded and/or new medical office clusters
- Expansion of training offerings for nurses and other medical professionals.

# IV. FORECAST OF EMPLOYMENT AND LAND NEED

## CITY OF UMATILLA EMPLOYMENT FORECASTS

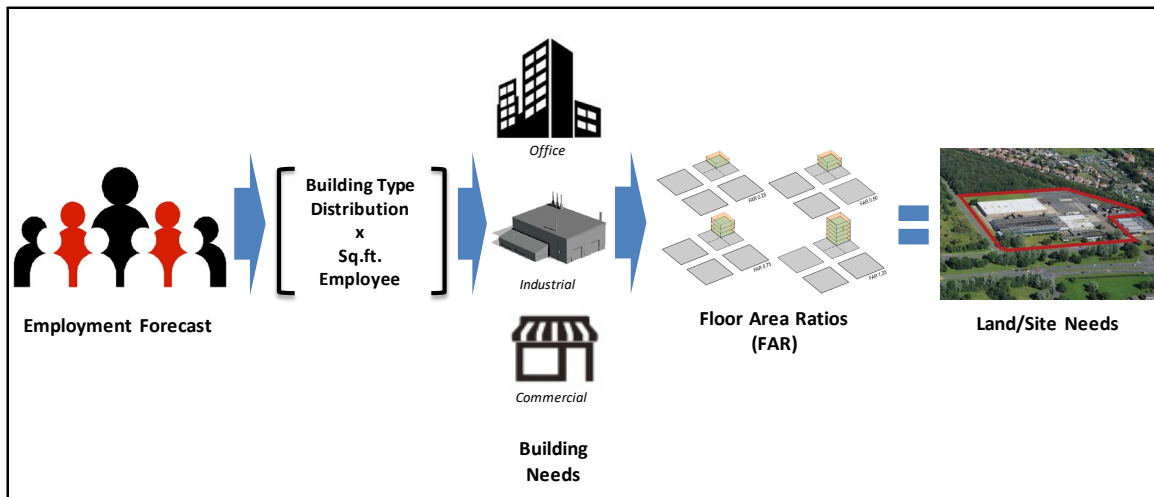
Goal 9 requires that jurisdictions plan for a 20-year supply of commercial and industrial capacity. Because employment capacity is the physical space necessary to accommodate new workers in the production of goods and services, employment needs forecasts typically begin with a forecast of employment growth in the community. The previous analysis of economic trends and targeted industries set the context for these estimates. This analysis translates those influences into estimates of employment growth by broad industry. Forecasts are produced at the sector or subsector level (depending on available information) and are subsequently aggregated to two-digit NAICS sectors. Estimates in this analysis are intended for long-range land planning purposes and are not designed to predict or respond to business cycle fluctuation.

The projections in this analysis are built on an estimate of employment in 2019, the commencement year for the planning period. Employment growth will come as the result of net-expansion of businesses in the community, new business formation, or the relocation/recruitment of new firms. Forecast scenarios consider a range of factors influencing growth. Long-range forecasts typically rely on a macroeconomic context for growth. Inflections in business cycles or the impact of a major shift in employment (i.e. a major unknown recruitment) are not considered.

### Overview of Employment Forecast Methodology

Our methodology starts with employment forecasts by major commercial and industrial sector. Forecasted employment is allocated to building type, and a space demand is a function of the assumed square footage per employee ratio multiplied by projected change. The need for space is then converted into land and site needs based on assumed development densities using floor area ratios (FARs).

**FIGURE 4.01: CONVERSION OF EMPLOYMENT FORECAST TO LAND NEED FORECAST - METHODOLOGY**



Source: Johnson Economics

The first step of the analysis is to update covered employment to the 2019 base year. Our City of Umatilla Quarterly Census of Employment and Wages (QCEW) dataset provides covered employment by industry

through 2017. To update these estimates, we use observed industry specific growth rates for the region between 2017 and 2019.

The second step in the analysis is to convert “covered”<sup>4</sup> employment to “total” employment. Covered employment only accounts for a share of overall employment in the economy. Specifically, it does not consider sole proprietors or some contracted workers. Covered employment was converted to total employment based on observed ratios at the national level derived from the Bureau of Economic Analysis from 2010 through 2017.

The differential is the most significant in construction, professional, and administrative services. The adjusted 2019 total non-farm employment base for the City of Umatilla is an estimated 1,968 jobs.

**FIGURE 4.02: UPDATE TO 2019 BASELINE AND CONVERSION OF COVERED TO TOTAL EMPLOYMENT**

Major Industry Sector	QCEW Employment			Total Emp. Conversion <sup>2</sup>	2019 Estimate
	2017 Employment	'17-'19 County Δ <sup>1</sup>	2019 Estimate		
Construction	172	1.8%	178	73.5%	243
Manufacturing	59	1.1%	60	97.6%	62
Wholesale Trade	88	1.0%	90	97.3%	92
Retail Trade	145	1.0%	148	94.4%	157
T.W.U.	93	1.1%	95	91.3%	104
Information*	0	2.9%	200	94.7%	211
Finance & Insurance	8	0.4%	8	91.6%	9
Real Estate	11	0.4%	11	91.6%	12
Professional & Technical Services	9	1.1%	9	88.5%	10
Administration Services	20	1.1%	20	88.5%	23
Education	215	1.5%	221	94.5%	234
Health Care	126	1.5%	130	94.5%	137
Leisure & Hospitality	79	1.0%	81	94.4%	85
Other Services	45	0.9%	46	82.7%	55
Government	525	0.7%	533	100.0%	533
<b>TOTAL</b>	<b>1,595</b>	<b>7.1%</b>	<b>1,830</b>	<b>93.0%</b>	<b>1,968</b>

<sup>1</sup> Forecasted AAGR from 2017-2024 for Umatilla County. Oregon Employment Department

<sup>2</sup> Bureau of Economic Analysis. Calculated as an eight-year average between 2010 and 2017

T.W.U. = Transportation, Warehousing, and Utilities

\*Information sector: Employment in 2019 is estimated from local sources

Source: Johnson Economics, Oregon Employment Department, BEA

### **Scenario 1: Safe Harbor Forecast**

The Goal 9 statute does not have a required method for employment forecasting. However, OAR 660-024-0040(9)(a) outlines several safe harbor methods, which are intended to provide jurisdictions a methodological approach that will not be challenged. The most applicable for Umatilla County jurisdictions is 660-024-0040(9)(a)(B), which recommends reliance on the adopted projected population growth rate as determined by the Portland State University Population Research Center. This method applies the projected

<sup>4</sup> The Department of Labor’s Quarterly Census of Employment and Wages (QCEW) tracks employment data through state employment departments. Employment in the QCEW survey is limited to firms with employees that are “covered” by unemployment insurance.

population growth rate to the 2019 Umatilla County base, essentially reflecting that employment growth is expected to keep track with population growth. For individual industries, the projected growth rate is based on the most recent regional forecast (2017-2027) published by the Oregon Employment Department for Morrow and Umatilla Counties.

This method results in an average annual growth rate of 1.7%, with total job growth of 805 jobs over the forecast period when applied to the employment profile in Umatilla.

### **Scenario 2: Alternative Employment Forecast**

A second prepared forecast scenario was influenced by the research and analysis conducted in the EOA. This scenario formulates an employment growth trajectory based on identified trends, the growth outlook for targeted industries, and input from the project advisory committee. Further, the alternative scenario recognizes that the city's policy direction has influence over realized growth in targeted sectors. This scenario considers the influence of known or anticipated development over a near and medium-term horizon. The following identified factors that are expected to influence growth informed the forecast

Target Industries – The key industries that the community has identified for targeted growth and focused economic development efforts. Known real-world business interest and location scouting from industries have also been considered. The most significant changes were to reflect targeted growth in the information (data centers) and transportation & warehousing (distribution centers).

Power, Water and Fiber Resources – Umatilla has excellent infrastructure resources that have proven attractive to large, high-investment industrial users such as data centers.

Location - Umatilla's location within the region will influence the mix of employment uses it can attract. Transportation, labor shed, recreation, and livability are some key locational factors.

Household Growth - Growth in many sectors, including retail, hospitality, banking, and real estate, is a direct function of population and households in a community.

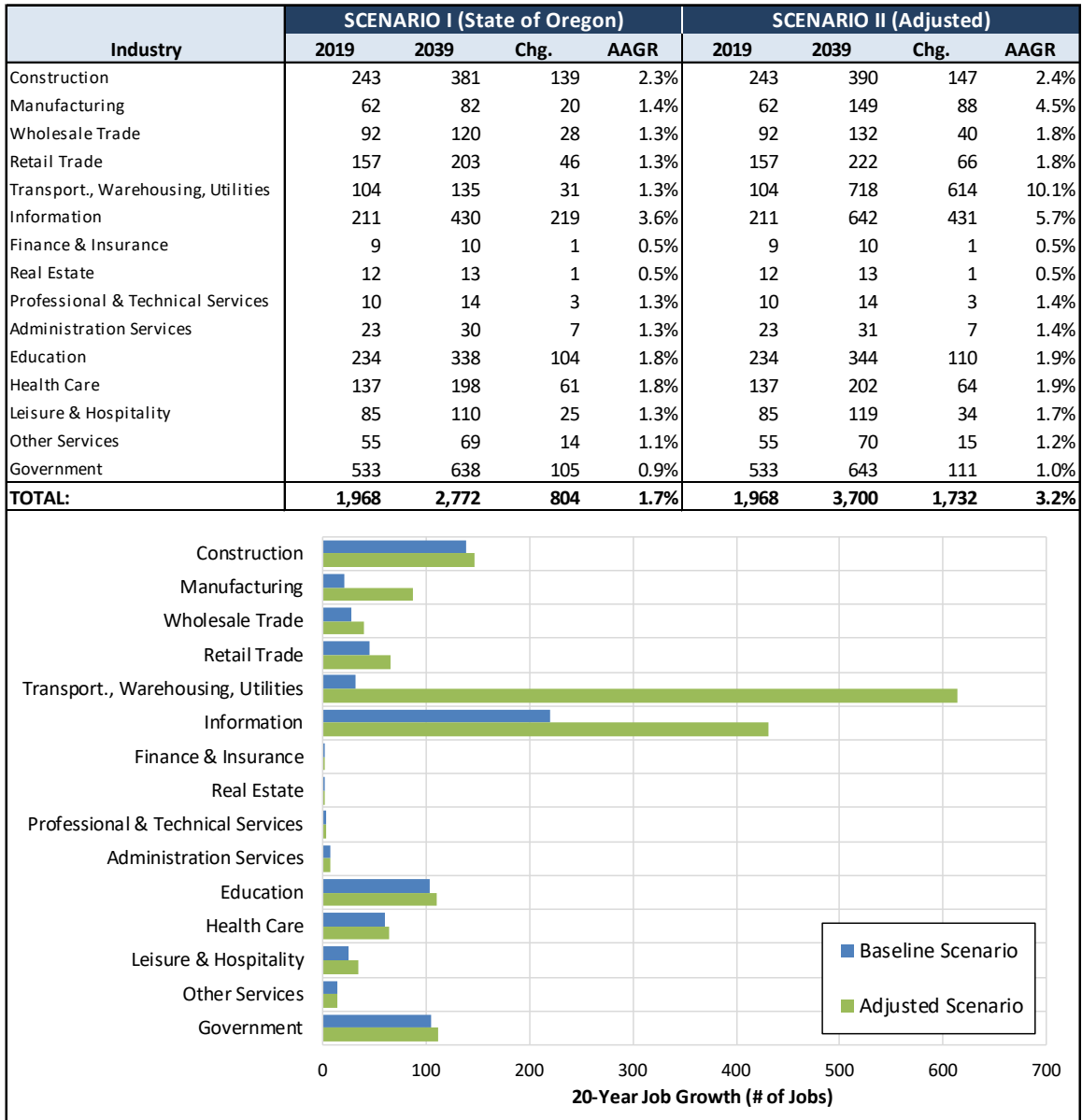
Taken together, the 20-year forecast in this scenario projects 3.2% average annual growth. Our outlook for growth in information, manufacturing, transportation and distribution, retail, and leisure & hospitality is more optimistic than macroeconomic forecasts indicate—reflecting the area's recent strength in these sectors.

### **Summary of Employment Forecast Scenarios**

The two forecast scenarios in this analysis range from 1.7% to 3.1% average annual growth. Job growth estimates range from roughly 805 to 1,730 jobs. The first scenario is useful in creating a baseline understanding of macroeconomic growth prospects. These are common and broadly accepted approaches when looking at large geographic regions.

However, forecasts grounded in broad-based economic variables do not account for the realities of local businesses and trends among evolving industries. The second scenario is meant to reflect these unique circumstances along with local economic development goals. Any long-term forecast is inherently uncertain and should be updated on a regular basis to reflect more current information.

**FIGURE 4.03: COMPARISON OF ALTERNATIVE FORECASTS, CITY OF UMATILLA**



Source: Johnson Economics, Oregon Employment Department, BEA

**FIGURE 4.04: SUMMARY OF PROJECTION SCENARIOS, CITY OF UMATILLA (5-YEAR INCREMENTS)**

Industry	Overall Employment					Net Change by Period				Total 19-39
	2019	2024	2029	2034	2039	19-24	24-29	29-34	34-39	
<b>SCENARIO 1 (State of Oregon)</b>										
Construction	243	272	304	341	381	29	32	36	41	139
Manufacturing	62	66	71	77	82	5	5	5	6	20
Wholesale Trade	92	99	105	112	120	6	7	7	8	28
Retail Trade	157	167	178	190	203	10	11	12	13	46
Transport, Warehousing, Utilities	104	111	119	127	135	7	8	8	9	31
Information	211	252	302	360	430	41	49	59	70	219
Finance & Insurance	9	9	9	9	10	0	0	0	0	1
Real Estate	12	12	13	13	13	0	0	0	0	1
Professional & Technical Services	10	11	12	13	14	1	1	1	1	3
Administration Services	23	25	26	28	30	2	2	2	2	7
Education	234	257	281	308	338	22	25	27	30	104
Health Care	137	150	165	181	198	13	14	16	17	61
Leisure & Hospitality	85	91	97	103	110	6	6	6	7	25
Other Services	55	59	62	65	69	3	3	4	4	14
Government	533	557	583	610	638	25	26	27	28	105
<b>TOTAL:</b>	<b>1,968</b>	<b>2,138</b>	<b>2,327</b>	<b>2,537</b>	<b>2,772</b>	<b>170</b>	<b>189</b>	<b>210</b>	<b>234</b>	<b>804</b>
<b>SCENARIO 2 (Modified)</b>										
Construction	243	273	308	346	390	31	34	39	44	147
Manufacturing	62	77	96	120	149	15	19	24	30	88
Wholesale Trade	92	101	110	121	132	9	9	10	11	40
Retail Trade	157	171	187	204	222	14	16	17	19	66
Transport, Warehousing, Utilities	104	169	273	443	718	65	105	170	275	614
Information	211	279	368	486	642	68	89	118	156	431
Finance & Insurance	9	9	9	10	10	0	0	0	0	1
Real Estate	12	12	13	13	13	0	0	0	0	1
Professional & Technical Services	10	11	12	13	14	1	1	1	1	3
Administration Services	23	25	27	28	31	2	2	2	2	7
Education	234	258	284	313	344	24	26	29	32	110
Health Care	137	151	166	183	202	14	15	17	18	64
Leisure & Hospitality	85	93	101	110	119	7	8	9	10	34
Other Services	55	59	62	66	70	3	4	4	4	15
Government	533	558	585	614	643	26	27	28	30	111
<b>TOTAL:</b>	<b>1,968</b>	<b>2,246</b>	<b>2,602</b>	<b>3,069</b>	<b>3,700</b>	<b>278</b>	<b>356</b>	<b>467</b>	<b>631</b>	<b>1,732</b>

Source: Johnson Economics, Oregon Employment Department, BEA

### EMPLOYMENT LAND NEED FORECAST – CITY OF UMATILLA

The next step in our analysis is to convert projections of employment into forecasts of land demand over the planning period. The generally accepted methodology for this conversion begins by allocating employment by sector into a distribution of building typologies that typically house those economic activities. As an example, insurance agents commonly locate in a traditional office space, usually along commercial corridors. However, a percentage of these firms locate in commercial retail space adjacent to retail anchors. Cross tabulating this distribution provides an estimate of employment in each typology.

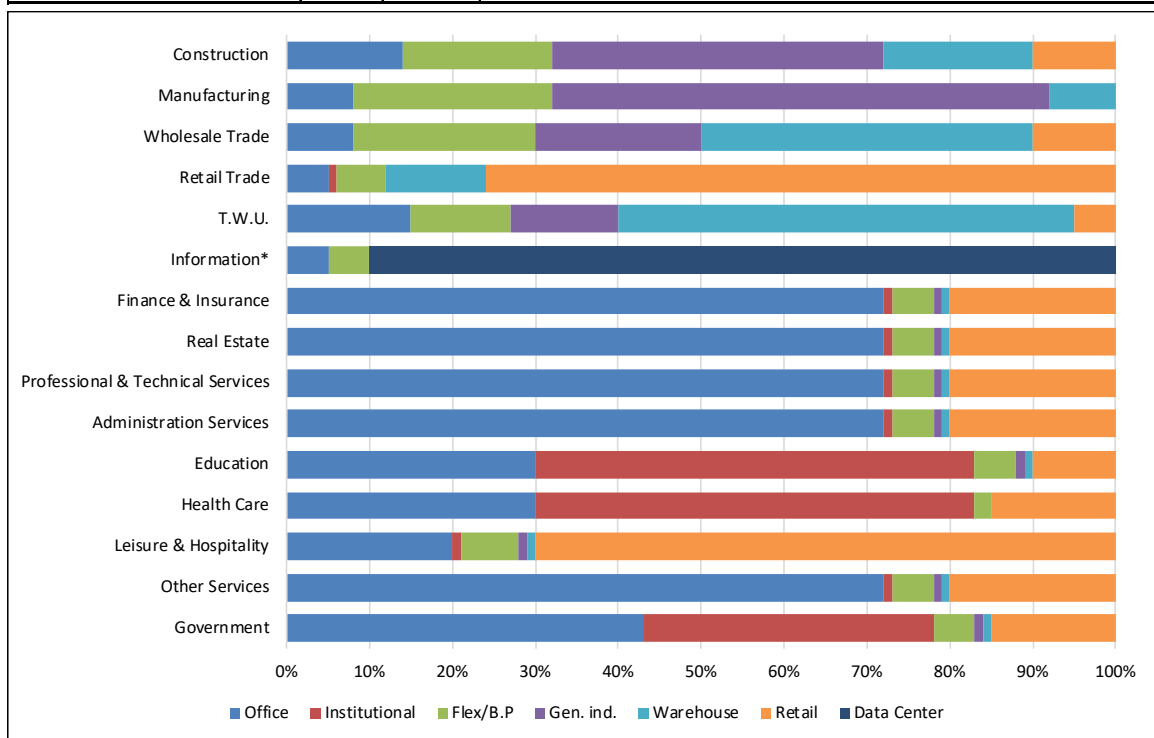
The next step converts employment into space using estimates of the typical square footage exhibited within each typology. Adjusting for market clearing vacancy we arrive at an estimate of total space demand for each building type. Finally, we can consider the physical characteristics of individual building types and the amount of land they typically require for development. The site utilization metric commonly used is referred to as a “floor area ratio” or FAR. For example, assume a 25,000-square foot general industrial building requires approximately two acres to accommodate its structure, setbacks, parking, and necessary yard/storage space. This building would have an FAR. of roughly 0.29. Demand for space is then converted to net acres using a standard FAR for each development form.

**Land Demand Analysis (Adjusted Forecast)**

To demonstrate the methodology used, this report will develop land need estimates in a step-by-step process, clearly presenting underlying assumptions. In this analytical step we allocate employment growth into standard building typologies. The building typology matrix represents the share of sectoral employment that locates across various building types.

**FIGURE 4.05: DISTRIBUTION OF EMPLOYMENT BY SPACE TYPE, CITY OF UMATILLA**

Industry Sector	20-year Job Forecast		BUILDING TYPE MATRIX						
	Number	AAGR	Office	Institutional	Flex/B.P	Gen. ind.	Warehouse	Data Center	Retail
Construction	147	2.3%	14%	0%	18%	40%	18%	0%	10%
Manufacturing	88	1.4%	8%	0%	24%	60%	8%	0%	0%
Wholesale Trade	40	1.3%	5%	0%	5%	10%	75%	0%	5%
Retail Trade	66	1.3%	5%	1%	6%	0%	12%	0%	76%
Transport, Warehousing, Utilities	614	1.3%	15%	0%	12%	13%	55%	0%	5%
Information	431	3.6%	5%	0%	5%	0%	0%	90%	0%
Finance & Insurance	1	0.5%	72%	1%	5%	1%	1%	0%	20%
Real Estate	1	0.5%	72%	1%	5%	1%	1%	0%	20%
Professional & Technical Services	3	1.3%	72%	1%	5%	1%	1%	0%	20%
Administration Services	7	1.3%	72%	1%	5%	1%	1%	0%	20%
Education	110	1.8%	30%	53%	5%	1%	1%	0%	10%
Health Care	64	1.8%	30%	53%	2%	0%	0%	0%	15%
Leisure & Hospitality	34	1.3%	20%	1%	7%	1%	1%	0%	70%
Other Services	15	1.1%	72%	1%	5%	1%	1%	0%	20%
Government	111	0.9%	43%	35%	5%	1%	1%	0%	15%
<b>TOTAL</b>	<b>1,732</b>	<b>1.7%</b>	<b>16%</b>	<b>8%</b>	<b>10%</b>	<b>11%</b>	<b>24%</b>	<b>22%</b>	<b>9%</b>



Source: Johnson Economics, Oregon Employment Department

Under the employment forecast scenario, employment housed in data center, office, retail, and general industrial space accounts for the greatest share of growth.

**FIGURE 4.06: NET CHANGE IN EMPLOYMENT ALLOCATED BY BUILDING TYPE, CITY OF UMATILLA – 2019-2039**

Industry Sector	20-year Job Forecast		NET CHANGE IN EMPLOYMENT BY BUILDING TYPE - 2019-2039							Total
	Number	AAGR	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
Construction	147	2.3%	21	0	27	59	27	0	15	147
Manufacturing	88	1.4%	7	0	21	53	7	0	0	88
Wholesale Trade	40	1.3%	2	0	2	4	30	0	2	40
Retail Trade	66	1.3%	3	1	4	0	8	0	50	66
Transport., Warehousing, Utilities	614	1.3%	92	0	74	80	338	0	31	614
Information	431	3.6%	22	0	22	0	0	388	0	431
Finance & Insurance	1	0.5%	1	0	0	0	0	0	0	1
Real Estate	1	0.5%	1	0	0	0	0	0	0	1
Professional & Technical Services	3	1.3%	2	0	0	0	0	0	1	3
Administration Services	7	1.3%	5	0	0	0	0	0	1	7
Education	110	1.8%	33	58	5	1	1	0	11	110
Health Care	64	1.8%	19	34	1	0	0	0	10	64
Leisure & Hospitality	34	1.3%	7	0	2	0	0	0	24	34
Other Services	15	1.1%	11	0	1	0	0	0	3	15
Government	111	0.9%	48	39	6	1	1	0	17	111
<b>TOTAL</b>	<b>1,732</b>	<b>1.7%</b>	<b>273</b>	<b>132</b>	<b>165</b>	<b>198</b>	<b>412</b>	<b>388</b>	<b>164</b>	<b>1,732</b>

Source: Johnson Economics, Oregon Employment Department

Employment growth estimates by building type are then converted into demand for physical space. This conversion assumes the typical space needed per employee on average. This step also assumes a market clearing vacancy rate, acknowledging that equilibrium in real estate markets is not 0% vacancy. We assume a 10% vacancy rate for office, retail, and flex uses, as these forms have high rates of speculative multi-tenant usage. A 5% rate is used for general industrial, warehouse, and data centers—these uses have higher rates of owner occupancy that lead to lower overall vacancy. Institutional uses are assumed to have no vacancy.

The demand for space is converted into an associated demand for acreage using an assumed Floor Area Ratio (FAR). The combined space and FAR assumptions further provide estimates indicative of job densities, determined on a per net-developable acre basis.

**FIGURE 4.07: NET ACRES REQUIRED BY BUILDING TYPOLOGY**

ADJUSTED SCENARIO	DEMAND BY GENERAL USE TYPOLOGY, 2019-2039							Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
<b>Employment Growth</b>	273	132	165	198	412	388	164	1,732
<b>Avg. SF Per Employee</b>	350	600	990	600	1,850	8,000	500	2,542
<b>Demand for Space (SF)</b>	95,600	79,400	163,100	118,900	761,900	3,101,100	81,900	4,401,900
<b>Floor Area Ratio (FAR)</b>	0.35	0.35	0.30	0.30	0.35	0.35	0.25	0.32
<b>Market Vacancy</b>	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	10.0%	5.6%
<b>Implied Density (Jobs/Acre)</b>	39.2	22.9	11.9	20.7	7.8	1.8	19.6	5.6
<b>Net Acres Required</b>	<b>7.0</b>	<b>5.8</b>	<b>13.9</b>	<b>9.6</b>	<b>52.6</b>	<b>214.1</b>	<b>8.4</b>	<b>311.3</b>

Source: Johnson Economics, Oregon Employment Department

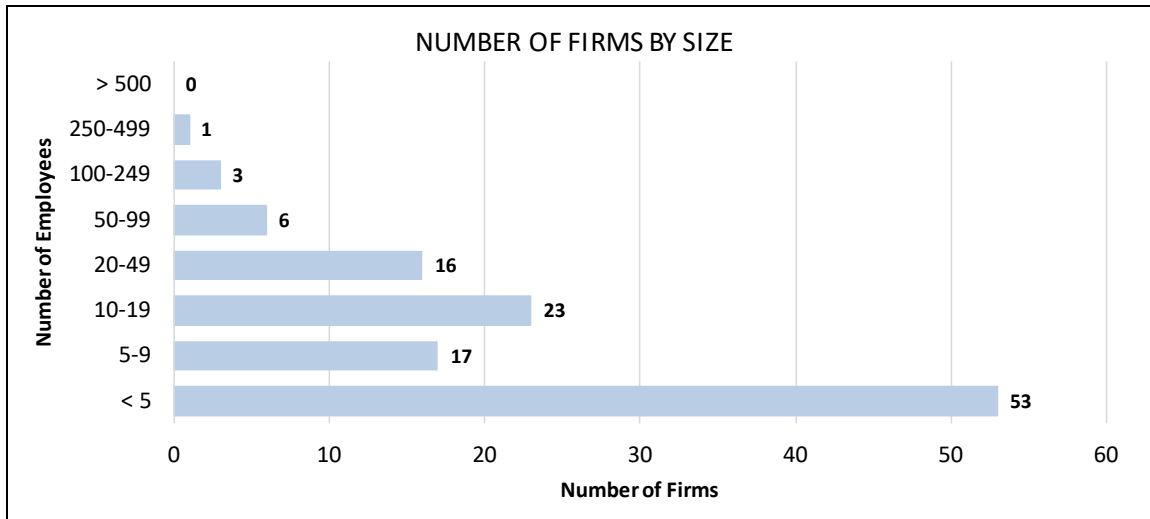
Commercial office and retail densities are 39 and 20 jobs per acre, respectively. Industrial uses range from 21 jobs per acre for general industrial to 8 jobs per acre for warehouse/distribution to as few as 2 jobs per acre for data center users. The projected 1,730 job expansion in the local employment base would require an estimated 311 net acres of employment land to house.



## EMPLOYMENT LAND NEED FORECAST – NEEDED SITE SIZES

The local employment base is largely dominated by small firms of 10 or fewer employees, with four employers currently accounting for more than 100 employees and one accounting for more than 250 (Figure 4.08).

**FIGURE 4.08: DISTRIBUTION OF CURRENT FIRMS BY SIZE, UMATILLA OREGON**



Source: Johnson Economics, Oregon Employment Department

Figure 4.09 presents the projected need for new commercial and industrial sites based on the industry growth projections presented above. These site needs are an estimate of future needs to aid comparison to available supply (see following Section.)

**FIGURE 4.09: ESTIMATED SITE NEEDS (ACRES) OF FUTURE EMPLOYERS, UMATILLA OREGON**

LAND USE	0 TO .9 acres	1 to 4.9 acres	5 to 9.9 acres	10 to 19.9 acres	20 to 29.9 acres	30 to 49.9 acres	50 to 99.9 acres	100+ acres	TOTAL
Office	10	1	0	0	0	0	0	0	11
Institutional	2	2	0	0	0	0	0	0	4
Retail	5	2	0	0	0	0	0	0	7
<b>Commercial:</b>	<b>17</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>
Flex/B.P	3	2	1	0	0	0	0	0	6
Gen. Ind.	5	3	1	0	0	0	0	0	9
Warehouse	2	3	2	0	0	0	1	0	8
Data Center	0	0	0	0	0	0	1	2	3
<b>Industrial:</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>26</b>
<b>TOTAL:</b>	<b>27</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>48</b>

Source: Johnson Economics, Oregon Employment Department

The estimates presented in Figure 4.09 are based on the average firm sizes of businesses in the different industry subsectors in Umatilla County. *However, economic development and job growth are dynamic, and this estimate of site needs is unlikely to match actual future needs exactly. Communities should maintain flexibility and ensure a supply of a variety of site types with short-term availability, as allowed through the Goal 9 EOA process.*

Local and regional employment trends in Umatilla and Morrow Counties support the likely ability to continue to recruit larger users such as data centers and larger manufacturers going forward. At the same time, there will be a continued demand for real estate space and sites of all size to accommodate the full range of employers across sectors.

### **Additional Considerations in Land Demand**

Beyond a consideration of gross acreage, there is a significantly broader range of site characteristics that industries would require to accommodate future growth. We summarize some key findings here:

- Industrial buildings are generally more susceptible to slope constraints due to larger building footprints. For a site to be competitive for most industrial uses, a 5% slope is the maximum for development sites. Office and commercial uses are generally smaller and more vertical, allowing for slopes up to 15%.
- Most industries require some direct access to a major transportation route, particularly manufacturing and distribution industries that move goods throughout the region and beyond. A distance of 10-to-20 miles to a major interstate is generally acceptable for most manufacturing activities, but distribution activities require five miles or less and generally prefer a direct interstate linkage. Visibility and access are highly important to most commercial activities and site location with both attributes from a major commercial arterial is commonly required.
- Access and capacity for water, power, gas, and sewer infrastructure is more important to industrial than commercial operations. Water/sewer lines of up to 10" are commonly required for large manufacturers. Appendix A details utility infrastructure requirements by typology.
- Fiber telecommunications networks are likely to be increasingly required in site selection criteria for most commercial office and manufacturing industries. Medical, high-tech, creative office, research & development, and most professional service industries will prefer or require strong fiber access in the coming business cycles.

**Section VI and Appendix A of this report discuss industry-specific site requirements in greater detail.**

## V. CURRENT EMPLOYMENT LAND SUPPLY

### BUILDABLE LAND INVENTORY

The inventory of employment land provides a snapshot of the currently local capacity to accommodate more business and jobs. This current available land will be compared to the forecasted need for new land over the 20-year planning period.

Employment land includes land zoned for industrial, retail or other commercial use (i.e. office), and may also include mixed-use zoning that allows for employment uses. This inventory includes vacant parcels with the proper zoning, as well as “redevelopable” parcels. (The methodology used in this analysis is described in detail below.)

#### Methodology

The Buildable Lands Inventory (BLI) used in this analysis is based on tax account data from the County, supplemented with data from the State of Oregon. The data was provided in Geographic Information Systems (GIS) compatible format, providing information on land use, parcel size and other relevant data categories on the taxlot level. Zoning information was also provided by the City.

The tax account data was used to identify vacant and redevelopable parcels in the city and its UGB. Environmental constraints including wetlands, floodplain and steep slopes that might impact developability were also considered. The identified candidate parcels were then further screened and refined by Johnson Economics.

In keeping with State requirements, the BLI includes an assessment of vacant buildable lands and redevelopable parcels. This analysis applied the “safe harbor” assumptions allowed under state rules to determine the infill potential of developed parcels (OAR 660-024-0050):

**FIGURE 5.01: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY METHODOLOGY**



Appendix B provides an in-depth summary of the Buildable Lands Inventory, including methodology and mapping of the identified parcels of employment land. The results are summarized below.

**FIGURE 5.02: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY (UMATILLA)**

ZONE	VACANT		REDEVELOPABLE		TOTAL	
	Parcels	Acreage	Parcels	Acreage	Parcels	Acreage
C-1	4	8.5	2	1.0	6	9.5
DC	11	2.2	3	0.4	14	2.6
DT	8	1.4	0	0.0	8	1.4
GC	6	10.0	2	3.6	8	13.5
MC	3	4.1	0	0.0	3	4.1
NC	3	31.4	0	0.0	3	31.4
<b>Commercial Total:</b>	<b>35</b>	<b>57.6</b>	<b>7</b>	<b>4.9</b>	<b>42</b>	<b>62.5</b>
M1	6	23.5	5	27.6	11	51.1
M2	16	247.9	3	16.8	19	264.7
<b>Industrial Total:</b>	<b>22</b>	<b>271.3</b>	<b>8</b>	<b>44.5</b>	<b>30</b>	<b>315.8</b>
<b>TOTAL:</b>	<b>57</b>	<b>328.9</b>	<b>15</b>	<b>49.4</b>	<b>72</b>	<b>378.3</b>

Source: Umatilla County, Umatilla, Johnson Economics LLC

The inventory identifies over 378 acres of vacant or potentially redevelopable land in both commercial and industrial zones. A smaller share is in the Commercial zones, while the majority has Industrial zoning. 80% of the sites are identified as “vacant”, and 20% are potential “redevelopment” sites.

**FIGURE 5.03: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**

ZONE	0 TO .99 acres		1 to 4.99 acres		5 to 9.99 acres		10 to 19.99 acres		20 to 29.99 acres		30 to 49.99 acres		50+ acres		TOTALS	
	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage
C-1	4	2.2	1	1.9	1	5.5	0	0.0	0	0.0	0	0.0	0	0.0	6	9.5
DC	14	2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	14	2.6
DT	8	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	1.4
GC	2	1.7	3	5.0	1	6.9	0	0.0	0	0.0	0	0.0	0	0.0	6	13.5
MC	1	0.7	2	3.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	4.1
NC	0	0.0	0	0.0	2	13.4	1	18.0	0	0.0	0	0.0	0	0.0	3	31.4
<i>Commercial Total:</i>	<i>29</i>	<i>8.6</i>	<i>6</i>	<i>10.2</i>	<i>4</i>	<i>25.8</i>	<i>1</i>	<i>18.0</i>	<i>0</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>40</i>	<i>62.5</i>
M1	0	0.0	8	20.7	2	13.4	1	17.0	0	0.0	0	0.0	0	0.0	11	51.1
M2	0	0.0	3	10.3	6	39.7	4	53.3	0	0.0	0	0.0	1	161.4	14	264.7
<i>Industrial Total:</i>	<i>0</i>	<i>0.0</i>	<i>11</i>	<i>31.0</i>	<i>8</i>	<i>53.2</i>	<i>5</i>	<i>70.3</i>	<i>0</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>1</i>	<i>161.4</i>	<i>25</i>	<i>315.8</i>
<b>TOTAL:</b>	<b>29</b>	<b>8.6</b>	<b>17</b>	<b>41.2</b>	<b>12</b>	<b>78.9</b>	<b>6</b>	<b>88.2</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>161.4</b>	<b>65</b>	<b>378.3</b>

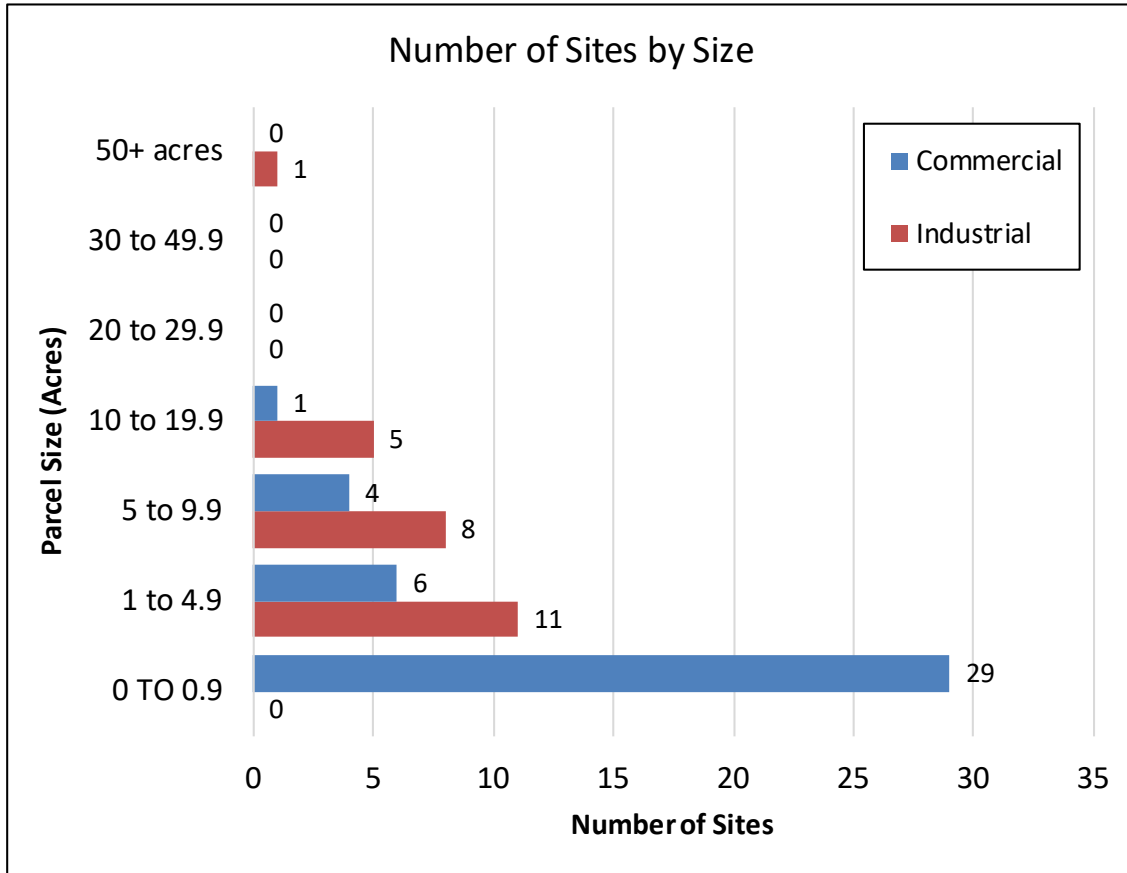
Source: Umatilla County, Umatilla, Johnson Economics LLC

Figure 5.03 presents the inventory broken down by the size of parcels. Most of the buildable unconstrained parcels identified are smaller than 20 acres, with the largest share of commercial parcels being smaller than

one acre in size. The largest share of industrial parcels (over one third) are between one and five acres. There is one large industrial parcel of roughly 160 acres located at the Port.

The following chart provides a visual presentation of the site-size data.

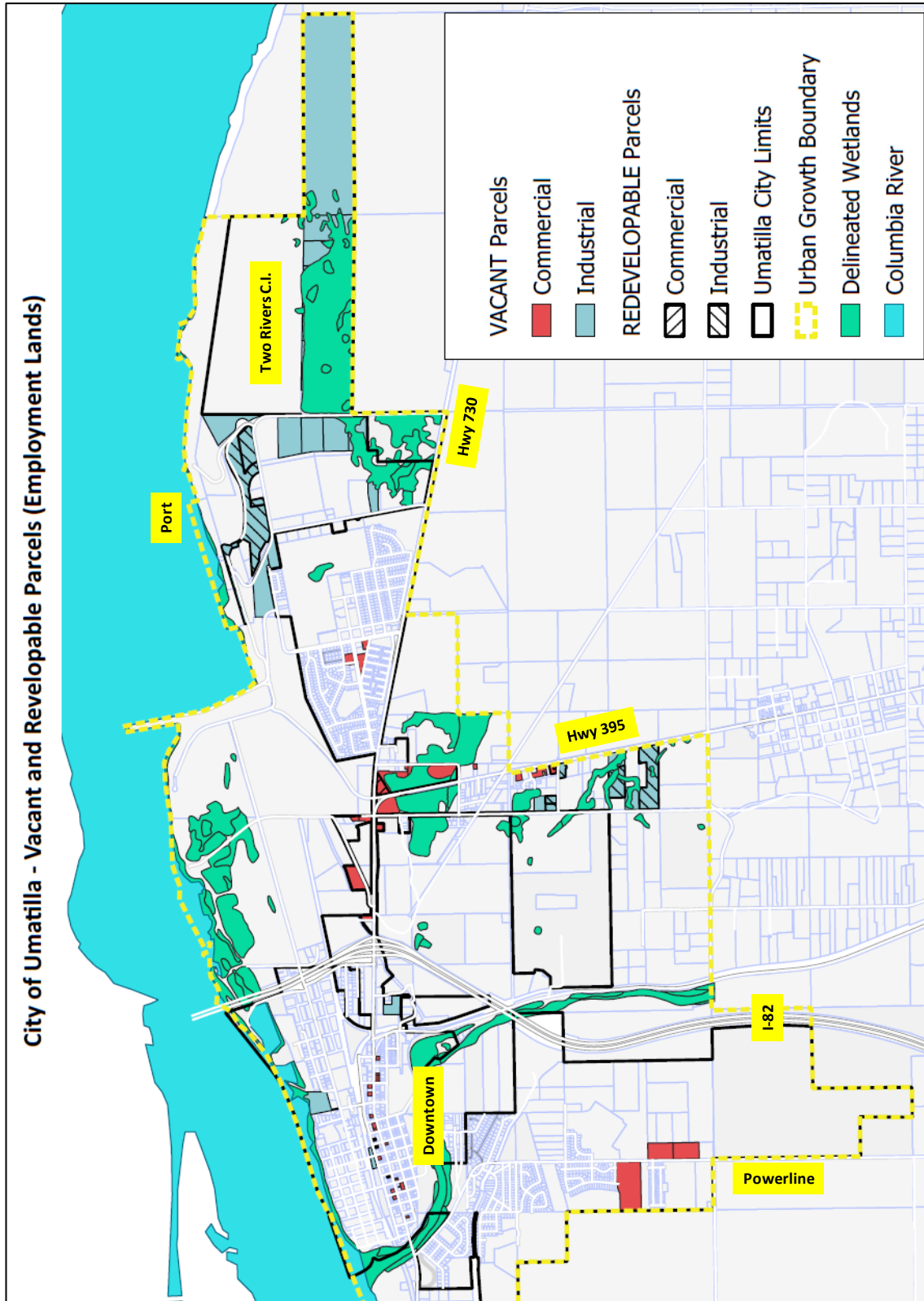
**FIGURE 5.04: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**



Source: Umatilla County, Umatilla, Johnson Economics LLC

The following figure shows a map of the Buildable Land Inventory for commercial and industrial parcels. Wetland constraints are highlighted to show how they hamper some of nominally vacant land supply. Where wetlands constrain a parcel, these parcels may be partially or wholly discounted from the inventory.

FIGURE 5.05: MAP OF EMPLOYMENT BUILDABLE LAND INVENTORY (UMATILLA)



Source: Umatilla County, State of Oregon, Johnson Economics LLC

## BUILDABLE LAND INVENTORY VS. 20-YEAR LAND NEED

The inventory of employment land provides a snapshot of the currently local capacity to accommodate more business and jobs. This current available land is compared to the forecasted need for new land over the 20-year planning period, generated in a previous step of this project (Section IV).

The estimate of future land need is presented below. A total need for 309 net acres was identified across a range of building types.

**FIGURE 5.06: SUMMARY OF FORECASTED 20-YEAR LAND NEED BY BUILDING TYPOLOGY (UMATILLA)**

ADJUSTED SCENARIO	DEMAND BY GENERAL USE TYPOLOGY, 2019-2039							Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
Employment Growth	273	132	165	198	412	388	164	1,732
Avg. SF Per Employee	350	600	990	600	1,850	8,000	500	2,542
Demand for Space (SF)	95,600	79,400	163,100	118,900	761,900	3,101,100	81,900	4,401,900
Floor Area Ratio (FAR)	0.35	0.35	0.30	0.30	0.35	0.35	0.25	0.32
Market Vacancy	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	10.0%	5.6%
Implied Density (Jobs/Acre)	39.2	22.9	11.9	20.7	7.8	1.8	19.6	5.6
<b>Net Acres Required</b>	<b>7.0</b>	<b>5.8</b>	<b>13.9</b>	<b>9.6</b>	<b>52.6</b>	<b>214.1</b>	<b>8.4</b>	<b>311.3</b>

Source: Oregon Employment Department, Umatilla, Johnson Economics LLC

There is a total projected 20-year need for 309 acres of buildable employment land in industrial and commercial zones. Roughly 90% of this projected need is for uses most appropriate to industrial zones (Flex, General Industrial, Warehouse, and Data Center), while the remainder is for uses most appropriate for commercial zones (Office, Retail, Institutional).

### Conclusion

This combined identified need (311 acres) is less than the 378 acres of combined buildable employment land noted in Figure 5.02. **It is important to remember that the different categories of employment land are not (necessarily) substitutable.** For instance, a shortage of 10 acres of commercial land, and a surplus of 10 acres of industrial land do not cancel each other.

Also, this does not address the more specific site needs from specific categories of employment land users. **Some of the forecasted growth includes employers who may have specific site needs and preferences that are not reflected in the available buildable inventory, even though *in total* the available parcels sum to a significant amount.**

In particular, there is forecasted demand for more suitable large-lot industrial sites while relatively few of these sites were found in the inventory. This is discussed in greater detail below.

## VI. EMPLOYER SITE NEEDS VS. BUILDABLE LAND SUPPLY

This section compares the more specific site requirements of projected future commercial and industrial users with the specific inventory of prospective employment sites identified within the UGB. Oregon Administrative Rules requires a determination of 20-year employment land need, as well as a determination of need for suitable, readily serviceable land to meet short-term demand.

The following definitions from OAR 660-009-005 are relevant to this discussion:

(2) "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas....

(10) "Short-term Supply of Land" means suitable land that is ready for construction within one year of an application for a building permit or request for service extension. Engineering feasibility is sufficient to qualify land for the short-term supply of land. Funding availability is not required. "Competitive Short-term Supply" means the short-term supply of land provides a range of site sizes and locations to accommodate the market needs of a variety of industrial and other employment uses.

(11) "Site Characteristics" means the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.

(12) "Suitable" means serviceable land designated for industrial or other employment use that provides, or can be expected to provide the appropriate site characteristics for the proposed

As noted in the previous section, the Buildable Land Inventory was screened for major constraints, including current development, floodways, wetlands, steep slopes, and federal ownership. The remaining parcels in the inventory may be buildable but may not meet the specific site requirements of certain users. Others may be part of the long-term supply, but not be well-suited for the short-term supply.

### **Estimated 20-Year Site Needs vs. Current Supply**

The following figures re-present the findings of estimated need and current supply of sites by size, as presented in the preceding sections. Note that the estimate of future needs is approximate, as economic growth is dynamic and difficult to predict. Communities should maintain flexibility and ensure a supply of a variety of site types with short-term availability, as allowed through the Goal 9 EOA process.

As Figure 6.01 presents there is currently estimated to be a sufficient supply of commercial (retail/office/institutional) parcels to meet the projected demand. Most of the demand is estimated to be from employers seeking relatively small sites of five acres or less. Due to higher employment density for commercial uses, some of these may still have sizable workforces, despite smaller sites.



For industrial users, there is an estimated deficit of sites of some sizes. Most notably there is a deficit of suitable large industrial sites, and a deficit of small industrial sites.

**FIGURE 6.01: SUMMARY OF FORECASTED 20-YEAR SITE NEED VS. SITE SUPPLY  
BY LAND USE AND SITE SIZE (ACRES), UMATILLA**

**Estimated 20-year Site NEED**

LAND USE	0 TO .9 acres	1 to 4.9 acres	5 to 9.9 acres	10 to 19.9 acres	20 to 29.9 acres	30 to 49.9 acres	50 to 99.9 acres	100+ acres	TOTAL
Office	10	1	0	0	0	0	0	0	11
Institutional	2	2	0	0	0	0	0	0	4
Retail	5	2	0	0	0	0	0	0	7
<b>Commercial:</b>	<b>17</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>
Flex/B.P	3	2	1	0	0	0	0	0	6
Gen. Ind.	5	3	1	0	0	0	0	0	9
Warehouse	2	3	2	0	0	0	1	0	8
Data Center	0	0	0	0	0	0	1	2	3
<b>Industrial:</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>26</b>
<b>TOTAL:</b>	<b>27</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>48</b>

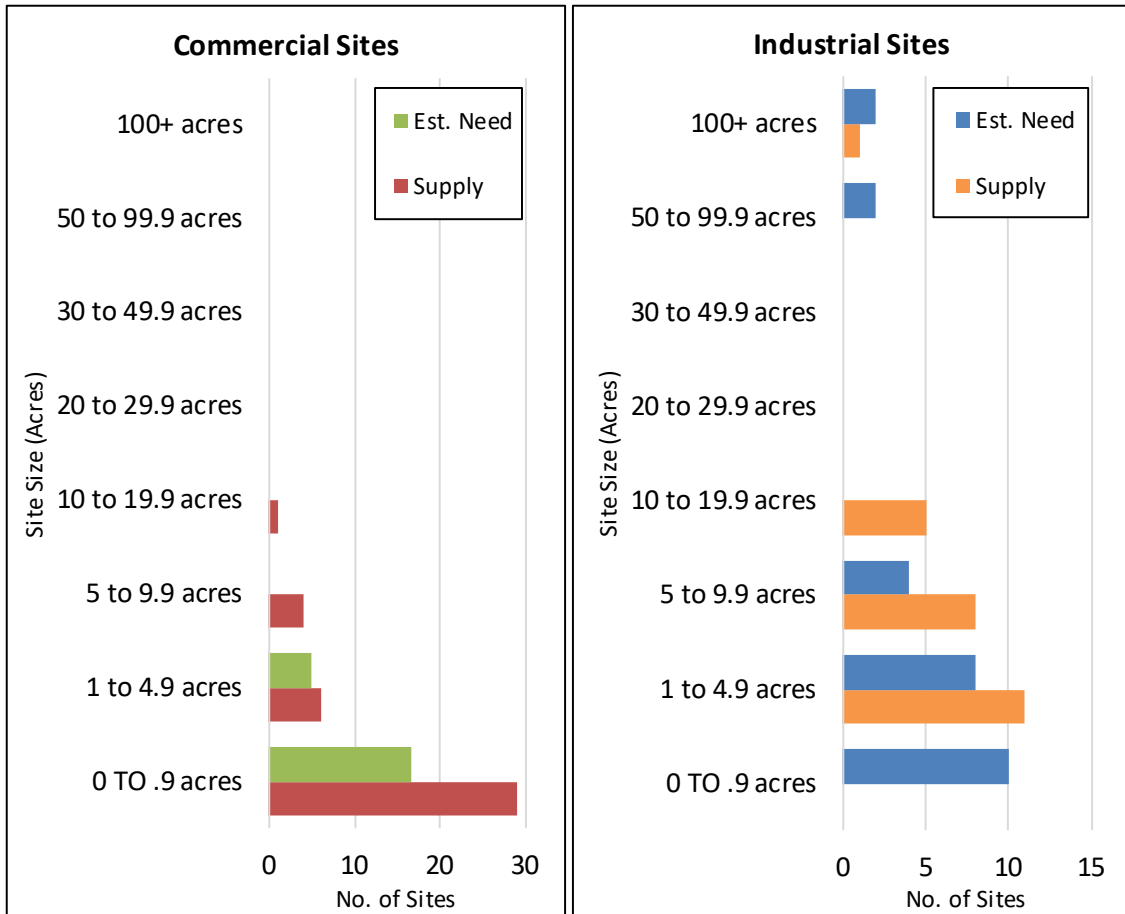
**Estimated Employment Land SUPPLY (BLI)**

LAND USE	0 TO .9 acres	1 to 4.9 acres	5 to 9.9 acres	10 to 19.9 acres	20 to 29.9 acres	30 to 49.9 acres	50 to 99.9 acres	100+ acres	TOTAL
C-1	4	1	1	0	0	0	0	0	6
DC	14	0	0	0	0	0	0	0	14
DT	8	0	0	0	0	0	0	0	8
GC	2	3	1	0	0	0	0	0	6
MC	1	2	0	0	0	0	0	0	3
NC	0	0	2	1	0	0	0	0	3
<b>Commercial:</b>	<b>29</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>
M1	0	8	2	1	0	0	0	0	11
M2	0	3	6	4	0	0	0	1	14
<b>Industrial:</b>	<b>0</b>	<b>11</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>25</b>
<b>TOTAL:</b>	<b>29</b>	<b>17</b>	<b>12</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>65</b>

Source: Oregon Employment Department, Umatilla, Johnson Economics LLC

Figure 6.02 presents the same data in chart form.

**FIGURE 6.02: SUMMARY OF FORECASTED 20-YEAR SITE NEED VS. SITE SUPPLY  
BY LAND USE AND SITE SIZE (ACRES), UMATILLA**



Source: Oregon Employment Department, Umatilla, Johnson Economics LLC

**Identified Industrial Site Deficits**

**Large Lot:** The specific site deficits identified are for large industrial parcels. This finding is the result of strong projected growth in the information sector, and specifically data centers and cloud computing facilities. The Umatilla and Morrow County regions are now established centers for these facilities in Oregon due to a confluence of available infrastructure and workforce that have attracted these employers over the past decade. These facilities represent huge capital investments and offer high average wages for the region. There are known prospective opportunities to attract more of these facilities in the Umatilla area, which are excellent candidates for a ready short-term supply of suitable sites.

As outlined in the matrix of site requirements presented in Appendix A, these users seek large-lot industrial land with excellent power, water, and fiber access. These facilities have thus far used sites of 30 to over 100 acres. These users have stated a preference for very large sites in order to allow for future expansion. The most recent data center development in Umatilla sought a 120-acre site.

Given the projected short-term growth, and prospective long-term growth in this industry, Johnson Economics estimates a need for at least two sites of 100+ acres meeting serviceability requirements for data center or large manufacturing users, and at least two sites of 50+ acres.

In addition, there is a need for an additional large site or sites for potential distribution facilities. This is an identified target industry based on local economic goals, and the Umatilla area provides strong advantages for this type of facility based on its location at the connection of two interstate freeways.

Distribution centers require large sites for warehousing and truck staging, with ready freeway or major highway access for the receiving and shipping of large volumes of goods. For example, the nearby Walmart Distribution Center uses a 190-acre site, while the Fed Ex Freight distribution facility uses a 62.5-acre site. The currently available industrial sites are generally too limited in size and most are too distant from the freeway to serve as suitable candidates for this use.

**Small Lot:** There is also a projected future need from small industrial firms for smaller sites. It is also common for these types of users to also be accommodated in multi-tenant industrial buildings on larger sites. Given the supply of industrial sites in the 5- to 20-acre range that can be subdivided or built with multi-tenant space, it may be less critical to designate new land for these small users at this time. However, policies which facilitate availability of space for small industrial firms within current zones may be warranted.

# APPENDIX A: SITE REQUIREMENTS

The following series of tables summarize key site requirements for a range of prospective tenant types.<sup>5</sup>

CRITERIA		PROFILE	A	B	C	D	E	F	G	H	I	J
		Computer & Electronic Manufacturing (High-Tech R&D)	Software & Media	Multi-Tenant Office	Food Processing	Other Manufacturing	Life/Bioscience R&D Campus	Wholesaling	Retail	Data Center	Incubator	
<b>GENERAL REQUIREMENTS</b>		Use is permitted outright, located in UGB or equivalent and outside flood plain; and site (NCDA) does not contain contaminants, wetlands, protected species, or cultural resources or has mitigation plan(s) that can be implemented in 180 days or less.										
<b>PHYSICAL SITE</b>												
1	TOTAL SITE SIZE* Competitive Acreage**	5 - 100+	5 - 15	5 - 20	5 - 25+	5 - 50+	20 - 100+	10 - 100+	5 - 20	10 - 100+	5 - 25+	
2	COMPETITIVE SLOPE: Maximum Slope	0 - 5%	0 - 7%	0 - 7%	0 - 5%	0 - 5%	0 - 7%	0 - 3%	0 - 7%	0 - 7%	0 - 5%	
<b>TRANSPORTATION</b>												
3	TRIP GENERATION: Average Daily Trips per Acre	40 - 60	80 - 200 <sub>1</sub>	120 - 240 <sub>2</sub>	50 - 60	40 - 50	60 - 150	50 - 60 <sub>3</sub>	400 - 500 <sub>4</sub>	20 - 30	40 - 50	
4	MILES TO INTERSTATE OR FREIGHT ROUTE: Miles	w/in 10	w/in 5	w/in 5	w/in 30	w/in 20	w/in 5	w/in 5	w/in 5	w/in 30	N/A	
5	MILES TO FREQUENT TRANSIT SERVICE (15 MIN OR LESS) Miles	0.6	0.5	0.8	< 0.1	0.2	0.1	0.3	< 0.1	0.1	< 0.1	
6	RAILROAD ACCESS: Dependency	Preferred	Not Required	Not Required	Preferred	Preferred	Preferred	Preferred	Preferred	Avoid	Avoid	N/A
7	PROXIMITY TO MARINE PORT: Dependency	Preferred	Not Required	Not Required	Preferred	Preferred	Preferred	Preferred	Preferred	Not Required	Not Required	N/A
8	PROXIMITY TO INTERNATIONAL/REGIONAL AIRPORT: Dependency	Competitive	Required	Preferred	Preferred	Preferred	Required	Not Required	Not Required	Competitive	N/A	
	Distance (Miles)	This criteria cannot be met in Eastern Oregon										

<sup>5</sup> Business Oregon, Mackenzie.

PROFILE		A	B	C	D	E	F	G	H	I	J	
		Computer & Electronic Manufacturing (High-Tech R&D)	Software & Media	Multi-Tenant Office	Food Processing	Other Manufacturing	Life/Bioscience R&D Campus	Wholesaling	Retail	Data Center	Incubator	
CRITERIA												
<b>UTILITIES</b>												
9	WATER:	Min. Line Size (Inches/Dmtr)	12" - 16"	6" - 8"	8" - 10"	12" - 16"	6" - 10"	8" - 12"	6" - 10"	8" - 12"	16"	4" - 8"
		Min. Fire Line Size (Inches/Dmtr)	12" - 18"	8" - 10"	8" - 12"	10" - 12"	8" - 10"	8" - 12"	8" - 10"	8" - 12"	10"-12"	6" (or alternate source)
		High Pressure Water Dependency	Required	Not Required	Not Required	Required	Not Required	Preferred	Not Required	Not Required	Required	Not Required
		Flow (Gallons per Day per Acre)	5,200	1,200	1,500	3,150	1,850	2,450	1,200	1,800 <sub>s</sub>	50 - 200 <sup>+</sup>	1,200
10	SEWER:	Min. Service Line Size (Inches/Dmtr)	12" - 18"	6" - 8"	8" - 10"	10" - 12"	6" - 8"	10" - 12"	6" - 8"	6" - 10"	8" - 10"	4" - 6" (or on-site source)
		Flow (Gallons per Day per Acre)	4,700	1,000	2,000	2,600	1,700	2,000	1,000	1,500 <sub>s</sub>	1,000 <sup>±</sup>	1,000
11	NATURAL GAS:	Preferred Min. Service Line Size (Inches/Dmtr)	6"	4"	4"	4"	4"	6"	4"	4" - 6"	4"	N/A
		On Site	Competitive	Preferred	Competitive	Preferred	Competitive	Competitive	Preferred	Competitive	Preferred	Preferred
12	ELECTRICITY:	Minimum Service Demand	4 - 6 MW	1 - 2 MW	0.5 - 1 MW	2 - 6 MW	0.5 MW	2 - 6 MW	0.5 MW	0.5 - 1 MW	5 - 25 MW	1 MW
		Close Proximity to Substation	Competitive	Competitive	Preferred	Not Required	Preferred	Competitive	Not Required	Preferred	Required, could be on site	Not Required
		Redundancy Dependency	Preferred	Preferred	Preferred	Not Required	Not Required	Competitive	Not Required	Preferred	Required	Not Required
13	TELECOMMUNICATIONS:	Major Communications Dependency	Required	Required	Required	Preferred	Required	Required	Preferred	Required	Required	Preferred
		Route Diversity Dependency	Required	Required	Required	Not Required	Not Required	Required	Preferred	Preferred	Required	Not Required
		Fiber Optic Dependency	Required	Required	Required	Preferred	Preferred	Required	Competitive	Preferred	Required	Not Required

PROFILE		A	B	C	D	E	F	G	H	I	J
CRITERIA		Computer & Electronic Manufacturing (High-Tech R&D)	Software & Media	Multi-Tenant Office	Food Processing	Other Manufacturing	Life/Bioscience R&D Campus	Wholesaling	Retail	Data Center	Incubator
14	<b>SPECIAL CONSIDERATIONS:</b>	<p>Acreage allotment includes expansion space (often an exercisable option). Very high utility demands in one or more areas common. Sensitive to vibration from nearby uses.</p>	<p>1: Research &amp; Development @ 80 ADTs per acre on the low end, estimated 200 ADTs per acre for general office on the high end.</p> <p>Location specific.</p>	<p>2: Range represents FAR 0.25 - 0.5 of office uses</p> <p>Location to other cluster industries.</p>	<p>May require high volume/supply of water and sanitary sewer treatment. Often needs substantial storage/yard space for input storage. Onsite water pre-treatment needed in many instances.</p>	<p>Adequate distance from sensitive land uses (residential, parks) necessary. Moderate demand for water and sewer. Higher demand for electricity, gas, and telecom.</p>	<p>High diversity of facilities within business parks. R&amp;D facilities benefit from close proximity to higher education facilities. Moderate demand on all infrastructure systems.</p>	<p>3: General warehousing rates</p>	<p>4: Based on discount warehouse @ 0.25 FAR</p> <p>5: Dependent on use, i.e., brewery vs. restaurant</p> <p>Location to cluster industries.</p>	<p>Site size differs due to land cost and availability. Urban-area centers may require 10-20 acres, while E. Oregon centers will typically use larger sites. Also the trend is towards increasing site size as cloud storage needs continue to increase. Power delivery, water supply, and security are critical. Surrounding environment (vibration, air quality, etc.) is crucial. May require high volume/supply of water and sanitary sewer treatment.</p>	<p>Often established by municipalities and have symbiotic relationships with colleges and/or universities.</p>

**Terms:**

More Critical ↑	'Required' factors are seen as mandatory in a vast majority of cases and have become industry standards.
	'Competitive' significantly increases marketability and is <i>highly recommended by Business Oregon</i> . May also be linked to financing in order to enhance the potential reuse of the asset in case of default.
Less Critical	'Preferred' increases the feasibility of the subject property and its future reuse. Other factors may, however, prove more critical.
	'Not Required' does not apply for this industry and/or criteria.
	'Avoid' factors act as deterrents to businesses in these industries because of negative impacts.
*Total Site: Building footprint, including buffers, setbacks, parking, mitigation, and expansion space.	
**Competitive Acreage: Acreage that would meet the site selection requirements of the majority of industries in this sector.	
† Data Center Water Requirements: Water requirement is reported as gallons per MWh to more closely align with the Data Center industry standard reporting of Water Usage Effectiveness (WUE).	
‡ Data Center Sewer Requirements: Sewer requirement is reported as 200% of the domestic usage at the Data Center facility. Water and sewer requirements for Data Centers are highly variable based on new technologies and should be reviewed on a case-by-case basis for specific development requirements.	

The 14 site requirements listed on the matrix provide a basis for establishing a profile of the physical and other site needs of the identified industry. The site requirements are intended to address the typical needs of each of the industry categories, and it is recognized that there will likely be unique or non-typical needs of a specific user that will need to be evaluated by on a case-by-case basis.

The following describes a few general requirements that apply to *all* industry type categories under consideration and then an overview of the 14 site requirements listed on the matrix.

### **General Requirements:**

- The underlying zoning on the site must allow the use outright within the identified category. For example, no zone change, conditional use and/or similar land use review is necessary. Many jurisdictions typically require a design or development review which is acceptable, since the timeframe for obtaining such design-related approvals will be addressed in the State's rating system.
- The site under consideration must be located geographically within a UGB.
- The site is not located within a 100-year floodplain as mapped by FEMA, although sites with approved FEMA map amendments (e.g., LOMA & LOMR) are acceptable.
- The net contiguous developable area (NCDA) of the site does not include hazardous contaminants as verified by a Level 1 Environmental Report, or a Level 2 Report that has received a No Further Action approval from DEQ; or existing wetlands or other natural features which are regulated at the State, Federal or local level; or federally endangered species.
- The NCDA does not contain any cultural or historical resources that have been identified for protection at the State, Federal or local level.
- The NCDA does not have mitigation plans that can be implemented in 180 days or less.

### **Site Requirements:**

1. **Total Site Size:** The site size is taken to mean the size of the building footprint and includes buffers, setbacks, parking, mitigation, and expansion space.
2. **Competitive Slope:** Most industrial uses require relatively large building footprints that do not accommodate steps in floor slabs, and sloping topography will require extensive excavation and retaining systems that increase development cost over flat sites. The figures given are the preferred maximum average slope across the developable portion of the site, recognizing that sites with additional area outside the building, or developments with multiple building pads, generally will have lower slope earthwork costs than sites with limited space outside the building footprint.
3. **Trip Generation:** Sites are frequently limited by a jurisdiction to a specified total number of vehicle trips entering and exiting the site. This site requirement is an estimate of the minimum number of average daily trips per acre (based on the range of building coverage) that should be available for each of the industrial categories based on the Institute of Traffic Engineers (ITE) Manual-Ninth Edition. The following table lists the ITE codes used to estimate average trips for the industry profiles represented in the matrix.

4. **Miles to Interstate or Freight Route:** With few exceptions, access to major freeways or freight routes is critical for the movement of goods. This site requirement indicates the typical maximum range of distance, in miles, from the site to the freeway or highway access. The roadways/intersections between the site and freeway/highway must generally operate at a level of service 'D' or better in accordance with the Highway Capacity Manual methodologies and general engineering standards.
5. **Miles to Frequent Transit Service:** Businesses located walking distance (within one-quarter of a mile) to a bus stop that is serviced by a frequent bus line enjoy a competitive advantage over others that are more limited in transportation access options.<sup>6</sup>
6. **Railroad Access:** The need for access to railroad for the movement of goods within each industrial category is dependent upon individual users, so the site requirements are identified as either "Preferred," "Not Required," or "Avoid" in some cases where the presence of rail may be considered a deterrent to business.
7. **Proximity to Marine Port:** The need for access to a marine port for the movement of goods within each industrial category is dependent upon individual users.
8. **Proximity to International/Regional Airport:** The need for access to a regional airport for the movement of goods or business travel within each industrial category is dependent upon individual users.
9. **Availability of Water:** This requirement indicates the minimum sizes of domestic water and fire lines immediately available to the site. In certain rural cases, a comparable supply from an on-site water system (i.e., well or reservoir with available water rights) may be acceptable. In addition to lines sizes, preference for high-pressure water capabilities and average flow demand in gallons per day is specified for each industry type.
10. **Availability of Sanitary Sewer:** This requirement indicates the minimum size of public sanitary sewer service line immediately available to the site. In certain rural cases, an on-site subsurface system providing a comparable level of service may be acceptable. Sewer flow requirements were determined by calculating a percentage of the water flow for each industry type.
11. **Natural Gas:** This requirement indicates the minimum size natural gas line that is immediately available to the site. It is assumed that the pressure demand for all industry categories is 40-60 psi.
12. **Electricity:** This requirement indicates the minimum electrical demand readily available to each industry and where proximity to a substation and redundancy dependency rank on the continuum of less critical to more critical. Estimated demand is based on review of existing usage from local utility providers, referencing industrial NAICS codes for the various profiles.
13. **Telecommunications:** This requirement indicates whether the availability of telecommunication systems are readily available, and where major commercial capacity, route diversity and fiber optic lines rank on the continuum of less critical to more critical. All sites are assumed to have a T-1 line readily available.

## INDUSTRY PROFILES

The following provides supplemental information for the attached Industrial Development Profile Matrix. The preceding matrix identifies 10 industry type categories (labeled A-J on the matrix) and 14 "site needs" which will assist in evaluating selected sites using the criteria of a given industry type.

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<sup>6</sup> We have defined "frequent bus line" as one with service occurring in no longer than 15 minute intervals.



The industry categories have been established based primarily on Business Oregon information (including input from various state agencies). Due to the wide range and constantly evolving characteristics of uses, borderline and/or non-typical applications will likely arise and will be evaluated on a case-by-case basis. It should be noted that certain industry types might have unique requirements, such as proximity to an international airport, which may require an additional category. It should also be noted that the industry types represent the primary use of the industry, and exclude secondary/accessory uses (e.g., training facilities, etc.) at this

## **A: Food Processing**

### *a) Description:*

Generally, this category includes industries that manufacture or process foods and beverages for human or animal consumption. Although this category has similar siting characteristics as Other Manufacturing, the unique needs associated with food processing, such as high-volume water and/or pressure demand, warrant this separate category. Broadly, there are two types of food processing categories:

- (1) raw materials; and
- (2) assembling.

Additionally, there is a packaging and warehousing component to these facilities.

### *b) Representative Industry Types:*

- Production foods/goods (e.g., bakeries)
- Fruits and vegetables
- Breweries and wineries
- Dairy
- Bottling/beverages

### *c) Representative Companies:*

- Ajinomoto (Portland)
- Beaverton Foods Inc. (Hillsboro)
- Cabroso (Medford)
- Rogue Creamery
- Hermiston Foods (Hermiston)
- Nancy's Yogurt (Eugene)
- Reser's Foods (Beaverton)
- Norpac (Salem and Stayton)
- Tillamook Dairy (Tillamook)
- Coca Cola bottling (statewide)
- Pepsi bottling (statewide)
- Full Sail Brewing (Hood River)
- Hood River Juice Company (Hood River)

## **B: Other Manufacturing**

### *a) Description:*

This category is intended to include industries that utilize relatively less intensive manufacturing processes, more assembly activities, and direct transfer to wholesale and domestic consumers. Typically, these facilities are freestanding, devoted to a single use, and emphasize manufacturing space over office space. Generally, these non-high-tech industries may be located on individual sites or in business/industrial parks and have less effect on surrounding uses. This category also includes some industrial service uses that are engaged in serving other businesses, such as an industrial laundry facility.

### *b) Representative Industry Types:*

- Electronic assembly support

- Wood products
  - Automobile products
  - Steel/metals
  - Building materials fabrication and processing
- c) *Representative Companies:*
- Warn Industries (Clackamas)
  - JV Northwest (Canby)
  - Hartung Glass (Wilsonville)
  - Oregon Iron Works (Clackamas)
  - Daimler Trucks North America (Portland)
  - Maxim Integrated (Beaverton and Hillsboro)
  - Oregon Steel Mills (Portland)

### **C: Wholesaling**

- a) *Description:*  
 The wholesale industry comprises companies involved in wholesaling merchandise and other goods such as mining, agriculture, manufacturing, and certain information industries. This industry typically represents an intermediate step in the production and distribution of goods and merchandise, as wholesalers generally sell goods intended for resale by a retailer. In some cases, users and customers may purchase these goods directly from a wholesaler with a retailer.
- b) *Representative Industry Types:*
- Automobile and Other Motor Vehicle Merchant Wholesalers
  - Furniture Merchant Wholesalers
  - Office Equipment Merchant Wholesalers
  - Hardware Merchant Wholesalers
  - Farm and Garden Machinery and Equipment Merchant Wholesalers
  - Sporting and Recreational Goods and Supplies Merchant Wholesalers
- c) *Representative Companies:*
- Cascade Wholesale Hardware
  - Costco Wholesale
  - Pearlier Auto Wholesale

### **D: Retail**

- b) *Description:*  
 This industry contains businesses that sell merchandise, largely without any transformation of the good, with services largely being ancillary to the sale of said merchandise. The businesses usually receive goods from wholesalers, and typically do not transform the good before its final sale to the user or customer. There are sixty-nine subsectors of retail trade, some of which are reflected in the bulleted list below.
- c) *Representative Industry Types:*
- Specialty food/grocery
  - Coffee shops/cafes
  - Theater/recreation/entertainment
  - Brew pub/wine or bottle shops
  - Full service local restaurants
  - Food car pods
  - Bookstores and boutiques
  - Wellness and spa services
  - Hotel & hospitality
  - Niche manufacturing (bike, bakery, outdoor, etc.)

d) *Representative Companies:*

- New Seasons
- Dutch Bros. Coffee
- McMenamins Cornelius Pass Roadhouse
- P.F. Chang's
- Barnes & Noble
- Align Wellness Center
- Embassy Suites
- Orenco Station Cyclery

**E: Incubator**

a) *Description:*

This industry type is often established by local municipalities and has a symbiotic relationship with colleges and universities within the vicinity. Business incubators are designed to help new and small businesses in the start-up and early growth phases of development, through providing a flexible combination of business development tools, facilities and resources, and personal contacts.

b) *Representative Industry Types:*

- Not applicable for this industry type, as the incubators serve as cultivating space for several uses to grow in their nascent business stages.

c) *Representative Examples:*

- Launch Pad Baker City
- Microenterprise Investors Program of Oregon (Portland)
- BESThq (Beaverton)
- Forge Portland
- WeWork (Portland)

**F: Data Center**

a) *Description:*

Data centers are classified under NAICS 5182: Data Processing, Hosting, and Related Services. We consider them separately from other "information and software" activities because the land and utility needs are far different. Over the just the last five years, unprecedented growth in demand for data hosting has developed an entirely new segment of the industrial landscape in Oregon attracted to a generally temperate climate, low overall disaster risk, low utility rates from renewable sources, and abundant water.

The growth outlook for data center siting is strong, as high growth rates for streaming, software as a service (SaaS), and cloud data and processing across the industry creates an accelerating need for hosting services. Global data center demand is expected to grow threefold over just the next five years.<sup>7</sup> Key areas like the Columbia Basin, Central Oregon and Hillsboro compete for these industrial users.

b) *Representative Companies:*

- Vadata
- Google
- Apple
- Facebook
- ViaWest
- Adobe

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<sup>7</sup> Cisco Global Cloud Index (2015).

## Appendix B: Buildable Land Inventory

### MEMORANDUM

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To: Tamra Mabbott, Community Development Director  
Technical Advisory Committee

From: Johnson Economics

Subject: Economic Opportunities Analysis, City of Umatilla, OR  
Inventory of Buildable Employment Lands

#### INTRODUCTION

This memo summarizes an interim step in the Economic Opportunities Analysis. The inventory of employment land provides a snapshot of the currently local capacity to accommodate more business and jobs. This current available land will be compared to the forecasted need for new land over the 20-year planning period.

Employment land includes land zoned for industrial, retail or other commercial use (i.e. office), and may also include mixed-use zoning that allows for employment uses. This inventory includes vacant parcels with the proper zoning, as well as “redevelopable” parcels. (The methodology used in this analysis is described in detail below.)

For planning purposes, this type of inventory is often called a Buildable Lands Inventory (BLI).

#### METHODOLOGY

The Buildable Lands Inventory (BLI) used in this analysis is based on tax account data, zoning and other key mapping information provided by the City of Umatilla, Umatilla County, and the state. The data was provided in Geographic Information Systems (GIS) compatible format, providing information on land use, parcel size and other relevant data categories on the taxlot level.

The tax account data was used to identify vacant and redevelopable parcels in Umatilla with their Urban Growth Boundary (UGB). The identified candidate parcels were then further screened and refined by JOHNSON ECONOMICS.

In keeping with State requirements, the BLI includes an assessment of vacant buildable lands and redevelopable parcels. This analysis applied the “safe harbor” assumptions allowed under state rules to determine the infill potential of developed parcels (OAR 660-024-0050).

The Buildable Lands Inventory relied on the following sources:

- Umatilla County Geographic Information System (GIS) data
- DLCDC GIS data
- Google Earth
- Assessment of environmental constraints
- City staff input



## Appendix B

- Advisory Committee input
- Site visits

### **Identification of Vacant Parcels**

JOHNSON ECONOMICS used the most recent available tax account data from Umatilla County to identify those parcels located in appropriate commercial or industrial zones and determine whether they are developed or undeveloped. The County supplied taxlot data in GIS format. Johnson Economics applied the following steps to further refine the Buildable Lands Inventory:

- 1) Isolate the taxlots located within Umatilla's UGB. The shapefile contains data on the individual property tax accounts associated with each taxlot in the county.
- 2) Using zoning layers, isolate those taxlots that are located in appropriate employment zones, including industrial and commercial areas.
- 3) Through a combination of parsing individual taxlot data and aerial map surveying, develop preliminary list of qualified vacant parcels. For this preliminary analysis, all vacant lots were included regardless of size.
- 4) Using staff and advisory committee feedback, additional GIS data and surveying, and site visits, the vacant inventory was further refined to remove anomalies or misidentified parcels.

### **Identification of Redevelopable Parcels**

In order to identify those developed parcels which might accommodate additional development, JOHNSON ECONOMICS applied the so-called "safe harbor" provisions of the Oregon Administrative Rules, which provide cities a systematic means to estimate the development capacity of larger parcels with a limited amount of existing development:

#### **OAR 660-024-0050**

#### **Land Inventory and Response to Deficiency**

...

- (3) As safe harbors when inventorying land to accommodate industrial and other employment needs, a local government may assume that a lot of parcel is vacant if it is:
  - (a) Equal to or larger than one-half acre, if the lot or parcel does not contain a permanent building;
  - or
  - (b) Equal to or larger than five acres, if less than one-half acre of the lot or parcel is occupied by a permanent building.

Source: Oregon Administrative Rules, 660-024

Using GIS data, the above criteria were applied to the developed parcels in Umatilla in order to identify those developed parcels which are prospective candidates for infill development or redevelopment.

The Buildable Lands Inventory of Employment Lands was prepared following the preceding steps by JOHNSON ECONOMICS LLC. The findings are presented below with additional discussion.



## Appendix B

### BUILDABLE LANDS INVENTORY – EMPLOYMENT LANDS

The methodology as described above finds an existing buildable employment lands inventory as follows in Umatilla:

#### 1. UMATILLA

**FIGURE 1: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY (UMATILLA)**

ZONE	VACANT		REDEVELOPABLE		TOTAL	
	Parcels	Acreage	Parcels	Acreage	Parcels	Acreage
C-1	4	8.5	2	1.0	6	9.5
DC	11	2.2	3	0.4	14	2.6
DT	8	1.4	0	0.0	8	1.4
GC	6	10.0	2	3.6	8	13.5
MC	3	4.1	0	0.0	3	4.1
NC	3	31.4	0	0.0	3	31.4
<b>Commercial Total:</b>	<b>35</b>	<b>57.6</b>	<b>7</b>	<b>4.9</b>	<b>42</b>	<b>62.5</b>
M1	6	23.5	5	27.6	11	51.1
M2	16	247.9	3	16.8	19	264.7
<b>Industrial Total:</b>	<b>22</b>	<b>271.3</b>	<b>8</b>	<b>44.5</b>	<b>30</b>	<b>315.8</b>
<b>TOTAL:</b>	<b>57</b>	<b>328.9</b>	<b>15</b>	<b>49.4</b>	<b>72</b>	<b>378.3</b>

Source: Umatilla County, State of Oregon, Johnson Economics LLC

The inventory identifies 378 acres of vacant or potentially redevelopable land in the commercial and industrial zones. 87% of the acreage is identified as “vacant”, and 13% in potential “redevelopment” sites. Roughly 62.5 of the acres are in commercial zones, while nearly 316 acres are industrial.

**FIGURE 2: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**

ZONE	0 TO .99 acres		1 to 4.99 acres		5 to 9.99 acres		10 to 19.99 acres		20 to 29.99 acres		30 to 49.99 acres		50+ acres		TOTALS	
	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage
C-1	4	2.2	1	1.9	1	5.5	0	0.0	0	0.0	0	0.0	0	0.0	6	9.5
DC	14	2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	14	2.6
DT	8	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	1.4
GC	2	1.7	3	5.0	1	6.9	0	0.0	0	0.0	0	0.0	0	0.0	6	13.5
MC	1	0.7	2	3.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	4.1
NC	0	0.0	0	0.0	2	13.4	1	18.0	0	0.0	0	0.0	0	0.0	3	31.4
<b>Commercial Total:</b>	<b>29</b>	<b>8.6</b>	<b>6</b>	<b>10.2</b>	<b>4</b>	<b>25.8</b>	<b>1</b>	<b>18.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>40</b>	<b>62.5</b>
M1	0	0.0	8	20.7	2	13.4	1	17.0	0	0.0	0	0.0	0	0.0	11	51.1
M2	0	0.0	3	10.3	6	39.7	4	53.3	0	0.0	0	0.0	1	161.4	14	264.7
<b>Industrial Total:</b>	<b>0</b>	<b>0.0</b>	<b>11</b>	<b>31.0</b>	<b>8</b>	<b>53.2</b>	<b>5</b>	<b>70.3</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>161.4</b>	<b>25</b>	<b>315.8</b>
<b>TOTAL:</b>	<b>29</b>	<b>8.6</b>	<b>17</b>	<b>41.2</b>	<b>12</b>	<b>78.9</b>	<b>6</b>	<b>88.2</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>161.4</b>	<b>65</b>	<b>378.3</b>

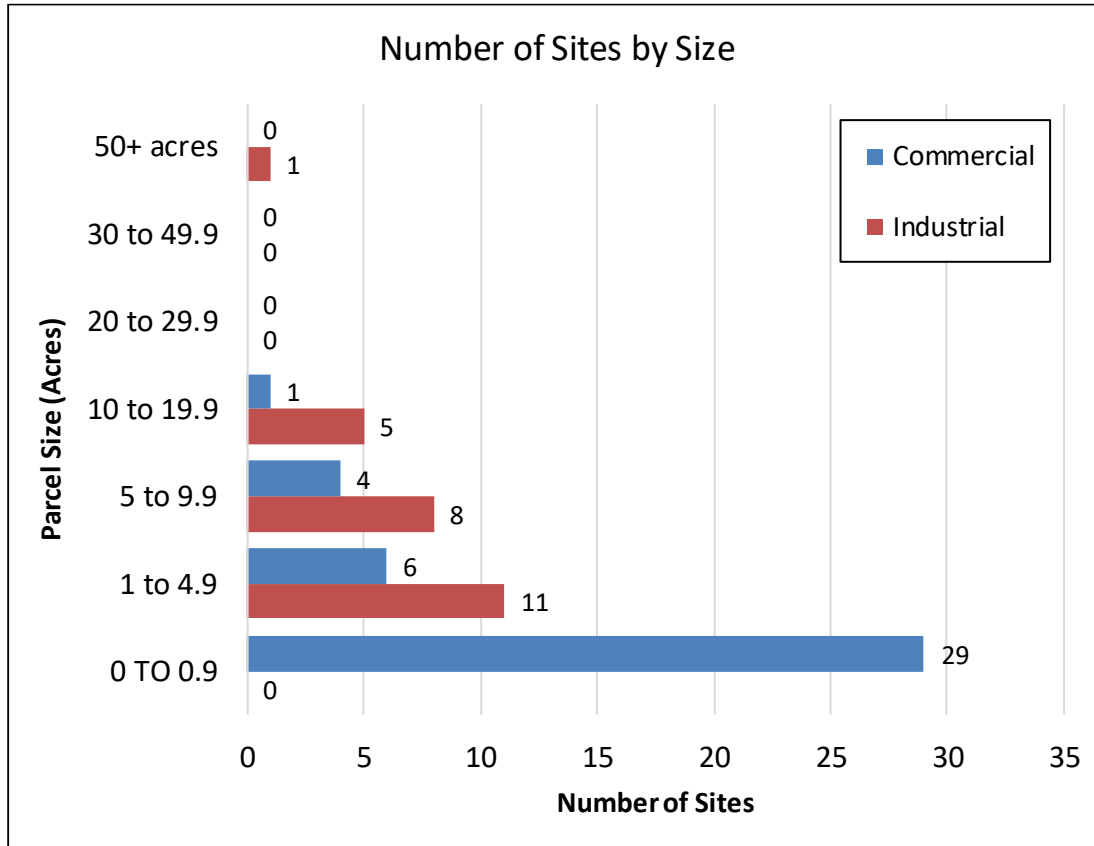
Source: Umatilla County, State of Oregon, Johnson Economics LLC



## Appendix B

Figure 2 presents the inventory broken down by the size of parcels. The distribution is weighted towards smaller parcels, with few unconstrained parcels over 20 acres in size. Figure 3 presents the same data in chart form.

**FIGURE 3: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**



Source: Umatilla County, State of Oregon, Johnson Economics LLC

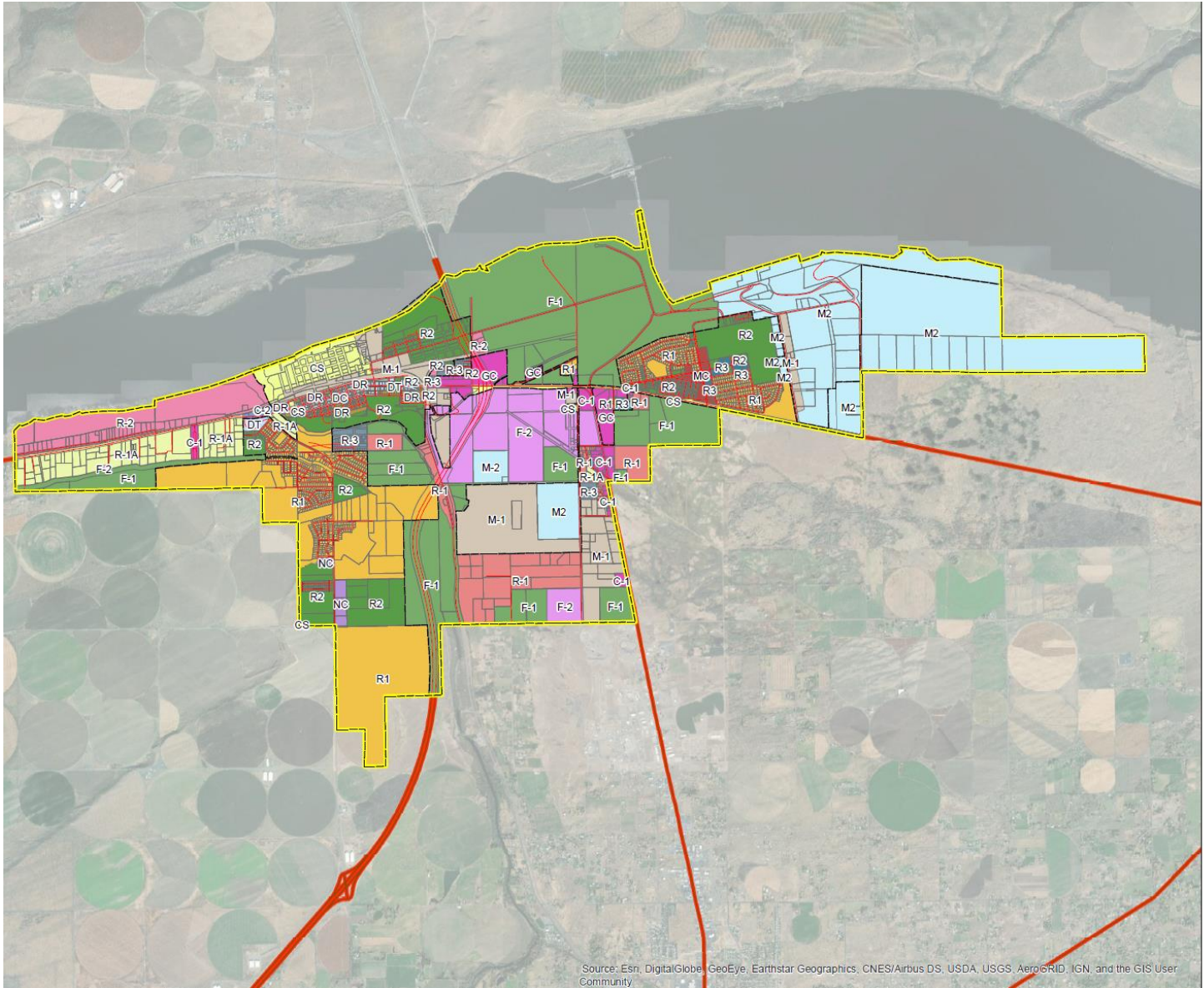
The following set of maps presents the Buildable Land Inventory and some reference information. The maps include:

- Figure 4: City Zoning Map
- Figure 5: Constrained Lands
- Figure 6: Buildable Employment Lands



# Appendix B: Buildable Land Inventory

FIGURE 5: ZONING MAP, UMATILLA



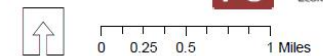
## West Umatilla Cities Buildable Lands Inventory

City of Umatilla:

### Zoning

- Streets
  - Taxlot
  - City Limits
  - Umatilla\_UGB
- Zone**
- Agricultural Residential, R-1
  - Community Services, CS
  - Downtown Commercial, DC
  - Downtown Residential, DR
  - Downtown Transitional, DT
  - Exclusive Farm Use, F-1
  - General Commercial, C-1, GC
  - General Rural, F-2
  - Heavy Industrial, M-2
  - Light Industrial, M-1
  - McNary Center Commercial, MC
  - Medium Density Residential, R2
  - Multi-Family Residential, R3
  - Neighborhood Commercial, NC
  - Single-Family Residential, R1
  - Suburban Residential, R-2
  - Tourist Commercial, C-2
  - Two Acre Residential, R-1A
  - Urban Residential, R-3

Prepared by:  
Angelo Planning Group  
Date: 01/15/19



Coordinate System:  
NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl

This map is intended for informational purposes only. While this map represents the best data available at the time of publication, APG makes no claims, representations, or warranties as to its accuracy or completeness. Metadata available upon request.

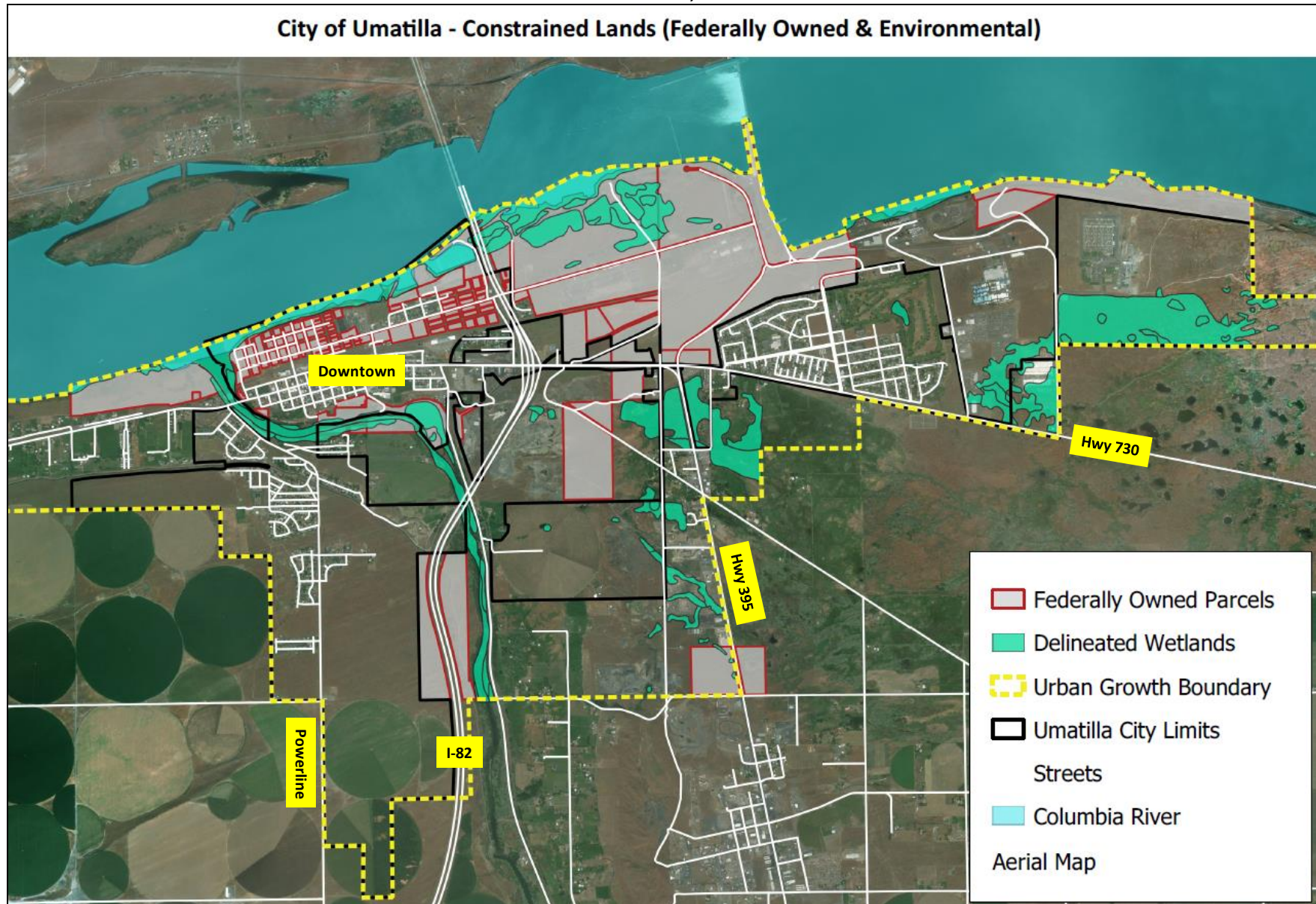
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Source: Angelo Planning Group (2019)





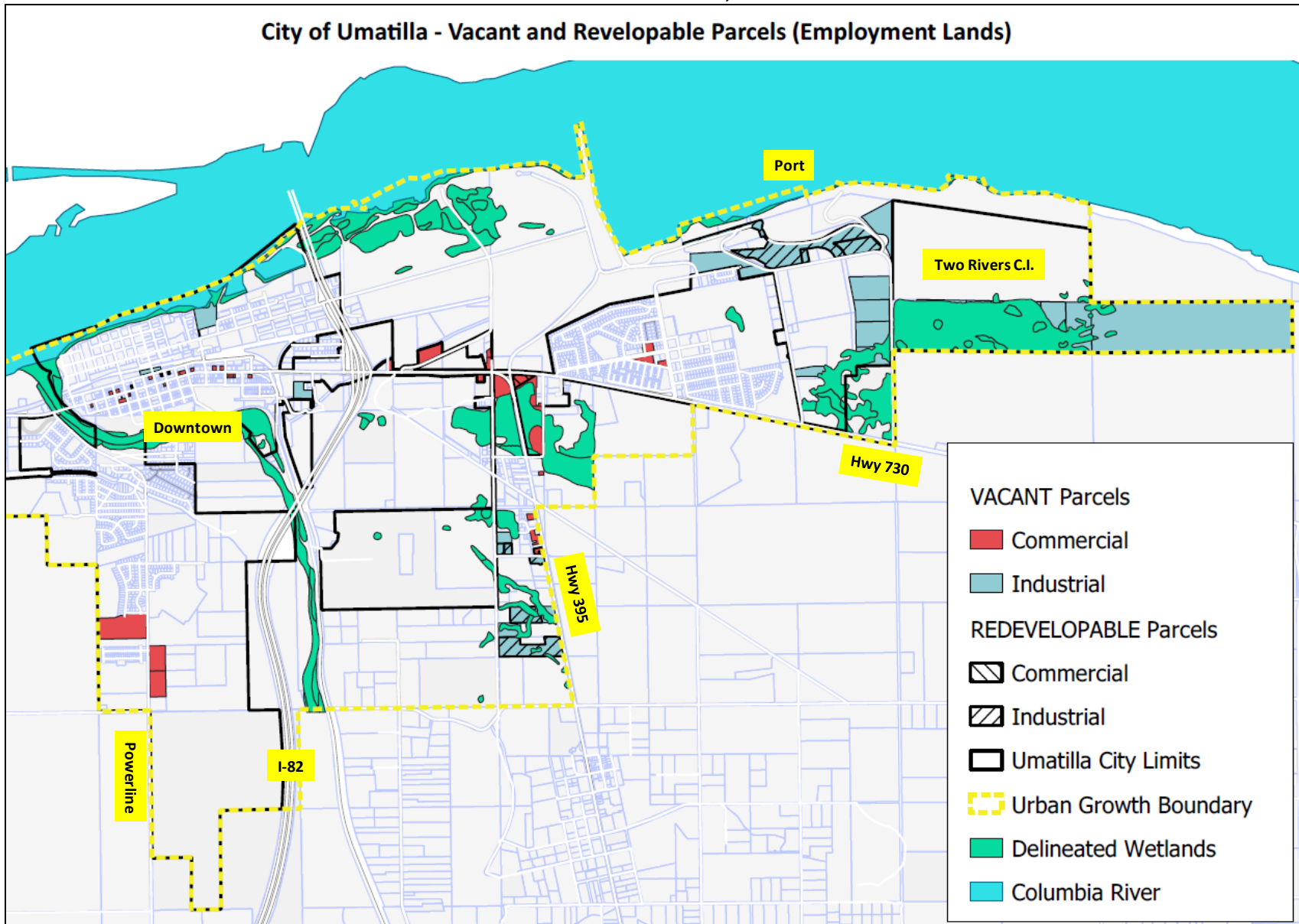
FIGURE 6: CONSTRAINED LAND, UMATILLA



Source: Umatilla County, State of Oregon, Johnson Economics LLC



FIGURE 7: BUILDABLE EMPLOYMENT LANDS, UMATILLA



Source: Umatilla County, State of Oregon, Johnson Economics LLC



# Exhibit C - Umatilla Industrial Area Utility Technical Memorandum



THE  
LANGDON  
GROUP



GATEWAY  
MAPPING  
INC.

OTHER J-U-B COMPANIES

**DATE:** 3/9/2020  
**TO:** Dave Stockdale, City Manager  
City of Umatilla  
**CC:** Scott Coleman, Public Works Director  
Melissa Ince, Finance Director  
**FROM:** Shae Talley, PE  
Tirzah Eyre, EIT  
**SUBJECT:** Umatilla Industrial Area Utility Technical Memorandum



## 1 INTRODUCTION & BACKGROUND

### 1.1 Introduction

The City of Umatilla is currently evaluating the feasibility of providing utility service to an industrial area of interest near the Southwest Boundary of the City. This study area is bordered to the west by County Road 1225 and to the east by Interstate 82 as shown in Figure 1 in Appendix A. City staff have developed a list of infrastructure projects that would be necessary for industrial development of this area including potable water, water storage, sanitary sewer, and industrial wastewater.

In general, utility improvements required to meet existing and future demands are developed through Master Plans; however, the City requires an immediate, preliminary review to assist City staff with ongoing land negotiations and stakeholder discussions. This technical memorandum will summarize the review and provide preliminary cost opinions for each infrastructure project specified by the City.

The infrastructure projects analyzed are as follows:

- Potable Water Main Extension to Serve the Subject Property
- Sanitary Sewer Main Extension to Serve the Subject Property
- Potable Water Storage Improvements – Coyote Reservoir Expansion required to Serve the Subject Property
- Industrial Wastewater (IWW) Treatment and Disposal Alternatives
  - Industrial Wastewater Collected and Conveyed to the Wastewater Treatment Plant (WWTP)
  - Non-Contact Cooling Tower Industrial Wastewater
    - Alternative 1 - Land Apply to Farmland
    - Alternative 2 - Store and Land Apply to Residential Areas

This technical memorandum is for City use only and does not discuss recommended alternatives, other necessary upgrades to the existing system<sup>1</sup>, an implementation plan, nor a schedule, as these items will be included as part of future planning efforts. Future efforts include development of a Water Master Plan and Wastewater Facility Plan in accordance with state guidelines to further develop the improvements outlined in this tech memo. The proposed planning documents will further vet and quantify existing and future water demands and wastewater flows; identify system deficiencies; plan for system expansions; develop improvement alternatives and select a recommended alternative; develop planning level cost estimates; and outline an implementation plan for sustainable management of the City's public utilities.

## 1.2 Study Area

The study area is comprised of approximately 450 acres. For the purposes of this study, the west boundary of the study area is delineated by County Road 1225; the north boundary of the study area is delineated by County Road 1226; the east boundary is delineated by Interstate 82; and the south boundary is delineated by County Road 1225 and Interstate 82. Figure 1 in Appendix A depicts the overall study area.

## 2 PLANNING CRITERIA

The evaluation of infrastructure projects was completed at a planning level of detail. The assumptions and design criteria used herein were developed by J-U-B and City staff and should be reviewed and refined during future planning and design efforts.

### 2.1 Planning Assumptions and Design Criteria

#### 2.1.1 Land Use

Currently, land within the study area is used for agricultural purposes. The City of Umatilla has indicated this land, falling within the future UGB, will be rezoned to light industrial. Based on City input, it is assumed for planning purposes that the study area will be comprised of a single 100-acre data center facility, one 60-acre small food processing facility, and two 40-acre packaging/manufacturing facilities at full buildout. All four facilities are considered light industrial.

#### 2.1.2 Demands and Flows

Buildout demands and flows represent the peak demands and flows anticipated in the system when the study area is fully developed. All undeveloped land around the study area was assumed to remain undeveloped; as such, demands and flows were not considered for this area. As the current study area land use is agricultural, there is no historical data for light industrial facilities within this area. Demands for each lot were determined based on the type of proposed facility and experience gained from analysis of similar sized industries. It was assumed that the data center will remain in operation 24 hours a day while other industries will only operate 8 hours a day.

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<sup>1</sup> Well withdraw increased and delivery capacity to subject property area, for example (not inclusive).

The data center will have both potable water and industrial water demands supplied by the City of Umatilla. Potable demands were determined using Oregon Administrative Rule (OAR) 340-071-0220 Table 2 Quantities of Sewage Flows, as given by the State of Oregon Department of Environmental Quality in their publication Onsite Wastewater Treatment Systems, and assuming the data center has 350 employees on site, as estimated by City staff. Industrial demands were estimated to be 1.2 million gallons per day (MGD) based on PDX63 data center campus information provided by data center personnel.

The data center will have both sanitary sewer and industrial wastewater flows. Sanitary sewer flows were determined using the OAR 340-071-0220 Table 2 factory flow and assuming the data center has 350 employees on site as estimated by City staff. Industrial wastewater flows were estimated to be 440,000 gallons per day (gpd) based on PDX63 data center campus information provided by data center personnel.

All other industries were assumed to have 20 employees onsite per lot and have potable water demands corresponding to OAR 340-071-0220 Table 2. Industrial water demands were assumed to be 1,100 gallons per acre day (GPAD) as determined from the 2018 Umatilla Beneficial Reuse Feasibility Analysis (BRFA) report. Sanitary sewer flows were assumed to be equal to potable water flows and industrial wastewater flows were assumed to be equal to industrial water flows.

For long-term planning purposes, the water demands and wastewater flow assumptions above were also applied to 880 acres of proposed light industrial land at the Army Depot site to adequately size the study area infrastructure that will one day serve the Army Depot. Future water and wastewater infrastructure to serve the Army Depot area were not analyzed. No analysis of infrastructure outside of the study area was performed. It is recommended the City develop a Water Master Plan and Wastewater Facility Plan in accordance with state guidelines to develop the possible infrastructure, such as piping and lift stations, to serve the Army Depot.

The demands and flows above represent the estimated average day demand (ADD) and estimated average day flow (ADF), respectively. To identify the maximum day demand (MDD) and peak hourly demand (PHD), demand peaking factors were assumed based on data from the 2008 Water Master Plan (WMP) and industry values in similarly sized cities. Sanitary and industrial sewer flows only require a peak hourly flow (PHF). A flow peaking factor equivalent to the PDD peaking factor was assumed based on the principle that demand inflows are equal to outflows. The following relationships were used to obtain MDD, PHD, and PHF:

$$\text{MDD} = 1.6 * \text{ADD}$$

$$\text{PHD} = 3.0 * \text{ADD}$$

$$\text{PHF} = 3.0 * \text{ADF}$$

Fire flows were also considered for the MDD scenario. It was assumed that the data center would have fire flows of 2,500 gpm for 2 hours and all light industrial lots would have fire flows of 3,000 gpm for 3 hours. These assumptions were based on the 2018 Umatilla BRFA.

A summary of the assumed demands is given in the following table.

**Table 1 - Demands**

Facility Type	Number of Lots	Total Water Demand (gpm)			Sanitary Sewer Flows (gpm)		Industrial Wastewater Flows (gpm)	
		ADD	MDD	PHD	ADF	PHF	ADF	PHF
Data Center Noncontact RO Reject	1	546	874	1639	26	77	191 25	573 76
Food Processing	1	139	222	417	2	4	138	413
Packaging/Manufacturing	2	93	149	279	2	4	92	275
Army Depot Industrial	35	59	95	178	2	4	58	174

\* Total Water Demand includes both industrial and potable demands.

### 2.1.3 Manning's "n"

The roughness factor is used in the Manning's formula below to relate flow in a gravity pipe (Q) with the cross-sectional area of the flow (A), hydraulic radius of the flow (R), and the pipe slope (S<sub>o</sub>).

$$Q = \frac{1.49AR^{2/3}}{S_o^{1/2}}$$

Typical "n" values range from 0.009 for very smooth glass or new plastic to greater than 0.016 for unfinished concrete. Sanitary sewer pipes, however, develop a slime layer on any pipe material in contact with sewage which provides a relatively consistent roughness regardless of material. To account for this, it was assumed that a Manning's "n" of 0.013 would be used regardless of pipe material and size.

### 2.1.4 Hazen-Williams "C" Coefficient

The "C" coefficient is used in the Hazen-Williams formula below to relate flow in a pressurized pipe (Q) with the cross-sectional area of the flow (A), hydraulic radius of the flow (R), and the slope of the energy grade line (S).

$$Q = 1.318CAR^{0.63}S^{0.54}$$

Typical "C" values range from 60 for rough, aged pipes to 150 for smooth, new pipes. It was assumed that a Hazen-Williams "C" value of 150 would be used regardless of pipe material as all pipes will be constructed new.

### 2.1.5 Pipe Sizing Methodology

Pipes were sized using two different methodologies depending on whether the pipe would be gravity fed or pressurized.

#### 2.1.5.1 Gravity Pipe

All gravity pipes were sized using the Manning's formula and the maximum depth of flow/diameter of pipe (d/D) indicator. This indicates how much of the pipe capacity is being used. When the calculated flow in a pipe reaches the point where the d/D ratio is greater than the maximum design d/D ratio, the pipe diameter is increased. Buildout flows were used to size the proposed pipes.

A graduated scale for maximum d/D, dependent on the size of the pipe, was used and is given in the table below. This allows for a larger safety factor for smaller pipes where variations in land use and extensions of the service area can have large impacts on the available capacity of

the system. Larger pipes have a smaller safety factor because variations in land use tend to balance out over the larger area served by the system. Pipes smaller than 8 inches in diameter were not considered for this analysis and are not recommended as they are more difficult to maintain.

**Table 2 – Depth over Diameter Ratios for Design Pipes**

Size	d/D	Resultant Safety Factor
8"	0.50	2.00
10"	0.55	1.71
12"	0.60	1.49
15"	0.65	1.32
≥ 18"	0.75	1.10

### 2.1.5.2 Pressurized Pipe

Pressurized potable water pipes were sized using the Hazen-Williams formula and the minimum allowable pressure criteria. Per Oregon Health Authority (OHA) OAR 333-061-0025, potable water mains must not have a pressure less than 20 psi at any given time. Two scenarios were evaluated for system pressures: MDD + Fire Flow and PDD. Pipe sizes were initially assumed to be 8-inch diameter pipe and were upsized as necessary to meet OHA pressure requirements.

Pressurized irrigation water pipes were sized using the Hazen-Williams formula, the minimum allowable pressure criteria, and the maximum allowable velocity criteria. Per a 2008 publication by IRZ Consulting titled *Irrigation Practices in the Umatilla and Morrow County Area*, pressurized irrigation pipes must not have a pressure less than 50 psi at any given time. It is also considered good engineering practice to have pipe velocities below five feet per second. All irrigation pipe was analyzed under ADD and PHD scenarios. Pipe sizes were initially assumed to be 4-inch diameter pipe and were upsized as necessary to meet pressure and velocity requirements.

Sanitary and industrial force mains were sized using the Hazen-Williams formula and the maximum allowable velocity criteria. Pipe velocities are not to exceed 8 feet per second (fps) per the State of Oregon Department of Environmental Quality in Oregon Standards for Design and Construction of Wastewater Pump Stations. Pipe sizes were initially assumed to be 8-inch diameter pipe and were upsized as necessary to meet velocity requirements.

## 3 WATER

The City is evaluating the feasibility of providing potable and industrial water to the study area. Analysis of the proposed infrastructure did not include evaluating existing water system capacity, existing well capacity, existing pumping capacity, system storage needs, and water rights availability. The existing system capacity should be analyzed with future master planning efforts to determine if any portion of the system needs to be upsized to accommodate the study area demands.

## 3.1 Proposed Water Supply Infrastructure

### 3.1.1 Water Main Extension

The existing potable water main will be extended south along County Road 1225 until the end of the Cleaver Land. A stub will be provided at the intersection of the Cleaver Land and County Road 1225 to facilitate the anticipated Army Depot industrial area connection. The extension is sized to meet both potable and industrial water demands from the study area and the future Army Depot industrial lots to the southwest.

Water demands for the study area were determined by applying a gallon per capita per day (GPCD) demand for potable needs and a gallon per acre per day (GPAD) demand for industrial needs. Specific values for GPCD and GPAD demands are given in section 2.1.2 above.

The potential buildout water demand was calculated by multiplying the land area by the assumed GPAD unit demand for industrial needs and by multiplying the assumed number of employees by the assumed GPCD unit demand for potable needs. This calculation resulted in a gallon per day (GPD) value. The data center demand did not need to be converted to a per day value since it was already given as such. Gallons per minute (gpm) was determined from GPD. These average day demands (ADD) were converted to maximum day demands (MDD) and peak hourly demands (PHD) using the peaking factors in section 2.1.2 above. The total demands for each scenario are given in Table 1 above.

Pipe size was determined for the preliminary layout using the Hazen-Williams equation. The value for the Hazen-Williams "C" coefficient is described in section 2.1.4. Resulting pipe size is shown in Figure 2 of Appendix A. It should be noted that the stub at the intersection of the Cleaver Land and County Road 1225 will need to be 16-inch pipe. Estimated costs for the water main extension are in Appendix B. It was assumed the City would utilize the existing right of way or acquire a utility easement while possessing the land therefore no easement acquisition cost was included in the estimate. The existing system capacity and condition was not analyzed therefore the cost estimate does not include costs for upsizing the existing system.

### 3.1.2 Coyote Reservoir Expansion

The 2008 WMP recommended a second Coyote Reservoir. As directed by the City, the second reservoir was upsized and assumed adequate to serve the study area. The second Coyote Reservoir was reviewed for probable cost for inclusion in this analysis. No analysis was completed to determine capacity needs, reservoir type, location, and sizing. It is assumed that improvements will be similar to those described in Chapter 4 of the 2008 WMP. Per the City's request, this evaluation assumed a 1-million-gallon tank instead of the 750,000-gallon tank described in the 2008 WMP. The City also requested only a ground level reservoir be considered and to disregard the elevated reservoir alternative proposed in the 2008 WMP.

Costs for a steel, ground level reservoir and appurtenances were based on costs from comparable projects by using a dollar per gallon amount. Estimated costs for the water storage expansion are in Appendix B. It should be noted that this evaluation did not analyze existing well capacities, water rights, nor booster station capabilities.



## 4 SANITARY SEWER

The City is evaluating the feasibility of providing sanitary sewer service to the study area. Only new infrastructure was included in the analysis. The existing sanitary sewer system and wastewater treatment plant capacity and condition were not analyzed. The existing infrastructure should be analyzed with the future master planning efforts to determine if any portion of the system needs to be upsized to accommodate the study area flows.

### 4.1 Sanitary Sewer Main Extension

Due to the topography of the study area, it is not possible to serve the study area with only gravity sanitary sewer. The highest elevation is at the northwest corner of the study area and the land slopes steeply from that point east towards Interstate 82. Adverse slopes as high as 24% would cause a gravity conveyance pipe to be too deep for conventional construction techniques; therefore, a wastewater pumping system is needed to convey flow to the existing collection system. All industrial lots will gravity flow to a lift station which will pump sanitary sewer flows west to County Road 1225 then north to County Road 1226 then west connecting to the existing manhole at the intersection of County Road 1225 and Dark Canyon Road as shown in Figure 3. The lift station and sanitary sewer pipes are sized to meet sanitary and “dirty” (typical strength) industrial sewer demands from industrial lots within the study area. Army Depot industrial lots will be served by a separate lift station on the Army Depot property and this lift station was not included in this analysis.

Sanitary sewer demands for the study area were determined by applying a gallon per capita day per (GPCD) demand as described above for each worker. Industrial sanitary sewer demands were estimated using a gallon per acre per day (GPAD) demand for industrial sanitary sewer flows that will be connected to the sanitary sewer system. Specific values for GPCD and GPAD demands are given in section 2.1.2 above.

It should be noted that domestic sanitary sewer flows are the only flows from the data center that will be incorporated into the sanitary sewer system. Other data center waste streams, such as Reverse Osmosis (RO) reject water, are assumed to be managed onsite by the industrial user (e.g. by evaporation).

The majority of the industrial wastewater will be non-contact cooling tower industrial wastewater from the data center. Non-contact cooling tower industrial wastewater is considered “clean” or low-strength and does not require treatment; therefore, “clean” IWW will be collected and disposed of separately as described in section 5.

Potential buildout flows were calculated by multiplying the land area by the assumed GPAD unit demand for industrial needs and by multiplying the assumed number of employees by the assumed GPCD unit demand for sanitary sewer needs. This calculation resulted in a gallon per day (GPD) value. Gallons per minute (gpm) was determined from GPD. The total flows are given in Table 1 above.

The lift station was placed at the lowest elevation on the southeast corner of the proposed data center property. The lift station was sized to accommodate 110 % of the buildout flows from the study area which is approximately 1,157 gpm. This is desirable to reduce the chance of

overloading the lift station. All lots are served from the back and gravity flow to the lift station. The food processor is served by the 12-inch gravity pipe. The data center and two packaging/manufacturing facilities are served by the 15-inch gravity pipe as shown in Figure 3. A force main will then carry flows west to County Road 1225 and then north to the existing sanitary sewer system. It is important to note that everything east of the lift station will not be able to be served due to steep slopes. Further analysis should take place as part of future planning studies to identify the best location for the lift station.

Pipe sizes were determined for the preliminary layout using Manning's equation. Values for Manning's "n" coefficient and d/D ratios are described in sections 2.1.3 and 2.1.5, respectively. Resulting pipe sizes are shown in Figure 3 in Appendix A. Estimated costs for the water main extension are included with the estimated costs for the sanitary sewer main extension in Appendix B. It was assumed the City would acquire an easement while possessing the land therefore no easement acquisition cost is included in the estimate. While no analysis of the existing system was performed, it is expected that the connection between the larger diameter, proposed sanitary sewer piping and the smaller diameter, existing piping will create a bottleneck. This will require all downstream infrastructure, possibly including the wastewater treatment plant, to be upsized to accommodate the study area flows. The cost estimate does not include costs for upsizing the existing system.

## 5 INDUSTRIAL WASTEWATER

The City is evaluating the feasibility of providing industrial wastewater service to the study area. Each industrial user has different expected industrial wastewater needs. As such, different collection and treatment options were analyzed for the different types of industrial wastewater.

### 5.1 Standard Industrial Wastewater – Pretreat IWW Onsite and Convey to WWTP

Standard industrial wastewater, also referred to as "dirty" (typical strength) industrial wastewater, is all water that has come into contact with contaminants during use and requires treatment. Industrial wastewater is often high-strength as compared to typical sanitary sewer flows. These flows must be properly treated to meet federal and state pretreatment requirements before they can be discharged. For the study area and Army Depot property, it is assumed all industrial lots will be required to pretreat their industrial wastewater to typical sanitary sewer strengths before they can discharge to the sanitary sewer system. Once discharged, study area industrial flows will be carried to the existing wastewater treatment plant (WWTP) for treatment and disposal as described in section 4. Due to topography, a separate lift station at the Army Depot property is expected to be needed to collect flows from the Army Depot and pump the wastewater to the existing system. There is the possibility of constructing an industrial wastewater treatment plant (IWWTP) on the Army Depot property. After construction, all industrial wastewater flows will be carried to the IWWTP and not to the existing WWTP. Analysis and cost estimation of an IWWTP and its collection system was not performed. No analysis of the existing sanitary sewer system or WWTP capacities were performed. Infrastructure needs for the Army Depot, including the additional lift station, were not evaluated and should be analyzed in future master planning efforts.

## 5.2 “Clean” Industrial Wastewater (IWW) Alternatives

Industrial wastewater from the data center noncontact cooling tower is considered “clean” as it was kept within a closed system and did not come into contact with chemical or biological contaminants during use. Due to the low-strength nature of these flows, no treatment is necessary before discharging. Additionally, this “clean” IWW can be used for irrigation. Samples taken from a similar data center campus in Umatilla showed that total dissolved solids (TDS) levels were well below the 450 mg/L maximum for irrigation reuse therefore it was assumed that no dilution of the “clean” wastewater would be needed.

### 5.2.1 Alternative 1 – Land Application to Farmland

This alternative involves land applying the “clean” industrial wastewater to farmland just north of the industrial parcels during the irrigation season. The City will need to develop a contract with a nearby farmer and discharge the “clean” wastewater to the farmer’s irrigation system. At the time of this report, no conversations have been had with farmers regarding taking the water for irrigation. As the project is pursued and landowners are engaged, the alignment should be adjusted as necessary to convey IWW flow to the desired landowner and tie into existing piping. An irrigation water balance was calculated using the expected non-contact cooling IWW flow and typical values for alfalfa irrigation demand, rain, evaporation and temperature. The expected annual IWW flow of 48 million gallons would need approximately 50 acres of irrigated alfalfa (at 42.25 inches of irrigation per year) to dispose of the water. Since some IWW is produced when irrigation demand is low, about three million gallons of storage is needed. If storage is not constructed, about 60 acres of irrigated alfalfa would be needed to receive the IWW during periods of low irrigation demand; however, supplemental irrigation water would be needed to meet irrigation demands during peak irrigation season. It was assumed that all supplemental water would be provided by the farmer and that the farmer would take IWW flows at all times. Graphs of the irrigation water balance on 50 acres and 60 acres are shown in Figure 4 and Figure 5, respectively, in Appendix A. For cost estimation purposes, it was assumed storage would not be constructed and additional irrigation water would be provided by the farmer as needed. Calculations are shown in Appendix C.

Piping will be provided to convey the wastewater from the property line of the data center north to the farmland along County Road 1225. Pumps required for conveyance are assumed to be provided by the data center. All collection and distribution piping, equipment, and appurtenances on either the data center property or farmland is the responsibility of the respective landowners and was not evaluated or estimated.

Pipe size was determined for the preliminary layout using the Hazen-Williams formula. The values for the Hazen-Williams “C” coefficient is described in section 2.1.4. The resulting pipe size is shown in Figure 6 in Appendix A. Estimated costs for this alternative are included in Appendix B.

### 5.2.2 Alternative 2 – Storage and Land Application to Residential Irrigation

This alternative involves storing the data center non-contact cooling wastewater in a storage facility and providing residential irrigation to nearby neighborhoods north of the study area. This will require a new storage facility and booster station to provide system pressurization.

Residential area lawns, perfectly maintained, have an estimated irrigation demand of 47.2 inches. For this analysis, it was estimated that the public would only be about 50% reliable resulting in an assumed irrigation demand of 23.6 inches per irrigation season.

As before, an irrigation water balance was calculated using the expected non-contact cooling IWW flow and typical values for lawn irrigation demand, rain, evaporation, and temperature. The expected annual IWW flow of 48 million gallons would need about 94 acres of irrigated lawn (at 23.6 inches of irrigation per year) to dispose of the water and 6.5 million gallons of storage to hold IWW when flow is greater than expected irrigation use. If the public is more efficient, less acreage and storage would be needed; however, a buffer is recommended. It is important to note that there are currently not enough residential neighborhoods between the Study Area and Pine Tree Avenue to fully utilize the expected annual IWW flow. However, the City has several residential developments planned for the area adjacent to County Road 1225/Powerline Road between the Study Area and Pine Tree Avenue. It is assumed the new developments would provide the additional 81 acres needed to dispose of all the IWW flow and would require supplemental irrigation water when fully built out. If this alternative is selected, an additional method for disposing of the remaining IWW flows may be needed if sufficient residential lawn area is not available. A graph of the irrigation water balance on 94 acres is shown in Figure 7 in Appendix A. Calculations are shown in Appendix C.

Piping will be provided on County Road 1225 to convey the wastewater from the property line of the data center to the residential neighborhoods. This pipe was determined to be 8-inch diameter and was included in the cost estimate. All collection and distribution piping, equipment, and appurtenances on the data center property and in residential neighborhoods is the responsibility of the respective land owners and was not evaluated or estimated.

The 6.5 MG storage facility would be needed to store excess “clean” industrial wastewater during the middle of the irrigation season when wastewater flows are greater than residential irrigation demands. Stored water will be irrigated when irrigation demand exceeds IWW production toward the end of the season. It was assumed that storage would be located adjacent to County Road 1225 on the data center property. The data center would be responsible for providing their own piping and pumping to the storage facility therefore costs for such were not estimated. A booster station would be needed to pump water from the storage facility to the residential neighborhoods. Booster station costs were based on flow and no evaluation of booster station pumps, piping, and appurtenances was performed.

Supplemental irrigation water is needed for the residential lawns during the beginning of the irrigation season and, if residents are more efficient than 50%, during the rest of the season. It was assumed residents would use potable water for additional irrigation from the City system. The two systems cannot be directly connected. It was assumed that the proposed potable water main extension discussed in section 3 would provide supplement irrigation via a connection to the proposed storage facility with a backflow prevention device. The infrastructure needed for this alternative was included in the cost estimate. The existing water rights, supplemental irrigation storage, and pumping capacities were not analyzed as part of this improvement. Other supplemental irrigation water options available to the City include utilizing the water right from the acquired study area land and utilizing the existing surface

water right from the Columbia River. It is recommended that these alternatives be analyzed in depth during future master planning efforts.

Pipe size was determined for the preliminary layout using the Hazen-Williams equation. The values for the Hazen-Williams “C” coefficient is described in section 2.1.4. The resulting pipe size is shown in Figure 8 in Appendix A. Estimated costs for this alternative are included in Appendix B.

## 6 REFERENCES

- Anderson-Perry & Associates, Inc. (2008). *City of Umatilla, Oregon Water System Master Plan*. La Grande.
- IRZ Consulting, LLC (2008). *Irrigation Practices in the Umatilla and Morrow County Area*. Hermiston.
- J-U-B Engineers, Inc. (2018). *City of Umatilla, Beneficial Reuse Feasibility Analysis*. La Grande. OAR 333-061-0025.  
OAR 340-071-0220.
- State of Oregon Department of Environmental Quality (2001). *Oregon Standards for Design and Construction of Wastewater Pump Stations*. Portland.
- State of Oregon Department of Environmental Quality (2014). *Onsite Wastewater Treatment Systems*. Portland.

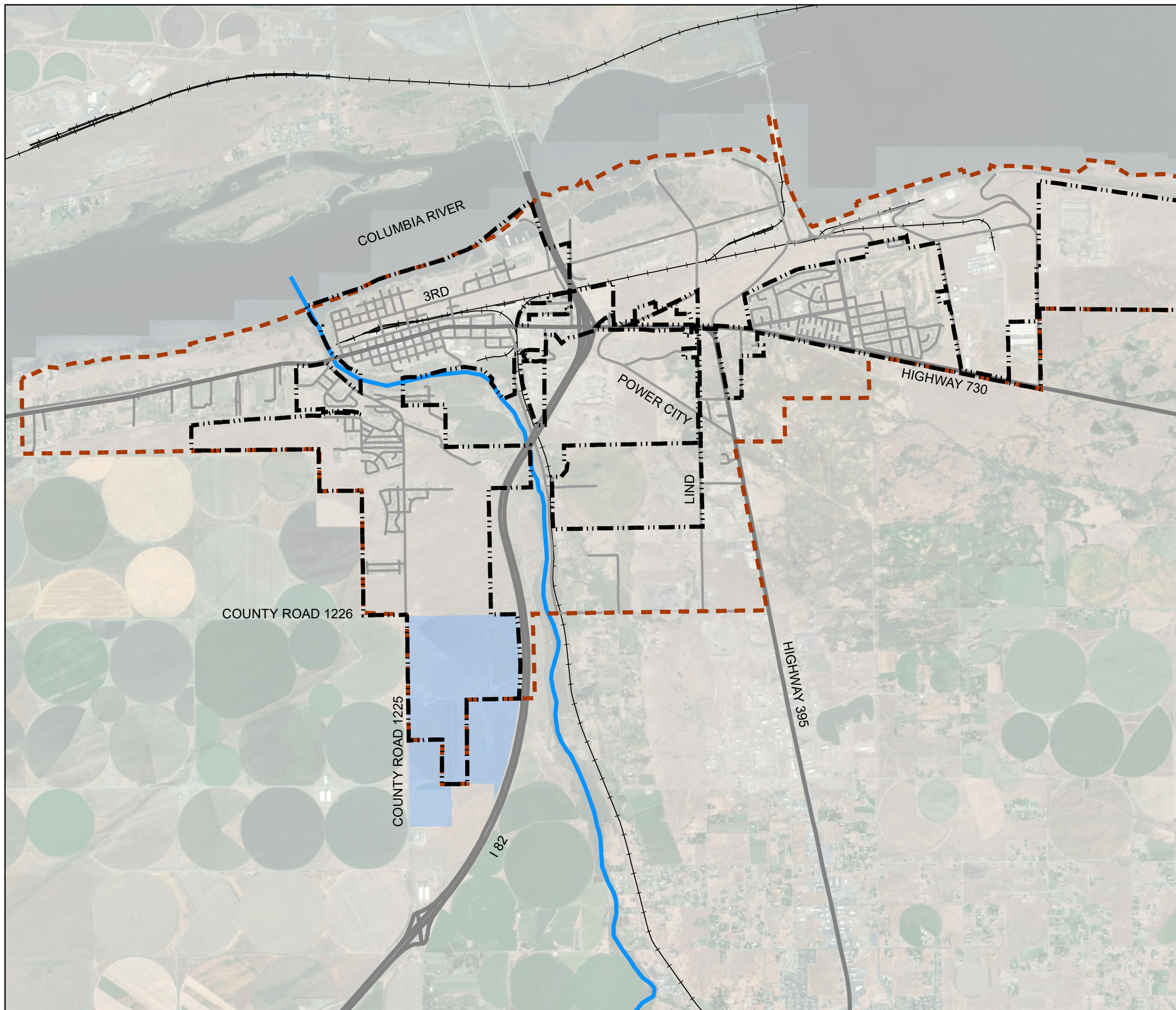
## Appendix A – Figures





# Figure 1

## Study Area



### Legend

- City Limits
- Urban Growth Boundary
- Major Streets
- Highway/Interstate
- Railroad
- Umatilla River
- Study Area

Not to scale



Date: Dec 24, 2019

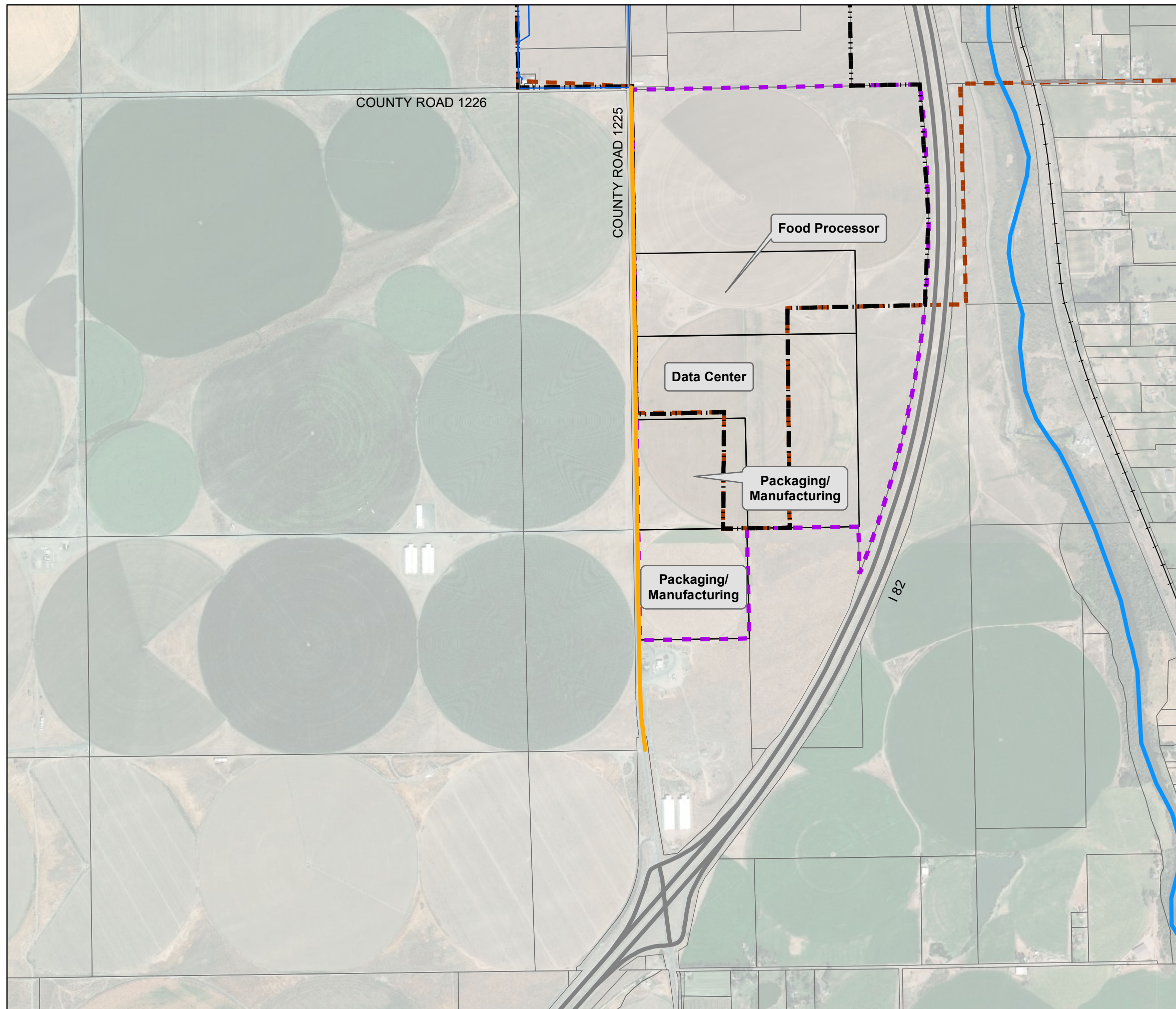






# Figure 2

## Potable Water



### Legend

- City Limits
- Urban Growth Boundary
- Study Area
- Assumed Lot Boundaries
- Parcel Boundaries
- Major Streets
- Highway/Interstate
- Railroad
- Umatilla River
- Existing Potable Water Main
- Proposed Water Main Pipe**
- 16-inch

Not to scale



Date: Dec 24, 2019







# Figure 3

## Sanitary Sewer

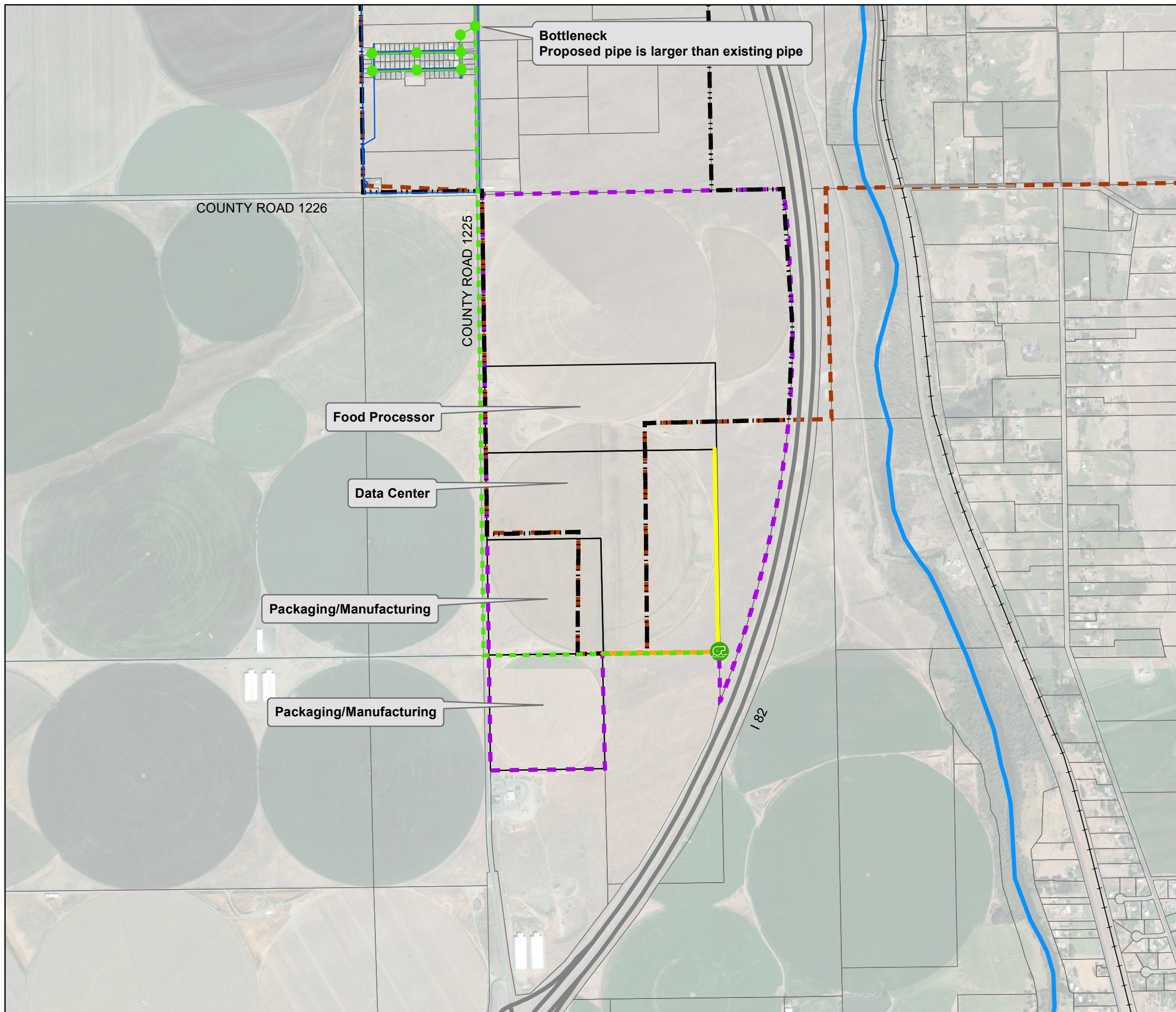
### Legend

- City Limits
  - Urban Growth Boundary
  - Study Area
  - Assumed Lot Boundaries
  - Parcel Boundaries
  - Major Streets
  - Highway/Interstate
  - Railroad
  - Umatilla River
  - Existing Potable Water Main
  - Existing Sanitary Sewer Main
  - Existing Sanitary Sewer Manhole
  - Lift Station
- Proposed Sanitary Sewer Pipe**
- 12-inch Forcemain
  - 12-inch Gravity Pipe
  - 15-inch Gravity Pipe

Not to scale

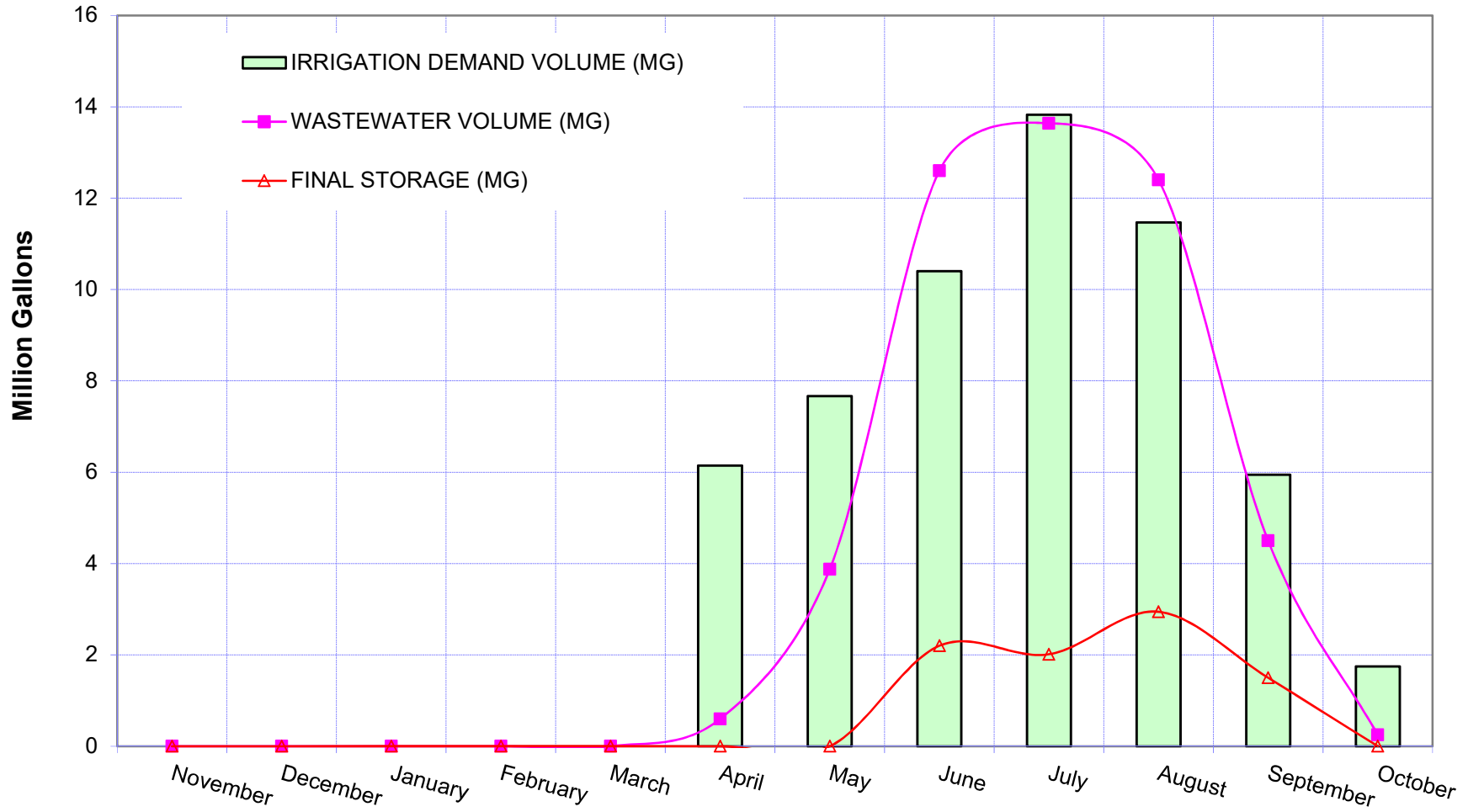


Date: Dec 24, 2019



# Figure 4

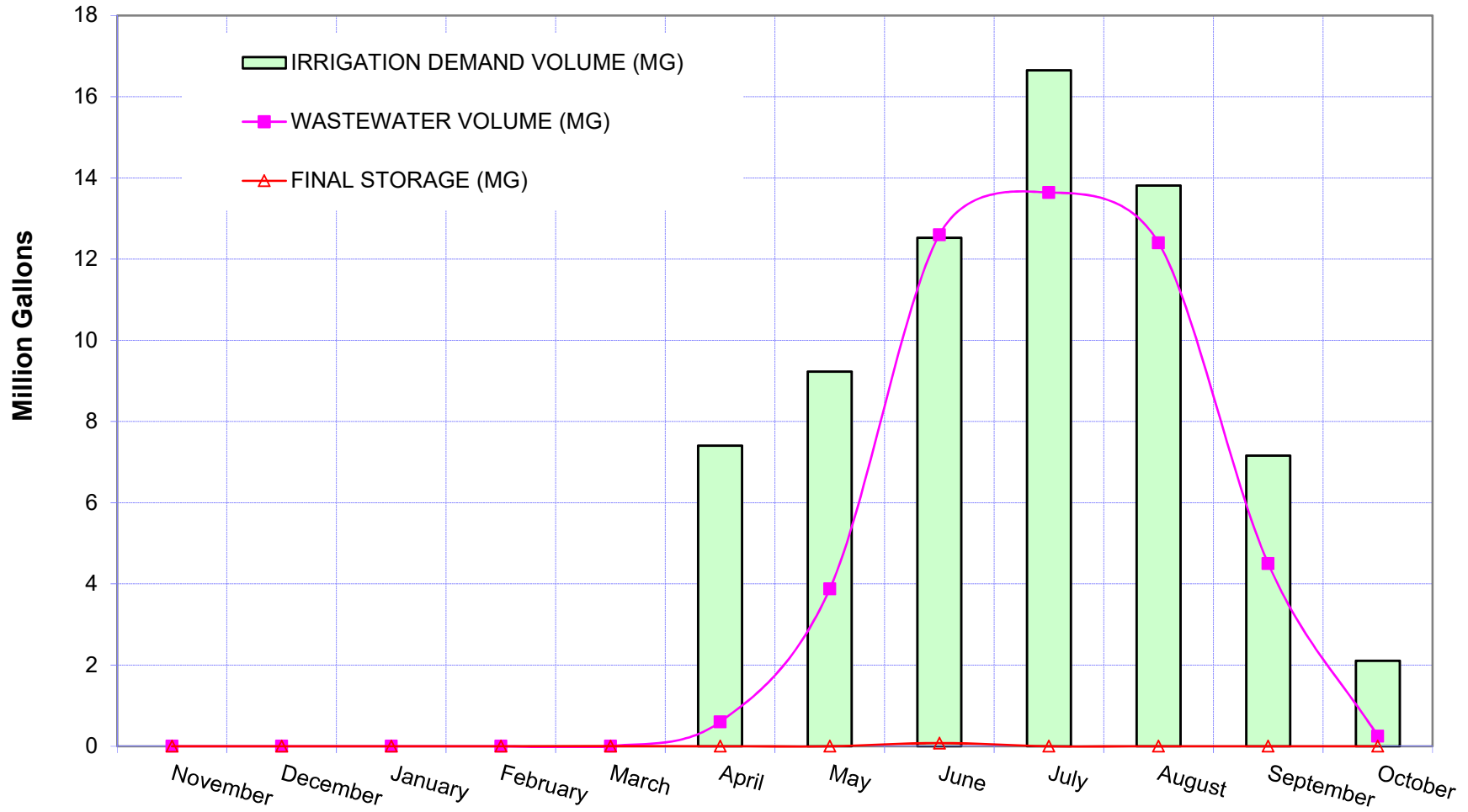
**Umatilla Water Balance**  
**47.9 MG IWW/yr,**  
**Annual Irrigation Demand: 42.2 in/yr**  
**Land Acreage: 50 Acres**  
**Storage: 2.9 Million Gallons**





# Figure 5

**Umatilla Water Balance**  
**47.9 MG IWW/yr,**  
**Annual Irrigation Demand: 42.2 in/yr**  
**Land Acreage: 60 Acres**  
**Storage: ZERO Million Gallons**








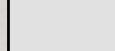







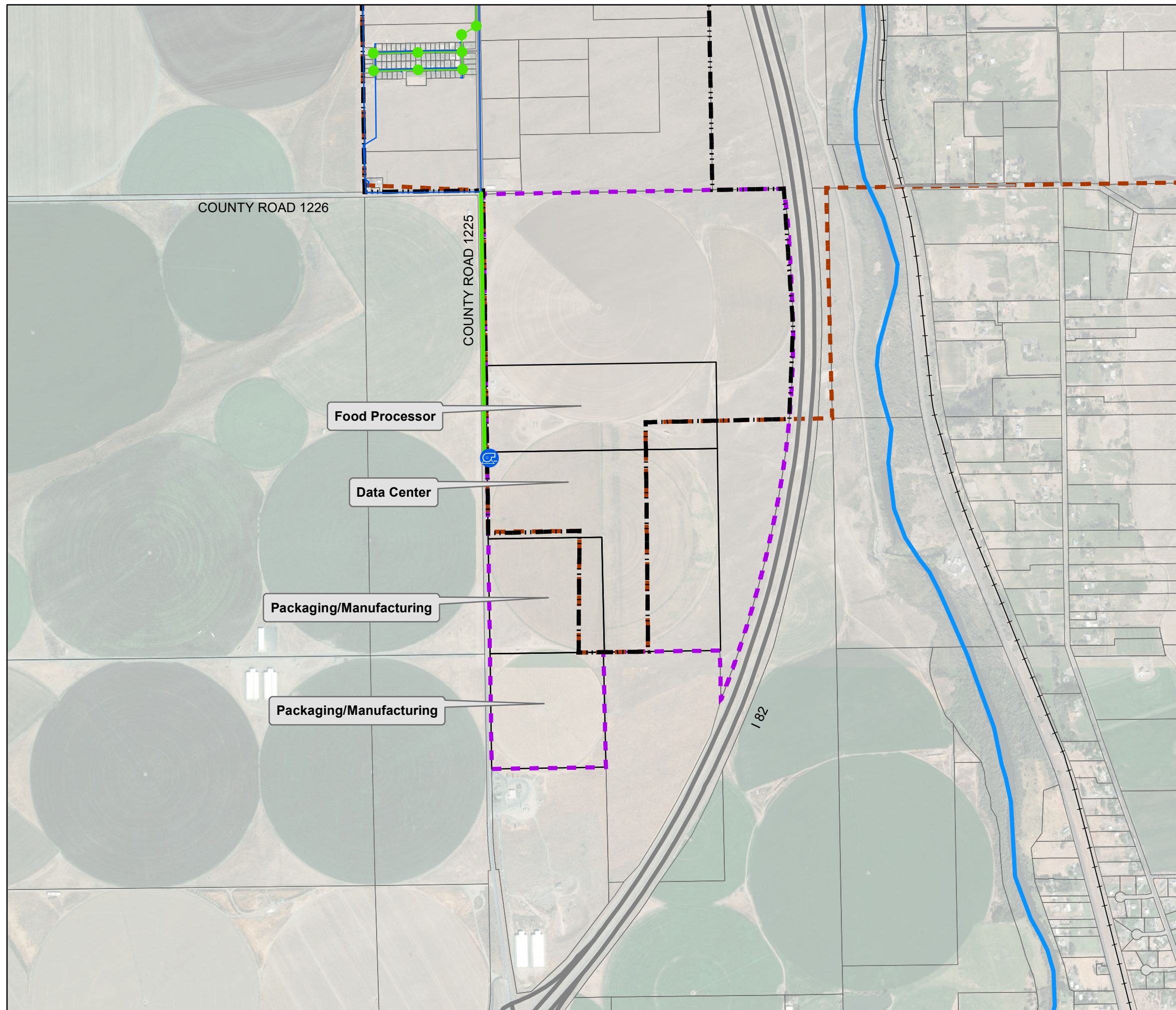


# Figure 6

## Industrial Wastewater Alternative 1

### Legend

-  City Limits
-  Urban Growth Boundary
-  Study Area
-  Assumed Lot Boundaries
-  Parcel Boundaries
-  Major Streets
-  Highway/Interstate
-  Railroad
-  Umatilla River
-  Existing Potable Water Main
-  Existing Sanitary Sewer Main
-  Existing Sanitary Sewer Manhole
-  Booster Station
- Proposed Industrial Wastewater Pipe**
-  10-Inch



Not to scale



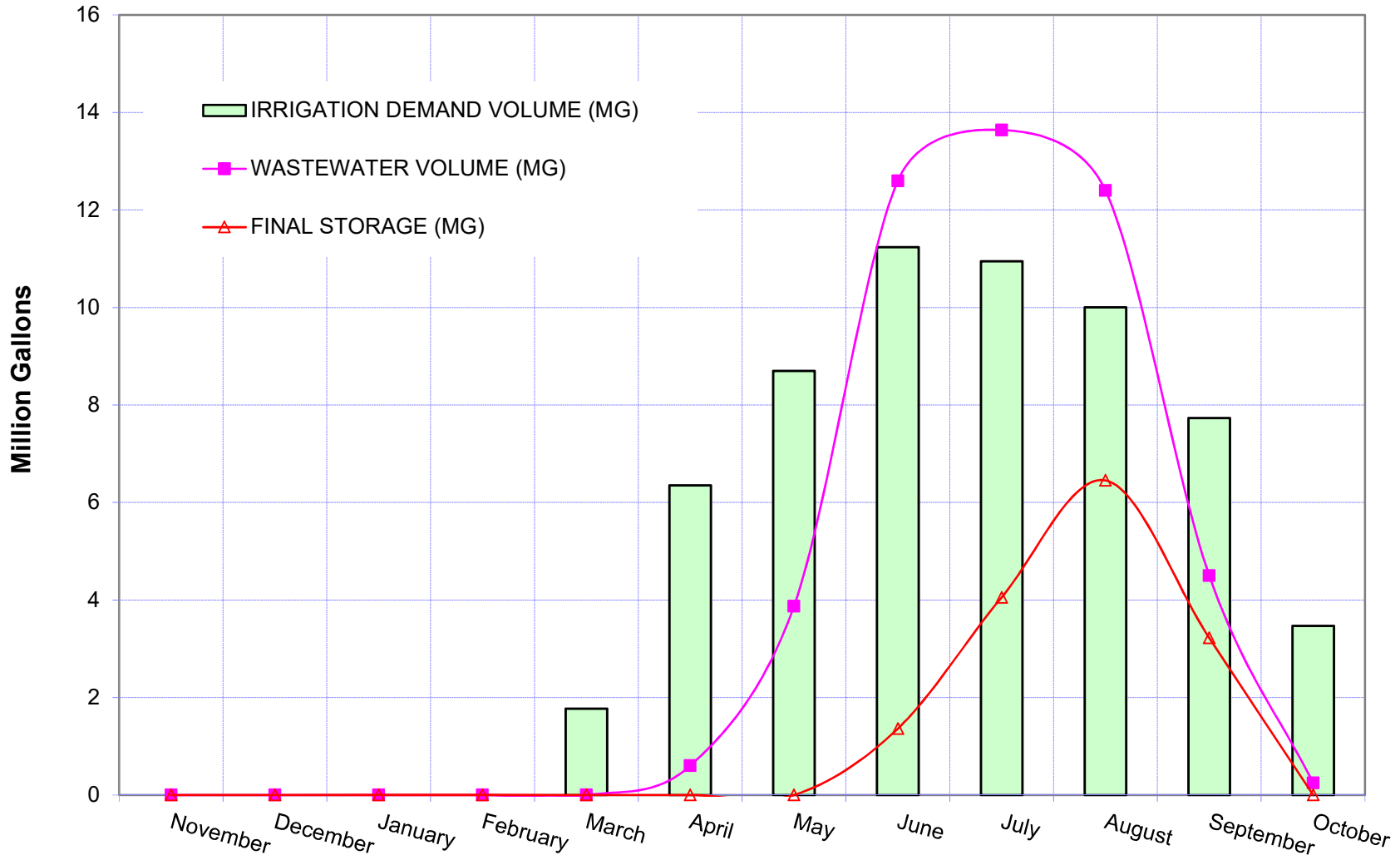
Date: Jan 8, 2020





# Figure 7

**Umatilla Water Balance = 48 MG per Year IWW**  
**Annual Irrigation Demand: 23.6 inches (50%)**  
**Land Acreage: 94 Acres**  
**Storage: 6.5 MG**





# Figure 8

## Industrial Wastewater Alternative 2

### Legend

- City Limits
- Urban Growth Boundary
- Study Area
- Assumed Lot Boundaries
- Parcel Boundaries
- Major Streets
- Highway/Interstate
- Railroad
- Umatilla River
- Existing Potable Water Main
- Existing Sanitary Sewer Main
- Existing Sanitary Sewer Manhole
- Storage Lagoon
- Booster Station

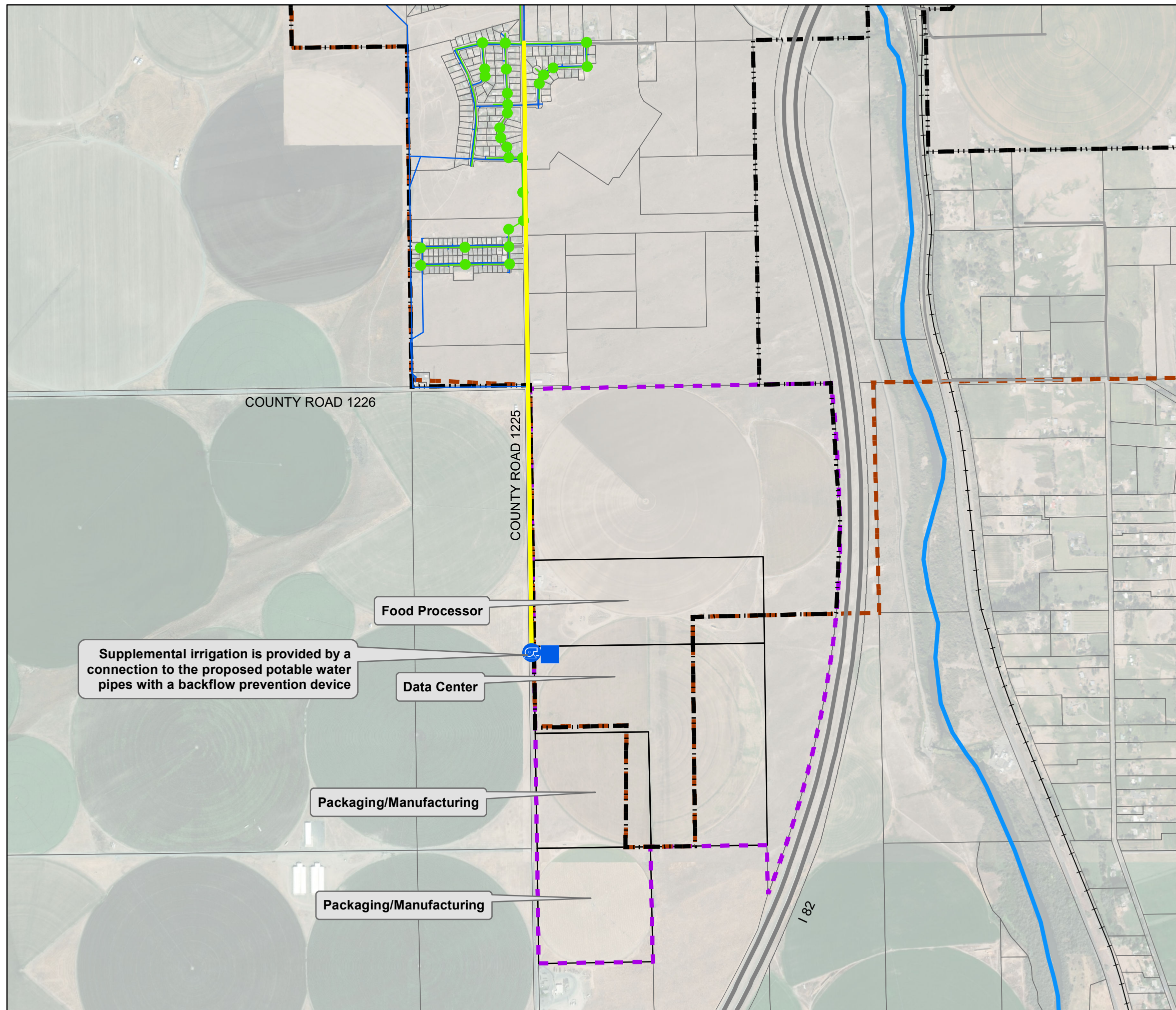
### Proposed Industrial Wastewater Pipe

- 8-Inch

Not to scale



Date: Mar 4, 2020



## Appendix B – Preliminary Cost Opinions



**Domestic Water and Sewer Conveyance Systems  
PLANNING LEVEL ESTIMATE  
Industrial Area Utility Tech Memo**



Item No.	Item Description	Unit	Quantity	Adjusted Bid Prices	
				Unit Price (\$)	Amount (\$) <sup>1</sup>
	Mobilization <sup>2</sup>	LS	1	\$201,600	\$201,600
	Traffic Control <sup>3</sup>	LS	1	\$34,000	\$34,000
	<b>Potable Water</b>				
	16 Inch C900 PVC Pipe <sup>4</sup>	LF	7,930	\$107	\$848,510
	<b>Sanitary Sewer</b>				
	12 Inch ASTM D3034 PVC Pipe, 5'-10' Depth <sup>5</sup>	LF	2,060	\$40	\$82,400
	12 Inch ASTM D3034 PVC Pipe, 10'-15' Depth <sup>5</sup>	LF	590	\$48	\$28,320
	15 Inch ASTM D3034 PVC Pipe, 10'-15' Depth <sup>5</sup>	LF	300	\$59	\$17,700
	15 Inch ASTM D3034 PVC Pipe, 15'-20' Depth <sup>5</sup>	LF	180	\$68	\$12,240
	15 Inch ASTM D3034 PVC Pipe, 20'-25' Depth <sup>5</sup>	LF	430	\$76	\$32,680
	15 Inch ASTM D3034 PVC Pipe, 25'-30' Depth <sup>5</sup>	LF	260	\$83	\$21,580
	48 Inch Manholes, 5-10 Feet	EA	8	\$4,000	\$32,000
	48 Inch Manholes, 10-15 Feet	EA	3	\$4,500	\$13,500
	48 Inch Manholes, 15-20 Feet	EA	1	\$6,000	\$6,000
	60 Inch Manholes, 20-25 Feet	EA	2	\$8,500	\$17,000
	60 Inch Manholes, 25-30 Feet	EA	1	\$13,500	\$13,500
	12 Inch C-900 PVC Forcemain <sup>6</sup>	LF	9,900	\$55	\$544,500
	Access Road <sup>7</sup>	TON	250	\$35	\$8,750
	Lift Station <sup>8</sup>	LS	1	\$800,000	\$800,000
<b>SUBTOTAL 1</b>				<b>\$2,720,000</b>	
CONSTRUCTION CONTINGENCY <sup>9</sup>				35%	\$952,000
<b>SUBTOTAL 2</b>				<b>\$3,670,000</b>	
ENGINEERING AND CONSTRUCTION ADMINISTRATION <sup>10</sup>				20%	\$734,000
ENVIRONMENTAL AND CULTURAL <sup>11</sup>				5%	\$183,500
TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY <sup>12</sup>				1%	\$36,700
LEGAL AND CITY ADMINISTRATIVE <sup>13</sup>				2%	\$73,400
CONSTRUCTION SURVEY <sup>14</sup>				1%	\$36,700
<b>TOTAL IMPROVEMENT COST<sup>15</sup></b>				<b>\$4,700,000</b>	

<sup>1</sup> Cost estimates are provided in 2020 dollars. All dollar amounts are rounded for planning purposes.

<sup>2</sup> Mobilization includes the contractor's administrative and direct expenses to mobilize equipment, materials, and labor to the project site.

<sup>3</sup> Traffic control includes all labor, material, and equipment expenses associated with safely moving traffic through the work zone including signage, flagging, temporary barriers, temporary pavement markings, and lane delineators.

<sup>4</sup> Pipe cost includes the cost of all equipment, material, and labor for pipe installation, excavation, bedding, backfill, earthwork, compaction, valves, fittings, fire hydrants, and restoration to existing conditions.

<sup>5</sup> Pipe cost includes the cost of equipment, materials, and labor of trench excavation, pipe bedding, piping, backfill, compaction, and restoration to existing conditions.

<sup>6</sup> Pipe cost includes the cost of equipment, materials, and labor of trench excavation, pipe bedding, piping, restrained joints, air valves, pressure cleanouts, backfill, compaction, and restoration to existing conditions.

<sup>7</sup> Access road costs include the costs of all work associated with construction of the access road including earthwork, gravel, and restoration.

<sup>8</sup> Lift station cost includes the cost of equipment, materials, and labor of sitework, yard piping, submersible lift station, precast structures, and electrical and controls.

<sup>9</sup> A contingency of 35 percent was used due to the high degree of unknown factors. Assumes AACEI Class 4.

<sup>10</sup> Engineering and Construction Administration includes all administrative and direct expenses to develop plans, specifications, and an engineer's estimate for

<sup>11</sup> Environmental and Cultural includes all expenses associated with environmental or cultural studies and procedures.

<sup>12</sup> Topographic, Boundary, and Utility Survey includes all labor, equipment, and travel expenses to obtain existing survey information for planning and design purposes.

<sup>13</sup> Legal and City Administration includes all expenses associated with financial and legal oversight by the City.

<sup>14</sup> Construction survey includes all expenses, including labor and equipment, to conduct construction staking and construction verification/quality control checks.

<sup>15</sup> The Total Improvement Cost reflects an estimate of potential overall project costs based on preliminary estimates, and should not be considered an actual cost or encompassing all scenarios and circumstances.

**Water Project - Coyote Reservoir and Booster Station Upgrades  
PLANNING LEVEL ESTIMATE  
Industrial Area Utility Tech Memo**



Item No.	Item Description	Unit	Quantity	Adjusted Bid Prices	
				Unit Price (\$)	Amount (\$) <sup>1</sup>
1	Mobilization <sup>2</sup>	LS	1	\$67,000	\$67,000
2	Land Acquisition <sup>3</sup>	LS	1	\$75,000	\$75,000
3	Site Work <sup>4</sup>	LS	1	\$33,000	\$33,000
4	1 MG Steel Reservoir <sup>5</sup>	LS	1	\$673,000	\$673,000
5	PAX Mixing System <sup>6</sup>	LS	1	\$57,000	\$57,000
<b>SUBTOTAL 1</b>				<b>\$910,000</b>	
CONSTRUCTION CONTINGENCY <sup>7</sup>				35%	\$318,500
<b>SUBTOTAL 2</b>				<b>\$1,230,000</b>	
ENGINEERING AND CONSTRUCTION ADMINISTRATION <sup>8</sup>				20%	\$246,000
ENVIRONMENTAL AND CULTURAL <sup>9</sup>				5%	\$61,500
TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY <sup>10</sup>				1%	\$12,300
LEGAL AND CITY ADMINISTRATIVE <sup>11</sup>				2%	\$24,600
CONSTRUCTION SURVEY <sup>12</sup>				1%	\$12,300
<b>TOTAL IMPROVEMENT COST<sup>13</sup></b>				<b>\$1,600,000</b>	

<sup>1</sup> Cost estimates are provided in 2020 dollars. All dollar amounts are rounded for planning purposes.

<sup>2</sup> Mobilization includes the contractor's administrative and direct expenses to mobilize equipment, materials, and labor to the project site.

<sup>3</sup> Land acquisition includes the cost of obtaining additional land to construct the proposed improvements. Assume each site requiring land acquisition is half an acre in size.

<sup>4</sup> Site work includes the cost of excavation, grading, backfill, compaction, base rock, fencing, and site piping.

<sup>5</sup> Reservoir costs include the costs of all work associated with reservoir construction including all materials, labor, equipment to construct the reservoir, foundation, and yard piping.

<sup>6</sup> PAX mixing system includes the costs of the mixer, shipping and handling, start-up, and training.

<sup>7</sup> A contingency of 35 percent was used due to the high degree of unknown factors. Assumes AACEI Class 4.

<sup>8</sup> Engineering and Construction Administration includes all administrative and direct expenses to develop plans, specifications, and an engineer's estimate for construction.

<sup>9</sup> Environmental and Cultural includes all expenses associated with environmental or cultural studies and procedures.

<sup>10</sup> Topographic, Boundary, and Utility Survey includes all labor, equipment, and travel expenses to obtain existing survey information for planning and design purposes.

<sup>11</sup> Legal and City Administration includes all expenses associated with financial and legal oversight by the City.

<sup>12</sup> Construction survey includes all expenses, including labor and equipment, to conduct construction staking and construction verification/quality control checks.

<sup>13</sup> The Total Improvement Cost reflects an estimate of potential overall project costs based on preliminary estimates, and should not be considered an actual cost or encompassing all scenarios and circumstances. This does not reflect the cost of all pipes and services which will increase the overall cost.

**Industrial Wastewater Conveyance Systems - Alternative 1  
PLANNING LEVEL ESTIMATE  
Industrial Area Utility Tech Memo**



Item No.	Item Description	Unit	Quantity	Adjusted Bid Prices	
				Unit Price (\$)	Amount (\$) <sup>1</sup>
	Mobilization <sup>2</sup>	LS	1	\$8,000	\$8,000
	Traffic Control <sup>3</sup>	LS	1	\$9,000	\$9,000
	10 Inch C900 PVC Pipe <sup>4</sup>	LF	3,100	\$29	\$89,900
<b>SUBTOTAL 1</b>				<b>\$110,000</b>	
CONSTRUCTION CONTINGENCY <sup>5</sup>				35%	\$38,500
<b>SUBTOTAL 2</b>				<b>\$150,000</b>	
ENGINEERING AND CONSTRUCTION ADMINISTRATION <sup>6</sup>				20%	\$30,000
ENVIRONMENTAL AND CULTURAL <sup>7</sup>				10%	\$15,000
TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY <sup>8</sup>				1%	\$1,500
LEGAL AND CITY ADMINISTRATIVE <sup>9</sup>				2%	\$3,000
CONSTRUCTION SURVEY <sup>10</sup>				1%	\$1,500
<b>TOTAL IMPROVEMENT COST<sup>11</sup></b>				<b>\$200,000</b>	

<sup>1</sup> Cost estimates are provided in 2020 dollars. All dollar amounts are rounded for planning purposes.

<sup>2</sup> Mobilization includes the contractor's administrative and direct expenses to mobilize equipment, materials, and labor to the project site.

<sup>3</sup> Traffic control includes all labor, material, and equipment expenses associated with safely moving traffic through the work zone including signage, flagging, temporary barriers, temporary pavement markings, and lane delineators.

<sup>4</sup> Pipe cost includes the cost of all pipe, pipe installation, earthwork, compaction, valves, fittings, fire hydrants, pavement repair, and restoration associated with the project. Farmer to provide distribution piping.

<sup>5</sup> A contingency of 35 percent was used due to the high degree of unknown factors. Assumes AACEI Class 4.

<sup>6</sup> Engineering and Construction Administration includes all administrative and direct expenses to develop plans, specifications, and an engineer's estimate for

<sup>7</sup> Environmental and Cultural includes all expenses associated with environmental or cultural studies and procedures.

<sup>8</sup> Topographic, Boundary, and Utility Survey includes all labor, equipment, and travel expenses to obtain existing survey information for planning and design purposes.

<sup>9</sup> Legal and City Administration includes all expenses associated with financial and legal oversight by the City.

<sup>10</sup> Construction survey includes all expenses, including labor and equipment, to conduct construction staking and construction verification/quality control checks.

<sup>11</sup> The Total Improvement Cost reflects an estimate of potential overall project costs based on preliminary estimates, and should not be considered an actual cost or encompassing all scenarios and circumstances.

**Industrial Wastewater Conveyance Systems - Alternative 2  
PLANNING LEVEL ESTIMATE  
Industrial Area Utility Tech Memo**



Item No.	Item Description	Unit	Quantity	Adjusted Bid Prices	
				Unit Price (\$)	Amount (\$) <sup>1</sup>
	Mobilization <sup>2</sup>	LS	1	\$156,000	\$156,000
	Traffic Control <sup>3</sup>	LS	1	\$10,000	\$10,000
	8 Inch C900 PVC Pipe <sup>4</sup>	LF	7,050	\$21	\$148,050
	6.5 MG Lagoon <sup>5</sup>	LS	1	\$1,700,000	\$1,700,000.00
	Booster Station <sup>6</sup>	LS	1	\$90,000	\$90,000
<b>SUBTOTAL 1</b>				<b>\$2,100,000</b>	
CONSTRUCTION CONTINGENCY <sup>7</sup>				35%	\$735,000
<b>SUBTOTAL 2</b>				<b>\$2,840,000</b>	
ENGINEERING AND CONSTRUCTION ADMINISTRATION <sup>8</sup>				20%	\$568,000
ENVIRONMENTAL AND CULTURAL <sup>9</sup>				3%	\$85,200
TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY <sup>10</sup>				1%	\$28,400
LEGAL AND CITY ADMINISTRATIVE <sup>11</sup>				2%	\$56,800
CONSTRUCTION SURVEY <sup>12</sup>				1%	\$28,400
<b>TOTAL IMPROVEMENT COST<sup>13</sup></b>				<b>\$3,600,000</b>	

<sup>1</sup> Cost estimates are provided in 2020 dollars. All dollar amounts are rounded for planning purposes.

<sup>2</sup> Mobilization includes the contractor's administrative and direct expenses to mobilize equipment, materials, and labor to the project site.

<sup>3</sup> Traffic control includes all labor, material, and equipment expenses associated with safely moving traffic through the work zone including signage, flagging, temporary barriers, temporary pavement markings, and lane delineators.

<sup>4</sup> Pipe cost includes the cost of all pipe, pipe installation, earthwork, compaction, valves, fittings, fire hydrants, pavement repair, and restoration associated with the project. City to provide neighborhood distribution piping.

<sup>5</sup> Lagoon costs include the costs of all work associated with lagoon construction including the cost of earthwork, compaction, HDPE lining, perimeter road, perimeter fencing, water level gauges, and piping. No land acquisition costs are needed as the City will own this property prior to construction.

<sup>6</sup> Booster pump station costs include the costs of all work associated with construction of the booster pump station including, booster pumps, site work, building construction, yard piping, electrical and controls, and HVAC system.

<sup>7</sup> A contingency of 35 percent was used due to the high degree of unknown factors. Assumes AACEI Class 4.

<sup>8</sup> Engineering and Construction Administration includes all administrative and direct expenses to develop plans, specifications, and an engineer's estimate for

<sup>9</sup> Environmental and Cultural includes all expenses associated with environmental or cultural studies and procedures.

<sup>10</sup> Topographic, Boundary, and Utility Survey includes all labor, equipment, and travel expenses to obtain existing survey information for planning and design purposes.

<sup>11</sup> Legal and City Administration includes all expenses associated with financial and legal oversight by the City.

<sup>12</sup> Construction survey includes all expenses, including labor and equipment, to conduct construction staking and construction verification/quality control checks.

<sup>13</sup> The Total Improvement Cost reflects an estimate of potential overall project costs based on preliminary estimates, and should not be considered an actual cost or encompassing all scenarios and circumstances.

## Appendix C – Calculations

POWERLINE ROAD, UMATILLA OR

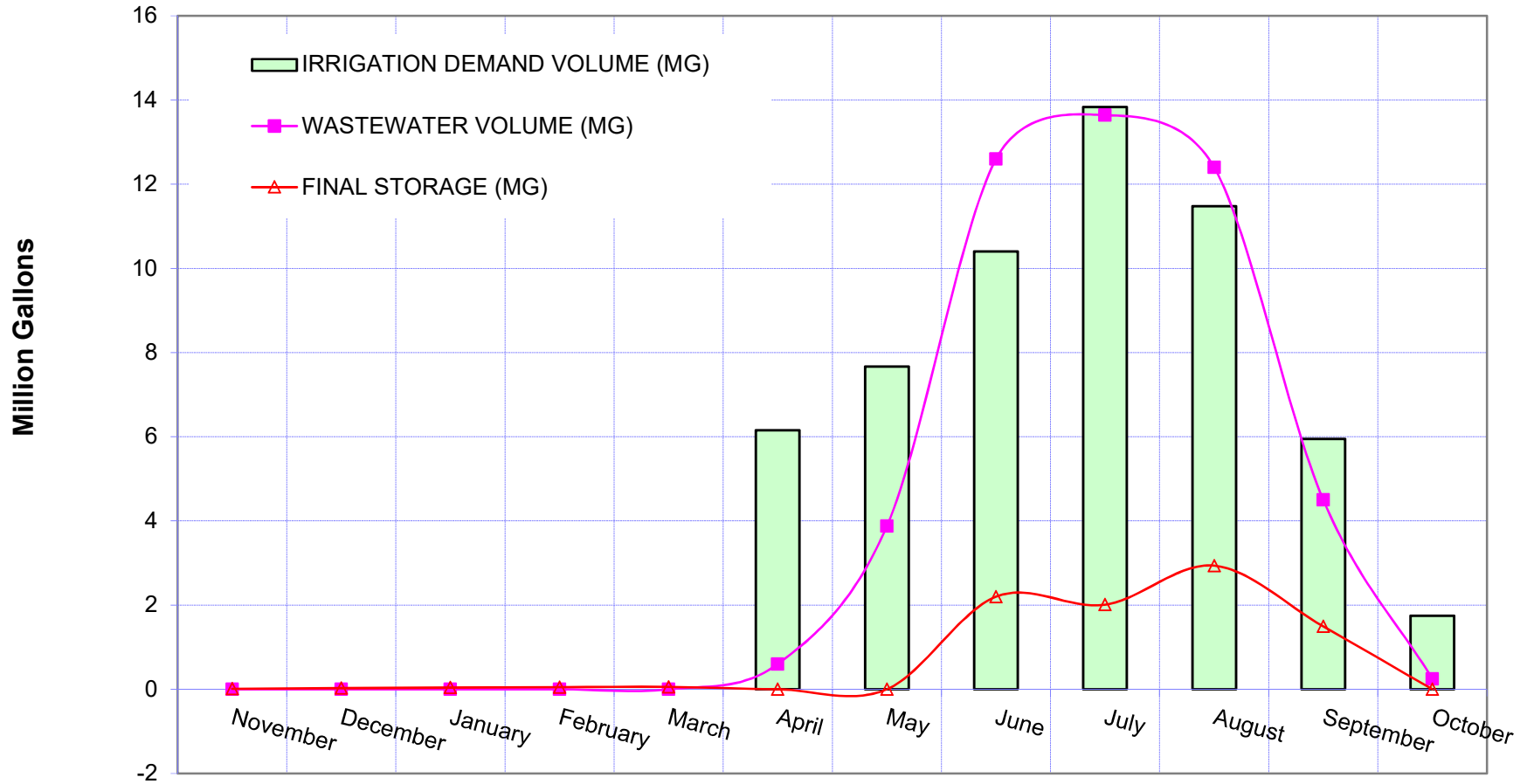
WATER BALANCE

Annual Irrigation Demand 57.23 inches

IWW INFLOW 47.86 MG

Area Irrigated 49.86 Acres

Storage 2.9 MG



**STORAGE LAGOON W/ LAND APPLICATION ON ALFALFA DURING GROWING SEASON**

**DRAFT WORKING DOCUMENT: 12/19/2019**

<b>AVG ANN WASTEWATER DESIGN FLOW, MGD.....</b>	<b>0.13</b>	<b>REQ'D IRRIGATION AREA (AC).....</b>	<b>50</b>
RAIN CATCHMENT AREA (AC).....	0.40 Acres of Storage Ponds	AVERAGE IRRIGATION REDUCTION .....	<b>1.00</b> To reduce the average demand to
POND PERIMETER RUNOFF FRACTION.....	1.00	IRRIGATION EFFICIENCY (DECIMAL FRACT).....	1.00 This increased the irrigation demand
POND EVAP AREA AT ZERO STOR (AC).....	0.40	PRECIP/AVG PRECIP RATIO.....	1.00 This increases the average precipitation
POND EVAP AREA ADD PER UNIT STOR (AC/MG).....	0.033	EVAPORATION / AVE EVAPORATION RATION.....	1.00 This reduces the average evaporation
		Flow Ratio KNOW AVERAGE FLOW / DESIGN FLOW.....	1.00 This increased the flow to the future

PARAMETER

	11	12	1	2	3	4	5	6	7	8	9	10	TOTAL
INPUT DATA	November	December	January	February	March	April	May	June	July	August	September	October	
MONTHLY FLOW RATIOS	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	
MONTHLY FLOWS (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	0.1303 Annual Avg. Daily Flow (MGD)
GIVEN INFLOW-OUTFLOW (MG)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
AVG PAN EVAP (IN)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	- Average Annual Pan Evaporation
AVG PRECIP (IN)	1.14	1.32	1.23	0.85	0.67	0.79	0.69	0.50	0.22	0.29	0.39	0.60	8.69 Average Annual Precipitation
MONTHLY AVE. TEMP.	42.00	34.70	34.20	38.70	46.00	52.70	60.50	67.70	74.60	73.10	73.10	52.40	Degrees F

CALCULATIONS

DAYS IN MONTH	30.0	31.0	31.0	28.0	31.0	30.0	31.0	30.0	31.0	31.0	30.0	31.0	
BEGINNING STORAGE (MG)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.2	2.0	2.9	1.5	4.0 Million Gallons per Month
WASTEWATER FLOW (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	
WASTEWATER VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	0.6	3.9	12.6	13.6	12.4	4.5	0.2	47.9 Million Gallon Per Year
PAN COEFFICIENT	0.89	0.96	0.96	0.93	0.85	0.80	0.72	0.66	0.59	0.60	0.60	0.80	
POND EVAP (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	- Design Annual Evaporation
EVAPORATION AREA (AC)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	
EVAPORATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	- Evaporation Volume
PRECIPITATION (IN)	1.1	1.3	1.2	0.9	0.7	0.8	0.7	0.5	0.2	0.3	0.4	0.6	8.7 Designed Annual Precipitation
PRECIPITATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1 Precip Volume
RAIN YET TO FALL (IN)	8.7	7.6	6.2	5.0	4.2	3.5	2.7	2.0	1.5	1.3	1.0	0.6	
AVG. MONTHLY Pdef (IN)	0.0	0.0	0.0	0.0	0.0	4.5	5.7	7.7	10.2	8.5	4.4	1.3	42.24 Average Annual Pdef
Vadose Zone Storage (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	- Inches Stored in The Vadose Zone
MODELED IRRIG DEMAND (IN)	0.0	0.0	0.0	0.0	0.0	4.5	5.7	7.7	10.2	8.5	4.4	1.3	42.24 Designed Annual Irrigation Demand
IRRIGATION DEMAND VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	6.2	7.7	10.4	13.8	11.5	5.9	1.7	57.2 Irrigation Demand (MG)
REUSE WATER IRRIGATED	0.0	0.0	0.0	0.0	0.0	0.7	3.9	10.4	13.8	11.5	5.9	1.7	48.0 Volume Reuse water Irrigated (MG)
STORAGE GAIN (MG)	0.0	0.0	0.0	0.0	0.0	-5.5	-3.8	2.2	-0.2	0.9	-1.4	-1.5	
FINAL STORAGE (MG)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.2	2.0	2.9	1.5	0.0	

ANNUAL INFLOW SUMMARY (MG)

WASTEWATER.....	47.9
PRECIPITATION.....	0.1
GIVEN INFLOWS-OUTFLOWS.....	0.0
<b>TOTAL</b>	<b>48.0</b>

ANNUAL OUTFLOW SUMMARY (MG)

POND EVAPORATION.....	0.0
POND PERCOLATION.....	0.0
IRRIGATION.....	48.0
<b>TOTAL</b>	<b>48.0</b>

OVERALL BALANCE

TOTAL INFLOW-OUTFLOW (MG).....	0.0
<b>MAX. REQ'D STORAGE (MG).....</b>	<b>2.94</b>
MAX. REQ'D STORAGE (ACFT)	9.0
MAX. DEPTH (FT)	25.0
SURFACE AREA (AC)	1.2
SURFACE AREA (SF)	54,330
SQUARE DIM (FT)	233

Acres Needed, vertical walls 0.4  
Storage Catchment Area Large Enough



POWERLINE ROAD, UMATILLA OR

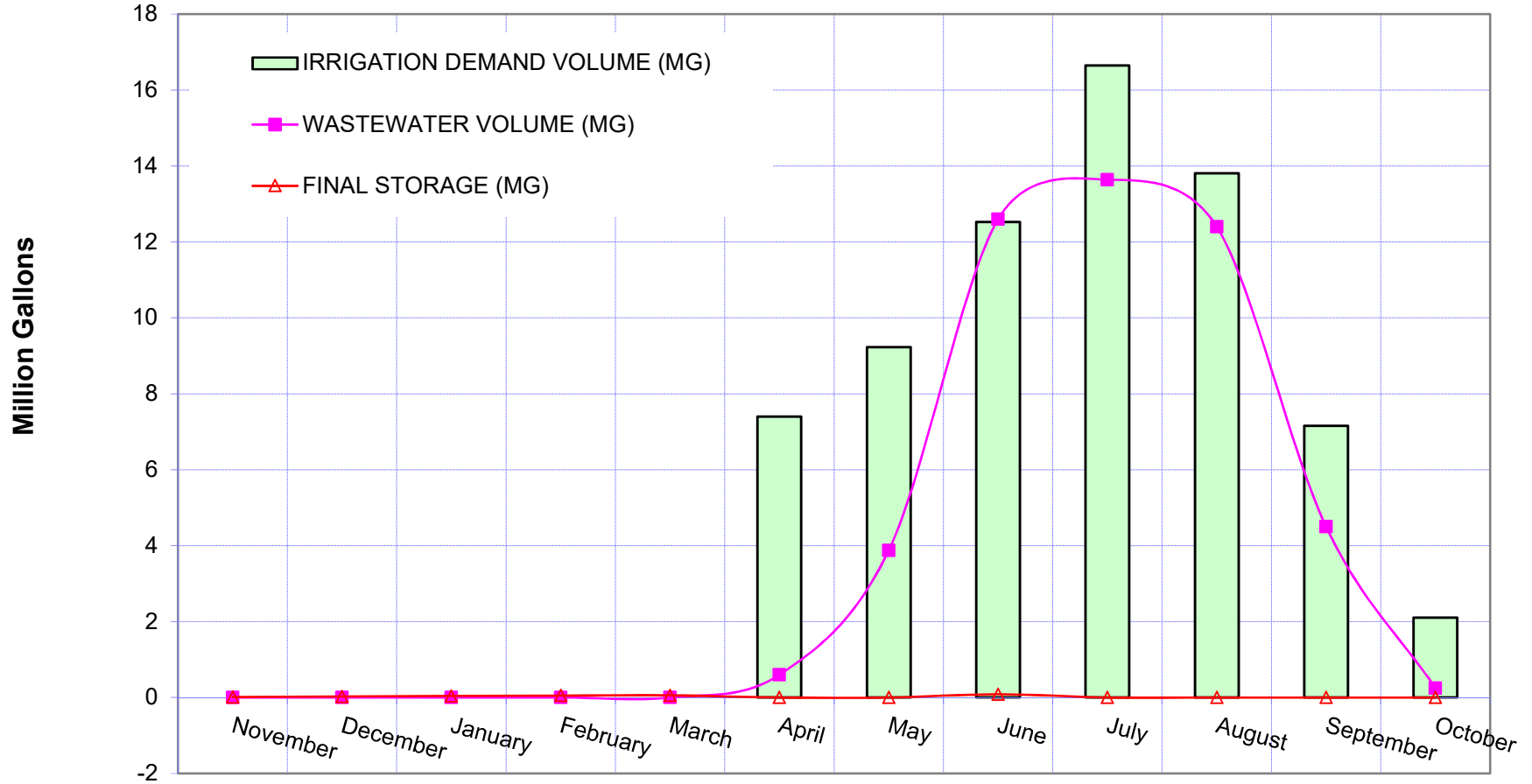
WATER BALANCE

Annual Irrigation Demand 68.87 inches

IWW INFLOW 47.86 MG

Area Irrigated 60 Acres

Storage 0.1 MG



**STORAGE LAGOON W/ LAND APPLICATION ON ALFALFA DURING GROWING SEASON**

**DRAFT WORKING DOCUMENT: 12/19/2019**

<b>AVG ANN WASTEWATER DESIGN FLOW, MGD.....</b>	<b>0.13</b>	<b>REQ'D IRRIGATION AREA (AC).....</b>	<b>60</b>
RAIN CATCHMENT AREA (AC).....	0.40 Acres of Storage Ponds	AVERAGE IRRIGATION REDUCTION .....	<b>1.00</b> To reduce the average demand to
POND PERIMETER RUNOFF FRACTION.....	1.00	IRRIGATION EFFICIENCY (DECIMAL FRACT).....	1.00 This increased the irrigation demand
POND EVAP AREA AT ZERO STOR (AC).....	0.40	PRECIP/AVG PRECIP RATIO.....	1.00 This increases the average precipitation
POND EVAP AREA ADD PER UNIT STOR (AC/MG).....	0.033	EVAPORATION / AVE EVAPORATION RATION.....	1.00 This reduces the average evaporation
		<b>Flow Ratio</b> KNOW AVERAGE FLOW / DESIGN FLOW.....	1.00 This increased the flow to the future

PARAMETER

	11	12	1	2	3	4	5	6	7	8	9	10	TOTAL	
INPUT DATA	November	December	January	February	March	April	May	June	July	August	September	October		
MONTHLY FLOW RATIOS	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01		
MONTHLY FLOWS (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	0.1303	Annual Avg. Daily Flow (MGD)
GIVEN INFLOW-OUTFLOW (MG)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	
AVG PAN EVAP (IN)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	Average Annual Pan Evaporation
AVG PRECIP (IN)	1.14	1.32	1.23	0.85	0.67	0.79	0.69	0.50	0.22	0.29	0.39	0.60	8.69	Average Annual Precipitation
MONTHLY AVE. TEMP.	42.00	34.70	34.20	38.70	46.00	52.70	60.50	67.70	74.60	73.10	73.10	52.40		Degrees F

CALCULATIONS

DAYS IN MONTH	30.0	31.0	31.0	28.0	31.0	30.0	31.0	30.0	31.0	31.0	30.0	31.0		
BEGINNING STORAGE (MG)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0		
WASTEWATER FLOW (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	4.0	Million Gallons per Month
WASTEWATER VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	0.6	3.9	12.6	13.6	12.4	4.5	0.2	47.9	Million Gallon Per Year
PAN COEFFICIENT	0.89	0.96	0.96	0.93	0.85	0.80	0.72	0.66	0.59	0.60	0.60	0.80		
POND EVAP (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Design Annual Evaporation
EVAPORATION AREA (AC)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
EVAPORATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Evaporation Volume
PRECIPITATION (IN)	1.1	1.3	1.2	0.9	0.7	0.8	0.7	0.5	0.2	0.3	0.4	0.6	8.7	Designed Annual Precipitation
PRECIPITATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	Precip Volume
RAIN YET TO FALL (IN)	8.7	7.6	6.2	5.0	4.2	3.5	2.7	2.0	1.5	1.3	1.0	0.6		
AVG. MONTHLY Pdef (IN)	0.0	0.0	0.0	0.0	0.0	4.5	5.7	7.7	10.2	8.5	4.4	1.3	42.24	Average Annual Pdef
Vadose Zone Storage (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Inches Stored in The Vadose Zone
MODELED IRRIG DEMAND (IN)	0.0	0.0	0.0	0.0	0.0	4.5	5.7	7.7	10.2	8.5	4.4	1.3	42.24	Designed Annual Irrigation Demand
IRRIGATION DEMAND VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	7.4	9.2	12.5	16.6	13.8	7.2	2.1	68.9	Irrigation Demand (MG)
REUSE WATER IRRIGATED	0.0	0.0	0.0	0.0	0.0	0.7	3.9	12.5	13.7	12.4	4.5	0.3	48.0	Volume Reuse water Irrigated (MG)
STORAGE GAIN (MG)	0.0	0.0	0.0	0.0	0.0	-6.8	-5.3	0.1	-3.0	-1.4	-2.7	-1.8		
FINAL STORAGE (MG)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0		

ANNUAL INFLOW SUMMARY (MG)

WASTEWATER.....	47.9
PRECIPITATION.....	0.1
GIVEN INFLOWS-OUTFLOWS.....	0.0
<b>TOTAL</b>	<b>48.0</b>

ANNUAL OUTFLOW SUMMARY (MG)

POND EVAPORATION.....	0.0
POND PERCOLATION.....	0.0
IRRIGATION.....	48.0
<b>TOTAL</b>	<b>48.0</b>

OVERALL BALANCE

TOTAL INFLOW-OUTFLOW (MG).....	0.0
<b>MAX. REQ'D STORAGE (MG).....</b>	<b>0.08</b>
MAX. REQ'D STORAGE (ACFT)	0.3
MAX. DEPTH (FT)	25.0
SURFACE AREA (AC)	1.2
SURFACE AREA (SF)	54,330
SQUARE DIM (FT)	233

Acres Needed, vertical walls 0.0  
Storage Catchment Area Large Enough

POWERLINE ROAD, UMATILLA OR

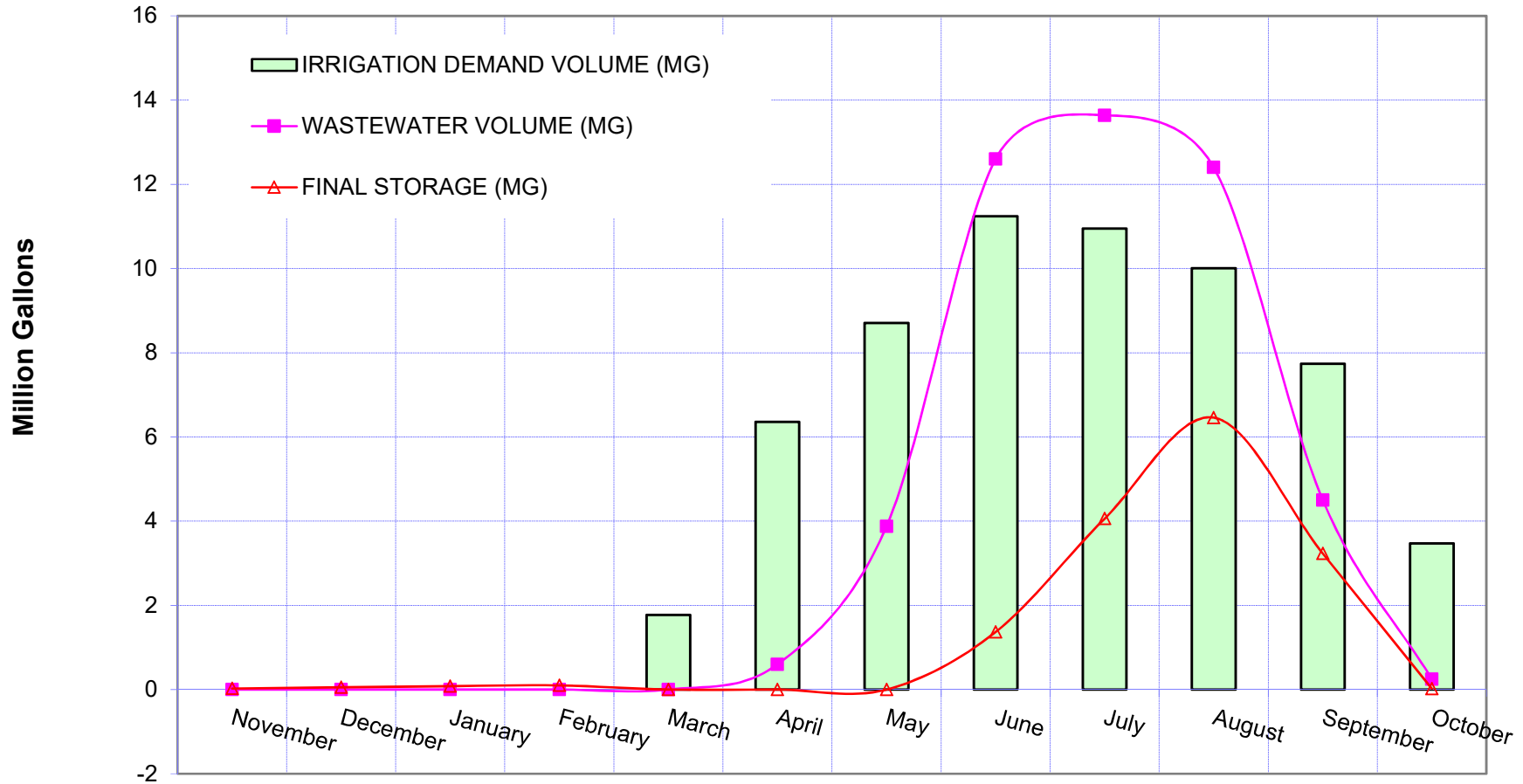
WATER BALANCE

Annual Irrigation Demand 60.25 inches

IWW INFLOW 47.86 MG

Area Irrigated 93.94 Acres

Storage 6.5 MG



STORAGE LAGOON W/ LAND APPLICATION ON LAWN DURING GROWING SEASON

DRAFT WORKING DOCUMENT: 12/19/2019

<b>AVG ANN WASTEWATER DESIGN FLOW, MGD</b> .....	<b>0.13</b>	<b>REQ'D IRRIGATION AREA (AC)</b> .....	<b>94</b>
RAIN CATCHMENT AREA (AC).....	0.80 Acres of Storage Ponds	AVERAGE IRRIGATION REDUCTION .....	<b>1.00</b> To reduce the average demand to
POND PERIMETER RUNOFF FRACTION.....	1.00	IRRIGATION EFFICIENCY (DECIMAL FRACT).....	1.00 This increased the irrigation demand
POND EVAP AREA AT ZERO STOR (AC).....	0.40	PRECIP/AVG PRECIP RATIO.....	1.00 This increases the average precipitation
POND EVAP AREA ADD PER UNIT STOR (AC/MG).....	0.033	EVAPORATION / AVE EVAPORATION RATION.....	1.00 This reduces the average evaporation
		KNOW AVERAGE FLOW / DESIGN FLOW.....	1.00 This increased the flow to the future

PARAMETER

	11	12	1	2	3	4	5	6	7	8	9	10	TOTAL	
INPUT DATA	November	December	January	February	March	April	May	June	July	August	September	October		
MONTHLY FLOW RATIOS	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01		
MONTHLY FLOWS (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	0.1303	Annual Avg. Daily Flow (MGD)
GIVEN INFLOW-OUTFLOW (MG)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	
AVG PAN EVAP (IN)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	Average Annual Pan Evaporation
AVG PRECIP (IN)	1.14	1.32	1.23	0.85	0.67	0.79	0.69	0.50	0.22	0.29	0.39	0.60	8.69	Average Annual Precipitation
MONTHLY AVE. TEMP.	42.00	34.70	34.20	38.70	46.00	52.70	60.50	67.70	74.60	73.10	73.10	52.40		Degrees F

CALCULATIONS

DAYS IN MONTH	30.0	31.0	31.0	28.0	31.0	30.0	31.0	30.0	31.0	31.0	30.0	31.0		
BEGINNING STORAGE (MG)	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	1.4	4.1	6.5	3.2		
WASTEWATER FLOW (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	4.0	Million Gallons per Month
WASTEWATER VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	0.6	3.9	12.6	13.6	12.4	4.5	0.2	47.9	Million Gallon Per Year
PAN COEFFICIENT	0.89	0.96	0.96	0.93	0.85	0.80	0.72	0.66	0.59	0.60	0.60	0.80		
POND EVAP (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Design Annual Evaporation
EVAPORATION AREA (AC)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5		
EVAPORATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Evaporation Volume
PRECIPITATION (IN)	1.1	1.3	1.2	0.9	0.7	0.8	0.7	0.5	0.2	0.3	0.4	0.6	8.7	Designed Annual Precipitation
PRECIPITATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	Precip Volume
RAIN YET TO FALL (IN)	8.7	7.6	6.2	5.0	4.2	3.5	2.7	2.0	1.5	1.3	1.0	0.6		
AVG. MONTHLY Pdef (IN)	0.0	0.0	0.0	0.0	0.7	2.5	3.4	4.4	4.3	3.9	3.0	1.4	23.60	Average Annual Pdef
Vadose Zone Storage (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Inches Stored in The Vadose Zone
MODELED IRRIG DEMAND (IN)	0.0	0.0	0.0	0.0	0.7	2.5	3.4	4.4	4.3	3.9	3.0	1.4	23.60	Designed Annual Irrigation Demand
IRRIGATION DEMAND VOLUME (MG)	0.0	0.0	0.0	0.0	1.8	6.4	8.7	11.2	11.0	10.0	7.7	3.5	60.2	Irrigation Demand (MG)
REUSE WATER IRRIGATED	0.0	0.0	0.0	0.0	0.1	0.6	3.9	11.2	11.0	10.0	7.7	3.5	48.0	Volume Reuse water Irrigated (MG)
STORAGE GAIN (MG)	0.0	0.0	0.0	0.0	-1.8	-5.7	-4.8	1.4	2.7	2.4	-3.2	-3.2		
FINAL STORAGE (MG)	0.0	0.1	0.1	0.1	0.0	0.0	0.0	1.4	4.1	6.5	3.2	0.0		

ANNUAL INFLOW SUMMARY (MG)

WASTEWATER.....	47.9
PRECIPITATION.....	0.2
GIVEN INFLOWS-OUTFLOWS.....	0.0
<b>TOTAL</b>	<b>48.1</b>

ANNUAL OUTFLOW SUMMARY (MG)

POND EVAPORATION.....	0.0
POND PERCOLATION.....	0.0
IRRIGATION.....	48.0
<b>TOTAL</b>	<b>48.0</b>

OVERALL BALANCE

TOTAL INFLOW-OUTFLOW (MG).....	0.0
<b>MAX. REQ'D STORAGE (MG).....</b>	<b>6.46</b>
MAX. REQ'D STORAGE (ACFT)	19.8
MAX. DEPTH (FT)	25.0
SURFACE AREA (AC)	1.2
SURFACE AREA (SF)	54,330
SQUARE DIM (FT)	233

Acres Needed, vertical walls 0.8  
Storage Catchment Area Large Enough

## Exhibit D - Traffic Impact Study

# Urban Growth Boundary Expansion City of Umatilla, Oregon Traffic Impact Analysis

June 2020

Prepared by:



J-U-B ENGINEERS, Inc.  
1201 Adams Avenue  
La Grande, Oregon 97850

# Urban Growth Boundary Expansion City of Umatilla, Oregon Traffic Impact Analysis

June 2020



EXPIRES: 06/30/2020

Prepared by:

Spencer Montgomery  
Shae Talley, PE



J-U-B ENGINEERS, Inc.  
1201 Adams Avenue  
La Grande, Oregon 97850

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## Appendices

- Appendix A – Traffic Counts
- Appendix B– Level of Service Worksheets
- Appendix C – City of Umatilla Plan Map
- Appendix D – Traffic Growth Calculations

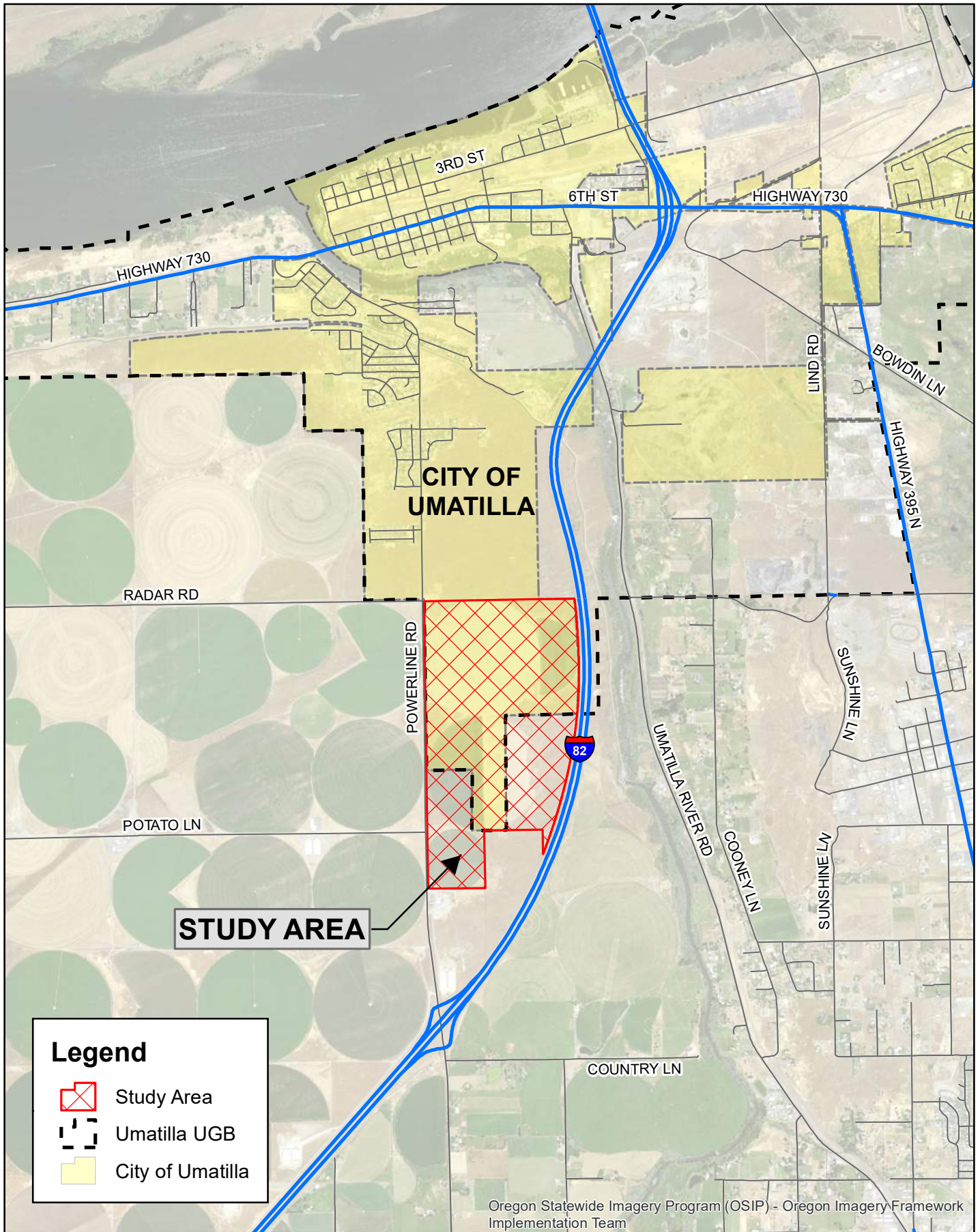


## Introduction and Background

Cleaver Land, LLC is preparing an application proposing a Comprehensive Plan Amendment to expand the City of Umatilla Urban Growth Area and associated Zoning Map for economic development purposes. There is interest in development on property with good highway access adjacent to the existing Umatilla City limits.

The proposed Urban Growth Boundary (UGB) expansion includes two parcels, Tax Lots 1400 and 6601 on Assessors Map 5N28C totaling approximately 147 acres situated between Powerline Road and I-82 south of the current city limits. The proposed UGB expansion would add the remainder of Tax lot 1400, 107.66 acres, and all of Tax Lot 6601, 39.09 acres, into the UGB. This property would be brought into the UGB as Light Industrial land. A rezone of approximately 294 acres, situated immediately north of the expansion area, from residential to Light Industrial is also part of the land use action. The area for the UGB Expansion and rezone totaling 441 acres to be rezoned as Light Industrial is shown in Figure 1. This report provides the Traffic Impact Analysis of the UGB expansion and rezoning.

This Traffic Impact Analysis has been requested by the City of Umatilla to document potential traffic impacts as a result of the proposed 147 acre UGB expansion and rezone of the 294 acre parcel. This study will summarize existing traffic conditions (2020) as well as future traffic operational conditions in 2040 with and without the anticipated action of the UGB rezone and expansion. This study also identifies mitigation that may be necessary to provide safety and acceptable Levels of Service (LOS) in order to meet City of Umatilla and Oregon Department of Transportation (ODOT) standards. ODOT relies on the Volume-To-Capacity (VC) Ratio as the measure of quality of service. VC represents the measurement of the operating capacity of a roadway or intersection where the number of vehicles passing through is divided by the number of vehicles that could theoretically pass through when at capacity. If vehicles ( $v$ ) divided by capacity ( $c$ ) is less than one the facility has additional capacity.



## Existing Conditions

This section will document existing conditions with respect to land use, roadway characteristics, traffic volumes and traffic operations at the study intersections.

### Land Use

Land use of the 294 acres parcel within the current city limits is zoned residential but currently functions as agricultural production. Crops regularly in rotation are potatoes, onions, corn, legumes and recently hemp. The 147 acres to be expanded into the UGB is zoned agricultural which is consistent with the immediate vicinity and zoning in the area. There is, however, substantial residential subdivision growth north of the subject UGB expansion.

### Roadway Characteristics

Roadways are described below, while the lane geometry for study intersections and existing PM peak hour traffic volumes are shown in Figure 2.

**Powerline Road** is a north-south Major Collector that provides a connection from an I-82 interchange (Exit 5) to the south to an intersection with US 730 to the north in the City of Umatilla. South, Powerline Road crosses over I-82 and intersects Westland Road 2.7 miles south of I-82. Powerline Road has a single through lane in each direction. The 12 foot lanes are paved with minimal gravel shoulders. The north 0.5 mile prior to US 730 has paved shoulders. The speed limit of Powerline Road from the intersection of US 730 south 1.4 miles is posted 35 MPH then the speed limit is increased to 45 MPH to MP 2. South of MP 2 the assumed speed limit is 55 MPH per rural highway standards in Oregon.

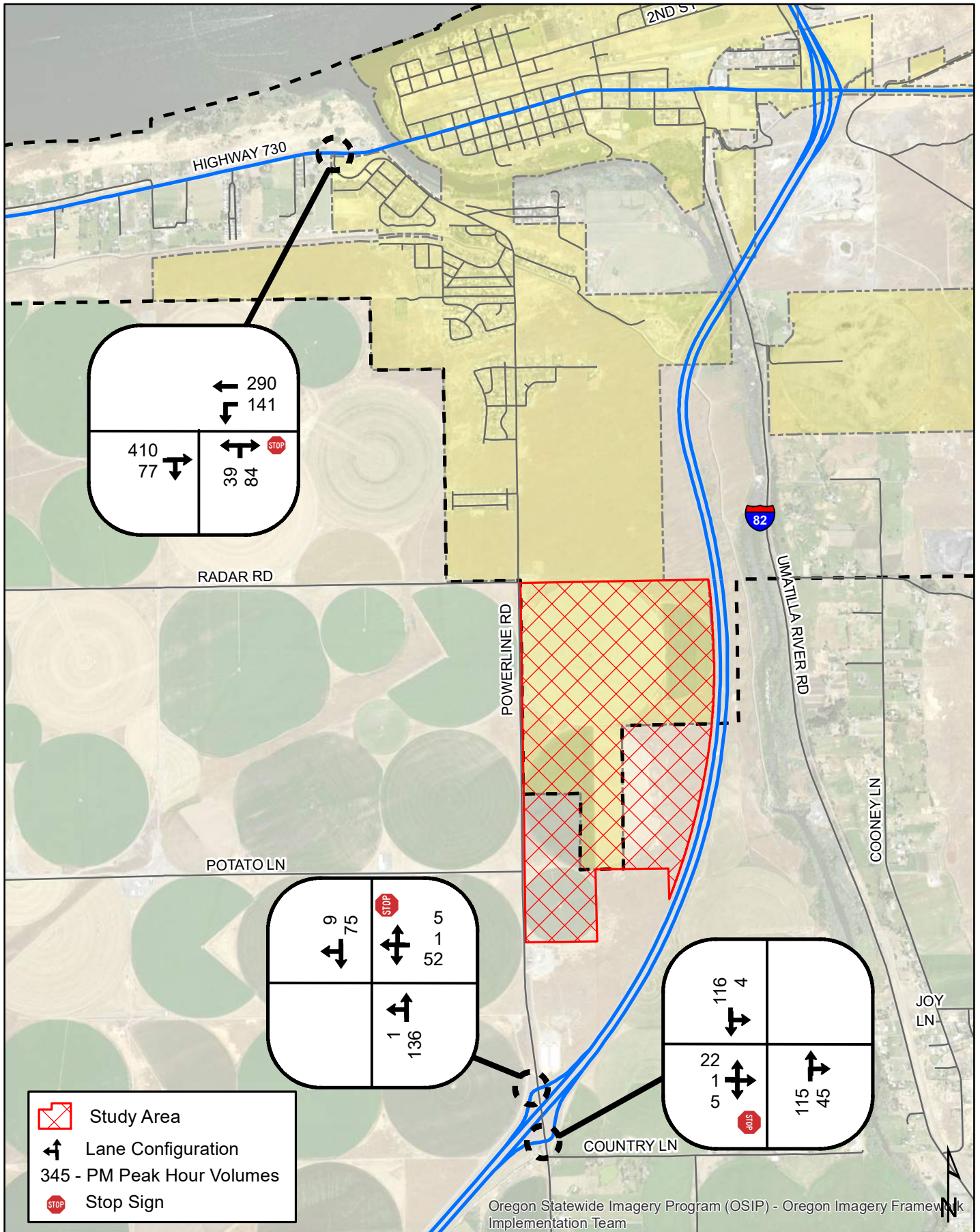
**I-82** is an east-west divided Interstate Highway which connects I-90 at Ellensburg, WA to I-84 approximately 10.5 miles south of the Oregon-Washington border. There are two lanes in each direction separated by a center median. It has a posted speed limit of 70 MPH (65 MPH Trucks). At the I-82 Interchange with Powerline road single lane approaches exist for all movements at both ramps. In the study area I-82 is oriented in a north-south direction, thus for clarity and for the purposes of this report I-82 westbound will be referred to as northbound, with the ramps being the east and west legs of the intersection at Powerline Road which also runs north/south, and I-82 eastbound will be referred to as southbound with the ramps being the east and west legs of the intersection at Powerline Road.

**US 730** in the vicinity of the intersection with Powerline Road is a 3 lane principal arterial Highway with one through lane in each direction and a center turn lane (although the west leg of the intersection at Powerline Road is not striped such that it promotes a northbound left turn into the center lane). US 730 has wide paved shoulders on both sides. US 730 terminates at I-84 west of Umatilla and terminates at the Wallula Junction to the east. At the Intersection with Powerline Road the posted speed is 40 MPH.

### Traffic Volumes

Turning movement counts were collected by All Traffic Data (provided to PBS for a separate TIA) collected on March 4, 2020 prior to the COVID-19 stay at home orders. PM peak period traffic at the intersection of US 730 /Powerline Road as well as the I-82 SB Ramps/Powerline Road and I-82 NB Ramps/Powerline Road are included in Appendix A. The PM peak hour occurred from 4:05 – 5:05 at US 730 and from 4:45 – 5:45 PM for both ramp intersections.





## Operational Analysis

The analysis of Level-of-Service (LOS) is a means of quantitatively describing the quality of operational conditions of a roadway segment or intersection and the perception by motorists and passengers. Service levels are identified by letter designation, A – F, with LOS “A” representing the best operating conditions and LOS “F” the worst. Each LOS represents a range of operating conditions. For intersections the measure used is average control delay in seconds per vehicle. While there are several methodologies for estimating the LOS of intersections, the most commonly used is presented in the Highway Capacity Manual and is the methodology used in this study (HCM 2010). The Highway Capacity Manual LOS criteria for intersections are summarized in Table 1.

**Table 1. Level of Service Criteria for Intersections**

Level of Service (LOS)	Average Control Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	< =10	< =10
B	>10 - < 20	>10 - < 15
C	>20 - < 35	>15 - < 25
D	>35 - < 55	>25 - < 35
E	>55 - < 80	>35 - < 50
F	>80	>50

Source: Highway Capacity Manual 6<sup>th</sup> Edition, Transportation Research Board, National Research Council, Washington, D.C., 2017.

For unsignalized intersections “delay” is based on the availability of gaps in the major street to allow minor street movements to occur. The methodology prioritizes each movement at an unsignalized intersection consistent with rules that govern right-of-way for drivers. In other words, major street through and right turn traffic has absolute priority over all other movements. Major street left turns must yield to opposing through traffic and right turns. Minor street through traffic and right turns yield to major street higher priority movements, and the minor street left turns have the lowest priority and must yield to all other movements. As traffic volumes increase, the availability of gaps will decrease and greater delay tends to result in driver frustration and anxiety, loss of time, unnecessary fuel consumption, and contributes to unnecessary air pollution. The City of Umatilla Transportation System Plan references ODOT’s minimum requirements which has LOS D for signalized intersections (meaning the LOS must be D or better), and LOS E for two-way stop controlled (TWSC) conditions. ODOT has a mobility standard of a v/c ratio of 0.85 or less for Highway 730 at Powerline road based on its classification and location. ODOT also has a mobility standard of a v/c ratio of 0.70 or less for interstate highways for locations outside a UGB and on rural lands. This standard would apply to the two interchange ramps of I-82 at Powerline Road.

Peak hour traffic volumes and existing intersection geometry were evaluated using the Highway Capacity Software to determine the delay and LOS at the existing study intersections. The LOS worksheet calculations are included in Appendix B. The results of the capacity analysis are shown in Table 2, which shows that all study intersections currently function at acceptable Levels of Service with the two I-82 ramps providing LOS B, and the Powerline Road/US 730 intersection providing LOS C with 23 seconds of average vehicle delay.

**Table 2. 2020 Existing Conditions Delay, Level of Service and volume to capacity ratios**

Intersection	2020 Existing
I-82 SB ramps/Powerline Road	WB – 10.4/B, 0.09
I-82 NB ramps/Powerline Road	EB—10.2/B, 0.04
US 730/Powerline Road	NB—23.0/C, 0.41 WBL—9.2/A, 0.16

**LEGEND**

10.4/B, 0.09      Delay (in seconds) and Level of Service, volume to capacity ratio  
 NB = northbound, SB = southbound, WB = westbound, EB = eastbound

---

## 2040 Conditions

This section evaluates traffic volumes at the study intersections for future conditions with the proposed UGB Expansion and Rezone as well as under the No Action Scenario.

### Proposed Land Use Change

The proposed land use action includes 294 acres currently within the City limits and zoned R-1 Single Family Residential to be rezoned to Light Industrial. It also includes expansion of the Urban Growth Boundary by 147 acres of currently zoned agricultural land to be zoned Light Industrial for a total of 441 acres of Light Industrial land. This is shown in Figure 3. The current City of Umatilla Plan Map showing existing zoning is included in Appendix C.

### Forecast 2040 Traffic Volumes

As is typical with most traffic studies, a growth rate for background traffic is used to apply to existing traffic volumes to account for growth in traffic that is the result of development outside the study area. The Coordinated Population Forecast for Umatilla County produced by Population Research Center at Portland State University indicates a forecast population growth rate of 1.1% per year for the City of Umatilla. For the purposes of this analysis a background growth rate of 1.5% was used to represent a conservatively high growth rate for traffic forecasting purposes. Added to this growth were trips for a recently approved residential development that is anticipated to add trips to the Powerline Road/US 730 intersection. The resulting 2040 No Action Traffic Volumes are shown in Figure 4, with detailed trips by movement included in Appendix D.

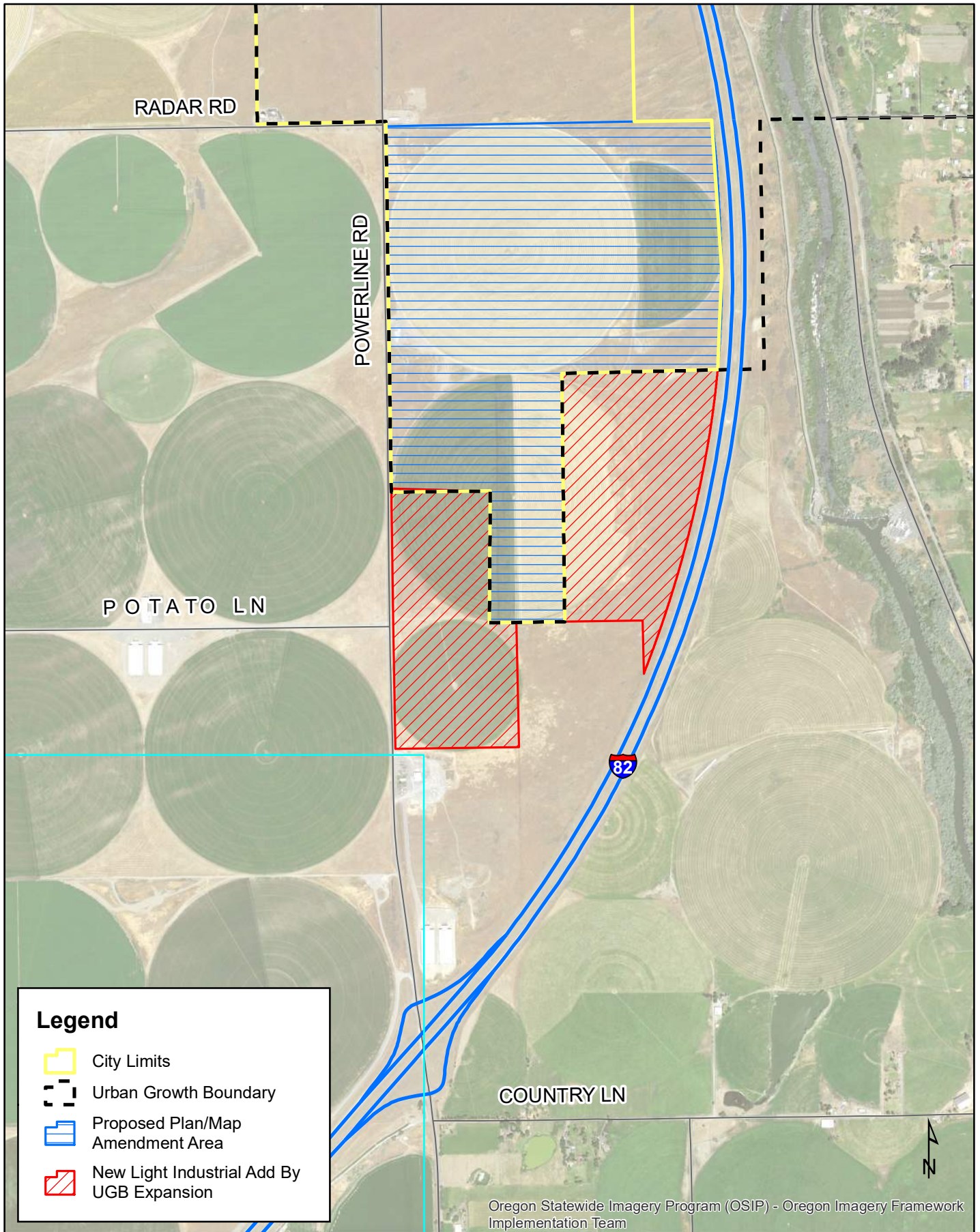
To estimate the new trips that could be generated by the proposed rezone and UGB Expansion the 10<sup>th</sup> Edition of the Institute of Transportation Engineers (ITE) *Trip Generation* Manual was used. This is a nationally recognized compilation of trip generation rates for common land uses. There is no specific development layout to use for development projections.

General Light Industrial (Land Use 110) fitted curve was used. To estimate the potential square footage of development for the site a floor area of 20% was applied to the 441 acres, resulting in 3.841 million square feet. Using the fitted curve equations in the ITE manual the resulting trips shown in Table 3 are anticipated upon build-out of the proposed industrial land.

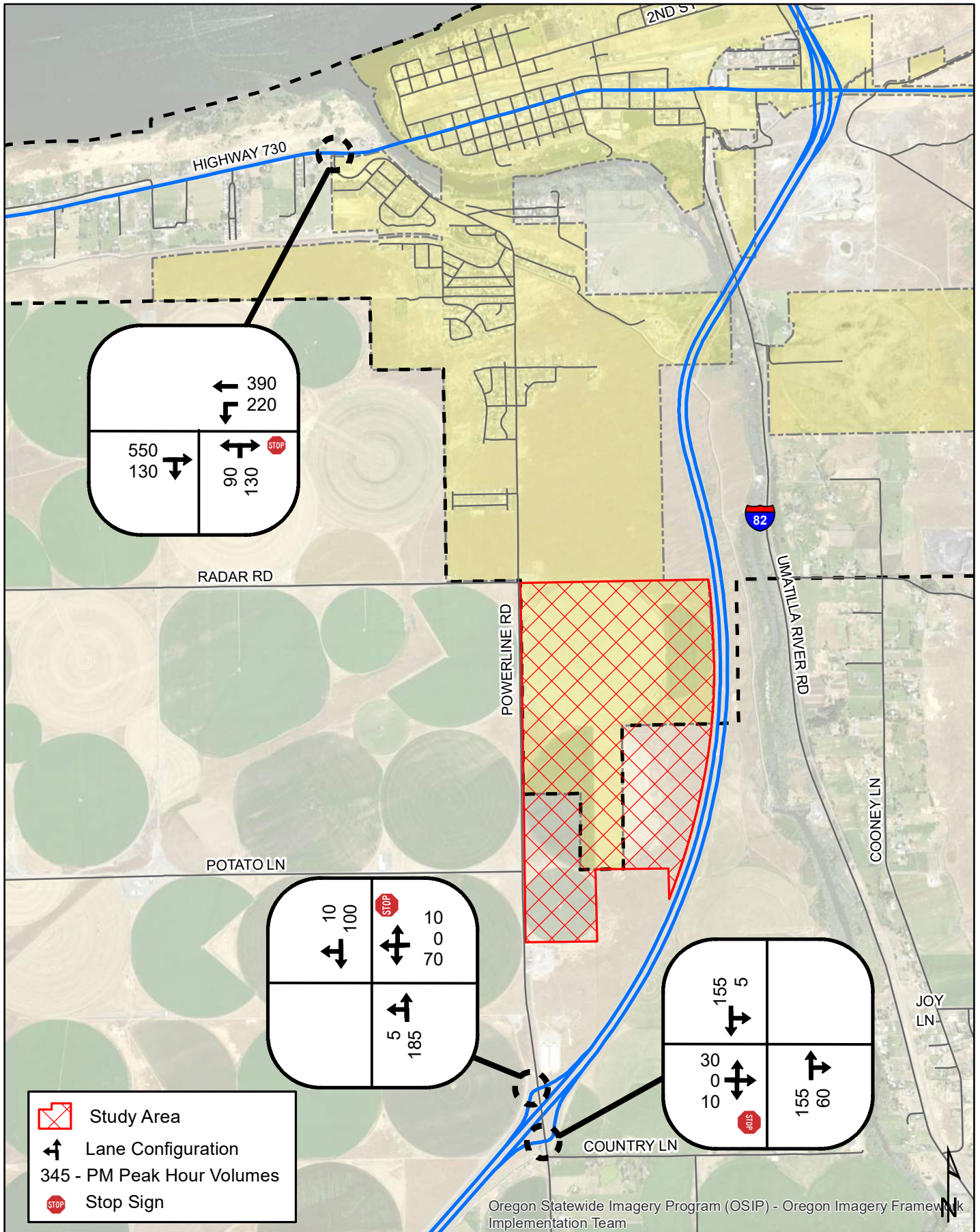
By comparison, the trips for Single Family Residential is also shown in Table 3. The number of potential homes that could be constructed on the 294 acres of currently zoned residential land was estimated by reducing the total land by 25% to account for buildable lands, right-of-way, stormwater, etc. and dividing by a lot size of 7,000 sq ft, resulting in 1,372 potential residential lots. The fitted curve equations are shown in Table 3.

Examination of Table 3 shows that the proposed 441 acres of light industrial land would generate approximately 458 PM peak hour trips. The existing zoning of 294 acres of residential would generate approximately 1,256 PM peak hour trips. Thus, even with the UGB Expansion under this proposal, the rezone from residential to light industrial is likely to reduce the total trips generated by the 441 acres by nearly 800 trips during the PM peak hour. This would indicate that the combined UGB Expansion/rezone proposed land use action would have significantly less impact than the current zoning of the land in question.









**Table 3. Trip Generation**

Description / ITE Code	Units	ITE Vehicle Trip Generation Rates				Expected Units	Total Trips		Distribution of Trips	
		Weekday	PM	PM In	PM Out		Daily	PM Hour	PM In	PM Out
General Light Industrial 110	1,000 sq ft	$T = 3.79(X) + 57.96$	$\ln(T) = i.69 \ln(X) + 0.43$	13%	87%	3,842	14,620	458	60	398
Single Family Residential 210	Dwelling Unit	$\ln(T) = 0.92 \ln(X) + 2.71$	$\ln(T) = 0.96 \ln(X) + 0.20$	63%	37%	1,372	11,570	1,256	791	465

To distribute the new 458 PM peak hour trips to the study intersections, an examination of traffic volumes in the study area considered in conjunction with the roadway network and the type of development proposed, resulted in the following trip distribution percentages:

- 10% to/from the south on I-82
- 15% to/from the north on I-82
- 20% to/from the south on Powerline towards Hermiston
- 25% to/from the west on US 730
- 30% to/from the east on US 730

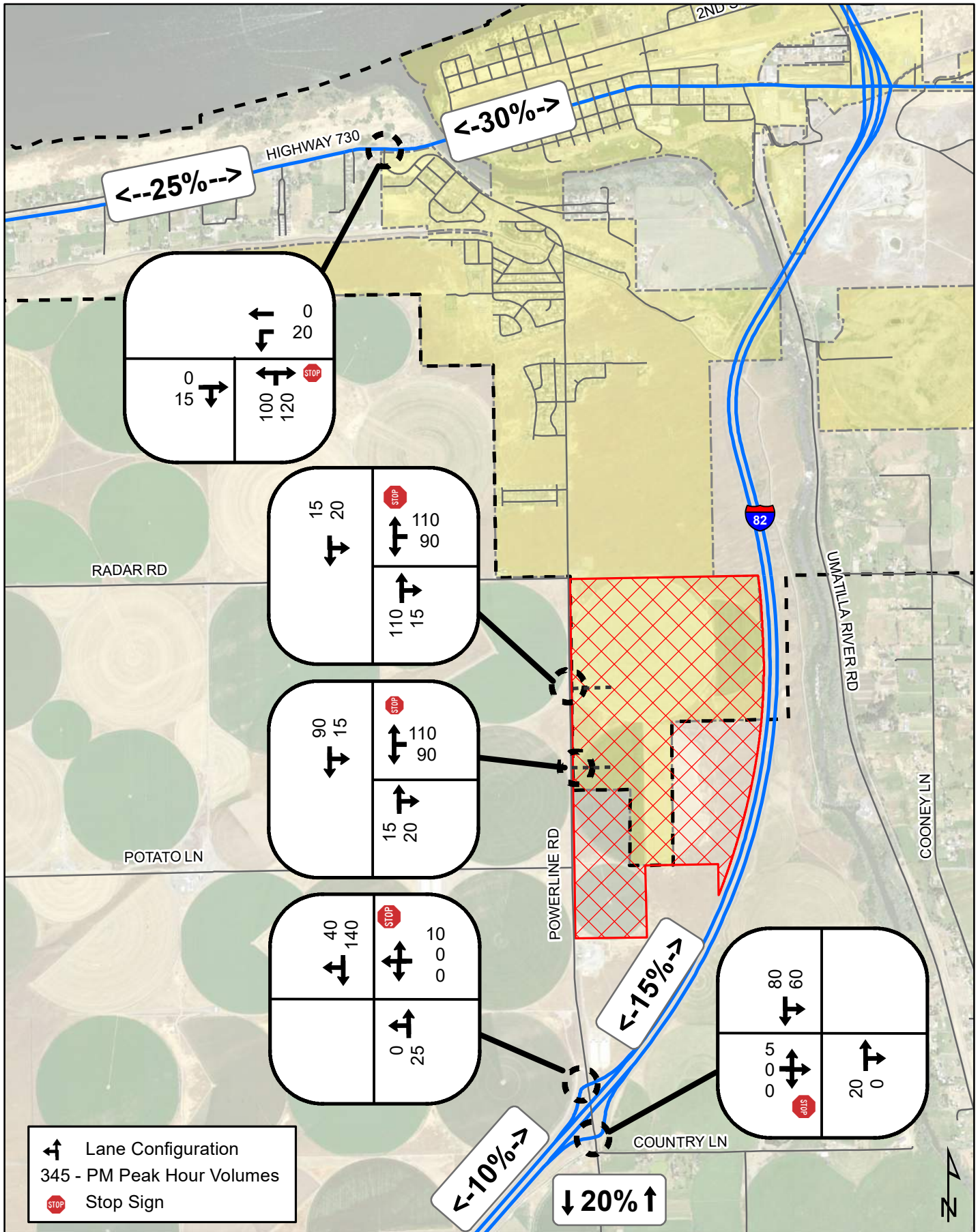
These percentages account for deliveries that will use I-82 more than the current traffic patterns, and the proximity to I-82 may lend itself to some northbound traffic to access the freeway at Powerline Road rather than using US 730. These percentages are also conservatively high in that they do not discount for employees that could live off Powerline to the north but south of US 730. Trip distribution percentages along with the resulting site generated trips are shown in Figure 5. Traffic volumes shown in Figure 5 were added to the No Action volumes shown in Figure 4 to estimate total 2040 PM peak hour traffic volumes with the UGB expansion and associated rezone that are shown in Figure 6.

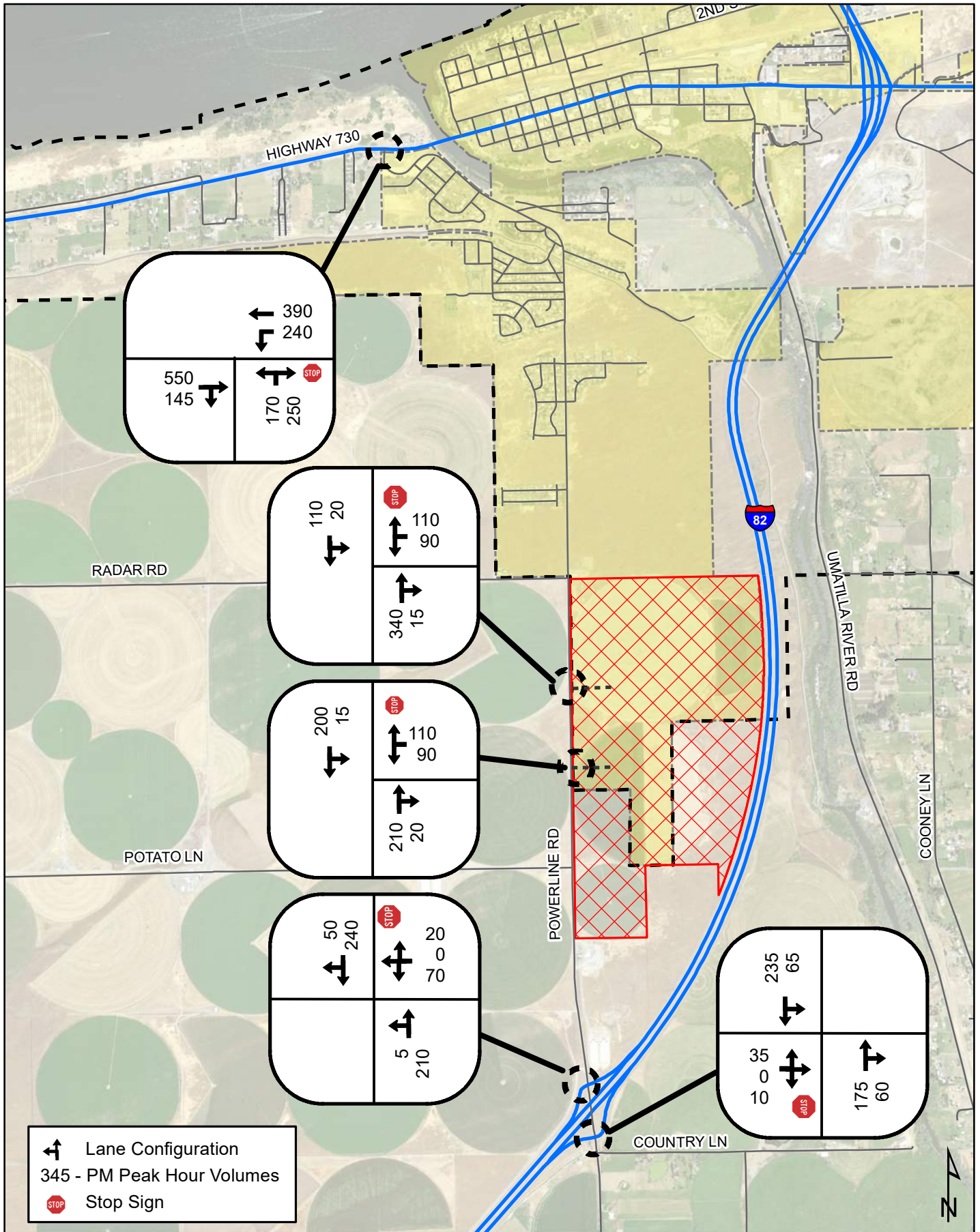
### Traffic Operations Analysis

The traffic volumes shown in Figures 4 and 6 were evaluated for traffic operations to determine the anticipated delay and Level of Service for 2040 Conditions under the No Action Scenario as well as with the UGB Expansion and associated Rezone. The results of the analysis are summarized in Table 4, with the LOS worksheets included in Appendix B.

As shown in Figure 4, under the No Action scenario, the two I-82 interchange ramps are anticipated to function at LOS B with relative low delay. The intersection of Powerline Road, however, is anticipated to have significant delay with over 300 seconds for the northbound approach. As noted earlier, US 730 has very wide shoulders as well as a two-way left turn lane that is not specifically striped to receive a northbound left turn from Powerline Road. An analysis was performed to determine appropriate mitigation. It was found that if the west leg were restriped to include an eastbound right turn lane and to accommodate left turns into the two way left turn lane, along with an exclusive northbound left turn lane, that acceptable LOS could be provided with the delay for the northbound left turn reduced to 39 seconds for LOS E.







**FIGURE 6:**  
 2040 PM PEAK HOUR  
 TRAFFIC VOLUMES WITH  
 UGB EXPANSION AND REZONE



**Table 4. 2040 Delay, Level of Service and Volume to Capacity Ratios**

Intersection	2020 Existing	2040 No Action	2040 With UGB Expansion and Rezone
I-82 SB ramps/Powerline Road	WB – 10.4/B, 0.09	WB—11.1/B, 0.13	WB—13.1/B,0.18
I-82 NB ramps/Powerline Road	EB—10.2/B, 0.04	EB—10.8/B, 0.07	EB—13.2/B, 0.10
US 730/Powerline Road	NB—23.0/C, 0.41 WBL—9.2/A, 0.16	NB—322.8/F, 1.54 WBL—10.9/B, 0.29	NB—1066/F, 3.23 WBL—11.3/B, 0.32
		(1) NBL—39.0/E, 0.49 WBL—10.9/B, 0.29	(1) NB—120.4/F, 1.01 WBL—11.3/B, 0.32

**LEGEND**

10.4/B, 0.09      Delay (in seconds) and Level of Service, volume to capacity ratio

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

- (1) Includes exclusive NB left turn lane, exclusive EB right turn lane and restriping for a receiving lane WB for NB left turn traffic to use the two-way left-turn lane.

With the UGB Expansion and associated rezone, acceptable LOS/delay is again provided at the two I-82 ramps. Even greater delay is expected at the Powerline Road/US 730 intersection. The improvements described above for the No Action scenario (restriping for an eastbound right turn lane and westbound receiving lane for the two-way left turn lane, and northbound left turn lane) will help significantly, but will still not achieve acceptable LOS. The intersection of Powerline Road/US 730 will need a higher level of traffic control such as a traffic signal or roundabout. A sensitivity analysis was conducted to determine what level of growth could occur prior to the need for a traffic signal. It was found that 10 years of background growth and 50% of the site generated trips could be added to the intersection while still providing acceptable LOS if the low cost improvements described above were implemented.

**Turn Lane Analysis**

An evaluation of left and right turn lanes, for the 2040 PM Peak traffic with the UGB expansion and rezoning, on US 730 and Powerline Road and at the two I-82 interchange ramp locations was performed. The ODOT Analysis Procedures Manual (APM) states:

*“A left turn lane improves safety and increases the capacity of the roadway by reducing the speed differential between the through and the left turn vehicles. Furthermore, the left turn lane provides the turning vehicle with a potential waiting area until acceptable gaps in the opposing traffic allow them to complete the turn.”*

*“The purpose of a right turn lane at an unsignalized intersection is to improve safety and to maximize the capacity of a roadway by reducing the speed differential between the right turning vehicles and the other vehicles on the roadway.”*

Exhibits 12-1 and 12-2 from the April 2020 ODOT Analysis Procedures Manual Version 2, were used to determine the need for turn lanes at the three study intersections.

Examination of Exhibit 12-1 shows that the intersection of Powerline Road and the southbound I-82 on ramp will not require an exclusive left turn lane. The northbound Powerline Road advancing traffic equals 215 vehicles of which only 5 vehicles turn left to the I-82 eastbound on ramp. The single shared through and left lane is sufficient given the 290 opposing southbound vehicles. Note there are no opposing left turns due to the one-way ramp intersection.

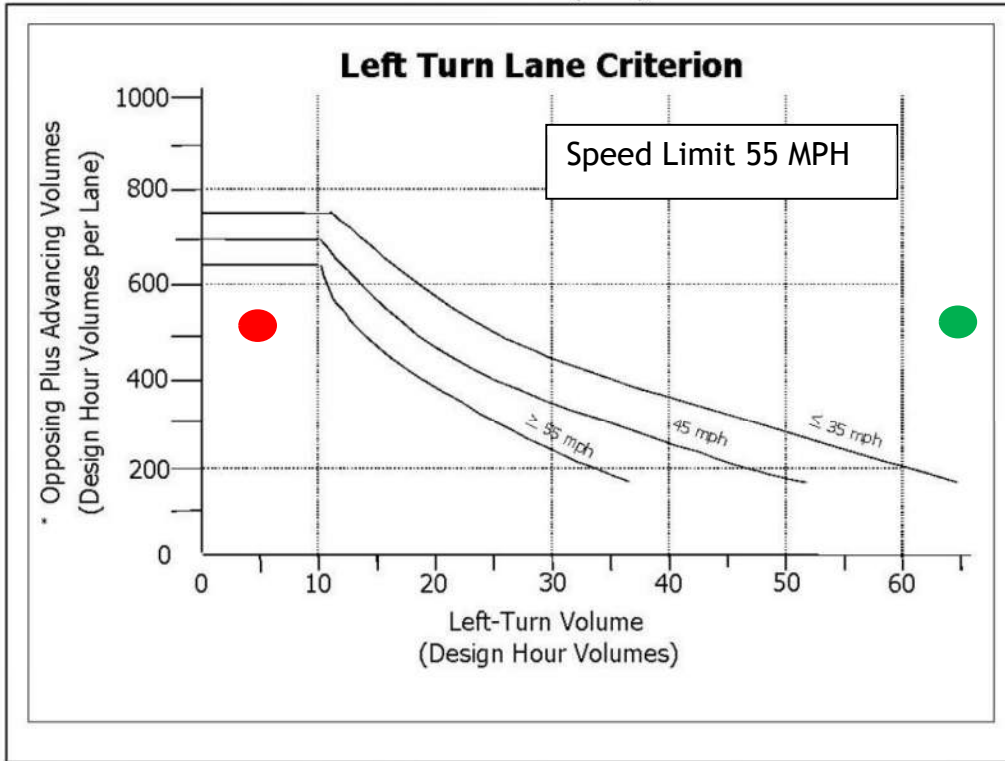
Examination of Exhibit 12-1 shows that the intersection of Powerline Road and the northbound I-82 on ramp will require an exclusive left turn lane. The southbound Powerline Road advancing traffic equals 300 vehicles of which 65 vehicles turn left to the I-82 northbound on ramp towards Umatilla. A single shared through and left lane exceeds the ODOT requirement given the 235 opposing northbound vehicles. Note there are no opposing left turns due to the one-way ramp intersection. The speed limit of Powerline Road is 55 MPH although the 95% percentile could logically be less but examination of Exhibit 12-1, even a much lesser speed would still require the left turn lane. Design of this additional lane will need to consider the proximity to the I-82 overpass structure. A sensitivity analysis indicated that approximately 33% of the industrial land and background growth could occur without the need for the left turn lane based on the assumptions of this study.

Examination of Exhibit 12-2 shows that the intersection of Powerline Road and eastbound I-82 on ramp will require an exclusive right turn lane. The southbound Powerline Road approaching volume is 290 peak hourly vehicles of which 50 are turning right on to the eastbound I-82 on ramp. The speed limit for Powerline Road is 55 MPH. Sensitivity analysis revealed that this right turn lane would not be needed until approximately 80% of the background growth and industrial land were developed.

Examination of Exhibit 12-2 shows that the intersection of US 730 and Powerline Road will require an exclusive right turn lane for the eastbound US 730 to southbound Powerline Road movement. The eastbound US 730 approaching volume equals 695 peak hour vehicles of which 145 will turn right on Powerline Road southbound. The speed limit for US 730 is 40 MPH at this location. Given the results of this analysis the traffic volumes for existing conditions were also evaluated and are shown in the exhibit as well. This indicates that an eastbound right turn lane is currently warranted at the Powerline Road/US 730 intersection.



**Exhibit 12-1 Left Turn Lane Criterion (TTI)**

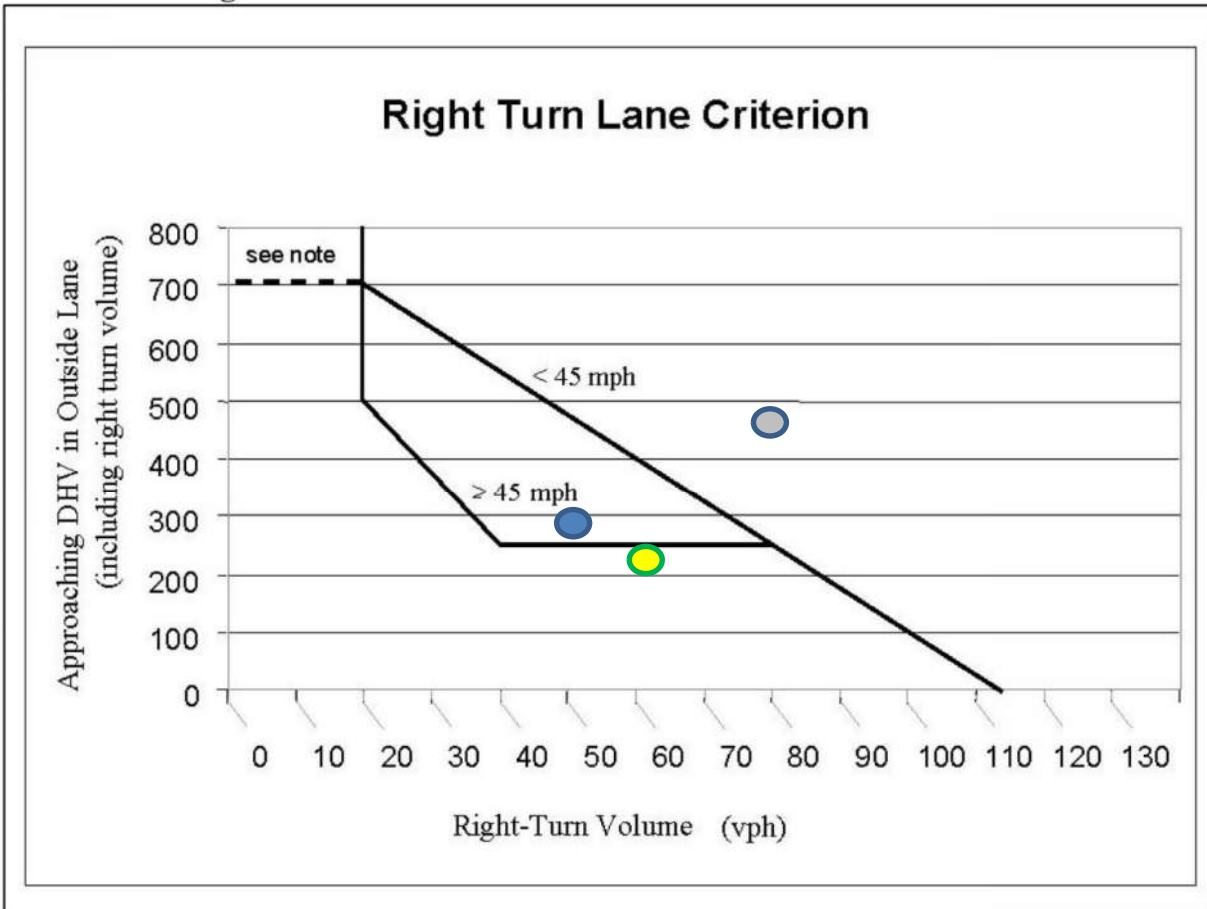


\*(Advancing Volume/Number of Advancing Through Lanes) + (Opposing Volume/Number of Opposing Through Lanes)

Opposing left turns are not counted as opposing volumes

- 2040 with UGB – NB Powerline Road/ -I-82 SB On Ramp
- 2040 with UGB - SB Powerline Road/I-82 NB On Ramp

**Exhibit 12-2 Right Turn Lane Criterion**



Note: If there is no right turn lane, a shoulder needs to be provided. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.

- 2040 with UGB – SB Powerline Road/I-82 SB On Ramp
- 2040 with UGB – NB Powerline Road/I-82 NB On Ramp
- 2040 with UGB – US 730/Powerline Road
- Existing – US 730/Powerline Road

## Summary and Recommendations

Cleaver Land, LLC is preparing an application proposing a Comprehensive Plan Amendment to expand the City of Umatilla Urban Growth Area and associated Zoning Map. There is interest in development on property with good highway access adjacent to the existing Umatilla city limits for economic development purposes.

The proposed Urban Growth Boundary (UGB) expansion includes two parcels, Tax Lots 1400 and 6601 on Assessors Map 5N28C totaling approximately 147 acres situated between Powerline Road and I-82 south of the current city limits. The proposed UGB expansion would add the remained of Tax lot 1400, 107.66 acres, and all of Tax Lot 6601, 39.09 acres, into the UGB. This property would be brought into the UGB as Light Industrial land. A rezone of approximately 294 acres, situated immediately north of the expansion area, from residential to Light Industrial is also part of the land use action.

Three study intersections of Powerline Road at the I-82 northbound and southbound ramps as well as at US 730 have been evaluated for existing conditions, 2040 No Action and 2040 with the Urban Growth Boundary Expansion and associated Rezone.

New trips that could be generated by the proposed rezone and UGB Expansion were estimated with over 3.8 million square feet of Light Industrial development potential. It is anticipated that this level of development could generate 458 PM peak hour trips. By comparison, however, the trips for Single Family Residential which is the current zoning that could accommodate approximately 1,372 residential lots, could generate 1,256 PM peak hour trips. Thus, even with the UGB Expansion under this proposal, the rezone from residential to light industrial is likely to reduce the total trips generated by the 441 acres by nearly 800 trips during the PM peak hour. This would indicate that the combined UGB Expansion/rezone proposed land use action would have significantly less impact than the current zoning of the land in question.

Capacity analysis of the three study intersections indicates that they all function with acceptable Levels of Service. For the 2040 No Action Scenario the I-82 interchange ramps will function with good LOS, however the intersection of Powerline Road/US 730 will need an exclusive northbound left turn and restriping of the west leg to accommodate an exclusive right turn lane and westbound receiving lane for northbound left turns to utilize the two-way left-turn nature of US 730.

With the UGB Expansion and associated rezone, acceptable LOS/delay is again provided at the two I-82 ramps. Even greater delay is expected at the Powerline Road/US 730 intersection. The improvements described above for the No Action scenario will help significantly, but will still not achieve acceptable LOS. The intersection of Powerline Road/US 730 will need a higher level of traffic control such as a traffic signal or roundabout. The traffic signal would likely be required at about 10 years of background growth and 50% of the site generated trips if the low cost improvements described above were implemented.

An evaluation of the need for left and right turns for safety purposes was also performed. A southbound right turn at the southbound I-82 ramps will be needed at approximately 80% of the background growth and 80% of the industrial development. A southbound left turn will be needed at the I-82 northbound ramps at approximately 33% of the background growth and 33% of the industrial development.

# APPENDIX A

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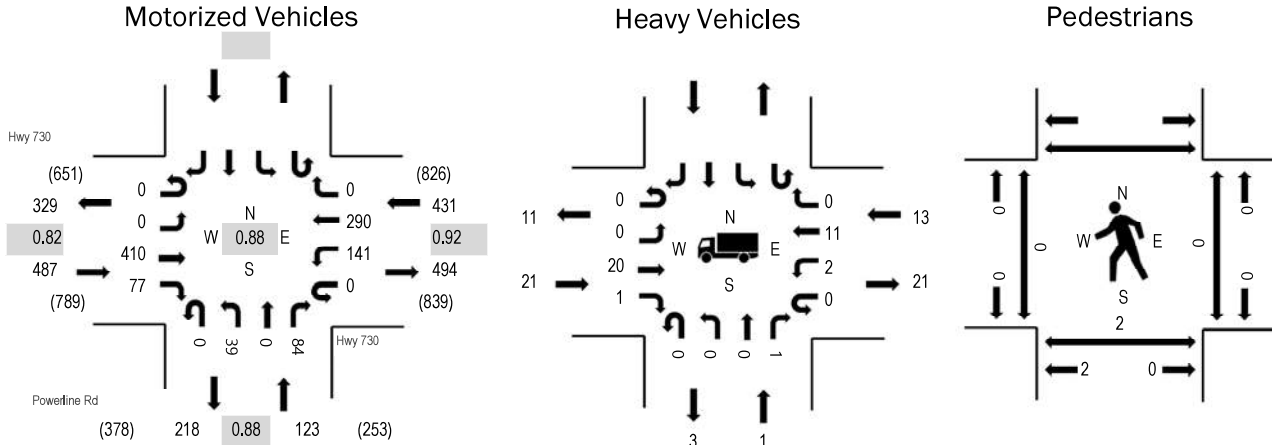
## Traffic Counts



(303) 216-2439  
www.alltrafficdata.net

**Location:** Powerline Rd & Hwy 730 PM  
**Date:** Wednesday, March 4, 2020  
**Peak Hour:** 04:05 PM - 05:05 PM  
**Peak 15-Minutes:** 04:40 PM - 04:55 PM

**Peak Hour**



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.3%	0.82
WB	3.0%	0.92
NB	0.8%	0.88
SB		
All	3.4%	0.88

**Traffic Counts - Motorized Vehicles**

Interval Start Time	Hwy 730 Eastbound				Hwy 730 Westbound				Powerline Rd Northbound				Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	39	9	0	8	17	0	0	1	0	3					77	1,021
4:05 PM	0	0	38	6	0	10	21	0	0	3	0	7					85	1,041
4:10 PM	0	0	40	13	0	9	12	0	0	0	0	12					86	1,031
4:15 PM	0	0	38	9	0	8	22	0	0	6	0	6					89	1,023
4:20 PM	0	0	48	4	0	14	24	0	0	3	0	4					97	1,004
4:25 PM	0	0	34	13	0	9	17	0	0	8	0	7					88	975
4:30 PM	0	0	29	2	0	13	26	0	0	2	0	6					78	969
4:35 PM	0	0	23	6	0	7	24	0	0	2	0	3					65	963
4:40 PM	0	0	43	5	0	11	25	0	0	1	0	9					94	986
4:45 PM	0	0	43	5	0	18	35	0	0	2	0	11					114	980
4:50 PM	0	0	17	4	0	14	40	0	0	7	0	7					89	938
4:55 PM	0	0	27	4	0	11	13	0	0	0	0	4					59	906
5:00 PM	0	0	30	6	0	17	31	0	0	5	0	8					97	
5:05 PM	0	0	24	4	0	7	27	0	0	6	0	7					75	
5:10 PM	0	0	21	8	0	10	27	0	0	5	0	7					78	
5:15 PM	0	0	25	4	0	9	23	0	0	1	0	8					70	
5:20 PM	0	0	20	5	0	8	23	0	0	6	0	6					68	
5:25 PM	0	0	19	2	0	11	33	0	0	5	0	12					82	
5:30 PM	0	0	21	4	0	12	23	0	0	6	0	6					72	
5:35 PM	0	0	25	2	0	14	35	0	0	4	0	8					88	
5:40 PM	0	0	30	1	0	13	29	0	0	7	0	8					88	
5:45 PM	0	0	21	2	0	14	20	0	0	2	0	13					72	
5:50 PM	0	0	16	0	0	13	19	0	0	3	0	6					57	
Count Total	0	0	671	118	0	260	566	0	0	85	0	168					1,868	
Peak Hour	0	0	410	77	0	141	290	0	0	39	0	84					1,041	

### Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	1	0		5	4:00 PM	0	0	0	0	4:00 PM	0	0	0	0	0	
4:05 PM	3	0	1		4	4:05 PM	0	0	0	0	4:05 PM	0	0	0	0	0	
4:10 PM	2	0	0		2	4:10 PM	0	0	0	0	4:10 PM	0	0	0	0	0	
4:15 PM	2	0	1		3	4:15 PM	0	0	0	0	4:15 PM	0	0	0	0	0	
4:20 PM	4	0	1		5	4:20 PM	0	0	0	0	4:20 PM	0	0	0	0	0	
4:25 PM	3	0	0		3	4:25 PM	0	0	0	0	4:25 PM	0	0	0	0	0	
4:30 PM	3	1	2		6	4:30 PM	0	0	0	0	4:30 PM	0	0	0	0	0	
4:35 PM	0	0	0		0	4:35 PM	0	0	0	0	4:35 PM	0	0	0	0	0	
4:40 PM	0	0	0		0	4:40 PM	0	0	0	0	4:40 PM	0	2	0	0	2	
4:45 PM	1	0	2		3	4:45 PM	0	0	0	0	4:45 PM	0	0	0	0	0	
4:50 PM	1	0	3		4	4:50 PM	0	0	0	0	4:50 PM	0	0	0	0	0	
4:55 PM	1	0	2		3	4:55 PM	0	0	0	0	4:55 PM	0	0	0	0	0	
5:00 PM	1	0	1		2	5:00 PM	0	0	0	0	5:00 PM	0	0	0	0	0	
5:05 PM	2	0	1		3	5:05 PM	0	0	0	0	5:05 PM	0	0	0	0	0	
5:10 PM	2	1	1		4	5:10 PM	0	0	0	0	5:10 PM	0	0	0	0	0	
5:15 PM	1	0	0		1	5:15 PM	0	0	0	0	5:15 PM	0	0	0	0	0	
5:20 PM	1	0	2		3	5:20 PM	0	0	1	1	5:20 PM	0	0	0	0	0	
5:25 PM	2	0	1		3	5:25 PM	0	0	0	0	5:25 PM	0	0	0	0	0	
5:30 PM	0	0	1		1	5:30 PM	0	0	0	0	5:30 PM	0	0	0	0	0	
5:35 PM	1	0	3		4	5:35 PM	0	0	0	0	5:35 PM	0	0	0	0	0	
5:40 PM	3	0	2		5	5:40 PM	0	0	0	0	5:40 PM	0	0	0	0	0	
5:45 PM	1	0	1		2	5:45 PM	0	0	0	0	5:45 PM	0	2	0	0	2	
5:50 PM	1	0	3		4	5:50 PM	0	0	0	0	5:50 PM	0	0	0	0	0	
Count Total	39	3	28		70	Count Total	0	0	1	1	Count Total	0	4	0	0	4	
Peak Hour	21	1	13		35	Peak Hour	0	0	0	0	Peak Hour	0	2	0	0	2	





### Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	1	0	1	2	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	1	1	0	0	2	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	1	1	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	1	1	0	0	2	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	1	0	1	2	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	1	0	0	0	1	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	1	0	1	2	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
Count Total	4	5	0	4	13	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	3	3	0	2	8	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0



(303) 216-2439  
www.alltrafficdata.net

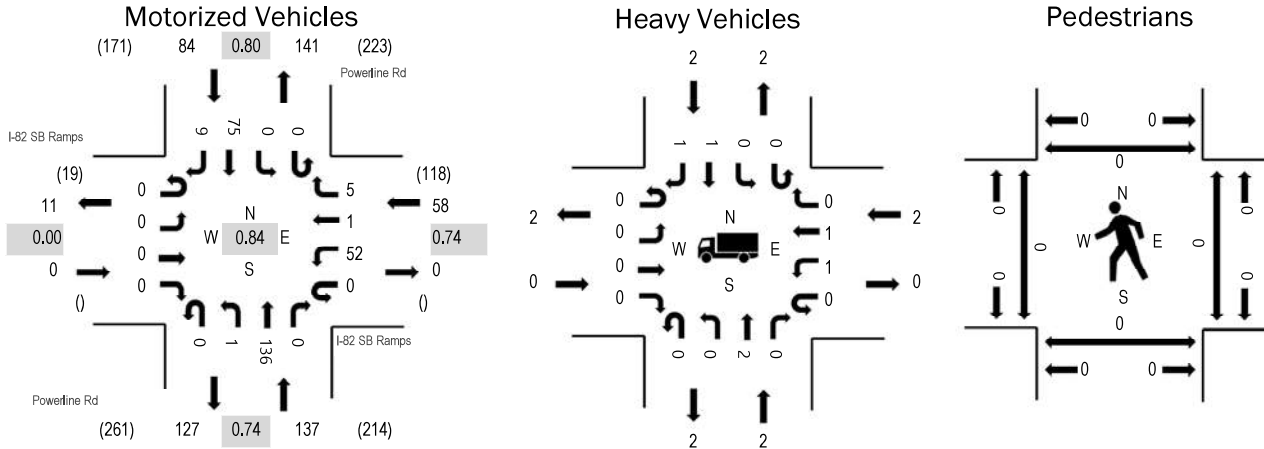
Location: Powerline Rd & I-82 SB Ramps PM

Date: Wednesday, March 4, 2020

Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:10 PM - 05:25 PM

**Peak Hour**



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	3.4%	0.74
NB	1.5%	0.74
SB	2.4%	0.80
All	2.2%	0.84

**Traffic Counts - Motorized Vehicles**

Interval Start Time	I-82 SB Ramps Eastbound				I-82 SB Ramps Westbound				Powerline Rd Northbound				Powerline Rd Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	0	0	7	0	0	0	0	6	0	0	0	5	0	18	262
4:05 PM	0	0	0	0	0	5	0	0	0	0	9	0	0	0	12	1	27	262
4:10 PM	0	0	0	0	0	10	0	0	0	0	6	0	0	0	7	1	24	256
4:15 PM	0	0	0	0	0	5	0	1	0	0	9	0	0	0	9	0	24	253
4:20 PM	0	0	0	0	0	3	0	0	0	0	8	0	0	0	9	3	23	258
4:25 PM	0	0	0	0	0	4	0	1	0	0	7	0	0	0	11	0	23	268
4:30 PM	0	0	0	0	0	6	0	1	0	0	5	0	0	0	7	2	21	265
4:35 PM	0	0	0	0	0	3	0	0	0	0	2	0	0	0	7	0	12	263
4:40 PM	0	0	0	0	0	5	0	2	0	0	7	0	0	0	4	1	19	275
4:45 PM	0	0	0	0	0	6	0	1	0	0	14	0	0	0	10	0	31	279
4:50 PM	0	0	0	0	0	4	0	0	0	0	13	0	0	0	4	2	23	259
4:55 PM	0	0	0	0	0	1	0	0	0	0	10	0	0	0	6	0	17	258
5:00 PM	0	0	0	0	0	3	0	2	0	0	6	0	0	0	7	0	18	
5:05 PM	0	0	0	0	0	7	0	0	0	1	8	0	0	0	5	0	21	
5:10 PM	0	0	0	0	0	4	0	1	0	0	9	0	0	0	7	0	21	
5:15 PM	0	0	0	0	0	6	0	0	0	0	16	0	0	0	6	1	29	
5:20 PM	0	0	0	0	0	3	0	0	0	0	21	0	0	0	6	3	33	
5:25 PM	0	0	0	0	0	5	0	1	0	0	6	0	0	0	7	1	20	
5:30 PM	0	0	0	0	0	3	0	0	0	0	11	0	0	0	4	1	19	
5:35 PM	0	0	0	0	0	5	1	0	0	0	12	0	0	0	5	1	24	
5:40 PM	0	0	0	0	0	5	0	0	0	0	10	0	0	0	8	0	23	
5:45 PM	0	0	0	0	0	3	0	0	0	0	6	0	0	0	2	0	11	
5:50 PM	0	0	0	0	0	4	0	0	0	0	12	0	0	0	6	0	22	
Count Total	0	0	0	0	0	107	1	10	0	1	213	0	0	0	154	17	503	
Peak Hour	0	0	0	0	0	52	1	5	0	1	136	0	0	0	75	9	279	

### Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	1	1	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	1	1	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	1	1	2	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	1	0	1	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	1	0	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	1	1	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	1	0	0	1	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	1	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	1	0	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	1	0	1	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
Count Total	0	3	4	5	12	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	2	2	2	6	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

# APPENDIX B

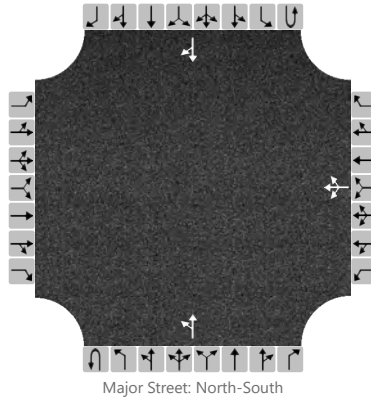
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## Level of Service Worksheets

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 SB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 SB ramps
Analysis Year	2020	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.84
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume, V (veh/h)						52	1	5		1	136				75	9
Percent Heavy Vehicles (%)						3	3	3		3						
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized		No				No				No				No		
Median Type/Storage							Undivided									

## Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						6.43	6.53	6.23		4.13						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23						

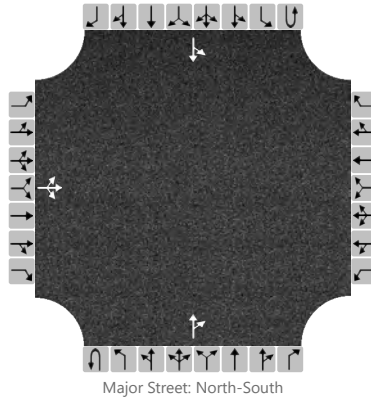
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						69				1						
Capacity, c (veh/h)						738				1485						
v/c Ratio						0.09				0.00						
95% Queue Length, Q <sub>95</sub> (veh)						0.3				0.0						
Control Delay (s/veh)						10.4				7.4						
Level of Service, LOS						B				A						
Approach Delay (s/veh)						10.4				0.1						
Approach LOS						B										

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 NB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 NB ramps
Analysis Year	2020	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR									TR		LT			
Volume, V (veh/h)		22	1	5							115	45		4	116		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No					No					No					
Median Type/Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		6.43	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

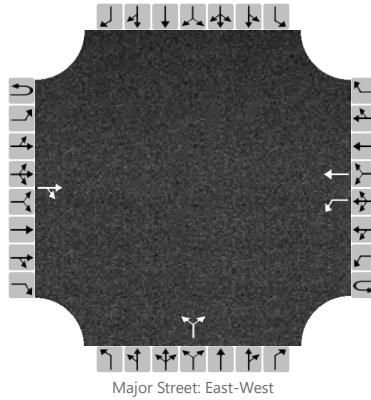
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			32											4		
Capacity, c (veh/h)			725											1388		
v/c Ratio			0.04											0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.1											0.0		
Control Delay (s/veh)			10.2											7.6		
Level of Service, LOS			B											A		
Approach Delay (s/veh)		10.2										0.2				
Approach LOS		B														

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2020	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.88
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume, V (veh/h)			410	77		141	290			39		84				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					6.43		6.23			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

## Delay, Queue Length, and Level of Service

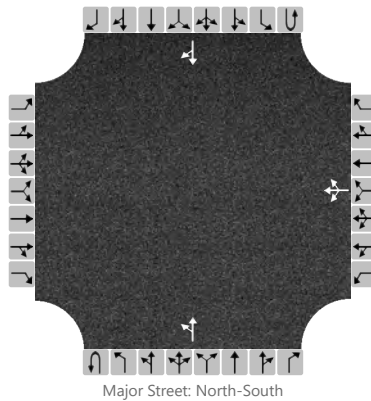
Flow Rate, v (veh/h)						160					139					
Capacity, c (veh/h)						1010					337					
v/c Ratio						0.16					0.41					
95% Queue Length, Q <sub>95</sub> (veh)						0.6					2.0					
Control Delay (s/veh)						9.2					23.0					
Level of Service, LOS						A					C					
Approach Delay (s/veh)						3.0				23.0						
Approach LOS										C						



# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 SB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 SB ramps
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion - No Action		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume, V (veh/h)						70	0	10		5	185				100	10
Percent Heavy Vehicles (%)						3	3	3		3						
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

## Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						6.43	6.53	6.23		4.13						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23						

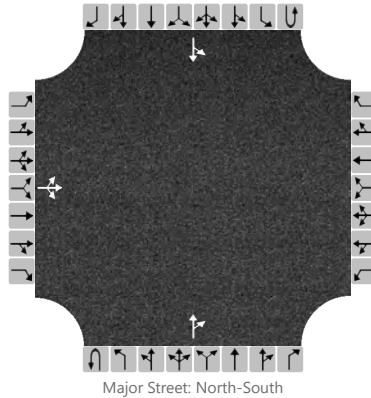
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						89				6						
Capacity, c (veh/h)						676				1457						
v/c Ratio						0.13				0.00						
95% Queue Length, Q <sub>95</sub> (veh)						0.5				0.0						
Control Delay (s/veh)						11.1				7.5						
Level of Service, LOS						B				A						
Approach Delay (s/veh)						11.1				0.2						
Approach LOS						B										

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 NB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 NB ramps
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion - No Action		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound							
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
Movement																				
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6				
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0				
Configuration			LTR									TR		LT						
Volume, V (veh/h)		30	0	10							155	60		5	155					
Percent Heavy Vehicles (%)		3	3	3										3						
Proportion Time Blocked																				
Percent Grade (%)		0																		
Right Turn Channelized		No					No					No					No			
Median Type/Storage		Undivided																		

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2											4.1		
Critical Headway (sec)		6.43	6.53	6.23											4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3											2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33											2.23		

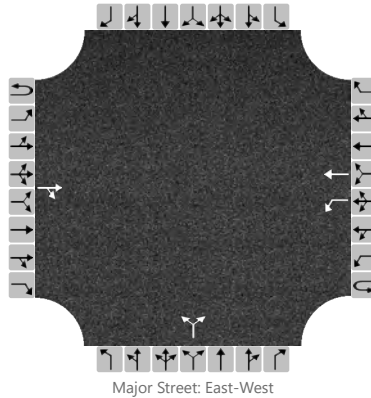
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			44												6			
Capacity, c (veh/h)			660												1320			
v/c Ratio			0.07												0.00			
95% Queue Length, Q <sub>95</sub> (veh)			0.2												0.0			
Control Delay (s/veh)			10.8												7.7			
Level of Service, LOS			B												A			
Approach Delay (s/veh)		10.8													0.3			
Approach LOS		B																

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion - No Action		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume, V (veh/h)			550	130		220	390			90		130				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

## Critical and Follow-up Headways

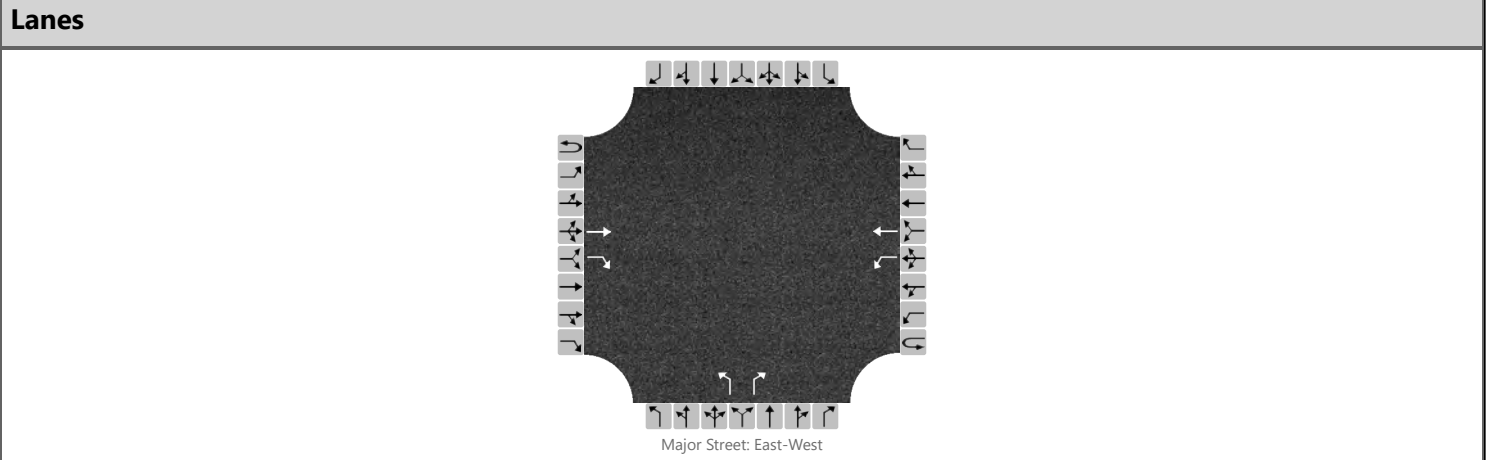
Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					6.43		6.23			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						244					244					
Capacity, c (veh/h)						850					159					
v/c Ratio						0.29					1.54					
95% Queue Length, Q <sub>95</sub> (veh)						1.2					16.3					
Control Delay (s/veh)						10.9					322.8					
Level of Service, LOS						B					F					
Approach Delay (s/veh)					3.9				322.8							
Approach LOS									F							

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion-No Action-Mit w/turns		



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume, V (veh/h)			550	130		220	390			90		130				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

**Critical and Follow-up Headways**

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

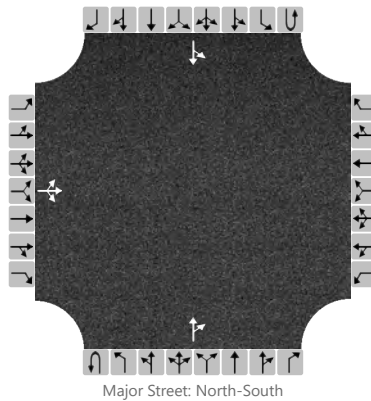
**Delay, Queue Length, and Level of Service**

Flow Rate, v (veh/h)						244				100		144				
Capacity, c (veh/h)						850				202		492				
v/c Ratio						0.29				0.49		0.29				
95% Queue Length, Q <sub>95</sub> (veh)						1.2				2.5		1.2				
Control Delay (s/veh)						10.9				39.0		15.3				
Level of Service, LOS						B				E		C				
Approach Delay (s/veh)					3.9				25.0							
Approach LOS									D							

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 NB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 NB ramps
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion with Rezone		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR									TR		LT			
Volume, V (veh/h)		35	0	10							175	60		65	235		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No					No					No					
Median Type/Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		6.43	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

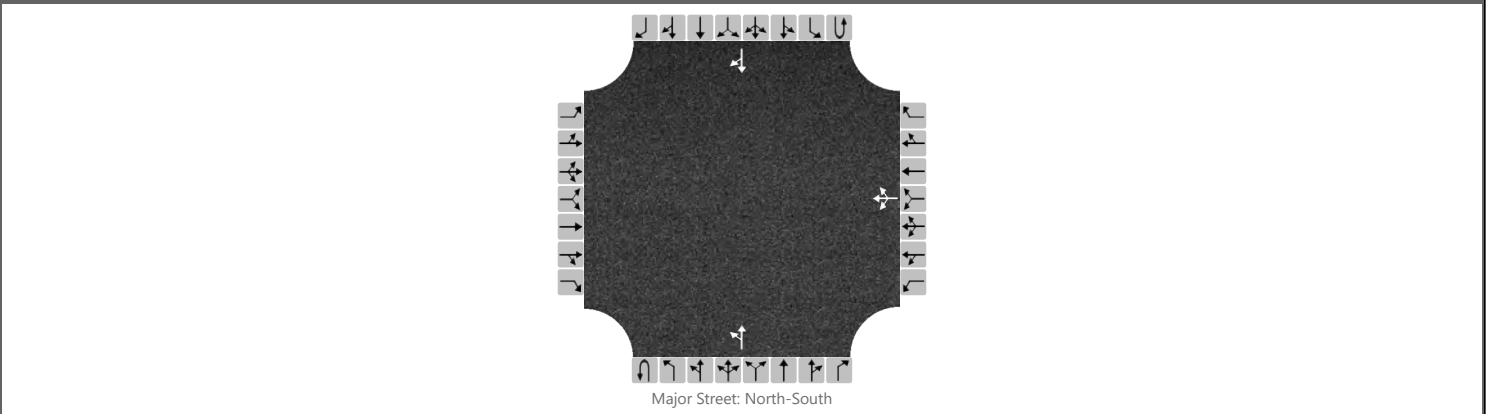
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			50											72		
Capacity, c (veh/h)			489											1296		
v/c Ratio			0.10											0.06		
95% Queue Length, Q <sub>95</sub> (veh)			0.3											0.2		
Control Delay (s/veh)			13.2											7.9		
Level of Service, LOS			B											A		
Approach Delay (s/veh)		13.2										2.1				
Approach LOS		B														

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 SB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 SB ramps
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion with Rezone		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume, V (veh/h)						70	0	20		5	210				240	50
Percent Heavy Vehicles (%)						3	3	3		3						
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized		No				No				No				No		
Median Type/Storage							Undivided									

## Critical and Follow-up Headways

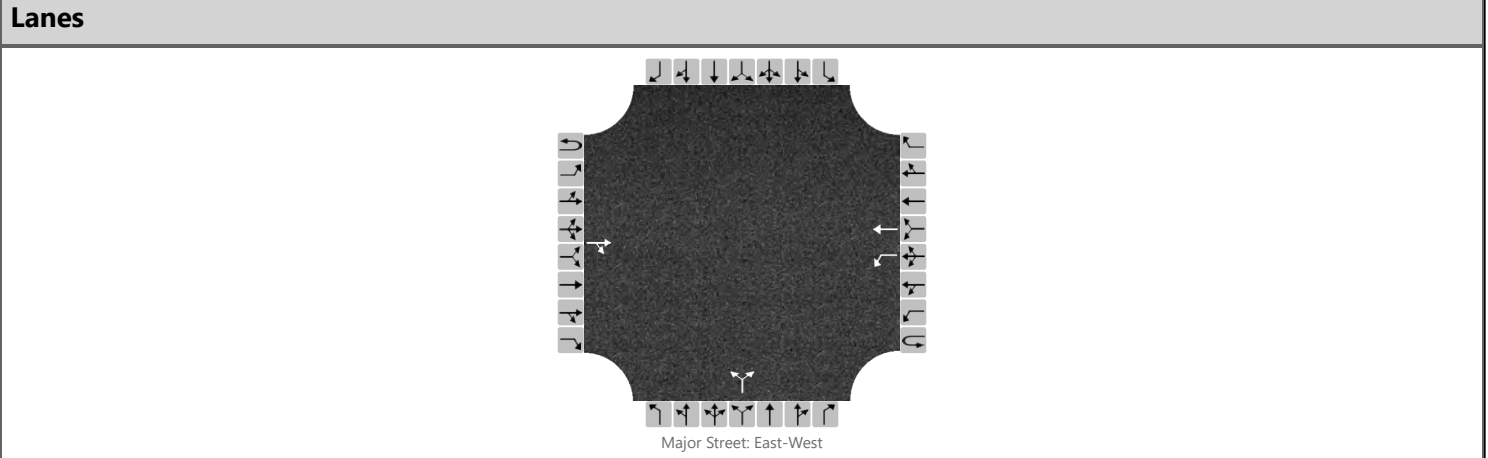
Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						6.43	6.53	6.23		4.13						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23						

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						100				6						
Capacity, c (veh/h)						546				1230						
v/c Ratio						0.18				0.00						
95% Queue Length, Q <sub>95</sub> (veh)						0.7				0.0						
Control Delay (s/veh)						13.1				7.9						
Level of Service, LOS						B				A						
Approach Delay (s/veh)						13.1				0.2						
Approach LOS						B										

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion-with Rezone		



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0	
Configuration				TR		L	T				LR						
Volume, V (veh/h)			550	145		240	390			170		250					
Percent Heavy Vehicles (%)						3				3		3					
Proportion Time Blocked																	
Percent Grade (%)										0							
Right Turn Channelized		No				No				No				No			
Median Type/Storage		Undivided															

**Critical and Follow-up Headways**

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					6.43		6.23			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

**Delay, Queue Length, and Level of Service**

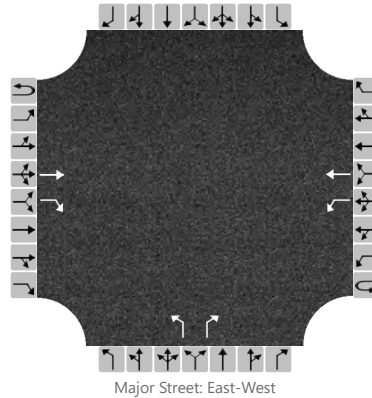
Flow Rate, v (veh/h)						267					467					
Capacity, c (veh/h)						838					145					
v/c Ratio						0.32					3.23					
95% Queue Length, Q <sub>95</sub> (veh)						1.4					44.2					
Control Delay (s/veh)						11.3					1066.0					
Level of Service, LOS						B					F					
Approach Delay (s/veh)						4.3				1066.0						
Approach LOS										F						



# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion-with Rezone		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume, V (veh/h)			550	145		240	390			170		250				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

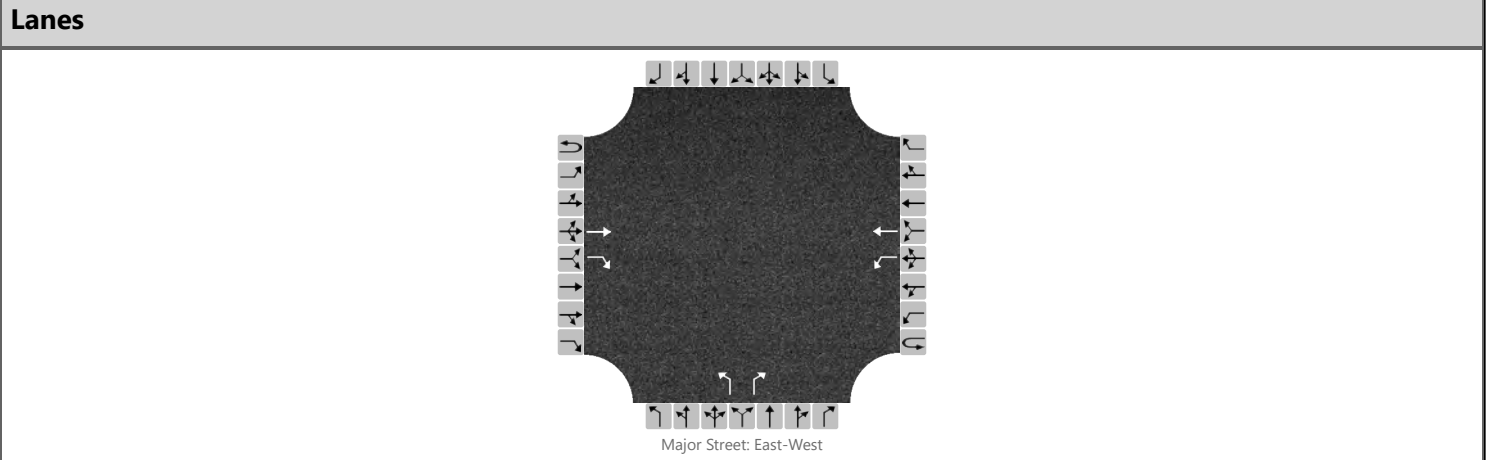
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						267				189		278				
Capacity, c (veh/h)						838				187		492				
v/c Ratio						0.32				1.01		0.57				
95% Queue Length, Q <sub>95</sub> (veh)						1.4				8.5		3.5				
Control Delay (s/veh)						11.3				120.4		21.4				
Level of Service, LOS						B				F		C				
Approach Delay (s/veh)					4.3				61.5							
Approach LOS									F							

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2030	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion-with Rezone, with turns		



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume, V (veh/h)			480	115		195	340			60		115				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

**Critical and Follow-up Headways**

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					6.43		6.23			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

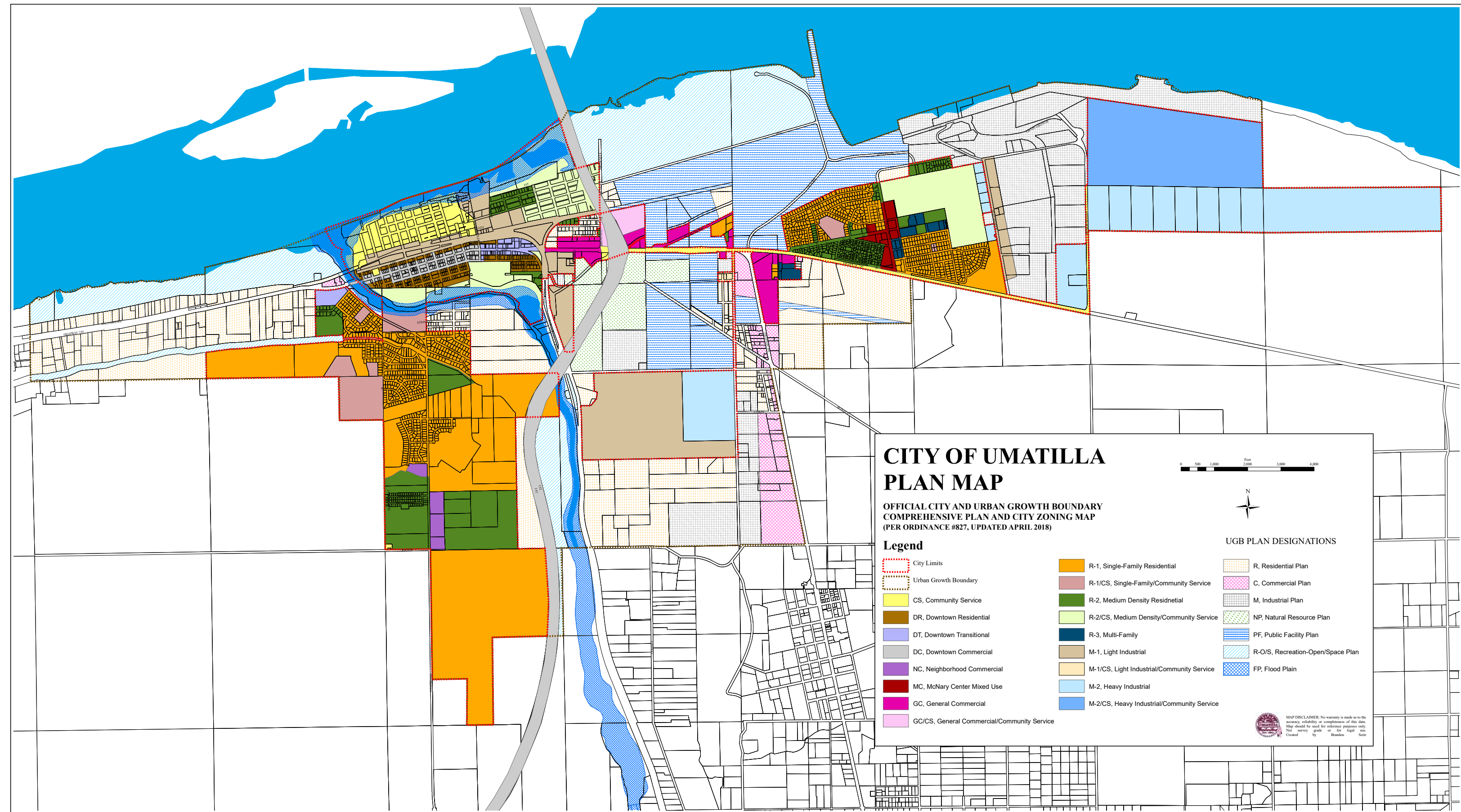
**Delay, Queue Length, and Level of Service**

Flow Rate, v (veh/h)						217					67		128			
Capacity, c (veh/h)						922					245		545			
v/c Ratio						0.24					0.27		0.24			
95% Queue Length, Q <sub>95</sub> (veh)						0.9					1.1		0.9			
Control Delay (s/veh)						10.1					25.1		13.6			
Level of Service, LOS						B					D		B			
Approach Delay (s/veh)					3.7				17.6							
Approach LOS									C							

# APPENDIX C

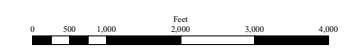
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## City of Umatilla Plan Map



# CITY OF UMATILLA PLAN MAP

OFFICIAL CITY AND URBAN GROWTH BOUNDARY  
COMPREHENSIVE PLAN AND CITY ZONING MAP  
(PER ORDINANCE #827, UPDATED APRIL 2018)



## Legend

- |   |  |                                   |
|---|--|-----------------------------------|
| City Limits                                 | R-1, Single-Family Residential             | R, Residential Plan               |
| Urban Growth Boundary                       | R-1/CS, Single-Family/Community Service    | C, Commercial Plan                |
| CS, Community Service                       | R-2, Medium Density Residential            | M, Industrial Plan                |
| DR, Downtown Residential                    | R-2/CS, Medium Density/Community Service   | NP, Natural Resource Plan         |
| DT, Downtown Transitional                   | R-3, Multi-Family                          | PF, Public Facility Plan          |
| DC, Downtown Commercial                     | M-1, Light Industrial                      | R-O/S, Recreation-Open/Space Plan |
| NC, Neighborhood Commercial                 | M-1/CS, Light Industrial/Community Service | FP, Flood Plain                   |
| MC, McNary Center Mixed Use                 | M-2, Heavy Industrial                      |                                   |
| GC, General Commercial                      | M-2/CS, Heavy Industrial/Community Service |                                   |
| GC/CS, General Commercial/Community Service |  |                                   |

## UGB PLAN DESIGNATIONS

MAP DISCLAIMER: No warranty is made as to the accuracy, reliability or completeness of this data. Map should be used for reference purposes only. Not survey grade or for legal use. Created by Brandon Seitz

# APPENDIX D

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## Traffic Growth Calculations

**Umatilla Urban Growth Boundary Traffic Growth Calculations**

Intersection	NB			SB			EB			WB			TOTAL
	LT	T	RT	LT	T	RT	LT	T	RT	LT	T	RT	
	<b>Powerline/US 730</b>												
Existing 2020 PM Peak Hr	39	--	84	--	--	--	--	410	77	141	290	0	1041
2040 Background @ 1.5%/year	53	--	113	--	--	--	--	562	104	190	391	0	1402
Ambience Vested Trips	15	--	17	--	--	--	--	0	26	30	0	0	88
Total 2040 No Action (rounded)	70	--	130	--	--	--	--	550	130	220	390	0	1490
UGB Expansion/Rezone Trips	100	--	120	--	--	--	--	0	15	20	0	0	255
Total 2040 Trips with UGB & Rezone	170	--	250	--	--	--	--	550	145	240	390	0	1744

Intersection	NB			SB			EB			WB			TOTAL
	LT	T	RT	LT	T	RT	LT	T	RT	LT	T	RT	
	<b>Powerline/I-82 EB ramps (SB)</b>												
Existing 2020 PM Peak Hr	1	136	--	--	75	9	--	--	--	52	1	5	279
2040 Background @ 1.5%/year	1	183	--	--	101	12	--	--	--	70	1	7	376
Ambience Vested Trips													0
Total 2040 No Action (rounded)	5	185	--	--	100	10	--	--	--	70	0	10	380
UGB Expansion/Rezone Trips	0	25	--	--	140	40	--	--	--	0	0	10	215
Total 2040 Trips with UGB & Rezone	5	210	--	--	240	50	--	--	--	70	0	20	596

Intersection	NB			SB			EB			WB			TOTAL
	LT	T	RT	LT	T	RT	LT	T	RT	LT	T	RT	
	<b>Powerline/I-82 WB ramps (NB)</b>												
Existing 2020 PM Peak Hr	--	115	45	4	116	--	22	1	5	--	--	--	308
2040 Background @ 1.5%/year	--	155	61	5	156	--	30	1	7	--	--	--	415
Ambience Vested Trips	--												0
Total 2040 No Action (rounded)	--	155	60	5	155	--	30	0	10	--	--	--	415
UGB Expansion/Rezone Trips	--	20	0	60	80	--	5	0	0	--	--	--	165
Total 2040 Trips with UGB & Rezone	--	175	60	65	235	--	35	0	10	--	--	--	580

CITY OF UMATILLA, OREGON

**AGENDA BILL**

<b>Agenda Title:</b> <b>Cleaver Land Plan Amendment PA-2-20:</b> The applicant, Cleaver Land, LLC, is requesting approval of an Urban Growth Boundary Expansion to include approximately 146.69 acres land. The applicant also submitted an Annexation and Zone Change applications with the desired outcome to have approximately 450 acres of land planned and zoned for industrial use.	<b>Meeting Date:</b> 2021-07-20
---	------------------------------------

<b>Department:</b> Community Development	<b>Director:</b> Brandon Seitz	<b>Contact Person:</b> Brandon Seitz	<b>Phone Number:</b>
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<b>Cost of Proposal:</b> NA	<b>Fund(s) Name and Number(s):</b> N/A
<b>Amount Budgeted:</b> NA	

<b>Reviewed by Finance Department:</b> Yes	<b>Previously Presented:</b> NA
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**Attachments to Agenda Packet Item:**

[PA-2-20 CC Report.pdf](#)

<b>Summary Statement:</b> The City of Umatilla Planning Commission at their August 2020 public hearing unanimously voted to recommend approval of Plan Amendment PA-2-20. The County Planning Commission has scheduled a public hearing on this joint application on July 22, 2021. Staff recommends leaving the record open to allow any new testimony submitted at the County Planning Commission meeting to be address. A sample motion for a continuance is provided below  I move to continue Cleaver Land Plan Amendment PA-2-20 to the City Council meeting on August 2nd beginning at 7:00 pm and leave the record open.
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<b>Consistent with Council Goals:</b> Goal 2: Promote Economic Development and Job Growth.
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**UMATILLA CITY COUNCIL  
REPORT AND RECOMMENDATION  
FOR  
PLAN AMENDMENT PA-2-20**

**DATE OF HEARING:** July 20, 2021

**REPORT PREPARED BY:** Brandon Seitz, Community Development Director

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**I. GENERAL INFORMATION AND FACTS**

**Applicant:** Cleaver Land, LLC, 78757 Westland Rd, Hermiston, OR 97838

**Land Use Review:** An Urban Growth Boundary (UGB) expansion.

**II. NATURE OF REQUEST AND GENERAL FACTS**

The applicant, Cleaver Land, LLC, is requesting approval of an Urban Growth Boundary Expansion to include approximately 146.69 acres land. The applicant also submitted an Annexation and Zone Change applications with the desired outcome to have approximately 450 acres of land planned and zoned for industrial use. Current use of the property is agricultural. Crops under circle pivot irrigation regularly in rotation are potatoes, onions, corn, and grass seed. Improvements to the property include circle pivot irrigation systems and a general use storage building.

**Applicants Intended Outcomes of Application Process:**

The applicant is working with the City of Umatilla to achieve approval of three applications – an Urban Growth Boundary (UGB) expansion, an Annexation, and a Zone Change – with the desired outcome to have some 450 acres of available land planned and zoned for industrial use. The UGB expansion will add about 150 acres to the UGB; the Annexation will add those same acres within the City Limits; and those actions combined with a Zone Change will add about 450 acres to the industrial land supply. The proposed zoning designation of Light Industrial will support the types of uses – data centers, warehousing and light manufacturing – outlined in the Economic Opportunities Analysis completed by Johnson Economics that indicates that the City of Umatilla is in need of large lot industrial parcels. On page 43 of the Economic Opportunities Analysis it states, “For industrial users, there is an estimated deficit of sites of some sizes. Most notably there is a deficit of suitable large industrial sites, and a deficit of small industrial sites.” This statement is expanded on pages 44 and 45 providing more definition to the needs. At the top of page 45 the report states, “Given the projected short-term growth, and prospective long-term growth in this industry [data centers], Johnson Economics estimates a need for at least two sites of 100+ acres meeting serviceability requirements for data center or large manufacturing users, and at least two sites of 50+ acres.” Johnson Economics also states on page 41 the following, “...this does not address the more specific site needs from specific categories of employment land users. Some of the forecasted growth includes employers who may have specific site needs and preferences that are not reflected in the available buildable inventory, even though *in total*

the available parcels sum to a significant amount. In particular, there is forecasted demand for more suitable large-lot industrial sites while relatively few of these sites were found in the inventory.” The Johnson Economics provided Economic Opportunities Analysis, while using acreage ranges to discuss needs, does acknowledge that needs for large lots over 100 acres might easily mean upwards of 200 acres for any single user. Examples are a data center request at more than 120 acres and the Walmart Distribution Center at 190 acres. This would also be applicable to the range of 50 to 99.9 acres which could result in users needing 65 acres or 92 acres, an example being the FedEx freight distribution facility at 62.5 acres.

This suite of applications seeks to add 450 acres to the industrial land inventory for the City of Umatilla, meeting this need with the ability to also meet future needs for smaller lot or clustered industrial development which is also identified as a need. The Johnson Economics report on page 45 states the following about small lots, “There is also a projected need from small industrial firms for smaller sites. It is also common for these types of users to also be accommodated in multi-tenant industrial buildings on larger sites.”

The zone change component of this suite of applications does propose to rezone approximately 300 acres from Residential to Industrial. In 2019 the City of Umatilla completed a Goal 10 update that included a buildable lands inventory and a Housing Strategies Report (2019) that indicates an overabundance of residential land. Removal of 300 acres of residential land from the inventory does not negatively impact the land supply for residential development in the 20-year planning period, leaving a continuing surplus of approximately 750 acres.

### **III. ANALYSIS**

The criteria applicable to this request are shown in underlined text and the responses are shown in standard text. All of the following criteria must be satisfied in order for this request to be approved.

#### **Oregon Administrative Rule Chapter 660 Division 24 Section 0020 Adoption or Amendment of a UGB identifies which Statewide Planning Goals and related administrative rules are applicable. The following are considered:**

(1) All statewide goals and related administrative rules are applicable when establishing or amending a UGB, except as follows:

(a) The exceptions process in Goal 2 and OAR chapter 660, division 4, is not applicable unless a local government chooses to take an exception to a particular goal requirement, for example, as provided in OAR 660-004-0010(1);

**Applicants Response:** Based on the provisions outlined here no exceptions to any of the Statewide Planning Goals are necessary. Later analyzed are additional Division 24 requirements meeting current planning requirements for an urban growth boundary expansion.

**Conclusion:** The City is not claiming a goal exception.

(b) Goals 3 and 4 are not applicable;

**Applicants Response:** The applicant is relying on the Economic Opportunities Analysis (October

2019) which utilizes Oregon Administrative Rule Chapter 660 Division 24. This allows for an application to expand the urban growth boundary without an exception to Goal 3 Agricultural Land. The land under consideration for this urban growth boundary expansion is zoned Exclusive Farm Use and is currently inventoried in Umatilla County as part of Goal 3 protected lands. This action would remove approximately 150 acres from that inventory, adding it to the City of Umatilla urban growth boundary and city limits (by way of the included annexation application if approved).

**Conclusion:** Expansion of the urban growth boundary is allowed without an exception to State Goal 3 by way of Oregon Administrative Rule Chapter 660 Division 24. Goal 4 is not applicable as there are no Forest Lands found in or surrounding the City of Umatilla.

(c) Goal 5 and related rules under OAR chapter 660, division 23, apply only in areas added to the UGB, except as required under OAR 660-023-0070 and 660-023-0250;

**Applicants Response:** The applicant, based on conversations with City of Umatilla staff, is not aware of or has identified any Goal 5 resources within the subject property for either the urban growth boundary expansion and associated annexation or within the area proposed to be zoned or rezoned to Light Industrial.

**Conclusion:** According to the City of Umatilla Comprehensive Plan there are no identified Goal 5 resources on the subject property. The proposed urban growth boundary expansion, associated annexation, and rezone would not affect any known Goal 5 resources.

(d) The transportation planning rule requirements under OAR 660-012-0060 need not be applied to a UGB amendment if the land added to the UGB is zoned as urbanizable land, either by retaining the zoning that was assigned prior to inclusion in the boundary or by assigning interim zoning that does not allow development that would generate more vehicle trips than development allowed by the zoning assigned prior to inclusion in the boundary;

**Applicants Response:** The included Traffic Impact Analysis finds that the conversion of the residential land to industrial creates a reduction in trips. For the land that is subject to the urban growth boundary expansion and annexation, approximately 150 acres, there would be an increase in traffic over current Exclusive Farm Use zoning. That increase is consumed by the change in zoning of nearly 300 acres with a decrease in total daily trips. Transportation impacts are further analyzed later in this narrative and are evaluated in the included Traffic Impact Analysis.

**Conclusion:** A decrease in total daily trips is the net result from all three applications. Transportation impacts are further analyzed later in this narrative.

(e) Goal 15 is not applicable to land added to the UGB unless the land is within the Willamette River Greenway Boundary;

**Applicants Response:** The City of Umatilla is not within the Willamette River Greenway Boundary. Goal 15 is not considered here or elsewhere in this narrative.

**Conclusion:** The City of Umatilla is not within the Willamette River Greenway Boundary. Goal 15 is not applicable.

(f) Goals 16 to 18 are not applicable to land added to the UGB unless the land is within a coastal shorelands boundary;

**Applicants Response:** The City of Umatilla is not within a coastal shorelands boundary. Goals 16 through 18 are not considered here or elsewhere in this narrative.

**Conclusion:** The City of Umatilla is not within a coastal shorelands boundary. Goals 16 through 18 are not applicable.

(g) Goal 19 is not applicable to a UGB amendment.

**Applicants Response:** Goal 19 is not considered here or elsewhere in this narrative.

**Conclusion:** Goal 19 is not applicable.

(2) The UGB and amendments to the UGB must be shown on the city and county plan and zone maps at a scale sufficient to determine which particular lots or parcels are included in the UGB. Where a UGB does not follow lot or parcel lines, the map must provide sufficient information to determine the precise UGB location.

**Applicants Response:** Maps are included as part of the application package. The area subject to the urban growth boundary expansion (and related annexation) is the portion of Tax Lot 1400 of Assessor's Map 5N28C that is outside of the current urban growth boundary and city limit line. Also included is Tax Lot 6601 of Assessor's Map 5N28C. The acreage of the urban growth boundary expansion is approximately 150 acres. The Powerline Road right-of-way is also included in the urban growth boundary expansion to facilitate the future transfer of the portion of the Road from Umatilla County to the City of Umatilla.

**Conclusion:** The maps included in the application package clearly show the intention of the application. They are all at a scale sufficient to determine which particular lots or parcels are included in the UGB and subsequent applications.

**Applicants Note:** As part of the Economic Opportunities Analysis, Johnson Economics evaluated Oregon Administrative Rule Chapter 660 Division 24 Section 0040 Land Need and Section 0050 Land Inventory and Response to Deficiency. See pages 28 through 36 of the Economic Opportunities Analysis for evaluation and analysis of these two sections of OAR 660 Division 24.

**Oregon Administrative Rule Chapter 660 Division 24 Section 0065 Establishment of Study Area to Evaluate Land for Including in the UGB is a continuation of the work embodied in the included Economic Opportunities Analysis which determines a need for large lot industrial opportunities. As part of the Economic Opportunities Analysis, Johnson Economics evaluated Oregon Administrative Rule Chapter 660 Division 24 Section 0040 Land Need and Section 0050 Land Inventory and Response to Deficiency. Section 0065 is reviewed here:**

(1) When considering a UGB amendment to accommodate a need deficit identified in OAR 660-024-0050(4), a city outside of Metro must determine which land to add to the UGB by evaluating alternative locations within a “study area” established pursuant to this rule. To establish the study area, the city must first identify a “preliminary study area” which shall not include land within a different UGB or the corporate limits of a city within a different UGB. The preliminary study area shall include:

(a) All lands in the city’s acknowledged urban reserve, if any;

**Applicants Response:** The City of Umatilla does not have an acknowledged urban reserve. This is not applicable.

**Conclusion:** The City of Umatilla does not have an acknowledged urban reserve. This is not applicable.

(b) All lands that are within the following distance from the acknowledged UGB:

(A) For cities with a UGB population less than 10,000: one-half mile;

(B) For cities with a UGB population equal to or greater than 10,000: one mile;

(c) All exception areas contiguous to an exception area that includes land within the distance specified in subsection (b) and that are within the following distance from the acknowledged UGB:

(A) For cities with a UGB population less than 10,000: one mile;

(B) For cities with a UGB population equal to or greater than 10,000: one and one-half miles;

(d) At the discretion of the city, the preliminary study area may include land that is beyond the distance specified in subsections (b) and (c).

**Applicants Response:** The applicant, working with City staff, originally identified three sites to evaluate as alternatives to the subject property. These three Sites along with the subject property are identified on maps included with this application package.

Based on comment from the Department of Land Conservation and Development additional lands have been included and are identified in the tables below. The three alternative sites that are most fully analyzed are: 1) land to the east of the Port of Umatilla development and north of Highway 730 along the banks of the Columbia River (Site 1), 2) land east and south of the Port of Umatilla and both north and south of Highway 730 (Site 2), and 3) land to the south of the City of Umatilla between Highway 395 and Interstate 82 (Site 3). The subject property is along Powerline Road to the south of the City of Umatilla. It should be noted that to the north of the City of Umatilla is the Columbia River and the State of Washington thereby restricting expansion and development.

The following sites are within the city limits and over 90 acres:

Tax Account #	Map & tax lot	OWNER	Acreage	Current Use
133088	5N28210000200	AMAZON DATA SERVICES INC	178.2	Data Center
135855	5N29B00000600	PORT OF UMATILLA	161.36	Empty land
135832	5N28A00000101	OREGON DEPT OF CORRECTIONS	268.15	Prison

<b><u>124632</u></b>	<b><u>5N28C0000140</u></b> <b><u>0</u></b>	<b><u>CLEAVER LAND, LLC</u></b>	214	Subject Property
<b><u>124632</u></b>	<b><u>5N28C0000140</u></b> <b><u>0</u></b>	<b><u>CLEAVER LAND, LLC</u></b>	106.34	Subject Property

Based on discussion with City of Umatilla staff the Amazon data center site is under development, the Port of Umatilla property is under consideration for development at the time of application, and the Oregon Department of Corrections property, while partially vacant, is considered unavailable for development. The property owned by Cleaver Land is the subject property.

The following sites are within the study area and are generally over 90 acres:

Tax Account #	Map & tax lot	OWNER	Acreage	Current Use
128455	5N28C00001300	TOPAZ LAND INC	635.74	Agriculture
129006	5N27000000401	N & C LAND LLC	432.44	Agriculture
124666	5N28C00006701	TOPAZ LAND INC	319.89	Agriculture
128459	5N28C00001401	TOPAZ LAND INC	155.45	Agriculture
158438	5N28330000200	BROKEN SPUR RANCH LLC	106.56	Agriculture
133096	5N28C00001200	TOPAZ LAND INC	595.5	Agriculture
129011	5N27000000501	N & C LAND LLC	594.29	Agriculture
148171	5N28C00001404	BROKEN SPUR RANCH LLC	135.4	Agriculture
127025	5N29B00000203	DEPT OF INTERIOR BIA	713.88	Federal Land
150061	5N29B00000601	USA Site 2	479.15	Federal Land
133108	5N28230000100	DEPT OF INTERIOR BIA Site 2	318	Federal Land
126982	5N28240000100	DEPT OF INTERIOR BIA Site 2	200.59	Federal Land
127030	5N29B00000301	OREGON DEPT FISH & WILDLIFE	160	State Land
135854	5N29B00000400	USA	102.31	Federal Land
136210	5N2828C000200	USA	95.76	Federal Land
126980	5N28A00001300	DEPT OF INTERIOR BIA Site 2	465.36	Federal Land
136246	5N28A00000400	USA	659.59	Federal Land
136258	5N28090000100	USA	256.17	Federal Land
127039	5N29B00000500	USA (TRS) Site 1	195.23	Federal Land
135814	5N28A00000100	USA	134.98	Federal Land
136249	5N28140001600	USA	105.21	Federal Land
136324	5N28180000601	USA	95.1	Federal Land
136228	5N27130001001	USA	90.82	Federal Land
136211	5N2828A000100	USA (BLM) Site 3	77.43	Federal Land

137707	5N2828D000100	USA (BLM) Site 3	77.27	Federal Land
<b><u>124632</u></b>	<b><u>5N28C00001400</u></b>	<b><u>CLEAVER LAND, LLC</u></b>	214	<b>Subject Property</b>
<b><u>124632</u></b>	<b><u>5N28C00001400</u></b>	<b><u>CLEAVER LAND, LLC</u></b>	106.34	<b>Subject Property</b>

Many of the parcels identified as Agricultural land are west of Powerline Road with better growth characteristics so have not been included for consideration. Most are captured within the study area having just a small portion of their acreage included. Two of the Agricultural parcels (Broken Spur) are situated in a location that make access difficult for industrial development.

Site 1 is Federal land under the management of the Confederated Tribes of the Umatilla Indian Reservation and is identified for future tribal uses with a Goal 11 exception in place. As Federal land it is not subject to Oregon’s statewide planning program and is not available to the City to direct economic opportunity. While the City of Umatilla would encourage economic opportunity to occur on this property it is unavailable for current inclusion in any inventory.

The McNary Dam and its associated Federal land holdings make up a large expanse of parks and natural areas. These areas would not be available for economic development opportunities. Site 2 lands are in Federal ownership, most under the purview of the Bureau of Indian Affairs. These properties are also protected in a partnership between the Confederated Tribes of the Umatilla Indian Reservation and the Bonneville Power Administration managed as the Wanaket Wildlife Mitigation Area (see attachment). There are also significant wetlands in this area, a portion identified within the Goal 5 inventory of Umatilla County.

There are two parcels in Federal ownership, managed by the Bureau of Land Management, identified as Site 3. Previous use of a portion of this land was a landfill operated many years ago and subsequently closed. Total acreage of the two parcels equals approximately 154 acres, driving its inclusion as an alternative Site.

**See Exhibit E** – supplemental findings addressing the City’s site selection analysis addressing OAR 660-02406605.

**Conclusion:** As addressed in this report three alternative locations have been determined and evaluated. The three alternative areas are 1) land to the east of the Port of Umatilla development and north of Highway 730 along the banks of the Columbia River (site 1), 2) land east and south of the Port of Umatilla and both north and south of Highway 730 (site 2), and 3) land to the south of the City of Umatilla between Highway 395 and Interstate 82 (site 3). In addition, as outline in the Exhibit E no other properties we identified as suitable alternative locations.

(2) A city that initiated the evaluation or amendment of its UGB prior to January 1, 2016, may choose to identify a preliminary study area applying the standard in this section rather than section (1). For such cities, the preliminary study area shall consist of:

- (a) All land adjacent to the acknowledged UGB, including all land in the vicinity of the UGB that has a reasonable potential to satisfy the identified need deficiency, and
- (b) All land in the city’s acknowledged urban reserve established under OAR chapter 660, division 21, if applicable.



**Applicants Response:** It is after January 1, 2016, making this provision not available.

**Conclusion:** It is after January 1, 2016, making this provision not available.

(3) When the primary purpose for expansion of the UGB is to accommodate a particular industrial use that requires specific site characteristics, or to accommodate a public facility that requires specific site characteristics, and the site characteristics may be found in only a small number of locations, the preliminary study area may be limited to those locations within the distance described in section (1) or (2), whichever is appropriate, that have or could be improved to provide the required site characteristics. For purposes of this section:

(a) The definition of “site characteristics” in OAR 660-009-0005(11) applies for purposes of identifying a particular industrial use.

(b) A “public facility” may include a facility necessary for public sewer, water, storm water, transportation, parks, schools, or fire protection. Site characteristics may include but are not limited to size, topography and proximity.

**Applicants Response:** This application is specifically designed to identify opportunities for large lot industrial development. While no specific industrial or public facility is identified, the Economic Opportunities Analysis calls out several industry clusters with this application focusing on data centers, light industrial manufacturing, and warehousing opportunities that require 50-100 acres or more than 100 acres. Based on this requirement, at least one of the alternative sites falls out of consideration as it does not have enough land to meet the total identified need – the site south of the City of Umatilla and west of Highway 395 (site 3).

**Conclusion:** Site 3 which is land to the south of the City of Umatilla between Highway 395 and Interstate 82, does not have enough acreage to meet the needed lot sizes as identified in the EOA, Site 3 is not considered a viable option.

(4) The city may exclude land from the preliminary study area if it determines that:

(a) Based on the standards in section (7) of this rule, it is impracticable to provide necessary public facilities or services to the land;

(b) The land is subject to significant development hazards, due to a risk of:

(A) Landslides: The land consists of a landslide deposit or scarp flank that is described and mapped on the Statewide Landslide Information Database for Oregon (SLIDO) Release 3.2 Geodatabase published by the Oregon Department of Geology and Mineral Industries (DOGAMI) December 2014, provided that the deposit or scarp flank in the data source is mapped at a scale of 1:40,000 or finer. If the owner of a lot or parcel provides the city with a site-specific analysis by a certified engineering geologist demonstrating that development of the property would not be subject to significant landslide risk, the city may not exclude the lot or parcel under this paragraph;

(B) Flooding, including inundation during storm surges: the land is within the Special Flood Hazard Area (SFHA) identified on the applicable Flood Insurance Rate Map (FIRM);

(C) Tsunamis: the land is within a tsunami inundation zone established pursuant to ORS 455.446;

(c) The land consists of a significant scenic, natural, cultural or recreational resource described in this subsection:

(A) Land that is designated in an acknowledged comprehensive plan prior to initiation of the UGB amendment, or that is mapped on a published state or federal inventory at a scale sufficient to determine its location for purposes of this rule, as:

- (i) Critical or essential habitat for a species listed by a state or federal agency as threatened or endangered;
- (ii) Core habitat for Greater Sage Grouse; or
- (iii) Big game migration corridors or winter range, except where located on lands designated as urban reserves or exception areas;
- (B) Federal Wild and Scenic Rivers and State Scenic Waterways, including Related Adjacent Lands described by ORS 390.805, as mapped by the applicable state or federal agency responsible for the scenic program;
- (C) Designated Natural Areas on the Oregon State Register of Natural Heritage Resources;
- (D) Wellhead protection areas described under OAR 660-023-0140 and delineated on a local comprehensive plan;
- (E) Aquatic areas subject to Statewide Planning Goal 16 that are in a Natural or Conservation management unit designated in an acknowledged comprehensive plan;
- (F) Lands subject to acknowledged comprehensive plan or land use regulations that implement Statewide Planning Goal 17, Coastal Shoreland, Use Requirement 1;
- (G) Lands subject to acknowledged comprehensive plan or land use regulations that implement Statewide Planning Goal 18, Implementation Requirement 2;
- (d) The land is owned by the federal government and managed primarily for rural uses.

**Applicants Response:** The alternative location (Site 2) east of the City of Umatilla lying both north and south of Highway 730 has significant wetlands with a portion specifically called out and protected within the Umatilla County Comprehensive Plan. Protection of wetlands and any required mitigation severely limit this site for development of large lot industrial activity, a primary objective of this application. Additionally, much of this area is also managed jointly between the Confederated Tribes of the Umatilla Indian Reservation and the Bonneville Power Administration as the Wanaket Wildlife Mitigation Area negatively impacting its availability for economic opportunity development.

The area east of the Port of Umatilla along the banks of the Columbia River (Site 1) does have an adopted Goal 11 exception which could be seen as making this an ideal location for large lot expansion. Current ownership is the primary factor in removing it from consideration as it is currently under Federal ownership and managed by the Confederated Tribes of the Umatilla Indian Reservation, is not subject to local land use authority or the statewide planning program, and is not available for development generally.

**See Exhibit E** – supplemental findings addressing the City’s site selection analysis addressing OAR 660-02406605.

**Conclusion:** Due to the wetlands that are inventoried on the National Wetland Inventory as well as in the Umatilla County’s Comprehensive plan found on Site 2, this alternative location becomes impracticable and not viable. Site 3 is currently owned and managed by the Confederated Tribes of the Umatilla Indian Reservation. While the City supports development on the CTUIR property, it is not subject to local land use authority or the state-wide planning goals. The City would have no authority to ensure the land was maintained or developed to meet the City’s need for large lot industrial sites.

(5) After excluding land from the preliminary study area under section (4), the city must adjust the area, if necessary, so that it includes an amount of land that is at least twice the amount of land

needed for the deficiency determined under OAR 660-024-0050(4) or, if applicable, twice the particular land need described in section (3). Such adjustment shall be made by expanding the distance specified under the applicable section (1) or (2) and applying section (4) to the expanded area.

**Applicants Response:** The table above identifies significant lands that have been considered. Much of the agricultural land has been excluded to not impact the local agricultural economy. The subject property (the approximate 150-acre urban growth boundary expansion), when combined with the other property that is part of the change in zoning request (approximately 300 acres), does accommodate the identified need as stated in the Economic Opportunities Analysis. The need is identified as two parcels in the range of 50 to 99.9 acres and a third parcel at over 100 acres. Given regional development trends that need could easily consume up to if not more than the 450 identified acres.

**Conclusion:** Given regional development trends that need could easily consume up to if not more than the 450 identified acres.

(6) For purposes of evaluating the priority of land under OAR 660-024-0067, the “study area” shall consist of all land that remains in the preliminary study area described in section (1), (2) or (3) of this rule after adjustments to the area based on sections (4) and (5), provided that when a purpose of the UGB expansion is to accommodate a public park need, the city must also consider whether land excluded under subsection (4)(a) through (c) of this rule can reasonably accommodate the park use.

**Applicants Response:** Parks are not a part of this application.

**Conclusion:** Parks are not a part of this application.

(7) For purposes of subsection (4)(a), the city may consider it impracticable to provide necessary public facilities or services to the following lands:

(a) Contiguous areas of at least five acres where 75 percent or more of the land has a slope of 25 percent or greater, provided that contiguous areas 20 acres or more that are less than 25 percent slope may not be excluded under this subsection. Slope shall be measured as the increase in elevation divided by the horizontal distance at maximum ten-foot contour intervals;

(b) Land that is isolated from existing service networks by physical, topographic, or other impediments to service provision such that it is impracticable to provide necessary facilities or services to the land within the planning period. The city’s determination shall be based on an evaluation of:

(A) The likely amount of development that could occur on the land within the planning period;

(B) The likely cost of facilities and services; and,

(C) Any substantial evidence collected by or presented to the city regarding how similarly situated land in the region has, or has not, developed over time.

(c) As used in this section, “impediments to service provision” may include but are not limited to:

(A) Major rivers or other water bodies that would require new bridge crossings to serve planned urban development;

(B) Topographic features such as canyons or ridges with slopes exceeding 40 percent and vertical relief of greater than 80 feet;

(C) Freeways, rail lines, or other restricted access corridors that would require new grade separated

crossings to serve planned urban development;

(D) Significant scenic, natural, cultural or recreational resources on an acknowledged plan inventory and subject to protection measures under the plan or implementing regulations, or on a published state or federal inventory, that would prohibit or substantially impede the placement or construction of necessary public facilities and services.

**Applicants Response:** The City of Umatilla had J-U-B Engineers complete an Umatilla Industrial Area Utility Technical Memorandum (dated March 2020) which states that the subject property, including the area that would be subject to the change in zoning, can be served with water, wastewater and industrial wastewater. While there is slope on the subject property it is limited to the eastern edge, sloping down to Interstate 82. Most of the property, particularly the frontage along Powerline Road, is reasonably flat.

**Conclusion:** The City of Umatilla had J-U-B Engineers complete an Umatilla Industrial Area Utility Technical Memorandum (March 2020) which states that the subject property, including the area that would be subject to the change in zoning, can be served with water, wastewater and industrial wastewater. According to the UTM, the subject property has been deemed viable to be served with water, wastewater and industrial wastewater.

(8) Land may not be excluded from the preliminary study area based on a finding of impracticability that is primarily a result of existing development patterns. However, a city may forecast development capacity for such land as provided in OAR 660-024-0067(1)(d).

**Applicants Response:** Current development patterns were not a consideration in the application process. The three alternative Sites are currently bare. Development east of Umatilla, which includes alternative Sites 1 and 2, consists of significant land in Federal ownership, current economic development within the Port of Umatilla, various agricultural activities, and land maintained for habitat values. The alternative Site 3 south of Umatilla was deemed too small to meet the need, is in Federal ownership, and is configured long and narrow, which could be a hinderance to larger lot development opportunities.

**Conclusion:** Development patterns were not applicable to the three alternative sites, as they are currently bare.

(9) Notwithstanding OAR 660-024-0050(4) and section (1) of this rule, except during periodic review or other legislative review of the UGB, the city may approve an application under ORS 197.610 to 197.625 for a UGB amendment to add an amount of land less than necessary to satisfy the land need deficiency determined under OAR 660-024-0050(4), provided the amendment complies with all other applicable requirements.

**Applicants Response:** This application is not a part of the City of Umatilla's periodic review. It is submitted to meet a specific need of large lot industrial land as outlined in the Economic Opportunities Analysis that is included as part of the application. The amount of land included in the urban growth boundary expansion (150 acres), when coupled with the land in the associated change of zoning request (300 acres), meets the stated need for large lot industrial land within the Economic Opportunities Analysis

**Conclusion:** Neither periodic review or other legislative review of the UGB is being conducted. Filling the need of large lot industrial land highlighted by the Economic Opportunities Analysis is the purpose of this application. As addressed above the subject property is large enough to satisfy the land need deficiency as determined under OAR 660-024-0050(4).

**Oregon Administrative Rule 660 Division 24 Section 0067 Evaluation of Land in the Study Area for Inclusion in the UGB continues this analysis.**

**See Exhibit E** – See supplemental findings providing additional analysis for City’s site evaluation analysis addressing OAR 660-02406607.

- (1) A city considering a UGB amendment must decide which land to add to the UGB by evaluating all land in the study area determined under OAR 660-024-0065, as follows
- (a) Beginning with the highest priority category of land described in section (2), the city must apply section (5) to determine which land in that priority category is suitable to satisfy the need deficiency determined under OAR 660-024-0050 and select for inclusion in the UGB as much of the land as necessary to satisfy the need.
- (b) If the amount of suitable land in the first priority category is not sufficient to satisfy all the identified need deficiency, the city must apply section (5) to determine which land in the next priority is suitable and select for inclusion in the UGB as much of the suitable land in that priority as necessary to satisfy the need. The city must proceed in this manner until all the land need is satisfied, except as provided in OAR 660-024-0065(9).
- (c) If the amount of suitable land in a particular priority category in section (2) exceeds the amount necessary to satisfy the need deficiency, the city must choose which land in that priority to include in the UGB by applying the criteria in section (7) of this rule.
- (d) In evaluating the sufficiency of land to satisfy a need under this section, the city may use the factors identified in sections (5) and (6) of this rule to reduce the forecast development capacity of the land to meet the need.
- (e) Land that is determined to not be suitable under section (5) of this rule to satisfy the need deficiency determined under OAR 660-024-0050 is not required to be selected for inclusion in the UGB unless its inclusion is necessary to serve other higher priority lands.

**Applicants Response:** This application is focused on an urban growth boundary amendment for large lot industrial development. This need was identified in the attached Economic Opportunities Analysis completed for the City of Umatilla in October 2019. The requirements of OAR 660-024-0065 are addressed above. The alternative sites identified in the section above where shown to have limitations removing them from consideration. The subject site meets the identified need for two sites between 50 and 99.9 acres and a two sites over 100 acres. When regional patterns are considered for development patterns that need could easily be 450 acres.

**Conclusion:** The lack of large lot industrial parcels as identified in the Economic Opportunities Analysis can be met by the submitted applications. The requirements of OAR 660-024-0065 are addressed above. The subject site meets the identified need for 300 – 399.98 acres of land suitable for large lot industrial development as outlined in the Economic Opportunities Analysis. The subject property for inclusion and rezoning totals 450+/- acres.

(2) Priority of Land for inclusion in a UGB:

(a) First Priority is urban reserve, exception land, and nonresource land. Lands in the study area that meet the description in paragraphs (A) through (C) of this subsection are of equal (first) priority:

(A) Land designated as an urban reserve under OAR chapter 660, division 21, in an acknowledged comprehensive plan;

(B) Land that is subject to an acknowledged exception under ORS 197.732; and

(C) Land that is nonresource land.

**Applicants Response:** The City of Umatilla does not have any urban reserves; no lands with an acknowledged exception are available (the parcel with the Goal 11 exception is owned or managed by the Confederated Tribes of the Umatilla Indian Reservation, is not subject to local land use authority, and is not available for development to meet current needs); and no other non-resource land has been identified as being available or of sufficient size to meet the identified need.

See supplemental findings for additional site evaluation analysis.

**Conclusion:** The supplemental finding show two alternative locations would be considered first priority land for inclusion. However, those properties were not determined to be suitable to meet the City's identified need for large lot industrial sites.

(b) Second Priority is marginal land: land within the study area that is designated as marginal land under ORS 197.247 (1991 Edition) in the acknowledged comprehensive plan.

**Applicants Response:** There are no designated marginal lands within Umatilla County.

**Conclusion:** There are no designated marginal lands within Umatilla County.

(c) Third Priority is forest or farm land that is not predominantly high-value farm land: land within the study area that is designated for forest or agriculture uses in the acknowledged comprehensive plan and that is not predominantly high-value farmland as defined in ORS 195.300, or that does not consist predominantly of prime or unique soils, as determined by the United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS). In selecting which lands to include to satisfy the need, the city must use the agricultural land capability classification system or the cubic foot site class system, as appropriate for the acknowledged comprehensive plan designation, to select lower capability or cubic foot site class lands first.

**Applicants Response:** There are no Goal 4 or Forest Lands adjacent to the City of Umatilla. Already excluded are areas with wetlands and an area not of sufficient size to accommodate the need. The subject area is comprised of Class VIIe Soils if not irrigated. Specifically, the soils are Burbank loamy find sand with 0 to 5 percent slopes for the area to the west and Quincy loamy find sand with 5 to 25 percent slopes for the area to the east. The lands are not considered prime or unique.

**Conclusion:** The supplemental findings clarify the soils for all other properties surrounding the

UGB considered as part of the site evaluation analysis are considered high-value farmland as defined by ORS 195.300. Therefore, no properties were identified as Third Priority land for inclusion.

(d) Fourth Priority is agricultural land that is predominantly high-value farmland: land within the study area that is designated as agricultural land in an acknowledged comprehensive plan and is predominantly high-value farmland as defined in ORS 195.300. A city may not select land that is predominantly made up of prime or unique farm soils, as defined by the USDA NRCS, unless there is an insufficient amount of other land to satisfy its land need. In selecting which lands to include to satisfy the need, the city must use the agricultural land capability classification system to select lower capability lands first.

**Applicants Response:** The land is not identified as high-value farmland, nor is it prime or unique. The approximate 150 acres identified for inclusion within the urban growth boundary is currently farmed with only about half under pivot irrigation. The balance is scrub land, unavailable based on the shape of the ownership and layout options for pivot irrigation. The most easterly portion of the property slopes down to Interstate 82.

**Conclusion:** As addressed in detail in the supplemental findings there are three sites identified as suitable alternative locations. The properties identified as East 395 property are located on class 1 soils and contained mapped wetlands as identified on both the National Wetlands Inventory and State Wetlands Inventory. Given these properties are the only site identified within the study area with class 1 soils the East 395 properties were not considered a suitable alternative location. The Topaz Land properties and the Cleaver Land properties are both considered high-value farmland given they have existing water rights on designated agricultural land. The supplemental findings conclude that the Cleaver Land properties would impact less high-value farmland than inclusion of the Topaz Land properties as any expansion of the UGB would impact lands in irrigation crop production. A significant portion of the irrigated farm land that would be removed from production on the Cleaver land properties are already located within the UGB and therefore, no considered high-value farmland.

(3) Notwithstanding section (2)(c) or (d) of this rule, land that would otherwise be excluded from a UGB may be included if:

(a) The land contains a small amount of third or fourth priority land that is not important to the commercial agricultural enterprise in the area and the land must be included in the UGB to connect a nearby and significantly larger area of land of higher priority for inclusion within the UGB; or

(b) The land contains a small amount of third or fourth priority land that is not predominantly high-value farmland or predominantly made up of prime or unique farm soils and the land is completely surrounded by land of higher priority for inclusion into the UGB.

**Applicants Response:** This action does not seek to connect an area nor is it surrounded by land of higher priority. This action seeks to add approximately 150 acres to the urban growth boundary of which about half is under circle pivot irrigation, the balance scrub land not available for irrigation based on the shape and layout of the ownership. None of the land is prime or unique.

**Conclusion:** The above standards do not apply to the subject property.



(4) For purposes of categorizing and evaluating land pursuant to subsections (2)(c) and (d) and section (3) of this rule,

(a) Areas of land not larger than 100 acres may be grouped together and studied as a single unit of land;

(b) Areas of land larger than 100 acres that are similarly situated and have similar soils may be grouped together provided soils of lower agricultural or forest capability may not be grouped with soils of higher capability in a manner inconsistent with the intent of section (2) of this rule, which requires that higher capability resource lands shall be the last priority for inclusion in a UGB;

(c) Notwithstanding subsection (4)(a), if a city initiated the evaluation or amendment of its UGB prior to January 1, 2016, and if the analysis involves more than one lot or parcel or area within a particular priority category for which circumstances are reasonably similar, these lots, parcels and areas may be considered and evaluated as a single group;

(d) When determining whether the land is predominantly high-value farmland, or predominantly prime or unique, “predominantly” means more than 50 percent.

**Applicants Response:** The land is not identified as high-value farmland, nor is it prime or unique. This action seeks to add approximately 150 acres to the urban growth boundary of which about half is under circle pivot irrigation, the balance scrub land not available for irrigation based on the shape and layout of the ownership.

**Conclusion:** As addressed in the supplemental findings three areas were identified as high-value farmland. The subject property was determined to be the most suitable location and would impact the least amount of high-value farmland.

(5) With respect to section (1), a city must assume that vacant or partially vacant land in a particular priority category is “suitable” to satisfy a need deficiency identified in OAR 660-024-0050(4) unless it demonstrates that the land cannot satisfy the specified need based on one or more of the conditions described in subsections (a) through (g) of this section:

(a) Existing parcelization, lot sizes or development patterns of rural residential land make that land unsuitable for an identified employment need; as follows:

(A) Parcelization: the land consists primarily of parcels 2-acres or less in size, or

(B) Existing development patterns: the land cannot be reasonably redeveloped or infilled within the planning period due to the location of existing structures and infrastructure.

(b) The land would qualify for exclusion from the preliminary study area under the factors in OAR 660-024-0065(4) but the city declined to exclude it pending more detailed analysis.

(c) The land is, or will be upon inclusion in the UGB, subject to natural resources protections under Statewide Planning Goal 5 such that that no development capacity should be forecast on that land to meet the land need deficiency.

(d) With respect to needed industrial uses only, the land is over 10 percent slope, or is an existing lot or parcel that is smaller than 5 acres in size, or both. Slope shall be measured as the increase in elevation divided by the horizontal distance at maximum ten-foot contour intervals.

(e) With respect to a particular industrial use or particular public facility use described in OAR 660-024-0065(3), the land does not have, and cannot be improved to provide, one or more of the required specific site characteristics.

(f) The land is subject to a conservation easement described in ORS 271.715 that prohibits urban development.

(g) The land is committed to a use described in this subsection and the use is unlikely to be discontinued during the planning period:

(A) Public park, church, school, or cemetery, or

(B) Land within the boundary of an airport designated for airport uses, but not including land designated or zoned for residential, commercial or industrial uses in an acknowledged comprehensive plan.

**Applicants Response:** None of the alternative sites have been parcelized. The alternative site east of the City of Umatilla lying both north and south of Highway 730 (site 2) has significant wetlands, some identified within the Umatilla County Comprehensive Plan, that would be subject to development restrictions limiting opportunities for large lot industrial development. The alternative site south of the City of Umatilla and west of Highway 395 (site 3) is about 160 acres, long and narrow, which could limit large lot development and not of sufficient size to fulfill the need as identified within the Economic Opportunities Analysis. The subject site is of a size and shape to meet the needs as outlined in the Economic Opportunities Analysis.

**Conclusion:** Due to wetlands on site 2 and the lot sizes and shapes of site 3, the subject site is the only one that is a size and shape to meet the needs as outlined in the Economic Opportunities Analysis.

(6) For vacant or partially vacant lands added to the UGB to provide for residential uses:

(a) Existing lots or parcels one acre or less may be assumed to have a development capacity of one dwelling unit per lot or parcel. Existing lots or parcels greater than one acre but less than two acres shall be assumed to have an aggregate development capacity of two dwelling units per acre.

(b) In any subsequent review of a UGB pursuant to this division, the city may use a development assumption for land described in subsection (a) of this section for a period of up to 14 years from the date the lands were added to the UGB.

**Applicants Response:** This is not applicable as the intent is to create opportunities for large lot industrial uses.

**Conclusion:** This is not applicable as the intent is to create opportunities for the identified need for large lot industrial uses.

(7) Pursuant to subsection (1)(c), if the amount of suitable land in a particular priority category under section (2) exceeds the amount necessary to satisfy the need deficiency, the city must choose which land in that priority to include in the UGB by first applying the boundary location factors of Goal 14 and then applying applicable criteria in the acknowledged comprehensive plan and land use regulations acknowledged prior to initiation of the UGB evaluation or amendment. The city may not apply local comprehensive plan criteria that contradict the requirements of the boundary location factors of Goal 14. The boundary location factors are not independent criteria; when the factors are applied to compare alternative boundary locations and to determine the UGB location the city must show that it considered and balanced all the factors. The criteria in this section may not be used to select lands designated for agriculture or forest use that have higher land capability or cubic foot site class, as applicable, ahead of lands that have lower capability or cubic foot site class.

**Applicants Response:** No forest lands are being considered. The land classification of the subject area is Class VIIe, not high-value, prime or unique. The applicant would assert that the subject site balances the need for industrial land against other land needs.

**Conclusion:** No forest lands are being considered. As address in the supplemental finding no properties were identified that do not include high-value farmland. The subject site balances the need for industrial land against other land needs.

(8) The city must apply the boundary location factors of Goal 14 in coordination with service providers and state agencies, including the Oregon Department of Transportation (ODOT) with respect to Factor 2 regarding impacts on the state transportation system, and the Oregon Department of Fish and Wildlife (ODFW) and the Department of State Lands (DSL) with respect to Factor 3 regarding environmental consequences. “Coordination” includes timely notice to agencies and service providers and consideration of any recommended evaluation methodologies.

**Applicants Response:** The Oregon Department of Transportation was contacted early in the application process. The applicant anticipates that both the Oregon Department of Fish and Wildlife and Department of State Lands will be provided notice of the required public hearings to consider this application. The Department of Land Conservation and Development has been involved through pre-application contact and meetings.

**Conclusion:** The City of Umatilla noticed the above agencies on August 4, 2020.

(9) In applying Goal 14 Boundary Location Factor 2 to evaluate alternative locations under section (7), the city must compare relative costs, advantages and disadvantages of alternative UGB expansion areas with respect to the provision of public facilities and services needed to urbanize alternative boundary locations. For purposes of this section, the term “public facilities and services” means water, sanitary sewer, storm water management, and transportation facilities. The evaluation and comparison under Boundary Location Factor 2 must consider:

- (a) The impacts to existing water, sanitary sewer, storm water and transportation facilities that serve nearby areas already inside the UGB;
- (b) The capacity of existing public facilities and services to serve areas already inside the UGB as well as areas proposed for addition to the UGB; and
- (c) The need for new transportation facilities, such as highways and other roadways, interchanges, arterials and collectors, additional travel lanes, other major improvements on existing roadways and, for urban areas of 25,000 or more, the provision of public transit service.

**Applicants Response:** An Umatilla Industrial Area Utility Technical Memorandum was completed for the subject area concluding that public services can be reasonably provided. That memorandum evaluated water, wastewater, industrial process water, and the option of irrigation water. Also evaluated was how a connection to the Umatilla Army Depot reuse areas could create efficiencies and synergies. No other area was evaluated as they were eliminated from consideration for the reasons discussed above.

**Conclusion:** The Utility Technical Memorandum states that water, wastewater, industrial wastewater can be reasonably provided to the subject property. No other area was evaluated as they were eliminated from consideration for the reasons discussed above.

(10) The adopted findings for UGB amendment must describe or map all of the alternative areas evaluated in the boundary location alternatives analysis.

**Applicants Response:** Please see the included Study Area map.

**Conclusion:** Please see the included Study Area map.

**Oregon Administrative Rule Chapter 660 Division 12 Section 0060 governs Plan and Land Use Regulation Amendments.**

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

**Applicants Response:** As part of the application process the City of Umatilla accomplished a Traffic Impact Analysis (TIA), completed by J-U-B Engineers and dated May 2020. The TIA comes to several conclusions, summarized on page 17 of the Analysis, concerning the function of Powerline Road as well as its connection to both Interstate 82 and Highway 730. The effect of the urban growth boundary expansion and annexation, when coupled with the change in zoning, results in a net reduction in daily traffic including the pm peak hour (this is further discussed on page 7 of the TIA). The analysis does conclude there will be impacts to intersections at the Interstate 82 Interchange and the intersection with Highway 730. For this particular criterion the applicant would assert that the TIA provides evidence that Powerline Road along the frontage of the subject property does not require a change in functional classification or the standards to implement the functional classification, and in fact results in a lower pm peak hour by nearly 800

trips in 2040.

Comment has been received from the Oregon Department of Transportation dated August 21, 2020, and signed by Marilyn Holt, District 12 Manager (see attached letter). The letter provides the following guidance to the City of Umatilla, “Page 17 of the TIA identifies the intersection of Powerline Road/US 730 will need a higher level of traffic control such as a traffic signal or roundabout. Also, both a southbound right-turn lane at the southbound Interstate-82 ramps and a southbound left-turn will be needed at the Interstate-82 northbound ramp. Accordingly to reflect long-term changes with appropriate improvements, balancing access and circulation management require context sensitive designs to respond to growth. As this area urbanizes, frontage improvement, such as transit facilities, curb, sidewalk, crosswalk ramps(s), bikeways and street standards should be constructed as necessary to provide travel choices and to be consistent with the City’s Transportation System Plan (TSP) and ADA standards. ODOT recommends these elements should be addressed with emphasis on development contributing to implement the improvements that may be necessary to provide safe and acceptable Levels of Service in order to meet City and ODOT standards.” The applicant addresses these items in other locations within this narrative stating that City of Umatilla development standards, including requirements within the Transportation System Plan, would be applicable at the time of development, requiring many of these development components to be installed. There is also discussion within this narrative that connections to the recently adopted trails system within the City of Umatilla is possible with this development as it occurs over time. Residential development that has been occurring north of this location within the city limits has required developers to install curb, gutter and sidewalks along with widening of Powerline Road. It is anticipated that the City would require similar installations as part of any industrial development on the subject property.

**Conclusion:** The effect of the urban growth boundary expansion and annexation, when coupled with the change in zoning, results in a net reduction in daily traffic including the pm peak hour for the subject property.

(2) If a local government determines that there would be a significant effect, then the local government must ensure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility measured at the end of the planning period identified in the adopted TSP through one or a combination of the remedies listed in (a) through (e) below, unless the amendment meets the balancing test in subsection (2)(e) of this section or qualifies for partial mitigation in section (11) of this rule. A local government using subsection (2)(e), section (3), section (10) or section (11) to approve an amendment recognizes that additional motor vehicle traffic congestion may result and that other facility providers would not be expected to provide additional capacity for motor vehicles in response to this congestion.

(a) Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

(b) Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of this division; such amendments shall include a funding plan or mechanism consistent with section (4) or include an amendment to the transportation finance plan so that the facility, improvement, or service will be provided by the end of the planning period.

(c) Amending the TSP to modify the planned function, capacity or performance standards

of the transportation facility.

(d) Providing other measures as a condition of development or through a development agreement or similar funding method, including, but not limited to, transportation system management measures or minor transportation improvements. Local governments shall, as part of the amendment, specify when measures or improvements provided pursuant to this subsection will be provided.

(e) Providing improvements that would benefit modes other than the significantly affected mode, improvements to facilities other than the significantly affected facility, or improvements at other locations, if:

(A) The provider of the significantly affected facility provides a written statement that the system-wide benefits are sufficient to balance the significant effect, even though the improvements would not result in consistency for all performance standards;

(B) The providers of facilities being improved at other locations provide written statements of approval; and

(C) The local jurisdictions where facilities are being improved provide written statements of approval.

**Applicants Response:** The TIA identifies that the function along Powerline Road could be improved based on this action. The intersections with both Interstate 82 and Highway 730 do not fare as well and will need improvements particularly when combined with the assumed background growth along Powerline Road. Specifically, the TIA calls for signalization or a round-about at the Powerline Road and Highway 730 intersection stating that, “The traffic signal would likely be required at about 10 years of background growth and 50% of the site generated trips if the low-cost improvements described above were implemented.”

The TIA also call for work at the Interstate 82 Interchange as follows, “A southbound right turn at the southbound I-82 ramps will be needed at approximately 80% of the background growth and 80% of the industrial development. A southbound left turn will be needed at the I-82 northbound ramps at approximately 33% of the background growth and 33% of the industrial development.”

The applicant would assert that the TIA provides evidence that the proposed urban growth boundary expansion and annexation along with the change in zoning would not significantly impact the identified function, capacity, and performance of Powerline Road. There will be impacts to the intersections with both Interstate 82 and Highway 730 at a future point in time based on both background growth and development of the proposed industrial area. The applicant expects to work with the City and other transportation providers to assure that necessary projects are identified for inclusion in the City and County Transportation System Plans. Funding for those projects could be secured through system development charges on industrial projects on the subject site.

**Conclusion:** The TIA provides evidence that the proposed urban growth boundary expansion and annexation along with the change in zoning would not significantly impact the identified function, capacity, and performance of Powerline Road. There will be impacts to the intersections with both Interstate 82 and Highway 730 at a future point in time based on both background growth and development of the proposed industrial area. Funding for those projects could be secured through system development charges on industrial projects on the subject site.

(3) Notwithstanding sections (1) and (2) of this rule, a local government may approve an amendment that would significantly affect an existing transportation facility without assuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility where:

(a) In the absence of the amendment, planned transportation facilities, improvements and services as set forth in section (4) of this rule would not be adequate to achieve consistency with the identified function, capacity or performance standard for that facility by the end of the planning period identified in the adopted TSP;

(b) Development resulting from the amendment will, at a minimum, mitigate the impacts of the amendment in a manner that avoids further degradation to the performance of the facility by the time of the development through one or a combination of transportation improvements or measures;

(c) The amendment does not involve property located in an interchange area as defined in paragraph (4)(d)(C); and

(d) For affected state highways, ODOT provides a written statement that the proposed funding and timing for the identified mitigation improvements or measures are, at a minimum, sufficient to avoid further degradation to the performance of the affected state highway. However, if a local government provides the appropriate ODOT regional office with written notice of a proposed amendment in a manner that provides ODOT reasonable opportunity to submit a written statement into the record of the local government proceeding, and ODOT does not provide a written statement, then the local government may proceed with applying subsections (a) through (c) of this section.

**Applicants Response:** The portion of Powerline Road that fronts the subject property is a paved county road, is not a state highway, nor is it within an interchange area or within an area with an adopted Interchange Area Management Plan. Based on the TIA the applicant would assert that Powerline Road is not significantly impacted by the urban growth boundary expansion and annexation, with the change in zoning providing a lower pm peak hour improving the future function of Powerline Road. The applicant does acknowledge the future impacts to the intersections of Powerline Road with both Interstate-82 and Highway 730. See the included comment letter from the Oregon Department of Transportation, dated August 21, 2020, and signed by Marilyn Holt, District 12 Manager.

**Conclusion:** Powerline Road is not significantly impacted by the urban growth boundary expansion and annexation. Future development will have impacts to the intersections on powerline road, these will be addressed at time of development.

(4) Determinations under sections (1)–(3) of this rule shall be coordinated with affected transportation facility and service providers and other affected local governments.

(a) In determining whether an amendment has a significant effect on an existing or planned transportation facility under subsection (1)(c) of this rule, local governments shall rely on existing transportation facilities and services and on the planned transportation facilities, improvements and services set forth in subsections (b) and (c) below.

(b) Outside of interstate interchange areas, the following are considered planned facilities, improvements and services:

(A) Transportation facilities, improvements or services that are funded for



construction or implementation in the Statewide Transportation Improvement Program or a locally or regionally adopted transportation improvement program or capital improvement plan or program of a transportation service provider.

(B) Transportation facilities, improvements or services that are authorized in a local transportation system plan and for which a funding plan or mechanism is in place or approved. These include, but are not limited to, transportation facilities, improvements or services for which: transportation systems development charge revenues are being collected; a local improvement district or reimbursement district has been established or will be established prior to development; a development agreement has been adopted; or conditions of approval to fund the improvement have been adopted.

(C) Transportation facilities, improvements or services in a metropolitan planning organization (MPO) area that are part of the area's federally-approved, financially constrained regional transportation system plan.

(D) Improvements to state highways that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when ODOT provides a written statement that the improvements are reasonably likely to be provided by the end of the planning period.

(E) Improvements to regional and local roads, streets or other transportation facilities or services that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when the local government(s) or transportation service provider(s) responsible for the facility, improvement or service provides a written statement that the facility, improvement or service is reasonably likely to be provided by the end of the planning period.

(c) Within interstate interchange areas, the improvements included in (b)(A)–(C) are considered planned facilities, improvements and services, except where:

(A) ODOT provides a written statement that the proposed funding and timing of mitigation measures are sufficient to avoid a significant adverse impact on the Interstate Highway system, then local governments may also rely on the improvements identified in paragraphs (b)(D) and (E) of this section; or

(B) There is an adopted interchange area management plan, then local governments may also rely on the improvements identified in that plan and which are also identified in paragraphs (b)(D) and (E) of this section.

(d) As used in this section and section (3):

(A) Planned interchange means new interchanges and relocation of existing interchanges that are authorized in an adopted transportation system plan or comprehensive plan;

(B) Interstate highway means Interstates 5, 82, 84, 105, 205 and 405; and

(C) Interstate interchange area means:

(i) Property within one-quarter mile of the ramp terminal intersection of an existing or planned interchange on an Interstate Highway; or

(ii) The interchange area as defined in the Interchange Area Management Plan adopted as an amendment to the Oregon Highway Plan.

(e) For purposes of this section, a written statement provided pursuant to paragraphs (b)(D), (b)(E) or (c)(A) provided by ODOT, a local government or transportation facility provider, as appropriate, shall be conclusive in determining whether a transportation facility, improvement or service is a planned transportation facility, improvement or

service. In the absence of a written statement, a local government can only rely upon planned transportation facilities, improvements and services identified in paragraphs (b)(A)–(C) to determine whether there is a significant effect that requires application of the remedies in section (2).

**Applicants Response:** The subject area proposed for inclusion within the City of Umatilla urban growth boundary and city limits, and the larger project area proposed for a change in Zoning to Light Industrial, are located north approximately one-half mile of the Powerline Road interchange on Interstate 82. There is no adopted Interchange Area Management Plan and no corresponding interchange area that has been applied.

The portion of Powerline Road fronting the subject property is an Umatilla County paved road (City if annexation approved). Based on the Joint Management Agreement between Umatilla County and the City of Umatilla a portion of Powerline Road has been transferred from the County to the City. Both Umatilla County and City of Umatilla transportation standards are discussed more fully later in this narrative.

The applicant asserts that the TIA provides evidence that the impacts to Powerline Road are an improvement to the pm peak hour. The applicant also asserts that the proposed changes are at least one-half mile from the Interstate-82 Interchange.

**Conclusion:** There is no adopted Interchange Area Management Plan and no corresponding interchange area that has been applied. The proposed changes are at least one-half mile from the Interstate-82 Interchange. Upon approval of UGB expansion, the portion of powerline road adjacent to the subject property will be subject to City of Umatilla transportation standards.

(5) The presence of a transportation facility or improvement shall not be a basis for an exception to allow residential, commercial, institutional or industrial development on rural lands under this division or OAR 660-004-0022 and 660-004-0028.

**Applicants Response:** This is not an application to allow industrial development on rural lands, but an application package seeking an expansion of the City of Umatilla urban growth boundary and annexation along with an associated application requesting a change in Zoning to Light Industrial. While the Powerline Road Interchange on Interstate 82 is a beneficial transportation improvement, it is not the sole or primary reason for these applications.

**Conclusion:** This application package is to expand the City of Umatilla urban growth boundary to allow for more large lot industrial parcels. This application is not to allow industrial development on rural lands.

(6) In determining whether proposed land uses would affect or be consistent with planned transportation facilities as provided in sections (1) and (2), local governments shall give full credit for potential reduction in vehicle trips for uses located in mixed-use, pedestrian-friendly centers, and neighborhoods as provided in subsections (a)–(d) below;

(a) Absent adopted local standards or detailed information about the vehicle trip reduction benefits of mixed-use, pedestrian-friendly development, local governments shall assume that uses located within a mixed-use, pedestrian-friendly center, or

neighborhood, will generate 10% fewer daily and peak hour trips than are specified in available published estimates, such as those provided by the Institute of Transportation Engineers (ITE) Trip Generation Manual that do not specifically account for the effects of mixed-use, pedestrian-friendly development. The 10% reduction allowed for by this section shall be available only if uses which rely solely on auto trips, such as gas stations, car washes, storage facilities, and motels are prohibited;

(b) Local governments shall use detailed or local information about the trip reduction benefits of mixed-use, pedestrian-friendly development where such information is available and presented to the local government. Local governments may, based on such information, allow reductions greater than the 10% reduction required in subsection (a) above;

(c) Where a local government assumes or estimates lower vehicle trip generation as provided in subsection (a) or (b) above, it shall assure through conditions of approval, site plans, or approval standards that subsequent development approvals support the development of a mixed-use, pedestrian-friendly center or neighborhood and provide for on-site bike and pedestrian connectivity and access to transit as provided for in OAR 660-012-0045(3) and (4). The provision of on-site bike and pedestrian connectivity and access to transit may be accomplished through application of acknowledged ordinance provisions which comply with 660-012-0045(3) and (4) or through conditions of approval or findings adopted with the plan amendment that assure compliance with these rule requirements at the time of development approval; and

(d) The purpose of this section is to provide an incentive for the designation and implementation of pedestrian-friendly, mixed-use centers and neighborhoods by lowering the regulatory barriers to plan amendments which accomplish this type of development. The actual trip reduction benefits of mixed-use, pedestrian-friendly development will vary from case to case and may be somewhat higher or lower than presumed pursuant to subsection (a) above. The Commission concludes that this assumption is warranted given general information about the expected effects of mixed-use, pedestrian-friendly development and its intent to encourage changes to plans and development patterns. Nothing in this section is intended to affect the application of provisions in local plans or ordinances which provide for the calculation or assessment of systems development charges or in preparing conformity determinations required under the federal Clean Air Act.

**Applicants Response:** The proposed uses are industrial in nature – data centers, light manufacturing and warehousing – with traffic impacts addressed in the Traffic Impact Study for these activities. The growth of residential activity to the north of the subject property does include development of sidewalks and bicycle facilities along Powerline Road that could be connected to the proposed industrial area, creating a pedestrian and bicycle connection to the commercial and downtown area of the City of Umatilla. It is not known what the potential is for workers within the industrial area to either walk or bicycle to work, but that potential does exist and should be acknowledged. The proposed development can be connected to Powerline Road and the trail network that has been adopted by the City of Umatilla.

**Conclusion:** The proposed development can be connected to Powerline Road and the trail network that has been adopted by the City of Umatilla. Bike and pedestrian standards will be enforced at the time of development.

(7) Amendments to acknowledged comprehensive plans and land use regulations which meet all of the criteria listed in subsections (a)–(c) below shall include an amendment to the comprehensive plan, transportation system plan, the adoption of a local street plan, access management plan, future street plan or other binding local transportation plan to provide for on-site alignment of streets or accessways with existing and planned arterial, collector, and local streets surrounding the site as necessary to implement the requirements in OAR 660-012-0020(2)(b) and 660-012-0045(3):

(a) The plan or land use regulation amendment results in designation of two or more acres of land for commercial use;

(b) The local government has not adopted a TSP or local street plan which complies with OAR 660-012-0020(2)(b) or, in the Portland Metropolitan Area, has not complied with Metro's requirement for street connectivity as contained in Title 6, Section 3 of the Urban Growth Management Functional Plan; and

(c) The proposed amendment would significantly affect a transportation facility as provided in section (1).

**Applicants Response:** This request is proposed to result in land designated Light Industrial, the City of Umatilla has an adopted Transportation System Plan and the Traffic Impact Analysis determined that there is a reduction in pm peak hour traffic. The applicant asserts that this criterion would not be applicable to this action.

**Conclusion:** Due to the adopted TSP and provided TIA, this criterion is not applicable.

(8) A "mixed-use, pedestrian-friendly center or neighborhood" for the purposes of this rule, means:

(a) Any one of the following:

(A) An existing central business district or downtown;

(B) An area designated as a central city, regional center, town center or main street in the Portland Metro 2040 Regional Growth Concept;

(C) An area designated in an acknowledged comprehensive plan as a transit oriented development or a pedestrian district; or

(D) An area designated as a special transportation area as provided for in the Oregon Highway Plan.

(b) An area other than those listed in subsection (a) above which includes or is planned to include the following characteristics:

(A) A concentration of a variety of land uses in a well-defined area, including the following:

(i) Medium to high density residential development (12 or more units per acre);

(ii) Offices or office buildings;

(iii) Retail stores and services;

(iv) Restaurants; and

(v) Public open space or private open space which is available for public use, such as a park or plaza.

(B) Generally include civic or cultural uses;

(C) A core commercial area where multi-story buildings are permitted;

(D) Buildings and building entrances oriented to streets;

(E) Street connections and crossings that make the center safe and conveniently accessible from adjacent areas;

(F) A network of streets and, where appropriate, accessways and major driveways that make it attractive and highly convenient for people to walk between uses within the center or neighborhood, including streets and major driveways within the center with wide sidewalks and other features, including pedestrian-oriented street crossings, street trees, pedestrian-scale lighting and on-street parking;

(G) One or more transit stops (in urban areas with fixed route transit service); and

(H) Limit or do not allow low-intensity or land extensive uses, such as most industrial uses, automobile sales and services, and drive-through services.

**Applicants Response:** This proposal, if approved, will result in an industrial area Zoned Light Industrial. It is not proposed as a mixed-use area but could connect to the sidewalk or bicycle paths that are being incorporated along Powerline Road as the residential areas develop. As discussed above connections to the adopted pedestrian and bicycle network can be achieved to allow for industrial workers to walk or bike to work or to the downtown area of Umatilla. There may also be opportunity for future transit connections to the working Kayak system or other transit systems that may be developed.

**Conclusion:** The proposed subject property is not a mixed-use area. There is potential for alternative modes of transportation to future development on the property through use of walking, biking or public transit such as the CTUIR Kayak.

(9) Notwithstanding section (1) of this rule, a local government may find that an amendment to a zoning map does not significantly affect an existing or planned transportation facility if all of the following requirements are met.

(a) The proposed zoning is consistent with the existing comprehensive plan map designation and the amendment does not change the comprehensive plan map;

(b) The local government has an acknowledged TSP and the proposed zoning is consistent with the TSP; and

(c) The area subject to the zoning map amendment was not exempted from this rule at the time of an urban growth boundary amendment as permitted in OAR 660-024-0020(1)(d), or the area was exempted from this rule but the local government has a subsequently acknowledged TSP amendment that accounted for urbanization of the area.

**Applicants Response:** This application addresses transportation impacts because these factors cannot be met.

**Conclusion:** This application addresses transportation impacts because these factors cannot be met.

(10) Notwithstanding sections (1) and (2) of this rule, a local government may amend a functional plan, a comprehensive plan or a land use regulation without applying performance standards related to motor vehicle traffic congestion (e.g. volume to capacity ratio or V/C), delay or travel time if the amendment meets the requirements of subsection (a) of this section. This section does not exempt a proposed amendment from other transportation performance

standards or policies that may apply including, but not limited to, safety for all modes, network connectivity for all modes (e.g. sidewalks, bicycle lanes) and accessibility for freight vehicles of a size and frequency required by the development.

(a) A proposed amendment qualifies for this section if it:

(A) Is a map or text amendment affecting only land entirely within a multimodal mixed-use area (MMA); and

(B) Is consistent with the definition of an MMA and consistent with the function of the MMA as described in the findings designating the MMA.

(b) For the purpose of this rule, “multimodal mixed-use area” or “MMA” means an area:

(A) With a boundary adopted by a local government as provided in subsection (d) or (e) of this section and that has been acknowledged;

(B) Entirely within an urban growth boundary;

(C) With adopted plans and development regulations that allow the uses listed in paragraphs (8)(b)(A) through (C) of this rule and that require new development to be consistent with the characteristics listed in paragraphs (8)(b)(D) through (H) of this rule;

(D) With land use regulations that do not require the provision of off-street parking, or regulations that require lower levels of off-street parking than required in other areas and allow flexibility to meet the parking requirements (e.g. count on-street parking, allow long-term leases, allow shared parking); and

(E) Located in one or more of the categories below:

(i) At least one-quarter mile from any ramp terminal intersection of existing or planned interchanges;

(ii) Within the area of an adopted Interchange Area Management Plan (IAMP) and consistent with the IAMP; or

(iii) Within one-quarter mile of a ramp terminal intersection of an existing or planned interchange if the mainline facility provider has provided written concurrence with the MMA designation as provided in subsection (c) of this section.

(c) When a mainline facility provider reviews an MMA designation as provided in subparagraph (b)(E)(iii) of this section, the provider must consider the factors listed in paragraph (A) of this subsection.

(A) The potential for operational or safety effects to the interchange area and the mainline highway, specifically considering:

(i) Whether the interchange area has a crash rate that is higher than the statewide crash rate for similar facilities;

(ii) Whether the interchange area is in the top ten percent of locations identified by the safety priority index system (SPIS) developed by ODOT; and

(iii) Whether existing or potential future traffic queues on the interchange exit ramps extend onto the mainline highway or the portion of the ramp needed to safely accommodate deceleration.

(B) If there are operational or safety effects as described in paragraph (A) of this subsection, the effects may be addressed by an agreement between the local government and the facility provider regarding traffic management plans favoring traffic movements away from the interchange, particularly those facilitating clearing traffic queues on the interchange exit ramps.

(d) A local government may designate an MMA by adopting an amendment to the comprehensive plan or land use regulations to delineate the boundary following an existing zone, multiple existing zones, an urban renewal area, other existing boundary, or establishing a new boundary. The designation must be accompanied by findings showing how the area meets the definition of an MMA. Designation of an MMA is not subject to the requirements in sections (1) and (2) of this rule.

(e) A local government may designate an MMA on an area where comprehensive plan map designations or land use regulations do not meet the definition, if all of the other elements meet the definition, by concurrently adopting comprehensive plan or land use regulation amendments necessary to meet the definition. Such amendments are not subject to performance standards related to motor vehicle traffic congestion, delay or travel time.

**Applicants Response:** This proposal is not for a development that would meet the requirements of the MMA. It is for an urban growth boundary expansion and associated change in zoning to Light Industrial.

**Conclusion:** This application is not subject to requirements of the MMA.

(11) A local government may approve an amendment with partial mitigation as provided in section (2) of this rule if the amendment complies with subsection (a) of this section, the amendment meets the balancing test in subsection (b) of this section, and the local government coordinates as provided in subsection (c) of this section.

(a) The amendment must meet paragraphs (A) and (B) of this subsection or meet paragraph (D) of this subsection.

(A) Create direct benefits in terms of industrial or traded-sector jobs created or retained by limiting uses to industrial or traded-sector industries.

(B) Not allow retail uses, except limited retail incidental to industrial or traded sector development, not to exceed five percent of the net developable area.

(C) For the purpose of this section:

(i) "Industrial" means employment activities generating income from the production, handling or distribution of goods including, but not limited to, manufacturing, assembly, fabrication, processing, storage, logistics, warehousing, importation, distribution and transshipment and research and development.

(ii) "Traded-sector" means industries in which member firms sell their goods or services into markets for which national or international competition exists.

(D) Notwithstanding paragraphs (A) and (B) of this subsection, an amendment complies with subsection (a) if all of the following conditions are met:

(i) The amendment is within a city with a population less than 10,000 and outside of a Metropolitan Planning Organization.

(ii) The amendment would provide land for "Other Employment Use" or "Prime Industrial Land" as those terms are defined in OAR 660-009-0005.

(iii) The amendment is located outside of the Willamette Valley as defined in ORS 215.010.

(E) The provisions of paragraph (D) of this subsection are repealed on January 1,



2017.

(b) A local government may accept partial mitigation only if the local government determines that the benefits outweigh the negative effects on local transportation facilities and the local government receives from the provider of any transportation facility that would be significantly affected written concurrence that the benefits outweigh the negative effects on their transportation facilities. If the amendment significantly affects a state highway, then ODOT must coordinate with the Oregon Business Development Department regarding the economic and job creation benefits of the proposed amendment as defined in subsection (a) of this section. The requirement to obtain concurrence from a provider is satisfied if the local government provides notice as required by subsection (c) of this section and the provider does not respond in writing (either concurring or non-concurring) within forty-five days.

(c) A local government that proposes to use this section must coordinate with Oregon Business Development Department, Department of Land Conservation and Development, area commission on transportation, metropolitan planning organization, and transportation providers and local governments directly impacted by the proposal to allow opportunities for comments on whether the proposed amendment meets the definition of economic development, how it would affect transportation facilities and the adequacy of proposed mitigation. Informal consultation is encouraged throughout the process starting with pre-application meetings. Coordination has the meaning given in ORS 197.015 and Goal 2 and must include notice at least 45 days before the first evidentiary hearing. Notice must include the following:

(A) Proposed amendment.

(B) Proposed mitigating actions from section (2) of this rule.

(C) Analysis and projections of the extent to which the proposed amendment in combination with proposed mitigating actions would fall short of being consistent with the function, capacity, and performance standards of transportation facilities.

(D) Findings showing how the proposed amendment meets the requirements of subsection (a) of this section.

(E) Findings showing that the benefits of the proposed amendment outweigh the negative effects on transportation facilities.

**Applicants Response:** This request is for the expansion of the City of Umatilla urban growth boundary with an associated request to change the Zoning on the subject property to Light Industrial. Should the City of Umatilla wish to pursue the provisions of this criterion the applicant would be willing to participate. The applicant would assert that the economic benefits of this proposal do outweigh the negative impacts of any transportation impacts that are outlined in the TIA.

**Conclusion:** Due to the fact that the proposed economic benefits of this application outweigh the negative impacts of transportation impacts. Staff recommendation is to not pursue the provisions of this criterion.

**The Umatilla County Comprehensive Plan, Transportation System Plan and Development Code are applicable, specifically Comprehensive Plan Findings and Policies 2, 9 and 25, Transportation System Plan Goals 1 and 3, and Development Code provisions found at 152.019 Traffic Impact Study.**

Umatilla County **Comprehensive Plan** Chapter 15. TRANSPORTATION

All segments of Umatilla County's economy depend on the County's transportation network for movement inside County borders and to markets outside of the area. Fortunately, the County and particularly the developing West County has access to five modes of transportation. Interstate and state highways flow east-west and north-south in the County. The Port of Umatilla provides commercial freight use of the Columbia River. Railroad lines including Union Pacific's major switch-yard at Hinkle, bring passenger and freight service to Umatilla County. Two municipal airports make a wide variety of services available to county and regional residents, i.e. agriculture, freight, passenger, business. Natural gas and oil pipelines transport fuel to the county and to other areas. Local traffic between urban areas and highways travels on a fairly extensive county and state roads network. Mass transit is presently limited to long distance commercial bus lines and small fleet bus systems that serves some transportation needs of senior citizens.

The ability of existing services and facilities to serve future regional needs, and the specific requirements necessary to provide balanced forms of transportation for all segments of the county's future population, hinge upon cooperative city/county development of a transportation system plan. A major mechanism insuring this cooperative effort is found within the "Transportation" section of the Joint Management Agreements entered into with all cities of Umatilla County. A Transportation System Plan will also serve to assist state/federal transportation agencies in setting priorities and planning improvements in their areas of responsibilities.

**Applicants Response:** The following findings and policies are evaluated to meet Umatilla County Comprehensive Plan requirements.

**Conclusion:** The following findings and policies are evaluated to meet Umatilla County Comprehensive Plan requirements.

Finding 2. Transportation planning within urban growth boundaries is important to insure adequate transportation facilities in the County.

Policy 2. To facilitate transportation system coordination within urban growth boundaries, the cities' TSPs shall apply within the UGB and shall be co-adopted by the County and addressed in the city/county joint management agreements.

**Applicants Response:** The Joint Management Agreement between Umatilla County and the City of Umatilla is considered as part of this application. Powerline Road is specifically called out in the Joint Management Agreement. There has been a recent transfer of a portion of Powerline Road from Umatilla County to the City of Umatilla. The portion of Powerline Road adjacent to the subject property is still a paved Umatilla County road.

**Conclusion:** If approved, Powerline road will be adopted by the City of Umatilla down from HWY 730 to the subject property, and be added to the City's TSP. The County co adopted the City's TSP on December 6<sup>th</sup>, 1999. The TSP was adopted via County Ordinance #99-07.

Finding 9. Many County and public roads are not constructed to an acceptable County standard,

and development is increasing along these roads.

Policy 9. Subdivision of land not on road constructed to County standards or not accepted for maintenance responsibility by the County or state shall not be permitted. A subdivision road shall be public and maintained by a public agency or homeowners association.

**Applicants Response:** Powerline Road is a paved county road, is classified as a minor collector and is not currently built to that standard. Future development in the subject area would be subject to development standards within the City of Umatilla Zoning Ordinance with appropriate development improvements to Powerline Road with the outcome of bringing the road to the applicable development standard. This will be affected as part of the zone change undertaken by the City of Umatilla once the urban growth boundary expansion is concluded.

**Conclusion:** Powerline Road is a paved county road, is classified as a minor collector and is not currently built to that standard. Future development in the subject area will be subject to development standards.

Finding 25. The development of I-82 after the County's Comprehensive Plan was acknowledged established new interchanges which could affect the location of industries, commercial businesses and highway-oriented business.

Policy 25A. Examine interchanges and other potential commercial and industrial locations for appropriateness of development taking into consideration access, sewer and water availability and environmental conditions.

Policy 25B. Identify and evaluate factors limiting development in this area.

**Applicants Response:** The Interstate 82 Powerline Road interchange offers an opportunity to the City of Umatilla to consider additional uses of land between residential areas and the interchange. This application is to expand the City of Umatilla urban growth boundary to allow for additional industrial land to serve data centers, warehousing and certain low impact manufacturing operations. Earlier analysis evaluated these factors, finding the location to be suitable for an urban growth boundary expansion. The associated proposed change in zoning to Light Industrial is compatible with the Interstate 82 Interchange and the adjacent farm uses to the south. The included Umatilla Industrial Area Utility Technical Memorandum indicates that the City of Umatilla does have the capacity to provide services to this area in support of future industrial uses.

**Conclusion:** The included Umatilla Industrial Area Utility Technical Memorandum indicates that the City of Umatilla does have the capacity to provide services to this area in support of future industrial uses.

The Umatilla County **Transportation System Plan**'s OVERALL TRANSPORTATION GOAL is "To provide and encourage a safe, convenient, and economic transportation system." Goals 1 and 3 are applicable; the appropriate Objectives are addressed here:

Goal 1 Preserve the function, capacity, level of service, and safety of the local streets, county

roads, and state highways.

Objectives

A. Develop access management standards.

F. Develop procedures to minimize impacts to and protect transportation facilities, corridors, or sites during the development review process.

**Applicants Response:** Upon completion of this urban growth boundary expansion and the zoning of approximately 450 acres for industrial purposes, the City of Umatilla Transportation System Plan and Development Code would be applicable to any development. Those applicable provisions would impose access and development standards meeting this Goal.

**Conclusion:** Upon approval of the proposed UGB expansion the City of Umatilla's Transportation System Plan and Development Code will be applicable to any development on the subject property. These will fulfil the purposes of this goal.

Goal 3 Improve coordination among the cities of Umatilla County, the Oregon Department of Transportation (ODOT), the US Forest Service (USFS), the Federal Highway Administration (FHWA), and the county.

Objectives

F. Continue to work with cities planning for the county land within their urban growth boundaries.

**Applicants Response:** The urban growth boundary expansion process is one of cooperation between Umatilla County and the City of Umatilla. Powerline Road, a paved county road, is identified in the Joint Management Agreement for consideration to transfer to the City of Umatilla, a process that was recently completed for a portion of the road north of the proposed action.

**Conclusion:** The City of Umatilla planning department has involved and informed Umatilla County planning department in preparation of this application. The urban growth boundary expansion process is one of cooperation between Umatilla County and the City of Umatilla. A portion of Powerline road was transferred to the City on June 2, 2020. The City & County will continue to work together as development occurs within the UGB.

Umatilla County **Development Code** provisions 152.019 TRAFFIC IMPACT STUDY.

(A) Purpose: The purpose of this section of the code is to implement Section 660- 012-0045(2)(e) of the State Transportation Planning Rule that requires the County to adopt a process to apply conditions to specified land use proposals in order to minimize adverse impacts to and protect transportation facilities. This section establishes the standards for when a proposal must be reviewed for potential traffic impacts; when a Traffic Impact Analysis must be submitted with an application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; what must be in a Traffic Impact Analysis; and who is qualified to prepare the analysis.

(B) Applicability: A Traffic Impact Analysis shall be required to be submitted to the County with a land use application, when one or more of the following actions apply:

(1) A change in plan amendment designation; or

**Applicants Response:** A change in plan amendment designation is requested as part of the urban

growth boundary expansion process. A Traffic Impact Analysis is included as part of this application addressing the criteria in these provisions.

**Conclusion:** A change in plan amendment designation will be completed upon approval. The attached TIA addresses the criteria in these provisions.

(2) The proposal is projected to cause one or more of the following effects, which can be determined by field counts, site observation, traffic impact analysis or study, field measurements, crash history, Institute of Transportation Engineers Trip Generation manual; and information and studies provided by the local reviewing jurisdiction and/or ODOT:

(a) An increase in site traffic volume generation by 250 Average Daily Trips (ADT) or more (or as required by the County Engineer). The latest edition of the Trip Generation manual, published by the Institute of Transportation Engineers (ITE) shall be used as standards by which to gauge average daily vehicle trips; or

(b) An increase in use of adjacent gravel surfaced County roads by vehicles exceeding the 10,000-pound gross vehicle weights by 20 vehicles or more per day; or

(c) The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or vehicles queue or hesitate, creating a safety hazard; or

(d) A change in internal traffic patterns that may cause safety problems, such as back up onto the highway or traffic crashes in the approach area; or

(e) Any development proposed within the Umatilla Army Chemical Depot boundary of the I-82/Lamb Road or I84/Army Depot Access Road Interchange Area Management Area prior to the completion of near-term improvements projects (Projects A and B) identified in the I-82/Lamb Road IAMP; or

(f) For development within the I82/US 730 Interchange Area Management Plan (IAMP) Management Area, the location of the access driveway is inconsistent with the Access Management Plan in Section 7 of the IAMP; or

(g) For development within the I84/Barnhart Road Interchange Area Management Plan (IAMP) Management Area.

**Applicants Response:** The completed Traffic Impact Analysis indicates that proposed development on the subject property would decrease pm peak hour traffic by 800 trips as analyzed against the current residential zoning of most of the rezone subject property (please see the earlier analysis). There are impacts to the intersections with both Interstate-82 and Highway 730 during the planning horizon.

**Conclusion:** The TIA indicates a decrease of pm peak hour traffic by 800 trips. Impacts to the intersections of I-82 and HWY 730 will be addressed at the time of proposed development.

(C) Traffic Impact Analysis Requirements

(1) Preparation. A Traffic Impact Analysis shall be prepared by a professional engineer. The Traffic Impact Analysis will be paid for by the applicant.

(2) Transportation Planning Rule Compliance as provided in § 152.751.

(3) Pre-filing Conference. The applicant will meet with the Umatilla County Public Works Director and Planning Director prior to submitting an application that requires a

Traffic Impact Analysis. The County has the discretion to determine the required elements of the TIA and the level of analysis expected. The County shall also consult the Oregon Department of Transportation (ODOT) on analysis requirements when the site of the proposal is adjacent to or otherwise affects a State roadway.

(4) For development proposed within the Umatilla Army Chemical Depot boundary of the I-82/Lamb Road or I84/Army Depot Access Road Interchange Area Management Plan (IAMP) Management Area Prior to the construction and completion of near-term improvements projects (Projects A and B) identified in the I-82/Lamb Road IAMP, the following additional submittal requirements may be required:

(a) An analysis of typical average daily vehicle trips using the latest edition of the Trip Generation Manual, published by the Institute of Transportation Engineers (ITE) or other data source deemed acceptable by the County Engineer;

(b) A truck and passenger vehicle mode split analysis;

(c) An analysis that shows the traffic conditions of the project at full buildout and occupancy, assuming the background traffic conditions at the year of expected completion;

(d) Findings related to the impacts of the proposed development and the need for Projects A and B to mitigate those impacts. Once Projects A and B have been completed, this Section 4 will no longer apply to new development.

**Applicants Response:** The included Traffic Impact Analysis, dated May 2020, was completed by J-U-B Engineers, meeting the credential requirements. Umatilla County Development Code provisions at 152.751 are met as this application addresses the transportation requirements in the Umatilla County Comprehensive Plan, Transportation System Plan, and Development Code. Coordination with Umatilla County and the Oregon Department of Transportation was accomplished through consultation with City of Umatilla staff; in-person meetings were limited due to the COVID-19 pandemic.

**Conclusion:** The TIA meets and addresses the above criterion.

(D) Approval Criteria: When a Traffic Impact Analysis is required; approval of the proposal requires satisfaction of the following criteria:

(1) Traffic Impact Analysis was prepared by an Oregon Registered Professional Engineer qualified to perform traffic engineering analysis;

(2) If the proposed action shall cause a significant effect pursuant to the Transportation Planning Rule, or other traffic hazard or negative impact to a transportation facility, the Traffic Impact Analysis shall include mitigation measures that meet the County's Level-of-Service and/or Volume/Capacity standards and are satisfactory to the County Engineer, and ODOT when applicable; and

(3) The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:

(a) Have the least negative impact on all applicable transportation facilities;

(b) Accommodate and encourage non-motor vehicular modes of transportation to the extent practicable;

(c) Make the most efficient use of land and public facilities as practicable;

(d) Provide the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations; and

(e) Otherwise comply with applicable requirements of the Umatilla County Code.

**Applicants Response:** The Traffic Impact Analysis was completed by J-U-B Engineers and addresses both Level-of-Service and Volume/Capacity standards. The pm peak hour traffic, when compared with current zoning, is reduced by 800 trips. There are impacts to the intersections at both Interstate-82 and Highway 730 when this action is considered with background growth, creating impacts within the 20-year planning horizon.

**Conclusion:** Future impacts forecasted by the TIA will be addressed as future development is proposed.

*(E) Conditions of Approval: The County may deny, approve, or approve a proposal with appropriate conditions.*

*(1) Where the existing transportation system is shown to be impacted by the proposed action, dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or accessways may be required to ensure that the transportation system is adequate to handle the additional burden caused by the proposed action.*

*(2) Where the existing transportation system is shown to be impacted by the proposed action, improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, accessways, paths, or streets that serve the proposed action may be required.*

**Applicants Response:** The applicant request that the County approve this request to expand the urban growth boundary. The Traffic Impact Analysis does show that pm peak hour traffic will be lowered when compared to current zoning. Future development would be subject to City of Umatilla Development Code provisions concerning onsite and adjacent improvements.

**Conclusion:** The City of Umatilla staff foresee no complications in regards to the approval of the UGB expansion by Umatilla County. Preliminary conversations with the County have not identified any potential issues. Future development would be subject to City of Umatilla Development Code provisions concerning onsite and adjacent improvements.

**The City of Umatilla Transportation System Plan, which is a part of the Comprehensive Plan, has certain Goals and Objectives that require review and analysis as well as the Zoning Ordinance Chapter 11 Supplementary Provisions 10-11-10: Traffic Impact Analysis should the transfer of Powerline Road be accomplished prior to the submittal of this application. Additionally, these provisions are applicable to the associated application for a change in Zoning to Light Industrial for the larger subject property. Both the County and City provisions are addressed to assure compliance.**

*City of Umatilla Comprehensive Plan Chapter 12 Goal 12: Transportation*

*Section 12:0 Transportation Goal*

*To develop and encourage a safe, convenient and economic transportation system.*

**Applicants Response:** The applicant supports this overall Transportation Goal of the City of Umatilla. Development of an industrial area on the south side of the City of Umatilla along Powerline Road just north of the Interstate 82 Interchange creates transportation linkages to the larger regional transportation system in a safe and efficient matter, with the opportunity to limit truck traffic within the downtown and residential areas.



**Conclusion:** The subject property and proposed UGB expansion will allow for development of the Transportation System in a safe and efficient manner.

TSP Goal 1

Promote a balanced, safe, and efficient transportation system.

Objectives

Develop a multi-modal transportation system that avoids reliance upon one form of transportation as well as minimizes energy consumption and air quality impacts.

Protect the qualities of neighborhoods and the community.

Provide for adequate street capacity and optimum efficiency.

Promote adequate transportation linkages between residential, commercial, public, and industrial land uses.

**Applicants Response:** The applicant would support connection of the proposed industrial area to the residential areas north of the proposal along Powerline Road with appropriate pedestrian and bicycle facilities such as sidewalks or bike lanes. Further connections to downtown Umatilla via the walking bridge or other connections as envisioned in the City's recent trails visioning project are worthwhile.

**Conclusion:** At the time of future development the Umatilla Development Code provisions will be enforced. Required improvements to adopted City standard at the time development would meet the above criterion.

TSP Goal 2

Ensure the adequacy of the roadway network in terms of function, capacity, level of service, and safety.

Objectives

Identify existing and potential future capacity constraints and develop strategies to address those constraints, including potential intersection improvements, future roadway needs, and future street connections.

Evaluate the need for modifications to and/or the addition of traffic control devices, including evaluation of traffic signal warrants as appropriate.

Provide an acceptable level of service at all intersections in the City, recognizing the rural character of the area.

**Applicants Response:** The Traffic Impact Study addresses these three Objectives of Goal 2 by evaluating traffic impacts from the proposed urban growth boundary expansion and change in Zoning to Light Industrial. The current growth of residential uses along Powerline Road is creating additional pressure on the Powerline Road intersection with Highway 730 and will over time reduce the Level-of-Service of the intersection. The Traffic Impact Analysis provides an evaluation of traffic impacts along Powerline Road and at the intersections with both Interstate-82 and Highway 730. The Traffic Impact Analysis does provide both timing and the types of improvements that may be appropriate to address future impacts.

**Conclusion:** The included TIA evaluates in detail the above criterion. The TIA will be consulted for any future development of the subject site. Subsequent development would be subject to City review to ensure the City's roadway network is adequate.

City of Umatilla Title 10 Zoning Ordinance Chapter 11 Supplementary Provisions  
10-11-10: TRAFFIC IMPACT ANALYSIS (TIA)

A. Purpose: The purpose of this section of the code is to implement Section 660-012-0045(2)(e) of the State Transportation Planning Rule that requires the City to adopt a process to apply conditions to specified land use proposals in order to minimize adverse impacts to and protect transportation facilities. This section establishes the standards for when a proposal must be reviewed for potential traffic impacts; when a Traffic Impact Analysis must be submitted with an application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; what must be in a Traffic Impact Analysis; and who is qualified to prepare the analysis.

**Applicants Response:** The applicant has included with this application the Traffic Impact Analysis completed by J-U-B Engineers dated May 2020 meeting these requirements.

**Conclusion:** The applicant has included with this application the Traffic Impact Analysis completed by J-U-B Engineers dated May 2020 meeting these requirements.

B. Applicability: A Traffic Impact Analysis shall be required to be submitted to the City with a land use application, when the following conditions apply:

1. The application involves one or more of the following actions:

a. A change in zoning or plan amendment designation; or

b. The proposal is projected to cause one or more of the following effects, which can be determined by field counts, site observation, traffic impact analysis or study, field measurements, crash history, Institute of Transportation Engineers Trip Generation manual; and information and studies provided by the local reviewing jurisdiction and/or ODOT:

1) An increase in site traffic volume generation by 250 Average Daily Trips (ADT) or more (or as required by the City Engineer). The latest edition of the Trip Generation manual, published by the Institute of Transportation Engineers (ITE) shall be used as standards by which to gauge average daily vehicle trips; or

2) An increase in use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by 10 vehicles or more per day; or

3) The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or vehicles queue or hesitate, creating a safety hazard; or

4) The location of the access driveway does not meet the access spacing standard of the roadway on which the driveway is located; or

5) A change in internal traffic patterns that may cause safety problems, such as back up onto the highway or traffic crashes in the approach area.

**Applicants Response:** The completed Traffic Impact Analysis indicates that proposed development on the subject property would decrease pm peak hour traffic by 800 trips as analyzed against the current residential zoning of most of the rezone subject property (please see the earlier analysis). There are impacts to the intersections with both Interstate-82 and Highway 730 during the planning horizon.

**Conclusion:** The TIA indicates a decrease of pm peak hour traffic by 800 trips. Impacts to the intersections of I-82 and HWY 730 will be addressed at the time of proposed development.

C. Traffic Impact Analysis Requirements

1. Preparation. A Traffic Impact Analysis shall be prepared by an Oregon Registered Professional Engineer that is qualified to perform traffic engineering analysis and will be paid for by the applicant.
2. Transportation Planning Rule Compliance. See Section 10-13-3 Amendments to the Zoning Text or Map.
3. Pre-application Conference. The applicant will meet with the Umatilla Public Works Director and Planning Director prior to submitting an application that requires a Traffic Impact Analysis. The City has the discretion to determine the required elements of the TIA and the level of analysis expected. The City shall also consult the Oregon Department of Transportation (ODOT) on analysis requirements when the site of the proposal is adjacent to or otherwise affects a State roadway.

**Applicants Response:** The Traffic Impact Analysis was completed by J-U-B Engineers meeting the qualifications requirement. Section 10-13-3 of the Umatilla Zoning Ordinance is evaluated as part of the associated application for a change in zoning designation to Light Industrial. The applicant and their representatives have met with City staff on several occasions as these applications were being developed.

**Conclusion:** The TIA was prepared by Shae Talley, an Oregon Registered Professional Engineer meeting the qualifications requirement. Section 10-13-3 of the Umatilla Zoning Ordinance is evaluated as part of the associated application for a change in zoning designation to Light Industrial. City staff has met with the applicant and their representatives on several occasions in preparation for these applications. City staff requested a pre-application meeting with ODOT on June 19<sup>th</sup>, 2020 and never received any comment due to what staff assume to be Covid-19 delays.

D. Approval Criteria: When a Traffic Impact Analysis is required, approval of the proposal requires satisfaction of the following criteria:

1. Traffic Impact Analysis was prepared by an Oregon Registered Professional Engineer qualified to perform traffic engineering analysis;
2. If the proposed action shall cause a significant effect pursuant to the Transportation Planning Rule, or other traffic hazard or negative impact to a transportation facility, the Traffic Impact Analysis shall include mitigation measures that meet the City's Level-of-Service and/or Volume/Capacity standards and are satisfactory to the City Engineer, and ODOT when applicable; and
3. The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:
  - a. Have the least negative impact on all applicable transportation facilities;
  - b. Accommodate and encourage non-motor vehicular modes of transportation to the extent practicable;
  - c. Make the most efficient use of land and public facilities as practicable;
  - d. Provide the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations; and

e. Otherwise comply with applicable requirements of the City of Umatilla Code.

**Applicants Response:** The Traffic Impact Analysis was completed by J-U-B Engineers and evaluates the proposed urban growth boundary expansion and associated change in Zoning to Light Industrial with a focus on the impacts to Powerline Road and its associated connections by evaluating both Level-of-Service and the Volume/Capacity standards. The Traffic Impact Study found that the pm peak hour traffic, when compared with current zoning, is reduced by 800 trips. There are impacts to the intersections at both Interstate-82 and Highway 730 when this action is considered with background growth, creating impacts within the 20-year planning horizon.

**Conclusion:** The TIA indicates a decrease of pm peak hour traffic by 800 trips. Impacts to the intersections of I-82 and HWY 730 will be addressed at the time of proposed development.

E. Conditions of Approval: The City may deny, approve, or approve a proposal with appropriate conditions.

1. Where the existing transportation system is shown to be impacted by the proposed action, dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or accessways may be required to ensure that the transportation system is adequate to handle the additional burden caused by the proposed action.

2. Where the existing transportation system is shown to be impacted by the proposed action, improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, accessways, paths, or streets that serve the proposed action may be required.

**Applicants Response:** The applicant requests that the City approve this request to expand the urban growth boundary. The Traffic Impact Analysis provides evidence that the proposed change in zoning achieves a lowered pm peak hour by 800 trips at buildout, creating benefits to the operation of Powerline Road. There are impacts to the intersections of Powerline Road with both Interstate-82 and Highway 730 when combined with background growth during the planning horizon. There is opportunity for the industrial area to be connected to the residential area north of the subject property and to the downtown area of the City of Umatilla via sidewalks and bicycle lanes, connecting to the trails network recently adopted by the City Council.

**Conclusion:** Approval of this application will be determined by the City of Umatilla Planning Commission recommendation and City Council's decision. Staff recommend approval based on findings and conclusions as contained in this report.

**Analysis of the Statewide Planning Goals 1 through 14 follows.**

Goal 1 Citizen Involvement: To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

**Applicants Response:** The City of Umatilla Comprehensive Plan and development codes outline the City's citizen involvement program that includes the activities of the Planning Commission and provides for the public hearing process with its required notice provisions. These notice provisions provide for adjoining and affected property owner notice; notice to interested local, state and federal agencies; and allows for public comment to the process.

**Conclusion:** The required public notice process has been completed and staff hope for citizens to be involved at the Planning Commission and City Council meetings along with any other comments or participation.

Goal 2 Planning: To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.

**Applicants Response:** Goal 2 establishes the underlining process that a county or a city needs to utilize when considering changes to their Comprehensive Plans and development codes. This application meets those requirements for this request.

**Conclusion:** Established land use planning processes and policy framework were used in this application.

Goal 3 Agricultural Lands: To preserve and maintain agricultural lands.

**Applicants Response:** The Goal 3 requires counties to preserve and maintain agricultural lands for farm uses. Counties must inventory agricultural lands and protect them by adopting exclusive farm use zones consistent with Oregon Revised Statute 215.203 et. seq.

Goal 3 does not allow nonfarm uses like industrial development on lands zoned for exclusive farm use unless a local government adopts findings to justify an exception to Goal 3 or accomplishes an expansion of their urban growth boundary. The necessary analysis for an urban growth boundary is set out and included in this application and discusses why this particular location can support a change in designation from Agricultural to Industrial and be included in the City of Umatilla urban growth boundary.

The process the applicant has utilized under Oregon Revised Statute specifically allows an applicant or the community to not consider Goal 3 or Goal 4. The applicant is aware that much of the land surrounding the City of Umatilla is part of the Columbia Valley Viticultural Area as defined in Oregon Revised Statute 195.300 and is therefore consider high-value farmland. While there is significant viticultural development on the north side of the Columbia River in the greater area, at the locations considered as part of this application the aspect of much of the land is not favorable for this type of crop development (not south facing).

**Conclusion:** The necessary analysis for an urban growth boundary is set out and included in this application and discusses why this particular location can support a change in designation from Agricultural to Industrial and be included in the City of Umatilla urban growth boundary.

Goal 4 Forest Lands: To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.

**Applicants Response:** There are no forest lands in the City of Umatilla. The community is,

however, a Tree City USA participant, encouraging tree planting to create an urban canopy of trees to provide the many benefits of an urban landscape that includes trees.

**Conclusion:** There is no forest land in or adjacent to the City of Umatilla.

Goal 5 Open Spaces, Scenic and Historic Areas, and Natural Resources: To protect natural resources and conserve scenic and historic areas and open spaces.

**Applicants Response:** The subject property does not have any overlays or other known cultural or historical sites. As part of the site analysis earlier in this narrative there was an area that was eliminated from consideration because of the wetlands that are found there. There are no mapped wetlands on the subject property.

**Conclusion:** The subject site has no inventoried or known features referenced in Goal 5.

Goal 6 Air, Water and Land Resources Quality: To maintain and improve the quality of the air, water and land resources of the state.

**Applicants Response:** Goal 6 addresses the quality of air, water and land resources. In the context of comprehensive plan amendments, a local government complies with Goal 6 by explaining why it is reasonable to expect that the proposed uses authorized by the plan amendment will be able to satisfy applicable federal and state environmental standards, including air and water quality standards.

The proposed plan amendments do not seek approval of a specific development but seek to apply the City of Umatilla's Light Industrial zoning designation with a specific intent of creating large lot industrial opportunities to serve data centers, transport facilities and manufacturing opportunities. This action can improve air quality by better facilitating the movement of freight along Interstate 82 with connections to Interstate 84 to the south and Highway 730 to the north. Industrial uses at this location will increase impervious surface, although by no more than could have occurred at another location and are subject to environmental requirements imposed by the City of Umatilla and the State of Oregon. The use of construction techniques that include temporary and permanent Best Management Practices for erosion and sediment control and spill control and prevention also can achieve compliance with clean water standards.

Noise is defined as unwanted sound. The uses authorized by the requested plan amendments should not create noise that differs from the types of industrially-related noise that could be comparable to agricultural activities already in the area. The location of these uses in very close proximity to Interstate 82 will reduce overall noise impacts because highway generated noise muffles and obscures other noises located nearby. Open space and landscaping provisions will provide additional protection from noise that may be generated.

**Conclusion:** As addressed above any negative impacts can be and will be required to be mitigated to the extent possible at time of proposed development.

Goal 7 Areas Subject to Natural Hazards and Disasters: To protect people and property from natural hazards.

**Applicants Response:** Goal 7 works to address natural hazards and disasters and through a comprehensive plan amendment process would seek to determine if there are known natural hazards and seek to mitigate any concerns. There are no known natural hazards on the subject property, and it is located significantly above and outside the flood plain for both the Umatilla and Columbia Rivers.

**Conclusion:** There are no known natural hazards on the subject property, and it is located significantly above and outside the flood plain for both the Umatilla and Columbia Rivers.

*Goal 8 Recreation Needs: To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.*

**Applicants Response:** No recreation components are included in this application. However as industrial activities are sited, an increase in tax base for the City of Umatilla would occur. That tax base would provide additional revenue to the City of Umatilla leading to the opportunity for increased investment in parks and recreation opportunities for its citizens and visitors.

**Conclusion:** The ability to meet Recreation needs will be increased in the City of Umatilla due to the potential increase of the tax base from future development on the subject site.

*Goal 9 Economy: To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.*

**Applicants Response:** Goal 9 requires local governments to adopt comprehensive plans and policies that contribute to a stable and healthy economy. Both Umatilla County and the City of Umatilla have comprehensive plans that have been acknowledged to comply with Goal 9. The City of Umatilla has completed an Economic Opportunities Analysis that is scheduled to be adopted prior to this suite of applications submitted in support of an urban growth boundary expansion, annexation, and change in zoning. The Economic Opportunities Analysis does identify the current inventory of employment lands and recommends adding land to the inventory to accommodate large lot industrial development, meeting the requirement to address a 20-year planning need.

This application is based upon the findings of the October 2019 Economic Opportunities Analysis completed under Goal 9. The major finding of the Analysis was a need for additional large lot industrial land, two opportunities between 50 and 99.9 acres and a third opportunity over 100-acres in size. This application has been done with a focus on data centers, warehousing and light manufacturing. The applicant would assert that adopting the Economic Opportunity Analysis and the update to Goal 9 along with the suite of applications submitted by the applicant would be consistent with Goal 9.

**Conclusion:** This application is based upon the findings of the October 2019 Economic Opportunities Analysis completed under Goal 9. The major finding of the Analysis was a need for additional large lot industrial land with a focus on data centers, warehousing and light manufacturing. Approving the urban growth boundary expansion would be consistent with Goal 9.



Goal 10 Housing: To provide for the housing needs of citizens of the state.

**Applicants Response:** Housing is not a specific consideration of this application but is addressed because the associated zone change does propose to rezone just shy of 300 acres of residential land to industrial. Based on the Housing Strategies Report (2019), adopted by the City of Umatilla as part of a Goal 10 update, there is an overabundance of land zoned for single family residential development. The associated application for a change in both Comprehensive Plan and Zoning designations from residential to industrial would not negatively impact the City of Umatilla's needed inventory of residential lands, leaving at least 750 acres over the identified need in the inventory. Please see the attached Housing Strategies Report, particularly the analysis on page 26, that outlines the over 2,100-unit capacity and over 1,000-acre overabundance of residentially zoned land. Removal of 300 acres would not impact the needed residential land supply in the 20-year planning horizon.

**Conclusion:** Housing is not a specific consideration of this application but is addressed because the associated zone change does propose to rezone just shy of 300 acres of residential land to industrial. Based on the Housing Strategies Report (2019), adopted by the City of Umatilla as part of a Goal 10 update, there is an overabundance of land zoned for single family residential development. The associated application for a change in both Comprehensive Plan and Zoning designations from residential to industrial would not negatively impact the City of Umatilla's needed inventory of residential lands, leaving at least 750 acres over the identified need in the inventory. Please see the attached Housing Strategies Report, particularly the analysis on page 26, that outlines the over 2,100-unit capacity and over 1,000-acre overabundance of residentially zoned land. Removal of 300 acres would not impact the needed residential land supply in the 20-year planning horizon.

Goal 11 Public Services: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

**Applicants Response:** Goal 11 requires local governments to plan and develop a timely, orderly and efficient arrangement of public facilities and services. The goal provides that urban and rural development be guided and supported by types and levels of services appropriate for, but limited to, the needs and requirements of the area to be served. Attached and discussed previously is the Umatilla Industrial Area Utility Technical Memorandum which concludes that the subject area can be adequately served and includes initial cost estimates for consideration.

**Conclusion:** The UTM addresses bringing public services to the Subject site and determines it to be technically feasible.

Goal 12 Transportation: To provide and encourage a safe, convenient and economic transportation system.

**Applicants Response:** Goal 12 requires local governments to provide and encourage a safe, convenient, and economic transportation system, implemented through the Transportation Planning Rule. The included Traffic Impact Analysis evaluates the urban growth boundary expansion and related change in designation and zoning based upon the requirements in both the Umatilla County and City of Umatilla Transportation System Plans and Development Codes,

meeting both local and state requirements. Please see the earlier analysis and discussion for specifics or refer to page 17 of the Traffic Impact Analysis for the summary and conclusions. Also included is a comment letter from the Oregon Department of Transportation dated August 21, 2020, signed by Marilyn Holt, District 12 Manager.

**Conclusion:** As addressed by the TIA and findings in this report the peak PM trips will be decreased by this application. It is reasonable to believe that the subject site will not negatively impact the transportation system in a way that can not be addressed by the findings in the TIA. Needed improvements will be addressed at the time of future development.

Goal 13 Energy: To conserve energy.

**Applicants Response:** Goal 13 directs local jurisdictions to manage and control land and uses developed on the land to maximize the conservation of all forms of energy, based on sound economic principles. Access to Interstate 82 creates easy connections to Interstate 84, Highway 730 and Highway 395. These connections provide energy efficiency and convenience as travel connections, for both trucks and workers, are easily accessed. It should also be noted that the proposed industrial area is also adjacent to a large and growing residential area with the ability for both pedestrian and bicycle connections creating additional energy conservation opportunities.

**Conclusion:** The applicants referenced energy conservation opportunities will improve energy conservation in the City of Umatilla.

Goal 14 Urbanization: To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.

**Applicants Response:** Goal 14 prohibits urban uses on rural lands. To locate urban uses on rural lands, local governments must either expand their urban growth boundaries to add property or take a Goal 14 exception setting forth reasons why urban development should be allowed on rural lands. This application seeks to expand the City of Umatilla urban growth boundary to allow urban light industrial uses within the city limits. The earlier analysis is in support of an urban growth boundary expansion.

**Conclusion:** This application seeks to expand the City of Umatilla urban growth boundary to allow urban light industrial uses within City limits. The earlier analysis is in support of an urban growth boundary expansion.

### **Applicants Conclusion:**

In conclusion the applicant encourages the City of Umatilla Planning Commission and City Council, along with the Umatilla County Planning Commission and Board of Commissioners, to approve this request for an urban growth boundary expansion. There are two additional applications submitted to the City of Umatilla for a change in Zoning to Light Industrial and for Annexation of the proposed industrial area. Evidence has been provided in the form of the Economic Opportunities Analysis, Housing and Residential Land Needs Assessment (2019),

Umatilla Industrial Area Utility Technical Memorandum, and Traffic Impact Study to support this and the associated requests. These documents show a clear need for large lot industrial land and indicated that need can be met with city services and without impacts to the transportation system that cannot be mitigated. There is also shown to be no negative impact to the residential land supply leaving a continuing surplus of residential land at approximately 750 acres.

#### **IV. SUMMARY AND RECOMMENDATION**

The applicant, Cleaver Land LLC, is proposing to amend the City of Umatilla Comprehensive Plan. Evidence has been provided in the form of the Economic Opportunities Analysis, Umatilla Industrial Area Utility Technical Memorandum, and Traffic Impact Study to support this and the associated requests. These documents show a clear need for large lot industrial land and indicated that need can be met with city services and without impacts to the transportation system that cannot be mitigated. The request appears to meet all of the applicable criteria and standards for this type of request. Therefore, based on the information in Sections I and II of this report, and the above criteria, findings of fact and conclusions addressed in Section III, the City of Umatilla Planning Commission recommends approval of Plan Amendment (PA-2-20).

#### **VI. EXHIBITS**

- Exhibit A - Draft Map Change
- Exhibit B - Economic Opportunity Analysis
- Exhibit C - Umatilla Industrial Area Utility Technical Memorandum
- Exhibit D - Traffic Impact Study
- Exhibit E – Supplement Findings
- Exhibit F – DLCDC Comment Letter



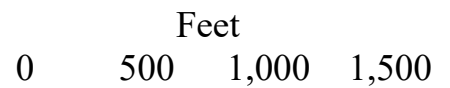


# CLEAVER LAND UGB EXPANSION SITE PLAN

## Legend

- City Limits
- Urban Growth Boundary
- Tax Lots (3/23/20)
- Proposed UGB Expansion Area

## Exhibit A - Draft Map Change



Map should be used for reference purpose: **362**  
Not survey grade or for legal use.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



## Exhibit B - Economic Opportunity Analysis



### **ECONOMIC OPPORTUNITIES ANALYSIS (OREGON STATEWIDE PLANNING GOAL 9)**

Prepared For:  
The City of Umatilla, Oregon

October 2019



# Acknowledgments

Johnson Economics prepared this report for the City of Umatilla. Johnson Economics and the City of Umatilla thank the many people who helped to develop this document.

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# I. INTRODUCTION

This report introduces analytical research presenting an Economic Opportunities Analysis (EOA) for the City of Umatilla, Oregon.

Cities are required to periodically reconcile estimates of future employment land demand with existing inventories of vacant and redevelopable employment land within their Urban Growth Boundary (UGB). The principal purpose of the analysis is to provide an adequate land supply for economic development and employment growth. The intent is to conduct this through a linkage of planning for an adequate land supply to infrastructure planning, community involvement and coordination among local governments and the state.

To this end, this report is organized into six primary sections:

- **Economic Trends:** Overview of national, state and local economic trends affecting Umatilla County and the city of Umatilla, including population projections, employment growth and a demographic profile.
- **Target Industries:** Analysis of key industry typologies the City should consider targeting as economic opportunities over the planning period.
- **Employment Land Needs:** Examines projected demand for industrial and commercial land based on anticipated employment growth rates by sector.
- **Capacity:** Summarizes the City's inventory of vacant and redevelopable industrial and commercial land (employment land) within the City of Umatilla's UGB.
- **Reconciliation:** Compares short- and long-term demand for employment land to the existing land inventory to determine the adequacy and appropriateness of capacity over a five and twenty-year horizon.
- **Economic Development Potential and Conclusions:** Summary of findings and policy implications.

This analysis reflects changes in employment, land supply, and macro-economic trends since the city of Umatilla last reviewed local economic development policies.



## II. ECONOMIC TRENDS

This report section summarizes long and intermediate-term trends at the national, state, and local level that will influence economic conditions in Umatilla over the 20-year planning period. This section is intended to provide an economic context for growth projections and establish a socioeconomic profile of the community. This report's national evaluation has a focus on potential changes in structural socioeconomic conditions both nationally and globally. Our localized analysis considers local growth trends, demographics, and economic performance.

### NATIONAL TRENDS

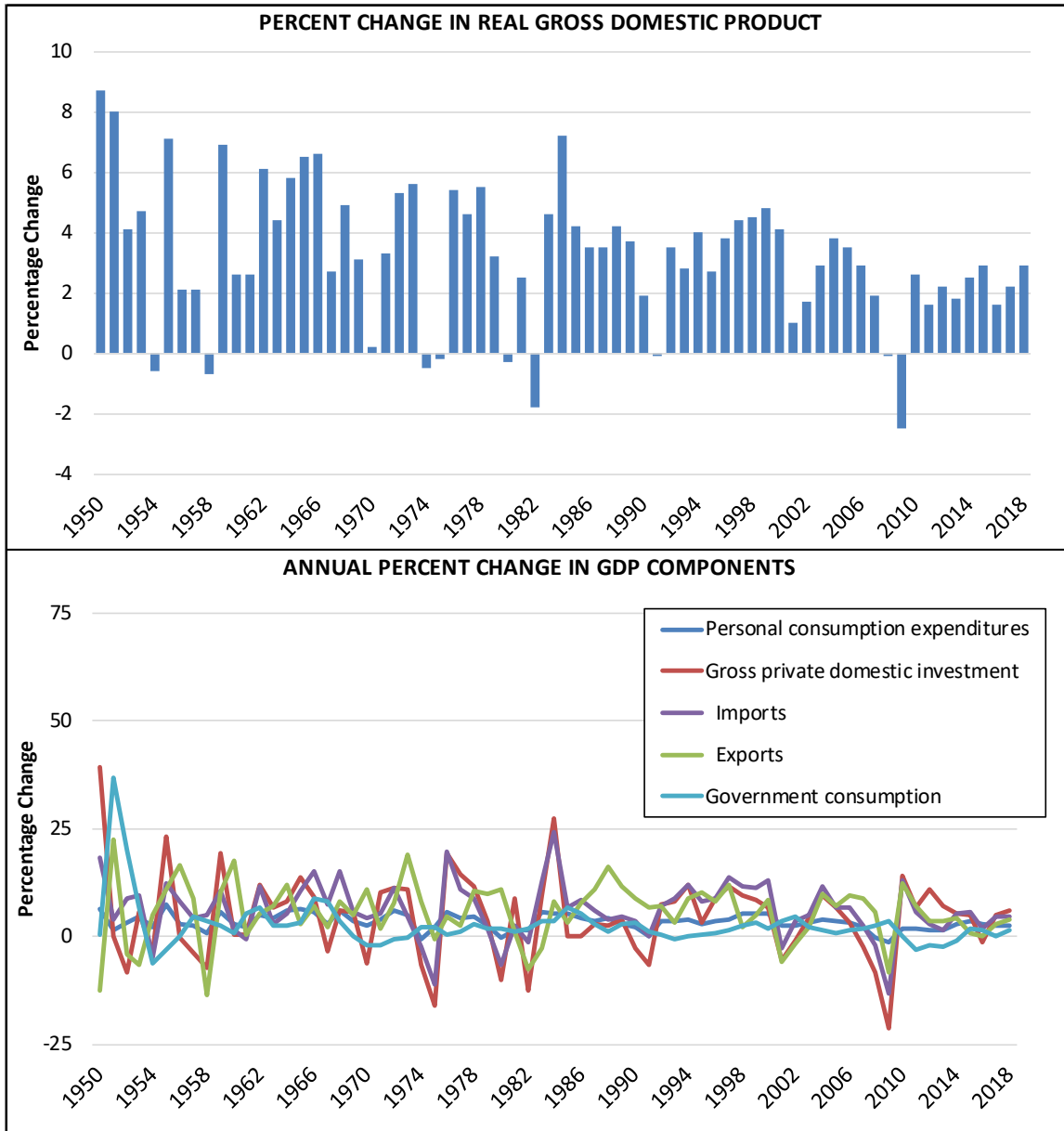
The long-term trend indicates that the United States economy has settled into a moderate growth trajectory at around 2.0% per year, after growing at above 4.0% per year during the 1960s and above 3.0% per year between 1970 and 2000. While the overall growth pace is moderating, there has been a shift within the economy from consumption of goods to consumption of services, especially services oriented around personal wellbeing (health, private education, finance). This reflects increasing levels of wealth and discretionary income in the population. Growth in fixed investment (equipment and structures) and government defense spending is also moderating – making manufactured goods a less significant part of the economy.

Increasing international trade led to strong growth in imports during the 1990s and 2000s, partly due to U.S. firms offshoring operations to lower-cost markets. Exports also grew over the period, but at a slower pace. The offshoring trend has partially reversed in the current decade, due to rising costs and greater awareness of cultural barriers and various associated risks. Greater emphasis on leaner and more agile supply chains, combined with demand for customized products and rapid delivery, has also contributed to growth in domestic production. This impact has been greatest in auto manufacturing. Despite this “reshoring” trend, imports from Asia continue to grow at a faster clip than domestic manufacturing.

The most commonly used measure of economic prosperity is real gross domestic product (GDP) per capita. Real GDP per capita is essentially a measure of national wealth considered on an individual basis, and the increased purchasing power of the population translates into greater investment in health care, education, housing, leisure, and many other sectors. U.S. real GDP per capita remains stable. Over the last century, the average annual growth rate has been 1.8%, despite considerable shifts in economic and social conditions—a finding that suggests long-term economic growth is more closely related to broad trends, such as population growth and investment in physical and human capital, than temporary economic fluctuations, like the recent recession and government policy.

The “Great Recession” officially spurred six consecutive quarters of negative economic growth in 2008 and early 2009. The depth and duration of this downturn was the most pronounced since World War II. The current expansion cycle has been sustained yet the pace of growth is modest to date. Credit markets have been more stringent, businesses are more cautious, and housing construction has yet to emerge as a driving catalyst.

**FIGURE 2.01: NATIONAL GROSS DOMESTIC PRODUCT TRENDS**

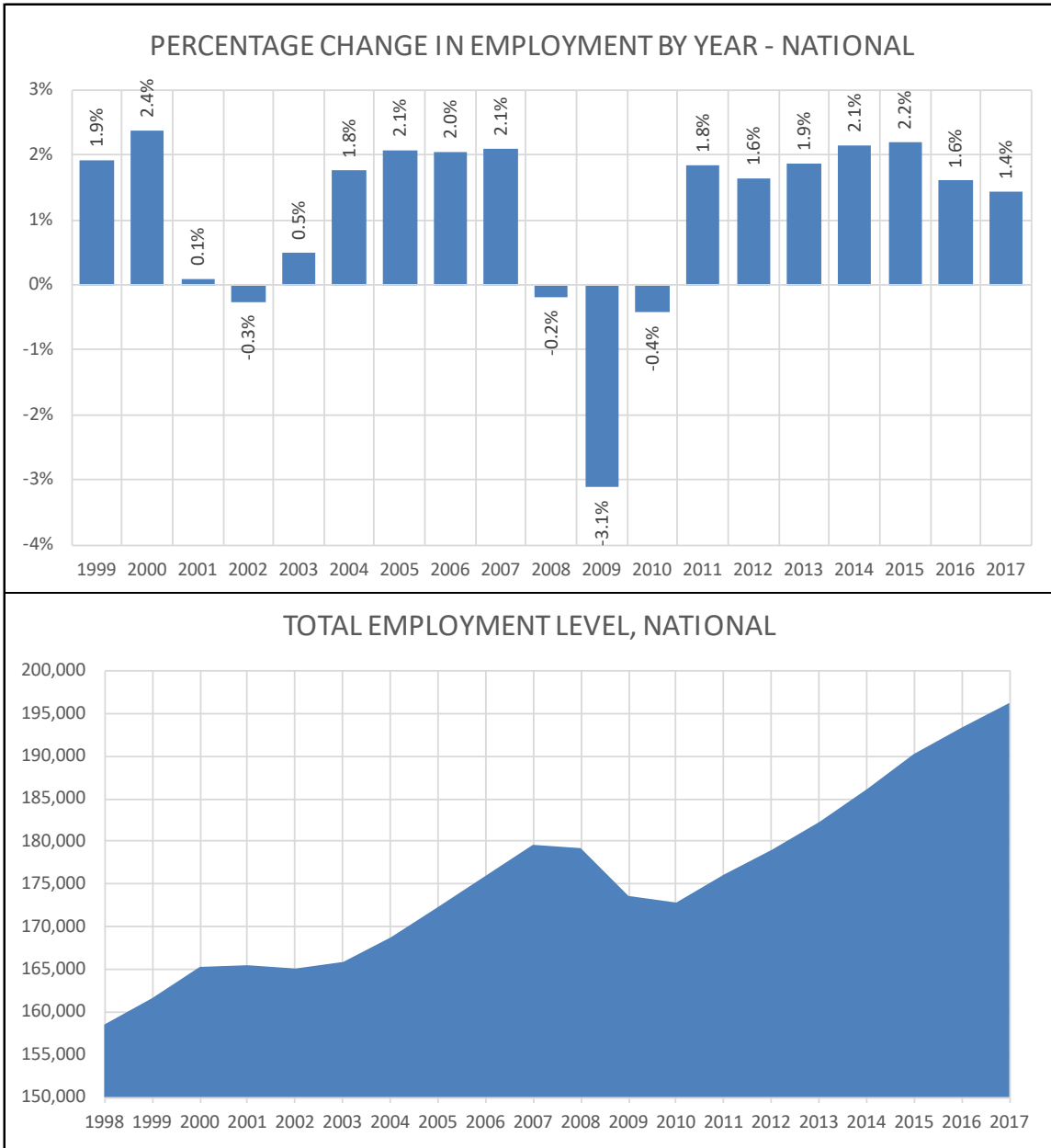


SOURCE: US Bureau of Economic Analysis

Overall, national economic output has seen a notable moderation in growth over the past two decades, with most of the current business cycle hovering around 2.0% growth per year. Economic forecasters generally expect a cyclical moderation over the 2020-23 period, reflecting downward pressures from the maturing of our decade-long economic expansion. Potential GDP growth, which measures the GDP growth that can be sustained at a constant rate of inflation, indicates future long-term growth will remain around 2.0% per year. In the near-term, considerable economic uncertainty exists due to global trade and currency conflicts among the US and many of its traditional trading partners.

The expansion in GDP has been reflected in employment growth, which has ranged between 1.4% and 2.2% in the current expansion cycle. Preliminary estimates indicate an acceleration in the rate of GDP as well as employment growth in 2018. While overall trends have been positive for almost a decade, there will likely be two to three downturns at the national level over the next twenty years.

**FIGURE 2.02: NATIONAL EMPLOYMENT TRENDS**



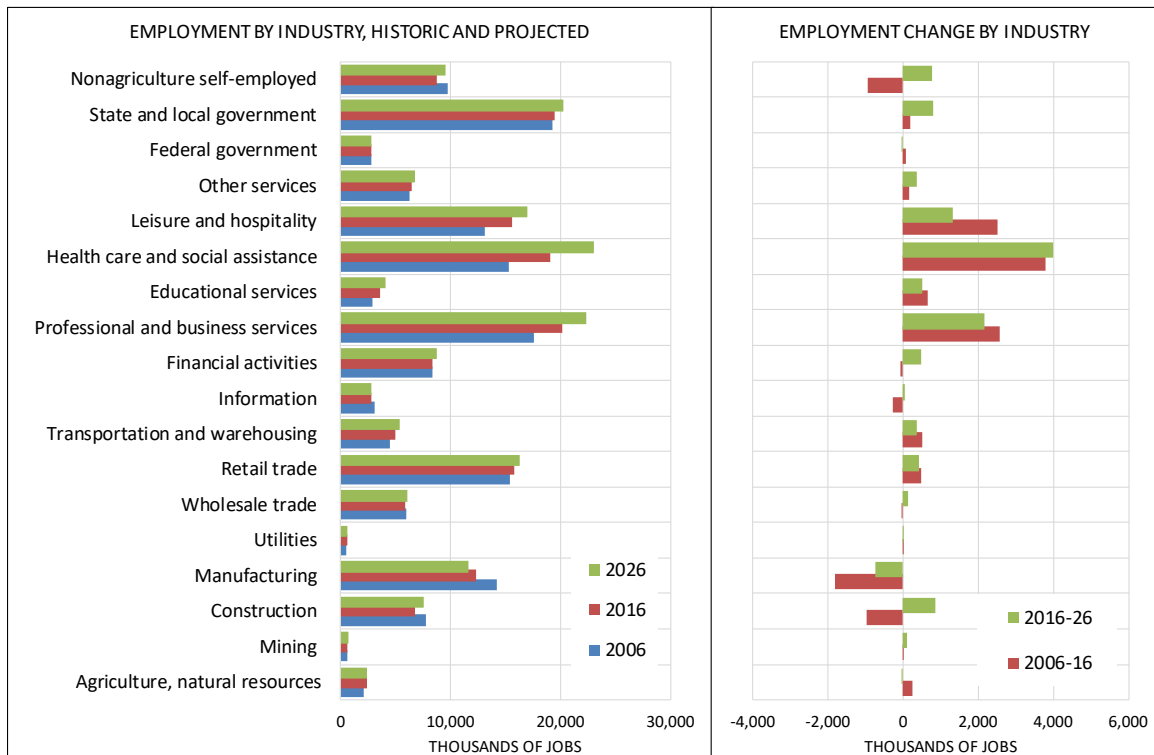
SOURCE: US Bureau of Economic Analysis

A few additional trends have significant implications for the industrial real estate market: E-commerce is rapidly taking market share from brick-and-mortar retailers, approaching 10% of all retail sales. This has caused a shift in storage needs from retail stores to warehouses and distribution centers. At the same time,

automation is causing a consolidation within the warehousing and distribution industry, leading to increasing reliance on larger third-party operators capable of making heavy investments in capital and expertise. Automation is also impacting the manufacturing industry, though to a lesser extent and primarily among larger industry leaders. Finally, changes in the use of electronic devices and growth in online services are causing a shift in the tech sector, from hardware manufacturing to software development.

Due to limited growth in demand for domestic goods and competition from low-cost markets, the U.S. manufacturing sector has lost one-third of its jobs since its peak in the late 1970s, with its share of total employment falling from 24% to 8%. With a strong dollar relative to the currencies of key trading partners, there remains significant headwinds for manufacturers that export a considerable level of product. Sectors seeing significant expansion over the prior decade include health care, professional and business services, and leisure and hospitality. Projections call for all major sectors except for manufacturing and federal government will see growth over the coming decade.

**FIGURE 2.03: NATIONAL EMPLOYMENT GROWTH BY SECTOR, HISTORIC AND PROJECTED**



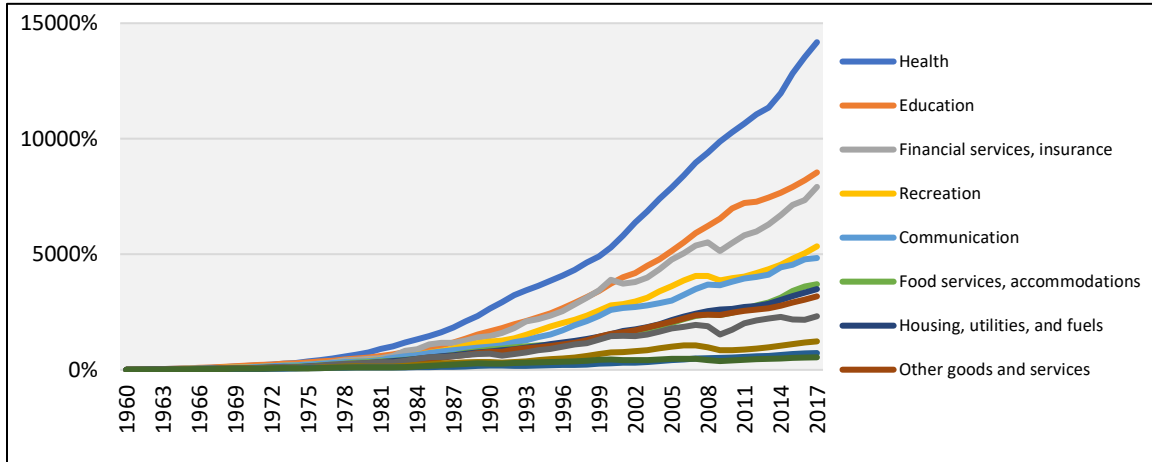
SOURCE: US Bureau of Economic Analysis

Recent trends and current forecasts reflect a shift from a goods economy, featuring manufacturing and natural resources, towards a service economy, which emphasizes technological innovation, research, and design.

Consumer spending accounts for more than two-thirds of the U.S. economy, therefore changing spending patterns dictate much of the shifts in the economy. The post-war era has been marked by increasing wealth and discretionary spending, which has shifted spending away from necessities and led households to buy goods and services that used to be produced in-house. The strongest spending growth over recent decades

has come in categories that represent investments in personal wellbeing, with healthcare/health products at the top of the list, followed by private education and financial services. Categories that represent more short-term enjoyment, like recreation, food services, and accommodations, occupy the middle segment, while necessities like groceries, clothing, transportation, and housing have seen only moderate growth. Spending on health is expected to continue to increase strongly over the coming decades as the baby boomer cohort ages.

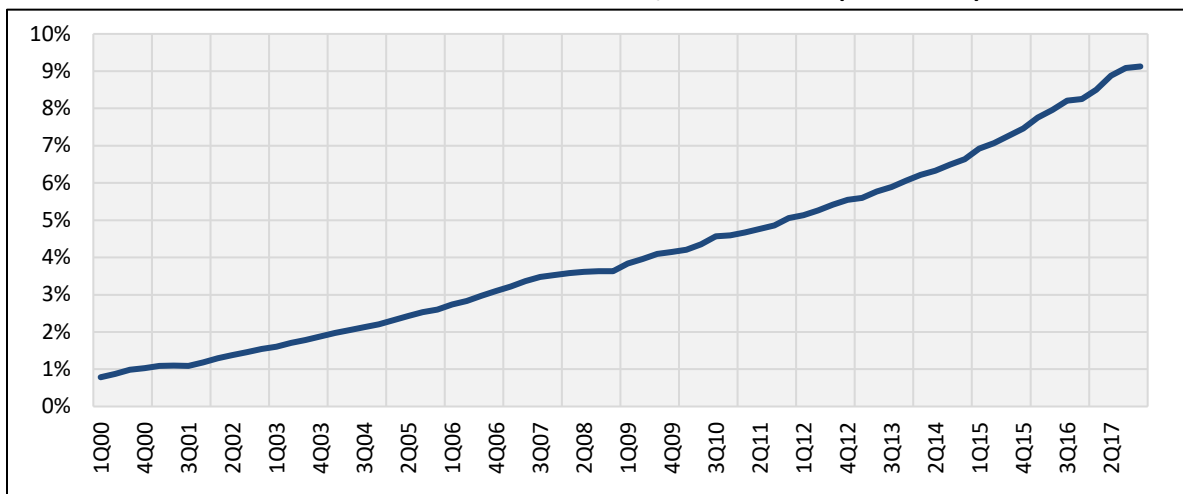
**FIGURE 2.04: CONSUMER SPENDING GROWTH SINCE 1960, BY CATEGORY, UNITED STATES (1960-2017)**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

The most dramatic spending shift in the context of real estate in recent times is the growth in online shopping, which has reduced the overall need for brick-and-mortar space, especially from retailers selling physical goods, while increasing the need for warehousing and distribution space. Online retailing accounted for an estimated 10% of all retail spending in 2018, at around \$500 billion in annual sales on a national level. Since the last recession, the segment has grown by around 15% per year, and it is currently taking market share from brick-and-mortar stores at a rate of nearly one percentage point annually.

**FIGURE 2.05: ONLINE RETAIL MARKET SHARE, UNITED STATES (2000-2017)**

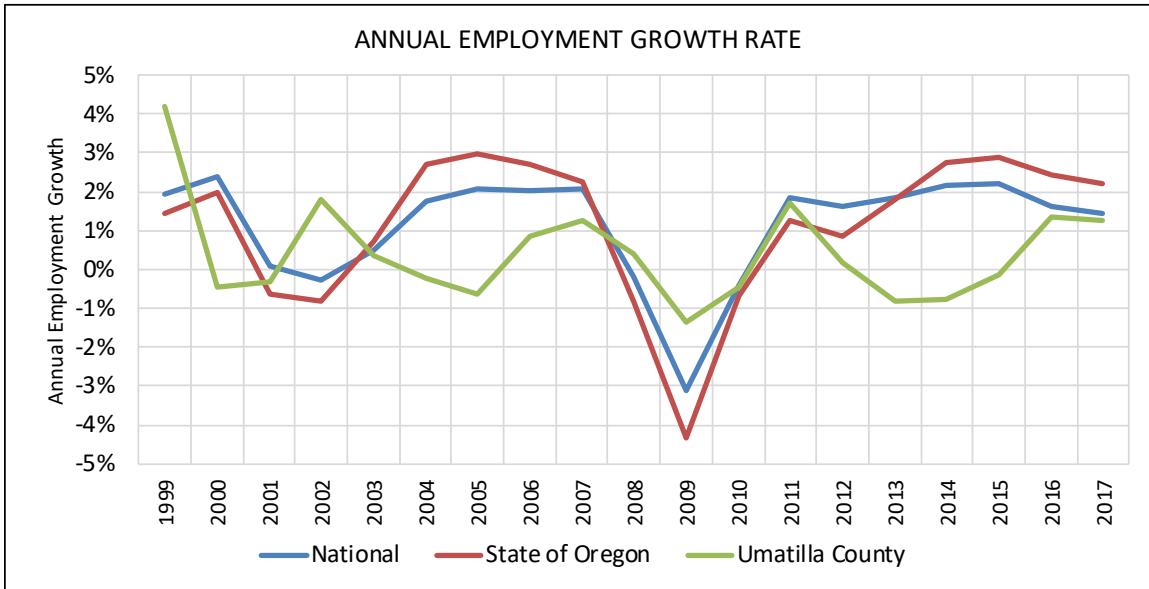


SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

## UMATILLA COUNTY & CITY OF UMATILLA ECONOMIC TRENDS

The annual rate of employment growth in Umatilla County has mirrored the broad national and statewide trends. However, after the emerging from the recession in 2008/2009, the county again experienced job losses until 2016. In recent years, county employment has been growing at roughly 1% per year.

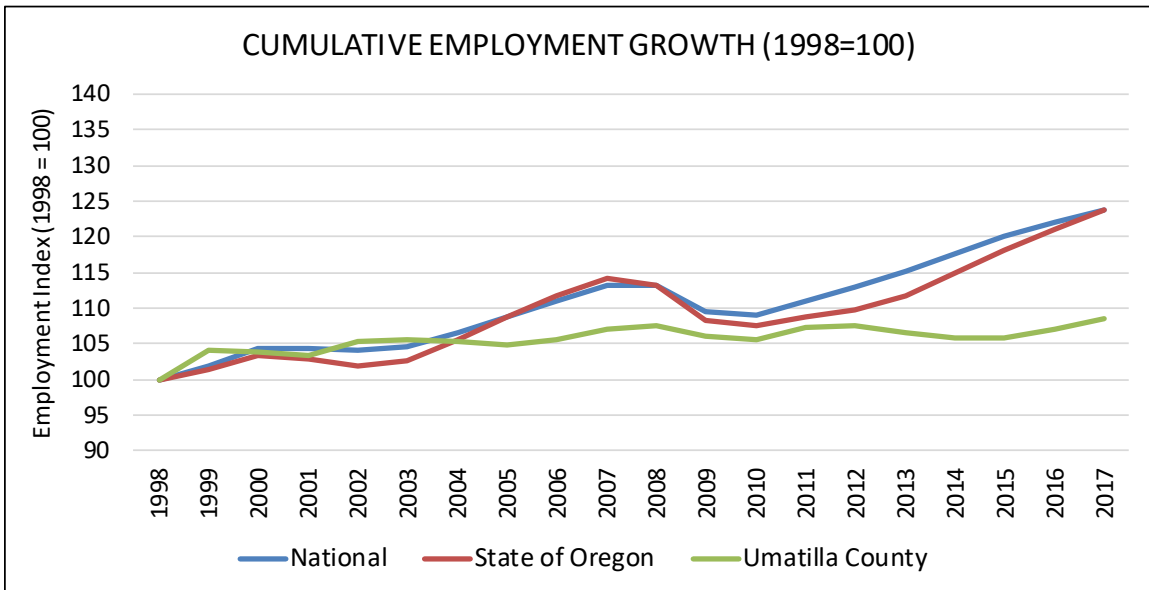
**FIGURE 2.06: COMPARISON OF ANNUAL EMPLOYMENT GROWTH RATES**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

On a cumulative basis Umatilla County has fallen behind the national and statewide averages, with the employment base up less than 10% over the last twenty years.

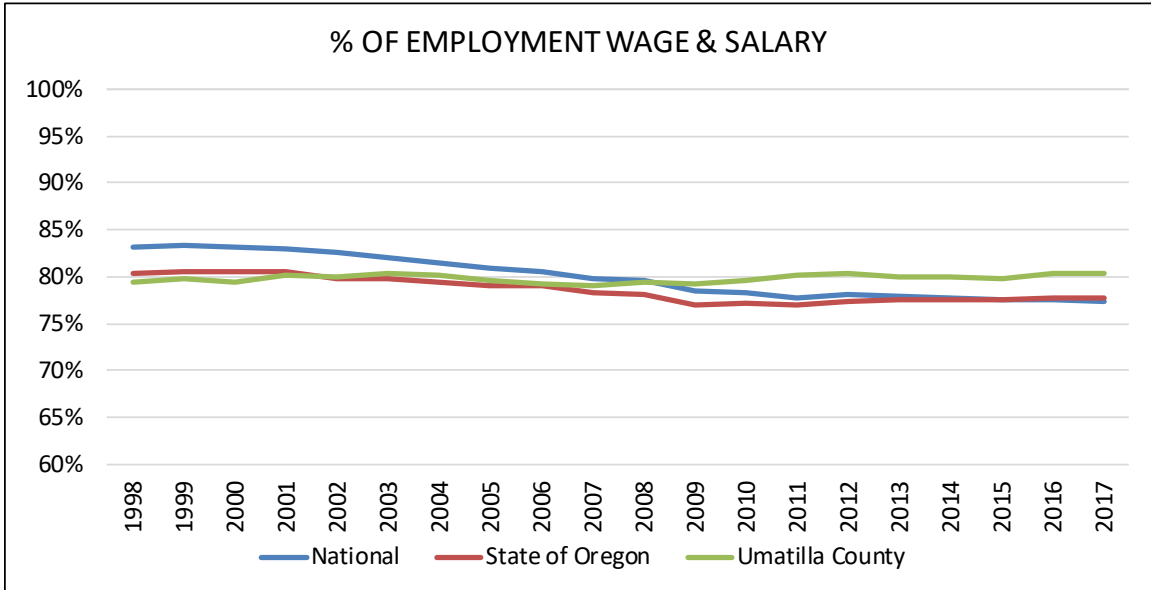
**FIGURE 2.07: CUMULATIVE EMPLOYMENT GROWTH**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

The employment base in Umatilla County has a somewhat lower share of self-employed than the national and state averages, with wage and salary employment accounting for roughly 80% of overall estimated employment in the county. This compares to rates approaching 78% statewide as well as nationally.

**FIGURE 2.08: % OF TOTAL EMPLOYMENT REPRESENTED BY WAGE & SALARY**

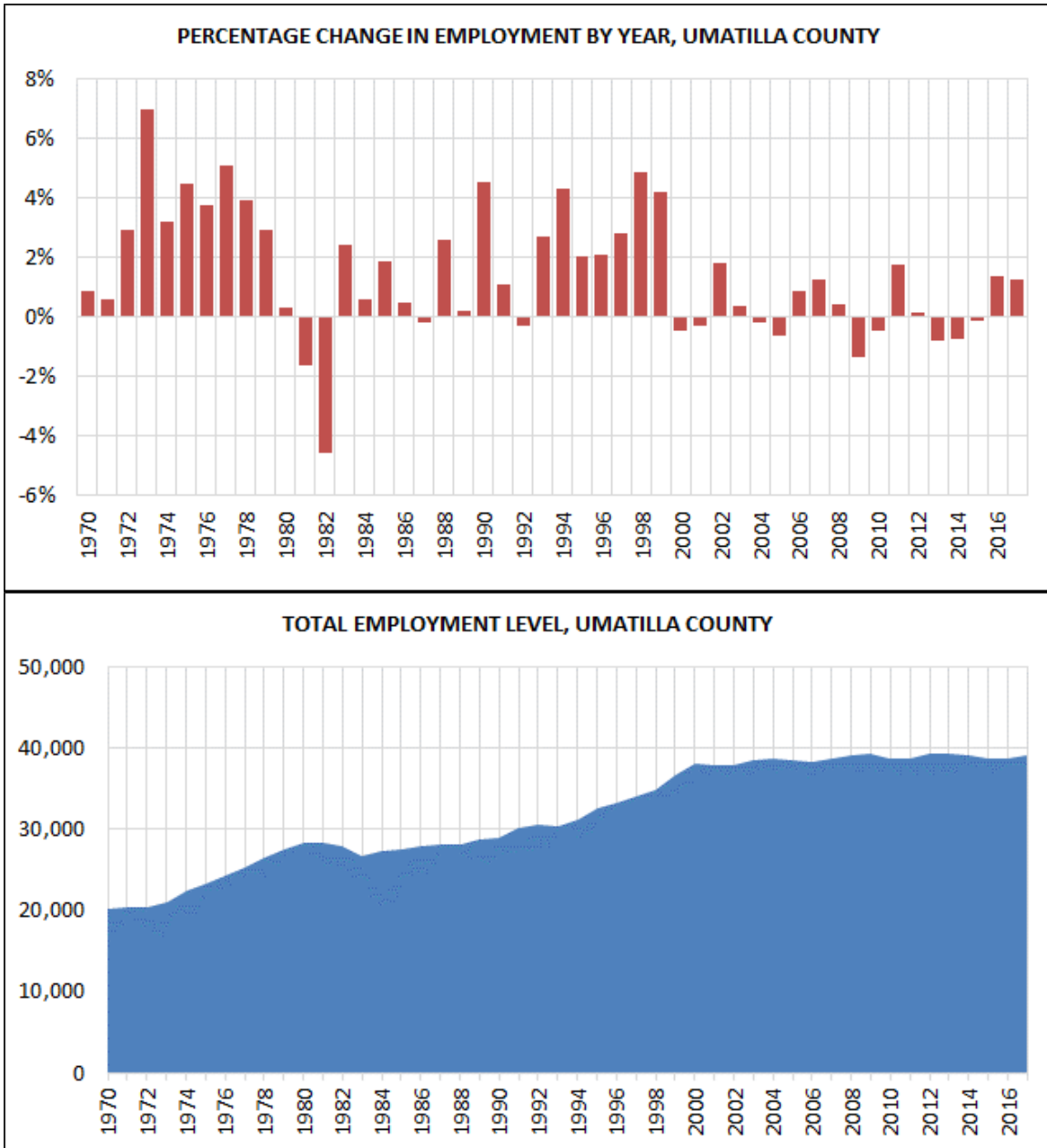


SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

Umatilla County’s employment base has been relatively stable since 2000, with the economic expansion adding a notable number of new jobs since 2016. The local employment level is at an all-time high, with average employment levels approaching 40,000 in 2017. However, this level does not greatly exceed the employment level seen in 2008 prior to the outset of the recession.



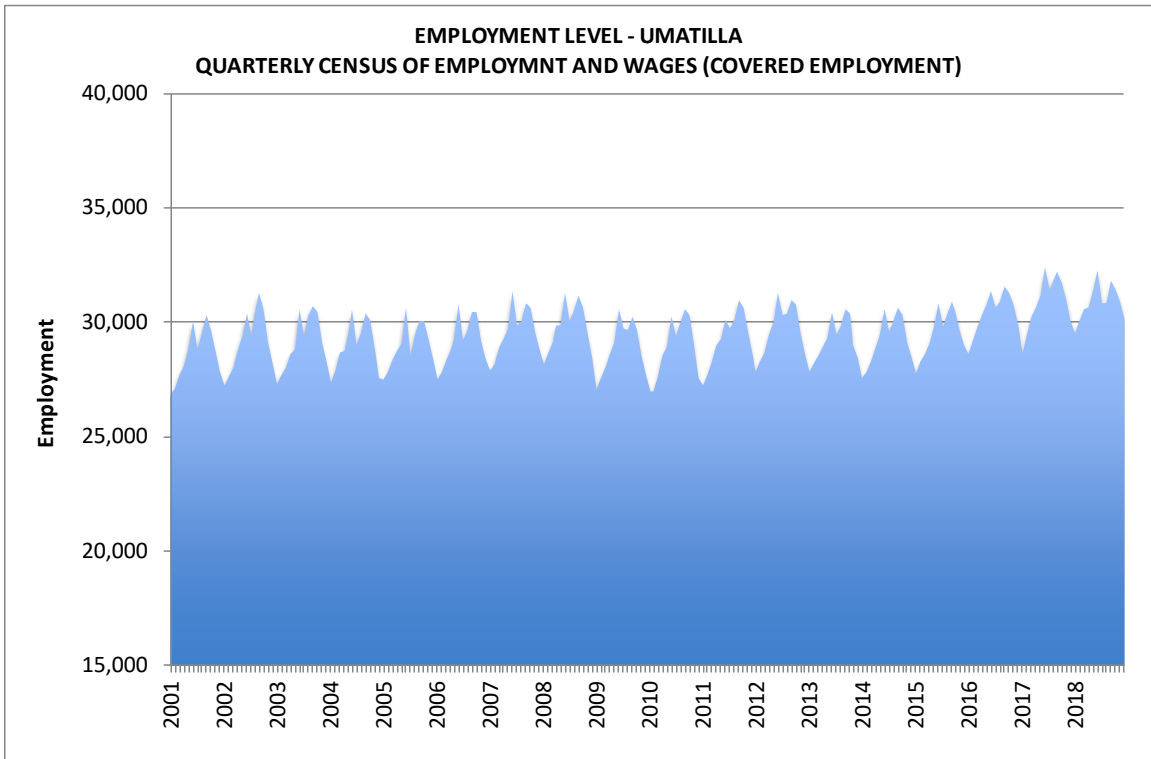
**FIGURE 2.09: UMATILLA COUNTY EMPLOYMENT TRENDS**



SOURCE: U.S. Bureau of Economic Analysis

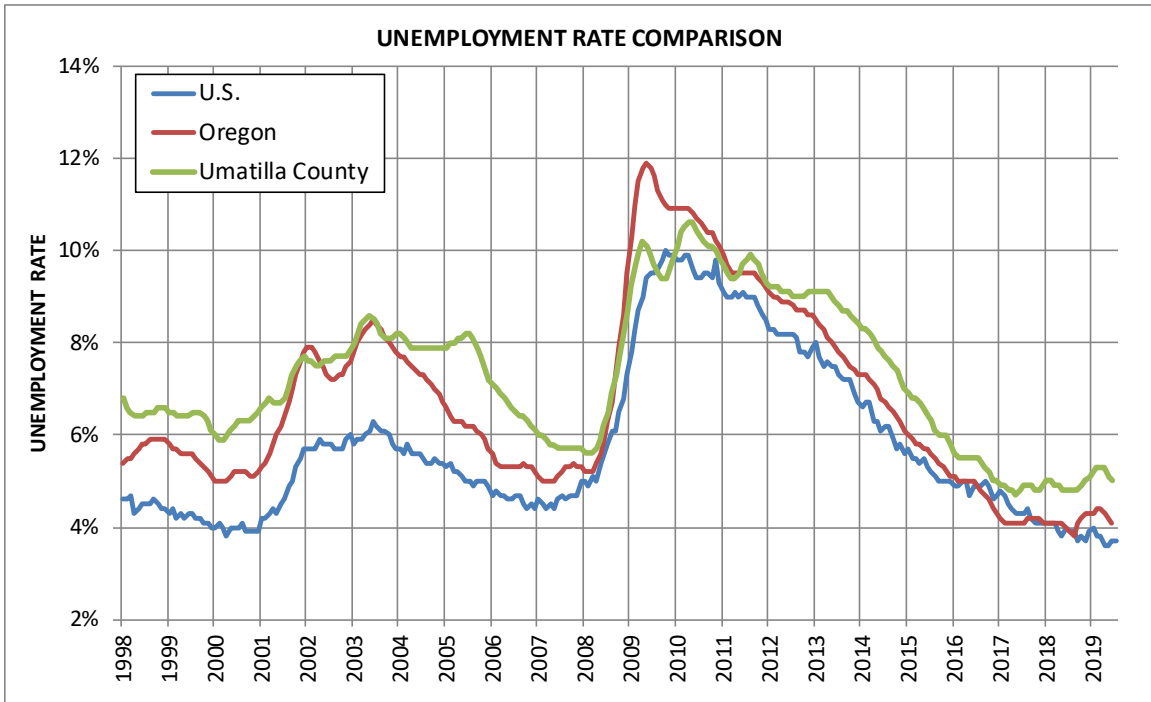
The local employment profile is highly seasonal, reflecting the area’s relatively high proportion of agricultural employment.

**FIGURE 2.10: UMATILLA COUNTY EMPLOYMENT LEVEL BY MONTH**



SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

**FIGURE 2.11: UNEMPLOYMENT RATE TRENDS**

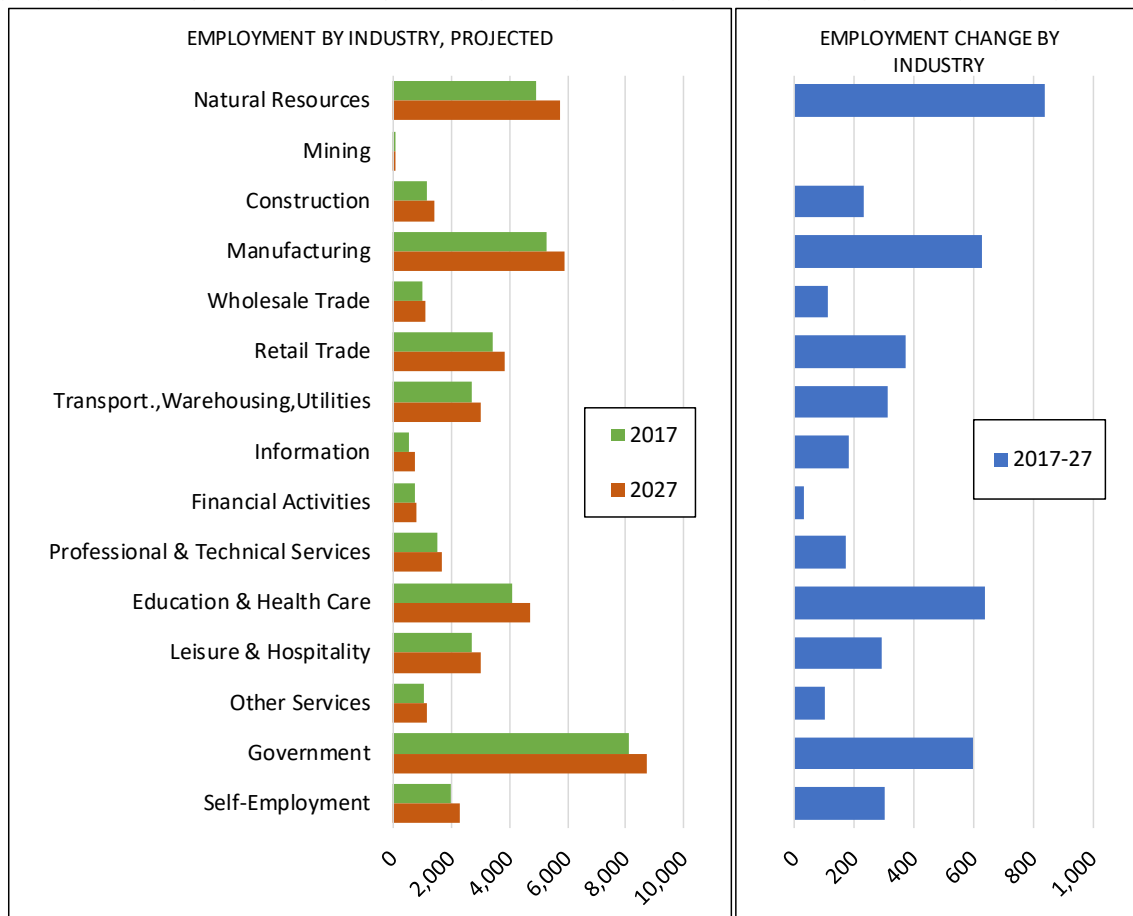


SOURCE: U.S. Bureau of Economic Analysis, JOHNSON ECONOMICS

The economic expansion has facilitated a commensurate drop in the unemployment rate, with Umatilla County following the national and statewide patterns. Tight labor market conditions are likely to limit growth potential in the future both locally and nationally. The local area’s ability to attract and retain workforce will be critical to sustaining economic growth going forward. In mid-2019, the countywide unemployment rate had fallen to a healthy 5%, slightly higher than the statewide rate of 4%.

According to the Oregon Employment Department, most industries are forecast to expand at a modest rate over the next decade in the broader area (Morrow and Umatilla Counties). On an absolute basis, the greatest gains are forecast in professional and business services, leisure and hospitality, and construction. On a rate of growth basis, the most rapid expansion is expected in the natural resources, manufacturing, government, and education and health services sectors.

**FIGURE 2.12: PROJECTED EMPLOYMENT GROWTH BY SECTOR, MORROW & UMATILLA COUNTIES**

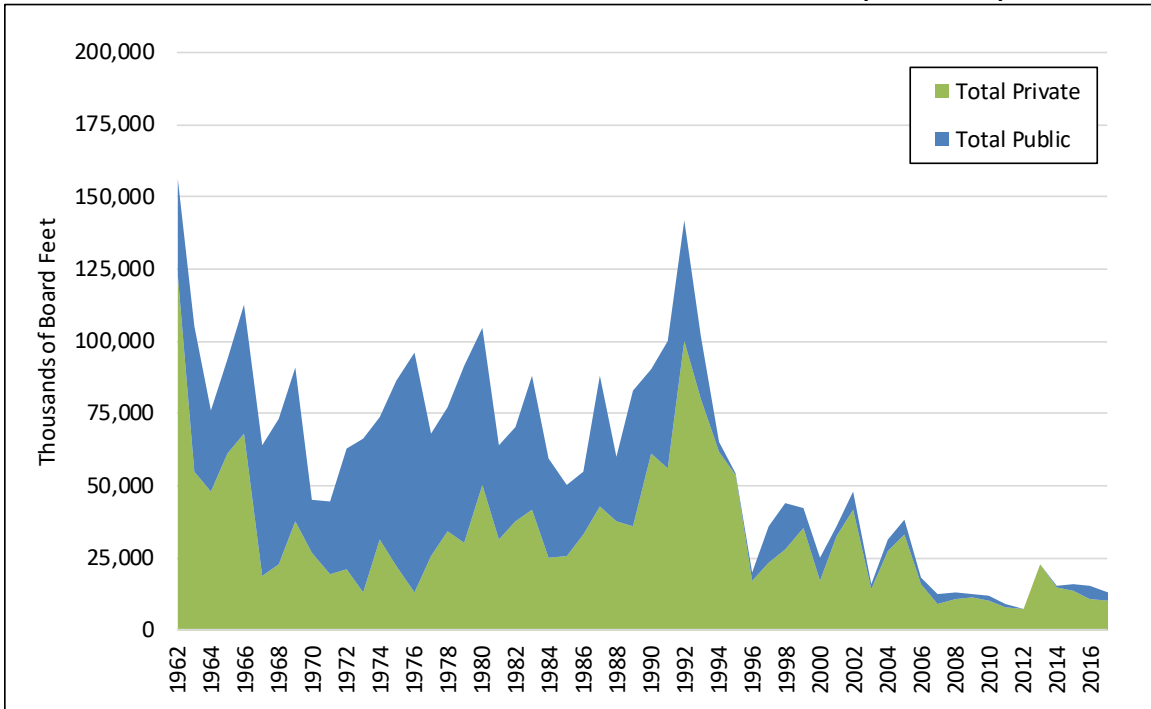


SOURCE: State of Oregon Employment Department

Like much of eastern and central Oregon, the forestry industry has seen a sharp decline in production, which is largely attributable to declines in production from public lands since 1993 (Figure 2.13). The broader region has been actively pursuing new and ongoing opportunities in the industry, including small diameter timber, biomass, and engineered wood products. Forestry is a smaller factor in communities along the river

gorge, such as Umatilla, however timber activity to the south can create some opportunities in wood manufacturing and shipping.

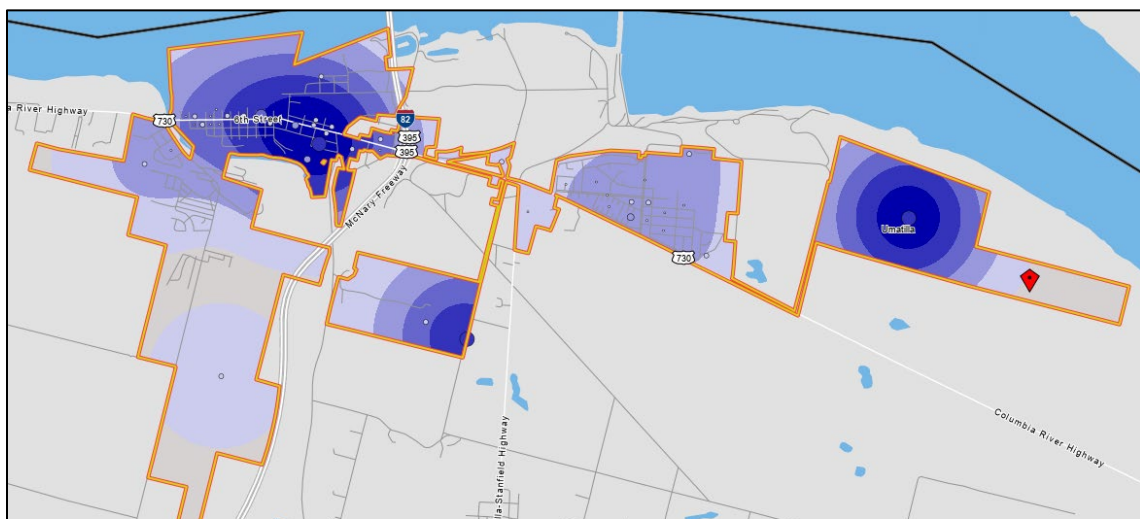
**FIGURE 2.13: ANNUAL TIMBER PRODUCTION IN UMATILLA COUNTY (1962-2017)**



SOURCE: Oregon Department of Forestry

Employment in Umatilla County is concentrated in the Hermiston/Umatilla corridor, as well as in the Pendleton area. Employment in the city of Umatilla is concentrated in the downtown area, in the area of the correctional facility and Port properties, and along Lind Road (Figure 2.14).

**FIGURE 2.14: DISTRIBUTION OF EMPLOYMENT, CITY OF UMATILLA CITY, 2017**



SOURCE: Census Bureau, LEHD Data

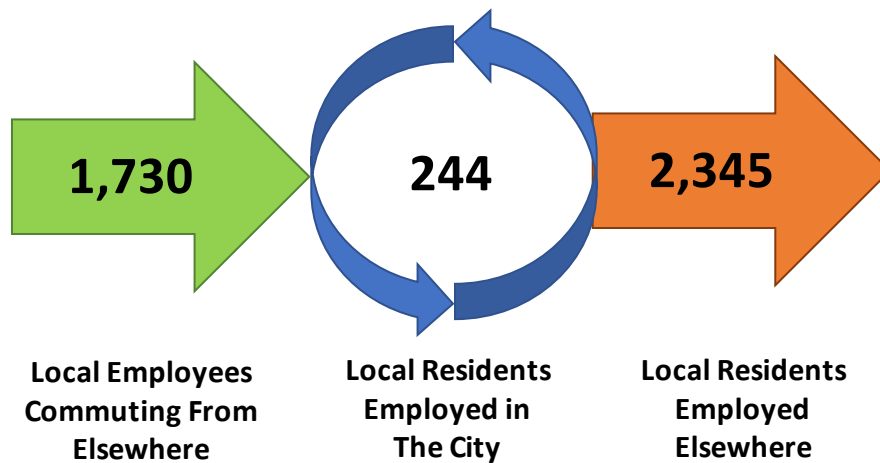
**Commuting**

Residents and employees commute broadly within Umatilla County and beyond. In the City of Umatilla, the local workforce was estimated at roughly 2,589 in 2017, of which 2,345 (90%) travelled outside of the city for employment while an estimated 244 both lived and worked within the city limits (Figure 2.15).

At the same time, an estimated 1,730 workers commuted into the city for employment, making up over 85% of the local job base of roughly 1,975. (These figures include covered employment and do not capture all forms of self-employment or contracting. Therefore, these figures are best used as an imprecise indicator of the overall pattern.)

This pattern is familiar to many communities across the state, but the extent to which local residents commute elsewhere for employment, and residents of other communities commute in for local jobs, seems somewhat starker in the case of Umatilla.

**FIGURE 2.15: NET INFLOW-OUTFLOW OF EMPLOYEES, CITY OF UMATILLA, 2017**



SOURCE: Census Bureau, LEHD Data

Commuting patterns are an important element in the local economy. They are indicative of the labor shed from which companies can draw workers, the extent to which job creation translates into increased demand for housing, goods, and services, and the overall balance of population and employment in the community.

Income and age demographics of the workforce commuting into and out of Umatilla are similar (Figure 2.16).

FIGURE 2.16: NET INFLOW-OUTFLOW DETAIL, CITY OF UMATILLA, 2017

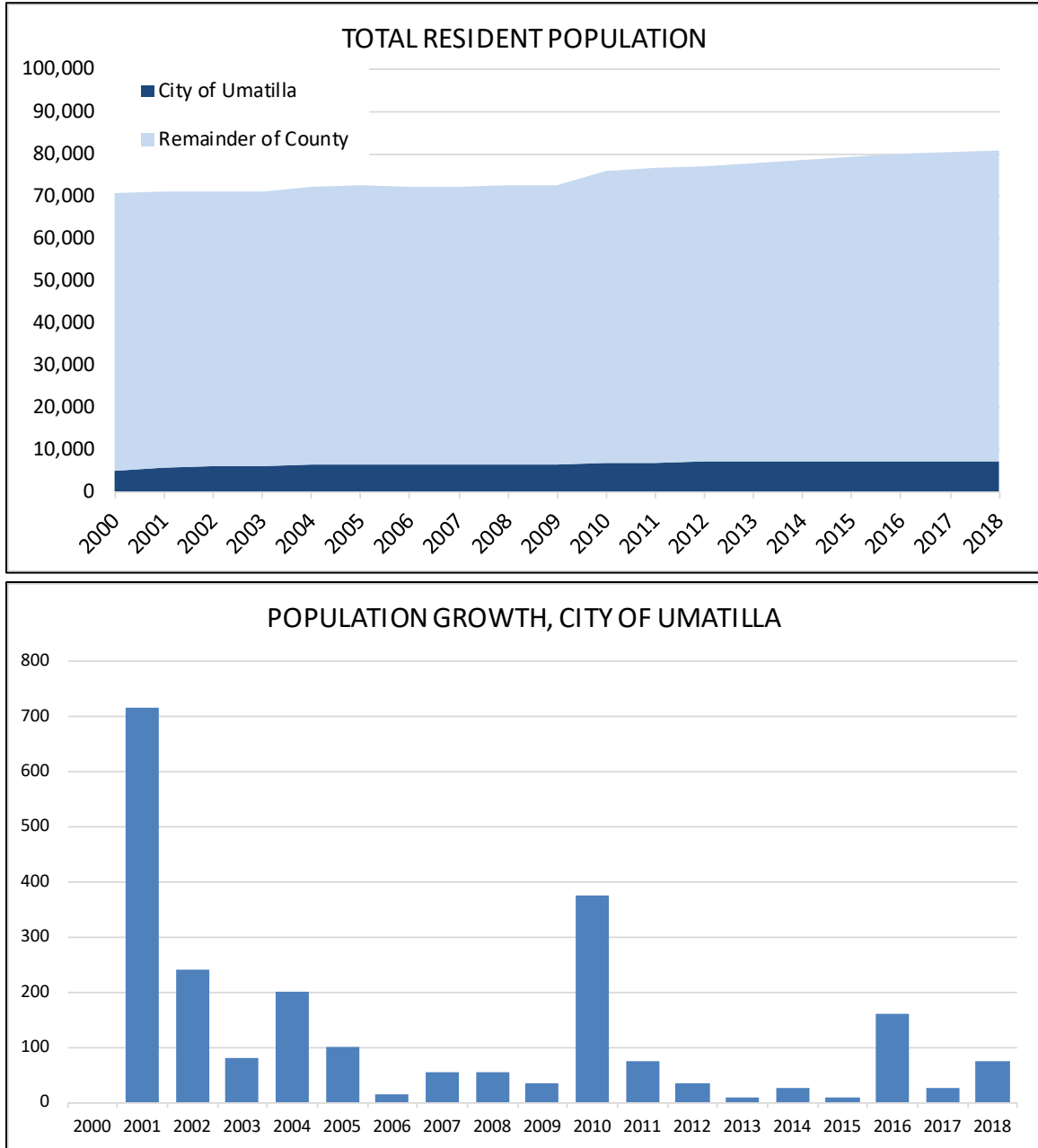
	Umatilla		Umatilla County	
	2017		2017	
	Count	Share	Count	Share
<b>Selection Area Labor Market Size (Primary Jobs)</b>				
Employed in the Selection Area	1,974	100.0%	31,226	100.0%
Living in the Selection Area	2,589	131.2%	31,621	101.3%
Net Job Inflow (+) or Outflow (-)	(615)	-	(395)	-
<b>In-Area Labor Force Efficiency (Primary Jobs)</b>				
Living in the Selection Area	2,589	100.0%	31,621	100.0%
Living and Employed in the Selection Area	244	9.4%	21,396	67.7%
Living in the Selection Area but Employed Outside	2,345	90.6%	10,225	32.3%
<b>In-Area Employment Efficiency (Primary Jobs)</b>				
Employed in the Selection Area	1,974	100.0%	31,226	100.0%
Employed and Living in the Selection Area	244	12.4%	21,396	68.5%
Employed in the Selection Area but Living Outside	1,730	87.6%	9,830	31.5%
<b>Outflow Job Characteristics (Primary Jobs)</b>				
External Jobs Filled by Residents	2,345	100.0%	10,225	100.0%
Workers Aged 29 or younger	570	24.3%	2,445	23.9%
Workers Aged 30 to 54	1,192	50.8%	5,222	51.1%
Workers Aged 55 or older	583	24.9%	2,558	25.0%
Workers Earning \$1,250 per month or less	443	18.9%	2,301	22.5%
Workers Earning \$1,251 to \$3,333 per month	1,010	43.1%	3,820	37.4%
Workers Earning More than \$3,333 per month	892	38.0%	4,104	40.1%
Workers in the "Goods Producing" Industry Class	835	35.6%	3,119	30.5%
Workers in the "Trade, Transportation, and Utilities" Industry Class	578	24.6%	2,235	21.9%
Workers in the "All Other Services" Industry Class	932	39.7%	4,871	47.6%
<b>Inflow Job Characteristics (Primary Jobs)</b>				
Internal Jobs Filled by Outside Workers	1,730	100.0%	9,830	100.0%
Workers Aged 29 or younger	318	18.4%	2,325	23.7%
Workers Aged 30 to 54	970	56.1%	5,078	51.7%
Workers Aged 55 or older	442	25.5%	2,427	24.7%
Workers Earning \$1,250 per month or less	372	21.5%	2,262	23.0%
Workers Earning \$1,251 to \$3,333 per month	594	34.3%	3,953	40.2%
Workers Earning More than \$3,333 per month	764	44.2%	3,615	36.8%
Workers in the "Goods Producing" Industry Class	715	41.3%	2,600	26.4%
Workers in the "Trade, Transportation, and Utilities" Industry Class	143	8.3%	2,683	27.3%
Workers in the "All Other Services" Industry Class	872	50.4%	4,547	46.3%
<b>Interior Flow Job Characteristics (Primary Jobs)</b>				
Internal Jobs Filled by Residents	244	100.0%	21,396	100.0%
Workers Aged 29 or younger	58	23.8%	4,975	23.3%
Workers Aged 30 to 54	128	52.5%	11,242	52.5%
Workers Aged 55 or older	58	23.8%	5,179	24.2%
Workers Earning \$1,250 per month or less	63	25.8%	4,566	21.3%
Workers Earning \$1,251 to \$3,333 per month	99	40.6%	9,214	43.1%
Workers Earning More than \$3,333 per month	82	33.6%	7,616	35.6%
Workers in the "Goods Producing" Industry Class	78	32.0%	5,105	23.9%
Workers in the "Trade, Transportation, and Utilities" Industry Class	26	10.7%	3,882	18.1%
Workers in the "All Other Services" Industry Class	140	57.4%	12,409	58.0%

SOURCE: US Census Bureau, LEHD Origin-Destination Employment Statistics

**Population and Workforce**

The population base in Umatilla County and Umatilla have grown at a rate of slightly under 1% since 2010, according to the Population Research Center at Portland State University. The growth rate is estimated to have increased in more recent years and is projected to accelerate over the coming 20-year period. The City of Umatilla had an estimated population of 7,320 in 2018, or 9% of the Umatilla County total of nearly 81,000 people.

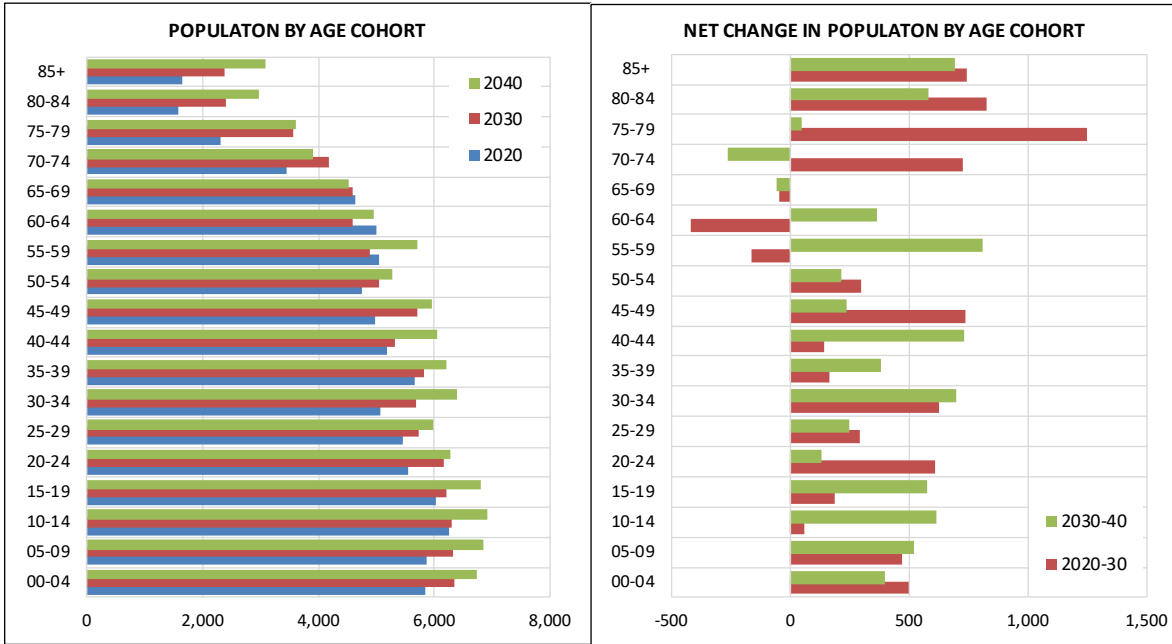
**FIGURE 2.17: HISTORIC POPULATION TRENDS, UMATILLA COUNTY AND CITY OF UMATILLA**



SOURCE: Population Research Center, Portland State University

The composition of the population base is expected to become generally older. The trend is most pronounced for residents over 75 years of age, but modest growth is also anticipated in age categories that are traditionally in the workforce.

**FIGURE 2.18: HISTORIC AND PROJECTED DISTRIBUTION OF POPULATION BY AGE COHORT, UMATILLA COUNTY**



SOURCE: Population Research Center, Portland State University

**Race and Ethnicity:** The population of Umatilla County is estimated to be 85% white and 15% minority or bi-racial, a very similar minority share as Oregon. The County is estimated to have a higher share of Native Americans, and a somewhat lower share of Black and Asian residents. Latinos are estimated to make up 26% of the county population, compared to 13% statewide.

**FIGURE 2.19: DISTRIBUTION OF POPULATION BY RACE & ETHNICITY, UMATILLA COUNTY**

Distribution of Population	Umatilla County				Oregon			
	2000	2017	Change	Share	2000	2017	Change	Share
<b>Total:</b>	70,548	80,500	14%	100%	3,421,399	4,025,127	18%	100%
White	57,852	68,585	19%	85%	2,961,623	3,416,776	15%	85%
Black	582	626	8%	1%	55,662	76,347	37%	2%
Native American	2,375	2,514	6%	3%	45,211	45,332	0%	1%
Asian	530	635	20%	1%	101,350	166,351	64%	4%
Hawaiian or Pac. Islander	124	140	13%	0%	7,976	15,157	90%	0%
Other Race	7,529	4,263	-43%	5%	144,832	121,000	-16%	3%
Two or More Races	1,556	3,738	140%	5%	104,745	184,164	76%	5%
Latino (of any race)	11,366	20,917	84%	26%	275,314	509,507	85%	13%

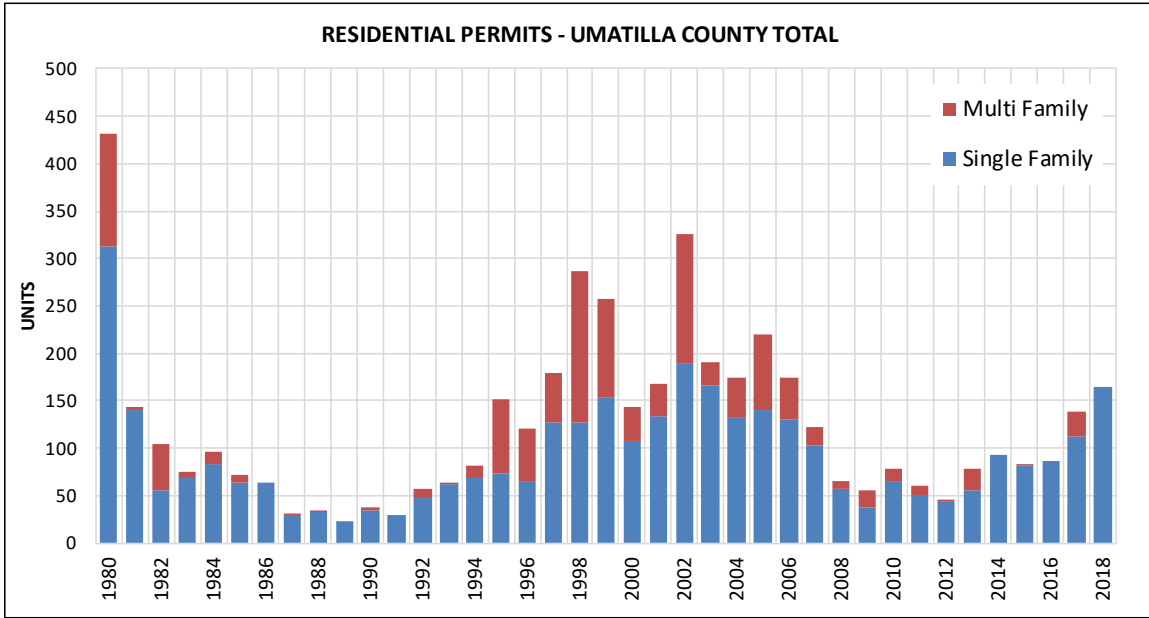
SOURCE: Census (Tables QT-P3, B02001, B03002) Population Research Center, Portland State University

\* 2017 Total county population is based on PSU 2017 estimate, applying the distribution of race and ethnicity from 2017 ACS.



With steady growth in population, residential permits in Umatilla County have averaged 137 per year since 2000, with the majority being single-family homes. After experiencing some multi-family development prior to the 2008 recession, permitting has been slow for the past decade.

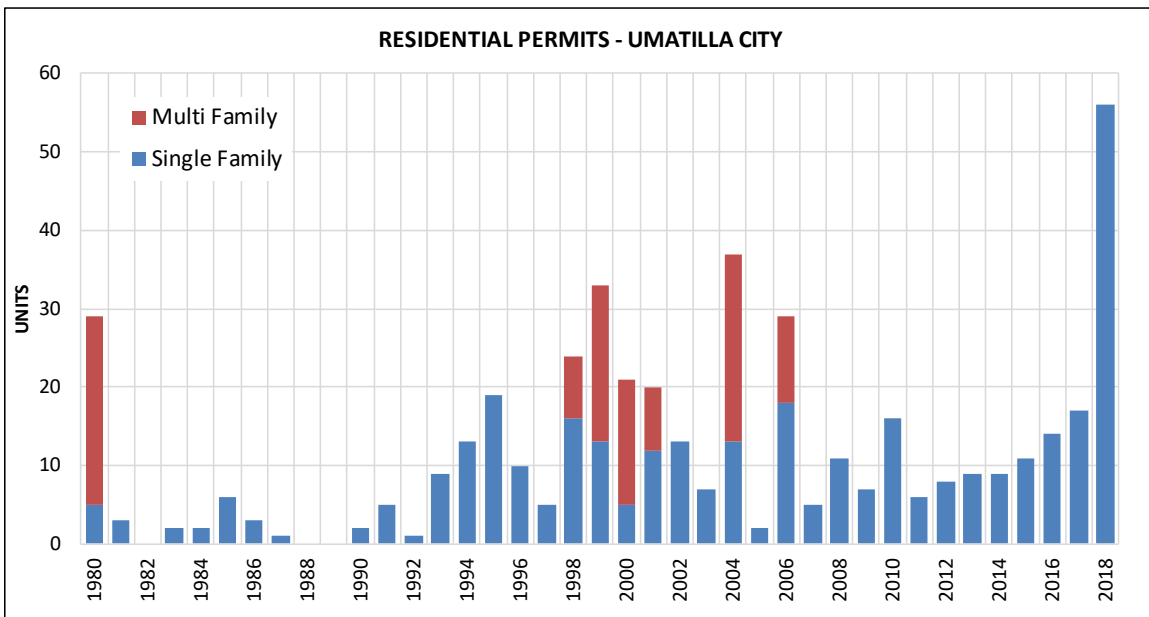
**FIGURE 2.20: HISTORIC AND PROJECTED RESIDENTIAL PERMITS, UMATILLA COUNTY**



SOURCE: HUD

The city of Umatilla has accounted for roughly 12% of the total county residential permits since 2000. Nearly 300 units have been permitted since 2000, with 20% being multi-family units permitted prior to 2008.

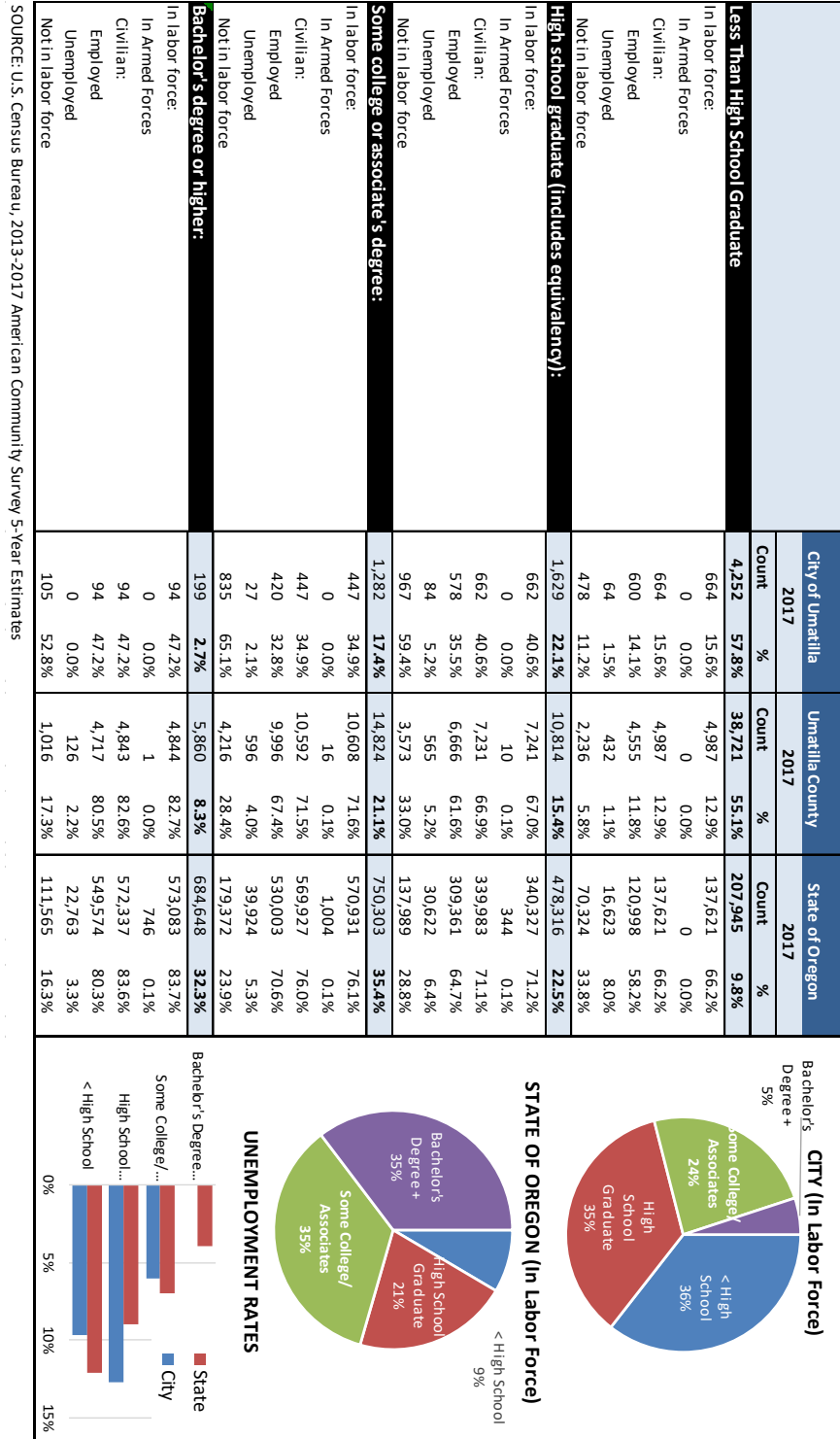
**FIGURE 2.21: HISTORIC AND PROJECTED RESIDENTIAL PERMITS, CITY OF UMATILLA**



SOURCE: HUD

The educational attainment level of the local workforce is lower in the city and county as the statewide profile. Residents of working age are more likely to have a high-school education, and less likely to have a college degree.

**FIGURE 2.23: EDUCATIONAL ATTAINMENT PROFILE BY EMPLOYMENT STATUS, 2017**



SOURCE: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

### III. TARGET INDUSTRY ANALYSIS

This element of the Economic Opportunities Analysis uses analytical tools to assess the economic landscape in Umatilla and Umatilla County. The objective of this process is to identify a range of industry types that can be considered targeted economic opportunities over the 20-year planning period.

A range of analytical tools to assess the local and regional economic landscape are used to determine the industry typologies the City should consider targeting over the planning period. Where possible, we look to identify the sectors that are likely to drive growth in current and subsequent cycles.

#### ECONOMIC SPECIALIZATION

The most common analytical tool to evaluate economic specialization is a location quotient (LQ) analysis. This metric compares the concentration of employment in an industry at the local level to a larger geography. All industry categories are assumed to have a quotient of 1.0 on the national level, and a locality’s quotient indicates if the local share of employment in each industry is greater or less than the share seen nationwide. For instance, a quotient of 2.0 indicates that locally, that industry represents twice the share of total employment as seen nationwide. A quotient of 0.5 indicates that the local industry has half the expected employment.

We completed a location quotient analysis for Umatilla County, which compares the distribution of local employment relative to national averages, as well as average annual wage levels by industry (Figure 3.1). The most over-represented industries were natural resources and mining, manufacturing and government.

**FIGURE 3.1: INDUSTRY SECTOR SPECIALIZATION BY MAJOR INDUSTRY, UMATILLA COUNTY, 2018<sup>1</sup>**

Industry	Annual Establishments	Avg. Annual Employment	Total Annual Wages	Avg. Annual Wages	Employment Loc. Quotient
1011 Natural resources and mining	193	3,386	\$111,161,727	\$32,832	8.3
1012 Construction	193	1,176	\$61,441,498	\$52,265	0.8
1013 Manufacturing	74	3,415	\$139,497,112	\$40,849	1.3
1021 Trade, transportation, and utilities	402	6,341	\$260,936,079	\$41,149	1.1
1022 Information	23	175	\$7,251,966	\$41,479	0.3
1023 Financial activities	153	698	\$32,889,517	\$47,137	0.4
1024 Professional and business services	201	1,403	\$55,157,349	\$39,319	0.3
1025 Education and health services	218	3,778	\$159,564,205	\$42,233	0.8
1026 Leisure and hospitality	211	2,578	\$44,250,408	\$17,166	0.8
1027 Other services	421	999	\$26,607,848	\$26,634	1.1
Federal Government	32	485	\$36,873,687	\$76,002	0.8
State Government	44	1,391	\$90,039,107	\$64,730	1.4
Local Government	104	5,047	\$216,324,995	\$42,861	1.7
<b>Total</b>	<b>2,269</b>	<b>30,872</b>	<b>\$1,241,995,498</b>	<b>\$40,231</b>	

SOURCE: Bureau of Labor Statistics

<sup>1</sup> QCEW Data, Annual Average 2018 Data

In terms of total employment, the largest sectors are government, transportation/warehousing/utilities, education and health services, and manufacturing. Natural resources (agriculture and forestry, and support services to these industries) as well as leisure and hospitality (tourism-related industry) are also major employment sectors in the county.

Figure 3.2 shows a more detailed analysis of the top 20 local industry subsectors in the county, as ranked by their LQ. The LQ shows that agricultural subsectors have the highest share of employment in comparison to nationwide averages, but also food manufacturing and wood product manufacturing. Various transportation and distribution-related industries are also well represented, as are utilities. Nursing and residential care, construction, and retailers are some of the subsectors rounding out the list.

The average wage LQ (right column) is an indicator of how much local wages paid in these industries are paid relative to the total wages in that industry typical across the nation. For instance, the agricultural and forestry subsector in Umatilla County represents 28.5 times the share of total wages paid as would be expected by looking at the national average.

**FIGURE 3.2: INDUSTRY SECTOR SPECIALIZATION BY DETAILED INDUSTRY, UMATILLA COUNTY, 2018**

Rank	NAICS	Description	Employment	Emp. L.Q.	Average Wage	Total Wages L.Q.
1	115	Agriculture and forestry support activities	1,685	20.6	\$32,950	28.5
2	111	Crop production	1,393	12.0	\$31,030	15.6
3	311	Food manufacturing	1,711	5.0	\$41,909	6.2
4	112	Animal production and aquaculture	237	4.2	\$38,318	5.9
5	321	Wood product manufacturing	357	4.2	\$44,516	5.8
6	814	Private households	235	3.9	\$18,252	3.8
7	484	Truck transportation	789	2.5	\$60,964	4.1
8	447	Gasoline stations	450	2.3	\$19,028	2.8
9	485	Transit and ground passenger transportation	151	1.5	\$23,353	1.4
10	221	Utilities	170	1.5	\$109,579	2.1
11	623	Nursing and residential care facilities	985	1.4	\$28,869	1.8
12	236	Construction of buildings	422	1.2	\$52,518	1.4
13	452	General merchandise stores	787	1.2	\$26,238	1.8
14	441	Motor vehicle and parts dealers	484	1.1	\$46,121	1.5
15	813	Membership associations and organizations	331	1.1	\$22,670	0.8
16	811	Repair and maintenance	295	1.1	\$34,824	1.2
17	445	Food and beverage stores	684	1.1	\$24,680	1.5
18	424	Merchant wholesalers, nondurable goods	449	1.0	\$56,184	1.1
19	312	Beverage and tobacco product manufacturing	54	0.9	\$24,687	0.6
20	562	Waste management and remediation services	85	0.9	\$45,727	1.0

SOURCE: Bureau of Labor Statistics

Sectors such as local government, education, health care and retail trade, are industries that are driven by serving a local population. The county also has a significant amount of employment in export or “traded sector” industries that send their products beyond the county, and thus bring new dollars into the region. These industries include manufacturing, utilities, and data centers.

## ECONOMIC DRIVERS

The identification of the economic drivers of a local or regional economy is critical in informing the character and nature of future employment, and by extension land demand over a planning cycle. To this end, we employ a shift-share analysis of the local economy emerging out of the current expansion cycle<sup>2</sup>.

A shift-share analysis measures local effect of economic performance within an industry or occupation. The process considers local economic performance in the context of national economic trends—indicating the extent to which local growth can be attributed to unique regional competitiveness or simply growth in line with broader trends.

For example, assume that Widget Manufacturing is growing at a 1.5% rate locally, about the same rate as the local economy. On the surface we would consider the Widget Manufacturing industry to be healthy and contributing soundly to local economic expansion. However, consider also that Widget Manufacturing is booming across the country, growing at a robust 4% annually. In this context, local widget manufacturers are struggling, and some local or regional condition is stifling economic opportunities.

We can generally classify industries, groups of industries, or clusters into four groups:

- **Growing, Outperforming:** Industries that are growing locally at a rate faster than the national average. These industries have local characteristics leading them to be particularly competitive.
- **Growing, Underperforming:** Industries that are growing locally but slower than the national average. These industries generally have a sound foundation, but some local factor is limiting growth.
- **Contracting, Outperforming:** Industries that are declining locally but slower than the national average. These industries have structural issues that are impacting growth industry wide. However, local firms are leveraging some local or regional factor that is making them more competitive than other firms on average.
- **Contracting, Underperforming:** Industries that are declining locally at a rate faster than the national average. These industries have structural issues that are impacting growth industry wide. However, some local or regional factor is making it increasingly tough on local firms.

We evaluated the average annual growth rate by industry from 2008 through 2017 for Umatilla County relative to the national rate. The observed local change was compared to a standardized level reflecting what would be expected if the local industry grew at a rate consistent with national rates for that industry.

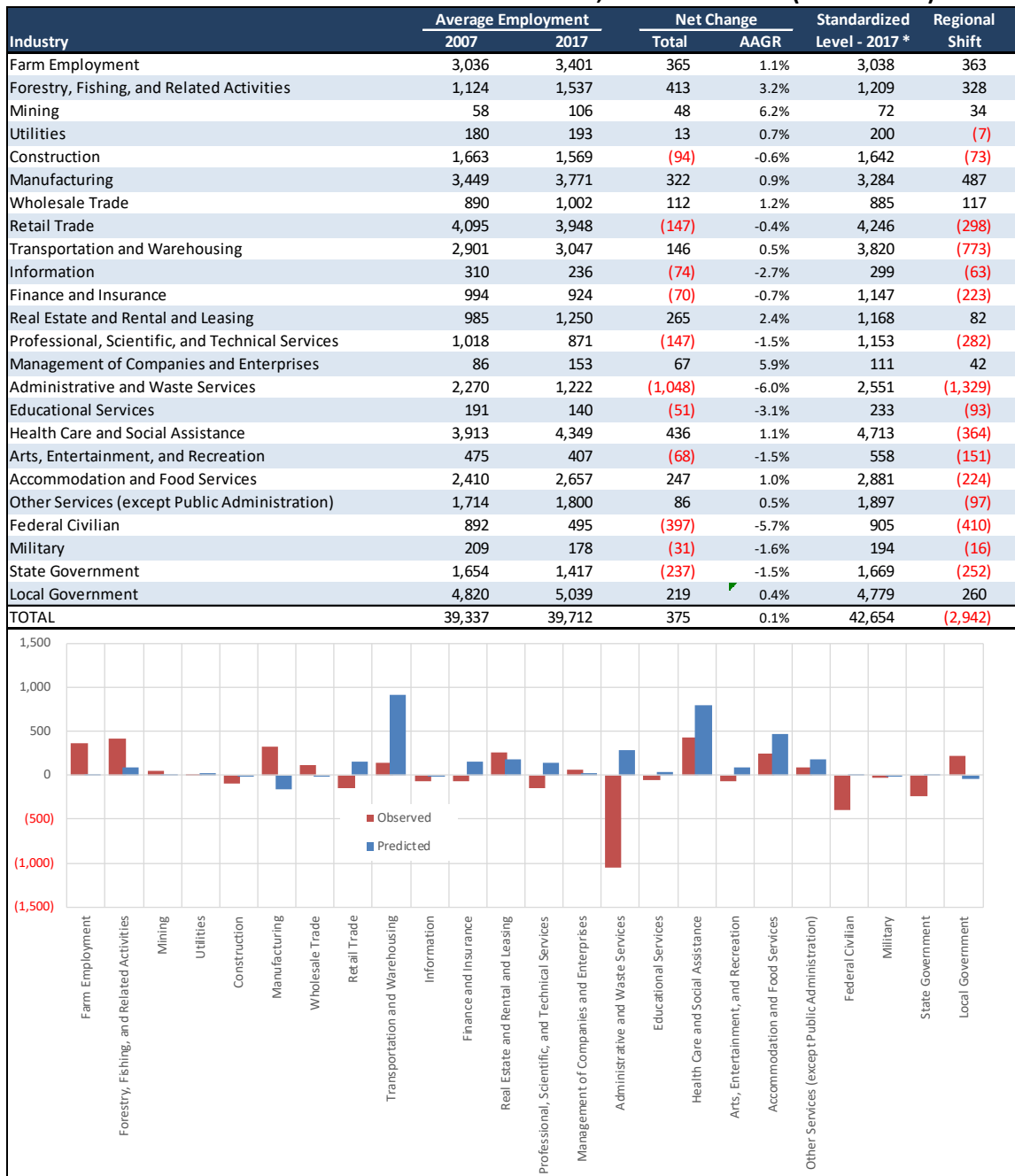
As shown in Figure 3.3, only a few industries showed growth in excess of national rates. These include manufacturing, natural resources industries, real estate rental and leasing, and wholesale trade.

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<sup>2</sup> Measured from the trough of recent recession to 2017, the most recent period available for local employment data.

It is also known that in the last few years, Umatilla County has added significant employment and investment in the data center industry. This employment is not yet reflected in the most recent QCEW data (2017) of covered employment where it would appear under the “Information” sector. It is known that this industry has experienced significant and rapid growth in the county and the city of Umatilla itself. (This target industry is discussed more in the following section.)

**FIGURE 3.3: INDUSTRY SECTOR SHIFT SHARE ANALYSIS, UMATILLA COUNTY (2008 – 2017)**



\* Employment level in each industry had it grown at the same rate as its counterparts at the national level over the same period.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis

## ECONOMIC DEVELOPMENT ASSETS

In this section, we summarize some of the key economic development assets of the city and the area, which will shape the nature of economic growth in the foreseeable future.

### 1. *Abundance of Energy & Water*

Availability of quality power will continue to increase regional competitiveness over the long-term. This provides an advantage when pursuing users requiring large power sources, including data center investments, as well as durable goods manufacturing. While much of the local power production is exported outside of the region, there is substantial loss in transmission. Average electrical rates in Oregon are 23% below national levels, but higher than those in Washington or Idaho.

### 2. *Transportation Linkages*

Along with abundant affordable power, transportation linkages are arguably the region's best asset. The city of Umatilla is positioned near one of only five confluences of major interstates in Oregon and is the only one outside of the Willamette Valley. The City is also located at the border with Washington State, with the next nearest bridge crossings of the Columbia located 50 miles north, or 80 miles to the west. Further, the Port terminals and regional rail linkages provide access to world-wide shipping networks, particularly for the region's agricultural products.

### 3. *Amenity Values*

Amenity values are encompassed in the concept of livability. Amenity values are often characterized in the field of Economics and Economic Geography because amenity values have real economic impacts on attracting residents, employers and workforce to an area. The Columbia Basin has abundant natural amenities, with scenery and proximity to nature and recreational activities. However, the region is lacking in some urban amenities given the size of its communities.

### 4. *Proximity to a Large Well-Educated Workforce*

While the local workforce is underrepresented in higher skilled laborers, regional economic growth can tap into a large population base with above average training levels. Both Umatilla (15.6%) and Morrow Counties (10.7%) have lower rates of persons aged 25 and older holding bachelor's degrees than the State of Oregon (29.0%). In Benton County, the ratio is 27.7% while the State of Washington ratio is 31.4%.<sup>3</sup> Benton and Franklin Counties in Washington combine for 42,000 adults with an Associate Degree or better. The size and commuting patterns of the greater region, allows for large new employers to draw sufficient workforce from beyond the immediate community if needed.

### 5. *Flat, Developable Land*

The study area has a diversity of potentially available land to accommodate a range of uses and intensity of uses. This diversity can expand regional marketability and offers the flexibility to plan uses meeting specific site criteria. Within the State of Oregon, there are very limited opportunities for large-lot industrial development. The region's potential supply of large sites can provide a strong competitive advantage, if it is made available. While the land in the county may be hypothetically suitable however, the right amount, location, and sizes of development sites for different employers may not be currently available within the Urban Growth Boundary. The suitability of buildable land in Umatilla is discussed elsewhere in this report.

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<sup>3</sup> 2010 Census

## 6. *Economic Development Support & Partnerships*

The region benefits from an aggressive and well-organized economic development climate. The Port Districts have had noted economic development success and local communities have undertaken countless initiatives to improve economic competitiveness. The Confederated Tribes of the Umatilla Indian Reservation also is an active participant in regional economic development efforts. The end result has been a region that has significantly outperformed non-metropolitan areas of the State over the last decade in terms of economic growth.

## TARGET INDUSTRY CLUSTERS

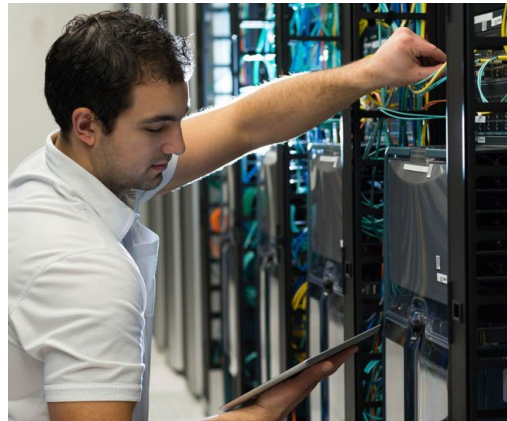
This section discusses potential target industries for the City of Umatilla based on the community's historical strengths and advantages, established economic development goals, and discussion of community priorities through this process. These are industries where the city might focus efforts to grow local business and attract new businesses. At the end of this section is a more detailed glossary of potential community partners for economic development.

### Data Centers/ Cloud Storage Services

The City of Umatilla, along with other locations in Umatilla and Morrow Counties has quickly grown as a hub for large, very-high investment data center users who seek ready access to ample inexpensive power and water, as well as large suitable development sites.

These types of industrial land users make very large capital investments in facilities and equipment. They can employ hundreds of people at each site and pay wages far above the average income for the area.

This sector is a major target industry identified by the community. There are currently nine major data centers located in the Columbia Basin, demonstrating the suitability and desirability of the area and its infrastructure. The nation's largest tech companies continue to express interest in locating new data center and cloud-computing facilities in the area, and in Umatilla specifically. There have been recent real-world opportunities to recruit these types of businesses to Umatilla if suitable sites are available.



#### *Cluster Strengths*

- Proximity to abundant and inexpensive power and water sources
- Excellent fiber optic telecom connectivity
- Suitability of land for large, flat industrial sites
- Establishment of successful examples and building of skilled workforce in this sector
- Strong economic development support from local and regional partners

#### *Cluster Challenges*

- Limited supply of appropriately large, shovel-ready development sites, within the UGB
- Need to continually recruit and grow trained workforce and supply workforce housing.

#### *Potential Opportunities*

- Recruitment of additional data center facilities
- Ensure sufficient adequately-sized shovel-ready industrial parcels within UGB and/or City limits



- Partnerships with local education sector to train and recruit additional workforce

### **Manufacturing (Traditional and Advanced)**

Manufacturing is typically a highly desirable sector, which creates considerable value, pays good wages, and often exports the bulk of its output. The manufacturing sector currently accounts for a relatively small share of the current employment base in the city of Umatilla but is targeted by the community as a potential growth sector in the future.



Umatilla has been home to food, wood and metals product manufacturers. Going forward, these will remain good opportunities for growth taking advantage of available industrial lands, power and water resources. These export industries also benefit from the ample transportation connections and shipping options in the area.

Advanced manufacturing is also expected to be an increasing opportunity. In general, this refers to modern manufacturers who use advanced technologies such as robots and software to increase productivity and make traditional methods more efficient. Like data centers, these manufacturers also benefit from ample power and their facilities may rely on significant mechanization. Despite the automation, these industries typically require a sizable trained workforce to run the advanced processes.

Manufacturing firms can be a full range of sizes with differing land needs from small sites to very large. Potential large-site manufacturers have made inquiries in the Umatilla area.

#### *Cluster Strengths*

- Proximity to abundant and inexpensive power and water sources
- Existing food and wood products industries with workforce expertise.
- Available and serviced land supply of smaller and medium sites

#### *Cluster Challenges*

- Limited supply of larger shovel-ready development sites, for largest manufacturers
- Need to continually recruit and grow trained workforce and supply workforce housing.

#### *Potential Manufacturing Opportunities*

- Food products/value-added specialty foods
- Advanced agricultural technology, such as robotics, precision tools, indoor-growing technology
- Specialty river recreation or other recreation equipment
- Drones and robotics
- Recruitment of other large-lot, large-power users

### **Tourism and Retail**

Umatilla has physical and locational attributes that make recreation and hospitality an attractive target sector. The city offers access to the river and recreation and has plans to redevelop the marina to encourage more visitors, concessions, tours and related activity. Regional outdoor recreation includes camping, hiking,

hunting, fishing, and rafting. Major regional draws such as the Pendleton Round Up and tribal gaming also provide an opportunity to market to new visitors.

Tourism growth can be mutually reinforcing with new business development along the city's main downtown corridor of 6<sup>th</sup> Street, and elsewhere in the community. While retail trade is typically viewed as a function of growth in local population and buying power, developing a strong retail trade base in an area helps limit spending from leaking out of the market, retaining dollars in the local economy.

The amenities that tourism traffic supports are also largely consistent with what is desirable to local residents. Quality retail, restaurant, recreation, and hospitality businesses make a community an attractive place to live and work. Studies have shown that tourism-related supportive uses have a positive impact on housing values and attract residents and businesses alike. This is a growing phenomenon in the context of emerging consumer preferences observed across Millennial and Boomer generations. Attraction of these types of businesses would offer Umatilla the opportunity to raise its amenity profile.



#### *Cluster Strengths*

- Recreational amenities, river location
- Location on freeway, at state border
- Historic Oldtown site
- Investment in trails, and outdoor and recreation events

#### *Cluster Challenges*

- Need to raise awareness/visibility beyond the region

#### *Cluster Opportunities*

- Drawing visitors from other regional attractions
- Improved access use of the marina/river

### **Transportation, Warehousing and Distribution**

Currently, Transportation & Warehousing is among the largest sectors in the county. The location quotient analysis indicated that the study area's concentration in truck transportation is more than two and a half times the national average. The region has succeeded in attracting and retaining large transportation firms, including three firms with 100-249 employees and two additional firms with more than 250 employees.

The reason for the emergence of this industry cluster is intuitively clear. The area's geographic position and transportation linkages afford a reasonable (distribution) drive-time from major population centers throughout the Northwest, Northern California, British Columbia, and the Western Mountain States. Other regional attributes include a refrigerator cargo dock on the Columbia River, fiber optic telecommunications, and the location of the Union Pacific switching station.

The area's strong transportation access and multi-modal opportunities makes it ideal for transportation and warehousing uses. Umatilla County has successfully attracted multiple large distribution centers, including a Walmart Distribution Center and Fed Ex Freight distribution facility. One or more such distribution facilities are a viable target recruitment for Umatilla City, if appropriate sites are available.

*Cluster Strengths*

- Multi-modal transportation connections, confluence of two freeways
- Port/rail access

*Cluster Challenges*

- Need for additional large, shovel-ready sites near the freeway and within the UGB

*Cluster Opportunities*

- Distribution centers
- Central hub for transportation/freight/logistics businesses

**Health Care**

Demand for health services tends to follow demographic trends. The local population and workforce are projected to continue growing at a strong rate. At the same time, a major segment of the population will be aging in place, increasing the demand for health services and continuing care. The following are key industry trends:

- Emphasis on leveraging cost advantages.
- Strong growth in utilization of mobile health systems, software, and access to information.
- Emerging care models including smaller, distributed clinics (i.e. Zoomcare).
- Video or phone appointments.
- An estimated 5% to 8% of Boomers will age in multi-family retirement and care facilities.



The community has identified a need for more local health services located in Umatilla for the local households, many of whom currently travel to Hermiston or beyond for needed health care. Needed services include urgent care, additional clinics, dental care and other specialists. As the population grows, there should be increasing opportunities for health care providers to locate in the community to serve the local population.

*Cluster Strengths*

- Growth and aging of population will support health services.
- Dedicated service area.
- Identified need and captive market.

*Cluster Weakness*

- Sector is concentrated in Hermiston.

*Cluster Opportunities*

- Development of expanded and/or new medical office clusters
- Expansion of training offerings for nurses and other medical professionals.

# IV. FORECAST OF EMPLOYMENT AND LAND NEED

## CITY OF UMATILLA EMPLOYMENT FORECASTS

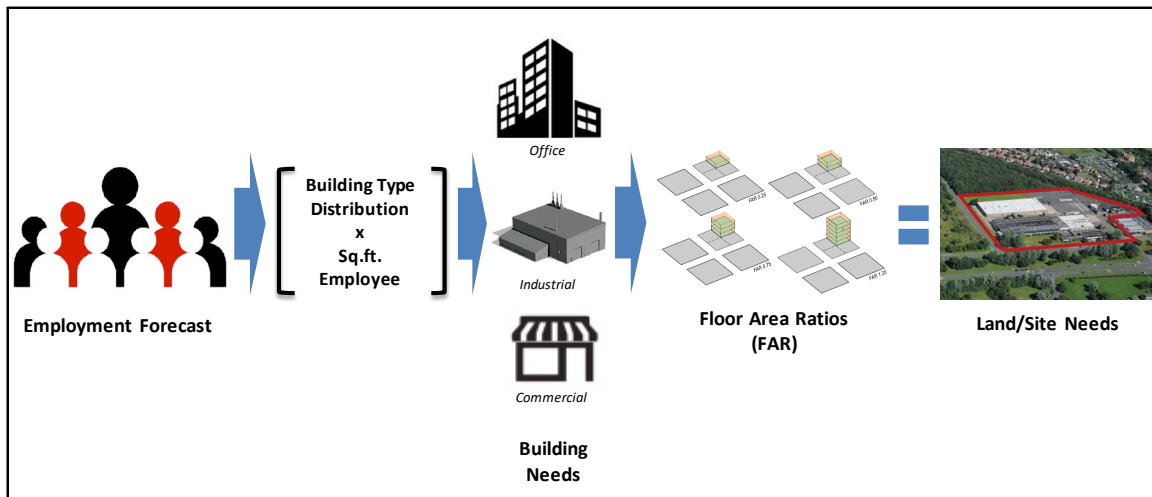
Goal 9 requires that jurisdictions plan for a 20-year supply of commercial and industrial capacity. Because employment capacity is the physical space necessary to accommodate new workers in the production of goods and services, employment needs forecasts typically begin with a forecast of employment growth in the community. The previous analysis of economic trends and targeted industries set the context for these estimates. This analysis translates those influences into estimates of employment growth by broad industry. Forecasts are produced at the sector or subsector level (depending on available information) and are subsequently aggregated to two-digit NAICS sectors. Estimates in this analysis are intended for long-range land planning purposes and are not designed to predict or respond to business cycle fluctuation.

The projections in this analysis are built on an estimate of employment in 2019, the commencement year for the planning period. Employment growth will come as the result of net-expansion of businesses in the community, new business formation, or the relocation/recruitment of new firms. Forecast scenarios consider a range of factors influencing growth. Long-range forecasts typically rely on a macroeconomic context for growth. Inflections in business cycles or the impact of a major shift in employment (i.e. a major unknown recruitment) are not considered.

### Overview of Employment Forecast Methodology

Our methodology starts with employment forecasts by major commercial and industrial sector. Forecasted employment is allocated to building type, and a space demand is a function of the assumed square footage per employee ratio multiplied by projected change. The need for space is then converted into land and site needs based on assumed development densities using floor area ratios (FARs).

**FIGURE 4.01: CONVERSION OF EMPLOYMENT FORECAST TO LAND NEED FORECAST - METHODOLOGY**



Source: Johnson Economics

The first step of the analysis is to update covered employment to the 2019 base year. Our City of Umatilla Quarterly Census of Employment and Wages (QCEW) dataset provides covered employment by industry

through 2017. To update these estimates, we use observed industry specific growth rates for the region between 2017 and 2019.

The second step in the analysis is to convert “covered”<sup>4</sup> employment to “total” employment. Covered employment only accounts for a share of overall employment in the economy. Specifically, it does not consider sole proprietors or some contracted workers. Covered employment was converted to total employment based on observed ratios at the national level derived from the Bureau of Economic Analysis from 2010 through 2017.

The differential is the most significant in construction, professional, and administrative services. The adjusted 2019 total non-farm employment base for the City of Umatilla is an estimated 1,968 jobs.

**FIGURE 4.02: UPDATE TO 2019 BASELINE AND CONVERSION OF COVERED TO TOTAL EMPLOYMENT**

Major Industry Sector	QCEW Employment			Total Emp. Conversion <sup>2</sup>	2019 Estimate
	2017 Employment	'17-'19 County Δ <sup>1</sup>	2019 Estimate		
Construction	172	1.8%	178	73.5%	243
Manufacturing	59	1.1%	60	97.6%	62
Wholesale Trade	88	1.0%	90	97.3%	92
Retail Trade	145	1.0%	148	94.4%	157
T.W.U.	93	1.1%	95	91.3%	104
Information*	0	2.9%	200	94.7%	211
Finance & Insurance	8	0.4%	8	91.6%	9
Real Estate	11	0.4%	11	91.6%	12
Professional & Technical Services	9	1.1%	9	88.5%	10
Administration Services	20	1.1%	20	88.5%	23
Education	215	1.5%	221	94.5%	234
Health Care	126	1.5%	130	94.5%	137
Leisure & Hospitality	79	1.0%	81	94.4%	85
Other Services	45	0.9%	46	82.7%	55
Government	525	0.7%	533	100.0%	533
<b>TOTAL</b>	<b>1,595</b>	<b>7.1%</b>	<b>1,830</b>	<b>93.0%</b>	<b>1,968</b>

<sup>1</sup> Forecasted AAGR from 2017-2024 for Umatilla County. Oregon Employment Department

<sup>2</sup> Bureau of Economic Analysis. Calculated as an eight-year average between 2010 and 2017

T.W.U. = Transportation, Warehousing, and Utilities

\*Information sector: Employment in 2019 is estimated from local sources

Source: Johnson Economics, Oregon Employment Department, BEA

### **Scenario 1: Safe Harbor Forecast**

The Goal 9 statute does not have a required method for employment forecasting. However, OAR 660-024-0040(9)(a) outlines several safe harbor methods, which are intended to provide jurisdictions a methodological approach that will not be challenged. The most applicable for Umatilla County jurisdictions is 660-024-0040(9)(a)(B), which recommends reliance on the adopted projected population growth rate as determined by the Portland State University Population Research Center. This method applies the projected

<sup>4</sup> The Department of Labor’s Quarterly Census of Employment and Wages (QCEW) tracks employment data through state employment departments. Employment in the QCEW survey is limited to firms with employees that are “covered” by unemployment insurance.

population growth rate to the 2019 Umatilla County base, essentially reflecting that employment growth is expected to keep track with population growth. For individual industries, the projected growth rate is based on the most recent regional forecast (2017-2027) published by the Oregon Employment Department for Morrow and Umatilla Counties.

This method results in an average annual growth rate of 1.7%, with total job growth of 805 jobs over the forecast period when applied to the employment profile in Umatilla.

### **Scenario 2: Alternative Employment Forecast**

A second prepared forecast scenario was influenced by the research and analysis conducted in the EOA. This scenario formulates an employment growth trajectory based on identified trends, the growth outlook for targeted industries, and input from the project advisory committee. Further, the alternative scenario recognizes that the city's policy direction has influence over realized growth in targeted sectors. This scenario considers the influence of known or anticipated development over a near and medium-term horizon. The following identified factors that are expected to influence growth informed the forecast

Target Industries – The key industries that the community has identified for targeted growth and focused economic development efforts. Known real-world business interest and location scouting from industries have also been considered. The most significant changes were to reflect targeted growth in the information (data centers) and transportation & warehousing (distribution centers).

Power, Water and Fiber Resources – Umatilla has excellent infrastructure resources that have proven attractive to large, high-investment industrial users such as data centers.

Location - Umatilla's location within the region will influence the mix of employment uses it can attract. Transportation, labor shed, recreation, and livability are some key locational factors.

Household Growth - Growth in many sectors, including retail, hospitality, banking, and real estate, is a direct function of population and households in a community.

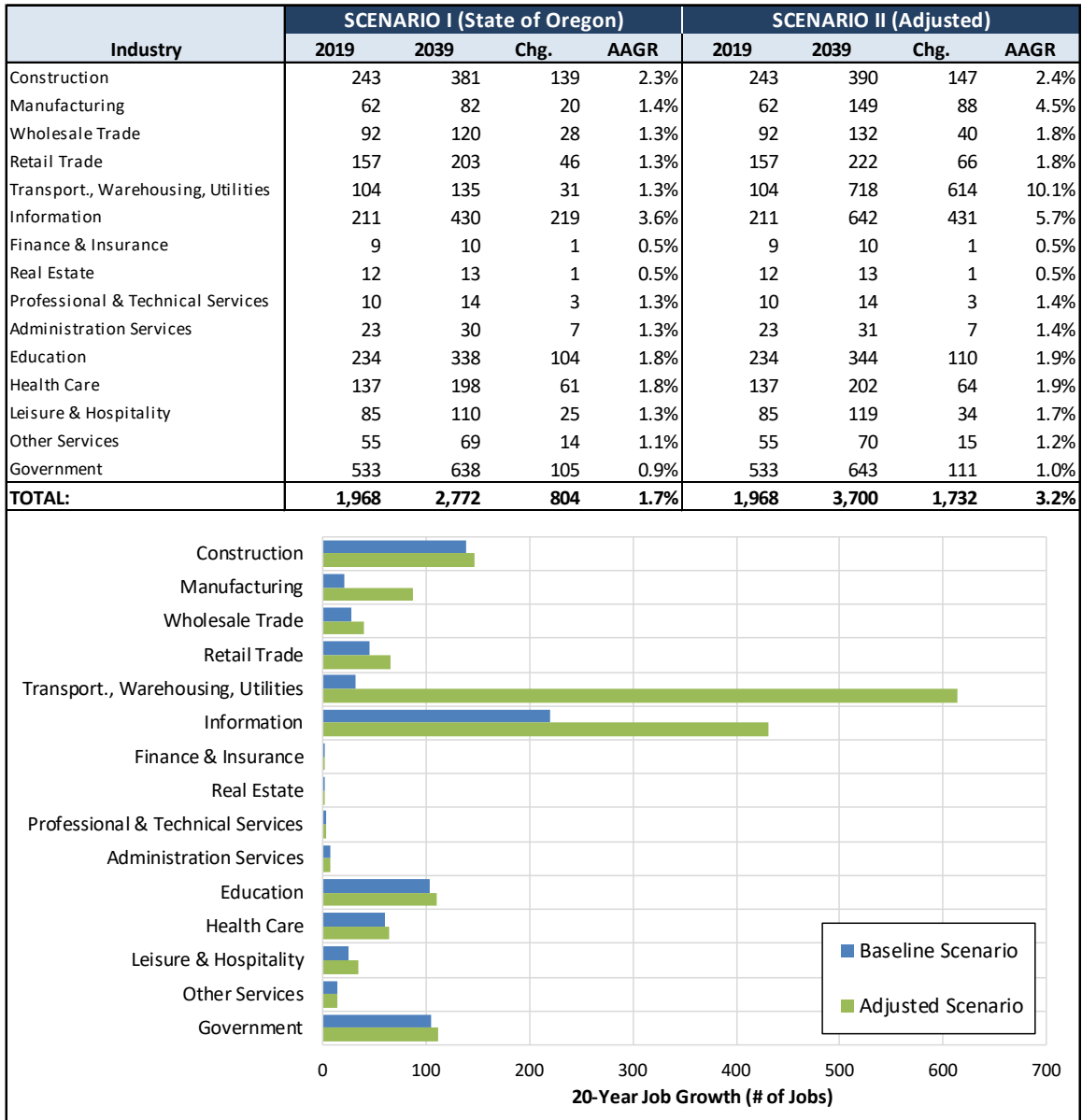
Taken together, the 20-year forecast in this scenario projects 3.2% average annual growth. Our outlook for growth in information, manufacturing, transportation and distribution, retail, and leisure & hospitality is more optimistic than macroeconomic forecasts indicate—reflecting the area's recent strength in these sectors.

### **Summary of Employment Forecast Scenarios**

The two forecast scenarios in this analysis range from 1.7% to 3.1% average annual growth. Job growth estimates range from roughly 805 to 1,730 jobs. The first scenario is useful in creating a baseline understanding of macroeconomic growth prospects. These are common and broadly accepted approaches when looking at large geographic regions.

However, forecasts grounded in broad-based economic variables do not account for the realities of local businesses and trends among evolving industries. The second scenario is meant to reflect these unique circumstances along with local economic development goals. Any long-term forecast is inherently uncertain and should be updated on a regular basis to reflect more current information.

**FIGURE 4.03: COMPARISON OF ALTERNATIVE FORECASTS, CITY OF UMATILLA**



Source: Johnson Economics, Oregon Employment Department, BEA

**FIGURE 4.04: SUMMARY OF PROJECTION SCENARIOS, CITY OF UMATILLA (5-YEAR INCREMENTS)**

Industry	Overall Employment					Net Change by Period				Total 19-39
	2019	2024	2029	2034	2039	19-24	24-29	29-34	34-39	
<b>SCENARIO 1 (State of Oregon)</b>										
Construction	243	272	304	341	381	29	32	36	41	139
Manufacturing	62	66	71	77	82	5	5	5	6	20
Wholesale Trade	92	99	105	112	120	6	7	7	8	28
Retail Trade	157	167	178	190	203	10	11	12	13	46
Transport, Warehousing, Utilities	104	111	119	127	135	7	8	8	9	31
Information	211	252	302	360	430	41	49	59	70	219
Finance & Insurance	9	9	9	9	10	0	0	0	0	1
Real Estate	12	12	13	13	13	0	0	0	0	1
Professional & Technical Services	10	11	12	13	14	1	1	1	1	3
Administration Services	23	25	26	28	30	2	2	2	2	7
Education	234	257	281	308	338	22	25	27	30	104
Health Care	137	150	165	181	198	13	14	16	17	61
Leisure & Hospitality	85	91	97	103	110	6	6	6	7	25
Other Services	55	59	62	65	69	3	3	4	4	14
Government	533	557	583	610	638	25	26	27	28	105
<b>TOTAL:</b>	<b>1,968</b>	<b>2,138</b>	<b>2,327</b>	<b>2,537</b>	<b>2,772</b>	<b>170</b>	<b>189</b>	<b>210</b>	<b>234</b>	<b>804</b>
<b>SCENARIO 2 (Modified)</b>										
Construction	243	273	308	346	390	31	34	39	44	147
Manufacturing	62	77	96	120	149	15	19	24	30	88
Wholesale Trade	92	101	110	121	132	9	9	10	11	40
Retail Trade	157	171	187	204	222	14	16	17	19	66
Transport, Warehousing, Utilities	104	169	273	443	718	65	105	170	275	614
Information	211	279	368	486	642	68	89	118	156	431
Finance & Insurance	9	9	9	10	10	0	0	0	0	1
Real Estate	12	12	13	13	13	0	0	0	0	1
Professional & Technical Services	10	11	12	13	14	1	1	1	1	3
Administration Services	23	25	27	28	31	2	2	2	2	7
Education	234	258	284	313	344	24	26	29	32	110
Health Care	137	151	166	183	202	14	15	17	18	64
Leisure & Hospitality	85	93	101	110	119	7	8	9	10	34
Other Services	55	59	62	66	70	3	4	4	4	15
Government	533	558	585	614	643	26	27	28	30	111
<b>TOTAL:</b>	<b>1,968</b>	<b>2,246</b>	<b>2,602</b>	<b>3,069</b>	<b>3,700</b>	<b>278</b>	<b>356</b>	<b>467</b>	<b>631</b>	<b>1,732</b>

Source: Johnson Economics, Oregon Employment Department, BEA

### EMPLOYMENT LAND NEED FORECAST – CITY OF UMATILLA

The next step in our analysis is to convert projections of employment into forecasts of land demand over the planning period. The generally accepted methodology for this conversion begins by allocating employment by sector into a distribution of building typologies that typically house those economic activities. As an example, insurance agents commonly locate in a traditional office space, usually along commercial corridors. However, a percentage of these firms locate in commercial retail space adjacent to retail anchors. Cross tabulating this distribution provides an estimate of employment in each typology.

The next step converts employment into space using estimates of the typical square footage exhibited within each typology. Adjusting for market clearing vacancy we arrive at an estimate of total space demand for each building type. Finally, we can consider the physical characteristics of individual building types and the amount of land they typically require for development. The site utilization metric commonly used is referred to as a “floor area ratio” or FAR. For example, assume a 25,000-square foot general industrial building requires approximately two acres to accommodate its structure, setbacks, parking, and necessary yard/storage space. This building would have an FAR. of roughly 0.29. Demand for space is then converted to net acres using a standard FAR for each development form.

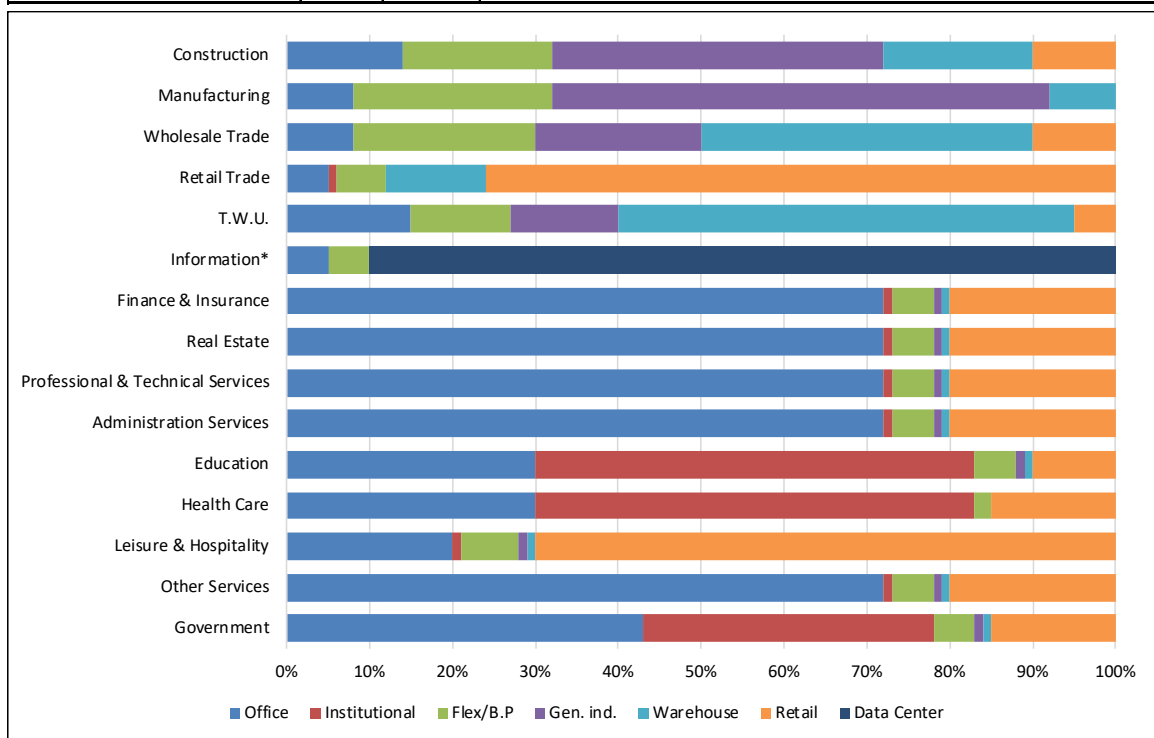


**Land Demand Analysis (Adjusted Forecast)**

To demonstrate the methodology used, this report will develop land need estimates in a step-by-step process, clearly presenting underlying assumptions. In this analytical step we allocate employment growth into standard building typologies. The building typology matrix represents the share of sectoral employment that locates across various building types.

**FIGURE 4.05: DISTRIBUTION OF EMPLOYMENT BY SPACE TYPE, CITY OF UMATILLA**

Industry Sector	20-year Job Forecast		BUILDING TYPE MATRIX						
	Number	AAGR	Office	Institutional	Flex/B.P	Gen. ind.	Warehouse	Data Center	Retail
Construction	147	2.3%	14%	0%	18%	40%	18%	0%	10%
Manufacturing	88	1.4%	8%	0%	24%	60%	8%	0%	0%
Wholesale Trade	40	1.3%	5%	0%	5%	10%	75%	0%	5%
Retail Trade	66	1.3%	5%	1%	6%	0%	12%	0%	76%
Transport, Warehousing, Utilities	614	1.3%	15%	0%	12%	13%	55%	0%	5%
Information	431	3.6%	5%	0%	5%	0%	0%	90%	0%
Finance & Insurance	1	0.5%	72%	1%	5%	1%	1%	0%	20%
Real Estate	1	0.5%	72%	1%	5%	1%	1%	0%	20%
Professional & Technical Services	3	1.3%	72%	1%	5%	1%	1%	0%	20%
Administration Services	7	1.3%	72%	1%	5%	1%	1%	0%	20%
Education	110	1.8%	30%	53%	5%	1%	1%	0%	10%
Health Care	64	1.8%	30%	53%	2%	0%	0%	0%	15%
Leisure & Hospitality	34	1.3%	20%	1%	7%	1%	1%	0%	70%
Other Services	15	1.1%	72%	1%	5%	1%	1%	0%	20%
Government	111	0.9%	43%	35%	5%	1%	1%	0%	15%
<b>TOTAL</b>	<b>1,732</b>	<b>1.7%</b>	<b>16%</b>	<b>8%</b>	<b>10%</b>	<b>11%</b>	<b>24%</b>	<b>22%</b>	<b>9%</b>



Source: Johnson Economics, Oregon Employment Department

Under the employment forecast scenario, employment housed in data center, office, retail, and general industrial space accounts for the greatest share of growth.

**FIGURE 4.06: NET CHANGE IN EMPLOYMENT ALLOCATED BY BUILDING TYPE, CITY OF UMATILLA – 2019-2039**

Industry Sector	20-year Job Forecast		NET CHANGE IN EMPLOYMENT BY BUILDING TYPE - 2019-2039							Total
	Number	AAGR	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
Construction	147	2.3%	21	0	27	59	27	0	15	147
Manufacturing	88	1.4%	7	0	21	53	7	0	0	88
Wholesale Trade	40	1.3%	2	0	2	4	30	0	2	40
Retail Trade	66	1.3%	3	1	4	0	8	0	50	66
Transport., Warehousing, Utilities	614	1.3%	92	0	74	80	338	0	31	614
Information	431	3.6%	22	0	22	0	0	388	0	431
Finance & Insurance	1	0.5%	1	0	0	0	0	0	0	1
Real Estate	1	0.5%	1	0	0	0	0	0	0	1
Professional & Technical Services	3	1.3%	2	0	0	0	0	0	1	3
Administration Services	7	1.3%	5	0	0	0	0	0	1	7
Education	110	1.8%	33	58	5	1	1	0	11	110
Health Care	64	1.8%	19	34	1	0	0	0	10	64
Leisure & Hospitality	34	1.3%	7	0	2	0	0	0	24	34
Other Services	15	1.1%	11	0	1	0	0	0	3	15
Government	111	0.9%	48	39	6	1	1	0	17	111
<b>TOTAL</b>	<b>1,732</b>	<b>1.7%</b>	<b>273</b>	<b>132</b>	<b>165</b>	<b>198</b>	<b>412</b>	<b>388</b>	<b>164</b>	<b>1,732</b>

Source: Johnson Economics, Oregon Employment Department

Employment growth estimates by building type are then converted into demand for physical space. This conversion assumes the typical space needed per employee on average. This step also assumes a market clearing vacancy rate, acknowledging that equilibrium in real estate markets is not 0% vacancy. We assume a 10% vacancy rate for office, retail, and flex uses, as these forms have high rates of speculative multi-tenant usage. A 5% rate is used for general industrial, warehouse, and data centers—these uses have higher rates of owner occupancy that lead to lower overall vacancy. Institutional uses are assumed to have no vacancy.

The demand for space is converted into an associated demand for acreage using an assumed Floor Area Ratio (FAR). The combined space and FAR assumptions further provide estimates indicative of job densities, determined on a per net-developable acre basis.

**FIGURE 4.07: NET ACRES REQUIRED BY BUILDING TYPOLOGY**

ADJUSTED SCENARIO	DEMAND BY GENERAL USE TYPOLOGY, 2019-2039							Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
<b>Employment Growth</b>	273	132	165	198	412	388	164	1,732
<b>Avg. SF Per Employee</b>	350	600	990	600	1,850	8,000	500	2,542
<b>Demand for Space (SF)</b>	95,600	79,400	163,100	118,900	761,900	3,101,100	81,900	4,401,900
<b>Floor Area Ratio (FAR)</b>	0.35	0.35	0.30	0.30	0.35	0.35	0.25	0.32
<b>Market Vacancy</b>	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	10.0%	5.6%
<b>Implied Density (Jobs/Acre)</b>	39.2	22.9	11.9	20.7	7.8	1.8	19.6	5.6
<b>Net Acres Required</b>	<b>7.0</b>	<b>5.8</b>	<b>13.9</b>	<b>9.6</b>	<b>52.6</b>	<b>214.1</b>	<b>8.4</b>	<b>311.3</b>

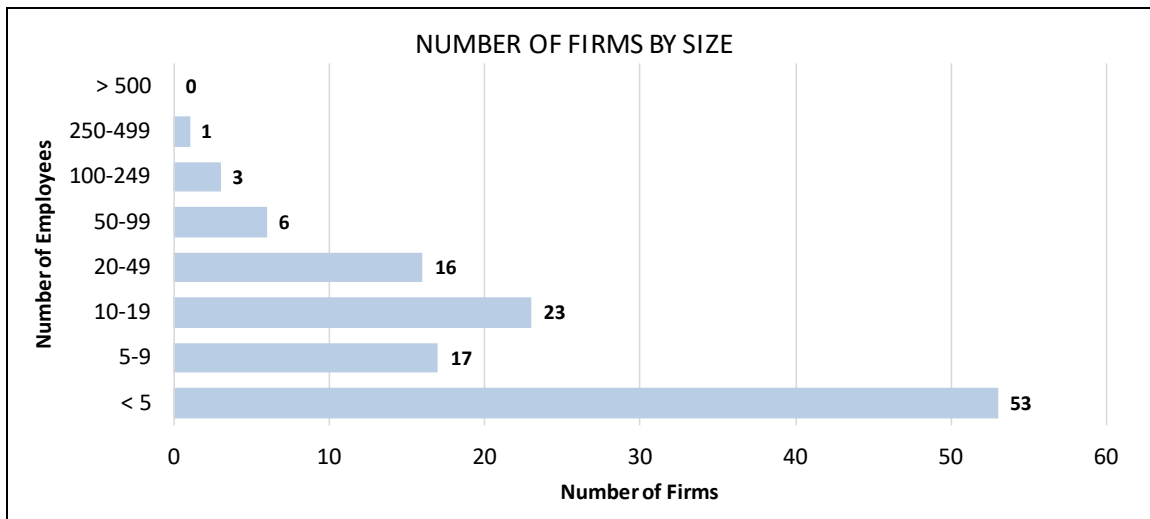
Source: Johnson Economics, Oregon Employment Department

Commercial office and retail densities are 39 and 20 jobs per acre, respectively. Industrial uses range from 21 jobs per acre for general industrial to 8 jobs per acre for warehouse/distribution to as few as 2 jobs per acre for data center users. The projected 1,730 job expansion in the local employment base would require an estimated 311 net acres of employment land to house.

## EMPLOYMENT LAND NEED FORECAST – NEEDED SITE SIZES

The local employment base is largely dominated by small firms of 10 or fewer employees, with four employers currently accounting for more than 100 employees and one accounting for more than 250 (Figure 4.08).

**FIGURE 4.08: DISTRIBUTION OF CURRENT FIRMS BY SIZE, UMATILLA OREGON**



Source: Johnson Economics, Oregon Employment Department

Figure 4.09 presents the projected need for new commercial and industrial sites based on the industry growth projections presented above. These site needs are an estimate of future needs to aid comparison to available supply (see following Section.)

**FIGURE 4.09: ESTIMATED SITE NEEDS (ACRES) OF FUTURE EMPLOYERS, UMATILLA OREGON**

LAND USE	0 TO .9 acres	1 to 4.9 acres	5 to 9.9 acres	10 to 19.9 acres	20 to 29.9 acres	30 to 49.9 acres	50 to 99.9 acres	100+ acres	TOTAL
Office	10	1	0	0	0	0	0	0	11
Institutional	2	2	0	0	0	0	0	0	4
Retail	5	2	0	0	0	0	0	0	7
<b>Commercial:</b>	<b>17</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>
Flex/B.P	3	2	1	0	0	0	0	0	6
Gen. Ind.	5	3	1	0	0	0	0	0	9
Warehouse	2	3	2	0	0	0	1	0	8
Data Center	0	0	0	0	0	0	1	2	3
<b>Industrial:</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>26</b>
<b>TOTAL:</b>	<b>27</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>48</b>

Source: Johnson Economics, Oregon Employment Department

The estimates presented in Figure 4.09 are based on the average firm sizes of businesses in the different industry subsectors in Umatilla County. *However, economic development and job growth are dynamic, and this estimate of site needs is unlikely to match actual future needs exactly. Communities should maintain flexibility and ensure a supply of a variety of site types with short-term availability, as allowed through the Goal 9 EOA process.*

Local and regional employment trends in Umatilla and Morrow Counties support the likely ability to continue to recruit larger users such as data centers and larger manufacturers going forward. At the same time, there will be a continued demand for real estate space and sites of all size to accommodate the full range of employers across sectors.

### **Additional Considerations in Land Demand**

Beyond a consideration of gross acreage, there is a significantly broader range of site characteristics that industries would require to accommodate future growth. We summarize some key findings here:

- Industrial buildings are generally more susceptible to slope constraints due to larger building footprints. For a site to be competitive for most industrial uses, a 5% slope is the maximum for development sites. Office and commercial uses are generally smaller and more vertical, allowing for slopes up to 15%.
- Most industries require some direct access to a major transportation route, particularly manufacturing and distribution industries that move goods throughout the region and beyond. A distance of 10-to-20 miles to a major interstate is generally acceptable for most manufacturing activities, but distribution activities require five miles or less and generally prefer a direct interstate linkage. Visibility and access are highly important to most commercial activities and site location with both attributes from a major commercial arterial is commonly required.
- Access and capacity for water, power, gas, and sewer infrastructure is more important to industrial than commercial operations. Water/sewer lines of up to 10" are commonly required for large manufacturers. Appendix A details utility infrastructure requirements by typology.
- Fiber telecommunications networks are likely to be increasingly required in site selection criteria for most commercial office and manufacturing industries. Medical, high-tech, creative office, research & development, and most professional service industries will prefer or require strong fiber access in the coming business cycles.

**Section VI and Appendix A of this report discuss industry-specific site requirements in greater detail.**

## V. CURRENT EMPLOYMENT LAND SUPPLY

### BUILDABLE LAND INVENTORY

The inventory of employment land provides a snapshot of the currently local capacity to accommodate more business and jobs. This current available land will be compared to the forecasted need for new land over the 20-year planning period.

Employment land includes land zoned for industrial, retail or other commercial use (i.e. office), and may also include mixed-use zoning that allows for employment uses. This inventory includes vacant parcels with the proper zoning, as well as “redevelopable” parcels. (The methodology used in this analysis is described in detail below.)

#### Methodology

The Buildable Lands Inventory (BLI) used in this analysis is based on tax account data from the County, supplemented with data from the State of Oregon. The data was provided in Geographic Information Systems (GIS) compatible format, providing information on land use, parcel size and other relevant data categories on the taxlot level. Zoning information was also provided by the City.

The tax account data was used to identify vacant and redevelopable parcels in the city and its UGB. Environmental constraints including wetlands, floodplain and steep slopes that might impact developability were also considered. The identified candidate parcels were then further screened and refined by Johnson Economics.

In keeping with State requirements, the BLI includes an assessment of vacant buildable lands and redevelopable parcels. This analysis applied the “safe harbor” assumptions allowed under state rules to determine the infill potential of developed parcels (OAR 660-024-0050):

**FIGURE 5.01: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY METHODOLOGY**



Appendix B provides an in-depth summary of the Buildable Lands Inventory, including methodology and mapping of the identified parcels of employment land. The results are summarized below.

**FIGURE 5.02: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY (UMATILLA)**

ZONE	VACANT		REDEVELOPABLE		TOTAL	
	Parcels	Acreage	Parcels	Acreage	Parcels	Acreage
C-1	4	8.5	2	1.0	6	9.5
DC	11	2.2	3	0.4	14	2.6
DT	8	1.4	0	0.0	8	1.4
GC	6	10.0	2	3.6	8	13.5
MC	3	4.1	0	0.0	3	4.1
NC	3	31.4	0	0.0	3	31.4
<b>Commercial Total:</b>	<b>35</b>	<b>57.6</b>	<b>7</b>	<b>4.9</b>	<b>42</b>	<b>62.5</b>
M1	6	23.5	5	27.6	11	51.1
M2	16	247.9	3	16.8	19	264.7
<b>Industrial Total:</b>	<b>22</b>	<b>271.3</b>	<b>8</b>	<b>44.5</b>	<b>30</b>	<b>315.8</b>
<b>TOTAL:</b>	<b>57</b>	<b>328.9</b>	<b>15</b>	<b>49.4</b>	<b>72</b>	<b>378.3</b>

Source: Umatilla County, Umatilla, Johnson Economics LLC

The inventory identifies over 378 acres of vacant or potentially redevelopable land in both commercial and industrial zones. A smaller share is in the Commercial zones, while the majority has Industrial zoning. 80% of the sites are identified as “vacant”, and 20% are potential “redevelopment” sites.

**FIGURE 5.03: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**

ZONE	0 TO .99 acres		1 to 4.99 acres		5 to 9.99 acres		10 to 19.99 acres		20 to 29.99 acres		30 to 49.99 acres		50+ acres		TOTALS	
	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage	# of Parcels	Acreage
C-1	4	2.2	1	1.9	1	5.5	0	0.0	0	0.0	0	0.0	0	0.0	6	9.5
DC	14	2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	14	2.6
DT	8	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	1.4
GC	2	1.7	3	5.0	1	6.9	0	0.0	0	0.0	0	0.0	0	0.0	6	13.5
MC	1	0.7	2	3.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	4.1
NC	0	0.0	0	0.0	2	13.4	1	18.0	0	0.0	0	0.0	0	0.0	3	31.4
<i>Commercial Total:</i>	<i>29</i>	<i>8.6</i>	<i>6</i>	<i>10.2</i>	<i>4</i>	<i>25.8</i>	<i>1</i>	<i>18.0</i>	<i>0</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>40</i>	<i>62.5</i>
M1	0	0.0	8	20.7	2	13.4	1	17.0	0	0.0	0	0.0	0	0.0	11	51.1
M2	0	0.0	3	10.3	6	39.7	4	53.3	0	0.0	0	0.0	1	161.4	14	264.7
<i>Industrial Total:</i>	<i>0</i>	<i>0.0</i>	<i>11</i>	<i>31.0</i>	<i>8</i>	<i>53.2</i>	<i>5</i>	<i>70.3</i>	<i>0</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>1</i>	<i>161.4</i>	<i>25</i>	<i>315.8</i>
<b>TOTAL:</b>	<b>29</b>	<b>8.6</b>	<b>17</b>	<b>41.2</b>	<b>12</b>	<b>78.9</b>	<b>6</b>	<b>88.2</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>161.4</b>	<b>65</b>	<b>378.3</b>

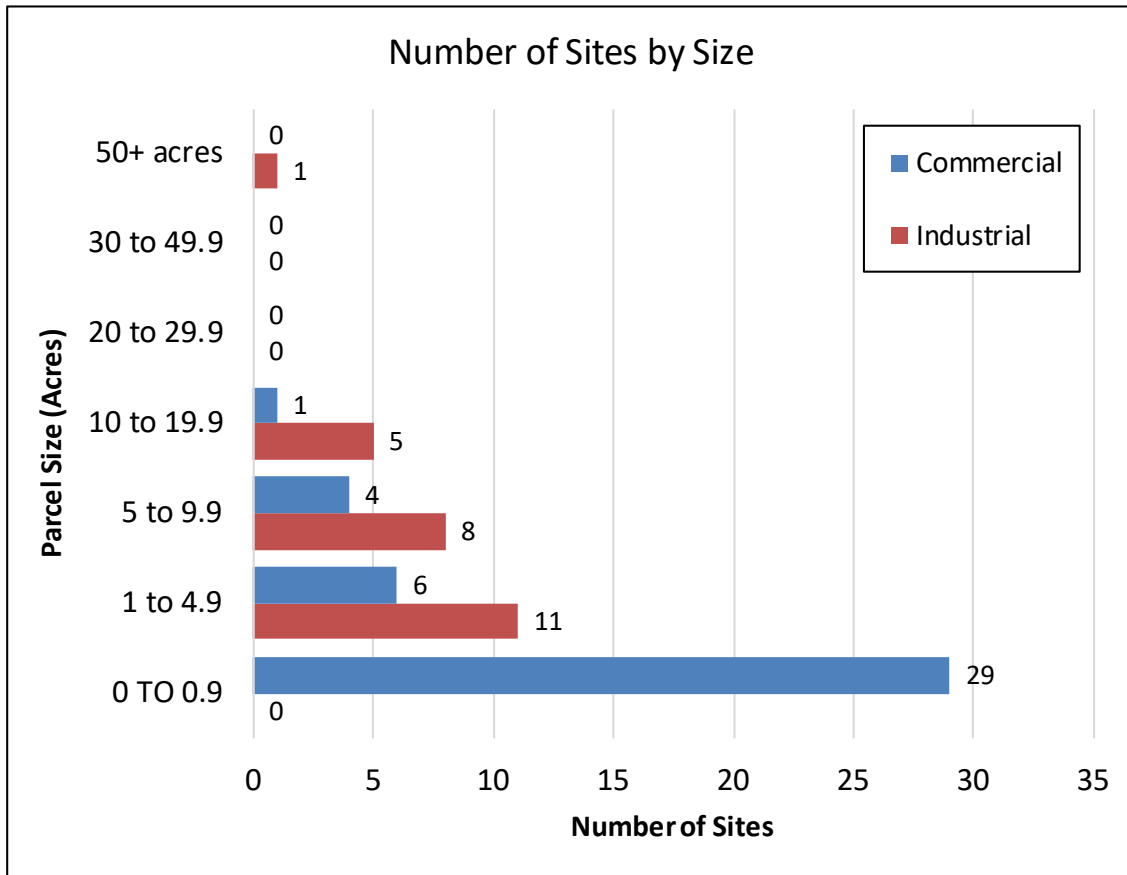
Source: Umatilla County, Umatilla, Johnson Economics LLC

Figure 5.03 presents the inventory broken down by the size of parcels. Most of the buildable unconstrained parcels identified are smaller than 20 acres, with the largest share of commercial parcels being smaller than

one acre in size. The largest share of industrial parcels (over one third) are between one and five acres. There is one large industrial parcel of roughly 160 acres located at the Port.

The following chart provides a visual presentation of the site-size data.

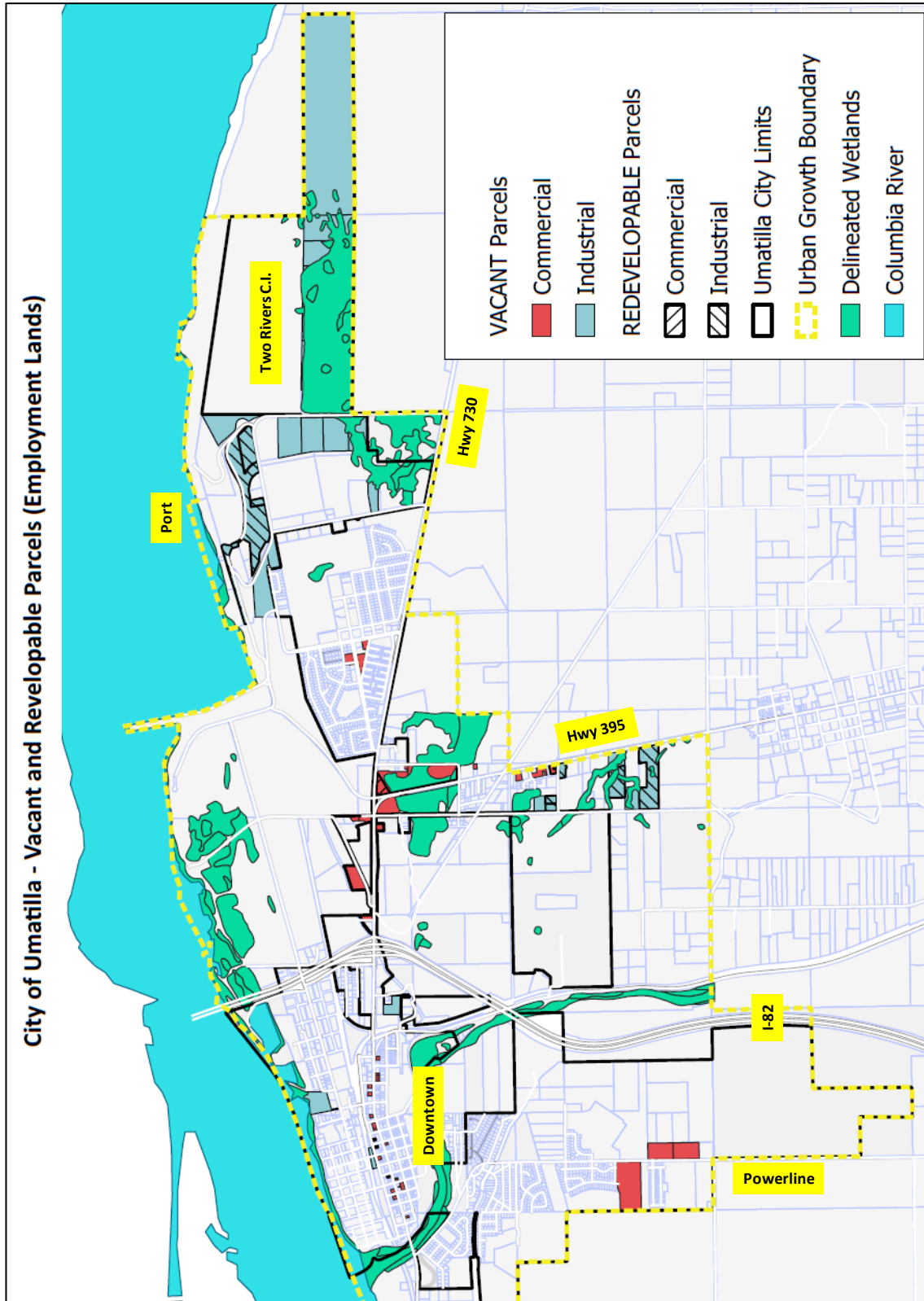
**FIGURE 5.04: SUMMARY OF EMPLOYMENT BUILDABLE LAND INVENTORY, BY PARCEL SIZE (UMATILLA)**



Source: Umatilla County, Umatilla, Johnson Economics LLC

The following figure shows a map of the Buildable Land Inventory for commercial and industrial parcels. Wetland constraints are highlighted to show how they hamper some of nominally vacant land supply. Where wetlands constrain a parcel, these parcels may be partially or wholly discounted from the inventory.

**FIGURE 5.05: MAP OF EMPLOYMENT BUILDABLE LAND INVENTORY (UMATILLA)**



Source: Umatilla County, State of Oregon, Johnson Economics LLC



## BUILDABLE LAND INVENTORY VS. 20-YEAR LAND NEED

The inventory of employment land provides a snapshot of the currently local capacity to accommodate more business and jobs. This current available land is compared to the forecasted need for new land over the 20-year planning period, generated in a previous step of this project (Section IV).

The estimate of future land need is presented below. A total need for 309 net acres was identified across a range of building types.

**FIGURE 5.06: SUMMARY OF FORECASTED 20-YEAR LAND NEED BY BUILDING TYPOLOGY (UMATILLA)**

ADJUSTED SCENARIO	DEMAND BY GENERAL USE TYPOLOGY, 2019-2039							Total
	Office	Institutional	Flex/B.P	Gen. Ind.	Warehouse	Data Center	Retail	
Employment Growth	273	132	165	198	412	388	164	1,732
Avg. SF Per Employee	350	600	990	600	1,850	8,000	500	2,542
Demand for Space (SF)	95,600	79,400	163,100	118,900	761,900	3,101,100	81,900	4,401,900
Floor Area Ratio (FAR)	0.35	0.35	0.30	0.30	0.35	0.35	0.25	0.32
Market Vacancy	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	10.0%	5.6%
Implied Density (Jobs/Acre)	39.2	22.9	11.9	20.7	7.8	1.8	19.6	5.6
<b>Net Acres Required</b>	<b>7.0</b>	<b>5.8</b>	<b>13.9</b>	<b>9.6</b>	<b>52.6</b>	<b>214.1</b>	<b>8.4</b>	<b>311.3</b>

Source: Oregon Employment Department, Umatilla, Johnson Economics LLC

There is a total projected 20-year need for 309 acres of buildable employment land in industrial and commercial zones. Roughly 90% of this projected need is for uses most appropriate to industrial zones (Flex, General Industrial, Warehouse, and Data Center), while the remainder is for uses most appropriate for commercial zones (Office, Retail, Institutional).

### Conclusion

This combined identified need (311 acres) is less than the 378 acres of combined buildable employment land noted in Figure 5.02. **It is important to remember that the different categories of employment land are not (necessarily) substitutable.** For instance, a shortage of 10 acres of commercial land, and a surplus of 10 acres of industrial land do not cancel each other.

Also, this does not address the more specific site needs from specific categories of employment land users. **Some of the forecasted growth includes employers who may have specific site needs and preferences that are not reflected in the available buildable inventory, even though *in total* the available parcels sum to a significant amount.**

In particular, there is forecasted demand for more suitable large-lot industrial sites while relatively few of these sites were found in the inventory. This is discussed in greater detail below.

## VI. EMPLOYER SITE NEEDS VS. BUILDABLE LAND SUPPLY

This section compares the more specific site requirements of projected future commercial and industrial users with the specific inventory of prospective employment sites identified within the UGB. Oregon Administrative Rules requires a determination of 20-year employment land need, as well as a determination of need for suitable, readily serviceable land to meet short-term demand.

The following definitions from OAR 660-009-005 are relevant to this discussion:

(2) "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas....

(10) "Short-term Supply of Land" means suitable land that is ready for construction within one year of an application for a building permit or request for service extension. Engineering feasibility is sufficient to qualify land for the short-term supply of land. Funding availability is not required. "Competitive Short-term Supply" means the short-term supply of land provides a range of site sizes and locations to accommodate the market needs of a variety of industrial and other employment uses.

(11) "Site Characteristics" means the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.

(12) "Suitable" means serviceable land designated for industrial or other employment use that provides, or can be expected to provide the appropriate site characteristics for the proposed

As noted in the previous section, the Buildable Land Inventory was screened for major constraints, including current development, floodways, wetlands, steep slopes, and federal ownership. The remaining parcels in the inventory may be buildable but may not meet the specific site requirements of certain users. Others may be part of the long-term supply, but not be well-suited for the short-term supply.

### **Estimated 20-Year Site Needs vs. Current Supply**

The following figures re-present the findings of estimated need and current supply of sites by size, as presented in the preceding sections. Note that the estimate of future needs is approximate, as economic growth is dynamic and difficult to predict. Communities should maintain flexibility and ensure a supply of a variety of site types with short-term availability, as allowed through the Goal 9 EOA process.

As Figure 6.01 presents there is currently estimated to be a sufficient supply of commercial (retail/office/institutional) parcels to meet the projected demand. Most of the demand is estimated to be from employers seeking relatively small sites of five acres or less. Due to higher employment density for commercial uses, some of these may still have sizable workforces, despite smaller sites.

For industrial users, there is an estimated deficit of sites of some sizes. Most notably there is a deficit of suitable large industrial sites, and a deficit of small industrial sites.

**FIGURE 6.01: SUMMARY OF FORECASTED 20-YEAR SITE NEED VS. SITE SUPPLY  
BY LAND USE AND SITE SIZE (ACRES), UMATILLA**

**Estimated 20-year Site NEED**

LAND USE	0 TO .9 acres	1 to 4.9 acres	5 to 9.9 acres	10 to 19.9 acres	20 to 29.9 acres	30 to 49.9 acres	50 to 99.9 acres	100+ acres	TOTAL
Office	10	1	0	0	0	0	0	0	11
Institutional	2	2	0	0	0	0	0	0	4
Retail	5	2	0	0	0	0	0	0	7
<b>Commercial:</b>	<b>17</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>
Flex/B.P	3	2	1	0	0	0	0	0	6
Gen. Ind.	5	3	1	0	0	0	0	0	9
Warehouse	2	3	2	0	0	0	1	0	8
Data Center	0	0	0	0	0	0	1	2	3
<b>Industrial:</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>26</b>
<b>TOTAL:</b>	<b>27</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>48</b>

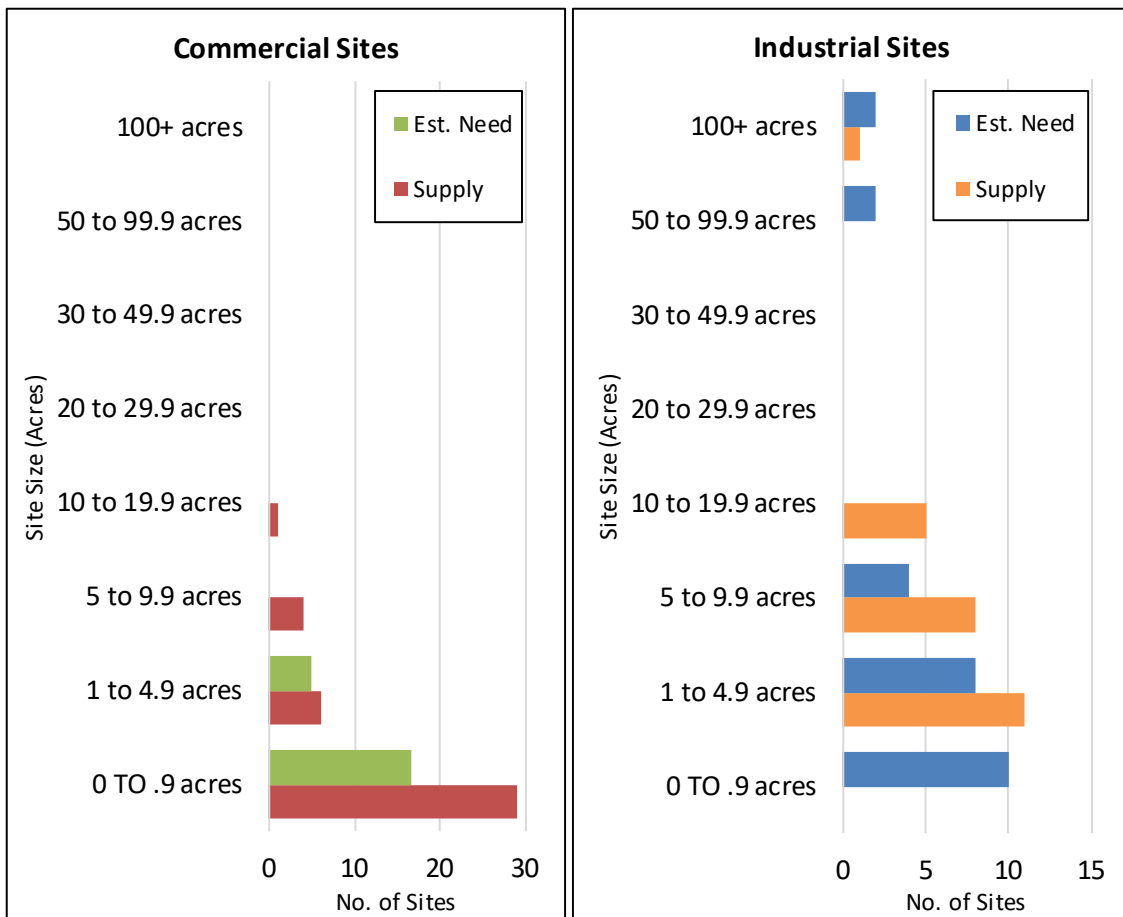
**Estimated Employment Land SUPPLY (BLI)**

LAND USE	0 TO .9 acres	1 to 4.9 acres	5 to 9.9 acres	10 to 19.9 acres	20 to 29.9 acres	30 to 49.9 acres	50 to 99.9 acres	100+ acres	TOTAL
C-1	4	1	1	0	0	0	0	0	6
DC	14	0	0	0	0	0	0	0	14
DT	8	0	0	0	0	0	0	0	8
GC	2	3	1	0	0	0	0	0	6
MC	1	2	0	0	0	0	0	0	3
NC	0	0	2	1	0	0	0	0	3
<b>Commercial:</b>	<b>29</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>
M1	0	8	2	1	0	0	0	0	11
M2	0	3	6	4	0	0	0	1	14
<b>Industrial:</b>	<b>0</b>	<b>11</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>25</b>
<b>TOTAL:</b>	<b>29</b>	<b>17</b>	<b>12</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>65</b>

Source: Oregon Employment Department, Umatilla, Johnson Economics LLC

Figure 6.02 presents the same data in chart form.

**FIGURE 6.02: SUMMARY OF FORECASTED 20-YEAR SITE NEED VS. SITE SUPPLY  
BY LAND USE AND SITE SIZE (ACRES), UMATILLA**



Source: Oregon Employment Department, Umatilla, Johnson Economics LLC

**Identified Industrial Site Deficits**

**Large Lot:** The specific site deficits identified are for large industrial parcels. This finding is the result of strong projected growth in the information sector, and specifically data centers and cloud computing facilities. The Umatilla and Morrow County regions are now established centers for these facilities in Oregon due to a confluence of available infrastructure and workforce that have attracted these employers over the past decade. These facilities represent huge capital investments and offer high average wages for the region. There are known prospective opportunities to attract more of these facilities in the Umatilla area, which are excellent candidates for a ready short-term supply of suitable sites.

As outlined in the matrix of site requirements presented in Appendix A, these users seek large-lot industrial land with excellent power, water, and fiber access. These facilities have thus far used sites of 30 to over 100 acres. These users have stated a preference for very large sites in order to allow for future expansion. The most recent data center development in Umatilla sought a 120-acre site.

Given the projected short-term growth, and prospective long-term growth in this industry, Johnson Economics estimates a need for at least two sites of 100+ acres meeting serviceability requirements for data center or large manufacturing users, and at least two sites of 50+ acres.

In addition, there is a need for an additional large site or sites for potential distribution facilities. This is an identified target industry based on local economic goals, and the Umatilla area provides strong advantages for this type of facility based on its location at the connection of two interstate freeways.

Distribution centers require large sites for warehousing and truck staging, with ready freeway or major highway access for the receiving and shipping of large volumes of goods. For example, the nearby Walmart Distribution Center uses a 190-acre site, while the Fed Ex Freight distribution facility uses a 62.5-acre site. The currently available industrial sites are generally too limited in size and most are too distant from the freeway to serve as suitable candidates for this use.

**Small Lot:** There is also a projected future need from small industrial firms for smaller sites. It is also common for these types of users to also be accommodated in multi-tenant industrial buildings on larger sites. Given the supply of industrial sites in the 5- to 20-acre range that can be subdivided or built with multi-tenant space, it may be less critical to designate new land for these small users at this time. However, policies which facilitate availability of space for small industrial firms within current zones may be warranted.

# APPENDIX A: SITE REQUIREMENTS

The following series of tables summarize key site requirements for a range of prospective tenant types.<sup>5</sup>

CRITERIA		PROFILE	A	B	C	D	E	F	G	H	I	J
			Computer & Electronic Manufacturing (High-Tech R&D)	Software & Media	Multi-Tenant Office	Food Processing	Other Manufacturing	Life/Bioscience R&D Campus	Wholesaling	Retail	Data Center	Incubator
<b>GENERAL REQUIREMENTS</b>		Use is permitted outright, located in UGB or equivalent and outside flood plain; and site (NCDA) does not contain contaminants, wetlands, protected species, or cultural resources or has mitigation plan(s) that can be implemented in 180 days or less.										
<b>PHYSICAL SITE</b>												
1	TOTAL SITE SIZE* Competitive Acreage**		5 - 100+	5 - 15	5 - 20	5 - 25+	5 - 50+	20 - 100+	10 - 100+	5 - 20	10 - 100+	5 - 25+
2	COMPETITIVE SLOPE: Maximum Slope		0 - 5%	0 - 7%	0 - 7%	0 - 5%	0 - 5%	0 - 7%	0 - 3%	0 - 7%	0 - 7%	0 - 5%
<b>TRANSPORTATION</b>												
3	TRIP GENERATION: Average Daily Trips per Acre		40 - 60	80 - 200 <sub>1</sub>	120 - 240 <sub>2</sub>	50 - 60	40 - 50	60 - 150	50 - 60 <sub>3</sub>	400 - 500 <sub>4</sub>	20 - 30	40 - 50
4	MILES TO INTERSTATE OR FREIGHT ROUTE: Miles		w/in 10	w/in 5	w/in 5	w/in 30	w/in 20	w/in 5	w/in 5	w/in 5	w/in 30	N/A
5	MILES TO FREQUENT TRANSIT SERVICE (15 MIN OR LESS) Miles		0.6	0.5	0.8	< 0.1	0.2	0.1	0.3	< 0.1	0.1	< 0.1
6	RAILROAD ACCESS: Dependency		Preferred	Not Required	Not Required	Preferred	Preferred	Preferred	Preferred	Avoid	Avoid	N/A
7	PROXIMITY TO MARINE PORT: Dependency		Preferred	Not Required	Not Required	Preferred	Preferred	Preferred	Preferred	Not Required	Not Required	N/A
8	PROXIMITY TO INTERNATIONAL/REGIONAL AIRPORT: Dependency		Competitive	Required	Preferred	Preferred	Preferred	Required	Not Required	Not Required	Competitive	N/A
	Distance (Miles)	This criteria cannot be met in Eastern Oregon										

<sup>5</sup> Business Oregon, Mackenzie.

PROFILE		A	B	C	D	E	F	G	H	I	J	
		Computer & Electronic Manufacturing (High-Tech R&D)	Software & Media	Multi-Tenant Office	Food Processing	Other Manufacturing	Life/Bioscience R&D Campus	Wholesaling	Retail	Data Center	Incubator	
CRITERIA												
<b>UTILITIES</b>												
9	WATER:	Min. Line Size (Inches/Dmtr)	12" - 16"	6" - 8"	8" - 10"	12" - 16"	6" - 10"	8" - 12"	6" - 10"	8" - 12"	16"	4" - 8"
		Min. Fire Line Size (Inches/Dmtr)	12" - 18"	8" - 10"	8" - 12"	10" - 12"	8" - 10"	8" - 12"	8" - 10"	8" - 12"	10"-12"	6" (or alternate source)
		High Pressure Water Dependency	Required	Not Required	Not Required	Required	Not Required	Preferred	Not Required	Not Required	Required	Not Required
		Flow (Gallons per Day per Acre)	5,200	1,200	1,500	3,150	1,850	2,450	1,200	1,800 <sub>s</sub>	50 - 200 <sup>+</sup>	1,200
10	SEWER:	Min. Service Line Size (Inches/Dmtr)	12" - 18"	6" - 8"	8" - 10"	10" - 12"	6" - 8"	10" - 12"	6" - 8"	6" - 10"	8" - 10"	4" - 6" (or on-site source)
		Flow (Gallons per Day per Acre)	4,700	1,000	2,000	2,600	1,700	2,000	1,000	1,500 <sub>s</sub>	1,000 <sup>±</sup>	1,000
11	NATURAL GAS:	Preferred Min. Service Line Size (Inches/Dmtr)	6"	4"	4"	4"	4"	6"	4"	4" - 6"	4"	N/A
		On Site	Competitive	Preferred	Competitive	Preferred	Competitive	Competitive	Preferred	Competitive	Preferred	Preferred
12	ELECTRICITY:	Minimum Service Demand	4 - 6 MW	1 - 2 MW	0.5 - 1 MW	2 - 6 MW	0.5 MW	2 - 6 MW	0.5 MW	0.5 - 1 MW	5 - 25 MW	1 MW
		Close Proximity to Substation	Competitive	Competitive	Preferred	Not Required	Preferred	Competitive	Not Required	Preferred	Required, could be on site	Not Required
		Redundancy Dependency	Preferred	Preferred	Preferred	Not Required	Not Required	Competitive	Not Required	Preferred	Required	Not Required
13	TELECOMMUNICATIONS:	Major Communications Dependency	Required	Required	Required	Preferred	Required	Required	Preferred	Required	Required	Preferred
		Route Diversity Dependency	Required	Required	Required	Not Required	Not Required	Required	Preferred	Preferred	Required	Not Required
		Fiber Optic Dependency	Required	Required	Required	Preferred	Preferred	Required	Competitive	Preferred	Required	Not Required

PROFILE		A	B	C	D	E	F	G	H	I	J
CRITERIA		Computer & Electronic Manufacturing (High-Tech R&D)	Software & Media	Multi-Tenant Office	Food Processing	Other Manufacturing	Life/Bioscience R&D Campus	Wholesaling	Retail	Data Center	Incubator
14	<b>SPECIAL CONSIDERATIONS:</b>	<p>Acreage allotment includes expansion space (often an exercisable option). Very high utility demands in one or more areas common. Sensitive to vibration from nearby uses.</p>	<p>1: Research &amp; Development @ 80 ADTs per acre on the low end, estimated 200 ADTs per acre for general office on the high end.</p> <p>Location specific.</p>	<p>2: Range represents FAR 0.25 - 0.5 of office uses</p> <p>Location to other cluster industries.</p>	<p>May require high volume/supply of water and sanitary sewer treatment. Often needs substantial storage/yard space for input storage. Onsite water pre-treatment needed in many instances.</p>	<p>Adequate distance from sensitive land uses (residential, parks) necessary. Moderate demand for water and sewer. Higher demand for electricity, gas, and telecom.</p>	<p>High diversity of facilities within business parks. R&amp;D facilities benefit from close proximity to higher education facilities. Moderate demand on all infrastructure systems.</p>	<p>3: General warehousing rates</p>	<p>4: Based on discount warehouse @ 0.25 FAR</p> <p>5: Dependent on use, i.e., brewery vs. restaurant</p> <p>Location to cluster industries.</p>	<p>Site size differs due to land cost and availability. Urban-area centers may require 10-20 acres, while E. Oregon centers will typically use larger sites. Also the trend is towards increasing site size as cloud storage needs continue to increase. Power delivery, water supply, and security are critical. Surrounding environment (vibration, air quality, etc.) is crucial. May require high volume/supply of water and sanitary sewer treatment.</p>	<p>Often established by municipalities and have symbiotic relationships with colleges and/or universities.</p>

**Terms:**

More Critical ↑	'Required' factors are seen as mandatory in a vast majority of cases and have become industry standards.
	'Competitive' significantly increases marketability and is <i>highly recommended by Business Oregon</i> . May also be linked to financing in order to enhance the potential reuse of the asset in case of default.
Less Critical	'Preferred' increases the feasibility of the subject property and its future reuse. Other factors may, however, prove more critical.
	'Not Required' does not apply for this industry and/or criteria.
	'Avoid' factors act as deterrents to businesses in these industries because of negative impacts.
*Total Site: Building footprint, including buffers, setbacks, parking, mitigation, and expansion space.	
**Competitive Acreage: Acreage that would meet the site selection requirements of the majority of industries in this sector.	
† Data Center Water Requirements: Water requirement is reported as gallons per MWh to more closely align with the Data Center industry standard reporting of Water Usage Effectiveness (WUE).	
‡ Data Center Sewer Requirements: Sewer requirement is reported as 200% of the domestic usage at the Data Center facility. Water and sewer requirements for Data Centers are highly variable based on new technologies and should be reviewed on a case-by-case basis for specific development requirements.	



The 14 site requirements listed on the matrix provide a basis for establishing a profile of the physical and other site needs of the identified industry. The site requirements are intended to address the typical needs of each of the industry categories, and it is recognized that there will likely be unique or non-typical needs of a specific user that will need to be evaluated by on a case-by-case basis.

The following describes a few general requirements that apply to *all* industry type categories under consideration and then an overview of the 14 site requirements listed on the matrix.

### **General Requirements:**

- The underlying zoning on the site must allow the use outright within the identified category. For example, no zone change, conditional use and/or similar land use review is necessary. Many jurisdictions typically require a design or development review which is acceptable, since the timeframe for obtaining such design-related approvals will be addressed in the State's rating system.
- The site under consideration must be located geographically within a UGB.
- The site is not located within a 100-year floodplain as mapped by FEMA, although sites with approved FEMA map amendments (e.g., LOMA & LOMR) are acceptable.
- The net contiguous developable area (NCDA) of the site does not include hazardous contaminants as verified by a Level 1 Environmental Report, or a Level 2 Report that has received a No Further Action approval from DEQ; or existing wetlands or other natural features which are regulated at the State, Federal or local level; or federally endangered species.
- The NCDA does not contain any cultural or historical resources that have been identified for protection at the State, Federal or local level.
- The NCDA does not have mitigation plans that can be implemented in 180 days or less.

### **Site Requirements:**

1. **Total Site Size:** The site size is taken to mean the size of the building footprint and includes buffers, setbacks, parking, mitigation, and expansion space.
2. **Competitive Slope:** Most industrial uses require relatively large building footprints that do not accommodate steps in floor slabs, and sloping topography will require extensive excavation and retaining systems that increase development cost over flat sites. The figures given are the preferred maximum average slope across the developable portion of the site, recognizing that sites with additional area outside the building, or developments with multiple building pads, generally will have lower slope earthwork costs than sites with limited space outside the building footprint.
3. **Trip Generation:** Sites are frequently limited by a jurisdiction to a specified total number of vehicle trips entering and exiting the site. This site requirement is an estimate of the minimum number of average daily trips per acre (based on the range of building coverage) that should be available for each of the industrial categories based on the Institute of Traffic Engineers (ITE) Manual-Ninth Edition. The following table lists the ITE codes used to estimate average trips for the industry profiles represented in the matrix.

4. **Miles to Interstate or Freight Route:** With few exceptions, access to major freeways or freight routes is critical for the movement of goods. This site requirement indicates the typical maximum range of distance, in miles, from the site to the freeway or highway access. The roadways/intersections between the site and freeway/highway must generally operate at a level of service 'D' or better in accordance with the Highway Capacity Manual methodologies and general engineering standards.
5. **Miles to Frequent Transit Service:** Businesses located walking distance (within one-quarter of a mile) to a bus stop that is serviced by a frequent bus line enjoy a competitive advantage over others that are more limited in transportation access options.<sup>6</sup>
6. **Railroad Access:** The need for access to railroad for the movement of goods within each industrial category is dependent upon individual users, so the site requirements are identified as either "Preferred," "Not Required," or "Avoid" in some cases where the presence of rail may be considered a deterrent to business.
7. **Proximity to Marine Port:** The need for access to a marine port for the movement of goods within each industrial category is dependent upon individual users.
8. **Proximity to International/Regional Airport:** The need for access to a regional airport for the movement of goods or business travel within each industrial category is dependent upon individual users.
9. **Availability of Water:** This requirement indicates the minimum sizes of domestic water and fire lines immediately available to the site. In certain rural cases, a comparable supply from an on-site water system (i.e., well or reservoir with available water rights) may be acceptable. In addition to lines sizes, preference for high-pressure water capabilities and average flow demand in gallons per day is specified for each industry type.
10. **Availability of Sanitary Sewer:** This requirement indicates the minimum size of public sanitary sewer service line immediately available to the site. In certain rural cases, an on-site subsurface system providing a comparable level of service may be acceptable. Sewer flow requirements were determined by calculating a percentage of the water flow for each industry type.
11. **Natural Gas:** This requirement indicates the minimum size natural gas line that is immediately available to the site. It is assumed that the pressure demand for all industry categories is 40-60 psi.
12. **Electricity:** This requirement indicates the minimum electrical demand readily available to each industry and where proximity to a substation and redundancy dependency rank on the continuum of less critical to more critical. Estimated demand is based on review of existing usage from local utility providers, referencing industrial NAICS codes for the various profiles.
13. **Telecommunications:** This requirement indicates whether the availability of telecommunication systems are readily available, and where major commercial capacity, route diversity and fiber optic lines rank on the continuum of less critical to more critical. All sites are assumed to have a T-1 line readily available.

## INDUSTRY PROFILES

The following provides supplemental information for the attached Industrial Development Profile Matrix. The preceding matrix identifies 10 industry type categories (labeled A-J on the matrix) and 14 "site needs" which will assist in evaluating selected sites using the criteria of a given industry type.

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<sup>6</sup> We have defined "frequent bus line" as one with service occurring in no longer than 15 minute intervals.

The industry categories have been established based primarily on Business Oregon information (including input from various state agencies). Due to the wide range and constantly evolving characteristics of uses, borderline and/or non-typical applications will likely arise and will be evaluated on a case-by-case basis. It should be noted that certain industry types might have unique requirements, such as proximity to an international airport, which may require an additional category. It should also be noted that the industry types represent the primary use of the industry, and exclude secondary/accessory uses (e.g., training facilities, etc.) at this

## **A: Food Processing**

### *a) Description:*

Generally, this category includes industries that manufacture or process foods and beverages for human or animal consumption. Although this category has similar siting characteristics as Other Manufacturing, the unique needs associated with food processing, such as high-volume water and/or pressure demand, warrant this separate category. Broadly, there are two types of food processing categories:

- (1) raw materials; and
- (2) assembling.

Additionally, there is a packaging and warehousing component to these facilities.

### *b) Representative Industry Types:*

- Production foods/goods (e.g., bakeries)
- Fruits and vegetables
- Breweries and wineries
- Dairy
- Bottling/beverages

### *c) Representative Companies:*

- Ajinomoto (Portland)
- Beaverton Foods Inc. (Hillsboro)
- Cabroso (Medford)
- Rogue Creamery
- Hermiston Foods (Hermiston)
- Nancy's Yogurt (Eugene)
- Reser's Foods (Beaverton)
- Norpac (Salem and Stayton)
- Tillamook Dairy (Tillamook)
- Coca Cola bottling (statewide)
- Pepsi bottling (statewide)
- Full Sail Brewing (Hood River)
- Hood River Juice Company (Hood River)

## **B: Other Manufacturing**

### *a) Description:*

This category is intended to include industries that utilize relatively less intensive manufacturing processes, more assembly activities, and direct transfer to wholesale and domestic consumers. Typically, these facilities are freestanding, devoted to a single use, and emphasize manufacturing space over office space. Generally, these non-high-tech industries may be located on individual sites or in business/industrial parks and have less effect on surrounding uses. This category also includes some industrial service uses that are engaged in serving other businesses, such as an industrial laundry facility.

### *b) Representative Industry Types:*

- Electronic assembly support

- Wood products
  - Automobile products
  - Steel/metals
  - Building materials fabrication and processing
- c) *Representative Companies:*
- Warn Industries (Clackamas)
  - JV Northwest (Canby)
  - Hartung Glass (Wilsonville)
  - Oregon Iron Works (Clackamas)
  - Daimler Trucks North America (Portland)
  - Maxim Integrated (Beaverton and Hillsboro)
  - Oregon Steel Mills (Portland)

### **C: Wholesaling**

- a) *Description:*  
 The wholesale industry comprises companies involved in wholesaling merchandise and other goods such as mining, agriculture, manufacturing, and certain information industries. This industry typically represents an intermediate step in the production and distribution of goods and merchandise, as wholesalers generally sell goods intended for resale by a retailer. In some cases, users and customers may purchase these goods directly from a wholesaler with a retailer.
- b) *Representative Industry Types:*
- Automobile and Other Motor Vehicle Merchant Wholesalers
  - Furniture Merchant Wholesalers
  - Office Equipment Merchant Wholesalers
  - Hardware Merchant Wholesalers
  - Farm and Garden Machinery and Equipment Merchant Wholesalers
  - Sporting and Recreational Goods and Supplies Merchant Wholesalers
- c) *Representative Companies:*
- Cascade Wholesale Hardware
  - Costco Wholesale
  - Pearlier Auto Wholesale

### **D: Retail**

- b) *Description:*  
 This industry contains businesses that sell merchandise, largely without any transformation of the good, with services largely being ancillary to the sale of said merchandise. The businesses usually receive goods from wholesalers, and typically do not transform the good before its final sale to the user or customer. There are sixty-nine subsectors of retail trade, some of which are reflected in the bulleted list below.
- c) *Representative Industry Types:*
- Specialty food/grocery
  - Coffee shops/cafes
  - Theater/recreation/entertainment
  - Brew pub/wine or bottle shops
  - Full service local restaurants
  - Food car pods
  - Bookstores and boutiques
  - Wellness and spa services
  - Hotel & hospitality
  - Niche manufacturing (bike, bakery, outdoor, etc.)

d) *Representative Companies:*

- New Seasons
- Dutch Bros. Coffee
- McMenamins Cornelius Pass Roadhouse
- P.F. Chang's
- Barnes & Noble
- Align Wellness Center
- Embassy Suites
- Orenco Station Cyclery

**E: Incubator**

a) *Description:*

This industry type is often established by local municipalities and has a symbiotic relationship with colleges and universities within the vicinity. Business incubators are designed to help new and small businesses in the start-up and early growth phases of development, through providing a flexible combination of business development tools, facilities and resources, and personal contacts.

b) *Representative Industry Types:*

- Not applicable for this industry type, as the incubators serve as cultivating space for several uses to grow in their nascent business stages.

c) *Representative Examples:*

- Launch Pad Baker City
- Microenterprise Investors Program of Oregon (Portland)
- BESThq (Beaverton)
- Forge Portland
- WeWork (Portland)

**F: Data Center**

a) *Description:*

Data centers are classified under NAICS 5182: Data Processing, Hosting, and Related Services. We consider them separately from other "information and software" activities because the land and utility needs are far different. Over the just the last five years, unprecedented growth in demand for data hosting has developed an entirely new segment of the industrial landscape in Oregon attracted to a generally temperate climate, low overall disaster risk, low utility rates from renewable sources, and abundant water.

The growth outlook for data center siting is strong, as high growth rates for streaming, software as a service (SaaS), and cloud data and processing across the industry creates an accelerating need for hosting services. Global data center demand is expected to grow threefold over just the next five years.<sup>7</sup> Key areas like the Columbia Basin, Central Oregon and Hillsboro compete for these industrial users.

b) *Representative Companies:*

- Vadata
- Google
- Apple
- Facebook
- ViaWest
- Adobe

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<sup>7</sup> Cisco Global Cloud Index (2015).

# Exhibit C - Umatilla Industrial Area Utility Technical Memorandum



THE  
LANGDON  
GROUP



GATEWAY  
MAPPING  
INC.

OTHER J-U-B COMPANIES

**DATE:** 3/9/2020  
**TO:** Dave Stockdale, City Manager  
City of Umatilla  
**CC:** Scott Coleman, Public Works Director  
Melissa Ince, Finance Director  
**FROM:** Shae Talley, PE  
Tirzah Eyre, EIT  
**SUBJECT:** Umatilla Industrial Area Utility Technical Memorandum



## 1 INTRODUCTION & BACKGROUND

### 1.1 Introduction

The City of Umatilla is currently evaluating the feasibility of providing utility service to an industrial area of interest near the Southwest Boundary of the City. This study area is bordered to the west by County Road 1225 and to the east by Interstate 82 as shown in Figure 1 in Appendix A. City staff have developed a list of infrastructure projects that would be necessary for industrial development of this area including potable water, water storage, sanitary sewer, and industrial wastewater.

In general, utility improvements required to meet existing and future demands are developed through Master Plans; however, the City requires an immediate, preliminary review to assist City staff with ongoing land negotiations and stakeholder discussions. This technical memorandum will summarize the review and provide preliminary cost opinions for each infrastructure project specified by the City.

The infrastructure projects analyzed are as follows:

- Potable Water Main Extension to Serve the Subject Property
- Sanitary Sewer Main Extension to Serve the Subject Property
- Potable Water Storage Improvements – Coyote Reservoir Expansion required to Serve the Subject Property
- Industrial Wastewater (IWW) Treatment and Disposal Alternatives
  - Industrial Wastewater Collected and Conveyed to the Wastewater Treatment Plant (WWTP)
  - Non-Contact Cooling Tower Industrial Wastewater
    - Alternative 1 - Land Apply to Farmland
    - Alternative 2 - Store and Land Apply to Residential Areas

This technical memorandum is for City use only and does not discuss recommended alternatives, other necessary upgrades to the existing system<sup>1</sup>, an implementation plan, nor a schedule, as these items will be included as part of future planning efforts. Future efforts include development of a Water Master Plan and Wastewater Facility Plan in accordance with state guidelines to further develop the improvements outlined in this tech memo. The proposed planning documents will further vet and quantify existing and future water demands and wastewater flows; identify system deficiencies; plan for system expansions; develop improvement alternatives and select a recommended alternative; develop planning level cost estimates; and outline an implementation plan for sustainable management of the City's public utilities.

## 1.2 Study Area

The study area is comprised of approximately 450 acres. For the purposes of this study, the west boundary of the study area is delineated by County Road 1225; the north boundary of the study area is delineated by County Road 1226; the east boundary is delineated by Interstate 82; and the south boundary is delineated by County Road 1225 and Interstate 82. Figure 1 in Appendix A depicts the overall study area.

## 2 PLANNING CRITERIA

The evaluation of infrastructure projects was completed at a planning level of detail. The assumptions and design criteria used herein were developed by J-U-B and City staff and should be reviewed and refined during future planning and design efforts.

### 2.1 Planning Assumptions and Design Criteria

#### 2.1.1 Land Use

Currently, land within the study area is used for agricultural purposes. The City of Umatilla has indicated this land, falling within the future UGB, will be rezoned to light industrial. Based on City input, it is assumed for planning purposes that the study area will be comprised of a single 100-acre data center facility, one 60-acre small food processing facility, and two 40-acre packaging/manufacturing facilities at full buildout. All four facilities are considered light industrial.

#### 2.1.2 Demands and Flows

Buildout demands and flows represent the peak demands and flows anticipated in the system when the study area is fully developed. All undeveloped land around the study area was assumed to remain undeveloped; as such, demands and flows were not considered for this area. As the current study area land use is agricultural, there is no historical data for light industrial facilities within this area. Demands for each lot were determined based on the type of proposed facility and experience gained from analysis of similar sized industries. It was assumed that the data center will remain in operation 24 hours a day while other industries will only operate 8 hours a day.

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<sup>1</sup> Well withdraw increased and delivery capacity to subject property area, for example (not inclusive).

The data center will have both potable water and industrial water demands supplied by the City of Umatilla. Potable demands were determined using Oregon Administrative Rule (OAR) 340-071-0220 Table 2 Quantities of Sewage Flows, as given by the State of Oregon Department of Environmental Quality in their publication Onsite Wastewater Treatment Systems, and assuming the data center has 350 employees on site, as estimated by City staff. Industrial demands were estimated to be 1.2 million gallons per day (MGD) based on PDX63 data center campus information provided by data center personnel.

The data center will have both sanitary sewer and industrial wastewater flows. Sanitary sewer flows were determined using the OAR 340-071-0220 Table 2 factory flow and assuming the data center has 350 employees on site as estimated by City staff. Industrial wastewater flows were estimated to be 440,000 gallons per day (gpd) based on PDX63 data center campus information provided by data center personnel.

All other industries were assumed to have 20 employees onsite per lot and have potable water demands corresponding to OAR 340-071-0220 Table 2. Industrial water demands were assumed to be 1,100 gallons per acre day (GPAD) as determined from the 2018 Umatilla Beneficial Reuse Feasibility Analysis (BRFA) report. Sanitary sewer flows were assumed to be equal to potable water flows and industrial wastewater flows were assumed to be equal to industrial water flows.

For long-term planning purposes, the water demands and wastewater flow assumptions above were also applied to 880 acres of proposed light industrial land at the Army Depot site to adequately size the study area infrastructure that will one day serve the Army Depot. Future water and wastewater infrastructure to serve the Army Depot area were not analyzed. No analysis of infrastructure outside of the study area was performed. It is recommended the City develop a Water Master Plan and Wastewater Facility Plan in accordance with state guidelines to develop the possible infrastructure, such as piping and lift stations, to serve the Army Depot.

The demands and flows above represent the estimated average day demand (ADD) and estimated average day flow (ADF), respectively. To identify the maximum day demand (MDD) and peak hourly demand (PHD), demand peaking factors were assumed based on data from the 2008 Water Master Plan (WMP) and industry values in similarly sized cities. Sanitary and industrial sewer flows only require a peak hourly flow (PHF). A flow peaking factor equivalent to the PDD peaking factor was assumed based on the principle that demand inflows are equal to outflows. The following relationships were used to obtain MDD, PHD, and PHF:

$$\text{MDD} = 1.6 * \text{ADD}$$

$$\text{PHD} = 3.0 * \text{ADD}$$

$$\text{PHF} = 3.0 * \text{ADF}$$

Fire flows were also considered for the MDD scenario. It was assumed that the data center would have fire flows of 2,500 gpm for 2 hours and all light industrial lots would have fire flows of 3,000 gpm for 3 hours. These assumptions were based on the 2018 Umatilla BRFA.

A summary of the assumed demands is given in the following table.



**Table 1 - Demands**

Facility Type	Number of Lots	Total Water Demand (gpm)			Sanitary Sewer Flows (gpm)		Industrial Wastewater Flows (gpm)	
		ADD	MDD	PHD	ADF	PHF	ADF	PHF
Data Center Noncontact RO Reject	1	546	874	1639	26	77	191 25	573 76
Food Processing	1	139	222	417	2	4	138	413
Packaging/Manufacturing	2	93	149	279	2	4	92	275
Army Depot Industrial	35	59	95	178	2	4	58	174

\* Total Water Demand includes both industrial and potable demands.

### 2.1.3 Manning's "n"

The roughness factor is used in the Manning's formula below to relate flow in a gravity pipe (Q) with the cross-sectional area of the flow (A), hydraulic radius of the flow (R), and the pipe slope (S<sub>o</sub>).

$$Q = \frac{1.49AR^{2/3}}{S_o^{1/2}}$$

Typical "n" values range from 0.009 for very smooth glass or new plastic to greater than 0.016 for unfinished concrete. Sanitary sewer pipes, however, develop a slime layer on any pipe material in contact with sewage which provides a relatively consistent roughness regardless of material. To account for this, it was assumed that a Manning's "n" of 0.013 would be used regardless of pipe material and size.

### 2.1.4 Hazen-Williams "C" Coefficient

The "C" coefficient is used in the Hazen-Williams formula below to relate flow in a pressurized pipe (Q) with the cross-sectional area of the flow (A), hydraulic radius of the flow (R), and the slope of the energy grade line (S).

$$Q = 1.318CAR^{0.63}S^{0.54}$$

Typical "C" values range from 60 for rough, aged pipes to 150 for smooth, new pipes. It was assumed that a Hazen-Williams "C" value of 150 would be used regardless of pipe material as all pipes will be constructed new.

### 2.1.5 Pipe Sizing Methodology

Pipes were sized using two different methodologies depending on whether the pipe would be gravity fed or pressurized.

#### 2.1.5.1 Gravity Pipe

All gravity pipes were sized using the Manning's formula and the maximum depth of flow/diameter of pipe (d/D) indicator. This indicates how much of the pipe capacity is being used. When the calculated flow in a pipe reaches the point where the d/D ratio is greater than the maximum design d/D ratio, the pipe diameter is increased. Buildout flows were used to size the proposed pipes.

A graduated scale for maximum d/D, dependent on the size of the pipe, was used and is given in the table below. This allows for a larger safety factor for smaller pipes where variations in land use and extensions of the service area can have large impacts on the available capacity of

the system. Larger pipes have a smaller safety factor because variations in land use tend to balance out over the larger area served by the system. Pipes smaller than 8 inches in diameter were not considered for this analysis and are not recommended as they are more difficult to maintain.

**Table 2 – Depth over Diameter Ratios for Design Pipes**

Size	d/D	Resultant Safety Factor
8"	0.50	2.00
10"	0.55	1.71
12"	0.60	1.49
15"	0.65	1.32
≥ 18"	0.75	1.10

### 2.1.5.2 Pressurized Pipe

Pressurized potable water pipes were sized using the Hazen-Williams formula and the minimum allowable pressure criteria. Per Oregon Health Authority (OHA) OAR 333-061-0025, potable water mains must not have a pressure less than 20 psi at any given time. Two scenarios were evaluated for system pressures: MDD + Fire Flow and PDD. Pipe sizes were initially assumed to be 8-inch diameter pipe and were upsized as necessary to meet OHA pressure requirements.

Pressurized irrigation water pipes were sized using the Hazen-Williams formula, the minimum allowable pressure criteria, and the maximum allowable velocity criteria. Per a 2008 publication by IRZ Consulting titled *Irrigation Practices in the Umatilla and Morrow County Area*, pressurized irrigation pipes must not have a pressure less than 50 psi at any given time. It is also considered good engineering practice to have pipe velocities below five feet per second. All irrigation pipe was analyzed under ADD and PHD scenarios. Pipe sizes were initially assumed to be 4-inch diameter pipe and were upsized as necessary to meet pressure and velocity requirements.

Sanitary and industrial force mains were sized using the Hazen-Williams formula and the maximum allowable velocity criteria. Pipe velocities are not to exceed 8 feet per second (fps) per the State of Oregon Department of Environmental Quality in Oregon Standards for Design and Construction of Wastewater Pump Stations. Pipe sizes were initially assumed to be 8-inch diameter pipe and were upsized as necessary to meet velocity requirements.

## 3 WATER

The City is evaluating the feasibility of providing potable and industrial water to the study area. Analysis of the proposed infrastructure did not include evaluating existing water system capacity, existing well capacity, existing pumping capacity, system storage needs, and water rights availability. The existing system capacity should be analyzed with future master planning efforts to determine if any portion of the system needs to be upsized to accommodate the study area demands.

## 3.1 Proposed Water Supply Infrastructure

### 3.1.1 Water Main Extension

The existing potable water main will be extended south along County Road 1225 until the end of the Cleaver Land. A stub will be provided at the intersection of the Cleaver Land and County Road 1225 to facilitate the anticipated Army Depot industrial area connection. The extension is sized to meet both potable and industrial water demands from the study area and the future Army Depot industrial lots to the southwest.

Water demands for the study area were determined by applying a gallon per capita per day (GPCD) demand for potable needs and a gallon per acre per day (GPAD) demand for industrial needs. Specific values for GPCD and GPAD demands are given in section 2.1.2 above.

The potential buildout water demand was calculated by multiplying the land area by the assumed GPAD unit demand for industrial needs and by multiplying the assumed number of employees by the assumed GPCD unit demand for potable needs. This calculation resulted in a gallon per day (GPD) value. The data center demand did not need to be converted to a per day value since it was already given as such. Gallons per minute (gpm) was determined from GPD. These average day demands (ADD) were converted to maximum day demands (MDD) and peak hourly demands (PHD) using the peaking factors in section 2.1.2 above. The total demands for each scenario are given in Table 1 above.

Pipe size was determined for the preliminary layout using the Hazen-Williams equation. The value for the Hazen-Williams “C” coefficient is described in section 2.1.4. Resulting pipe size is shown in Figure 2 of Appendix A. It should be noted that the stub at the intersection of the Cleaver Land and County Road 1225 will need to be 16-inch pipe. Estimated costs for the water main extension are in Appendix B. It was assumed the City would utilize the existing right of way or acquire a utility easement while possessing the land therefore no easement acquisition cost was included in the estimate. The existing system capacity and condition was not analyzed therefore the cost estimate does not include costs for upsizing the existing system.

### 3.1.2 Coyote Reservoir Expansion

The 2008 WMP recommended a second Coyote Reservoir. As directed by the City, the second reservoir was upsized and assumed adequate to serve the study area. The second Coyote Reservoir was reviewed for probable cost for inclusion in this analysis. No analysis was completed to determine capacity needs, reservoir type, location, and sizing. It is assumed that improvements will be similar to those described in Chapter 4 of the 2008 WMP. Per the City’s request, this evaluation assumed a 1-million-gallon tank instead of the 750,000-gallon tank described in the 2008 WMP. The City also requested only a ground level reservoir be considered and to disregard the elevated reservoir alternative proposed in the 2008 WMP.

Costs for a steel, ground level reservoir and appurtenances were based on costs from comparable projects by using a dollar per gallon amount. Estimated costs for the water storage expansion are in Appendix B. It should be noted that this evaluation did not analyze existing well capacities, water rights, nor booster station capabilities.

## 4 SANITARY SEWER

The City is evaluating the feasibility of providing sanitary sewer service to the study area. Only new infrastructure was included in the analysis. The existing sanitary sewer system and wastewater treatment plant capacity and condition were not analyzed. The existing infrastructure should be analyzed with the future master planning efforts to determine if any portion of the system needs to be upsized to accommodate the study area flows.

### 4.1 Sanitary Sewer Main Extension

Due to the topography of the study area, it is not possible to serve the study area with only gravity sanitary sewer. The highest elevation is at the northwest corner of the study area and the land slopes steeply from that point east towards Interstate 82. Adverse slopes as high as 24% would cause a gravity conveyance pipe to be too deep for conventional construction techniques; therefore, a wastewater pumping system is needed to convey flow to the existing collection system. All industrial lots will gravity flow to a lift station which will pump sanitary sewer flows west to County Road 1225 then north to County Road 1226 then west connecting to the existing manhole at the intersection of County Road 1225 and Dark Canyon Road as shown in Figure 3. The lift station and sanitary sewer pipes are sized to meet sanitary and “dirty” (typical strength) industrial sewer demands from industrial lots within the study area. Army Depot industrial lots will be served by a separate lift station on the Army Depot property and this lift station was not included in this analysis.

Sanitary sewer demands for the study area were determined by applying a gallon per capita day per (GPCD) demand as described above for each worker. Industrial sanitary sewer demands were estimated using a gallon per acre per day (GPAD) demand for industrial sanitary sewer flows that will be connected to the sanitary sewer system. Specific values for GPCD and GPAD demands are given in section 2.1.2 above.

It should be noted that domestic sanitary sewer flows are the only flows from the data center that will be incorporated into the sanitary sewer system. Other data center waste streams, such as Reverse Osmosis (RO) reject water, are assumed to be managed onsite by the industrial user (e.g. by evaporation).

The majority of the industrial wastewater will be non-contact cooling tower industrial wastewater from the data center. Non-contact cooling tower industrial wastewater is considered “clean” or low-strength and does not require treatment; therefore, “clean” IWW will be collected and disposed of separately as described in section 5.

Potential buildout flows were calculated by multiplying the land area by the assumed GPAD unit demand for industrial needs and by multiplying the assumed number of employees by the assumed GPCD unit demand for sanitary sewer needs. This calculation resulted in a gallon per day (GPD) value. Gallons per minute (gpm) was determined from GPD. The total flows are given in Table 1 above.

The lift station was placed at the lowest elevation on the southeast corner of the proposed data center property. The lift station was sized to accommodate 110 % of the buildout flows from the study area which is approximately 1,157 gpm. This is desirable to reduce the chance of

overloading the lift station. All lots are served from the back and gravity flow to the lift station. The food processor is served by the 12-inch gravity pipe. The data center and two packaging/manufacturing facilities are served by the 15-inch gravity pipe as shown in Figure 3. A force main will then carry flows west to County Road 1225 and then north to the existing sanitary sewer system. It is important to note that everything east of the lift station will not be able to be served due to steep slopes. Further analysis should take place as part of future planning studies to identify the best location for the lift station.

Pipe sizes were determined for the preliminary layout using Manning's equation. Values for Manning's "n" coefficient and d/D ratios are described in sections 2.1.3 and 2.1.5, respectively. Resulting pipe sizes are shown in Figure 3 in Appendix A. Estimated costs for the water main extension are included with the estimated costs for the sanitary sewer main extension in Appendix B. It was assumed the City would acquire an easement while possessing the land therefore no easement acquisition cost is included in the estimate. While no analysis of the existing system was performed, it is expected that the connection between the larger diameter, proposed sanitary sewer piping and the smaller diameter, existing piping will create a bottleneck. This will require all downstream infrastructure, possibly including the wastewater treatment plant, to be upsized to accommodate the study area flows. The cost estimate does not include costs for upsizing the existing system.

## 5 INDUSTRIAL WASTEWATER

The City is evaluating the feasibility of providing industrial wastewater service to the study area. Each industrial user has different expected industrial wastewater needs. As such, different collection and treatment options were analyzed for the different types of industrial wastewater.

### 5.1 Standard Industrial Wastewater – Pretreat IWW Onsite and Convey to WWTP

Standard industrial wastewater, also referred to as "dirty" (typical strength) industrial wastewater, is all water that has come into contact with contaminants during use and requires treatment. Industrial wastewater is often high-strength as compared to typical sanitary sewer flows. These flows must be properly treated to meet federal and state pretreatment requirements before they can be discharged. For the study area and Army Depot property, it is assumed all industrial lots will be required to pretreat their industrial wastewater to typical sanitary sewer strengths before they can discharge to the sanitary sewer system. Once discharged, study area industrial flows will be carried to the existing wastewater treatment plant (WWTP) for treatment and disposal as described in section 4. Due to topography, a separate lift station at the Army Depot property is expected to be needed to collect flows from the Army Depot and pump the wastewater to the existing system. There is the possibility of constructing an industrial wastewater treatment plant (IWWTP) on the Army Depot property. After construction, all industrial wastewater flows will be carried to the IWWTP and not to the existing WWTP. Analysis and cost estimation of an IWWTP and its collection system was not performed. No analysis of the existing sanitary sewer system or WWTP capacities were performed. Infrastructure needs for the Army Depot, including the additional lift station, were not evaluated and should be analyzed in future master planning efforts.

## 5.2 “Clean” Industrial Wastewater (IWW) Alternatives

Industrial wastewater from the data center noncontact cooling tower is considered “clean” as it was kept within a closed system and did not come into contact with chemical or biological contaminants during use. Due to the low-strength nature of these flows, no treatment is necessary before discharging. Additionally, this “clean” IWW can be used for irrigation. Samples taken from a similar data center campus in Umatilla showed that total dissolved solids (TDS) levels were well below the 450 mg/L maximum for irrigation reuse therefore it was assumed that no dilution of the “clean” wastewater would be needed.

### 5.2.1 Alternative 1 – Land Application to Farmland

This alternative involves land applying the “clean” industrial wastewater to farmland just north of the industrial parcels during the irrigation season. The City will need to develop a contract with a nearby farmer and discharge the “clean” wastewater to the farmer’s irrigation system. At the time of this report, no conversations have been had with farmers regarding taking the water for irrigation. As the project is pursued and landowners are engaged, the alignment should be adjusted as necessary to convey IWW flow to the desired landowner and tie into existing piping. An irrigation water balance was calculated using the expected non-contact cooling IWW flow and typical values for alfalfa irrigation demand, rain, evaporation and temperature. The expected annual IWW flow of 48 million gallons would need approximately 50 acres of irrigated alfalfa (at 42.25 inches of irrigation per year) to dispose of the water. Since some IWW is produced when irrigation demand is low, about three million gallons of storage is needed. If storage is not constructed, about 60 acres of irrigated alfalfa would be needed to receive the IWW during periods of low irrigation demand; however, supplemental irrigation water would be needed to meet irrigation demands during peak irrigation season. It was assumed that all supplemental water would be provided by the farmer and that the farmer would take IWW flows at all times. Graphs of the irrigation water balance on 50 acres and 60 acres are shown in Figure 4 and Figure 5, respectively, in Appendix A. For cost estimation purposes, it was assumed storage would not be constructed and additional irrigation water would be provided by the farmer as needed. Calculations are shown in Appendix C.

Piping will be provided to convey the wastewater from the property line of the data center north to the farmland along County Road 1225. Pumps required for conveyance are assumed to be provided by the data center. All collection and distribution piping, equipment, and appurtenances on either the data center property or farmland is the responsibility of the respective landowners and was not evaluated or estimated.

Pipe size was determined for the preliminary layout using the Hazen-Williams formula. The values for the Hazen-Williams “C” coefficient is described in section 2.1.4. The resulting pipe size is shown in Figure 6 in Appendix A. Estimated costs for this alternative are included in Appendix B.

### 5.2.2 Alternative 2 – Storage and Land Application to Residential Irrigation

This alternative involves storing the data center non-contact cooling wastewater in a storage facility and providing residential irrigation to nearby neighborhoods north of the study area. This will require a new storage facility and booster station to provide system pressurization.



Residential area lawns, perfectly maintained, have an estimated irrigation demand of 47.2 inches. For this analysis, it was estimated that the public would only be about 50% reliable resulting in an assumed irrigation demand of 23.6 inches per irrigation season.

As before, an irrigation water balance was calculated using the expected non-contact cooling IWW flow and typical values for lawn irrigation demand, rain, evaporation, and temperature. The expected annual IWW flow of 48 million gallons would need about 94 acres of irrigated lawn (at 23.6 inches of irrigation per year) to dispose of the water and 6.5 million gallons of storage to hold IWW when flow is greater than expected irrigation use. If the public is more efficient, less acreage and storage would be needed; however, a buffer is recommended. It is important to note that there are currently not enough residential neighborhoods between the Study Area and Pine Tree Avenue to fully utilize the expected annual IWW flow. However, the City has several residential developments planned for the area adjacent to County Road 1225/Powerline Road between the Study Area and Pine Tree Avenue. It is assumed the new developments would provide the additional 81 acres needed to dispose of all the IWW flow and would require supplemental irrigation water when fully built out. If this alternative is selected, an additional method for disposing of the remaining IWW flows may be needed if sufficient residential lawn area is not available. A graph of the irrigation water balance on 94 acres is shown in Figure 7 in Appendix A. Calculations are shown in Appendix C.

Piping will be provided on County Road 1225 to convey the wastewater from the property line of the data center to the residential neighborhoods. This pipe was determined to be 8-inch diameter and was included in the cost estimate. All collection and distribution piping, equipment, and appurtenances on the data center property and in residential neighborhoods is the responsibility of the respective land owners and was not evaluated or estimated.

The 6.5 MG storage facility would be needed to store excess “clean” industrial wastewater during the middle of the irrigation season when wastewater flows are greater than residential irrigation demands. Stored water will be irrigated when irrigation demand exceeds IWW production toward the end of the season. It was assumed that storage would be located adjacent to County Road 1225 on the data center property. The data center would be responsible for providing their own piping and pumping to the storage facility therefore costs for such were not estimated. A booster station would be needed to pump water from the storage facility to the residential neighborhoods. Booster station costs were based on flow and no evaluation of booster station pumps, piping, and appurtenances was performed.

Supplemental irrigation water is needed for the residential lawns during the beginning of the irrigation season and, if residents are more efficient than 50%, during the rest of the season. It was assumed residents would use potable water for additional irrigation from the City system. The two systems cannot be directly connected. It was assumed that the proposed potable water main extension discussed in section 3 would provide supplement irrigation via a connection to the proposed storage facility with a backflow prevention device. The infrastructure needed for this alternative was included in the cost estimate. The existing water rights, supplemental irrigation storage, and pumping capacities were not analyzed as part of this improvement. Other supplemental irrigation water options available to the City include utilizing the water right from the acquired study area land and utilizing the existing surface

water right from the Columbia River. It is recommended that these alternatives be analyzed in depth during future master planning efforts.

Pipe size was determined for the preliminary layout using the Hazen-Williams equation. The values for the Hazen-Williams “C” coefficient is described in section 2.1.4. The resulting pipe size is shown in Figure 8 in Appendix A. Estimated costs for this alternative are included in Appendix B.



## 6 REFERENCES

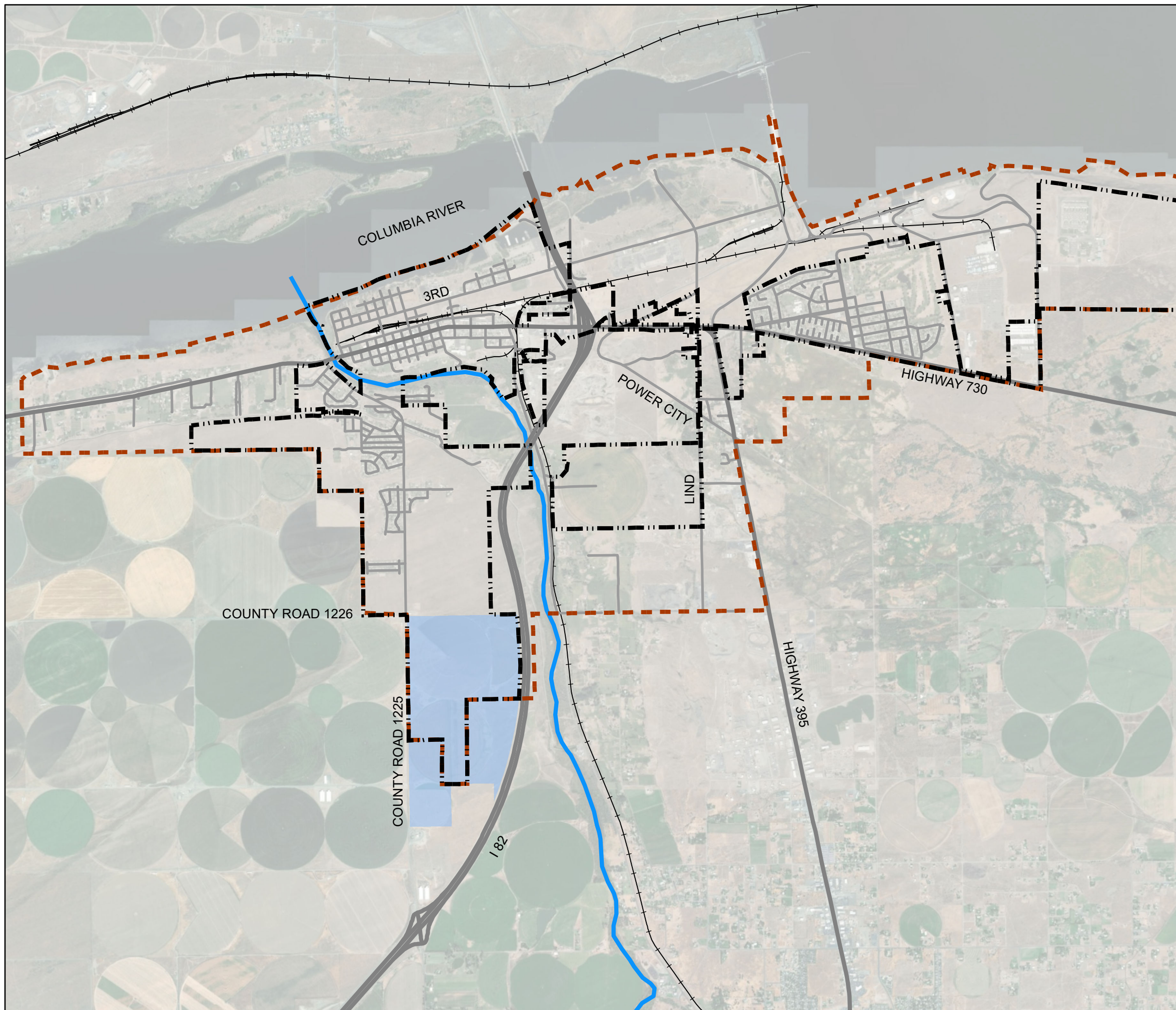
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## Appendix A – Figures



# Figure 1

## Study Area



### Legend

- City Limits
- Urban Growth Boundary
- Major Streets
- Highway/Interstate
- Railroad
- Umatilla River
- Study Area

Not to scale



Date: Dec 24, 2019

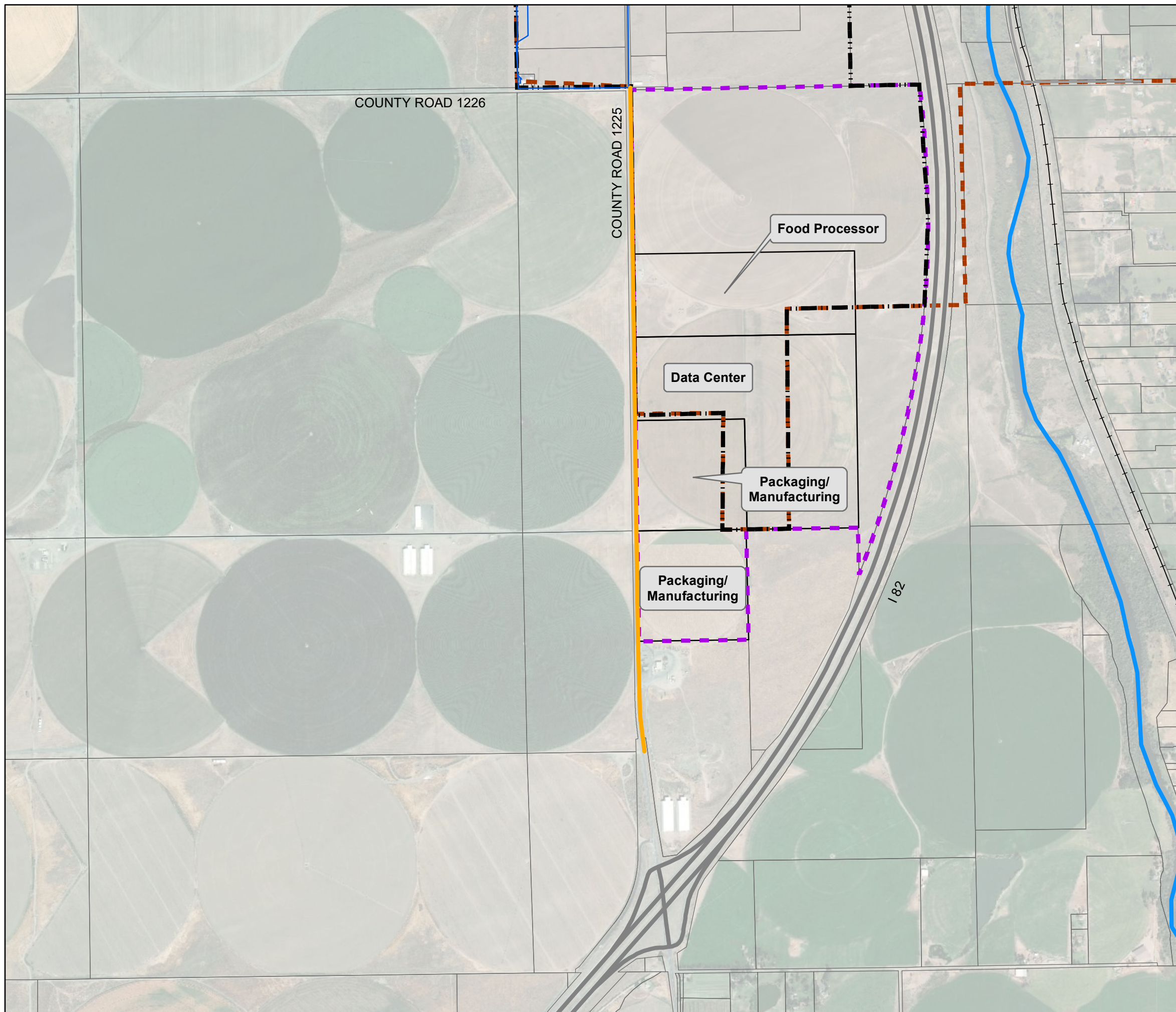






# Figure 2

## Potable Water



### Legend

- City Limits
- Urban Growth Boundary
- Study Area
- Assumed Lot Boundaries
- Parcel Boundaries
- Major Streets
- Highway/Interstate
- Railroad
- Umatilla River
- Existing Potable Water Main
- Proposed Water Main Pipe**
- 16-inch

Not to scale



Date: Dec 24, 2019





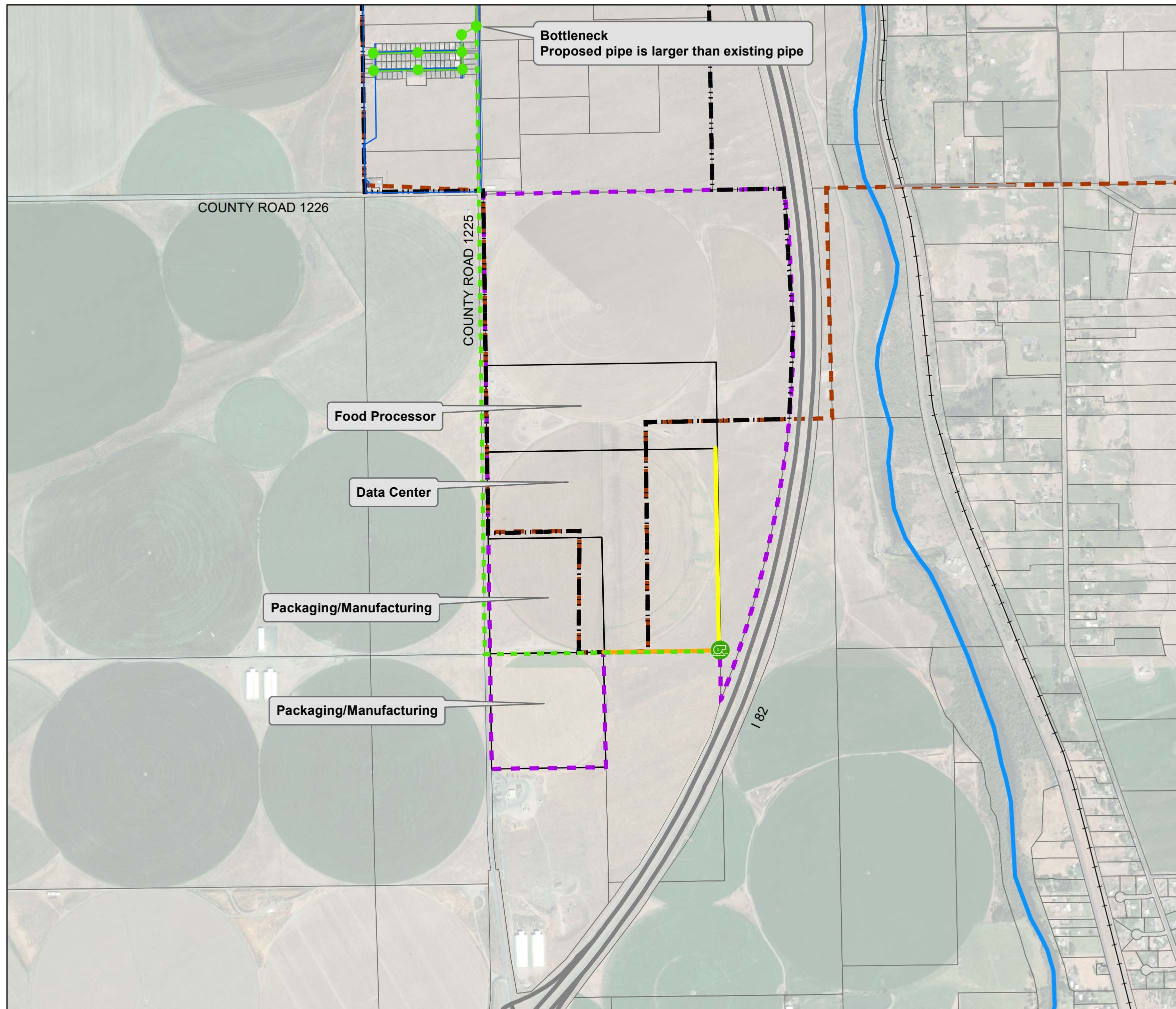


# Figure 3

## Sanitary Sewer

### Legend

- City Limits
  - Urban Growth Boundary
  - Study Area
  - Assumed Lot Boundaries
  - Parcel Boundaries
  - Major Streets
  - Highway/Interstate
  - Railroad
  - Umatilla River
  - Existing Potable Water Main
  - Existing Sanitary Sewer Main
  - Existing Sanitary Sewer Manhole
  - Lift Station
- Proposed Sanitary Sewer Pipe**
- 12-inch Forcemain
  - 12-inch Gravity Pipe
  - 15-inch Gravity Pipe



Not to scale

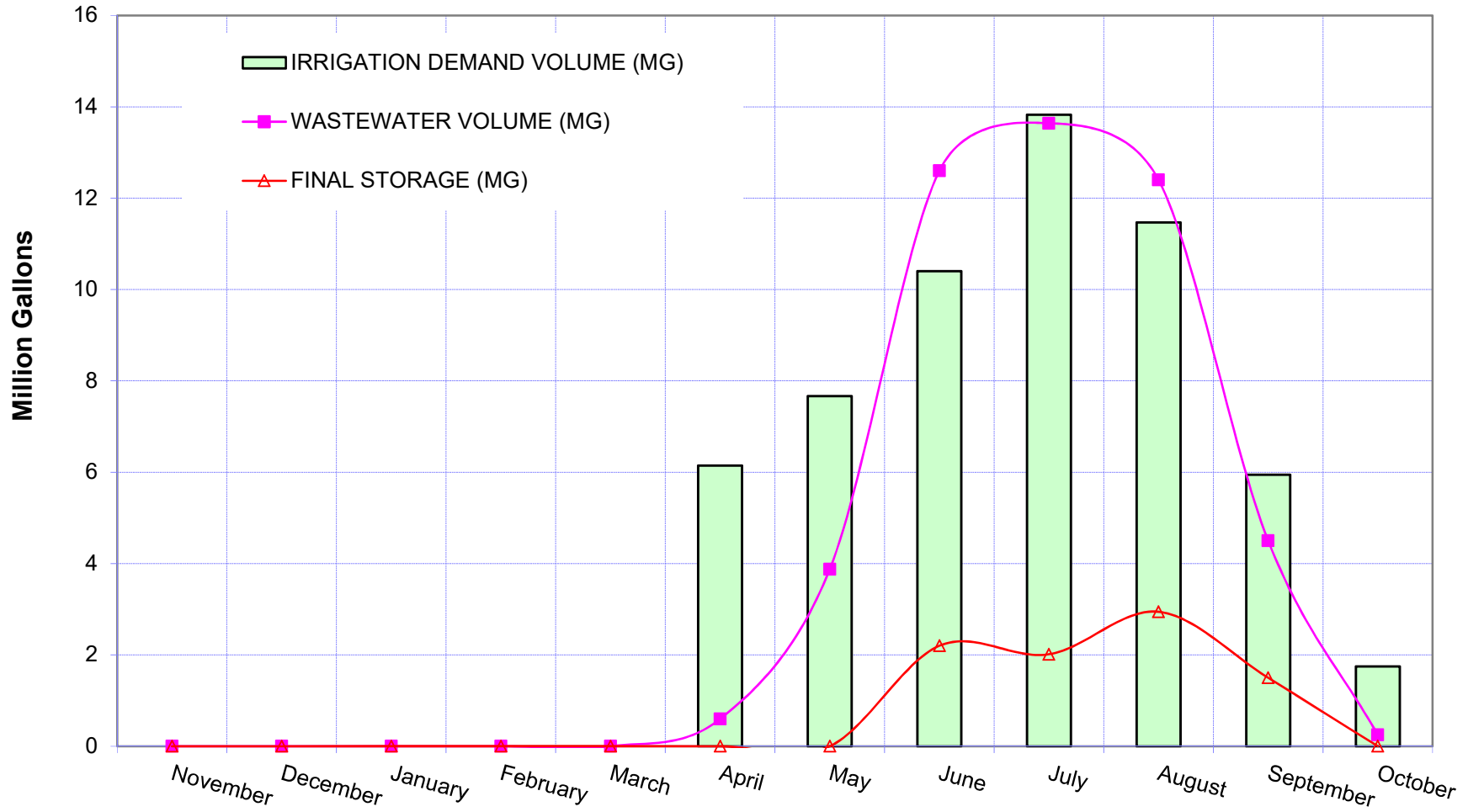


Date: Dec 24, 2019



# Figure 4

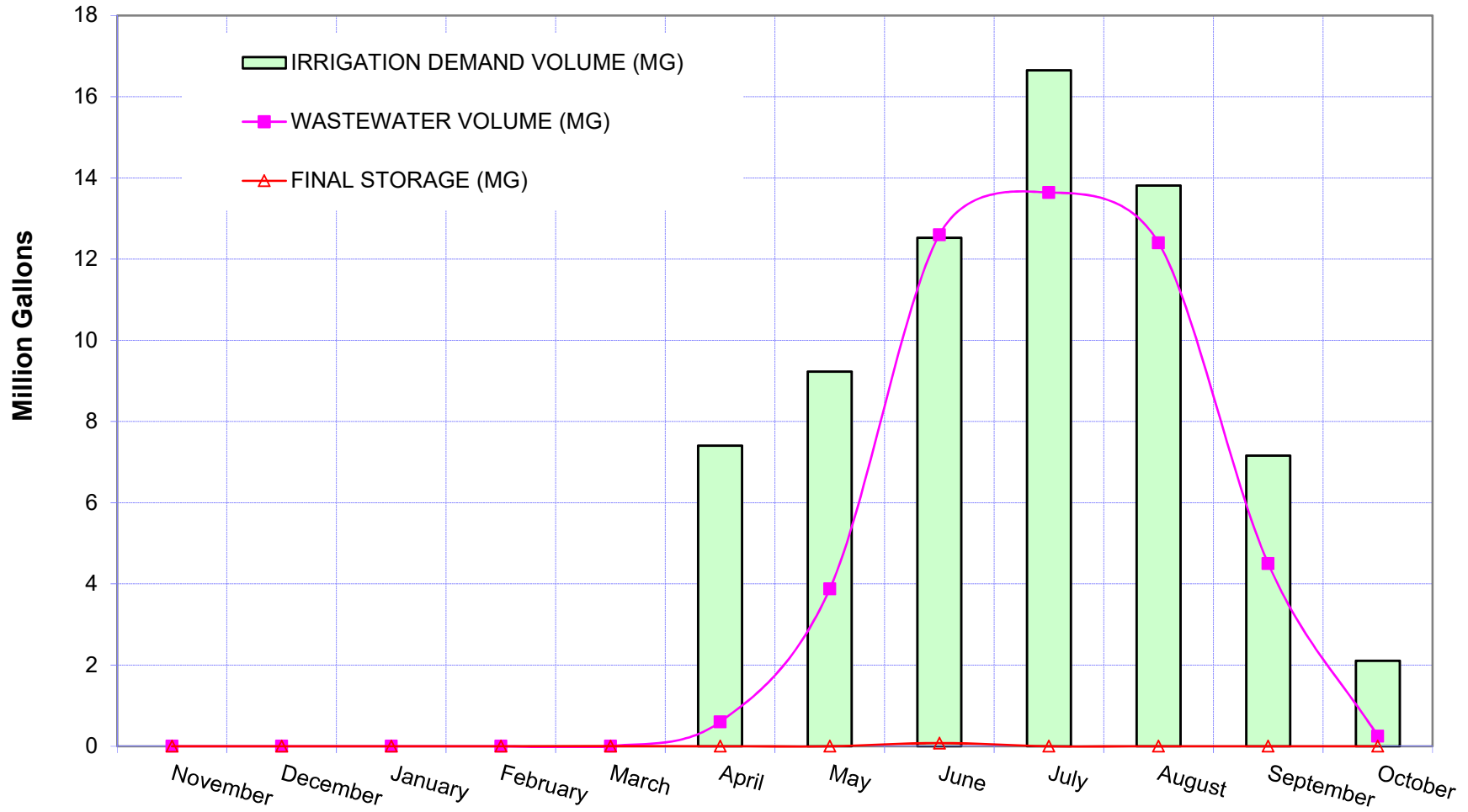
**Umatilla Water Balance**  
**47.9 MG IWW/yr,**  
**Annual Irrigation Demand: 42.2 in/yr**  
**Land Acreage: 50 Acres**  
**Storage: 2.9 Million Gallons**





# Figure 5

**Umatilla Water Balance**  
**47.9 MG IWW/yr,**  
**Annual Irrigation Demand: 42.2 in/yr**  
**Land Acreage: 60 Acres**  
**Storage: ZERO Million Gallons**








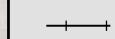




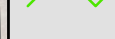


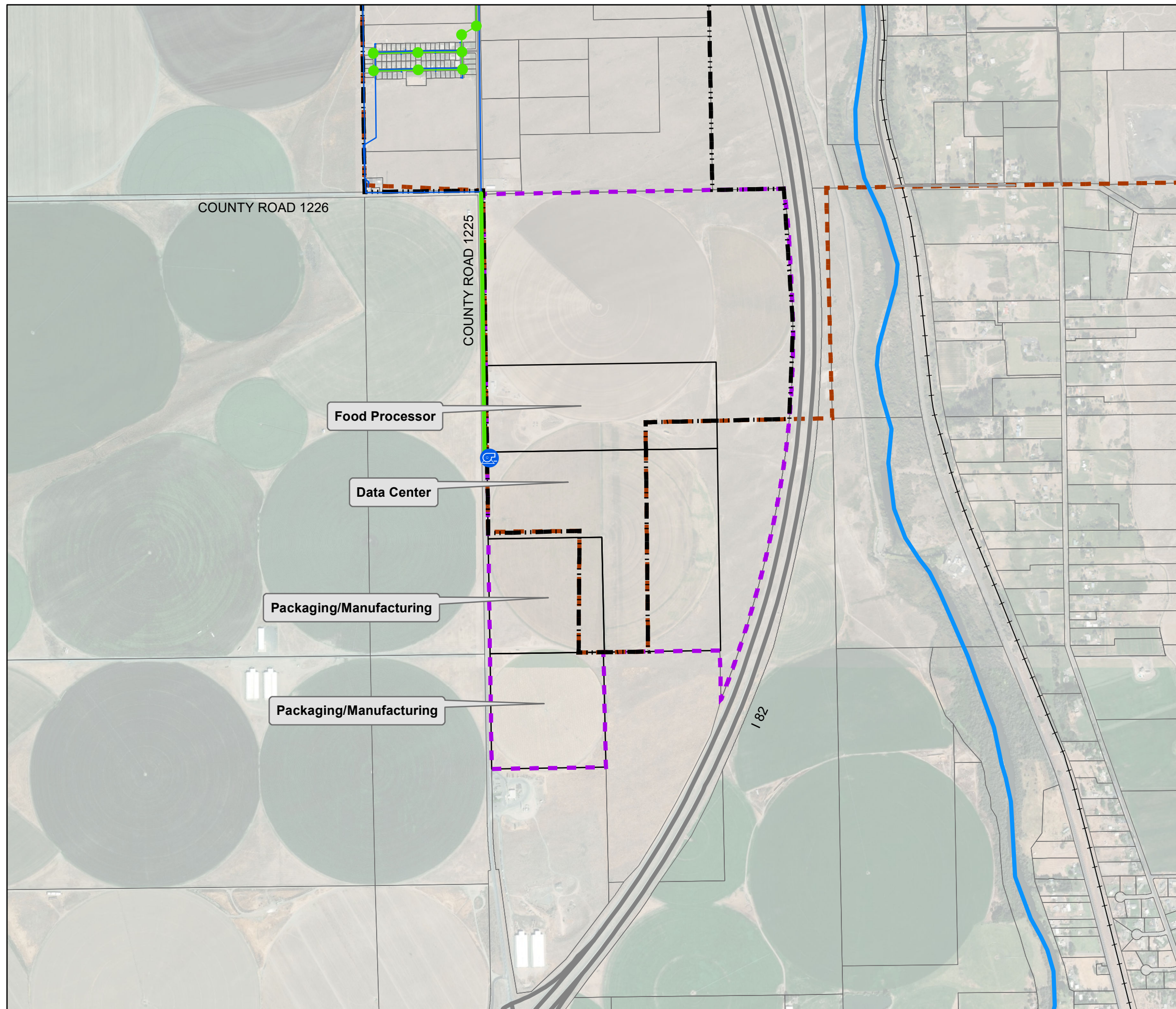


# Figure 6

## Industrial Wastewater Alternative 1

### Legend

-  City Limits
-  Urban Growth Boundary
-  Study Area
-  Assumed Lot Boundaries
-  Parcel Boundaries
-  Major Streets
-  Highway/Interstate
-  Railroad
-  Umatilla River
-  Existing Potable Water Main
-  Existing Sanitary Sewer Main
-  Existing Sanitary Sewer Manhole
-  Booster Station
- Proposed Industrial Wastewater Pipe**
-  10-Inch



Not to scale



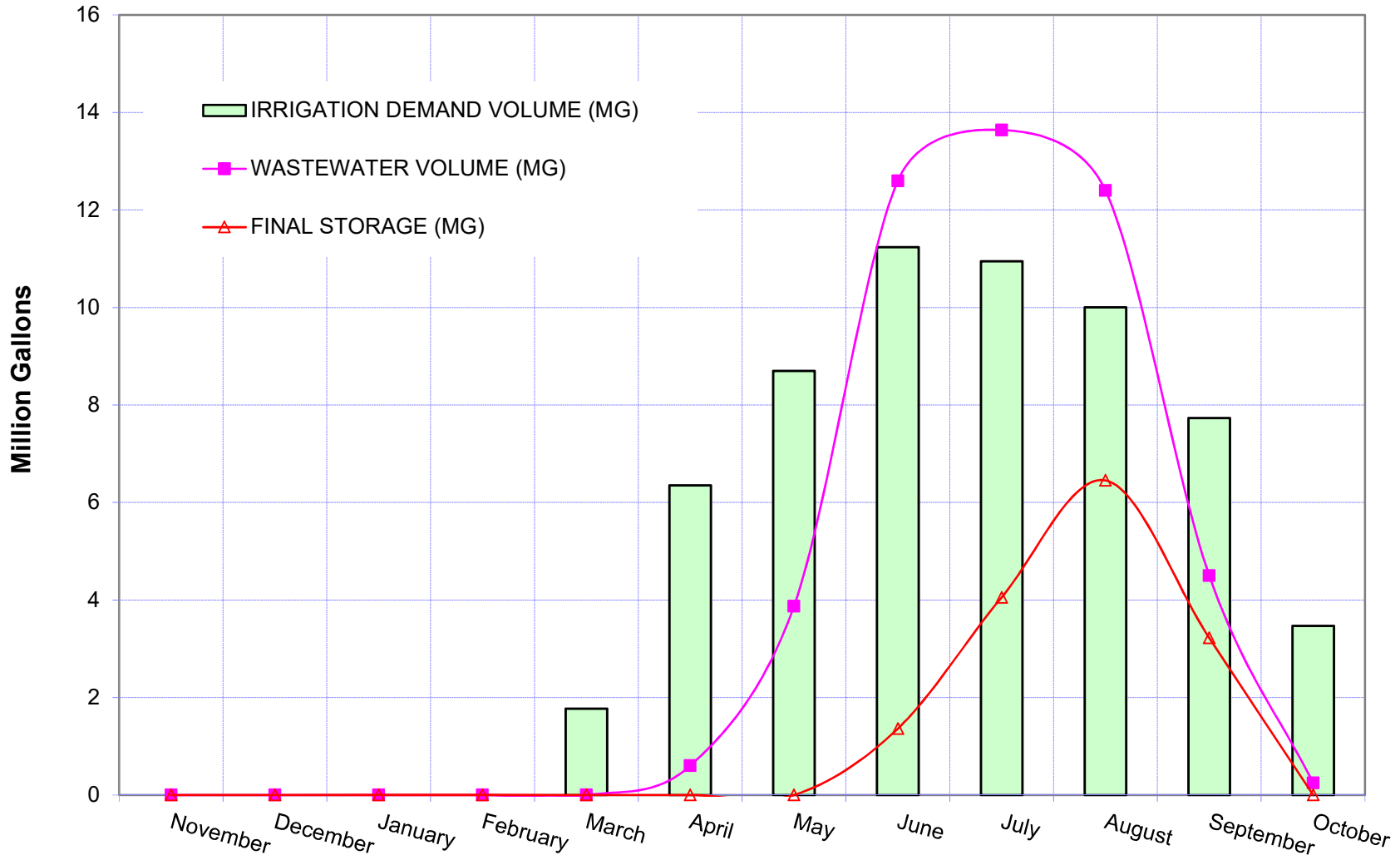
Date: Jan 8, 2020





# Figure 7

**Umatilla Water Balance = 48 MG per Year IWW**  
**Annual Irrigation Demand: 23.6 inches (50%)**  
**Land Acreage: 94 Acres**  
**Storage: 6.5 MG**





# Figure 8

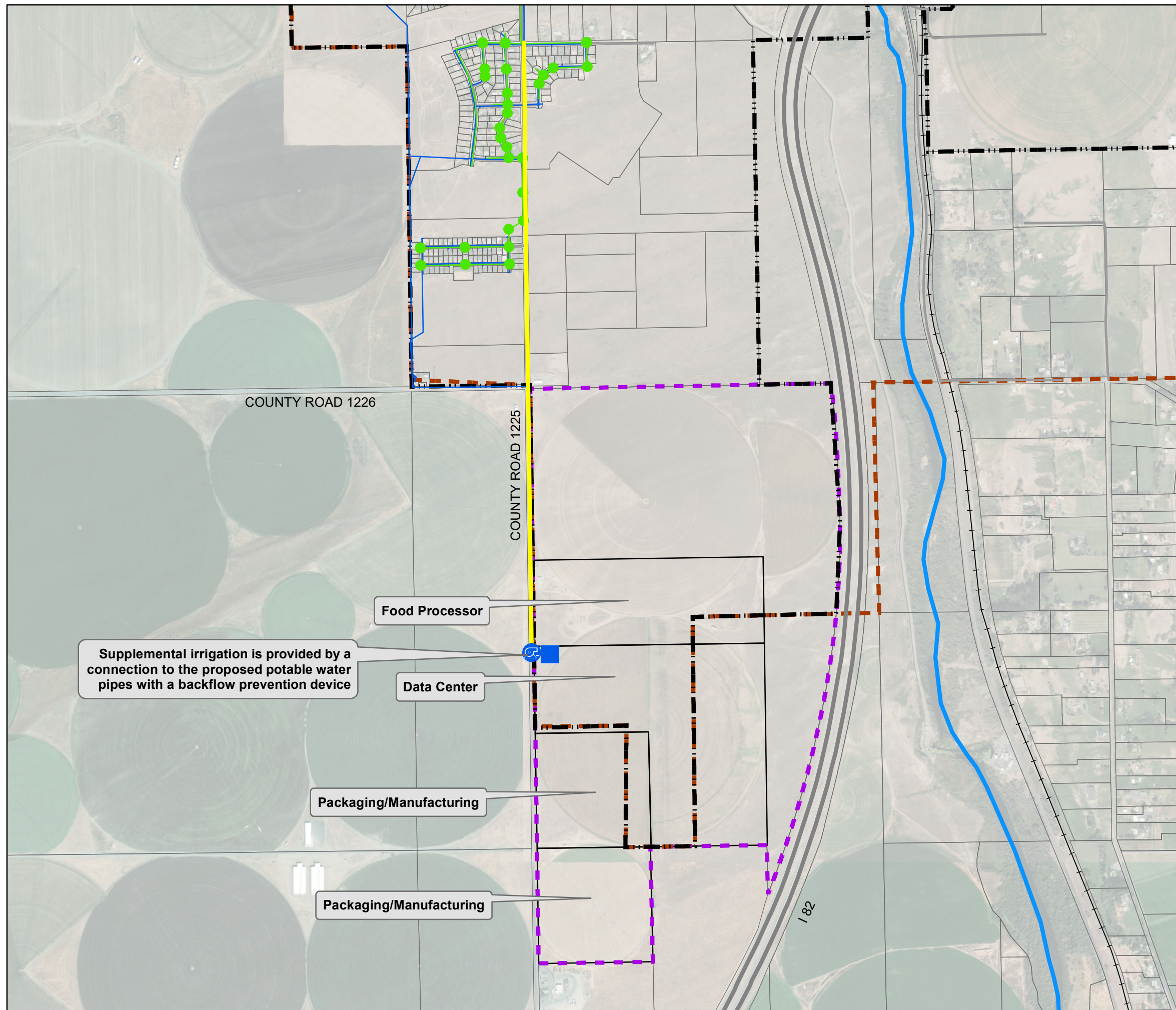
## Industrial Wastewater Alternative 2

### Legend

- City Limits
- Urban Growth Boundary
- Study Area
- Assumed Lot Boundaries
- Parcel Boundaries
- Major Streets
- Highway/Interstate
- Railroad
- Umatilla River
- Existing Potable Water Main
- Existing Sanitary Sewer Main
- Existing Sanitary Sewer Manhole
- Storage Lagoon
- Booster Station

### Proposed Industrial Wastewater Pipe

- 8-Inch



Not to scale



Date: Mar 4, 2020



## Appendix B – Preliminary Cost Opinions



**Domestic Water and Sewer Conveyance Systems  
PLANNING LEVEL ESTIMATE  
Industrial Area Utility Tech Memo**



Item No.	Item Description	Unit	Quantity	Adjusted Bid Prices	
				Unit Price (\$)	Amount (\$) <sup>1</sup>
	Mobilization <sup>2</sup>	LS	1	\$201,600	\$201,600
	Traffic Control <sup>3</sup>	LS	1	\$34,000	\$34,000
	<b>Potable Water</b>				
	16 Inch C900 PVC Pipe <sup>4</sup>	LF	7,930	\$107	\$848,510
	<b>Sanitary Sewer</b>				
	12 Inch ASTM D3034 PVC Pipe, 5'-10' Depth <sup>5</sup>	LF	2,060	\$40	\$82,400
	12 Inch ASTM D3034 PVC Pipe, 10'-15' Depth <sup>5</sup>	LF	590	\$48	\$28,320
	15 Inch ASTM D3034 PVC Pipe, 10'-15' Depth <sup>5</sup>	LF	300	\$59	\$17,700
	15 Inch ASTM D3034 PVC Pipe, 15'-20' Depth <sup>5</sup>	LF	180	\$68	\$12,240
	15 Inch ASTM D3034 PVC Pipe, 20'-25' Depth <sup>5</sup>	LF	430	\$76	\$32,680
	15 Inch ASTM D3034 PVC Pipe, 25'-30' Depth <sup>5</sup>	LF	260	\$83	\$21,580
	48 Inch Manholes, 5-10 Feet	EA	8	\$4,000	\$32,000
	48 Inch Manholes, 10-15 Feet	EA	3	\$4,500	\$13,500
	48 Inch Manholes, 15-20 Feet	EA	1	\$6,000	\$6,000
	60 Inch Manholes, 20-25 Feet	EA	2	\$8,500	\$17,000
	60 Inch Manholes, 25-30 Feet	EA	1	\$13,500	\$13,500
	12 Inch C-900 PVC Forcemain <sup>6</sup>	LF	9,900	\$55	\$544,500
	Access Road <sup>7</sup>	TON	250	\$35	\$8,750
	Lift Station <sup>8</sup>	LS	1	\$800,000	\$800,000
<b>SUBTOTAL 1</b>				<b>\$2,720,000</b>	
CONSTRUCTION CONTINGENCY <sup>9</sup>				35%	\$952,000
<b>SUBTOTAL 2</b>				<b>\$3,670,000</b>	
ENGINEERING AND CONSTRUCTION ADMINISTRATION <sup>10</sup>				20%	\$734,000
ENVIRONMENTAL AND CULTURAL <sup>11</sup>				5%	\$183,500
TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY <sup>12</sup>				1%	\$36,700
LEGAL AND CITY ADMINISTRATIVE <sup>13</sup>				2%	\$73,400
CONSTRUCTION SURVEY <sup>14</sup>				1%	\$36,700
<b>TOTAL IMPROVEMENT COST<sup>15</sup></b>				<b>\$4,700,000</b>	

<sup>1</sup> Cost estimates are provided in 2020 dollars. All dollar amounts are rounded for planning purposes.

<sup>2</sup> Mobilization includes the contractor's administrative and direct expenses to mobilize equipment, materials, and labor to the project site.

<sup>3</sup> Traffic control includes all labor, material, and equipment expenses associated with safely moving traffic through the work zone including signage, flagging, temporary barriers, temporary pavement markings, and lane delineators.

<sup>4</sup> Pipe cost includes the cost of all equipment, material, and labor for pipe installation, excavation, bedding, backfill, earthwork, compaction, valves, fittings, fire hydrants, and restoration to existing conditions.

<sup>5</sup> Pipe cost includes the cost of equipment, materials, and labor of trench excavation, pipe bedding, piping, backfill, compaction, and restoration to existing conditions.

<sup>6</sup> Pipe cost includes the cost of equipment, materials, and labor of trench excavation, pipe bedding, piping, restrained joints, air valves, pressure cleanouts, backfill, compaction, and restoration to existing conditions.

<sup>7</sup> Access road costs include the costs of all work associated with construction of the access road including earthwork, gravel, and restoration.

<sup>8</sup> Lift station cost includes the cost of equipment, materials, and labor of sitework, yard piping, submersible lift station, precast structures, and electrical and controls.

<sup>9</sup> A contingency of 35 percent was used due to the high degree of unknown factors. Assumes AACEI Class 4.

<sup>10</sup> Engineering and Construction Administration includes all administrative and direct expenses to develop plans, specifications, and an engineer's estimate for

<sup>11</sup> Environmental and Cultural includes all expenses associated with environmental or cultural studies and procedures.

<sup>12</sup> Topographic, Boundary, and Utility Survey includes all labor, equipment, and travel expenses to obtain existing survey information for planning and design purposes.

<sup>13</sup> Legal and City Administration includes all expenses associated with financial and legal oversight by the City.

<sup>14</sup> Construction survey includes all expenses, including labor and equipment, to conduct construction staking and construction verification/quality control checks.

<sup>15</sup> The Total Improvement Cost reflects an estimate of potential overall project costs based on preliminary estimates, and should not be considered an actual cost or encompassing all scenarios and circumstances.

**Water Project - Coyote Reservoir and Booster Station Upgrades  
PLANNING LEVEL ESTIMATE  
Industrial Area Utility Tech Memo**



Item No.	Item Description	Unit	Quantity	Adjusted Bid Prices	
				Unit Price (\$)	Amount (\$) <sup>1</sup>
1	Mobilization <sup>2</sup>	LS	1	\$67,000	\$67,000
2	Land Acquisition <sup>3</sup>	LS	1	\$75,000	\$75,000
3	Site Work <sup>4</sup>	LS	1	\$33,000	\$33,000
4	1 MG Steel Reservoir <sup>5</sup>	LS	1	\$673,000	\$673,000
5	PAX Mixing System <sup>6</sup>	LS	1	\$57,000	\$57,000
<b>SUBTOTAL 1</b>				<b>\$910,000</b>	
CONSTRUCTION CONTINGENCY <sup>7</sup>				35%	\$318,500
<b>SUBTOTAL 2</b>				<b>\$1,230,000</b>	
ENGINEERING AND CONSTRUCTION ADMINISTRATION <sup>8</sup>				20%	\$246,000
ENVIRONMENTAL AND CULTURAL <sup>9</sup>				5%	\$61,500
TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY <sup>10</sup>				1%	\$12,300
LEGAL AND CITY ADMINISTRATIVE <sup>11</sup>				2%	\$24,600
CONSTRUCTION SURVEY <sup>12</sup>				1%	\$12,300
<b>TOTAL IMPROVEMENT COST<sup>13</sup></b>				<b>\$1,600,000</b>	

<sup>1</sup> Cost estimates are provided in 2020 dollars. All dollar amounts are rounded for planning purposes.

<sup>2</sup> Mobilization includes the contractor's administrative and direct expenses to mobilize equipment, materials, and labor to the project site.

<sup>3</sup> Land acquisition includes the cost of obtaining additional land to construct the proposed improvements. Assume each site requiring land acquisition is half an acre in size.

<sup>4</sup> Site work includes the cost of excavation, grading, backfill, compaction, base rock, fencing, and site piping.

<sup>5</sup> Reservoir costs include the costs of all work associated with reservoir construction including all materials, labor, equipment to construct the reservoir, foundation, and yard piping.

<sup>6</sup> PAX mixing system includes the costs of the mixer, shipping and handling, start-up, and training.

<sup>7</sup> A contingency of 35 percent was used due to the high degree of unknown factors. Assumes AACEI Class 4.

<sup>8</sup> Engineering and Construction Administration includes all administrative and direct expenses to develop plans, specifications, and an engineer's estimate for construction.

<sup>9</sup> Environmental and Cultural includes all expenses associated with environmental or cultural studies and procedures.

<sup>10</sup> Topographic, Boundary, and Utility Survey includes all labor, equipment, and travel expenses to obtain existing survey information for planning and design purposes.

<sup>11</sup> Legal and City Administration includes all expenses associated with financial and legal oversight by the City.

<sup>12</sup> Construction survey includes all expenses, including labor and equipment, to conduct construction staking and construction verification/quality control checks.

<sup>13</sup> The Total Improvement Cost reflects an estimate of potential overall project costs based on preliminary estimates, and should not be considered an actual cost or encompassing all scenarios and circumstances. This does not reflect the cost of all pipes and services which will increase the overall cost.

**Industrial Wastewater Conveyance Systems - Alternative 1  
PLANNING LEVEL ESTIMATE  
Industrial Area Utility Tech Memo**



Item No.	Item Description	Unit	Quantity	Adjusted Bid Prices	
				Unit Price (\$)	Amount (\$) <sup>1</sup>
	Mobilization <sup>2</sup>	LS	1	\$8,000	\$8,000
	Traffic Control <sup>3</sup>	LS	1	\$9,000	\$9,000
	10 Inch C900 PVC Pipe <sup>4</sup>	LF	3,100	\$29	\$89,900
<b>SUBTOTAL 1</b>				<b>\$110,000</b>	
CONSTRUCTION CONTINGENCY <sup>5</sup>				35%	\$38,500
<b>SUBTOTAL 2</b>				<b>\$150,000</b>	
ENGINEERING AND CONSTRUCTION ADMINISTRATION <sup>6</sup>				20%	\$30,000
ENVIRONMENTAL AND CULTURAL <sup>7</sup>				10%	\$15,000
TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY <sup>8</sup>				1%	\$1,500
LEGAL AND CITY ADMINISTRATIVE <sup>9</sup>				2%	\$3,000
CONSTRUCTION SURVEY <sup>10</sup>				1%	\$1,500
<b>TOTAL IMPROVEMENT COST<sup>11</sup></b>				<b>\$200,000</b>	

<sup>1</sup> Cost estimates are provided in 2020 dollars. All dollar amounts are rounded for planning purposes.

<sup>2</sup> Mobilization includes the contractor's administrative and direct expenses to mobilize equipment, materials, and labor to the project site.

<sup>3</sup> Traffic control includes all labor, material, and equipment expenses associated with safely moving traffic through the work zone including signage, flagging, temporary barriers, temporary pavement markings, and lane delineators.

<sup>4</sup> Pipe cost includes the cost of all pipe, pipe installation, earthwork, compaction, valves, fittings, fire hydrants, pavement repair, and restoration associated with the project. Farmer to provide distribution piping.

<sup>5</sup> A contingency of 35 percent was used due to the high degree of unknown factors. Assumes AACEI Class 4.

<sup>6</sup> Engineering and Construction Administration includes all administrative and direct expenses to develop plans, specifications, and an engineer's estimate for

<sup>7</sup> Environmental and Cultural includes all expenses associated with environmental or cultural studies and procedures.

<sup>8</sup> Topographic, Boundary, and Utility Survey includes all labor, equipment, and travel expenses to obtain existing survey information for planning and design purposes.

<sup>9</sup> Legal and City Administration includes all expenses associated with financial and legal oversight by the City.

<sup>10</sup> Construction survey includes all expenses, including labor and equipment, to conduct construction staking and construction verification/quality control checks.

<sup>11</sup> The Total Improvement Cost reflects an estimate of potential overall project costs based on preliminary estimates, and should not be considered an actual cost or encompassing all scenarios and circumstances.

**Industrial Wastewater Conveyance Systems - Alternative 2  
PLANNING LEVEL ESTIMATE  
Industrial Area Utility Tech Memo**



Item No.	Item Description	Unit	Quantity	Adjusted Bid Prices	
				Unit Price (\$)	Amount (\$) <sup>1</sup>
	Mobilization <sup>2</sup>	LS	1	\$156,000	\$156,000
	Traffic Control <sup>3</sup>	LS	1	\$10,000	\$10,000
	8 Inch C900 PVC Pipe <sup>4</sup>	LF	7,050	\$21	\$148,050
	6.5 MG Lagoon <sup>5</sup>	LS	1	\$1,700,000	\$1,700,000.00
	Booster Station <sup>6</sup>	LS	1	\$90,000	\$90,000
<b>SUBTOTAL 1</b>				<b>\$2,100,000</b>	
CONSTRUCTION CONTINGENCY <sup>7</sup>				35%	\$735,000
<b>SUBTOTAL 2</b>				<b>\$2,840,000</b>	
ENGINEERING AND CONSTRUCTION ADMINISTRATION <sup>8</sup>				20%	\$568,000
ENVIRONMENTAL AND CULTURAL <sup>9</sup>				3%	\$85,200
TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY <sup>10</sup>				1%	\$28,400
LEGAL AND CITY ADMINISTRATIVE <sup>11</sup>				2%	\$56,800
CONSTRUCTION SURVEY <sup>12</sup>				1%	\$28,400
<b>TOTAL IMPROVEMENT COST<sup>13</sup></b>				<b>\$3,600,000</b>	

<sup>1</sup> Cost estimates are provided in 2020 dollars. All dollar amounts are rounded for planning purposes.

<sup>2</sup> Mobilization includes the contractor's administrative and direct expenses to mobilize equipment, materials, and labor to the project site.

<sup>3</sup> Traffic control includes all labor, material, and equipment expenses associated with safely moving traffic through the work zone including signage, flagging, temporary barriers, temporary pavement markings, and lane delineators.

<sup>4</sup> Pipe cost includes the cost of all pipe, pipe installation, earthwork, compaction, valves, fittings, fire hydrants, pavement repair, and restoration associated with the project. City to provide neighborhood distribution piping.

<sup>5</sup> Lagoon costs include the costs of all work associated with lagoon construction including the cost of earthwork, compaction, HDPE lining, perimeter road, perimeter fencing, water level gauges, and piping. No land acquisition costs are needed as the City will own this property prior to construction.

<sup>6</sup> Booster pump station costs include the costs of all work associated with construction of the booster pump station including, booster pumps, site work, building construction, yard piping, electrical and controls, and HVAC system.

<sup>7</sup> A contingency of 35 percent was used due to the high degree of unknown factors. Assumes AACEI Class 4.

<sup>8</sup> Engineering and Construction Administration includes all administrative and direct expenses to develop plans, specifications, and an engineer's estimate for

<sup>9</sup> Environmental and Cultural includes all expenses associated with environmental or cultural studies and procedures.

<sup>10</sup> Topographic, Boundary, and Utility Survey includes all labor, equipment, and travel expenses to obtain existing survey information for planning and design purposes.

<sup>11</sup> Legal and City Administration includes all expenses associated with financial and legal oversight by the City.

<sup>12</sup> Construction survey includes all expenses, including labor and equipment, to conduct construction staking and construction verification/quality control checks.

<sup>13</sup> The Total Improvement Cost reflects an estimate of potential overall project costs based on preliminary estimates, and should not be considered an actual cost or encompassing all scenarios and circumstances.



## Appendix C – Calculations

POWERLINE ROAD, UMATILLA OR

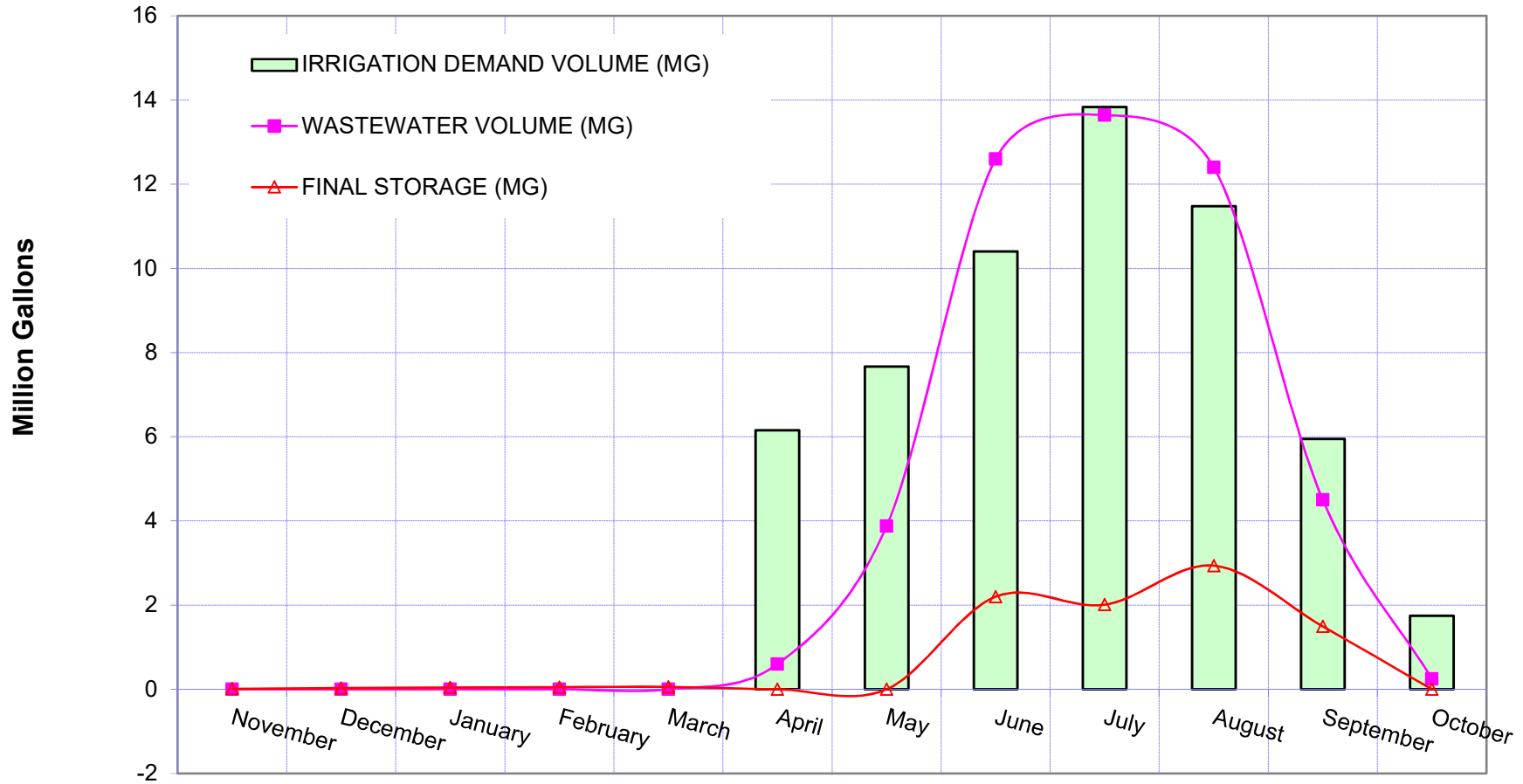
WATER BALANCE

Annual Irrigation Demand 57.23 inches

IWW INFLOW 47.86 MG

Area Irrigated 49.86 Acres

Storage 2.9 MG



**STORAGE LAGOON W/ LAND APPLICATION ON ALFALFA DURING GROWING SEASON**

**DRAFT WORKING DOCUMENT: 12/19/2019**

<b>AVG ANN WASTEWATER DESIGN FLOW, MGD.....</b>	<b>0.13</b>	<b>REQ'D IRRIGATION AREA (AC).....</b>	<b>50</b>
RAIN CATCHMENT AREA (AC).....	0.40 Acres of Storage Ponds	AVERAGE IRRIGATION REDUCTION .....	<b>1.00</b> To reduce the average demand to
POND PERIMETER RUNOFF FRACTION.....	1.00	IRRIGATION EFFICIENCY (DECIMAL FRACT).....	1.00 This increased the irrigation dema
POND EVAP AREA AT ZERO STOR (AC).....	0.40	PRECIP/AVG PRECIP RATIO.....	1.00 This increaseds the average precip
POND EVAP AREA ADD PER UNIT STOR (AC/MG).....	0.033	EVAPORATION / AVE EVAPORATION RATION.....	1.00 This reduces the average evaporat
		Flow Ratio KNOW AVERAGE FLOW / DESIGN FLOW.....	1.00 This increased the flow to the futur

PARAMETER

	11	12	1	2	3	4	5	6	7	8	9	10	TOTAL
INPUT DATA	November	December	January	February	March	April	May	June	July	August	September	October	
MONTHLY FLOW RATIOS	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	
MONTHLY FLOWS (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	0.1303 Annual Avg. Daily Flow (MGD)
GIVEN INFLOW-OUTFLOW (MG)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
AVG PAN EVAP (IN)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	- Average Annual Pan Evaporation
AVG PRECIP (IN)	1.14	1.32	1.23	0.85	0.67	0.79	0.69	0.50	0.22	0.29	0.39	0.60	8.69 Average Annual Precipitation
MONTHLY AVE. TEMP.	42.00	34.70	34.20	38.70	46.00	52.70	60.50	67.70	74.60	73.10	73.10	52.40	Degrees F

CALCULATIONS

DAYS IN MONTH	30.0	31.0	31.0	28.0	31.0	30.0	31.0	30.0	31.0	31.0	30.0	31.0	
BEGINNING STORAGE (MG)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.2	2.0	2.9	1.5	4.0 Million Gallons per Month
WASTEWATER FLOW (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	
WASTEWATER VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	0.6	3.9	12.6	13.6	12.4	4.5	0.2	47.9 Million Gallon Per Year
PAN COEFFICIENT	0.89	0.96	0.96	0.93	0.85	0.80	0.72	0.66	0.59	0.60	0.60	0.80	
POND EVAP (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	- Design Annual Evaporation
EVAPORATION AREA (AC)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	
EVAPORATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	- Evaporation Volume
PRECIPITATION (IN)	1.1	1.3	1.2	0.9	0.7	0.8	0.7	0.5	0.2	0.3	0.4	0.6	8.7 Designed Annual Precipitation
PRECIPITATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1 Precip Volume
RAIN YET TO FALL (IN)	8.7	7.6	6.2	5.0	4.2	3.5	2.7	2.0	1.5	1.3	1.0	0.6	
AVG. MONTHLY Pdef (IN)	0.0	0.0	0.0	0.0	0.0	4.5	5.7	7.7	10.2	8.5	4.4	1.3	42.24 Average Annual Pdef
Vadose Zone Storage (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	- Inches Stored in The Vadose Zone
MODELED IRRIG DEMAND (IN)	0.0	0.0	0.0	0.0	0.0	4.5	5.7	7.7	10.2	8.5	4.4	1.3	42.24 Designed Annual Irrigation Deman
IRRIGATION DEMAND VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	6.2	7.7	10.4	13.8	11.5	5.9	1.7	57.2 Irrigation Demand (MG)
REUSE WATER IRRIGATED	0.0	0.0	0.0	0.0	0.0	0.7	3.9	10.4	13.8	11.5	5.9	1.7	48.0 Volume Reuse water Irrigated (MG)
STORAGE GAIN (MG)	0.0	0.0	0.0	0.0	0.0	-5.5	-3.8	2.2	-0.2	0.9	-1.4	-1.5	
FINAL STORAGE (MG)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.2	2.0	2.9	1.5	0.0	

ANNUAL INFLOW SUMMARY (MG)

WASTEWATER.....	47.9
PRECIPITATION.....	0.1
GIVEN INFLOWS-OUTFLOWS.....	0.0
<b>TOTAL</b>	<b>48.0</b>

ANNUAL OUTFLOW SUMMARY (MG)

POND EVAPORATION.....	0.0
POND PERCOLATION.....	0.0
IRRIGATION.....	48.0
<b>TOTAL</b>	<b>48.0</b>

OVERALL BALANCE

TOTAL INFLOW-OUTFLOW (MG).....	0.0
<b>MAX. REQ'D STORAGE (MG).....</b>	<b>2.94</b>
MAX. REQ'D STORAGE (ACFT)	9.0
MAX. DEPTH (FT)	25.0
SURFACE AREA (AC)	1.2
SURFACE AREA (SF)	54,330
SQUARE DIM (FT)	233

Acres Needed, vertical walls 0.4

Storage Catchment Area Large Enough

POWERLINE ROAD, UMATILLA OR

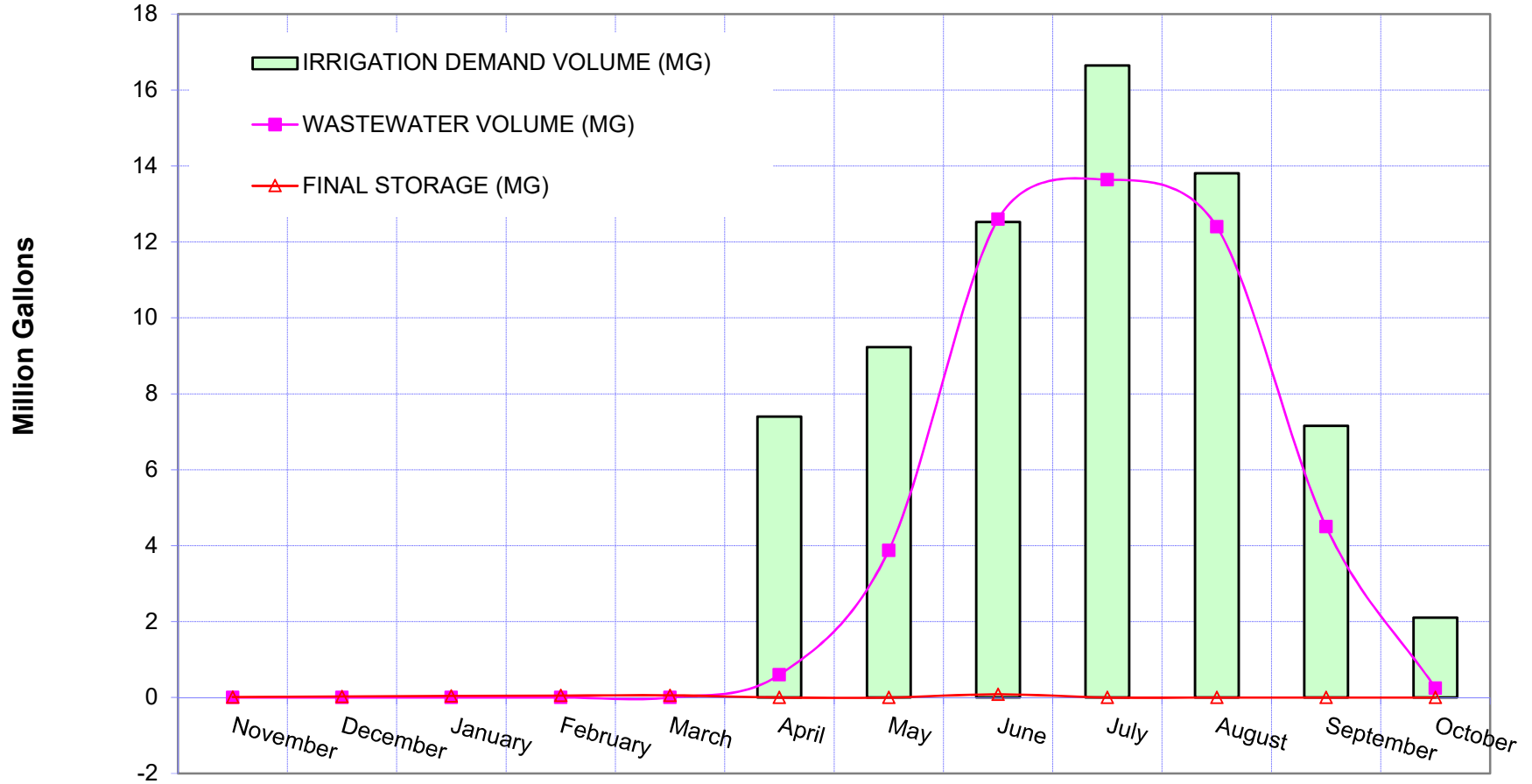
WATER BALANCE

Annual Irrigation Demand 68.87 inches

IWW INFLOW 47.86 MG

Area Irrigated 60 Acres

Storage 0.1 MG



**STORAGE LAGOON W/ LAND APPLICATION ON ALFALFA DURING GROWING SEASON**

**DRAFT WORKING DOCUMENT: 12/19/2019**

<b>AVG ANN WASTEWATER DESIGN FLOW, MGD.....</b>	<b>0.13</b>	<b>REQ'D IRRIGATION AREA (AC).....</b>	<b>60</b>
RAIN CATCHMENT AREA (AC).....	0.40 Acres of Storage Ponds	AVERAGE IRRIGATION REDUCTION .....	<b>1.00</b> To reduce the average demand to
POND PERIMETER RUNOFF FRACTION.....	1.00	IRRIGATION EFFICIENCY (DECIMAL FRACT).....	1.00 This increased the irrigation demand
POND EVAP AREA AT ZERO STOR (AC).....	0.40	PRECIP/AVG PRECIP RATIO.....	1.00 This increases the average precipitation
POND EVAP AREA ADD PER UNIT STOR (AC/MG).....	0.033	EVAPORATION / AVE EVAPORATION RATION.....	1.00 This reduces the average evaporation
		<b>Flow Ratio</b> KNOW AVERAGE FLOW / DESIGN FLOW.....	1.00 This increased the flow to the future

PARAMETER

	11	12	1	2	3	4	5	6	7	8	9	10	TOTAL	
INPUT DATA	November	December	January	February	March	April	May	June	July	August	September	October		
MONTHLY FLOW RATIOS	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01		
MONTHLY FLOWS (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	0.1303	Annual Avg. Daily Flow (MGD)
GIVEN INFLOW-OUTFLOW (MG)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	
AVG PAN EVAP (IN)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	Average Annual Pan Evaporation
AVG PRECIP (IN)	1.14	1.32	1.23	0.85	0.67	0.79	0.69	0.50	0.22	0.29	0.39	0.60	8.69	Average Annual Precipitation
MONTHLY AVE. TEMP.	42.00	34.70	34.20	38.70	46.00	52.70	60.50	67.70	74.60	73.10	73.10	52.40		Degrees F
<b>CALCULATIONS</b>														
DAYS IN MONTH	30.0	31.0	31.0	28.0	31.0	30.0	31.0	30.0	31.0	31.0	30.0	31.0		
BEGINNING STORAGE (MG)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0		
WASTEWATER FLOW (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	4.0	Million Gallons per Month
WASTEWATER VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	0.6	3.9	12.6	13.6	12.4	4.5	0.2	47.9	Million Gallon Per Year
PAN COEFFICIENT	0.89	0.96	0.96	0.93	0.85	0.80	0.72	0.66	0.59	0.60	0.60	0.80		
POND EVAP (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Design Annual Evaporation
EVAPORATION AREA (AC)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
EVAPORATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Evaporation Volume
PRECIPITATION (IN)	1.1	1.3	1.2	0.9	0.7	0.8	0.7	0.5	0.2	0.3	0.4	0.6	8.7	Designed Annual Precipitation
PRECIPITATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	Precip Volume
RAIN YET TO FALL (IN)	8.7	7.6	6.2	5.0	4.2	3.5	2.7	2.0	1.5	1.3	1.0	0.6		
AVG. MONTHLY Pdef (IN)	0.0	0.0	0.0	0.0	0.0	4.5	5.7	7.7	10.2	8.5	4.4	1.3	42.24	Average Annual Pdef
Vadose Zone Storage (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Inches Stored in The Vadose Zone
MODELED IRRIG DEMAND (IN)	0.0	0.0	0.0	0.0	0.0	4.5	5.7	7.7	10.2	8.5	4.4	1.3	42.24	Designed Annual Irrigation Demand
IRRIGATION DEMAND VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	7.4	9.2	12.5	16.6	13.8	7.2	2.1	68.9	Irrigation Demand (MG)
REUSE WATER IRRIGATED	0.0	0.0	0.0	0.0	0.0	0.7	3.9	12.5	13.7	12.4	4.5	0.3	48.0	Volume Reuse water Irrigated (MG)
STORAGE GAIN (MG)	0.0	0.0	0.0	0.0	0.0	-6.8	-5.3	0.1	-3.0	-1.4	-2.7	-1.8		
FINAL STORAGE (MG)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0		

ANNUAL INFLOW SUMMARY (MG)

WASTEWATER.....	47.9
PRECIPITATION.....	0.1
GIVEN INFLOWS-OUTFLOWS.....	0.0
<b>TOTAL</b>	<b>48.0</b>

ANNUAL OUTFLOW SUMMARY (MG)

POND EVAPORATION.....	0.0
POND PERCOLATION.....	0.0
IRRIGATION.....	48.0
<b>TOTAL</b>	<b>48.0</b>

OVERALL BALANCE

TOTAL INFLOW-OUTFLOW (MG).....	0.0
<b>MAX. REQ'D STORAGE (MG).....</b>	<b>0.08</b>
MAX. REQ'D STORAGE (ACFT)	0.3
MAX. DEPTH (FT)	25.0
SURFACE AREA (AC)	1.2
SURFACE AREA (SF)	54,330
SQUARE DIM (FT)	233

Acres Needed, vertical walls 0.0  
Storage Catchment Area Large Enough

POWERLINE ROAD, UMATILLA OR

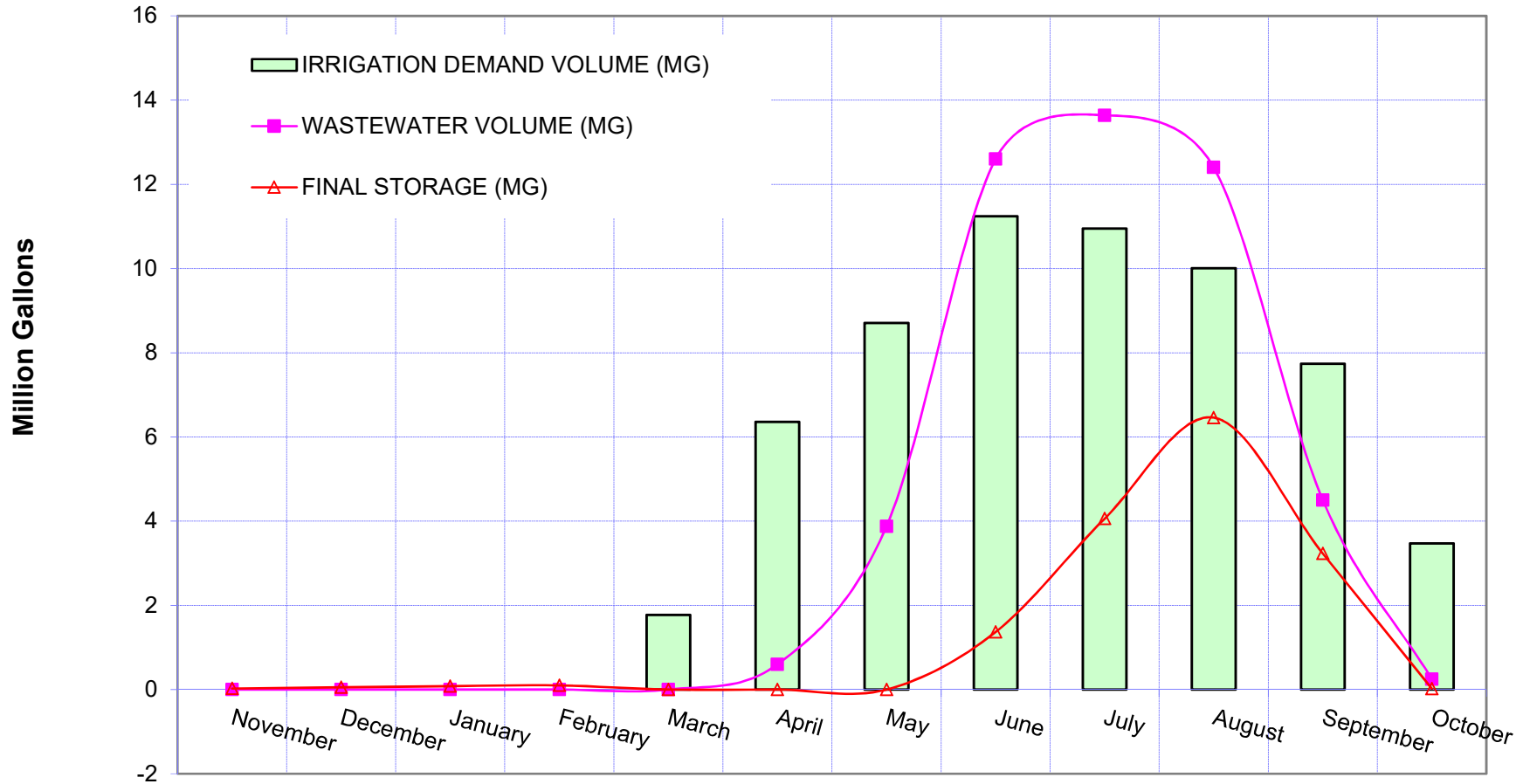
WATER BALANCE

Annual Irrigation Demand 60.25 inches

IWW INFLOW 47.86 MG

Area Irrigated 93.94 Acres

Storage 6.5 MG



STORAGE LAGOON W/ LAND APPLICATION ON LAWN DURING GROWING SEASON

DRAFT WORKING DOCUMENT: 12/19/2019

<b>AVG ANN WASTEWATER DESIGN FLOW, MGD</b> .....	<b>0.13</b>	<b>REQ'D IRRIGATION AREA (AC)</b> .....	<b>94</b>	
RAIN CATCHMENT AREA (AC).....	0.80 Acres of Storage Ponds	AVERAGE IRRIGATION REDUCTION .....	<b>1.00</b> To reduce the average demand to	
POND PERIMETER RUNOFF FRACTION.....	1.00	IRRIGATION EFFICIENCY (DECIMAL FRACT).....	1.00 This increased the irrigation demand	
POND EVAP AREA AT ZERO STOR (AC).....	0.40	PRECIP/AVG PRECIP RATIO.....	1.00 This increases the average precipitation	
POND EVAP AREA ADD PER UNIT STOR (AC/MG).....	0.033	EVAPORATION / AVE EVAPORATION RATION.....	1.00 This reduces the average evaporation	
		Flow Ratio	KNOW AVERAGE FLOW / DESIGN FLOW.....	1.00 This increased the flow to the future

PARAMETER

	11	12	1	2	3	4	5	6	7	8	9	10	TOTAL	
INPUT DATA	November	December	January	February	March	April	May	June	July	August	September	October		
MONTHLY FLOW RATIOS	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01		
MONTHLY FLOWS (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	0.1303	Annual Avg. Daily Flow (MGD)
GIVEN INFLOW-OUTFLOW (MG)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	
AVG PAN EVAP (IN)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	Average Annual Pan Evaporation
AVG PRECIP (IN)	1.14	1.32	1.23	0.85	0.67	0.79	0.69	0.50	0.22	0.29	0.39	0.60	8.69	Average Annual Precipitation
MONTHLY AVE. TEMP.	42.00	34.70	34.20	38.70	46.00	52.70	60.50	67.70	74.60	73.10	73.10	52.40		Degrees F

CALCULATIONS

DAYS IN MONTH	30.0	31.0	31.0	28.0	31.0	30.0	31.0	30.0	31.0	31.0	30.0	31.0		
BEGINNING STORAGE (MG)	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	1.4	4.1	6.5	3.2		
WASTEWATER FLOW (MGD)	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.42	0.44	0.40	0.15	0.01	4.0	Million Gallons per Month
WASTEWATER VOLUME (MG)	0.0	0.0	0.0	0.0	0.0	0.6	3.9	12.6	13.6	12.4	4.5	0.2	47.9	Million Gallon Per Year
PAN COEFFICIENT	0.89	0.96	0.96	0.93	0.85	0.80	0.72	0.66	0.59	0.60	0.60	0.80		
POND EVAP (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Design Annual Evaporation
EVAPORATION AREA (AC)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5		
EVAPORATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Evaporation Volume
PRECIPITATION (IN)	1.1	1.3	1.2	0.9	0.7	0.8	0.7	0.5	0.2	0.3	0.4	0.6	8.7	Designed Annual Precipitation
PRECIPITATION VOL (MG)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	Precip Volume
RAIN YET TO FALL (IN)	8.7	7.6	6.2	5.0	4.2	3.5	2.7	2.0	1.5	1.3	1.0	0.6		
AVG. MONTHLY Pdef (IN)	0.0	0.0	0.0	0.0	0.7	2.5	3.4	4.4	4.3	3.9	3.0	1.4	23.60	Average Annual Pdef
Vadose Zone Storage (IN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	Inches Stored in The Vadose Zone
MODELED IRRIG DEMAND (IN)	0.0	0.0	0.0	0.0	0.7	2.5	3.4	4.4	4.3	3.9	3.0	1.4	23.60	Designed Annual Irrigation Demand
IRRIGATION DEMAND VOLUME (MG)	0.0	0.0	0.0	0.0	1.8	6.4	8.7	11.2	11.0	10.0	7.7	3.5	60.2	Irrigation Demand (MG)
REUSE WATER IRRIGATED	0.0	0.0	0.0	0.0	0.1	0.6	3.9	11.2	11.0	10.0	7.7	3.5	48.0	Volume Reuse water Irrigated (MG)
STORAGE GAIN (MG)	0.0	0.0	0.0	0.0	-1.8	-5.7	-4.8	1.4	2.7	2.4	-3.2	-3.2		
FINAL STORAGE (MG)	0.0	0.1	0.1	0.1	0.0	0.0	0.0	1.4	4.1	6.5	3.2	0.0		

ANNUAL INFLOW SUMMARY (MG)

WASTEWATER.....	47.9
PRECIPITATION.....	0.2
GIVEN INFLOWS-OUTFLOWS.....	0.0
<b>TOTAL</b>	<b>48.1</b>

ANNUAL OUTFLOW SUMMARY (MG)

POND EVAPORATION.....	0.0
POND PERCOLATION.....	0.0
IRRIGATION.....	48.0
<b>TOTAL</b>	<b>48.0</b>

OVERALL BALANCE

TOTAL INFLOW-OUTFLOW (MG).....	0.0
<b>MAX. REQ'D STORAGE (MG).....</b>	<b>6.46</b>
MAX. REQ'D STORAGE (ACFT)	19.8
MAX. DEPTH (FT)	25.0
SURFACE AREA (AC)	1.2
SURFACE AREA (SF)	54,330
SQUARE DIM (FT)	233

Acres Needed, vertical walls 0.8  
Storage Catchment Area Large Enough



## Exhibit D - Traffic Impact Study

# Urban Growth Boundary Expansion City of Umatilla, Oregon Traffic Impact Analysis

June 2020

Prepared by:



J-U-B ENGINEERS, Inc.  
1201 Adams Avenue  
La Grande, Oregon 97850

# Urban Growth Boundary Expansion City of Umatilla, Oregon Traffic Impact Analysis

June 2020



EXPIRES: 06/30/2020

Prepared by:

Spencer Montgomery  
Shae Talley, PE



J-U-B ENGINEERS, Inc.  
1201 Adams Avenue  
La Grande, Oregon 97850

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## Appendices

- Appendix A – Traffic Counts
- Appendix B– Level of Service Worksheets
- Appendix C – City of Umatilla Plan Map
- Appendix D – Traffic Growth Calculations

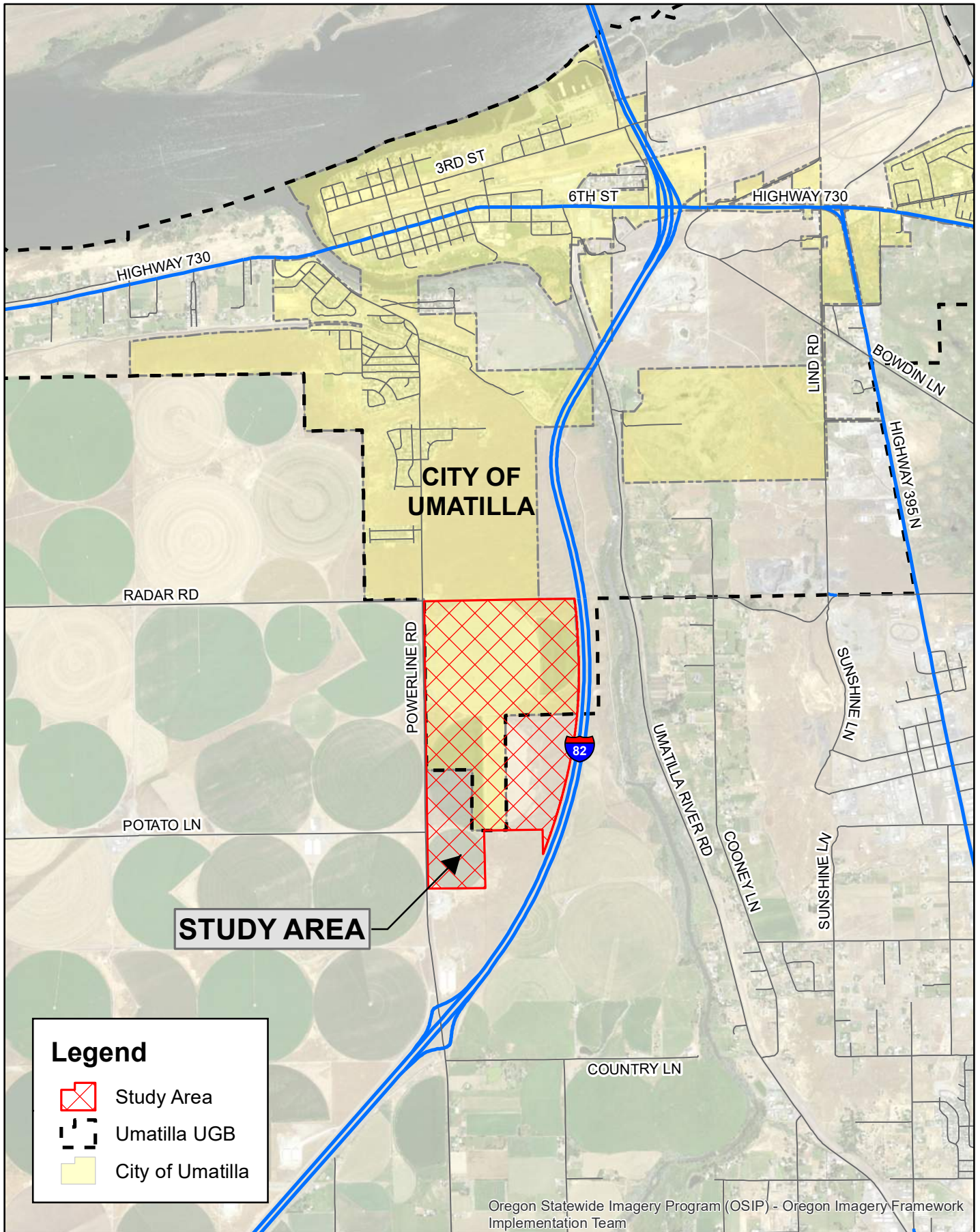
## Introduction and Background

Cleaver Land, LLC is preparing an application proposing a Comprehensive Plan Amendment to expand the City of Umatilla Urban Growth Area and associated Zoning Map for economic development purposes. There is interest in development on property with good highway access adjacent to the existing Umatilla City limits.

The proposed Urban Growth Boundary (UGB) expansion includes two parcels, Tax Lots 1400 and 6601 on Assessors Map 5N28C totaling approximately 147 acres situated between Powerline Road and I-82 south of the current city limits. The proposed UGB expansion would add the remainder of Tax lot 1400, 107.66 acres, and all of Tax Lot 6601, 39.09 acres, into the UGB. This property would be brought into the UGB as Light Industrial land. A rezone of approximately 294 acres, situated immediately north of the expansion area, from residential to Light Industrial is also part of the land use action. The area for the UGB Expansion and rezone totaling 441 acres to be rezoned as Light Industrial is shown in Figure 1. This report provides the Traffic Impact Analysis of the UGB expansion and rezoning.

This Traffic Impact Analysis has been requested by the City of Umatilla to document potential traffic impacts as a result of the proposed 147 acre UGB expansion and rezone of the 294 acre parcel. This study will summarize existing traffic conditions (2020) as well as future traffic operational conditions in 2040 with and without the anticipated action of the UGB rezone and expansion. This study also identifies mitigation that may be necessary to provide safety and acceptable Levels of Service (LOS) in order to meet City of Umatilla and Oregon Department of Transportation (ODOT) standards. ODOT relies on the Volume-To-Capacity (VC) Ratio as the measure of quality of service. VC represents the measurement of the operating capacity of a roadway or intersection where the number of vehicles passing through is divided by the number of vehicles that could theoretically pass through when at capacity. If vehicles ( $v$ ) divided by capacity ( $c$ ) is less than one the facility has additional capacity.





## Existing Conditions

This section will document existing conditions with respect to land use, roadway characteristics, traffic volumes and traffic operations at the study intersections.

### Land Use

Land use of the 294 acres parcel within the current city limits is zoned residential but currently functions as agricultural production. Crops regularly in rotation are potatoes, onions, corn, legumes and recently hemp. The 147 acres to be expanded into the UGB is zoned agricultural which is consistent with the immediate vicinity and zoning in the area. There is, however, substantial residential subdivision growth north of the subject UGB expansion.

### Roadway Characteristics

Roadways are described below, while the lane geometry for study intersections and existing PM peak hour traffic volumes are shown in Figure 2.

**Powerline Road** is a north-south Major Collector that provides a connection from an I-82 interchange (Exit 5) to the south to an intersection with US 730 to the north in the City of Umatilla. South, Powerline Road crosses over I-82 and intersects Westland Road 2.7 miles south of I-82. Powerline Road has a single through lane in each direction. The 12 foot lanes are paved with minimal gravel shoulders. The north 0.5 mile prior to US 730 has paved shoulders. The speed limit of Powerline Road from the intersection of US 730 south 1.4 miles is posted 35 MPH then the speed limit is increased to 45 MPH to MP 2. South of MP 2 the assumed speed limit is 55 MPH per rural highway standards in Oregon.

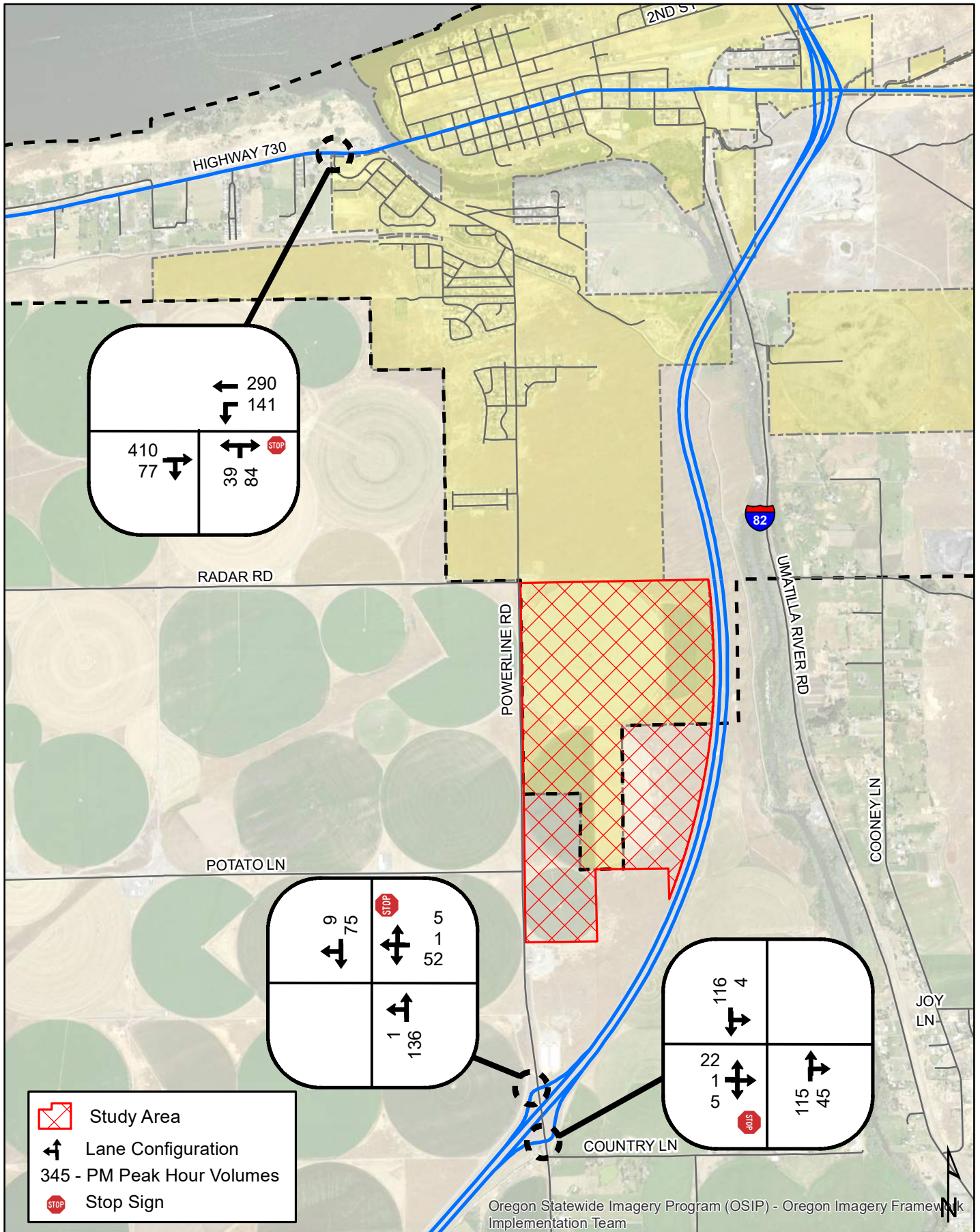
**I-82** is an east-west divided Interstate Highway which connects I-90 at Ellensburg, WA to I-84 approximately 10.5 miles south of the Oregon-Washington border. There are two lanes in each direction separated by a center median. It has a posted speed limit of 70 MPH (65 MPH Trucks). At the I-82 Interchange with Powerline road single lane approaches exist for all movements at both ramps. In the study area I-82 is oriented in a north-south direction, thus for clarity and for the purposes of this report I-82 westbound will be referred to as northbound, with the ramps being the east and west legs of the intersection at Powerline Road which also runs north/south, and I-82 eastbound will be referred to as southbound with the ramps being the east and west legs of the intersection at Powerline Road.

**US 730** in the vicinity of the intersection with Powerline Road is a 3 lane principal arterial Highway with one through lane in each direction and a center turn lane (although the west leg of the intersection at Powerline Road is not striped such that it promotes a northbound left turn into the center lane). US 730 has wide paved shoulders on both sides. US 730 terminates at I-84 west of Umatilla and terminates at the Wallula Junction to the east. At the Intersection with Powerline Road the posted speed is 40 MPH.

### Traffic Volumes

Turning movement counts were collected by All Traffic Data (provided to PBS for a separate TIA) collected on March 4, 2020 prior to the COVID-19 stay at home orders. PM peak period traffic at the intersection of US 730 /Powerline Road as well as the I-82 SB Ramps/Powerline Road and I-82 NB Ramps/Powerline Road are included in Appendix A. The PM peak hour occurred from 4:05 – 5:05 at US 730 and from 4:45 – 5:45 PM for both ramp intersections.





Oregon Statewide Imagery Program (OSIP) - Oregon Imagery Framework Implementation Team



## Operational Analysis

The analysis of Level-of-Service (LOS) is a means of quantitatively describing the quality of operational conditions of a roadway segment or intersection and the perception by motorists and passengers. Service levels are identified by letter designation, A – F, with LOS “A” representing the best operating conditions and LOS “F” the worst. Each LOS represents a range of operating conditions. For intersections the measure used is average control delay in seconds per vehicle. While there are several methodologies for estimating the LOS of intersections, the most commonly used is presented in the Highway Capacity Manual and is the methodology used in this study (HCM 2010). The Highway Capacity Manual LOS criteria for intersections are summarized in Table 1.

**Table 1. Level of Service Criteria for Intersections**

Level of Service (LOS)	Average Control Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	< =10	< =10
B	>10 - < 20	>10 - < 15
C	>20 - < 35	>15 - < 25
D	>35 - < 55	>25 - < 35
E	>55 - < 80	>35 - < 50
F	>80	>50

Source: Highway Capacity Manual 6<sup>th</sup> Edition, Transportation Research Board, National Research Council, Washington, D.C., 2017.

For unsignalized intersections “delay” is based on the availability of gaps in the major street to allow minor street movements to occur. The methodology prioritizes each movement at an unsignalized intersection consistent with rules that govern right-of-way for drivers. In other words, major street through and right turn traffic has absolute priority over all other movements. Major street left turns must yield to opposing through traffic and right turns. Minor street through traffic and right turns yield to major street higher priority movements, and the minor street left turns have the lowest priority and must yield to all other movements. As traffic volumes increase, the availability of gaps will decrease and greater delay tends to result in driver frustration and anxiety, loss of time, unnecessary fuel consumption, and contributes to unnecessary air pollution. The City of Umatilla Transportation System Plan references ODOT’s minimum requirements which has LOS D for signalized intersections (meaning the LOS must be D or better), and LOS E for two-way stop controlled (TWSC) conditions. ODOT has a mobility standard of a v/c ratio of 0.85 or less for Highway 730 at Powerline road based on its classification and location. ODOT also has a mobility standard of a v/c ratio of 0.70 or less for interstate highways for locations outside a UGB and on rural lands. This standard would apply to the two interchange ramps of I-82 at Powerline Road.

Peak hour traffic volumes and existing intersection geometry were evaluated using the Highway Capacity Software to determine the delay and LOS at the existing study intersections. The LOS worksheet calculations are included in Appendix B. The results of the capacity analysis are shown in Table 2, which shows that all study intersections currently function at acceptable Levels of Service with the two I-82 ramps providing LOS B, and the Powerline Road/US 730 intersection providing LOS C with 23 seconds of average vehicle delay.

**Table 2. 2020 Existing Conditions Delay, Level of Service and volume to capacity ratios**

Intersection	2020 Existing
I-82 SB ramps/Powerline Road	WB – 10.4/B, 0.09
I-82 NB ramps/Powerline Road	EB—10.2/B, 0.04
US 730/Powerline Road	NB—23.0/C, 0.41 WBL—9.2/A, 0.16

**LEGEND**

10.4/B, 0.09      Delay (in seconds) and Level of Service, volume to capacity ratio  
 NB = northbound, SB = southbound, WB = westbound, EB = eastbound

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## 2040 Conditions

This section evaluates traffic volumes at the study intersections for future conditions with the proposed UGB Expansion and Rezone as well as under the No Action Scenario.

### Proposed Land Use Change

The proposed land use action includes 294 acres currently within the City limits and zoned R-1 Single Family Residential to be rezoned to Light Industrial. It also includes expansion of the Urban Growth Boundary by 147 acres of currently zoned agricultural land to be zoned Light Industrial for a total of 441 acres of Light Industrial land. This is shown in Figure 3. The current City of Umatilla Plan Map showing existing zoning is included in Appendix C.

### Forecast 2040 Traffic Volumes

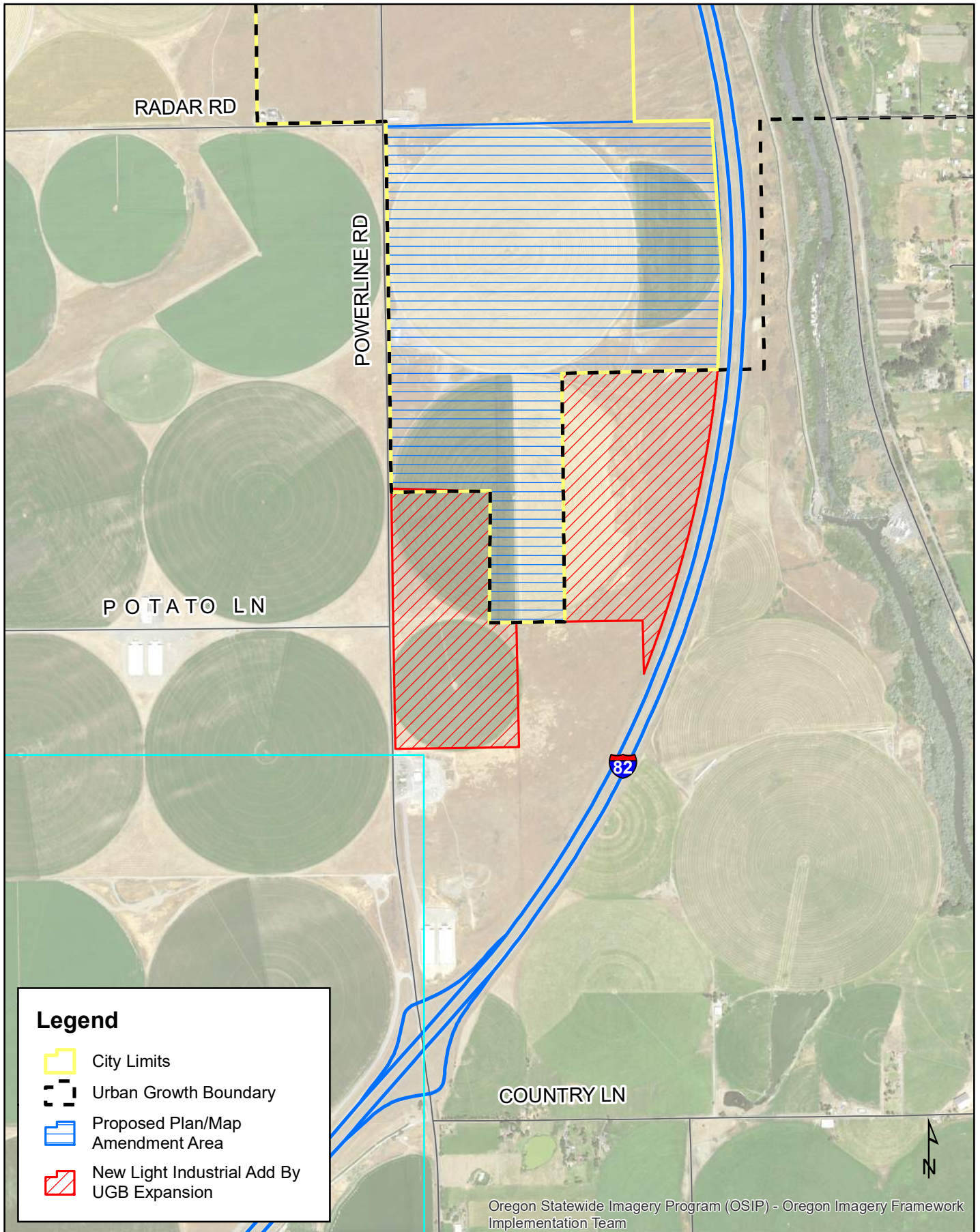
As is typical with most traffic studies, a growth rate for background traffic is used to apply to existing traffic volumes to account for growth in traffic that is the result of development outside the study area. The Coordinated Population Forecast for Umatilla County produced by Population Research Center at Portland State University indicates a forecast population growth rate of 1.1% per year for the City of Umatilla. For the purposes of this analysis a background growth rate of 1.5% was used to represent a conservatively high growth rate for traffic forecasting purposes. Added to this growth were trips for a recently approved residential development that is anticipated to add trips to the Powerline Road/US 730 intersection. The resulting 2040 No Action Traffic Volumes are shown in Figure 4, with detailed trips by movement included in Appendix D.

To estimate the new trips that could be generated by the proposed rezone and UGB Expansion the 10<sup>th</sup> Edition of the Institute of Transportation Engineers (ITE) *Trip Generation* Manual was used. This is a nationally recognized compilation of trip generation rates for common land uses. There is no specific development layout to use for development projections.

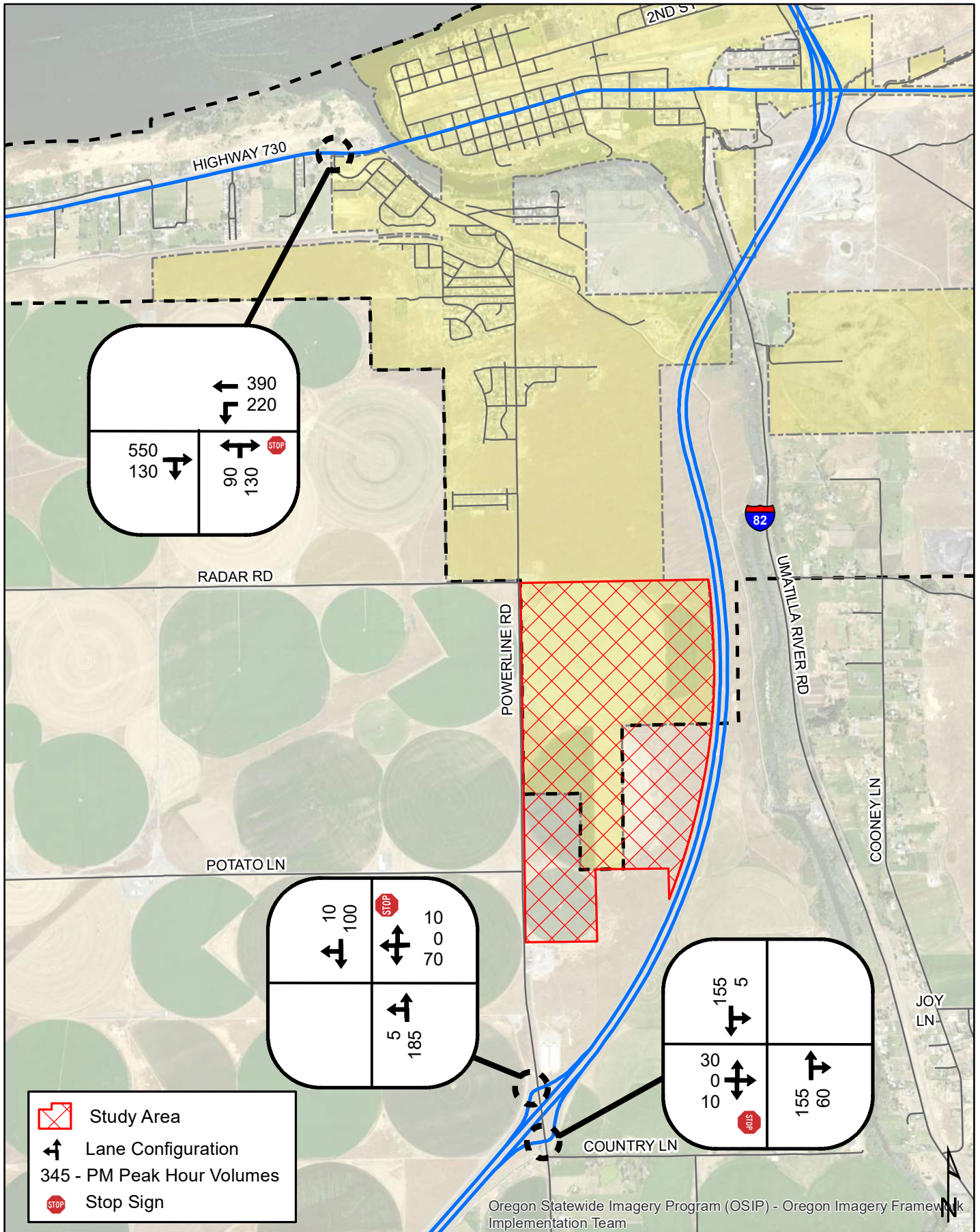
General Light Industrial (Land Use 110) fitted curve was used. To estimate the potential square footage of development for the site a floor area of 20% was applied to the 441 acres, resulting in 3.841 million square feet. Using the fitted curve equations in the ITE manual the resulting trips shown in Table 3 are anticipated upon build-out of the proposed industrial land.

By comparison, the trips for Single Family Residential is also shown in Table 3. The number of potential homes that could be constructed on the 294 acres of currently zoned residential land was estimated by reducing the total land by 25% to account for buildable lands, right-of-way, stormwater, etc. and dividing by a lot size of 7,000 sq ft, resulting in 1,372 potential residential lots. The fitted curve equations are shown in Table 3.

Examination of Table 3 shows that the proposed 441 acres of light industrial land would generate approximately 458 PM peak hour trips. The existing zoning of 294 acres of residential would generate approximately 1,256 PM peak hour trips. Thus, even with the UGB Expansion under this proposal, the rezone from residential to light industrial is likely to reduce the total trips generated by the 441 acres by nearly 800 trips during the PM peak hour. This would indicate that the combined UGB Expansion/rezone proposed land use action would have significantly less impact than the current zoning of the land in question.







**Table 3. Trip Generation**

Description / ITE Code	Units	ITE Vehicle Trip Generation Rates				Expected Units	Total Trips		Distribution of Trips	
		Weekday	PM	PM In	PM Out		Daily	PM Hour	PM In	PM Out
General Light Industrial 110	1,000 sq ft	$T = 3.79(X) + 57.96$	$\ln(T) = i.69 \ln(X) + 0.43$	13%	87%	3,842	14,620	458	60	398
Single Family Residential 210	Dwelling Unit	$\ln(T) = 0.92 \ln(X) + 2.71$	$\ln(T) = 0.96 \ln(X) + 0.20$	63%	37%	1,372	11,570	1,256	791	465

To distribute the new 458 PM peak hour trips to the study intersections, an examination of traffic volumes in the study area considered in conjunction with the roadway network and the type of development proposed, resulted in the following trip distribution percentages:

- 10% to/from the south on I-82
- 15% to/from the north on I-82
- 20% to/from the south on Powerline towards Hermiston
- 25% to/from the west on US 730
- 30% to/from the east on US 730

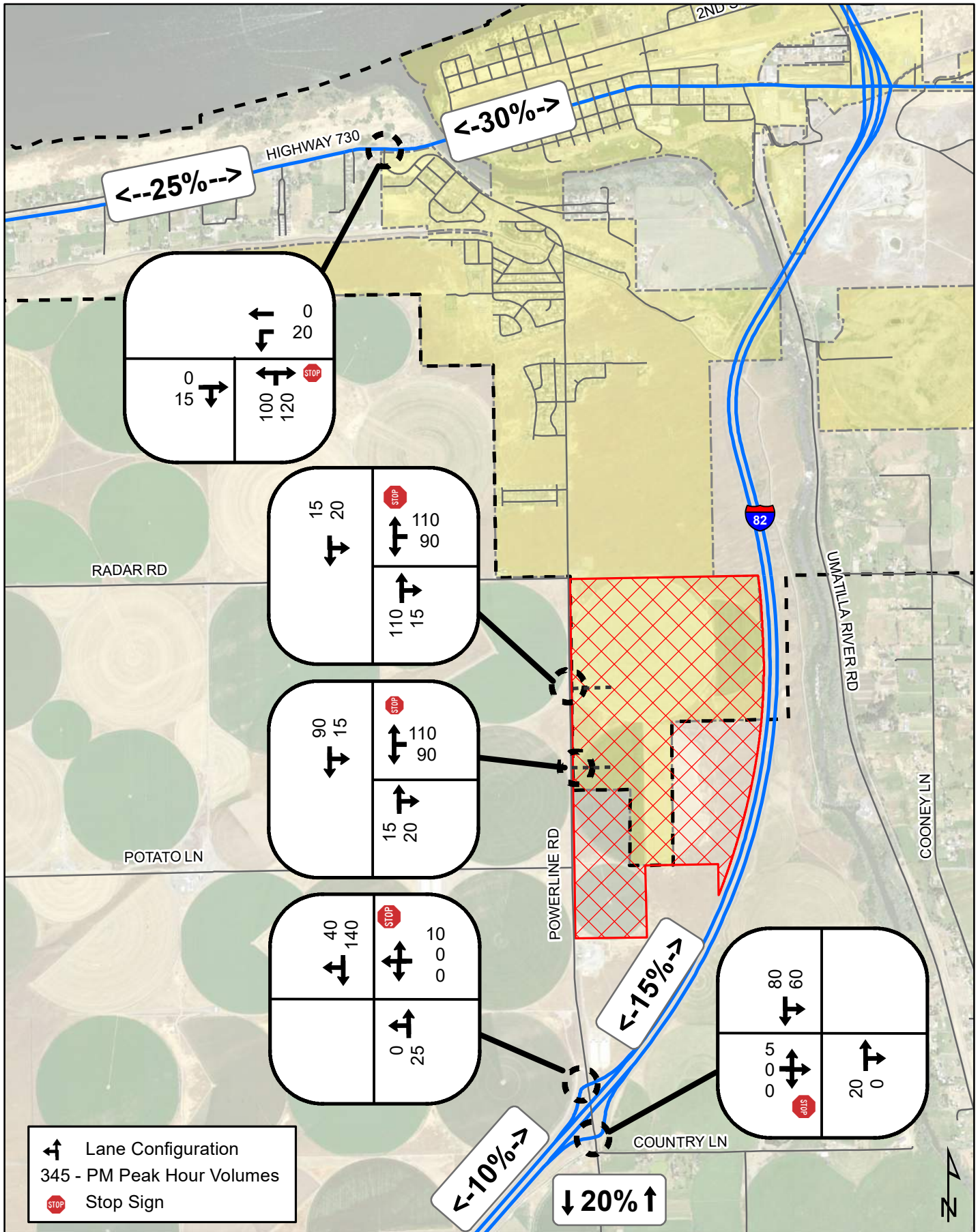
These percentages account for deliveries that will use I-82 more than the current traffic patterns, and the proximity to I-82 may lend itself to some northbound traffic to access the freeway at Powerline Road rather than using US 730. These percentages are also conservatively high in that they do not discount for employees that could live off Powerline to the north but south of US 730. Trip distribution percentages along with the resulting site generated trips are shown in Figure 5. Traffic volumes shown in Figure 5 were added to the No Action volumes shown in Figure 4 to estimate total 2040 PM peak hour traffic volumes with the UGB expansion and associated rezone that are shown in Figure 6.

### Traffic Operations Analysis

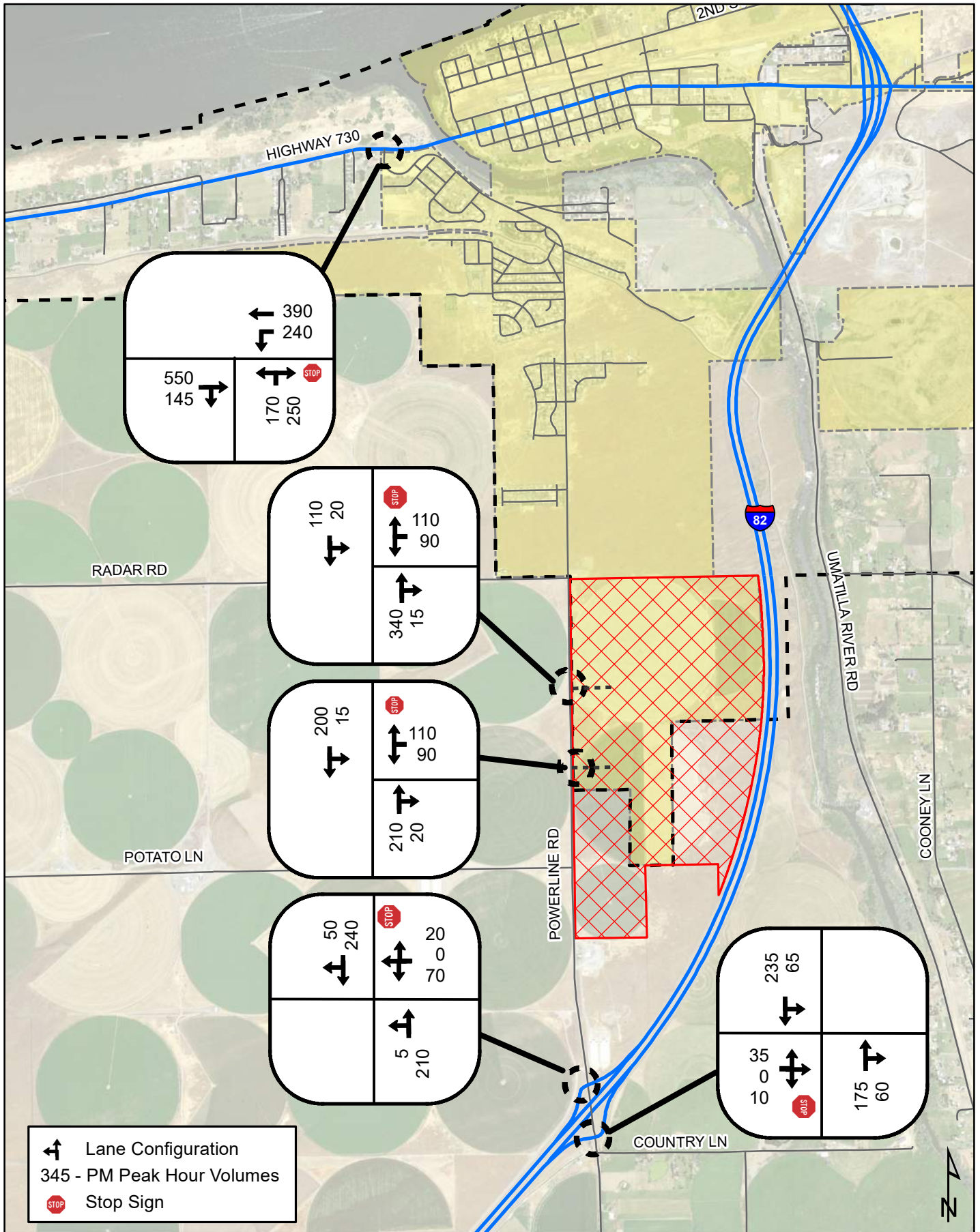
The traffic volumes shown in Figures 4 and 6 were evaluated for traffic operations to determine the anticipated delay and Level of Service for 2040 Conditions under the No Action Scenario as well as with the UGB Expansion and associated Rezone. The results of the analysis are summarized in Table 4, with the LOS worksheets included in Appendix B.

As shown in Figure 4, under the No Action scenario, the two I-82 interchange ramps are anticipated to function at LOS B with relative low delay. The intersection of Powerline Road, however, is anticipated to have significant delay with over 300 seconds for the northbound approach. As noted earlier, US 730 has very wide shoulders as well as a two-way left turn lane that is not specifically striped to receive a northbound left turn from Powerline Road. An analysis was performed to determine appropriate mitigation. It was found that if the west leg were restriped to include an eastbound right turn lane and to accommodate left turns into the two way left turn lane, along with an exclusive northbound left turn lane, that acceptable LOS could be provided with the delay for the northbound left turn reduced to 39 seconds for LOS E.









**Table 4. 2040 Delay, Level of Service and Volume to Capacity Ratios**

Intersection	2020 Existing	2040 No Action	2040 With UGB Expansion and Rezone
I-82 SB ramps/Powerline Road	WB – 10.4/B, 0.09	WB—11.1/B, 0.13	WB—13.1/B,0.18
I-82 NB ramps/Powerline Road	EB—10.2/B, 0.04	EB—10.8/B, 0.07	EB—13.2/B, 0.10
US 730/Powerline Road	NB—23.0/C, 0.41 WBL—9.2/A, 0.16	NB—322.8/F, 1.54 WBL—10.9/B, 0.29	NB—1066/F, 3.23 WBL—11.3/B, 0.32
		(1) NBL—39.0/E, 0.49 WBL—10.9/B, 0.29	(1) NB—120.4/F, 1.01 WBL—11.3/B, 0.32

**LEGEND**

10.4/B, 0.09      Delay (in seconds) and Level of Service, volume to capacity ratio

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

- (1) Includes exclusive NB left turn lane, exclusive EB right turn lane and restriping for a receiving lane WB for NB left turn traffic to use the two-way left-turn lane.

With the UGB Expansion and associated rezone, acceptable LOS/delay is again provided at the two I-82 ramps. Even greater delay is expected at the Powerline Road/US 730 intersection. The improvements described above for the No Action scenario (restriping for an eastbound right turn lane and westbound receiving lane for the two-way left turn lane, and northbound left turn lane) will help significantly, but will still not achieve acceptable LOS. The intersection of Powerline Road/US 730 will need a higher level of traffic control such as a traffic signal or roundabout. A sensitivity analysis was conducted to determine what level of growth could occur prior to the need for a traffic signal. It was found that 10 years of background growth and 50% of the site generated trips could be added to the intersection while still providing acceptable LOS if the low cost improvements described above were implemented.

**Turn Lane Analysis**

An evaluation of left and right turn lanes, for the 2040 PM Peak traffic with the UGB expansion and rezoning, on US 730 and Powerline Road and at the two I-82 interchange ramp locations was performed. The ODOT Analysis Procedures Manual (APM) states:

*“A left turn lane improves safety and increases the capacity of the roadway by reducing the speed differential between the through and the left turn vehicles. Furthermore, the left turn lane provides the turning vehicle with a potential waiting area until acceptable gaps in the opposing traffic allow them to complete the turn.”*

*“The purpose of a right turn lane at an unsignalized intersection is to improve safety and to maximize the capacity of a roadway by reducing the speed differential between the right turning vehicles and the other vehicles on the roadway.”*

Exhibits 12-1 and 12-2 from the April 2020 ODOT Analysis Procedures Manual Version 2, were used to determine the need for turn lanes at the three study intersections.

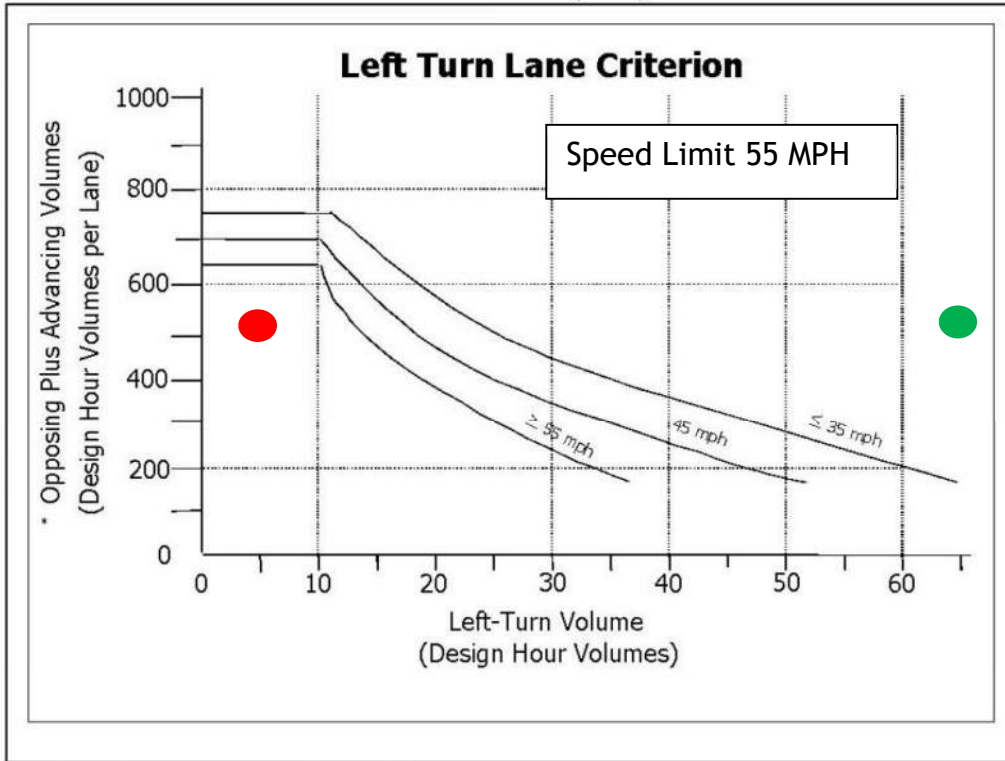
Examination of Exhibit 12-1 shows that the intersection of Powerline Road and the southbound I-82 on ramp will not require an exclusive left turn lane. The northbound Powerline Road advancing traffic equals 215 vehicles of which only 5 vehicles turn left to the I-82 eastbound on ramp. The single shared through and left lane is sufficient given the 290 opposing southbound vehicles. Note there are no opposing left turns due to the one-way ramp intersection.

Examination of Exhibit 12-1 shows that the intersection of Powerline Road and the northbound I-82 on ramp will require an exclusive left turn lane. The southbound Powerline Road advancing traffic equals 300 vehicles of which 65 vehicles turn left to the I-82 northbound on ramp towards Umatilla. A single shared through and left lane exceeds the ODOT requirement given the 235 opposing northbound vehicles. Note there are no opposing left turns due to the one-way ramp intersection. The speed limit of Powerline Road is 55 MPH although the 95% percentile could logically be less but examination of Exhibit 12-1, even a much lesser speed would still require the left turn lane. Design of this additional lane will need to consider the proximity to the I-82 overpass structure. A sensitivity analysis indicated that approximately 33% of the industrial land and background growth could occur without the need for the left turn lane based on the assumptions of this study.

Examination of Exhibit 12-2 shows that the intersection of Powerline Road and eastbound I-82 on ramp will require an exclusive right turn lane. The southbound Powerline Road approaching volume is 290 peak hourly vehicles of which 50 are turning right on to the eastbound I-82 on ramp. The speed limit for Powerline Road is 55 MPH. Sensitivity analysis revealed that this right turn lane would not be needed until approximately 80% of the background growth and industrial land were developed.

Examination of Exhibit 12-2 shows that the intersection of US 730 and Powerline Road will require an exclusive right turn lane for the eastbound US 730 to southbound Powerline Road movement. The eastbound US 730 approaching volume equals 695 peak hour vehicles of which 145 will turn right on Powerline Road southbound. The speed limit for US 730 is 40 MPH at this location. Given the results of this analysis the traffic volumes for existing conditions were also evaluated and are shown in the exhibit as well. This indicates that an eastbound right turn lane is currently warranted at the Powerline Road/US 730 intersection.

**Exhibit 12-1 Left Turn Lane Criterion (TTI)**

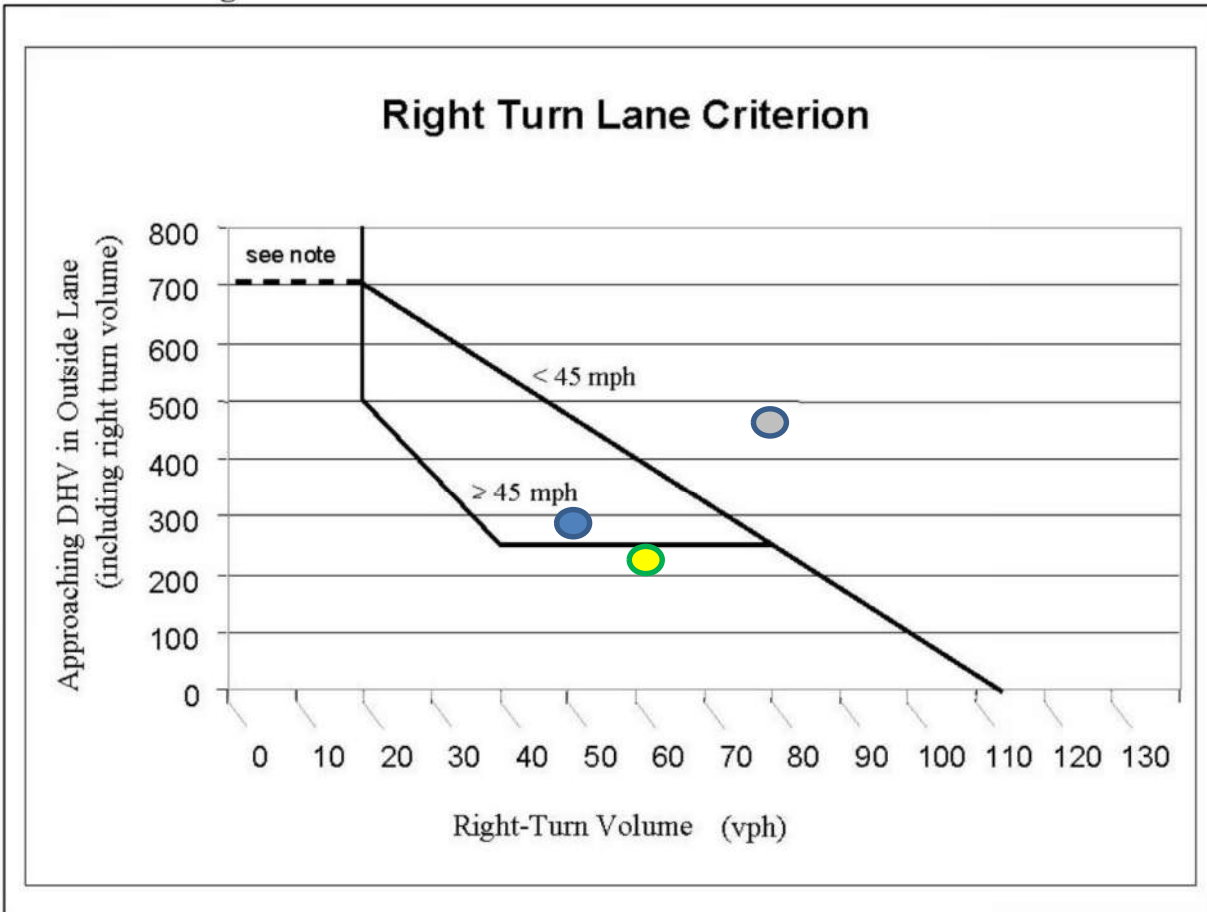


\*(Advancing Volume/Number of Advancing Through Lanes) + (Opposing Volume/Number of Opposing Through Lanes)

Opposing left turns are not counted as opposing volumes

- 2040 with UGB – NB Powerline Road/ -I-82 SB On Ramp
- 2040 with UGB - SB Powerline Road/I-82 NB On Ramp

**Exhibit 12-2 Right Turn Lane Criterion**



Note: If there is no right turn lane, a shoulder needs to be provided. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.

- 2040 with UGB – SB Powerline Road/I-82 SB On Ramp
- 2040 with UGB – NB Powerline Road/I-82 NB On Ramp
- 2040 with UGB – US 730/Powerline Road
- Existing – US 730/Powerline Road



## Summary and Recommendations

Cleaver Land, LLC is preparing an application proposing a Comprehensive Plan Amendment to expand the City of Umatilla Urban Growth Area and associated Zoning Map. There is interest in development on property with good highway access adjacent to the existing Umatilla city limits for economic development purposes.

The proposed Urban Growth Boundary (UGB) expansion includes two parcels, Tax Lots 1400 and 6601 on Assessors Map 5N28C totaling approximately 147 acres situated between Powerline Road and I-82 south of the current city limits. The proposed UGB expansion would add the remained of Tax lot 1400, 107.66 acres, and all of Tax Lot 6601, 39.09 acres, into the UGB. This property would be brought into the UGB as Light Industrial land. A rezone of approximately 294 acres, situated immediately north of the expansion area, from residential to Light Industrial is also part of the land use action.

Three study intersections of Powerline Road at the I-82 northbound and southbound ramps as well as at US 730 have been evaluated for existing conditions, 2040 No Action and 2040 with the Urban Growth Boundary Expansion and associated Rezone.

New trips that could be generated by the proposed rezone and UGB Expansion were estimated with over 3.8 million square feet of Light Industrial development potential. It is anticipated that this level of development could generate 458 PM peak hour trips. By comparison, however, the trips for Single Family Residential which is the current zoning that could accommodate approximately 1,372 residential lots, could generate 1,256 PM peak hour trips. Thus, even with the UGB Expansion under this proposal, the rezone from residential to light industrial is likely to reduce the total trips generated by the 441 acres by nearly 800 trips during the PM peak hour. This would indicate that the combined UGB Expansion/rezone proposed land use action would have significantly less impact than the current zoning of the land in question.

Capacity analysis of the three study intersections indicates that they all function with acceptable Levels of Service. For the 2040 No Action Scenario the I-82 interchange ramps will function with good LOS, however the intersection of Powerline Road/US 730 will need an exclusive northbound left turn and restriping of the west leg to accommodate an exclusive right turn lane and westbound receiving lane for northbound left turns to utilize the two-way left-turn nature of US 730.

With the UGB Expansion and associated rezone, acceptable LOS/delay is again provided at the two I-82 ramps. Even greater delay is expected at the Powerline Road/US 730 intersection. The improvements described above for the No Action scenario will help significantly, but will still not achieve acceptable LOS. The intersection of Powerline Road/US 730 will need a higher level of traffic control such as a traffic signal or roundabout. The traffic signal would likely be required at about 10 years of background growth and 50% of the site generated trips if the low cost improvements described above were implemented.

An evaluation of the need for left and right turns for safety purposes was also performed. A southbound right turn at the southbound I-82 ramps will be needed at approximately 80% of the background growth and 80% of the industrial development. A southbound left turn will be needed at the I-82 northbound ramps at approximately 33% of the background growth and 33% of the industrial development.

# APPENDIX A

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## Traffic Counts

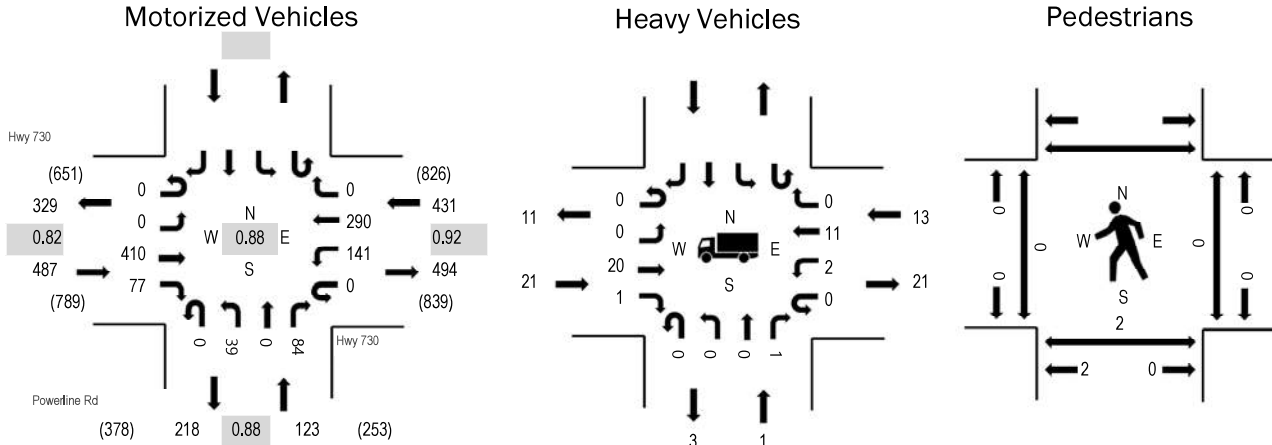




(303) 216-2439  
www.alltrafficdata.net

**Location:** Powerline Rd & Hwy 730 PM  
**Date:** Wednesday, March 4, 2020  
**Peak Hour:** 04:05 PM - 05:05 PM  
**Peak 15-Minutes:** 04:40 PM - 04:55 PM

**Peak Hour**



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.3%	0.82
WB	3.0%	0.92
NB	0.8%	0.88
SB		
All	3.4%	0.88

**Traffic Counts - Motorized Vehicles**

Interval Start Time	Hwy 730 Eastbound				Hwy 730 Westbound				Powerline Rd Northbound				Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	39	9	0	8	17	0	0	1	0	3					77	1,021
4:05 PM	0	0	38	6	0	10	21	0	0	3	0	7					85	1,041
4:10 PM	0	0	40	13	0	9	12	0	0	0	0	12					86	1,031
4:15 PM	0	0	38	9	0	8	22	0	0	6	0	6					89	1,023
4:20 PM	0	0	48	4	0	14	24	0	0	3	0	4					97	1,004
4:25 PM	0	0	34	13	0	9	17	0	0	8	0	7					88	975
4:30 PM	0	0	29	2	0	13	26	0	0	2	0	6					78	969
4:35 PM	0	0	23	6	0	7	24	0	0	2	0	3					65	963
4:40 PM	0	0	43	5	0	11	25	0	0	1	0	9					94	986
4:45 PM	0	0	43	5	0	18	35	0	0	2	0	11					114	980
4:50 PM	0	0	17	4	0	14	40	0	0	7	0	7					89	938
4:55 PM	0	0	27	4	0	11	13	0	0	0	0	4					59	906
5:00 PM	0	0	30	6	0	17	31	0	0	5	0	8					97	
5:05 PM	0	0	24	4	0	7	27	0	0	6	0	7					75	
5:10 PM	0	0	21	8	0	10	27	0	0	5	0	7					78	
5:15 PM	0	0	25	4	0	9	23	0	0	1	0	8					70	
5:20 PM	0	0	20	5	0	8	23	0	0	6	0	6					68	
5:25 PM	0	0	19	2	0	11	33	0	0	5	0	12					82	
5:30 PM	0	0	21	4	0	12	23	0	0	6	0	6					72	
5:35 PM	0	0	25	2	0	14	35	0	0	4	0	8					88	
5:40 PM	0	0	30	1	0	13	29	0	0	7	0	8					88	
5:45 PM	0	0	21	2	0	14	20	0	0	2	0	13					72	
5:50 PM	0	0	16	0	0	13	19	0	0	3	0	6					57	
Count Total	0	0	671	118	0	260	566	0	0	85	0	168					1,868	
Peak Hour	0	0	410	77	0	141	290	0	0	39	0	84					1,041	

### Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	1	0		5	4:00 PM	0	0	0	0	4:00 PM	0	0	0	0	0	
4:05 PM	3	0	1		4	4:05 PM	0	0	0	0	4:05 PM	0	0	0	0	0	
4:10 PM	2	0	0		2	4:10 PM	0	0	0	0	4:10 PM	0	0	0	0	0	
4:15 PM	2	0	1		3	4:15 PM	0	0	0	0	4:15 PM	0	0	0	0	0	
4:20 PM	4	0	1		5	4:20 PM	0	0	0	0	4:20 PM	0	0	0	0	0	
4:25 PM	3	0	0		3	4:25 PM	0	0	0	0	4:25 PM	0	0	0	0	0	
4:30 PM	3	1	2		6	4:30 PM	0	0	0	0	4:30 PM	0	0	0	0	0	
4:35 PM	0	0	0		0	4:35 PM	0	0	0	0	4:35 PM	0	0	0	0	0	
4:40 PM	0	0	0		0	4:40 PM	0	0	0	0	4:40 PM	0	2	0	0	2	
4:45 PM	1	0	2		3	4:45 PM	0	0	0	0	4:45 PM	0	0	0	0	0	
4:50 PM	1	0	3		4	4:50 PM	0	0	0	0	4:50 PM	0	0	0	0	0	
4:55 PM	1	0	2		3	4:55 PM	0	0	0	0	4:55 PM	0	0	0	0	0	
5:00 PM	1	0	1		2	5:00 PM	0	0	0	0	5:00 PM	0	0	0	0	0	
5:05 PM	2	0	1		3	5:05 PM	0	0	0	0	5:05 PM	0	0	0	0	0	
5:10 PM	2	1	1		4	5:10 PM	0	0	0	0	5:10 PM	0	0	0	0	0	
5:15 PM	1	0	0		1	5:15 PM	0	0	0	0	5:15 PM	0	0	0	0	0	
5:20 PM	1	0	2		3	5:20 PM	0	0	1	1	5:20 PM	0	0	0	0	0	
5:25 PM	2	0	1		3	5:25 PM	0	0	0	0	5:25 PM	0	0	0	0	0	
5:30 PM	0	0	1		1	5:30 PM	0	0	0	0	5:30 PM	0	0	0	0	0	
5:35 PM	1	0	3		4	5:35 PM	0	0	0	0	5:35 PM	0	0	0	0	0	
5:40 PM	3	0	2		5	5:40 PM	0	0	0	0	5:40 PM	0	0	0	0	0	
5:45 PM	1	0	1		2	5:45 PM	0	0	0	0	5:45 PM	0	2	0	0	2	
5:50 PM	1	0	3		4	5:50 PM	0	0	0	0	5:50 PM	0	0	0	0	0	
Count Total	39	3	28		70	Count Total	0	0	1	1	Count Total	0	4	0	0	4	
Peak Hour	21	1	13		35	Peak Hour	0	0	0	0	Peak Hour	0	2	0	0	2	



### Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	1	0	1	2	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	1	1	0	0	2	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	1	1	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	1	1	0	0	2	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	1	0	1	2	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	1	0	0	0	1	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	1	0	1	2	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
Count Total	4	5	0	4	13	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	3	3	0	2	8	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0



### Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	1	1	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	1	1	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	1	1	2	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	1	0	1	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	1	0	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	1	1	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	1	0	0	1	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	1	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	1	0	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	1	0	1	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
Count Total	0	3	4	5	12	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	2	2	2	6	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

# APPENDIX B

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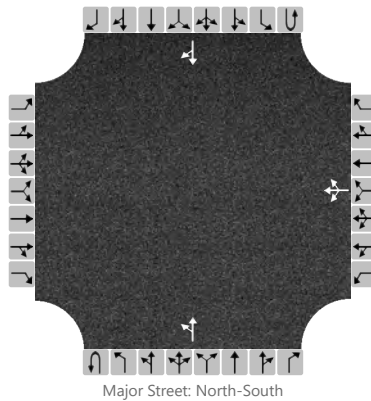
## Level of Service Worksheets



# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 SB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 SB ramps
Analysis Year	2020	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.84
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume, V (veh/h)						52	1	5		1	136				75	9
Percent Heavy Vehicles (%)						3	3	3		3						
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						6.43	6.53	6.23		4.13						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23						

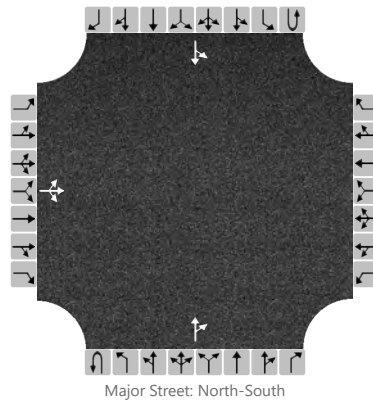
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						69				1						
Capacity, c (veh/h)						738				1485						
v/c Ratio						0.09				0.00						
95% Queue Length, Q <sub>95</sub> (veh)						0.3				0.0						
Control Delay (s/veh)						10.4				7.4						
Level of Service, LOS						B				A						
Approach Delay (s/veh)					10.4				0.1							
Approach LOS					B											

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 NB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 NB ramps
Analysis Year	2020	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR									TR		LT			
Volume, V (veh/h)		22	1	5							115	45		4	116		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No					No					No					
Median Type/Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		6.43	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

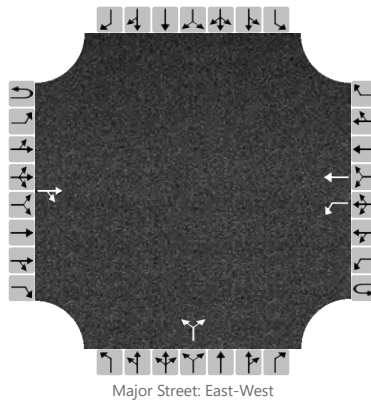
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			32											4		
Capacity, c (veh/h)			725											1388		
v/c Ratio			0.04											0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.1											0.0		
Control Delay (s/veh)			10.2											7.6		
Level of Service, LOS			B											A		
Approach Delay (s/veh)		10.2										0.2				
Approach LOS		B														

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2020	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.88
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume, V (veh/h)			410	77		141	290			39		84				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No			No				No				No		
Median Type/Storage																

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

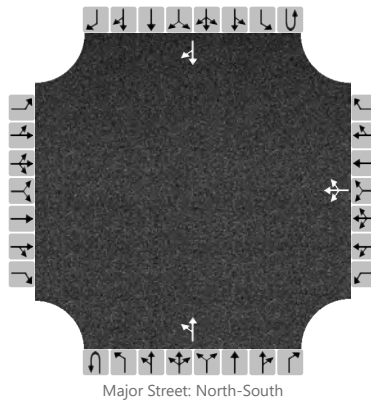
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						160					139					
Capacity, c (veh/h)						1010					337					
v/c Ratio						0.16					0.41					
95% Queue Length, Q <sub>95</sub> (veh)						0.6					2.0					
Control Delay (s/veh)						9.2					23.0					
Level of Service, LOS						A					C					
Approach Delay (s/veh)								3.0			23.0					
Approach LOS											C					

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 SB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 SB ramps
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion - No Action		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration							LTR			LT							TR
Volume, V (veh/h)						70	0	10		5	185					100	10
Percent Heavy Vehicles (%)							3	3	3	3							
Proportion Time Blocked																	
Percent Grade (%)								0									
Right Turn Channelized		No				No				No				No			
Median Type/Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1							
Critical Headway (sec)						6.43	6.53	6.23		4.13							
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2							
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23							

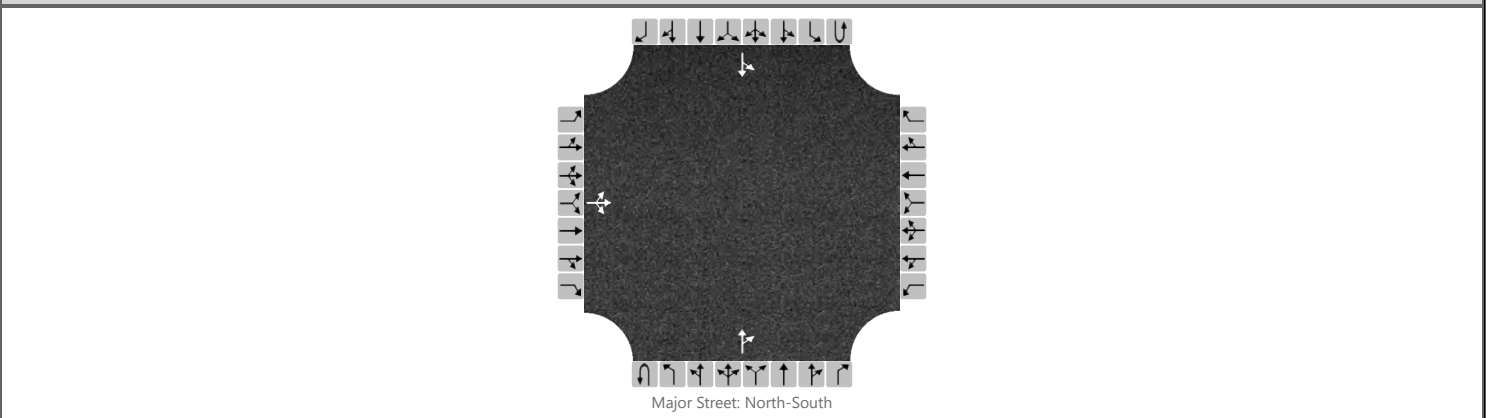
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						89				6							
Capacity, c (veh/h)						676				1457							
v/c Ratio						0.13				0.00							
95% Queue Length, Q <sub>95</sub> (veh)						0.5				0.0							
Control Delay (s/veh)						11.1				7.5							
Level of Service, LOS						B				A							
Approach Delay (s/veh)						11.1				0.2							
Approach LOS						B				A							

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 NB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 NB ramps
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion - No Action		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR								TR			LT			
Volume, V (veh/h)		30	0	10							155	60		5	155		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No					No					No					
Median Type/Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		6.43	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

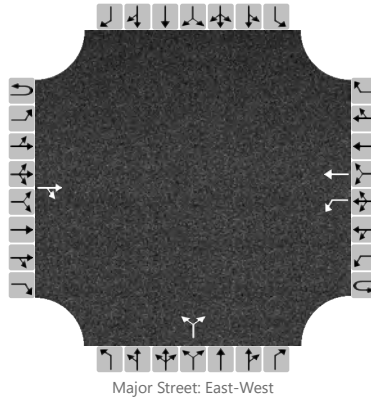
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			44											6		
Capacity, c (veh/h)			660											1320		
v/c Ratio			0.07											0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.2											0.0		
Control Delay (s/veh)			10.8											7.7		
Level of Service, LOS			B											A		
Approach Delay (s/veh)		10.8										0.3				
Approach LOS		B														

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion - No Action		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume, V (veh/h)			550	130		220	390			90		130				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					6.43		6.23			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

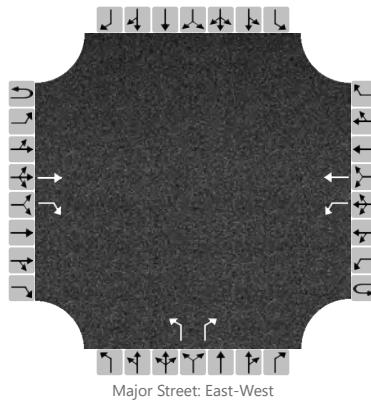
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						244					244					
Capacity, c (veh/h)						850					159					
v/c Ratio						0.29					1.54					
95% Queue Length, Q <sub>95</sub> (veh)						1.2					16.3					
Control Delay (s/veh)						10.9					322.8					
Level of Service, LOS						B					F					
Approach Delay (s/veh)					3.9				322.8							
Approach LOS									F							

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion-No Action-Mit w/turns		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume, V (veh/h)			550	130		220	390			90		130				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

## Delay, Queue Length, and Level of Service

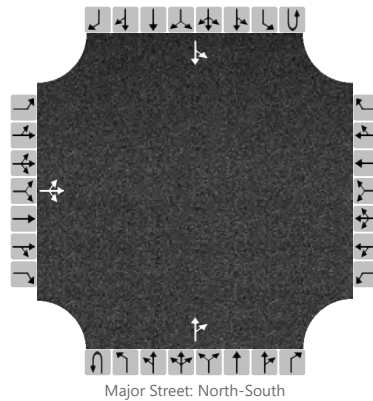
Flow Rate, v (veh/h)						244				100		144				
Capacity, c (veh/h)						850				202		492				
v/c Ratio						0.29				0.49		0.29				
95% Queue Length, Q <sub>95</sub> (veh)						1.2				2.5		1.2				
Control Delay (s/veh)						10.9				39.0		15.3				
Level of Service, LOS						B				E		C				
Approach Delay (s/veh)					3.9				25.0							
Approach LOS									D							



# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 NB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 NB ramps
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion with Rezone		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR									TR		LT			
Volume, V (veh/h)		35	0	10							175	60		65	235		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No					No					No					
Median Type/Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		6.43	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

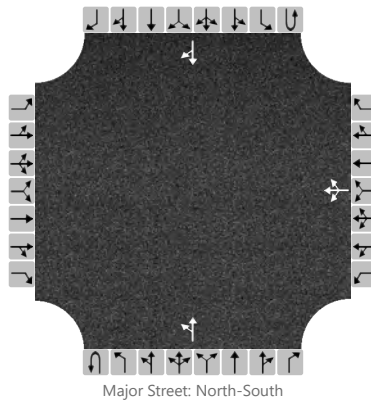
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			50											72		
Capacity, c (veh/h)			489											1296		
v/c Ratio			0.10											0.06		
95% Queue Length, Q <sub>95</sub> (veh)			0.3											0.2		
Control Delay (s/veh)			13.2											7.9		
Level of Service, LOS			B											A		
Approach Delay (s/veh)		13.2										2.1				
Approach LOS		B														

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	I-84 SB ramps/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	I-84 SB ramps
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion with Rezone		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume, V (veh/h)						70	0	20		5	210				240	50
Percent Heavy Vehicles (%)						3	3	3		3						
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized			No				No				No				No	
Median Type/Storage							Undivided									

## Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						6.43	6.53	6.23		4.13						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23						

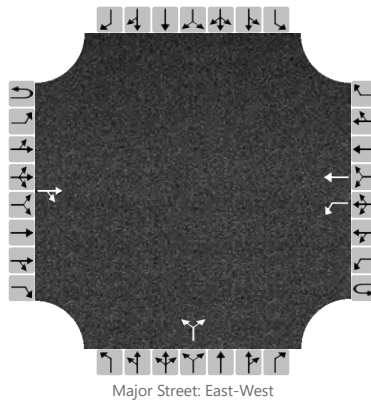
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						100				6						
Capacity, c (veh/h)						546				1230						
v/c Ratio						0.18				0.00						
95% Queue Length, Q <sub>95</sub> (veh)						0.7				0.0						
Control Delay (s/veh)						13.1				7.9						
Level of Service, LOS						B				A						
Approach Delay (s/veh)						13.1				0.2						
Approach LOS						B										

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion-with Rezone		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume, V (veh/h)			550	145		240	390			170		250				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No			No				No				No		
Median Type/Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					6.43		6.23			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

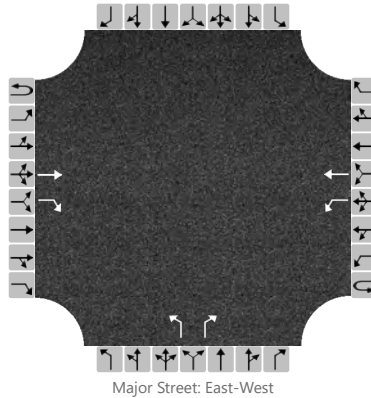
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						267					467					
Capacity, c (veh/h)						838					145					
v/c Ratio						0.32					3.23					
95% Queue Length, Q <sub>95</sub> (veh)						1.4					44.2					
Control Delay (s/veh)						11.3					1066.0					
Level of Service, LOS						B					F					
Approach Delay (s/veh)						4.3				1066.0						
Approach LOS						F				F						

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2040	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion-with Rezone		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume, V (veh/h)			550	145		240	390			170		250				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No			No				No				No		
Median Type/Storage				Left Only								1				

## Critical and Follow-up Headways

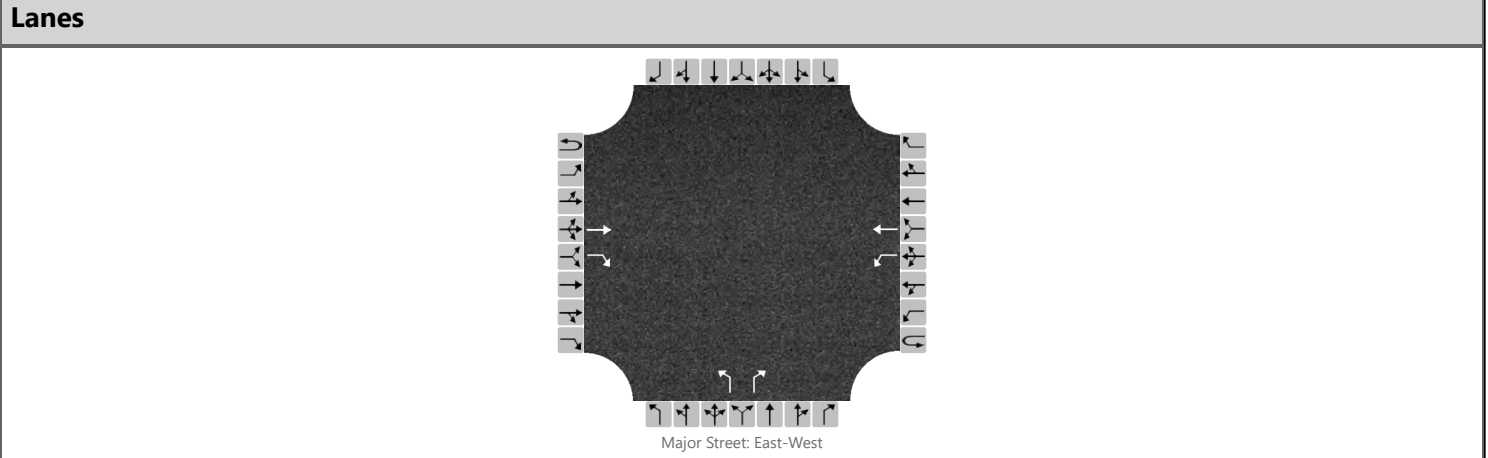
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						267				189		278				
Capacity, c (veh/h)						838				187		492				
v/c Ratio						0.32				1.01		0.57				
95% Queue Length, Q <sub>95</sub> (veh)						1.4				8.5		3.5				
Control Delay (s/veh)						11.3				120.4		21.4				
Level of Service, LOS						B				F		C				
Approach Delay (s/veh)						4.3				61.5						
Approach LOS										F						

# HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Montgomery	Intersection	US 730/Powerline
Agency/Co.	JUB Engineers	Jurisdiction	City of Umatilla
Date Performed	5/14/2020	East/West Street	US 730
Analysis Year	2030	North/South Street	Powerline Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Umatilla UGB Expansion-with Rezone, with turns		



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume, V (veh/h)			480	115		195	340			60		115				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No				No				No				No			
Median Type/Storage					Left Only								1			

**Critical and Follow-up Headways**

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					6.43		6.23			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

**Delay, Queue Length, and Level of Service**

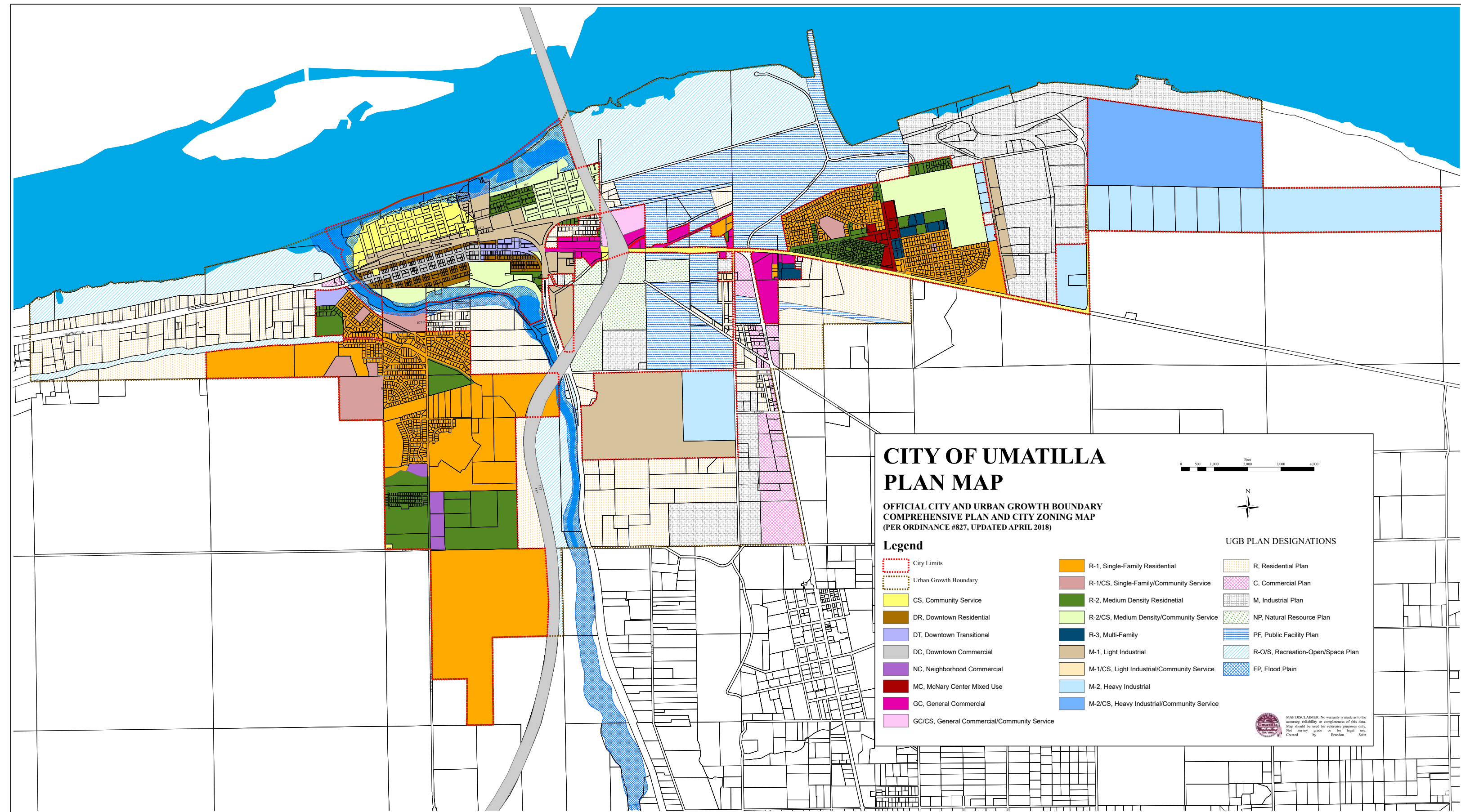
Flow Rate, v (veh/h)						217					67		128			
Capacity, c (veh/h)						922					245		545			
v/c Ratio						0.24					0.27		0.24			
95% Queue Length, Q <sub>95</sub> (veh)						0.9					1.1		0.9			
Control Delay (s/veh)						10.1					25.1		13.6			
Level of Service, LOS						B					D		B			
Approach Delay (s/veh)					3.7				17.6							
Approach LOS									C							

# APPENDIX C

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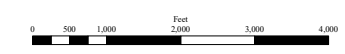
## City of Umatilla Plan Map





# CITY OF UMATILLA PLAN MAP

OFFICIAL CITY AND URBAN GROWTH BOUNDARY  
COMPREHENSIVE PLAN AND CITY ZONING MAP  
(PER ORDINANCE #827, UPDATED APRIL 2018)



## Legend

- |   |  |                                   |
|---|--|-----------------------------------|
| City Limits                                 | R-1, Single-Family Residential             | R, Residential Plan               |
| Urban Growth Boundary                       | R-1/CS, Single-Family/Community Service    | C, Commercial Plan                |
| CS, Community Service                       | R-2, Medium Density Residential            | M, Industrial Plan                |
| DR, Downtown Residential                    | R-2/CS, Medium Density/Community Service   | NP, Natural Resource Plan         |
| DT, Downtown Transitional                   | R-3, Multi-Family                          | PF, Public Facility Plan          |
| DC, Downtown Commercial                     | M-1, Light Industrial                      | R-O/S, Recreation-Open/Space Plan |
| NC, Neighborhood Commercial                 | M-1/CS, Light Industrial/Community Service | FP, Flood Plain                   |
| MC, McNary Center Mixed Use                 | M-2, Heavy Industrial                      |                                   |
| GC, General Commercial                      | M-2/CS, Heavy Industrial/Community Service |                                   |
| GC/CS, General Commercial/Community Service |  |                                   |

## UGB PLAN DESIGNATIONS

MAP DISCLAIMER: No warranty is made as to the accuracy, reliability or completeness of this data. Map should be used for reference purposes only. Not survey grade or for legal use. Created by Brandon Seitz



# APPENDIX D

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## Traffic Growth Calculations

**Umatilla Urban Growth Boundary Traffic Growth Calculations**

Intersection	NB			SB			EB			WB			TOTAL
	LT	T	RT	LT	T	RT	LT	T	RT	LT	T	RT	
	<b>Powerline/US 730</b>												
Existing 2020 PM Peak Hr	39	--	84	--	--	--	--	410	77	141	290	0	1041
2040 Background @ 1.5%/year	53	--	113	--	--	--	--	562	104	190	391	0	1402
Ambience Vested Trips	15	--	17	--	--	--	--	0	26	30	0	0	88
Total 2040 No Action (rounded)	70	--	130	--	--	--	--	550	130	220	390	0	1490
UGB Expansion/Rezone Trips	100	--	120	--	--	--	--	0	15	20	0	0	255
Total 2040 Trips with UGB & Rezone	170	--	250	--	--	--	--	550	145	240	390	0	1744

Intersection	NB			SB			EB			WB			TOTAL
	LT	T	RT	LT	T	RT	LT	T	RT	LT	T	RT	
	<b>Powerline/I-82 EB ramps (SB)</b>												
Existing 2020 PM Peak Hr	1	136	--	--	75	9	--	--	--	52	1	5	279
2040 Background @ 1.5%/year	1	183	--	--	101	12	--	--	--	70	1	7	376
Ambience Vested Trips													0
Total 2040 No Action (rounded)	5	185	--	--	100	10	--	--	--	70	0	10	380
UGB Expansion/Rezone Trips	0	25	--	--	140	40	--	--	--	0	0	10	215
Total 2040 Trips with UGB & Rezone	5	210	--	--	240	50	--	--	--	70	0	20	596

Intersection	NB			SB			EB			WB			TOTAL
	LT	T	RT	LT	T	RT	LT	T	RT	LT	T	RT	
	<b>Powerline/I-82 WB ramps (NB)</b>												
Existing 2020 PM Peak Hr	--	115	45	4	116	--	22	1	5	--	--	--	308
2040 Background @ 1.5%/year	--	155	61	5	156	--	30	1	7	--	--	--	415
Ambience Vested Trips	--												0
Total 2040 No Action (rounded)	--	155	60	5	155	--	30	0	10	--	--	--	415
UGB Expansion/Rezone Trips	--	20	0	60	80	--	5	0	0	--	--	--	165
Total 2040 Trips with UGB & Rezone	--	175	60	65	235	--	35	0	10	--	--	--	580

# Exhibit E – Supplement Findings



**CITY OF UMATILLA CITY COUNCIL**  
Supplemental Findings  
FOR  
PLAN AMENDMENT PA-2-20

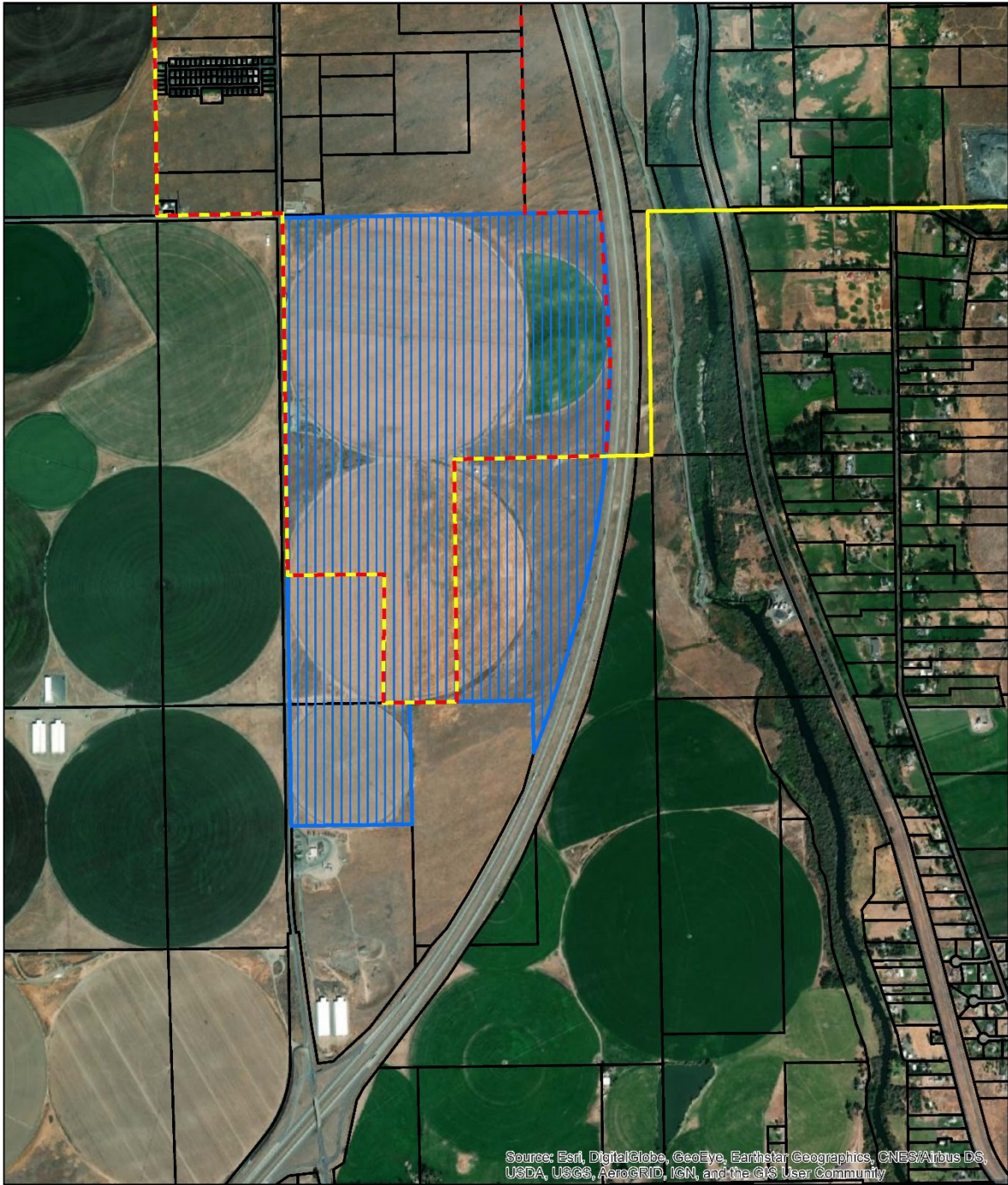
**REPORT PREPARED BY:** Brandon Seitz, Community  
Development Director

RE: Response to comment letter from DLCD for Plan Amendment PA-2-20 (DLCD File No. 002-20); Notice for and Annexation, Urban Growth Boundary Expansion and Rezone

The intent of these supplemental findings is to directly address DLCD’s comments submitted on October 19, 2020 by providing additional narrative and the requested maps and tables. To provide a brief overview the city is working with Cleaver Land to approve four applications as follows:

- City of Umatilla Plan Amendment (PA-1-20) – would amend Chapter 9 of the City of Umatilla’s Comprehensive Plan to incorporate relevant sections of the recently completed EOA.
- Cleaver Land Plan Amendment (PA-2-20) – would add 146.63 acres of land to the City’s Urban Growth Boundary
- Cleaver Land Plan Amendment (PA-3-20) – would rezone 294 acres of land currently designated Single-Family Residential to Light Industrial
- Cleaver Land Annexation (ANX-1-20) – would annex the 146.63 acres of land added to the City’s UGB and designated the land as Light Industrial

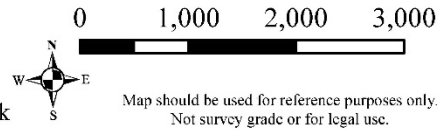
The intent of these applications is to create a new industrial park located in the South Hill neighborhood for large lot industrial development. The map below shows the existing UGB and City Limits boundary and the proposed area to be included in the “South Hill Industrial Park” assuming all 4 applications are approved.



### CITY OF UMATILLA TAX LOT MAP Feet

**Legend**

- City Limits
- Urban Growth Boundary
- Tax Lots (3/23/20)
- Proposed South Hill Industrial Park



DLCD's comments raise two primary issues: 1) Land need and City's position to consider a 160-acre parcel of industrial land developed prior to physical development taking place, and 2) land efficiency and evaluation both within and outside the UGB.

### **Land Need**

The City hired Johnson Economics to prepare an Economic Opportunities Analysis (EOA) and the proposed EOA would be adopted as part of Plan Amendment PA-1-20. To summarize the EOA identified the City has a projected need of two 100+ acre sites and two 50-99.9 acres sites. The EOA also identified that the City had one 100+ acres site in our inventory. The 160-acre site is located at the Port of Umatilla's McNary Industrial Park and is identified as Tax Lot 5N28B00000600. To date the City has approved several land use applications for future development of the port property, including a site plan review application approving data center building 1 of 4 and accessory structures. In addition, the City has issued the following building permits for the PDX 130 campus:

- 877-21-000145-ELEC - PDX 130 Phase 1 electrical
- 877-21-000135-STR - Security building for PDX 130
- 877-21-000120-STR – PDX 130 core and shell
- 877-21-000092-PLM – Site utilities

Physical development and construction have now commenced on Tax Lot 5N28B00000600 and the property can be removed from the City's inventory of industrial lands. City will note the above development and will refresh the current EOA to reflect this change. This results in a need of two 100+ acres sites and two 50-99.9 acres sites to meet the City's site-specific characteristics for large lot industrial sites as outlined in the EOA. No amendments to the EOA are being proposed, City will note the change in inventory.

Development of the PDX 130 further demonstrates the City's ability to attract and develop large lot industrial sites, specifically data centers. Staff acknowledges enterprise zone agreements are not binding but it should be noted that the City has approved two enterprise agreements, PDX 130 and PDX 120, for development of two new campuses located with City limits with an estimated value of 2.37 billion per campus, resulting in a total of 4.74-billion-dollar development to occur over the next several years.

Therefore, DLCD's comment regarding the City's position to consider Tax Lot 5N28B00000600 developed have been addressed. With the removal of the only 100+ acres site from the EOA the City now has a need for 300 – 399.98 acres of land suitable for large lot industrial development. It should also be noted that the EOA found the City had a combined need of 311 acres of employment lands and an inventory of 378.3 acres. With the removal of the 160 parcels from the City's inventory of industrial land the City would have a need for 93 acres of employment land. The additional need would be for additional large lot industrial sites so the City's evaluation process has not changed.

### **Land Efficiency & Evaluation**

To address DLCD's comments about site specific maps and study area analysis staff have provided a series of maps to identify potentially suitable sites both within the UGB and sites within the study area as established in OAR 660-024-0065. To reduce the need for multiple maps

staff will address properties within the study area and UGB by region of the City. However, in addition to the evaluation criteria in OAR 660-024-0067 the City added one criterion that the final industrial area(s) must be clustered to allow for extension of City services. While properties need not be contiguous, they must be within the same general region of the City. It is simply not financially feasible for the City to extend the needed utilities to serve large lot industrial sites to multiple locations scattered throughout the City.

Staff has provided several maps and tables that identify all properties located within City Limits that are 50 acres or larger in size. Similarly parcels that could be combined to achieve similar results have been identified. All parcels 50 acres and larger in size are highlighted and labeled with County's TLID # (first 8 number are Assessor's map number last 5 numbers are tax lot number) for identification purposes.

However, it should be noted that the United States Army Corp of Engineers (USACE), Portland and Walla Walla districts, and Bureau of Land Management (BLM) hold a significant portion of vacant land both within the UGB and study area. Those properties will be identified and labeled with the appropriate agency. However, site specific analysis is not provided as by operation of federal law those properties are not subject to the state wide planning goals or local regulation. In addition, OAR 660-024-065 (4)(d) allows lands owned by the federal government and managed primarily for rural uses to be excluded from the study area.

#### Southshore Drive & Western US 730

The western extent of the City UGB and study area is currently designated residential by the comprehensive plan and includes a variety of residential zoning. Generally, property located north of US 730 are located along Southshore Drive and with few exceptions have been divided into 1-acre parcels, the minimum allowed by the current zoning. Property south of US 730 have 2-acre minimum lot size and have similarly been divided and developed with a typical rural development pattern. While some of the larger parcels are between 10 -15 acres, they are not contiguous and would not be suitable for redevelopment to meet the City's need for large lot industrial sites. Given the development pattern all of the properties located north of the West Extension Irrigation District (WEID) canal are not considered suitable for redevelopment of large lot industrial sites.

As shown on the map below the 4 parcels located along the river are currently undeveloped and under USACE management. In addition, parcels 5N28180000601 & 5N27130001001 are believed to be at least partially located with the 35UM1 historic site that is designated as a significant site in the National Register of Historic Places. City staff does not have access to the official site designation maps but has had extensive discussions with Oregon State Historic Preservation Office (SHPO) and Confederated Tribes of the Umatilla Indian Reservation (CTUIR) cultural resources staff.

In addition, there are several large parcels owned by Topaz Land Inc, including additional properties located on the South Hill map, that meet multiple provision of the definition of high value farm land in ORS 195.300. These lands are collectively referred to Topaz Land properties and additional analysis on site suitability/alternative locations is provided below.





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

### Southshore Drive & West US 730

**Legend**

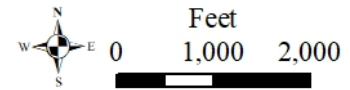
- West Extension Irrigation Canal
- City Limits
- Urban Growth Boundary

- Study Area
- Tax Lots

**Alternative Sites**

- Other Properties
- Topaz Land Properties

- USACE





Southshore Drive & West US 730 Properties

TLID	OWNER	ACRES
5N27000000400	TOPAZ LAND INC	48
5N27000000401	TOPAZ LAND INC	432.44
5N27000000501	TOPAZ LAND INC	594.29
5N27130001001	USA	90.82
5N27130001301	USA	12.89
5N27130003300	TOPAZ LAND INC	39.82
5N2714D000100	USA	40.95
5N2724B000100	TOPAZ LAND INC	9.18
5N28180000601	USA	95.1
5N28180000901	SCHOOL DIST #6	10
5N28180000903	MCCLANNAHAN VELMA JEAN ET AL	27
5N28180000904	MCCLANNAHAN VELMA JEAN ET AL	54.17
5N2818DD05500	SILVER RIDGE HOMES INC	9.54
5N28C00001100	UMATILLA CITY OF	38.48
5N28C00001200	TOPAZ LAND INC	595.5

The remainder of the properties identified as “other properties” on the map above total approximately 140 acres. However, TLID 5N28180000901 is owned by the Umatilla School District and was donated by the McClannahan family for future use of as a school. The School Districts is beginning to looking into the feasibility of developing the site as they are nearing capacity at existing facilities. TLID 5N28C00001100 is owned by the City of Umatilla and is currently developed with water infrastructure and the Sunset Hills Cemetery. The remainder of the property has been reserved for expansion of the existing cemetery.

The remainder of the is property is zoned for residential use and totals approximately 90 acres. While staff recognized that DLCD has stated that until physical development has occurred a property cannot be removed from the City’s inventory. However, at their July 6<sup>th</sup> meeting City Council approved Monte Vista Plan Amendment and Subdivision applications for development of “McClannahan Summit” a 326-lot subdivision for development of detached single-family dwellings. Given the City’s need for additional housing as establish in the City’s 2019 Housing and Residential Land Needs Assessment, pending residential development and the fact that the remainder of the site only partial meet the City’s for large lot industrial sites this location is not considered a viable alternative site. This land could be combined in part with a portion of the Topaz Land properties to achieve a similar result to the City proposed location. However, as addressed below in the alternative site analysis, expanding the UGB to include Topaz Land properties would result in additional high value farm land being added to the UGB an removed from crop production than the City’s preferred location.

South Hill

South Hill is generally described as the residential area located along Powerline Road laying west of I-82. However, for mapping purposes several large parcels located west of the Umatilla River were included. The Topaz Land/Onyx Land properties are collectively referred to Topaz Land properties and additional analysis on site suitability/alternative locations is provided below.

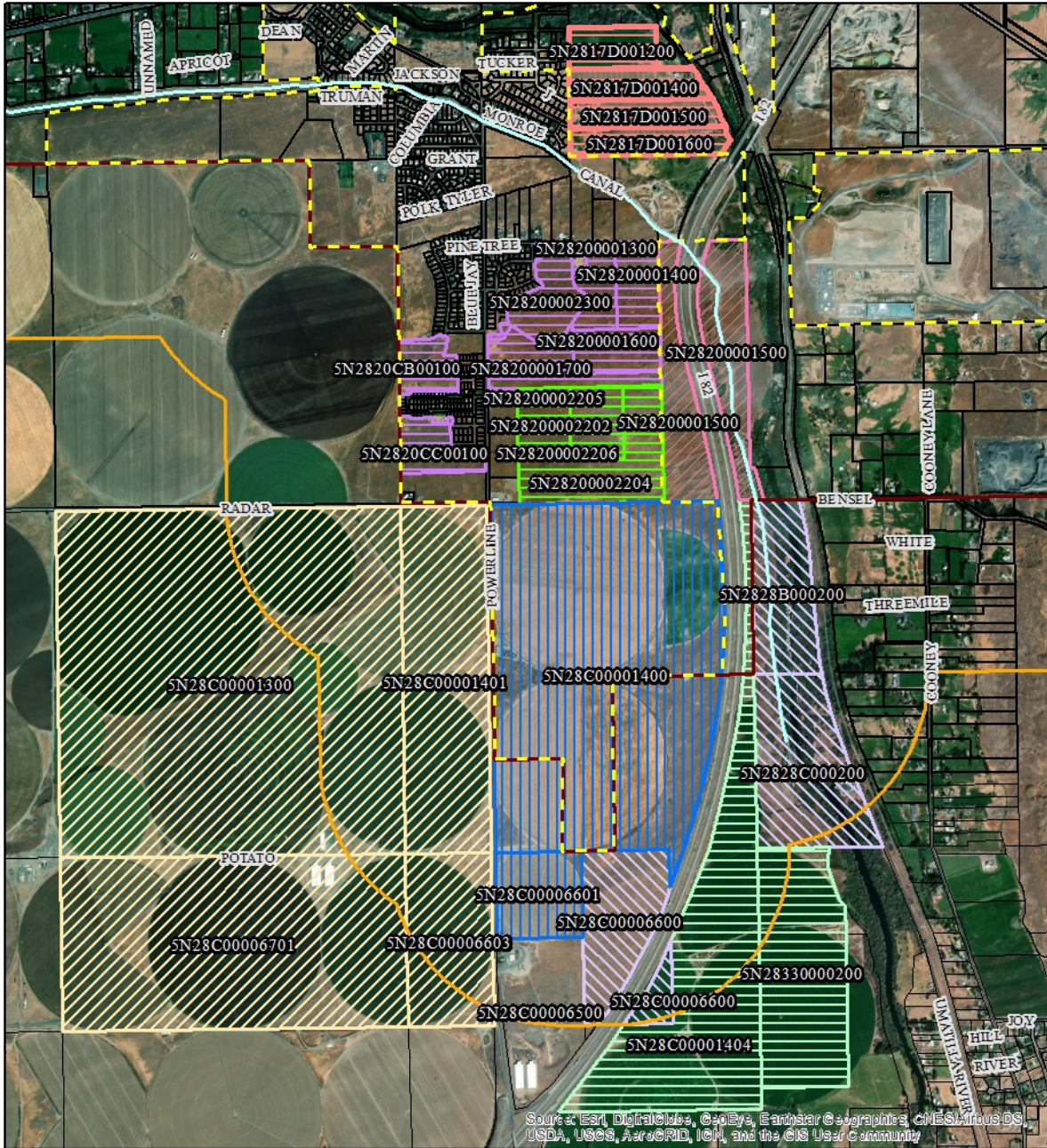
The Cleaver Land properties are the proposed site for the City's UGB expansion and a additional analysis is provided below. The other "farm" parcels identified are the Broken Spur Ranch property. The portion of the property located within the study area is approximately 90 acres in size and could meet a portion of the City need for large lot industrial sites. However, the parcels are isolated between I-82 and the Umatilla River. In addition, the property is zoned EFU and has water right for irrigation and would be considered high value farm land. As seen on the aerial imagery almost the entire portion of the property within the study area is developed with center pivot irrigation. Therefore, give the property is isolated by physical barriers from the remainder of the City and is considered high value farm land this site is not considered a suitable alternative location.

The remainder of the large undeveloped lots are in federal ownership. It is staff's belief that TLID 5N2828B000200 and 5N2828C000200 are managed by the Bureau of Reclamation given the location of the WEID canal, regardless of which federal agency manages the properties are in federal ownership and are not considered a suitable alternative location.

The Fastrack/Columbia Basin Development properties have each been approved for residential developments and are separated by an existing residential development and Powerline Road. The property is divided into 3 separate subdivisions; Ballard Subdivision, Vandalay Meadows and Cheryl's Place. The combined properties would result in a 542 new single family lots for development of detached single-family dwellings. Construction on all 49 lots on Vandalay Meadows has commenced with the first 26 homes having been completed in Phase 1. Phase 1 of Ballard, totaling 64 lots, is nearing completion with all of the road construction completed and the City anticipates the final plat application to be submitted within the coming weeks. Phase 1 of Cheryl's Place has been completed with the first 26 homes being completed. The master site plan outlined in the applicants TIA is provided below for reference. Given the City's need for housing and the approved applications for development these properties are not considered a suitable alternative location.

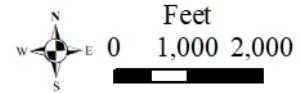
The Nobles properties are designated residential by the comprehensive plan and total 90.82 acres. The properties could meet a portion of the City's need for large lot industrial sites but are isolated by existing physical development. The property is bordered on the east and north by the Umatilla River and USACE owned lands. South of the property is the WEID irrigation canal and a major BPA easement and multiple transmission lines. The total BPA easement width is 395 feet. Lands to the west are developed with single family dwelling, the tax lots to the west are shown on the map but the aerial image does not show the 54 new homes built in 2019. Therefore, the Nobles property is not considered a suitable alternative location as existing development and physical barriers isolate the property and make it impractical to extend the needed utilities to serve large lot industrial development.

The CCPD Inc properties are zoned Medium Density Residential and are included in the site suitability/alternative locations analysis provided below. TLID 5N28C00006500 (not highlighted) is not contiguous to the City's UGB and could not be incorporated into the UGB as a stand-alone property.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

### South Hill



#### Legend

- Study Area
- West Extension Irrigation Canal
- City Limits
- Urban Growth Boundary
- Tax Lots

#### Alternative Sites

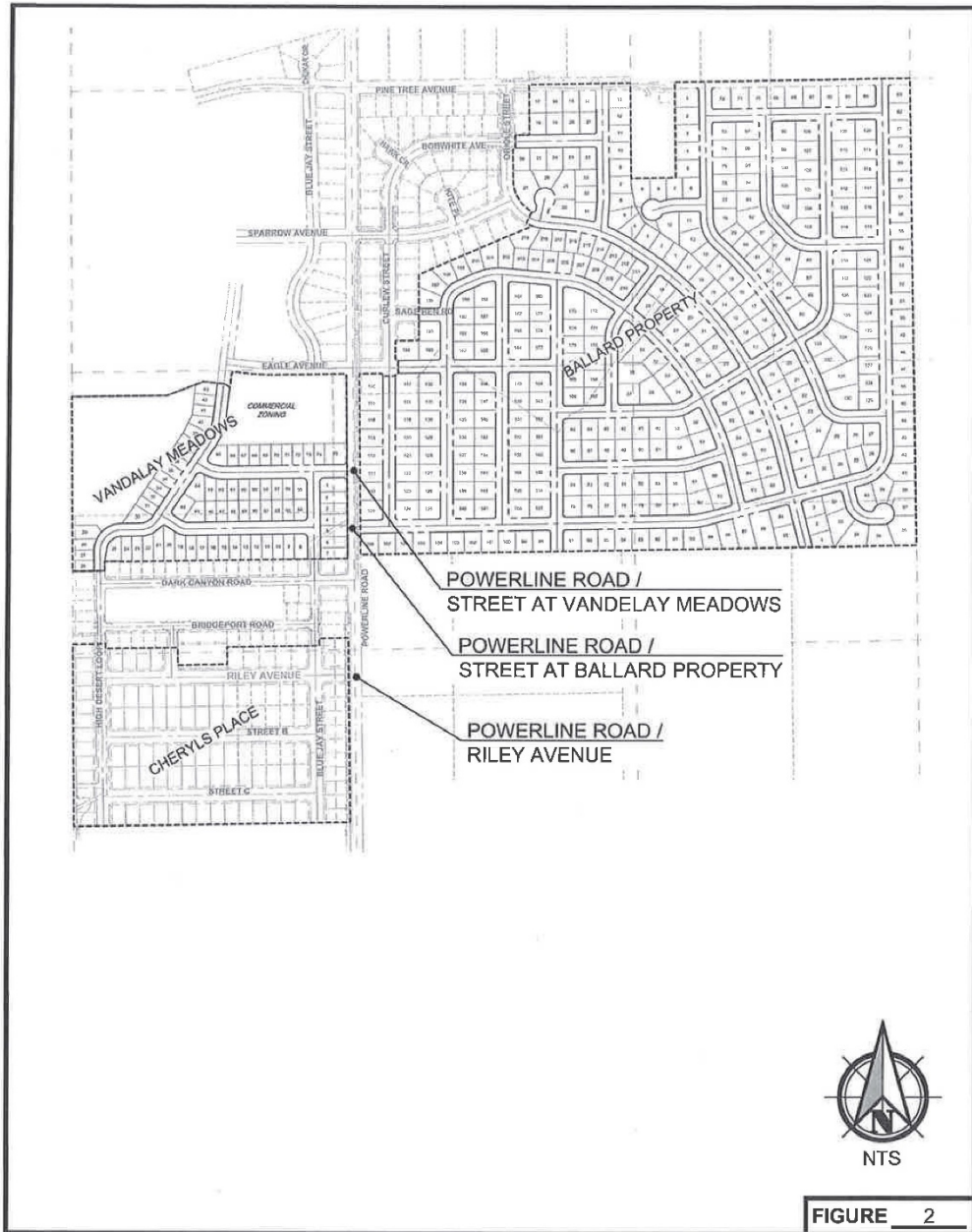
- Broken Spur Ranch
- CCPD Inc Property
- Cleaver Land
- Fastrack/Columbia Basin Development

- Nobles Property
- Topaz Land/Onyx Land
- BLM
- Bureau of Rec

South Hill Properties

<b>TLID</b>	<b>OWNER</b>	<b>ACRES</b>
5N2828C000200	USA	95.76
5N28330000200	BROKEN SPUR RANCH LLC	106.56
5N28C00001404	BROKEN SPUR RANCH LLC	169.4
5N28C00006500	FOX HARVESTING OF OREGON INC	61.87
5N28C00006600	USA	80
5N28C00006603	TOPAZ LAND INC	78.1
5N28C00006701	TOPAZ LAND INC	319.89
5N2817D001200	NOBLES CLYDE C JR & BETTY L	19.18
5N2817D001400	NOBLES CLYDE C JR ET AL	22.5
5N2817D001500	NOBLES CLYDE C JR & BETTY L	22.1
5N2817D001600	NOBLES CLYDE C JR & BETTY L	23.1
5N28200001300	FASTRACK INC	16.05
5N28200001400	FASTRACK INC	20
5N28200001500	USA BUREAU OF REC	88.7
5N28200001600	FASTRACK INC	20
5N28200001700	FASTRACK INC	29.21
5N28200002201	C C P D INC	4.4
5N28200002202	SOSA ANNABEL	20
5N28200002204	C C P D INC	48.58
5N28200002205	C C P D INC	7.8
5N28200002206	C C P D INC	7.8
5N28200002300	FASTRACK INC	26.65
5N2820CB00100	COLUMBIA BASIN DEVELOPMENT LLC	15.23
5N2828B000200	USA	63.28
5N28C00001300	ONYX LAND COMPANY LLC	635.74
5N28C00001400	CLEAVER LAND, LLC	1.26
5N28C00001401	ONYX LAND COMPANY LLC	155.45
5N28C00006601	CLEAVER LAND, LLC	39.09





**Site Plan**  
**Umatilla Residential Development**



April 2020  
PBS Project 66127.000

### Downtown & McNary Dam

The downtown area is generally described as the land laying north/east of the Umatilla River and west of I-82. The McNary Dam area is generally described as the land laying east of I-82 and north of US 730. The McNary dam area contains multiple large acreage parcels that are largely undeveloped. However, there are very few parcels that are not in federal ownership. Staff has attempted to identify which federal agency manages the property but County assessor's data primarily shows BLM as the property owner when they are actually managed by USACE or Bonneville Power Administration (BPA). Management areas do not directly match property lines so there are some inaccuracies in which federal agency manages the property but all properties identified are in federal ownership and are not considered suitable alternative locations.

The downtown area has been mostly developed to an urban density, with few properties available for larger development. The two exceptions are lands managed USACE that is currently developed with the City's 3<sup>rd</sup> street soccer field and the Umatilla Marina & RV Park. The other large cluster of undeveloped land is commonly referred to as the "old town site". While the property is also managed by USACE it is known to be located within the 35UM1 historic site. No other properties that could meet the City's need for large lot industrial site have been identified. Therefore, no sites within the downtown and McNary Dam areas are considered suitable alternative locations.

**MAP & TABLE NOTE:** Within the downtown area County tax lot data still show multiple smaller parcels and rights of way. Those property lines are not accurate and USACE owns all properties highlighted regardless of property line boundaries. For simplification of mapping staff has grouped those areas together to show a more accurate ownership area. The tax lot boundaries shown are remnants of the original township plats and do not align with actual ownership. Individual parcel information for the properties in the downtown area is provided in the table.

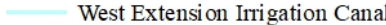
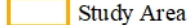
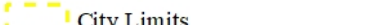
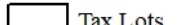
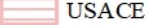
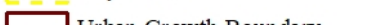
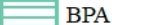
### McNary Dam Area Properties

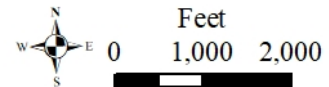
<b>TLID</b>	<b>OWNER</b>	<b>ACRES</b>
5N28090000100	USA	256.17
5N28090000200	USA	2.53
5N2809CC00100	USA	1.65
5N2809CC02800	USA	0.42
5N2815BC00101	USA	12.75
5N2816A000100	USA BPA	1.31
5N2816A000200	USA BPA	23.99
5N2816A000300	USA	10.75
5N2816A000400	USA	25.08
5N2816A001000	USA	11.38
5N2817AB00701	USA	3.69
5N2817AB00801	USA	1.63
5N2817BA03800	USA	0.87
5N2817BA04200	USA	1.05
5N28A00000400	USA	659.59



## Downtown & McNary Dam

### Legend

- |   |  |   |
|---|--|---|
|  West Extension Irrigation Canal |  Study Area | <b>Alternative Sites</b>  |
|  City Limits                     |  Tax Lots   |  USACE |
|  Urban Growth Boundary           |  |  BPA   |





Downtown Area Properties

<b>TLID</b>	<b>OWNER</b>	<b>ACRES</b>
5N2808DC00100	USA (CORP OF ENGR)	5.32
5N2808DD00300	USA (CORP OF ENGR)	10.07
5N2808DD00500	USA (CORP OF ENGR)	1.1
5N2808DD00600	USA (CORP OF ENGR)	2.2
5N2809CC01490	USA (CORP OF ENGR)	1.43
5N2809CC01700	USA (CORP OF ENGR)	1.61
5N2809CC01800	USA (CORP OF ENGR)	1.88
5N2809CC02500	USA (CORP OF ENGR)	1.69
5N2809CC03400	USA	2.2
5N2816BB01300	USA	2.22
5N2816BB02000	USA	1.31
5N2816BB02200	USA	1.46
5N2816BB02400	USA	1.61
5N2816BB02700	USA	1.23
5N28170001900	USA	2.23
5N28170002100	USA	9.76
5N2817AA00100	USA	2.2
5N2817AA00200	USA	2.2
5N2817AA00300	USA	4.36
5N2817AA00500	USA	1.22
5N2817AA00600	USA	1.58
5N2817AB00300	USA (CORP OF ENGR)	6
5N2817AB00701	USA	3.69
5N2817AB00801	USA	1.63
5N2817BA01300	USA	0.91
5N2817BA02000	USA	1.2
5N2817BA03000	USA	0.91
5N2817BA03100	USA	1.05
5N2817BA03200	USA	1.27
5N2817BA03500	USA	1.09

5N2817BA03800	USA	0.87
5N2817BA04200	USA	1.05
5N2817BA04500	USA	1.05
5N2817BA05600	USA	2.73
5N2817BB00100	USA	7
5N2817BB00300	USA	1.1
5N2817BB01000	USA	0.92
5N2817BB01900	USA	0.92
5N2817BB02500	USA	0.92
5N2817BB03000	USA	1.8
5N2817BB03800	USA	0.92
5N2817BB04100	USA	0.92
5N2817BB04700	USA	0.92
5N2817BB05300	USA	1.1
5N2817BB05900	USA	1.32
5N2817BB06200	USA	1.1
5N2817BB06900	USA	1.1
5N2817BB07500	USA	1.1
5N2817BB08400	USA	1.1
5N2817BC00101	USA	2.56
5N2818AA00100	USA	7.75
5N2818AA00300	USA	3.46
5N2818AA01200	USA	2.39
5N2818AA02000	USA	4.6
5N2818AD00100	USA	3.63
5N28B00000490	USA	44
5N28B00000490	USA	5.39

### US 730 & 395

The US 730 and 395 area is generally described as the property laying east of the Umatilla River and south of US 730 along US 395. The properties located along US 395 have been divided into smaller lots and are primarily developed with a mix of residential, commercial and industrial uses. There are several properties that are located west of US 395 that are completely encumbered with large BPA easements and are not identified on the map below. Those properties while not physically developed are not considered developable as they would conflict with the BPA easements and are not considered in the alternative site analysis.

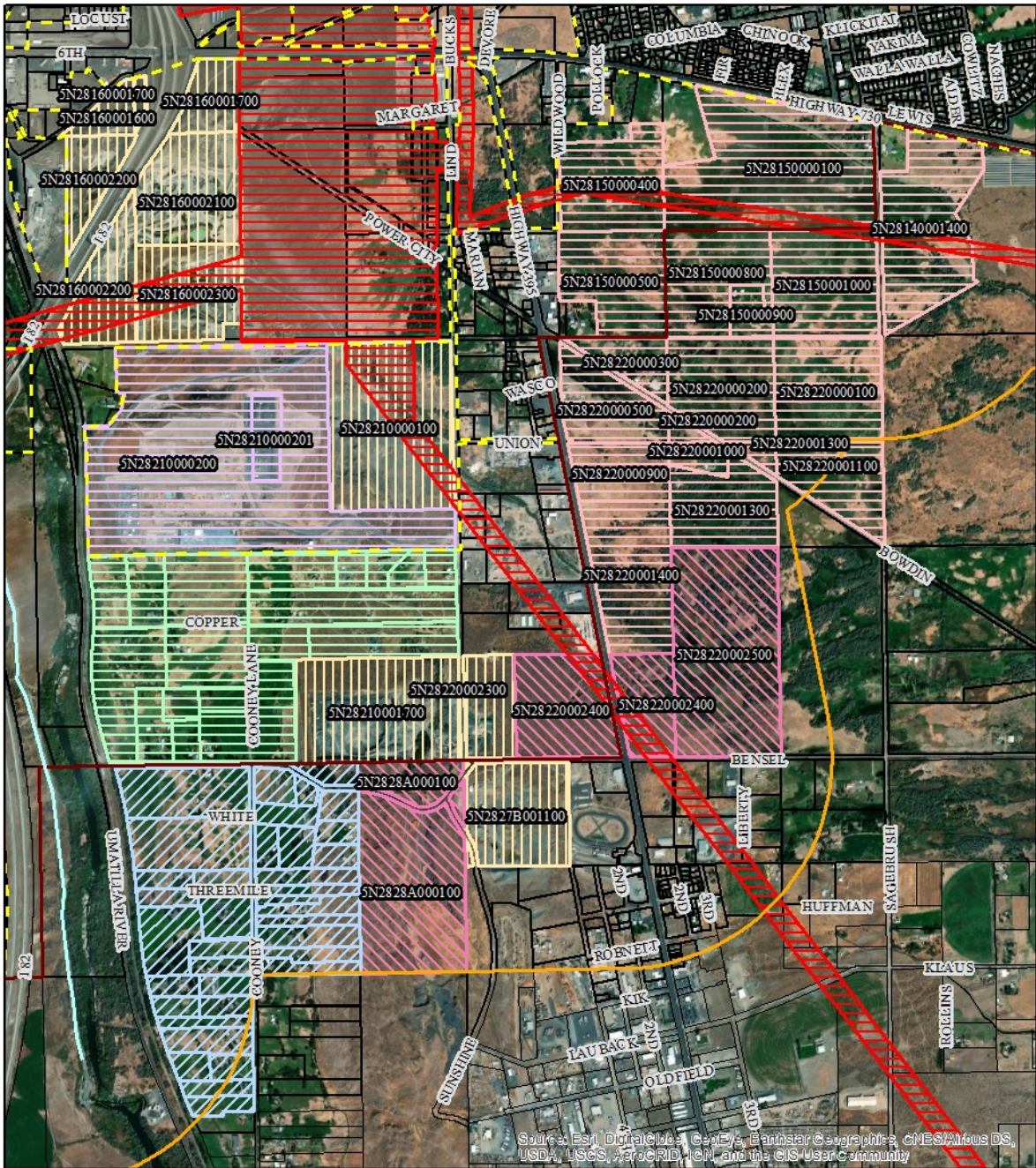
The PDX 63 site is not visibly developed on the aerial image but has been developed with four data center building and associated substation. To date the City has issued building permits for four data center building (PDX 63, PDX 65, PDX 67 and PDX 69). The properties are identified on the map below but are considered developed in the EOA as permits had been issued for PDX 63.

There are several sites with active Department of Geology and Mineral Industries (DOGAMI) permits in the US 730 and 395 area. All of the site are visibly developed for rock extraction and while not developed with structures are considered developed in the EOA and are not considered suitable alternative locations.

The properties identified as East 395 are properties located east of US 395 and south of US 730. The properties are split between the UGB and study area and could meet the City's need for large lot industrial sites. The East 395 properties are included in the alternative site analysis below.

The Cooney Lane Ext Residential properties are located within the UGB and are developed with a typical rural residential patter with housing on lots ranging from 4 to 26 acres. While the properties do not qualify for the safe harbor provision allowed by OAR 660-024-0050 (2). The properties were considered partially vacant or vacant respectively in the City's residential BIA and corresponding Comprehensive Plan Amendment acknowledged by DLCD (City # PA-1-19, DLCD file # Umatilla 002-19). Ultimately the properties have been divided into smaller lots with multiple owners and could not practically be recombined to accommodate redevelopment. Therefore, due the small lot size and multiple ownership these properties are not considered a reasonable alternative location for redevelopment of large lot industrial sites.

The properties identified as County Rural Residential area currently located outside the UGB and are zoned Rural Residential - 4 by the County. These properties share a similar development pattern to the Cooney Lane Ext Residential properties but are included alternative site analysis as the land evaluation criterion in OAR 660-024-0067 (2) "priority of land for inclusion" requires nonresource land to be considered as a first priority. **NOTE** see sub map showing residential properties TLID numbers.

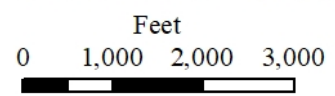


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community







**Legend**

-  BPA Easement
-  Study Area
-  WEID Canal
-  City Limits
-  Urban Growth Boundary
-  Tax Lots

**US 730 & 395**



**Alternative Sites**

-  BLM
-  Cooney Lane Ext Residential
-  County Rural Residential
-  DOGAMI Sites
-  East 395
-  PDX 63 Site







US 730 & 395 Table

TLID	OWNER	ACRES
5N28140001400	B. KIK PROPERTIES LLC	53.87
5N28150000100	B. KIK PROPERTIES LLC	86.75
5N28150000400	JARED GREG SCOTT	34.24
5N28150000500	MADRIGAL CERVANTES EDUARDO ROSARIO	34.9
5N28150000800	B. KIK PROPERTIES LLC	33
5N28150000900	TURNEY WILLARD F & PATRICIA E	7
5N28150001000	B. KIK PROPERTIES LLC	39
5N28160001600	MORRISON JOHN K ET AL	7.9
5N28160001700	UMATILLA COUNTY OF	16
5N28160002100	MORRISON JOHN K ET AL	40.29
5N28160002200	MORRISON JOHN K ET AL	46.13
5N28160002300	BONNEY KEN ET AL	0
5N28210000100	VADATA INC	79.68
5N28210000200	AMAZON DATA SERVICES INC	178.2
5N28210000201	UMATILLA ELECTRIC COOPERATIVE ASSOC	9.1
5N28210001200	BARTH LAUREN	4.79
5N28210001201	FOLEY CHRISTOPHER J & SCHULTZ SALLY A	4.76
5N28210001202	WALTON JOSHUA C & JAMIE L	4.76
5N28210001203	PARKINS VAUGHN EDWARD & TAMARA ROSE	4.75
5N28210001300	RIVERA PEDRO & MARIA	20.98
5N28210001400	NOBLES SAM K & NANCY C	4

5N28210001401	NOBLES SAM K & NANCY C	12
5N28210001402	RANNE DONALD L	4.19
5N28210001403	MCCLURE LINDA F	4
5N28210001404	NOBLES SAM K & NANCY C	4
5N28210001500	NOBLES CLYDE C & BETTY L	26.41
5N28210001600	GILCHER NEVA A	18.77
5N28210001601	KNOEPFLER JASON S & NOBLES-FISHER NICOLE	8
5N28210001700	NOBLES CLYDE JR 1/4 ETAL 3/4	61.43
5N28210001800	NOBLES JAMES B & SANDRA K	25.89
5N28210001900	WOOD TRAVIS J & BRITNEY M	19.02
5N28210002000	RICHMAN BECKY A & PETERSON RONALD	4.18
5N28210002001	BETTS ROBERT D & MONICA L	8.64
5N28210002002	NOBLES JAMES B & SANDRA K	4.49
5N28210002003	NOBLES JAMES BRUCE & SANDRA KAY	4.04
5N28210002100	LYMAN KATHERINE H	26.11
5N28220000100	B. KIK PROPERTIES LLC	40
5N28220000200	TURNEY WILLARD F & PATRICIA E	38.92
5N28220000300	CERVANTES JAIME M & RIVERA VENANCIA R	12.88
5N28220000500	UMATILLA SAGE RIDERS	24.49
5N28220000900	BONNEY KEN ET AL	20
5N28220001000	WARR STEVEN & ANNETTE	5

5N28220001100	B. KIK PROPERTIES LLC	25.68
5N28220001300	PARKS ETHAN	32.37
5N28220001400	BONNEY KEN ET AL	40.84
5N28220002300	UMATILLA COUNTY OF	8
5N28220002400	USA	55.56
5N28220002500	USA	79
5N2827B001100	LOGSDON NORRIS	0
5N2828A000100	USA (BLM)	77.43
5N2828A000200	POMEROY MICHAEL S & ASHLEY M	5.3
5N2828A000201	GUTIERREZ JULIAN & MARGARET	3.76
5N2828A000202	POTTER LYLE GENE	5.47
5N2828A000203	NOBLES KIMBERLY JEAN ET AL	5.02
5N2828A000204	EVANS DANNY EARLE & PAULINE KAY	4.17
5N2828A000300	HALLUM JOHN M & VALERIE L	1.5
5N2828A000400	MCDONOUGH PAUL M & JENNIFER L	4.1
5N2828A000500	JOHNSON MILTON J & JEANNE FAYE (LE)	3.68
5N2828A000600	PARKINS VAUGHN EDWARD & TAMARA ROSE	3.93
5N2828A000700	CLARK NATHANIAL ALVA & KIMBERLY	4
5N2828A000701	KONTUR FRANK J & WANDA J	5.76
5N2828A000800	JONS WILLIAM	2.08
5N2828A000900	ZWALD NICHOLAS C & MARY G	5.5
5N2828A001000	THOMAS CLINTON R & NORMA J	3.94

5N2828A001100	MURPHY CHANCE & ANDREA	7.77
5N2828A001200	SANCHEZ GABRIELA & CARILLO FERNANDA	5.01
5N2828A001201	PADILLA JOSE J & RAQUEL	5.02
5N2828B000100	NOBLES CLYDE C & BETTY L	22.18
5N2828B000300	ELYUTH TATAR & INGRID TATAR	24.54
5N2828B000400	POWELL GARY L & SANDRA L	4
5N2828B000500	RHEA ROBERT W & PATRICIA R	4
5N2828B000600	SARGENT MARK P & GAIL A	8.82
5N2828B000700	SWAGGART BENJAMIN C & TERRI L	4
5N2828B000800	WOOD THOMAS J & DANA A	14.06
5N2828B001000	CARLSON JEREMY C & ANGELA C	4
5N2828B001001	ENNIS GERALD L & CHERYL A	4
5N2828C000100	PADILLA DAVID M	3.82
5N2828C000101	KONTUR FRANK & WANDA	3.98
5N2828C000102	KONTUR FRANCIS J & WANDA J	3.71
5N2828C000300	LANGERMAN JEREME R ET AL	3.82
5N2828C000400	CLAASSEN MICHAEL E & LEAH D	3.83
5N2828C000500	MCNEIL DAN P & KIM K	8.53
5N2828C000501	SMITH TAMARA L & RANDALL C (TRS)	4
5N2828C000502	R & T SMITH TRUST ET AL	4
5N2828C000700	ASCENCIO GREGORIO L & TORRES MONICA R	4.14
5N2828C000800	JONS WILLIAM	4.15

### Port of Umatilla Industrial Park

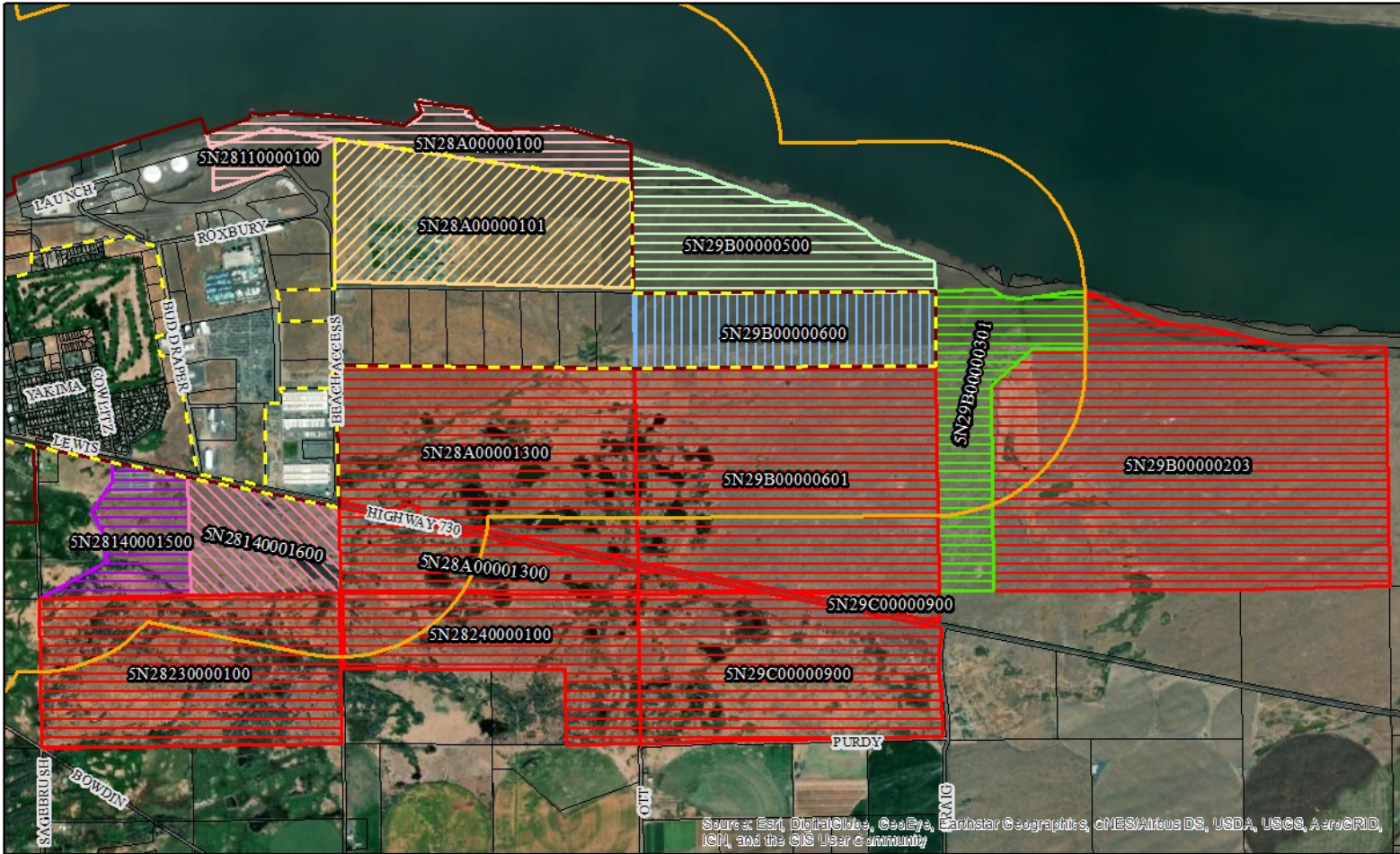
Expansion of industrial lands at the existing industrial park is the most logical location to look for expansion of the UGB. However, with the exception of a parcel (TLID 5N29B00000301) owned by Oregon Department of Fish & Wildlife, all of the surrounding properties are in federal or tribal ownership. To the south and east is the Wanaket Wildlife Area that is owned by Bureau of Indian Affairs (BIA) and held in trust for CTUIR. In addition, the area is generally identified as the “McNary Potholes” in the Umatilla County Comprehensive Plan Technical Report and designated a significant wetland site. The goal 5 analysis identifies the McNary Potholes as a 3C resource to limit conflicting uses. Therefore, given the Wanaket Wildlife area is in federal ownership is actively being managed by CTUIR as a wildlife and wetlands area the properties are not considered a suitable alternative location.

In addition to the Wanaket Wildlife area, CTUIR also owns and manages the Wanapa Industrial Site. The City has an acknowledged Goal 11 exception to provide sanitary sewer to the site. The City acknowledges the property is zoned industrial and would be considered a First Priority land under OAR 660-024-0050. While City has taken steps to facilitate development, existing goal exceptions to provide sanitary and agreements to provide potable water, of the Wanapa Industrial Site the City does not have regulatory jurisdiction of the property. In addition, properties held in fee by CTUIR are generally not eligible to be subdivided and sold to private developers. This would further reduce potential development opportunities. Therefore, the Wanapa Industrial Site is not considered a suitable alternative location.

The Umatilla Electric Cooperative property (UEC), TLID 5N28140001500, appears to be a suitable location based on aerial imagery but has existing physical barriers that would prohibit development of the site to meet the need for large lot industrial sites. As shown on the map below the property is divided by a significant BPA transmission lines and the “O line” irrigation canal/ditch, managed by the Hermiston Irrigation District. Due to the existing utilities the property is broken into three small sections not suitable for development of large lot industrial site. This property is not considered a suitable alternative location.

The remaining highlighted sites are the PDX 130 site, TLID 5N28B00000600, as addressed in the land need section above, the property is now considered developed as permits have been issued for construction of the first data center building and associated accessory structures. TLIDs 5N28110000100, 5N28A00000100 and 5N28140001600 are owned by USACE or BLM and given their federal ownership are not considered suitable alternative locations. The TRCI property, TLID 5N28A00000101, is the current site of the Two Rivers Correctional Institution and is only highlighted for discussion purposes as a large portion of the eastern side of the property is undeveloped. As allowed by OAR 660-024-0050 (3)(b) the property is larger than five acres in size and the existing permanent building exceeds the minimum required one-half acre to be considered developed. Therefore, the TRCI property is considered developed and not a suitable alternative location.





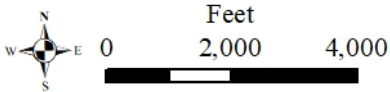
### Port of Umatilla Industrial Park

**Legend**

- Study Area
- City Limits
- Urban Growth Boundary
- Tax Lots

**Alternative Sites**

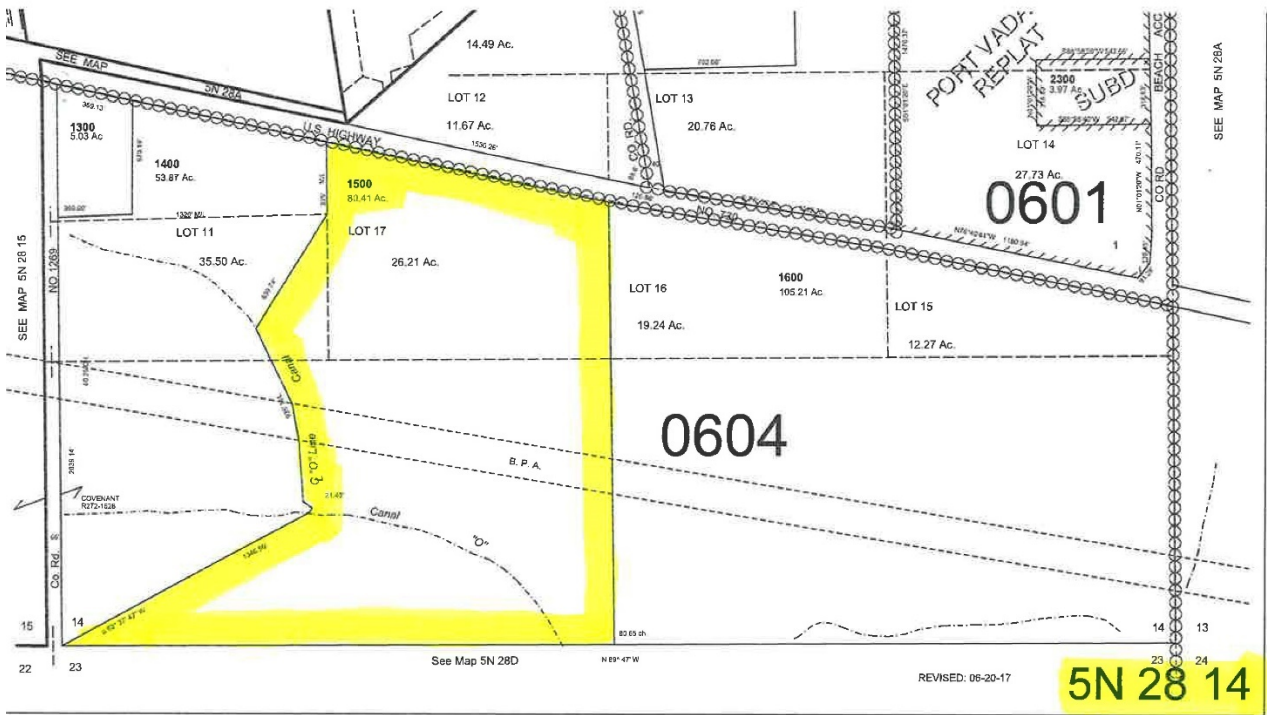
- BLM
- Oregon Fish & Wildlife
- PDX 130 Site
- TRCI
- UEC
- USACE
- Wanaket Wildlife Area
- Wanapa Industrial Site



Port of Umatilla Industrial Park

TLID	OWNER	ACRES
5N29B00000600	AMAZON DATA SERVICES	161.36
5N29B00000203	DEPT OF INTERIOR BIA	713.88
5N29B00000301	STATE OF OREGON DEPT FISH & WILDLIFE	160
5N28110000100	USA	27.66
5N28140001500	UMATILLA ELECTRIC COOP ASSN	80.41
5N28140001600	USA	105.21
5N28230000100	DEPT OF INTERIOR BIA	318
5N28A00000100	USA	134.98
5N28A00000101	STATE OF OREGON DEPT OF	268.15
5N28A00001300	DEPT OF INTERIOR BIA	465.36
5N29B00000500	USA (TRS)	195.23
5N28240000100	DEPT OF INTERIOR BIA	200.59
5N29B00000601	USA	479.15
5N29C00000900	DEPT OF INTERIOR BIA	315.16

UEC Property (County Assessors Map)



### **Alternative Site Analysis – Within the UGB**

OAR 660-024-0050 establishes the procedures for evaluation of existing inventory of land located within the UGB. The City has recently completed the BIA process for both residential and employment lands, with the residential update being completed and adoption acknowledged by DLCD. The City completed the pending EOA in fall of 2019 and is seeking to adopt an update to the City's Goal 9 inventory and overall land needs. OAR 660-024-0050 (4) specifically requires that if the City demonstrates that prior to expanding the UGB the need cannot be reasonable accommodated on land already within the UGB.

OAR 660-0024-0050 (4) - If the inventory demonstrates that the development capacity of land inside the UGB is inadequate to accommodate the estimated 20-year needs determined under OAR 660-024-0040, the local government must amend the plan to satisfy the need deficiency, either by increasing the development capacity of land already inside the city or by expanding the UGB, or both, and in accordance with ORS 197.296 where applicable. Prior to expanding the UGB, a local government must demonstrate that the estimated needs cannot reasonably be accommodated on land already inside the UGB. If the local government determines there is a need to expand the UGB, changes to the UGB must be determined by evaluating alternative boundary locations consistent with Goal 14 and applicable rules at OAR 660-024-0060 or 660-024-0065 and 660-024-0067.

The following map shows the same information provided above but highlighting properties located within the UGB. Ultimately within the UGB seven locations were identified that could meet a portion of the City's need for large lot industrial sites. Five of the locations are in the south hill area and are planned or zoned residential, including the City's proposed location for the pending UGB expansion. No federal properties located within the UGB were considered viable alternative locations.

The East 395 properties appear capable of meeting the City's need for large lot industrial site but similar to the proposed UGB expansion area would require expansion of the UGB as the City's entire need could not be meet on lands located solely within the UGB. Given this location would also require expansion of the UGB the site will be considered below using the evaluation priorities provided by OAR 660-0024-0067.

The Cooney Lane Ext Residential area as outlined above has been parceled and developed with a typical rural residential development pattern. Of the twenty individual properties half of them have been divided to near the minimum lot size of 4 acres. While all of the parcels have not been developed one of the large parcels was developed with multiple pre-existing dwellings. Based on City and County zoning permit records there are 18 existing single-family dwellings located in the Cooney Lane Ext Residential area. Therefore, given parcelization and existing development pattern the City finds that the area could not be reasonably combined or redeveloped to meet the City determined need for large lot industrial sites and is not considered a suitable alternative location.

The remaining areas identified as capable of partially meeting the City need are all located within the south hill area. The Fastrack/Columbia Basin Development properties, as outlined above, have already seen new residential development with the first phase of each project having

been completed or nearing completion with physical development having commenced at all three locations. Given the properties have been physically develop and new construction ongoing the City does not consider these properties to be a suitable alternative location.

The McClannahan Summit properties appears to be a viable alternative location. However, once the City owned property that is committed to use as a cemetery is removed the remaining 90 acres, including the School District property, would only partially meet the City's need. To meet the City's entire need for large lot industrial sites the UGB would need to be expanded to include properties located outside the UGB. Any expansion in this area would affect the Topaz Land properties and as addressed below would result in additional high value farm land being taken out of production. In addition, it should be noted that the City has approved a plan amendment and subdivision application for development of 326 new single-family dwellings on the subject property. The City finds that the McClannahan Summit properties would only partially meet the City's need for large lot industrial site without expanding the UGB. Inclusion of additional lands would remove more high value farm land from production than the City's proposed site. Therefore, the City finds that the McClannahan Summit property is not a suitable alternative location.

The Nobles properties are also located in the south hill area and are currently designated residential by the comprehensive plan and are zoned Exclusive Farm Use and Agricultural Residential by the Umatilla County 1972 zoning ordinance that is in affect for the UGA. However, as addressed in this report the property could only partially meet the City's need for large lot industrial sites and are physically isolated from other developable areas of the City by the Umatilla River, existing residential development and significant BPA easement and the WEID irrigation canal. Given the properties are isolated from other developable areas of the City and could not meet the City's need for large lot industrial sites these properties are not considered a viable alternative location.

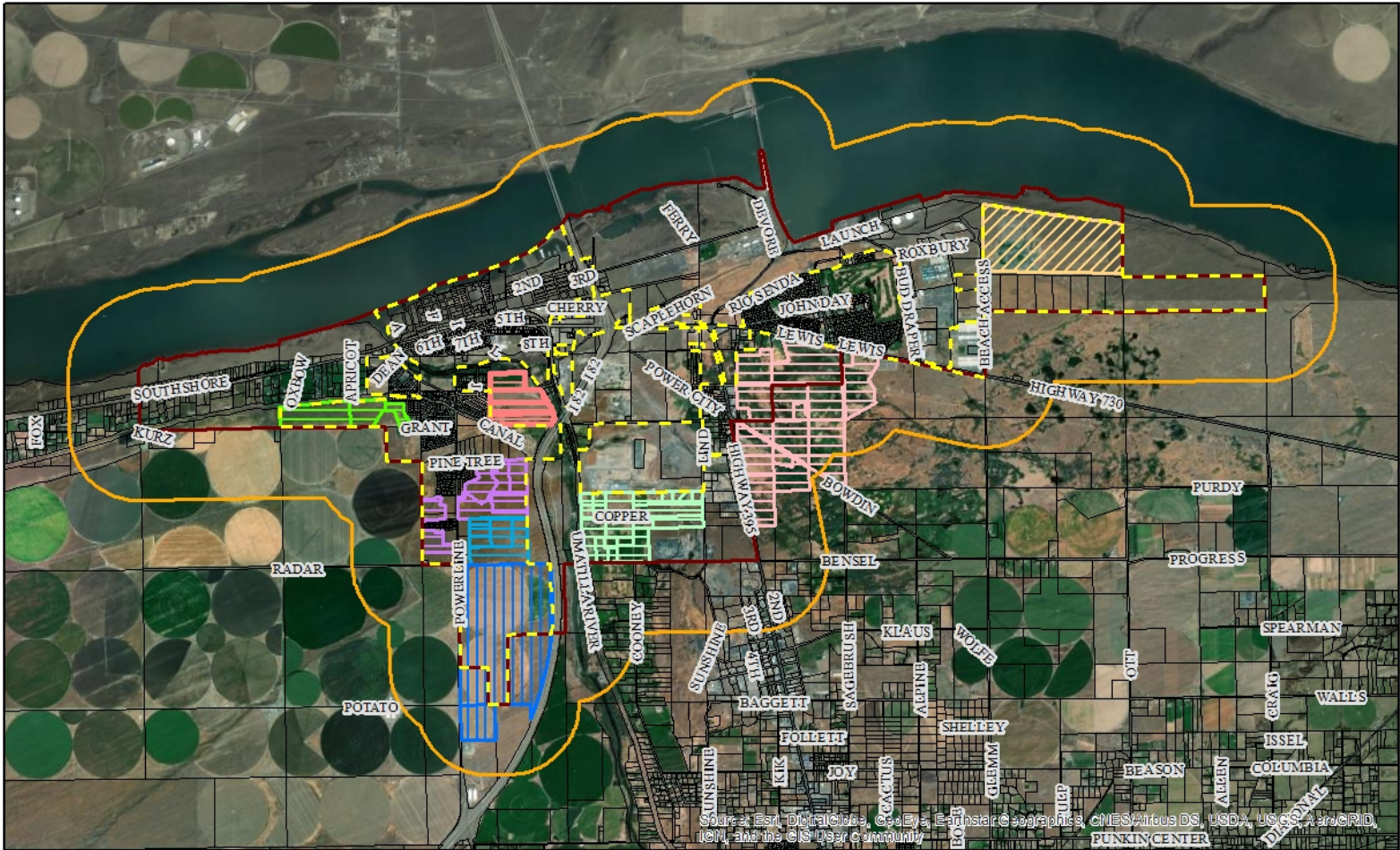
The CCPD Inc properties, owned primarily by CCPD Inc but includes a parcel owned by Annabel Sosa, are located adjacent to the City's proposed parcel for rezone and expansion of the UGB. The City's adopted Housing Needs Assessment (Figure 5.3 in the City's Housing and Residential Land Needs Assessment and Section 101.7.700 of the City's Comprehensive Plan) concludes that the City has projected need for 21 acres of land zoned Medium Density Residential and an inventory of 203 acres. This results in an assumed surplus of 182 acres of Medium Density Residential zoned lands. However, since adoption in September of 2019 the City has seen significant development occur in the Medium Density Residential Zone. Since adoption the City has approved 4 residential subdivision all located in the Medium Density Residential Zone. The four approved subdivision total approximately 60.99 acres as follows:

- Riverwood Estates – 5.15 acres converted to a 20 lot subdivision
- Cheryl's Place – 24.37 acres converted to a 104 lot subdivision
- Vandelay Meadows – 19.57 acres converted to a 49 lot subdivision, an approximately 7 acre remnant parcel remains that has significant topographic issues and is identified in the Comprehensive Plan as having slopes form 18-25%. The remnant 7 acres parcel is not considered developable.
- Sunrise Estates – 11.9 acres converted to a 81- lot subdivision

Given the City has already permitted development on 60 acres of land zoned Medium Density Residential, nearly three times the City projected need through the 20 year planning period, in less than two years the City feels that the project need specifically within the Medium Density Residential zone is low. The City has experienced unprecedented growth in both the industrial and residential sectors for the last 4 years and is surpassing our projected growth rate. With the emphasis towards development of new housing at both the state and federal level the City feels it is appropriate to maintain an inventory of Medium Density Residential zoned lands within the City's primary residential area. Therefore, the CCPD Inc properties are not considered a suitable alternative location.

The lone remaining property inside the UGB identified to be suitable is the Cleaver Land properties, the City's proposed site for the UGB expansion and rezone. City acknowledges that the Housing Needs Assessment identified a large residential land surplus, specifically an 873 acres surplus in the Single-Family Residential Zone. However, the subject property alone is not large enough to accommodate the City's projected need of 300 -399.98 acres of industrial land for large lot industrial development, when considering existing development constrains. Additional analysis for the portion of the property outside the UGB and development constrains is provided below with the alternative location analysis for properties outside the UGB.





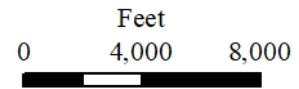
### Alternative Site Analysis - Inside The UGB

**Legend**

- Study Area
- City Limits
- Urban Growth Boundary
- Tax Lots

**Alternative Sites**

- TRCI
- CCPD Inc Property
- Cleaver Land
- Fastrack/Columbia Basin Development
- Nobles Property
- McClannahan Summit Properties
- Cooney Lane Ext Residential
- East 395



## Alternative Site Analysis – Outside the UGB

Except for the proposed site, four alternative locations were identified for additional analysis. The Wanapa Industrial Site is included in the analysis as it is one of two sites identified as First Priority land. First Priority lands are defined as urban reserve, exception land and non-resource lands.

- (2) Priority of Land for inclusion in a UGB:
  - (a) First Priority is urban reserve, exception land, and non-resource land. Lands in the study area that meet the description in paragraphs (A) through (C) of this subsection are of equal (first) priority:
    - (A) Land designated as an urban reserve under OAR chapter 660, division 21, in an acknowledged comprehensive plan;
    - (B) Land that is subject to an acknowledged exception under ORS 197.732; and
    - (C) Land that is non-resource land.

The City of Umatilla does not have an acknowledged urban reserve. Properties located to the west of the UGB on land zoned residential are highly parcellated and not suitable for redevelopment of large lot industrial site. Non-resource lands zoned commercial or industrial located along US 395, south of the US 730 & 395 map are also highly parcellated and are not suitable for redevelopment. The remaining properties that are considered first priority have been identified as the Wanapa Industrial Site and the County Rural Residential areas. As discussed previously the Wanapa Industrial Site is not considered a viable alternative location as it is in federal ownership and is not subject to state wide planning goals or local review. While the City has taken steps to help facilitate development of the site the City finds that it is not reasonable to incorporate a site to meet the City's development needs when the City has no regulatory control over use or development on the property. Therefore, the Wanapa Industrial Site is not considered a viable alternative location.

The County Rural Residential area share similar developmental issues as the Cooney Lane Extension area. The area has been subdivided into individual properties with existing single-family dwellings. Of the 36 parcels located within the County Rural Residential area only 3 are larger than 10 acres in size and the average parcel size is 5.8 acres. Given the development pattern and as allowed OAR 660-0240-0067 (5) a city may find land is unsuitable if the development pattern of rural residential land make it unreasonable to redevelop during the planning period. Therefore, due to the existing development pattern the City finds that the County Rural Residential area cannot be reasonably redeveloped to meet the City's need for large acre industrial sites. It is also worth noting that the entire County Rural Residential area identified is 209 acres and would not meet the City's need for large lot industrial sites.

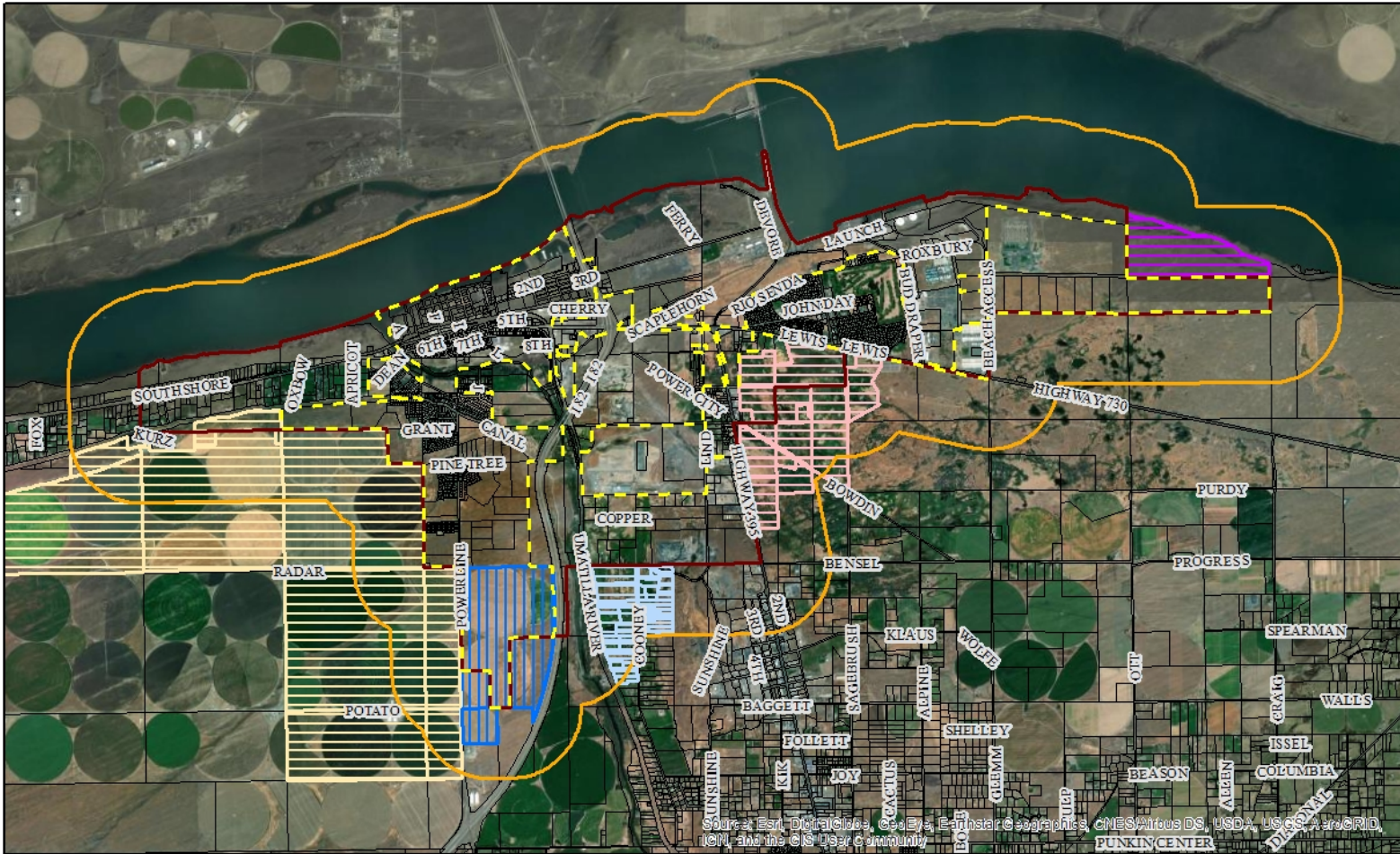
The remaining properties adjacent to the UGB and considered as part of this evaluation are in federal ownership and excluded from consideration or would be considered forth priority as they zoned EFU and would be considered high-value farm land as defined by ORS 195.300. The three properties are identified as the Cleaver Land Property, the location of the proposed UGB expansion, the Topaz/Onyx Land properties and the East 395 properties.



The East 395 property as discussed above could reasonably meet the City identified need if a similar rezone and UGB expansion application were pursued by the City but land both within the UGB and outside the UGB would be required. The East 395 properties are considered high value farmland as the tract is predominantly composed of “Adkins fine sandy loam, wet, 0 to 3 percent slopes” and are a Class 2 soil by the Natural Resources Conservation Service (NRCS) soil capability classification (see soils maps below). This is the only alternative location identified that has a class 2 soil capability classification without irrigation. In addition, to the soil classification the East 395 properties have a significant portion of the property covered by mapped wetlands as shown on the National Wetland Inventory and Statewide Wetland Inventory. Therefore, given the East 395 properties have the highest soil classification and are encumbered by mapped wetlands these properties are considered the lowest priority for inclusion into the UGB.

The Topaz and Cleaver Land Properties are both considered high values as they are zoned EFU and have water irrigation rights issued by the Oregon Water Resources Department. As shown on the soils map below the two properties largely have similar soil capability classifications, largely dependent on slope. The sites would therefore be considered high value where water rights are available and non-high value farmland between circles. All of the lands not considered a place of use, the land between the circles, are class seven soils. Given the soil classification for the two sites are largely identical the Cleaver Land properties should be considered the highest priority for inclusion into the UGB. Of the 150 acres proposed for inclusion in the UGB approximately 91 acres would be considered high value farm land. The remaining area is composed of class seven non high value soils. Therefore, any inclusion of either the Cleaver Land properties or the Topaz Land properties would result in high value farm land being taken out of production. The Cleaver land property is considered the most suitable as it would require the least amount of farm land to be taken out of production to meet the City’s need. Approximately 226 acres of land on the Cleaver Land properties in irrigation crop production is located inside the UGB and therefore, not considered high value farm land. The Topaz Land properties are considered a suitable alternative location but would have significantly more impacts to high value farmland than the Cleaver Land properties as any expansion of the UGB to include Topaz Land properties would impact irrigation crop circles.

In addition to soil classifications the City has identified that a portion of the Cleaver Land properties are identified in the comprehensive plan (figure 7.1-2) as having 10 -25% slopes. OAR 660-024-0067 (5) (d) allows land for industrial uses to be excluded from consideration if the land has over a 10% slope. Appendix A of the City’s EOA also identifies slope as a physical site requirement and with a maximum 0 – 7% slope being considered suitable. The map below shows the lidar data available from DOGAMI for the area. This results in a pretty significant slope from the existing crop circles down to I-82. This creates a physical barrier that would limit future development on the site. Based on available slope data staff estimates that 130 acres along the eastern side of the property is impacted by slopes greater than 7%. The result is approximately 310 acres of land with no slope impacts and an additional 130 acres of land with varying limitations due to slope. The City find that the Cleaver land property is the most suitable location to meet the City’s need for large lot industrial sites when considering the applicable OARs and other considerations.



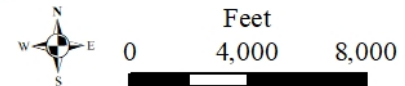
### Alternative Site Analysis - Outside the UGB

**Legend**

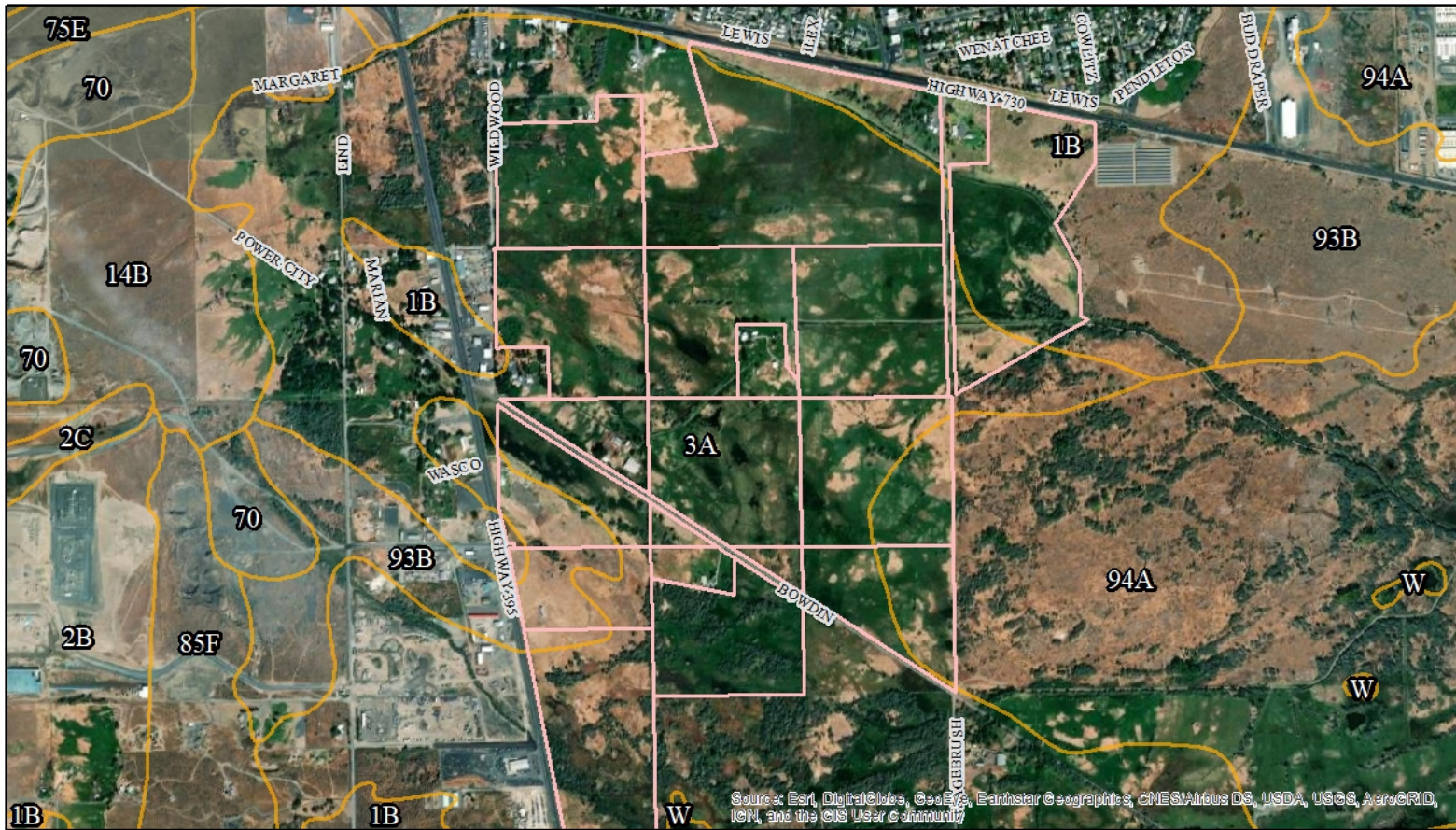
- Study Area
- City Limits
- Urban Growth Boundary
- Tax Lots

**Alternative Sites**

- Wanapa Industrial Site
- Cleaver Land
- Topaz/Onyx Land Properties
- County Rural Residential
- East 395





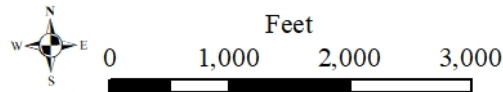


**East 395 Properties - Soil Map**

**Legend**

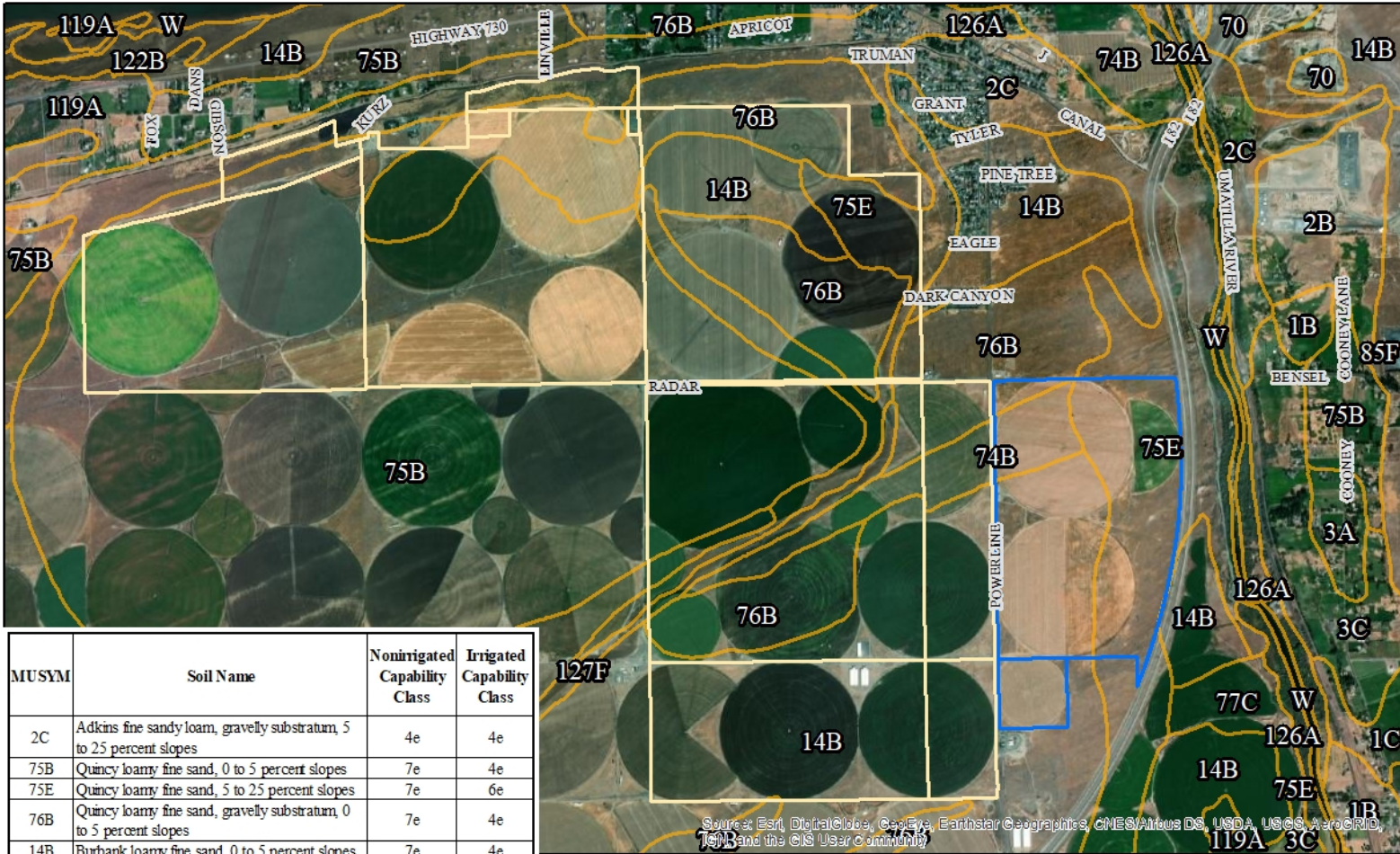
**Name**

- East 395 Properties
- Soils



MUSYM	Soil Name	Nonirrigated Capability Class	Irrigated Capability Class
70	Pits, gravel	8	
14B	Burbank loamy fine sand, 0 to 5 percent slopes	7e	4e
1B	ADKINS FINE SANDY LOAM, 0 TO 5 PERCENT SLOPES	4E	2E
2B	ADKINS FINE SANDY LOAM, GRAVELLY SUBSTRATUM, 0 TO 5 PERCENT	4E	2E
2C	Adkins fine sandy loam, gravelly substratum, 5 to 25 percent slopes	4e	4e
3A	ADKINS FINE SANDY LOAM, WET, 0 TO 3 PERCENT SLOPES	2W	2W
85F	Rock outcrop-Xeric Torriorthents complex, 10 to 70 percent slopes	8	
93B	Starbuck very fine sandy loam, 2 to 20 percent slopes	6e	4e
94A	Starbuck-Rock outcrop complex, 0 to 5 percent slopes	6e	4e
W	Water		

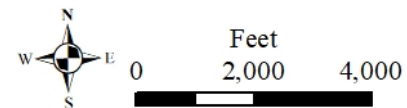




MUSYM	Soil Name	Nonirrigated Capability Class	Irrigated Capability Class
2C	Adkins fine sandy loam, gravelly substratum, 5 to 25 percent slopes	4e	4e
75B	Quincy loamy fine sand, 0 to 5 percent slopes	7e	4e
75E	Quincy loamy fine sand, 5 to 25 percent slopes	7e	6e
76B	Quincy loamy fine sand, gravelly substratum, 0 to 5 percent slopes	7e	4e
14B	Burbank loamy fine sand, 0 to 5 percent slopes	7e	4e
127F	Xerollic Durorthids, 30 to 60 percent slopes	7e	
14B	Burbank loamy fine sand, 0 to 5 percent slopes	7e	4e
76B	Quincy loamy fine sand, gravelly substratum, 0 to 5 percent slopes	7e	4e
74B	Quincy fine sand, 0 to 5 percent slopes	7e	4e
75B	Quincy loamy fine sand, 0 to 5 percent slopes	7e	4e
76B	Quincy loamy fine sand, gravelly substratum, 0 to 5 percent slopes	7e	4e
75E	Quincy loamy fine sand, 5 to 25 percent slopes	7e	6e
14B	Burbank loamy fine sand, 0 to 5 percent slopes	7e	4e

**Legend**

- Soils
- Cleaver Land
- Topaz/Onyx Land Properties








**South Hill - Soil Map**

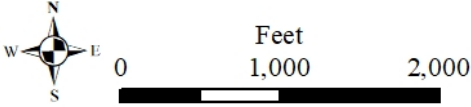




### Cleaver Slope Map

**Legend**

	Cleaver Land	<b>Oregon DOGAMI LiDAR Slope</b>
	0 - 7	
	7.000000001 - 10	
	10.00000001 - 15	
	15.00000001 - 89.30650354	





## Exhibit F – DLCD Comment Letter

October 19, 2020

Brandon Seitz  
Community Development Director  
PO Box 130  
Umatilla, OR 97882

SENT VIA Email



Re: City of Umatilla File PA-2-20 (DLCD File No. 002-20); Notice for an Annexation, Urban Growth Boundary Expansion and Rezone ---**Correction to cc's**

Mr. Brandon Seitz,

Thank you for your post acknowledgement plan amendment notice for the adoption of an Economic Opportunities Analysis (EOA), a 150 acre urban growth boundary (UGB) expansion and an annexation and rezone of 450 acres total for the purpose of accommodating land planned and zoned for industrial use. We appreciate all the work that has gone into these proposals and your willingness to address a number of the department's previous concerns. Our remaining primary concerns are addressed further below. Please include these comments in the record for this plan amendment and the proceedings of the October 20, 2020 City Council hearing.

### Land Need

The city proposes to adopt the 2019 EOA with this plan amendment. The EOA is the essential background document that evaluates several required elements: the target industry analysis, the forecast of employment land need, the current employment land supply, and the buildable land inventory vs. the 20 year employment land need. The EOA is also the essential document that must support the city's proposed urban growth boundary expansion for large lot industrial lands.

Taking into consideration the site specific needs for specific categories of employment land users, the EOA report concludes that there are site deficits for large industrial parcels as follows: two sites of 100+ acres and two sites of 50-99 acres. As the estimated employment land supply includes one site of 100+ acres, this results in a land need for one site of 100+ acres and two sites of 50-99 acres.

The city's proposal for an urban growth boundary expansion of approximately 150 acres inappropriately assumes that one approximately 160 acre property identified in the EOA as part of the large lot 20 year land supply, is no longer part of the land supply due to development interest in the property. DLCD does not consider property to be encumbered until construction

has begun on the site. We take this position to prepare for the possibility that development interest may not result in actual development of the site. The department has seen this issue arise in other cities around the state, most notably the City of Springfield, and in that case our Commission determined that a city cannot assume a particular vacant property is “developed” until actual physical development activities have begun on the site.

Let us step back here and point out that we anticipate the city will develop some or all of its employment land during the 20 year planning horizon (2019-2039), and we also anticipate that the city may reevaluate the 20 year land supply frequently in order to maintain a healthy supply of employment land. In this case, however, the current EOA and inventory of developable land does not support a need for more site specific land than can be accommodated within the city’s existing urban growth boundary. Therefore, we are not in support of the urban growth boundary amendment moving forward at this time.

There are a couple of options the city may want to consider going forward: a) You may conduct another EOA, or refresh the current EOA, after construction has commenced on the Port site to reevaluate the city’s employment growth projections, or b) You can take a site characteristics approach to a UGB expansion whenever there is interest from a data center (or other large industrial use) if there is no suitable site inside the UGB.

Although we do not support an UGB amendment based on the current EOA, we would like to provide suggestions related to the evaluation of land efficiencies inside an UGB, the study area outside the UGB, and general suggestions that may help the city with a future UGB analysis and proposed amendment. These are detailed below:

#### Land Efficiency within the Urban Growth Boundary

We recommend that the city provide a site specific map and associated table that clearly identify all the properties inside the UGB that could meet the specific employment land use needs identified in the EOA.

#### Evaluation of Land Outside the UGB

We recommend that the city provide a site specific map and associated table that clearly identify all the properties within the 1/2 mile study area. For the priority analysis, all the land within the identified study area must be evaluated according to the priorities established in Oregon Administrative Rule (OAR) 660-024-0067. This requires the city to identify study area lands that are designated Urban Reserve, exception lands and nonresource lands, non-high value farmlands and high-value farmlands. In determining what are high-value farmlands, all of the subcategory criteria in Oregon Revised Statute (ORS) 195.300 must be assessed for each property in order to identify whether or not the property is considered high value farmland.



One example that concerns us is the city notes in the prioritization analysis that the property proposed to be brought into the UGB is partially irrigated, which leads us to believe that the property may have a water right which would make it high value farmland under ORS 190.300(10)(c). Another example is that the city provided a map exhibit of the American Viticulture Association (AVA) slope and aspect analysis required by ORS 195.300(10)(f) which indicates the same property is high value farmland. However, the application, staff report and sub-area maps indicate that the property is not high value farmland. There appears to be contradictory evidence in the record.

In addition, if more than one property in the study area meets the site-specific land use need and all are high value farmland, then the city must prioritize based on the Natural Resources Conservation Service (NRCS) soil capability classifications and select lower capability lands first.

#### Overall Suggestion

Inconsistent conclusions contained in the narrative of the EOA about unmet employment land demand for large industrial sites are cited throughout the staff report and post acknowledgement plan amendment materials submitted to DLCD. Correcting these errors in the EOA and related materials with a consistent narrative will clarify current and future discussions about demand identified in the EOA, as well as the sufficiency of the city's supply of industrial land as large properties are developed.

A fundamental issue is that additional analysis is needed to demonstrate compliance with OAR 660-024-0050(4), specifically the requirement that, "Prior to expanding the UGB, a local government must demonstrate that the estimated needs cannot reasonably be accommodated on land already inside the UGB."

We understand that this is a detailed process and commend the city for all the work completed to date. As noted above, we recommend that the city withdraw the proposed urban growth boundary expansion until these issues have been resolved.

Please feel free to contact your Regional Representative, Anne Debbaut, at: [anne.debbaut@state.or.us](mailto:anne.debbaut@state.or.us) or 503.804.0902, if you have further questions or concerns.

Best Regards,



**Gordon Howard**  
**Community Services Division Manager**

cc: Anne Debbaut, Hilary Foote, Leigh McIlvaine, Kevin Young, DLCD (*email*)  
Bob Waldher, Planning Director, Umatilla County (*email*)