

City of Union Gap

Regional Beltway Connector

Corridor Study

November 2011



HLA

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Civil Engineering ♦ Land Surveying ♦ Planning

City of Union Gap

Regional Beltway Connector

Corridor Study

Prepared for:

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City of Union Gap

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Corridor Study

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EXECUTIVE SUMMARY

Corridor Study Scope

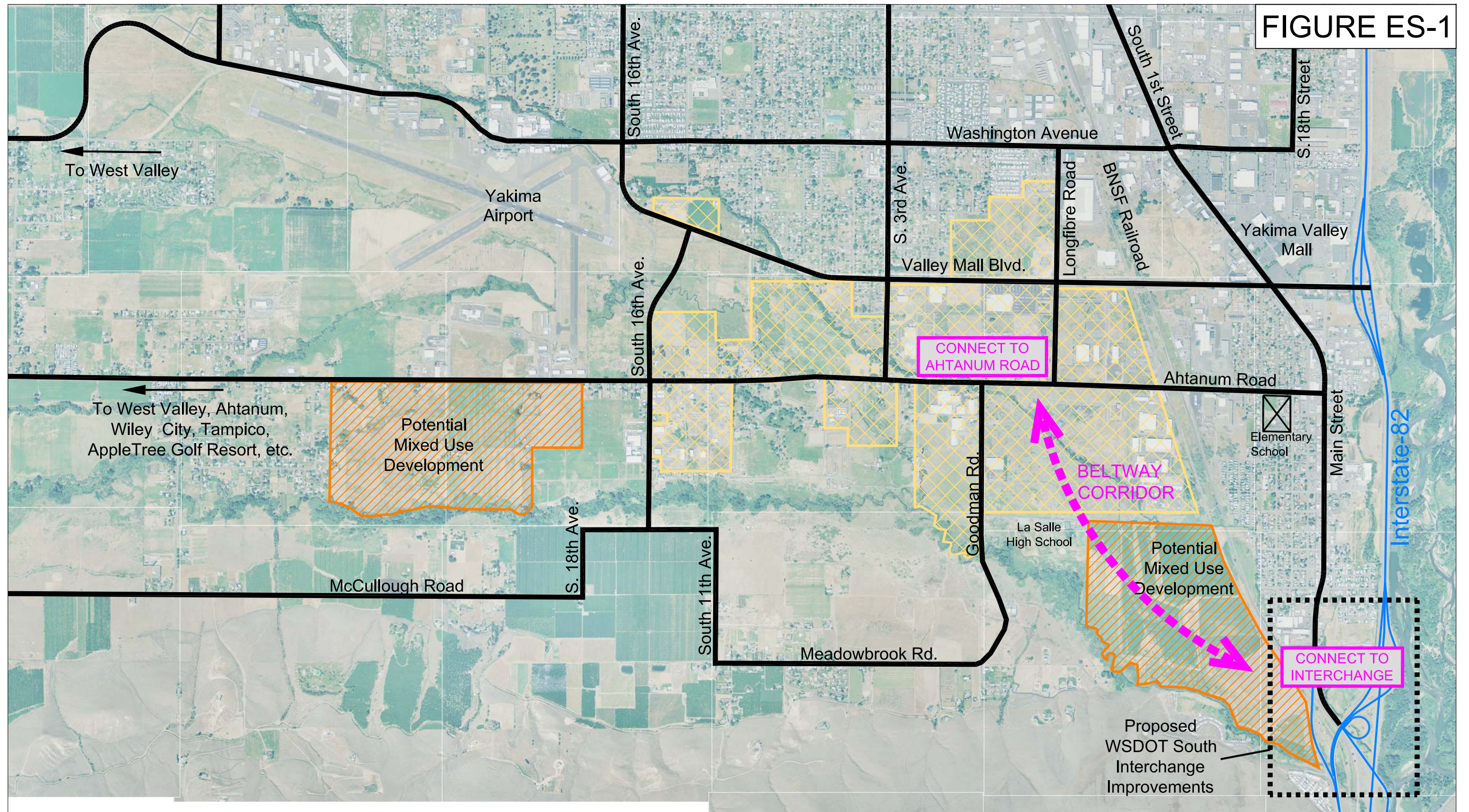
This report presents the results of a corridor study for the construction of a regional beltway connector through the City of Union Gap from the south end of Main Street to existing arterial roadways leading to the west. This new “Beltway” arterial has been identified by the local transportation group, *TRANS-Action*, as part of a regional “Westside Connector” that would traverse across the Upper Yakima Valley from Union Gap, through the City of Yakima and Yakima County, to US 12 at the Town of Naches. The Westside Connector has been proposed to create a continuous arterial route to and through developing areas in Union Gap, the City of Yakima, and Yakima County in order to ease congestion on existing overburdened local streets.

The proposed new Beltway connector will establish a federally designated arterial from Main Street near the Interstate 82 and US 97 Interchange (South Union Gap Interchange) to the existing Union Gap and Yakima County east/west arterial, Ahtanum Road. This new Beltway arterial will provide a limited access route through currently undeveloped commercial and industrial property in Union Gap to Ahtanum Road as shown on Figure ES-1 - Existing and Potential Land Uses. The public will be able to use this new route from the South Union Gap Interchange to access not only Union Gap’s developing commercial/industrial areas but also the outlying western areas of the Upper Yakima Valley. Due to the economic development implications of the Beltway corridor, the City was awarded a \$25,000 planning grant from the Yakima County Supporting Investment in Economic Development (SIED) Program to assist in funding the study.

The proposed new Beltway will provide an alternative for motorists traveling through Union Gap to or from Interstate 82 (I-82) or US 97. Currently, vehicles must use the heavily traveled Main Street and Valley Mall Boulevard arterials, through the City’s active commercial districts, in order to connect to Ahtanum Road. The new Beltway will significantly reduce traffic on Main Street and the eastern end of Ahtanum Road, particularly freight/truck traffic. This is extremely important as the current travel route passes through an existing elementary school zone on Ahtanum Road shown on Figure ES-1.

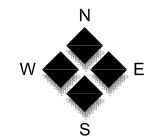
The Washington State Department of Transportation (WSDOT) has completed a preliminary “value engineering” analysis and recently, a draft Interchange Justification Report that proposes to construct improvements to the South Union Gap Interchange (I-82/US 97). The proposed interchange improvement alternates include a total reconstruction option as well as modifications/upgrades to existing ramps and structures and the addition of two currently missing ramp movements. It is anticipated the proposed Beltway arterial will be connected to the south end of Main Street as part of future improvements to the South Union Gap Interchange.

FIGURE ES-1



EXISTING MAJOR TRAVEL ROUTES

- EXISTING INDUSTRIAL AND COMMERCIAL ZONED PROPERTY
- POTENTIAL MIXED USE DEVELOPMENT



City of Union Gap
REGIONAL BELTWAY CONNECTOR
EXISTING AND POTENTIAL LAND USES

Regional Beltway Connector Corridor Study

The scope of the corridor study is to develop and analyze potential alignment alternates from the Main Street and South Union Gap Interchange area to Ahtanum Road. The analysis includes review of existing flood plains, availability of existing utilities, existing and future land uses, and traffic issues in order to assess their impacts on proposed alignment options. It is anticipated that the regional Union Gap Beltway connector project will require the involvement of multiple agencies. The Washington State Department of Transportation (WSDOT), Yakima County Surface Water Division, Washington State Department of Fish and Wildlife (WDFW), Yakama Indian Nation, FEMA, *TRANS-Action*, and private property owners will all serve vital roles in assisting Union Gap with developing, funding, and constructing the Beltway connector.

Preferred Alignment Alternate

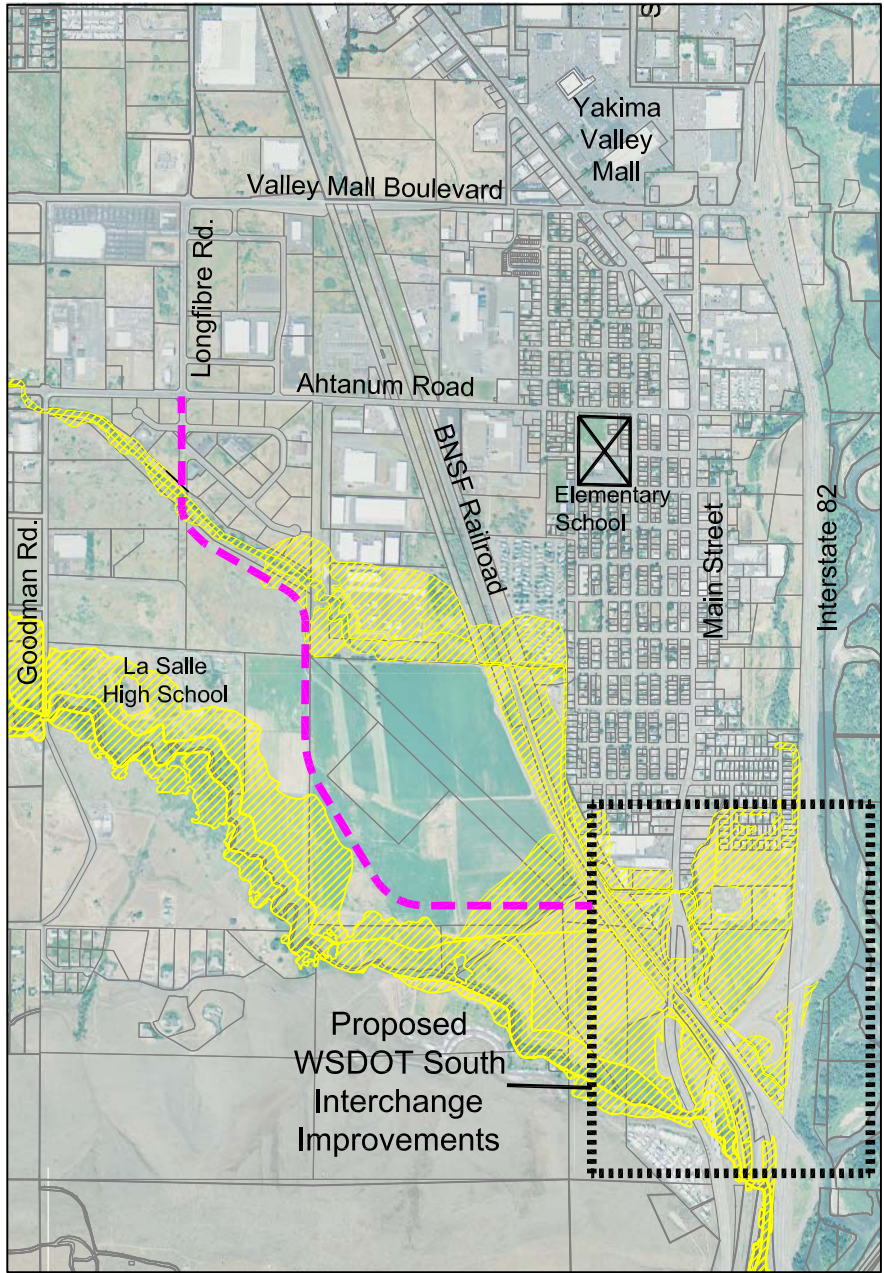
Three alignment alternates were developed and analyzed in the corridor study. All three assume a south end connection with Main Street that will be determined by WSDOT as part of future South Union Gap Interchange improvements and a diagonal route across private property that considers flood plain impacts as well as potential future development. The alignment across private property may be altered without significantly affecting the constructability or cost of the improvements. The three alternates vary, however, in their north end alignments and connections to Ahtanum Road as follows:

- Alternate A - At the Ahtanum Road and Longfibre Road Intersection
- Alternate B - At the Ahtanum Road and Goodman Road Intersection
- Alternate C - At the Ahtanum Road and South 3rd Avenue Intersection

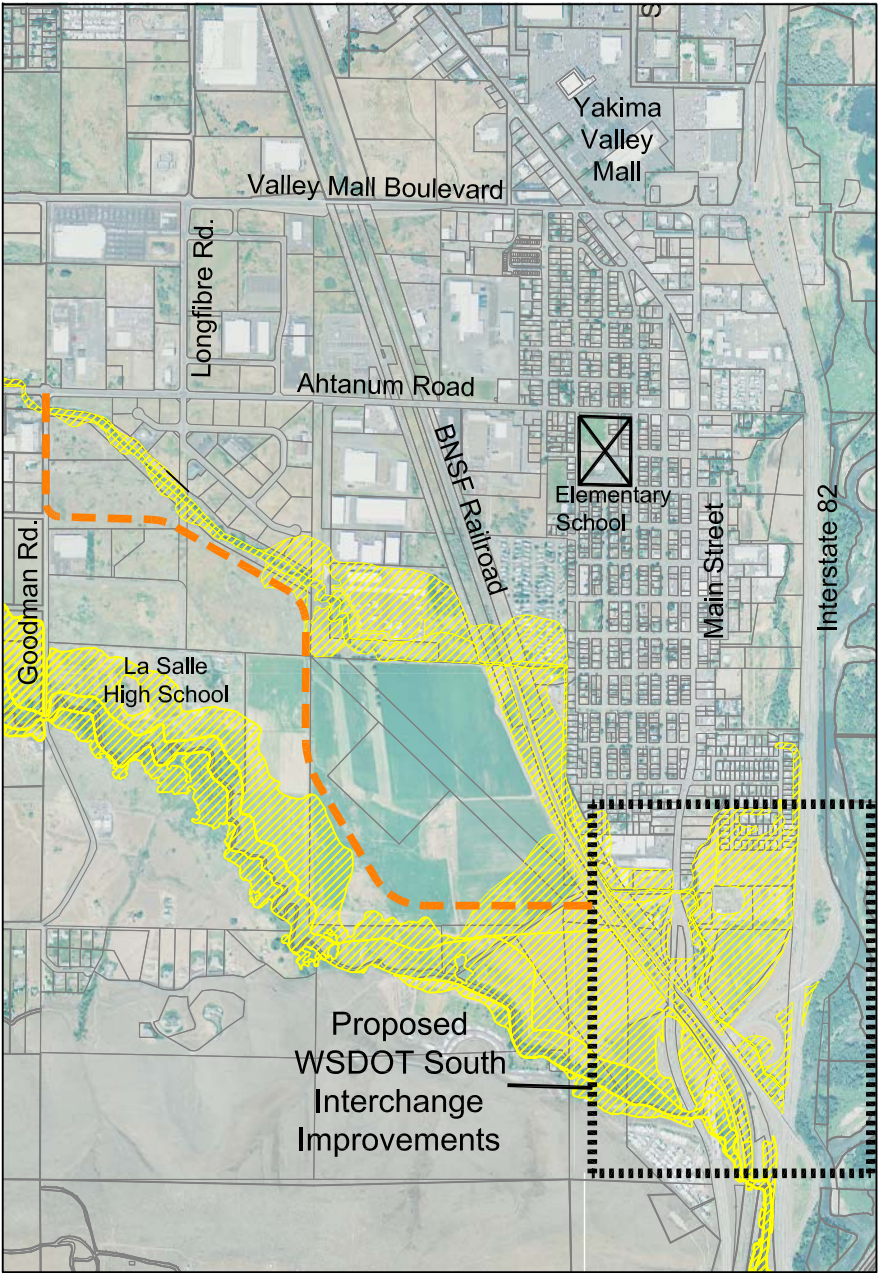
Figure ES-2 – Alignment Rankings shows the three alternate alignments and compares the advantages/disadvantages of each alignment to one another. The Corridor Study's conclusion is that Alternate A is the least cost option, is the least impactful to existing roadways and traffic movements, provides the most direct access to Union Gap's developing commercial/industrial areas via the existing 3-lane Longfibre Road arterial, and connects to Ahtanum Road at an existing fully developed signalized intersection. This preferred Beltway arterial alignment is shown on Figure ES-3 - Preferred Alternate A Alignment along with current City zoning.

Estimated Project Costs

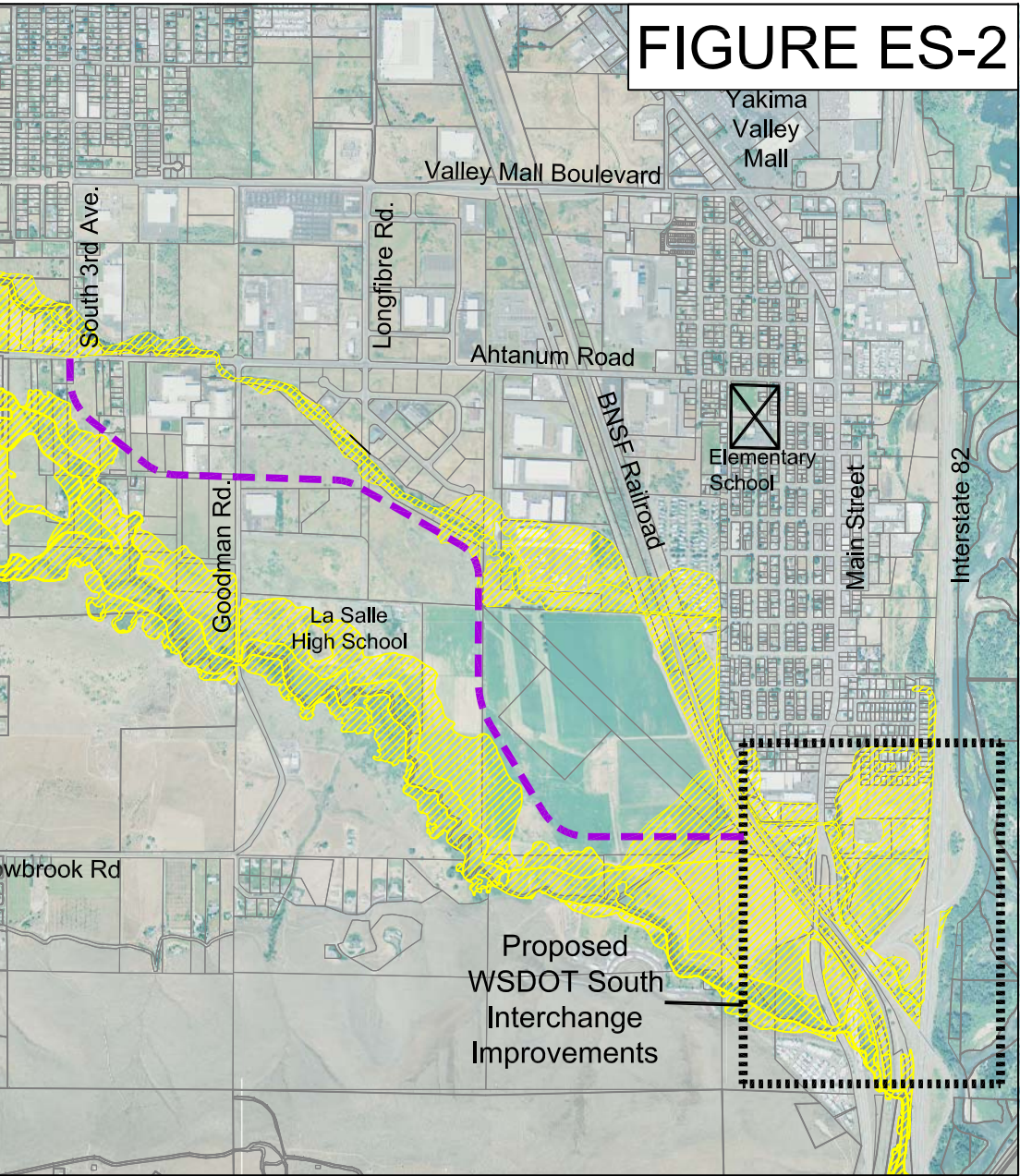
Preliminary estimated project costs for the preferred Alternate A alignment are summarized on the following page. These preliminary cost estimates are based on assumptions discussed in the corridor study. Several factors could significantly impact the final alignment and/or costs such as flood plains issues or the possible relocation of Wide Hollow Creek.



ALTERNATE A

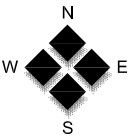


ALTERNATE B



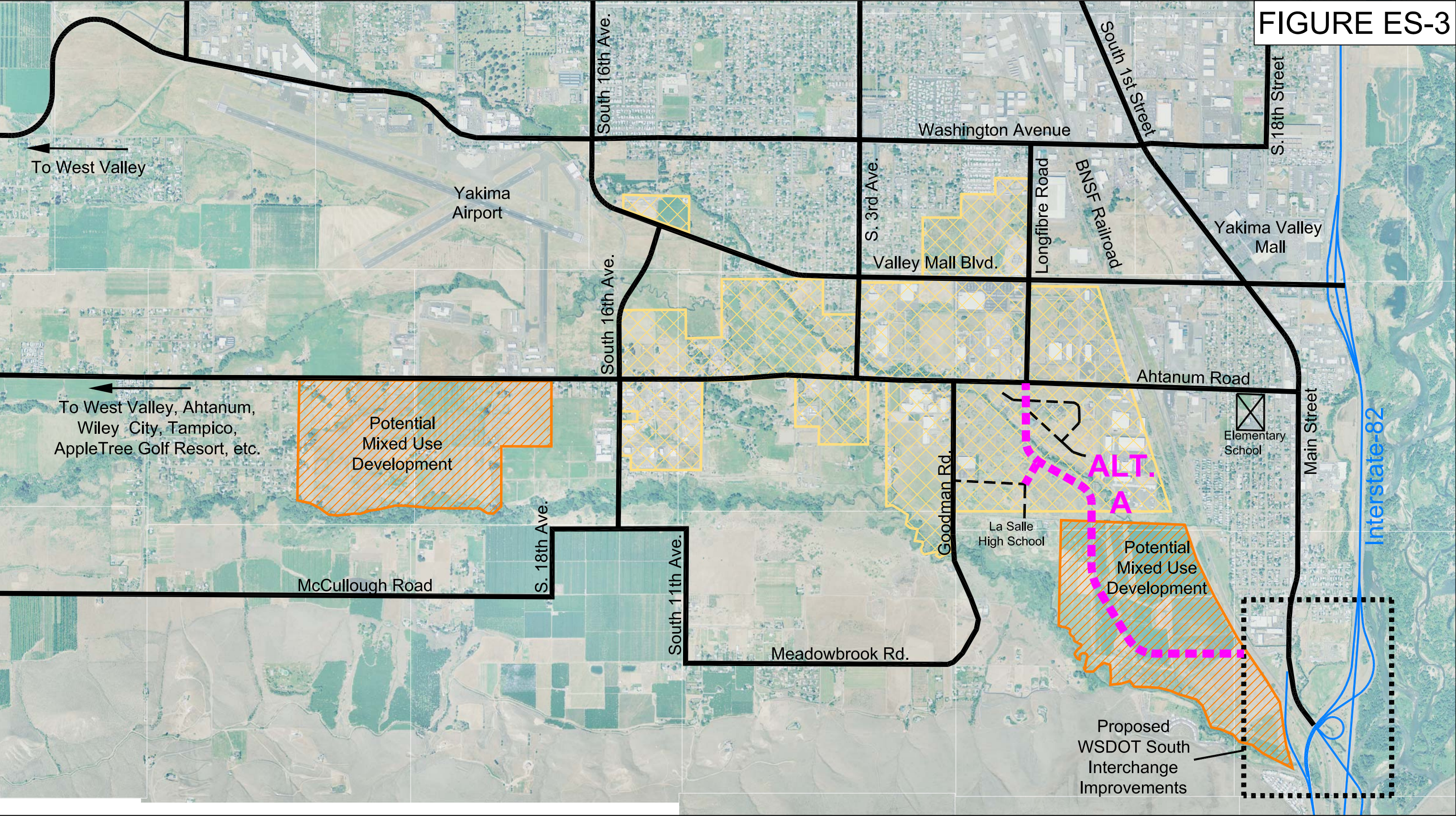
ALTERNATE C

	Provides access to existing Union Gap commercial/ industrial areas	Provides access to currently undeveloped/ vacant properties	Provides access to Valley Mall Blvd.	No Bridge (1), New Bridge (2), Replace Existing Bridge (3)	Minimizes required environmental review and permitting	Limited impacts to existing traffic routes	Connects to existing signalized intersection with adequate lane configuration	Minimizes acquisition of new right-of-way	Estimated project cost - Least (1) to Most (3)	Total Ranking Points (Best = Lowest Total)
ALTERNATE A	1	1	1	2	2	1	1	1	1	11
ALTERNATE B	2	2	3	3	3	3	3	2	3	24
ALTERNATE C	3	3	2	1	1	2	2	3	2	19



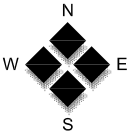
City of Union Gap
REGIONAL BELTWAY CONNECTOR
ALIGNMENT RANKINGS

FIGURE ES-3



EXISTING MAJOR TRAVEL ROUTES
PROPOSED BELTWAY CONNECTOR

EXISTING INDUSTRIAL AND COMMERCIAL ZONED PROPERTY
POTENTIAL MIXED USE DEVELOPMENT



City of Union Gap
REGIONAL BELTWAY CONNECTOR
PREFERRED ALTERNATE A ALIGNMENT

Regional Beltway Connector - Alignment Alternate A

Summary of Preliminary Estimated Project Costs

Environmental Review	\$ 100,000
Land Acquisition Costs	\$ 100,000
Design Engineering PS&E	\$ 1,035,500
Construction Contract (Incl. 15% Contingency)	\$ 9,004,800
Construction Engineering Services	\$ 1,215,650
Construction & Funding Administration Services	<u>\$ 44,000</u>
TOTAL PROJECT COST	\$ 11,500,000

1.0 INTRODUCTION

1.1 Background and Project Description

The Washington State Department of Transportation (WSDOT) and the City of Union Gap are nearing completion of major reconstruction improvements to the Interstate 82/Valley Mall Boulevard Interchange and the City's Valley Mall Boulevard arterial to Main Street. Once completed, these improvements will reduce congestion and greatly improve safety and traffic movement through the interchange and to the adjacent, highly developed commercial area that includes the regional "Valley Mall" shopping center.

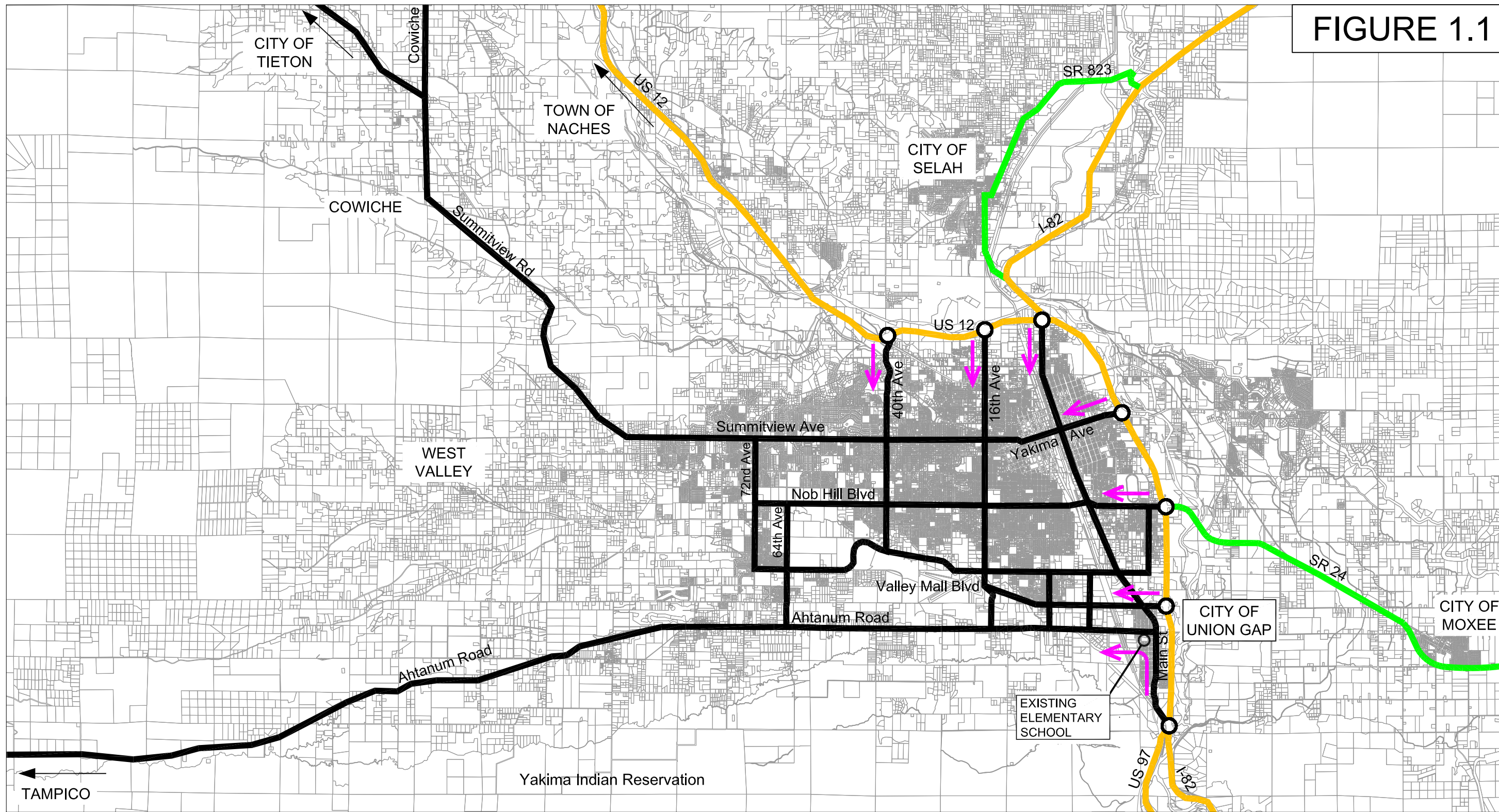
Construction of the new Interstate 82/Valley Mall Boulevard Interchange and the improvement and extension of Valley Mall Boulevard to the Washington Avenue and South 16th Avenue intersection has long been a top regional priority of *TRANS-Action*, the local public/private transportation organization. However, even with these significant Valley Mall Boulevard improvements, *TRANS-Action* recognized access to Interstate 82 (I-82) from western portions of the Upper Yakima Valley would still be limited, requiring travel along just a few busy city arterial roadways as shown on Figure 1.1 - Existing Travel Routes. The group identified the need for a "Westside Connector" that would traverse across the Upper Yakima Valley from Union Gap, through the City of Yakima and Yakima County, to US 12 at the Town of Naches. The Westside Connector was proposed to create a continuous arterial route, consisting of new and existing roadways, that would travel to and through developing areas in Union Gap, the City of Yakima, and Yakima County in order to ease congestion on existing overburdened local streets.




In conjunction with the I-82/Valley Mall Boulevard Interchange project, the City of Union Gap and WSDOT also identified improvements that were needed at the I-82/US 97 Interchange. Typically referred to as the South Union Gap Interchange, it is the confluence of the two federal highways and Union Gap's Main Street. As originally constructed in the 1960s and early 1980s, the interchange does not include ramps for two travel movements, eastbound I-82 to Main Street and Main Street to westbound I-82. Additionally, many of the aging structures are in need of improvement, e.g. repairs or replacement.

It was determined by the *TRANS-Action* group that the first phase of the Westside Connector, a regional "Beltway" connector, should be constructed connecting the South Union Gap Interchange to Ahtanum Road thereby providing a more direct, limited access route as an alternative to traveling on Main Street with its busy commercial/business district. *TRANS-Action* believed this regional "Beltway" connector would not only greatly improve travel to western areas of the Upper Yakima Valley but would also compliment the improvements made to Valley Mall Boulevard by:

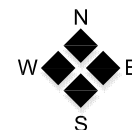
- Routing freight and other traffic not bound for the Valley Mall commercial district away from Valley Mall Boulevard and its interchange with I-82;

FIGURE 1.1



-  FEDERAL HIGHWAYS
-  EXISTING MAJOR TRAVEL ROUTES
-  STATE HIGHWAYS

 EXISTING INTERCHANGE



City of Union Gap
REGIONAL BELTWAY CONNECTOR
EXISTING TRAVEL ROUTES

Regional Beltway Connector Corridor Study

- Providing an alternate route for freight and other traffic using Ahtanum Road to travel to areas further to the west, thereby reducing traffic passing through the existing Union Gap Elementary School zone on Ahtanum Road and Main Street's commercial district.
- Providing an alternate route for traffic traveling from the Lower Yakima Valley to the Union Gap's developing commercial/industrial area along Valley Mall Boulevard and Longfibre Road which includes Costco Wholesale and Clarey Toyota; and
- Provide an additional access route to several hundred acres of industrial and commercial property in west Union Gap, at the Yakima Air Terminal, and areas in west Yakima and Yakima County.

The purpose of this study is to develop and evaluate potential alignment alternates for the proposed regional "Beltway" arterial based on logical connections to Main Street on the east and Ahtanum Road to the west. In determining the appropriate alignment(s), the study will consider the relationship/impact of the proposed Beltway to existing flood plains, access to public and private utilities, impacts to future development of private lands and the acceptance of affected property owners, and crossing of Wide Hollow Creek. The study will also present recommended roadway sections, preliminary cost estimates, and potential funding sources.

1.2 Study Authorization and Source of Funds

The Union Gap City Council authorized Huibregtse, Louman Associates, Inc. (HLA), to complete this corridor study. Funding for this project has come in part from a Yakima County Supporting Investment in Economic Development (SIED) grant to the City of Union Gap.

1.3 Contributing Organizations, Businesses, and Individuals

The following organizations, businesses, and individuals have been consulted and/or have assisted in the development and completion of this study:

City of Union Gap
Public Works Department
Dennis Henne
(509) 225-3524

City of Union Gap
Planning Department
Dave Spurlock
(509) 575-3638

Washington Dept. of Transportation
VE Team Leader Project Engineer
Troy Suing Jeff Minnick
(509) 577-1703 (509) 577-1704

Yakima County Public Services
Surface Water Division
Terry Keenhan
(509) 574-2311

Regional Beltway Connector Corridor Study

Washington Dept. of Fish and Wildlife

Area Habitat Biologist

Eric Bartrand

(509) 457-9310

Yakama Nation Fisheries

Tribal Fisheries Habitat Biologist

Scott Nicolai

(509) 962-6142

Wide Hollow Development

Property Owner

Trent Marquis

(509) 728-3190

Ahtanum Ridge Business Park

Property Owner

Terry McGuire

(509) 952-7880

2.0 ALIGNMENT SELECTION CONSIDERATIONS

2.1 Beltway Design Parameters

The primary purpose of the regional Beltway connector is to efficiently move traffic and freight between the South Union Gap Interchange and Ahtanum Road thereby improving travel to and from the western areas of Union Gap and the Upper Yakima Valley. To achieve this primary goal, the Beltway is recommended to be a limited access four-lane arterial with no driveways and few intersecting roads.

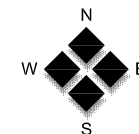
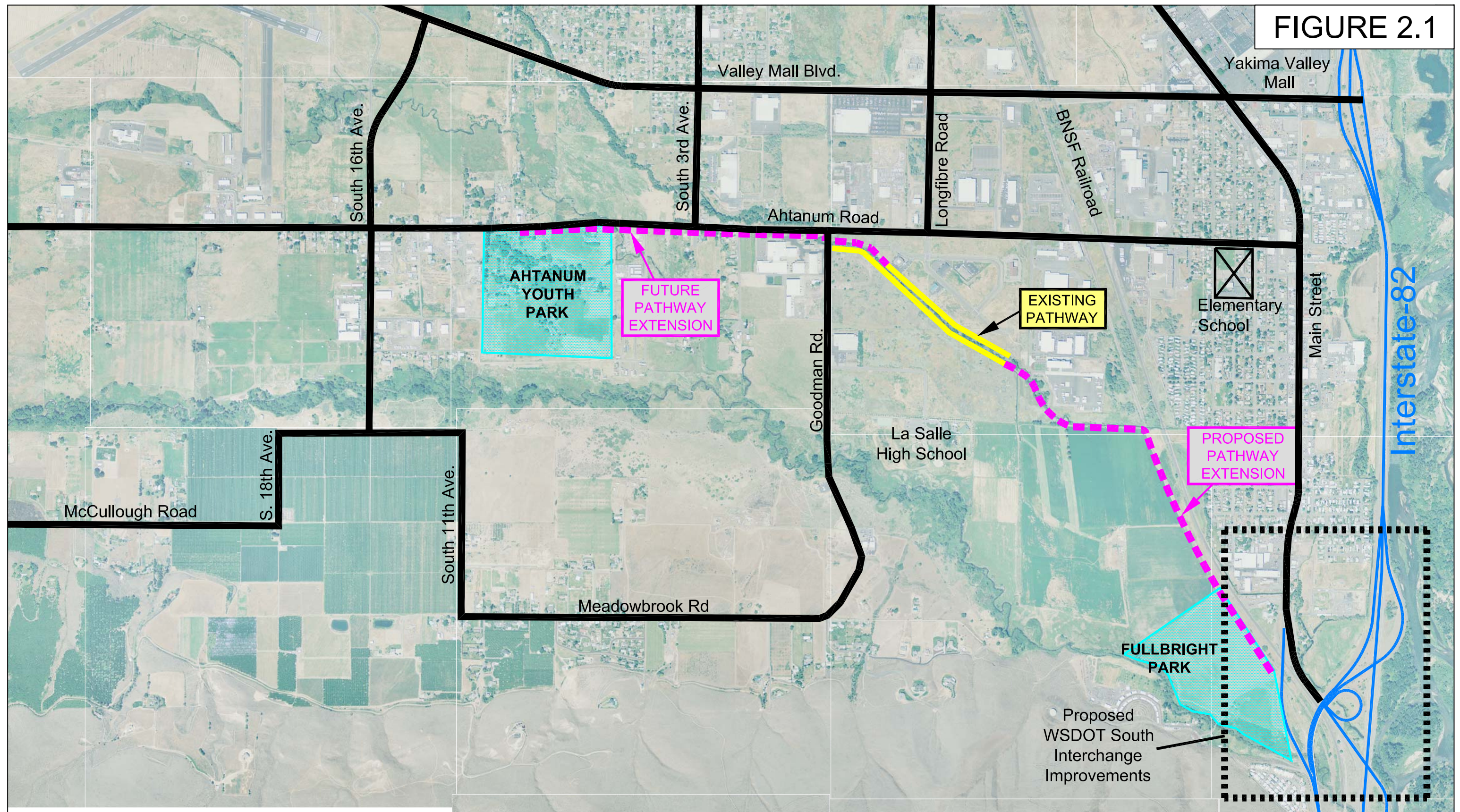
Access to properties adjacent to the Beltway will require use of interior roadway systems that connect to the arterial at controlled intersections. Discussions with adjacent property owners regarding potential future development identified roundabouts as being the preferred intersection design. The new roundabouts constructed during the I-82/Valley Mall Boulevard project have provided a good example of how versatile and effective such an intersection design is for a busy arterial.

The original *TRANS*-Action concept for the Beltway was for it to be a divided arterial similar to Valley Mall Boulevard in order to limit left turns and to provide a median for landscaping and/or other aesthetics such as infill with brick pavers. As the Beltway is proposed to have no driveway accesses and few roundabout intersections, there is no need for a centerline barrier prohibiting left turns. Providing a boulevard-style median for aesthetics such as landscaping may ultimately be appropriate based on factors such as development of adjacent properties. However, this would significantly add to the cost of construction and the City's ongoing maintenance of the roadway. Landscaping opportunities would be available along the back of sidewalks, in drainage swales, and/or within the center of roundabouts should they be constructed at Beltway intersections.

Union Gap does not have a comprehensive plan for bicycle routes and has discouraged their use within busy arterial streets. The heavy volumes of traffic, particularly trucks, that travel the City's arterials create an unacceptable safety risk to bicyclists should they share the street section. The recently completed Valley Mall Boulevard improvements did not include bicycle lanes within the roadway corridor. Adhering to this philosophy, it is recommended that the Beltway not include bicycle lanes within the roadway.

Although there is no adopted bicycle plan for Union Gap, the City has provided bicycle lanes and shared pathways where possible. This has recently included linking the Yakima Greenway through the new I-82/Valley Mall Boulevard Interchange and roundabouts to Main Street. The City has also pursued construction of a joint bicycle/pedestrian pathway from the City's Ahtanum Youth Park to its Fulbright Park as shown on Figure 2.1 - Non-Motorized Loop (Pathway). Union Gap is considering the potential for extending the pathway further including a possible link to the Greenway. It is recommended that the proposed alignment of this joint-use pathway be relocated to parallel the proposed new Beltway from the completed middle section

FIGURE 2.1



P:\Projects\2009\09076\Study Exhibits\and uses.dwg



City of Union Gap
REGIONAL BELTWAY CONNECTOR
NON-MOTORIZED LOOP (PATHWAY)

to Fulbright Park. The pathway would be adjacent to but separate from the arterial, as shown on typical roadway sections discussed below.

Typical roadway section alternates are shown on Figure 2.2 - Urban Arterial Sections and Figure 2.3 - Rural Arterial Section. Two urban arterial sections are shown, the recommended non-median design as well as a boulevard-style section with a landscaped center median. A separate joint bicycle/pedestrian pathway and a minimum 8-foot wide sidewalk on the opposite side of the roadway are shown. Storm water is proposed to be collected via curb inlet style catch basins and directed to vegetated swales for containment and percolation similar to the design of the City's existing Longfibre Road.

The rural arterial section is provided as a lower cost option. It provides for the separate joint bicycle/pedestrian pathway but no sidewalk on the opposite side. It anticipates that the opposite side sidewalk installation will be constructed by the adjacent development(s) in the future. No landscaped center median alternate is proposed for the rural section. Storm water will run off the roadway to adjacent vegetated swales for containment and percolation.

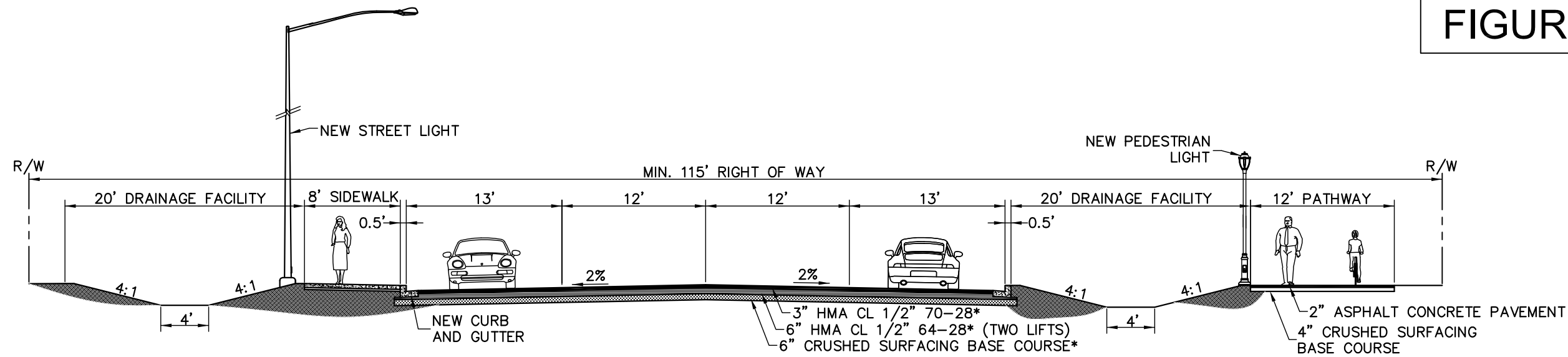
2.2 FEMA Flood Plains

The Yakima County Surface Water Division recently completed the development of new flood plain maps for the Ahtanum Creek, Wide Hollow Creek, Spring Creek, and Bachelor Creek corridors. All of these creeks have constant year-around flow and are located within or near the proposed Beltway corridor. The County employed the services of an outside consultant to conduct the analysis and prepare the maps, and after review by their Surface Water Division, submitted them to the Federal Emergency Management Agency (FEMA) for adoption. A copy of the draft flood plain map for the Beltway corridor area is provided in Figure 2.4 - Flood Plain Map. Formal adoption of the new flood plain maps by FEMA has not been completed as of the date of this study.

The locations of 100-year flood plains within the proposed Beltway corridor, as identified by the new Yakima County flood plain maps, significantly influence the alignment considerations of the arterial. Any work within the flood plain will require action with local permitting authorities and FEMA. The southern end of the Beltway and its proposed connection to the South Union Gap Interchange is in a dynamic area due to the convergence of the Wide Hollow and Ahtanum Creeks with the Yakima River. Regardless of the final location and design of the Beltway/Interchange connection, it is almost certain to require construction within the flood plain. This will require future analysis and coordination with regulatory agencies to determine the vertical placement of the arterial.

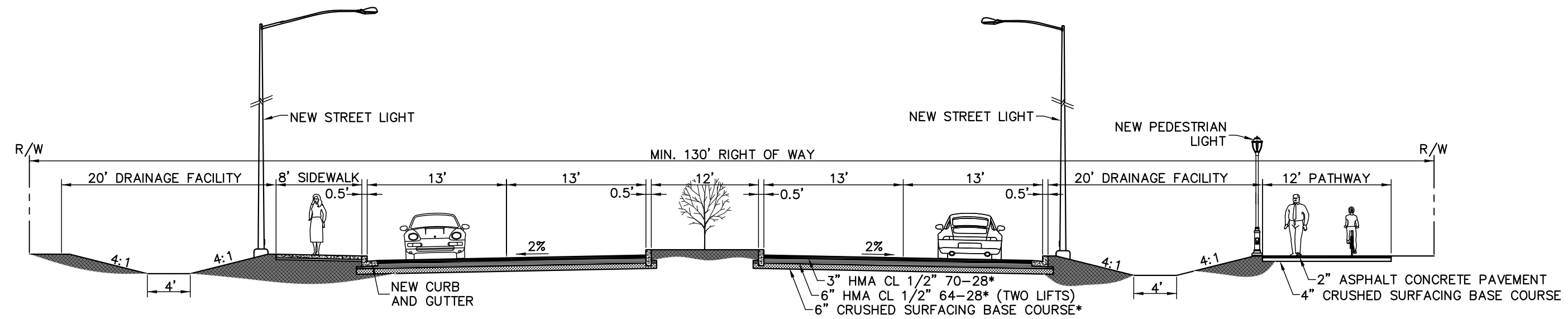
Normally, a highly traveled arterial should be placed at least 2-feet above the 100-year flood plain elevation, requiring the Beltway connector to be built on either fill or concrete stilts. Such construction will require an analysis proving adequate flood storage capacity would still exist after construction for any of the three creeks, if affected. Gaining approval and changing Flood

FIGURE 2.2



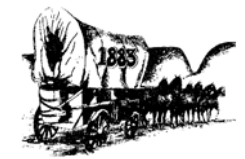
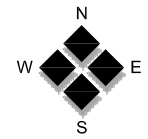
URBAN CROSS SECTION
NTS

*EQUIVALENT TO VALLEY MALL
BLVD. PHASE 4 SECTION.
PAVEMENT SECTION TO BE
DETERMINED THROUGH
GEOTECHNICAL INVESTIGATION.



URBAN CROSS SECTION WITH MEDIAN
NTS

*EQUIVALENT TO VALLEY MALL
BLVD. PHASE 4 SECTION.
PAVEMENT SECTION TO BE
DETERMINED THROUGH
GEOTECHNICAL INVESTIGATION.



City of Union Gap
REGIONAL BELTWAY CONNECTOR
URBAN ARTERIAL SECTIONS

FIGURE 2.3

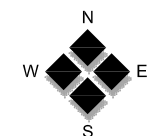
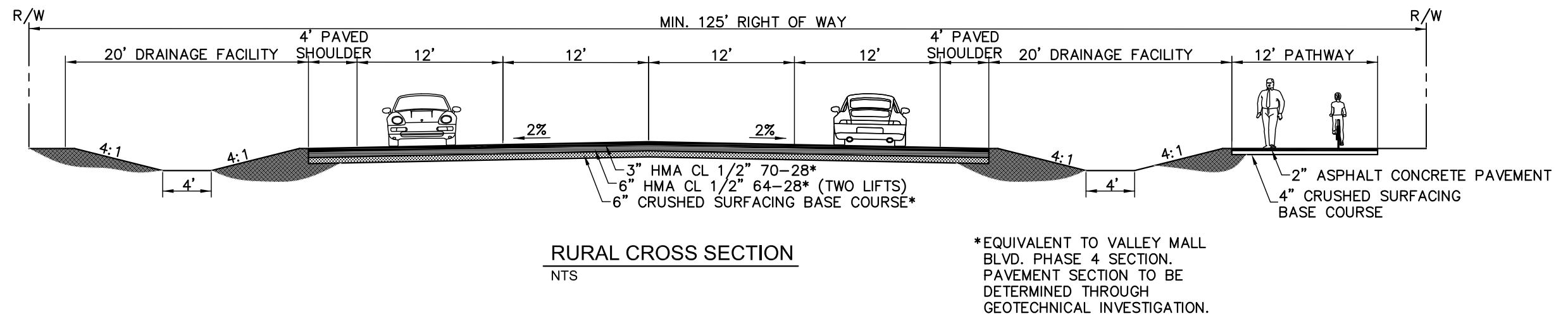
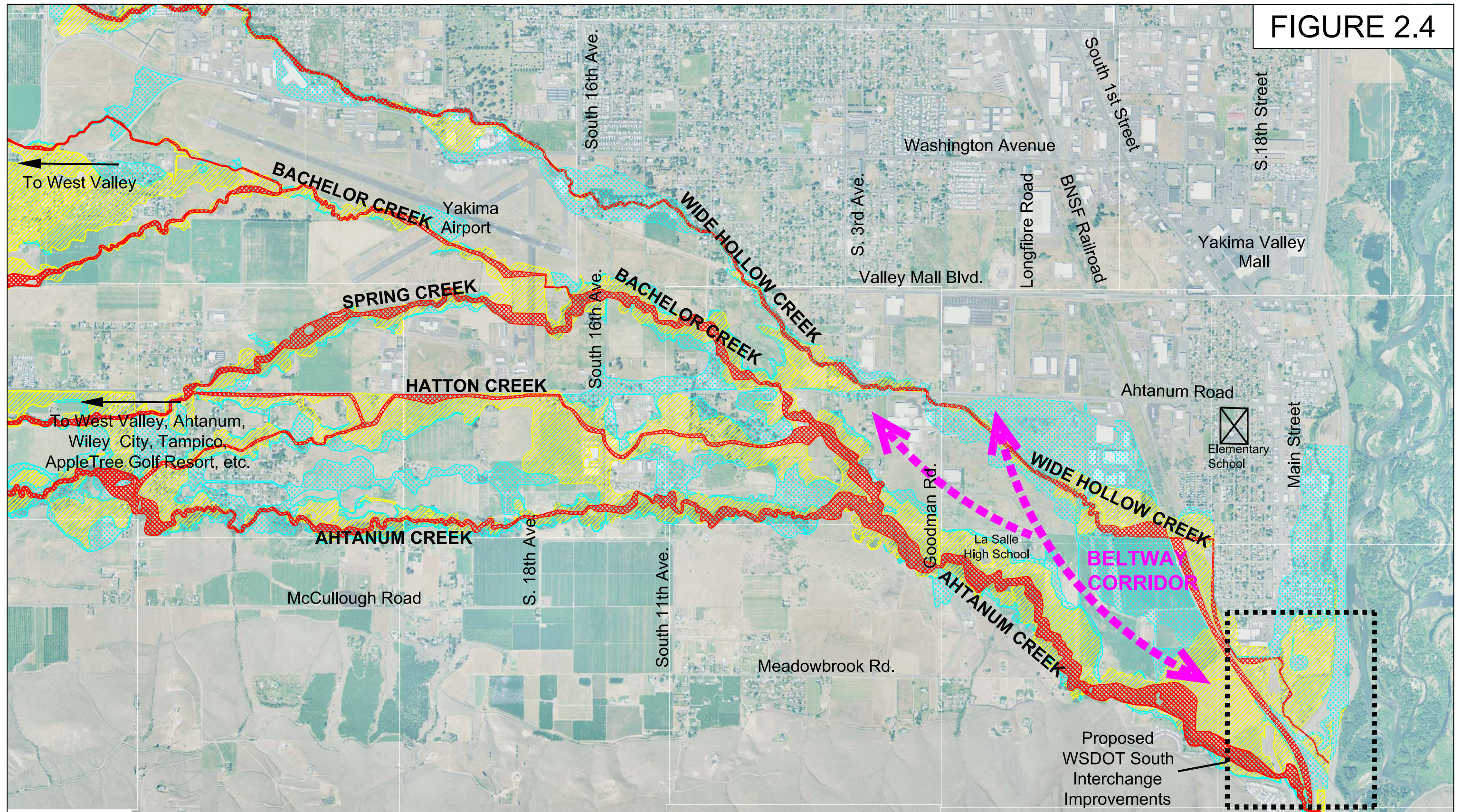
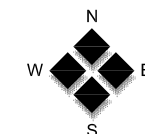


FIGURE 2.4



- 100 YEAR FLOOD PLAIN
- ZONE X (500 YEAR)
- FLOODWAY



City of Union Gap
REGIONAL BELTWAY CONNECTOR
FLOOD PLAIN MAP

Insurance Rate Maps (FIRM) through FEMA can be a lengthy process and would need to be started as soon as possible in the early stages of the engineering design phase.

Depending on the north end termini of the Beltway, crossing Wide Hollow Creek will be required on some alignment options in order to connect with Ahtanum Road. In determining logical alignment alternates, the analysis considered the ease or complexity of the creek crossing with respect to environmental, traffic, and cost issues. Some potential alignments would cross the creek in entirely new locations simplifying the existing traffic flow issues, but likely complicating the environmental review and permitting processes. For example, using Goodman Road as the connection to Ahtanum Road would introduce the problem of how to handle traffic while replacing the existing narrow span 2-lane bridge.

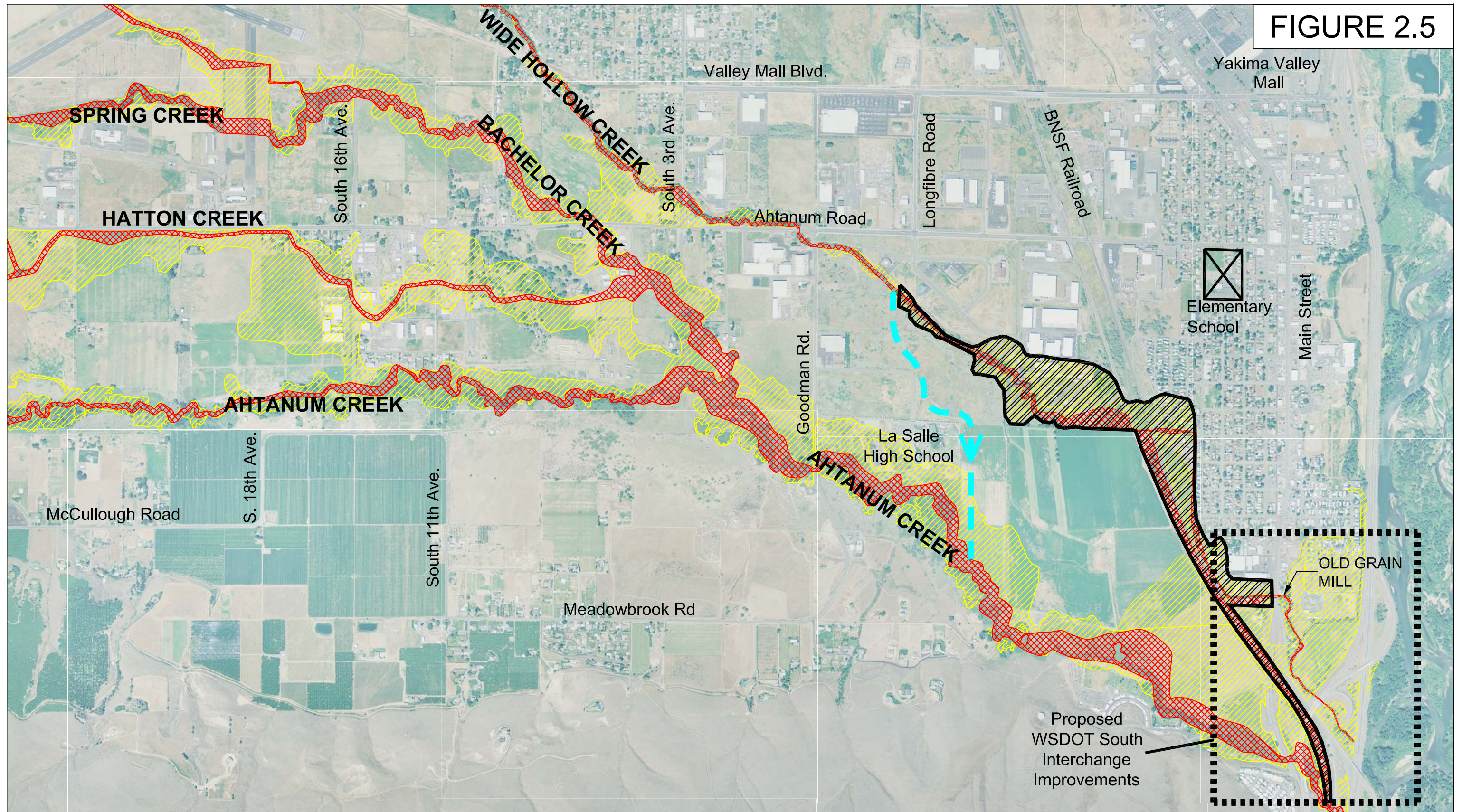
Additionally, several meetings have been held with various jurisdictions and authorities including the Yakima County Surface Water Division, Washington State Department of Fish and Wildlife, and Yakama Nation Fisheries personnel as well as private property owners to discuss the potential of relocating Wide Hollow Creek. These meetings have been very preliminary “what if” brainstorming sessions centering on the possibility of intercepting Wide Hollow Creek in the Longfibre Road area and redirecting it south to the Ahtanum Creek. This preliminary relocation idea has been considered for many years as it would eliminate flood plain issues within the City of Union Gap east of the Burlington Northern and Santa Fee Railroad tracks and would remove a fish barrier at the old grain mill site east of Main Street. Depending on the actual relocation alignment, it could also eliminate the need for a Beltway bridge crossing of the creek. Figure 2.5 - Wide Hollow Creek Relocation Concept shows one preliminary concept alignment for informational purposes only. As the potential creek relocation is only a preliminary “concept” idea at this time, it has not been considered in the Study’s alignment analysis.


2.3 South Union Gap Interchange Connection


Preliminary engineering and environmental investigation for the improvement of the I-82/US 97/Main Street Interchange, typically called the South Union Gap Interchange, has been underway since 2005 by the Washington State Department of Transportation (WSDOT). The existing interchange does not currently provide for two traffic movements, southbound I-82 to Main Street and Main Street to northbound I-82. The lack of these movements has significantly depressed Union Gap’s downtown business district since the original and subsequent construction of the I-82/US 97 Interchange in the 1960s and early 1980s. WSDOT has identified the additions of these movements as a priority in order to comply with federal requirements for full function interchanges.


Several safety improvements have also been considered in WSDOT’s study of the interchange including the condition and age of existing structures and the elimination of the dual use of the Main Street to US 97 southbound on-ramp. Currently the 2-lane roadway leading to the southbound US 97 on-ramp also provides access to the City’s Fulbright Park and to the Leisure Hills mobile home park. As of the date of this Beltway corridor study, WSDOT has accomplished the following:

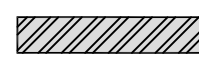
FIGURE 2.5

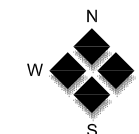


 100 YEAR FLOOD PLAIN

 FLOODWAY

 POTENTIAL CREEK
RELOCATION ALIGNMENT

 APPROXIMATE AREA OF
ELIMINATED FLOOD PLAIN



City of Union Gap
REGIONAL BELTWAY CONNECTOR

WIDE HOLLOW CREEK
RELOCATION CONCEPT

Regional Beltway Connector Corridor Study

- Value Engineering Study (VE) - A VE study was completed that evaluated current design concepts based on the project objectives of providing direct access between South Union Gap and I-82, improve access between I-82 and US 97, and accommodating a future “Beltway” connection. Preliminary design alternatives have been developed with consideration of reducing impacts to environmentally sensitive areas.
- Cost Risk Assessment (CRA) – A draft CRA was completed that provides a probabilistic-based evaluation of the project's cost and schedule.
- Assumptions Document - Preliminary information for the Interchange Justification Report (IJR) was prepared and approval was received from the Federal Highway Administration (FHWA) to break or revise the existing limited access required to improve the interchange.
- Interchange Justification Report (IJR) – A draft IJR has been submitted to WSDOT Headquarters from the Region 5 office for review and comment prior to being finalized and submitted to FHWA for approval.

The analysis by WSDOT of the potential improvement of the South Union Gap Interchange is part of a larger comprehensive study of access to the I-82 corridor that included the Valley Mall Boulevard Interchange. The goal of the study was to identify improvements that would enhance access to the western portions of the Upper Yakima Valley. The initial focus was on Valley Mall Boulevard which resulted in the recently completed interchange and arterial improvements project.

The study of the South Union Gap Interchange has recognized the need for a limited access arterial route that would connect to Main Street at or near the interchange and travel northwesterly to Ahtanum Road. This “Beltway” connector arterial was identified by the local transportation group known as *TRANS-Action*, as Phase 1 of a regional priority improvement called the “Westside Connector” that would traverse across the Upper Yakima Valley from Union Gap, through the City of Yakima and Yakima County, to US 12 at the Town of Naches. The Westside Connector has been proposed to create a continuous arterial route to and through developing areas in Union Gap, the City of Yakima, and Yakima County in order to ease congestion on existing overburdened local streets.

It is acknowledged that the proposed new Beltway arterial will not only provide a means for freight and vehicular traffic to access various industrial and commercial areas within Union Gap but will also provide access to the agricultural and residential areas to the west. The Beltway would also relieve traffic pressure at the recently improved I-82/Valley Mall Boulevard Interchange as it will provide an alternate route for people traveling between the Lower Yakima Valley and Union Gap's fast growing commercial district along Longfibre Road and Valley Mall Boulevard. Further, this South Union Gap Interchange is the last remaining I-82 interchange within the Central Yakima and Union Gap area that can be economically developed. Other interchanges are too close in proximity to the Yakima River and have surrounding property

improvements that make significant development near the interchanges cost prohibitive and/or impractical.

The proposed Beltway connector would alleviate a significant portion of the traffic volume being experienced through the downtown area and would allow continued development in the City's industrial and commercial areas without concerns for the safety and capacity of Union Gap's transportation system. The heavy truck and vehicular traffic that currently use Main Street to access Ahtanum Road for travel to and from the west would have a safer, more direct route with the proposed Beltway. No longer would large trucks need to navigate through the center of Union Gap, negotiating tight intersection corners and passing City Hall, the Fire Station, and the Elementary School as shown on Figure 2.6 - Existing South Union Gap Travel Patterns. Establishing a truck route to divert freight traffic away from the existing Union Gap Elementary School zone on Ahtanum Road was identified as part of a Safe Route to Schools (SRTS) National Course program held on October 25, 2011. A copy of the summary report from the one-day SRTS National Course is provided in the Appendix.

2.4 Land Uses

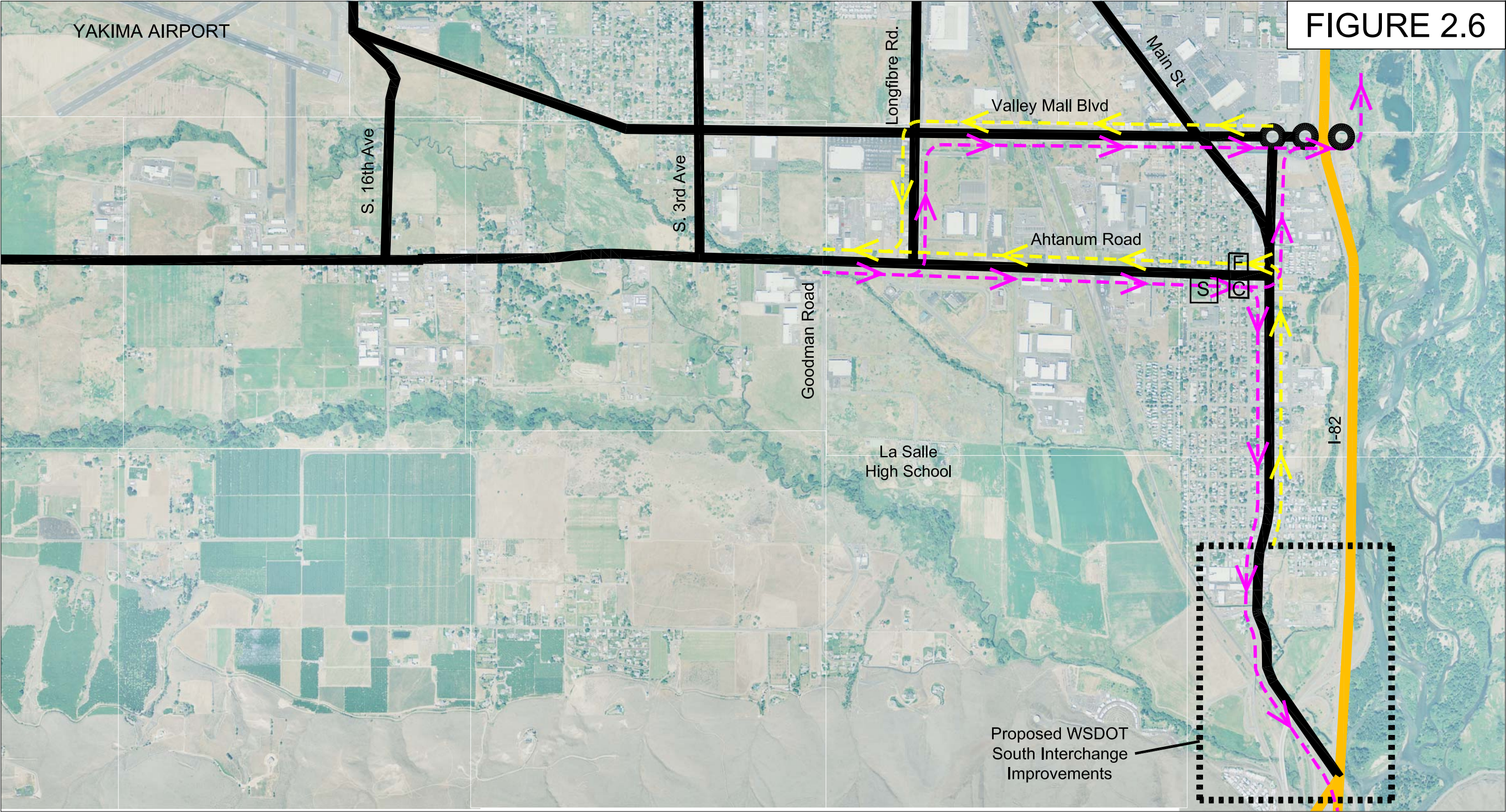
In analyzing and selecting potential alignment alternates for the proposed regional Beltway arterial, consideration was given to accessing not only existing commercial/industrial businesses and zoned properties, but also opening access to other potentially developable properties. Figure 2.7 – Existing and Future Land Uses shows existing commercial and industrial zoned properties that would be positively affected by the construction of the proposed Beltway. Figure 2.7 also identifies existing businesses, offices, and public facilities within the target area.



The current ownership of properties within the Beltway corridor that could possibly be affected by one or more of the alignment alternates are shown on Figure 2.8 - Current Property Ownership. Any proposed Beltway alignment leading northwesterly from the South Union Gap Interchange will travel through a significant length of undeveloped land owned by two properties owners. Depending on the final alignment routing, the Beltway will travel approximately 4,000 to 5,000 linear feet through property (highlighted in yellow in Figure 2.8) controlled by Wide Hollow Development under the ownership of U.C.I.P LLC and TM Rentals. The arterial would also traverse approximately 2,000 linear feet of vacant land (highlighted in blue in Figure 2.8) owned by Ahtanum Ridge Business Park LLC.




Understanding that the Beltway is to be a limited access arterial, both property owners expressed their concerns that the arterial's alignment might bisect their parcels. Each suggested they would be receptive to an alignment that would essentially route the arterial around the perimeter of their parcels leaving as much of their undeveloped land intact as possible. The alignment analysis has honored their request to the extent possible with the recognition that future development plans may alter the alignments through the properties.

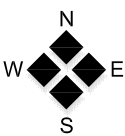
Acquisition of right-of-way will be required in order to construct the proposed new regional Beltway connector. A minimum of 120 feet of right-of-way is required to accommodate the four-lane urban roadway section shown on Figure 2.2. Should a center landscaped median be

FIGURE 2.6



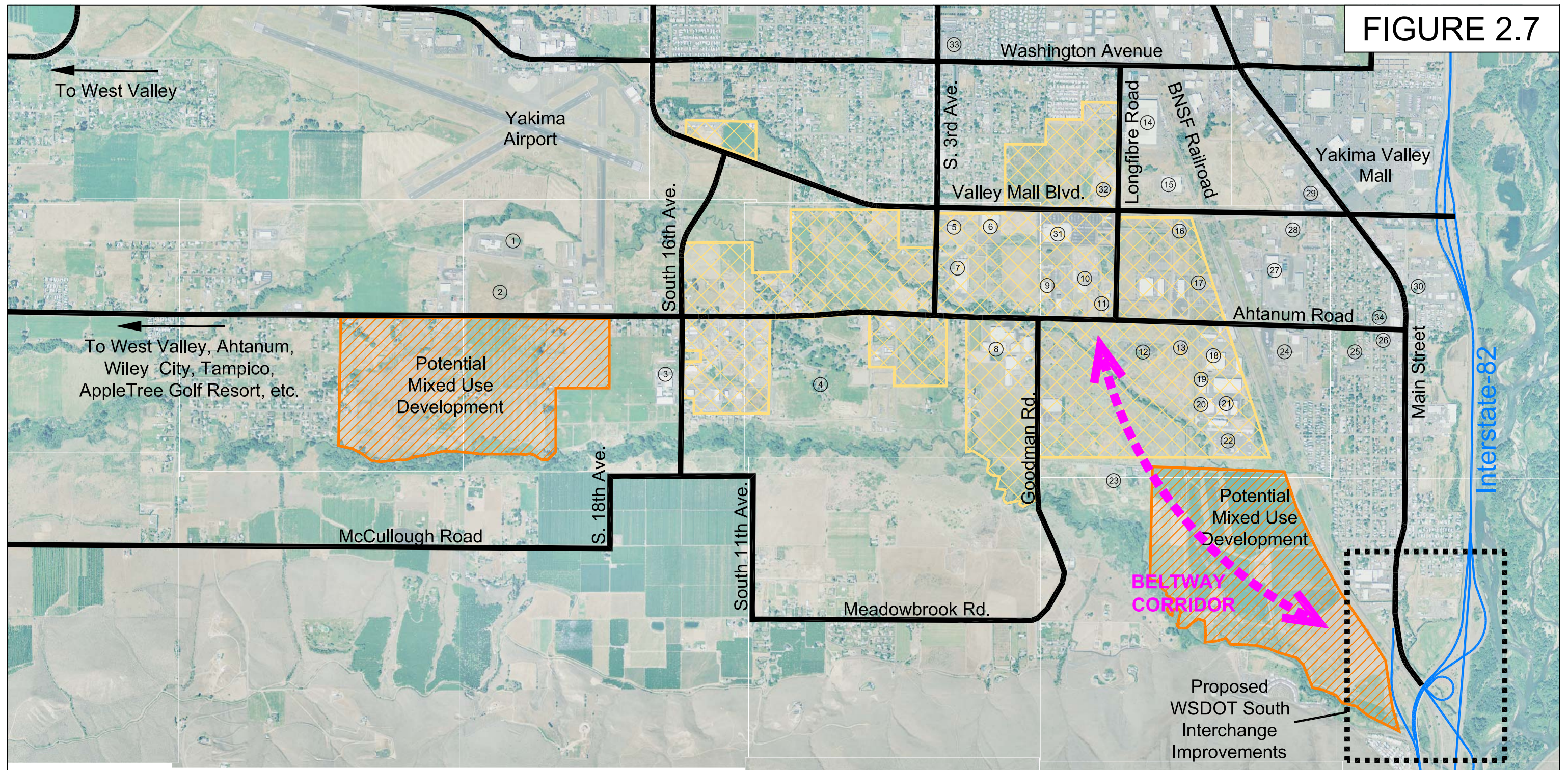
 HIGHWAYS
 EXISTING MAJOR TRAVEL ROUTES

 EXISTING ELEMENTARY SCHOOL
 EXISTING CITY HALL
 EXISTING FIRE DEPT. STATION



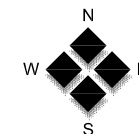
City of Union Gap
REGIONAL BELTWAY CONNECTOR
EXISTING SOUTH UNION GAP
TRAVEL PATTERNS

FIGURE 2.7



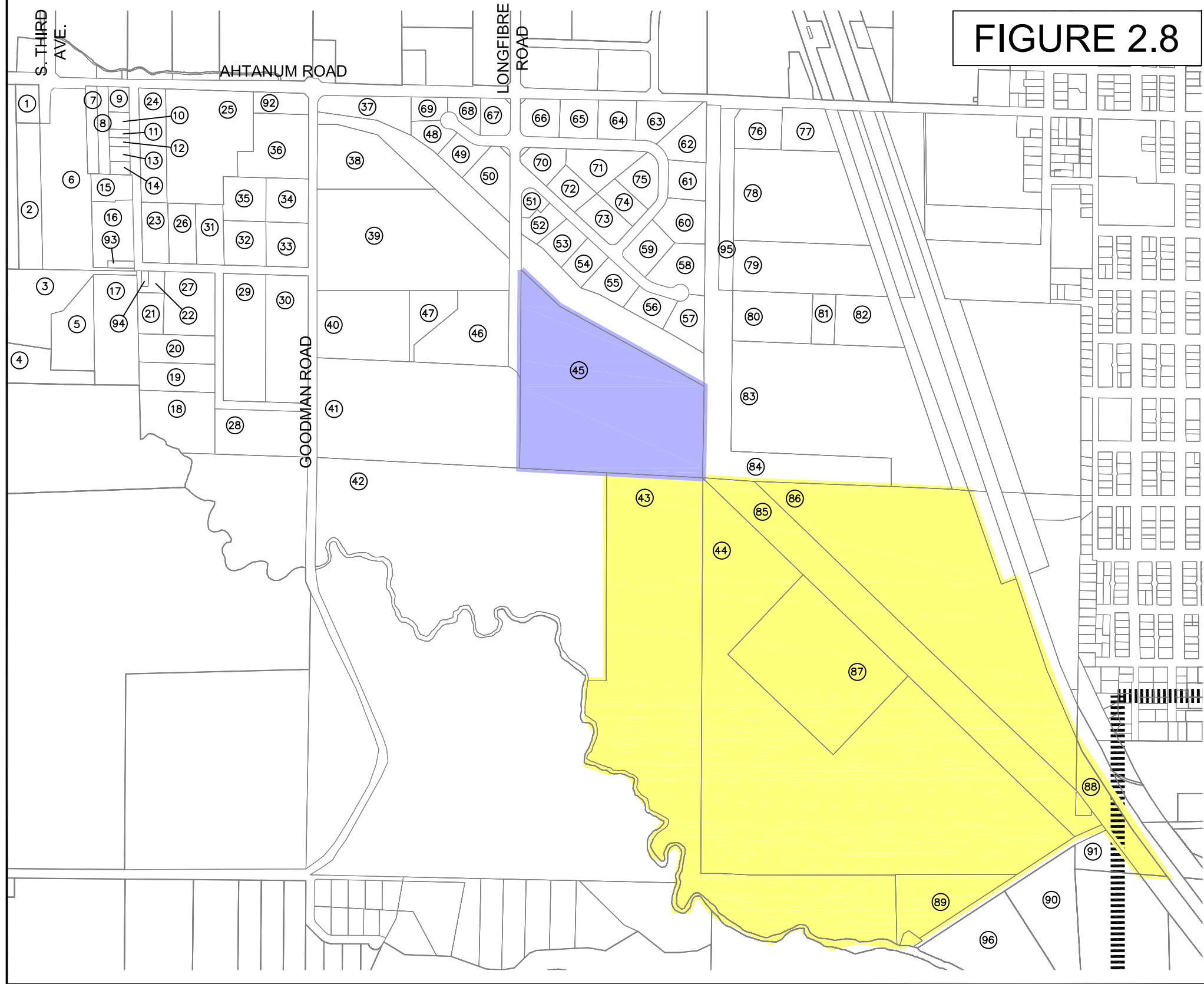
- | | | |
|---------------------------------|---------------------------------|--|
| ① National Guard Armory | ⑬ Yakima County Health District | ②⑤ Union Gap School |
| ② McAllister Business Park | ⑭ Longview Fibre Co. | ②⑥ Union Gap City Hall |
| ③ Kwik Lok Corporation | ⑮ Printing Press Inc. | ②⑦ Noel Transportation |
| ④ Ahtanum Youth Park | ⑯ New FedEx Ground | ②⑧ King Brothers Woodworking |
| ⑤ Picatti Brothers Inc. | ⑰ Pacific Power Substation | ②⑨ United Parcel Service |
| ⑥ R and R Beverage | ⑱ All-Wood Components Inc. | ③① Washington State Dept of Transportation |
| ⑦ Bunzi Extrusion | ⑲ Haney Truck Lines | ③② Costco |
| ⑧ Clasen Fruit and Cold Storage | ⑳ Magic Metals | ③③ Clary Toyota |
| ⑨ Orchard Rite Ltd. | ㉑ Renegade Powder Coating | ③④ U.S. Post Office |
| ⑩ Refrigeration Equip. Co Inc. | ㉒ Macro Plastics | ③⑤ Fire Dept. Station |
| ⑪ Superior Refuse and Recycle | ㉓ La Salle High School | |
| ⑫ Davita Dialysis Center | ㉔ Weyerhaeuser | |

- EXISTING MAJOR TRAVEL ROUTES
- EXISTING INDUSTRIAL AND COMMERCIAL ZONED PROPERTY
- POTENTIAL MIXED USE DEVELOPMENT

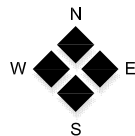


City of Union Gap
REGIONAL BELTWAY CONNECTOR
EXISTING AND FUTRE LAND USES

①	18120142016	QUIATCHON	④⑨	19120631422	AHTANUM MOB, LLC
②	18120142012	BUNKER	⑤⑩	19120631438	BK GATOR, LLC
③	18120143006	NASH	⑥⑪	19120631437	182 RESOURCES
④	18120142021	HART	⑦⑫	19120631436	ARBP
⑤	18120143003	BAGGARLY	⑧⑬	19120631418	ARBP
⑥	18120142011	SAM & JENNY, INC.	⑨⑭	19120631417	ARBP
⑦	18120142010	GONZALEZ	⑩⑮	19120631416	ARBP
⑧	18120142009	BUTLER	⑪⑯	19120631415	ARBP
⑨	18120142001	RICHTER	⑫⑰	19120631414	ARBP
⑩	18120142002	EDDY	⑬⑱	19120631413	ARBP
⑪	18120142003	BARTSCH	⑭⑲	19120631412	ARBP
⑫	18120142004	BARTSCH	⑮⑳	19120631411	ARBP
⑬	18120142005	GEDDES	⑯㉑	19120631410	FAMILY WORSHIP CENTER
⑭	18120142006	HILL	⑰㉒	19120631409	FAMILY WORSHIP CENTER
⑮	18120142401	ELLIOTT	⑱㉓	19120631408	BK GATOR, LLC
⑯	18120142402	ELLIOTT	㉑㉔	19120631407	BK GATOR, LLC
⑰	18120143008	BARRARLEY	㉒㉕	19120631406	BK GATOR, LLC
⑱	18120144411	HANSEN	㉓㉖	19120631405	BK GATOR, LLC
⑲	18120144407	HANSEN	㉔㉗	19120631404	PINNELL
⑳	18120144406	HANSEN	㉕㉘	19120631403	PINNELL
㉑	18120144414	HOEFT	㉖㉙	19120631402	PINNELL
㉒	18120144413	HOEFT	㉗㉚	19120631424	FLETCHER
㉓	18120141418	HANSEN	㉘㉛	19120631439	YAKIMA CO. HEALTH DISTRICT
㉔	18120141417	COLUMBIA VALLEY FRUIT	㉙㉜	19120631430	MAGSI
㉕	18120141416	COLUMBIA VALLEY FRUIT	㉚㉝	19120631429	MAGSI
㉖	18120141419	HANSEN	㉛㉞	19120631428	MAGSI
㉗	18120144405	HANSEN	㉜㉟	19120631427	MAGSI
㉘	18120144410	HANSEN	㉝㊱	19120642405	AHTANUM PARTNERSHIP
㉙	18120144408	HANSEN	㉞㊲	19120642002	TIDRICK
㊱	18120144409	HANSEN	㊱㊳	19120642406	RANKIN PROPERTIES, LLC
㊲	18120141420	HANSEN	㊲㊴	19120642403	UNION GAP PARTNERSHIP
㊳	18120141414	CA BUILDING, LLC	㊳㊵	19120643405	MIRROR MAGIC
㊴	18120141413	HANSEN	㊴㊶	19120643406	MIRROR MAGIC
㊵	18120141412	WHITE LIGHTNIN	㊵㊷	19120643403	MIRROR MAGIC
㊶	18120141411	CA BUILDING, LLC	㊶㊸	19120643404	MACRO PLASTICS
㊷	18120141415	COLUMBIA VALLEY FRUIT	㊷㊹	19120643003	PACIFIC POWER
㊸	19120631401	L & M	㊸㊺	19120712002	UCIP
㊹	19120632003	ARBP	㊹㊻	19120711007	TM RENTALS
㊺	19120632006	ARBP	㊺㊼	19120712003	TM RENTALS
㊻	19120633401	THERMOFORMING	㊻㊽	19120823001	UCIP
㊼	19120633404	ARBP	㊼㊾	19120741006	UCIP
㊽	19120722001	LA SALLE HIGH SCHOOL	㊽㊿	19120741003	CITY OF UNION GAP
㊾	19120721001	UCIP	㊾	19120823014	CITY OF UNION GAP
㊿	19120713001	UCIP	㊿	18120141003	HERNANDEZ
1	19120633403	ARBP	1	18120142008	FIRST AHTANUM LAND TRUST
2	19120633406	ARBP	2	18120144412	HOEFT
3	19120633405	ARBP	3	19120642404	RANKIN PROPERTIES, LLC
4	19120631423	PINNELL	4	19120741005	CITY OF UNION GAP



THE PARCEL NUMBERS AND OWNERSHIP SHOWN HEREON ARE UP TO DATE AS OF NOVEMBER 17, 2011, ACCORDING TO INFORMATION AVAILABLE FROM THE YAKIMA COUNTY ASSESSOR'S OFFICE.



City of Union Gap
REGIONAL BELTWAY CONNECTOR
CURRENT PROPERTY OWNERSHIP

included, a total of 135 feet of right-of-way would be needed. It is assumed that some or all of the undeveloped properties may grant right-of-way as part of a subdivision process or be willing to donate right-of-way as a financial contribution towards constructing the arterial. The remaining right-of-way parcels will need to be purchased.

2.5 Alignment Alternates

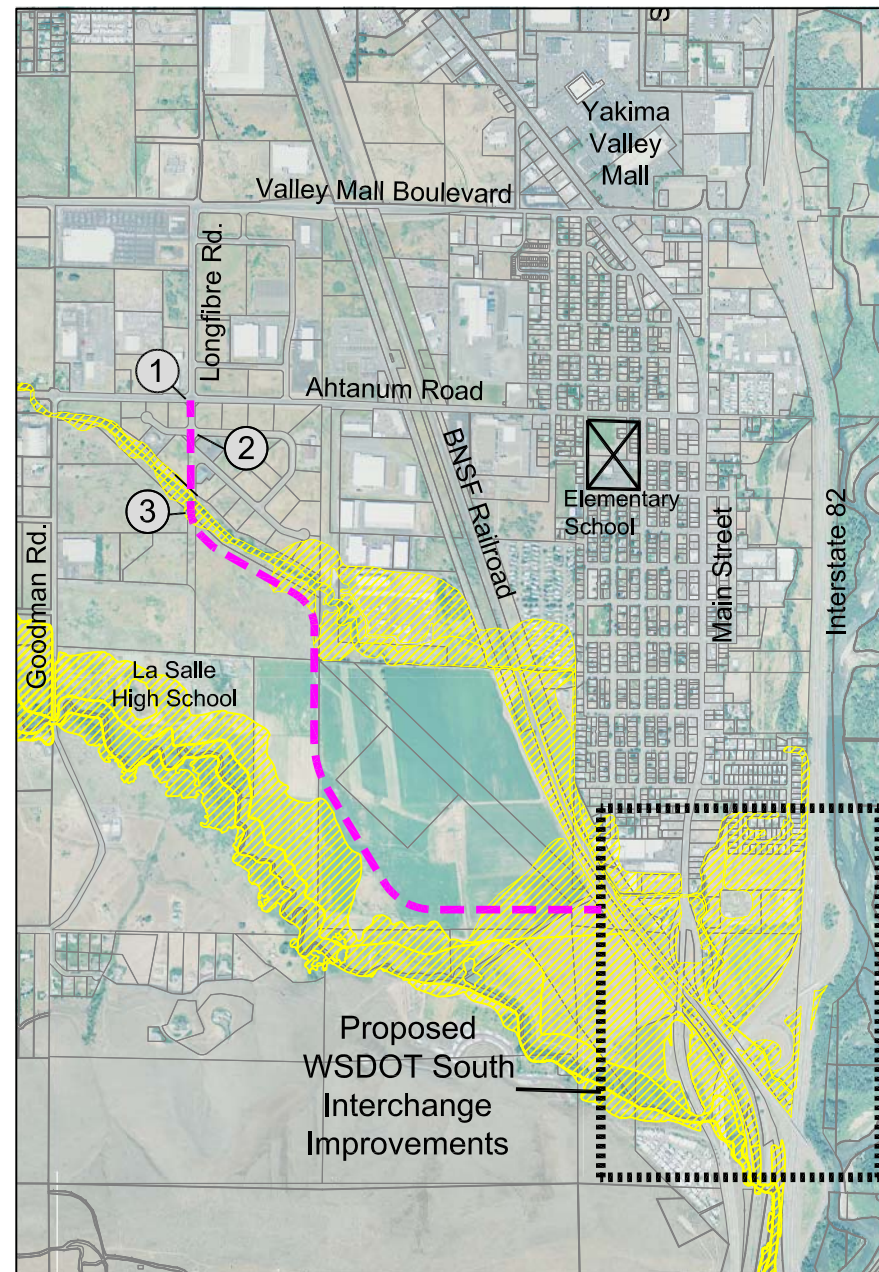
Based on the criteria discussed in Sections 2.1 through 2.4, three alignment alternates have been developed that connect from the South Union Gap Interchange area to Ahtanum Road at the following existing intersections: Longfibre Road (Alternate A), Goodman Road (Alternate B), and South 3rd Avenue (Alternate C). Figure 2.9 – Alignment Alternates shows each of the three alignment alternates with Yakima County's draft 100-year flood plain areas. All three alternates share the same alignment from the South Union Gap Interchange to the south side of Wide Hollow Creek near Longfibre Road. At that point, Alternate A would cross Wide Hollow Creek with a new bridge and connect to the existing 3-lane section of Longfibre Road at the south leg of the existing signalized intersection with Ahtanum Road.

Alternate B would bypass Longfibre Road and continue west to the existing 2-lane Goodman Road. The proposed Beltway project would improve Goodman Road to the north to a 3-lane section matching the existing south leg of its signalized intersection with Ahtanum Road. The improvements would require replacing the existing 2-lane Wide Hollow Creek Bridge with a new minimum 3-lane structure. Currently Goodman Road does not extend to the north beyond Ahtanum Road.

Alternate C would extend the Beltway to the existing 3-lane south leg of South 3rd Avenue at the signalized intersection with Ahtanum Road. This alternate would not involve the crossing of any surface water body although it does require acquisition of numerous right-of-way parcels to accommodate the proposed alignment. It is important to note the construction of either Alternate A or Alternate B would not preclude the future completion of Alternate C as a complimentary improvement.

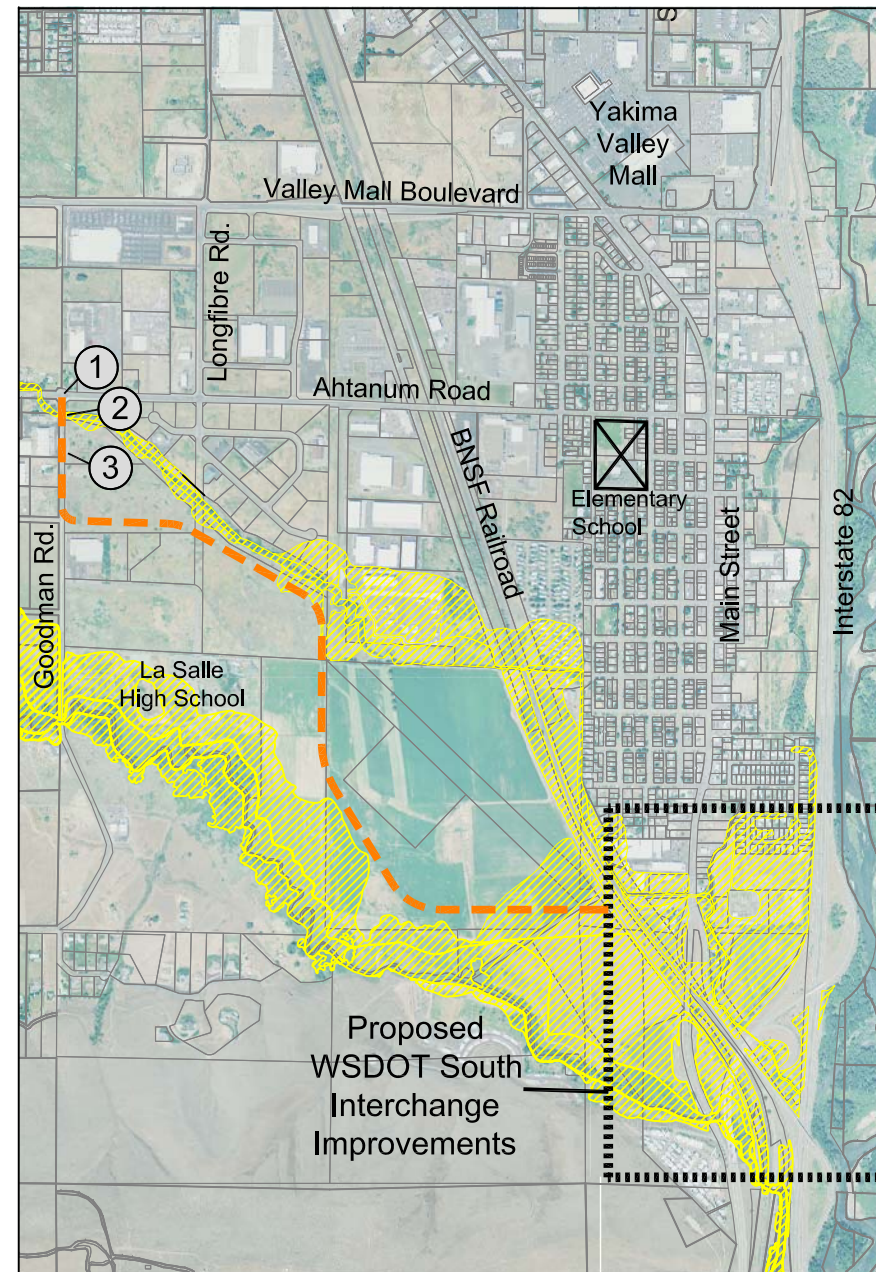
The proposed Beltway alternates would provide access to over 400 acres of currently undeveloped or vacant property as shown on Figure 2.10 – Undeveloped/Vacant Properties. Most of these properties are zoned for commercial and/or industrial uses or may be proposed as mixed-use developments. Public utilities are readily available to most of these properties. City potable water mains exist throughout the Beltway corridor area. Sanitary sewer service, however, does not currently exist in much of the area south of Wide Hollow Creek. Figure 2.11 - Potable Water Improvements and Figure 2.12 – Sanitary Sewer Improvements show existing City water and sewer facilities and possible future extensions. Should the Beltway arterial be constructed prior to development in the area, water and sewer stubs should be constructed across the roadway as shown on Figures 2.11 and 2.12.

FIGURE 2.9



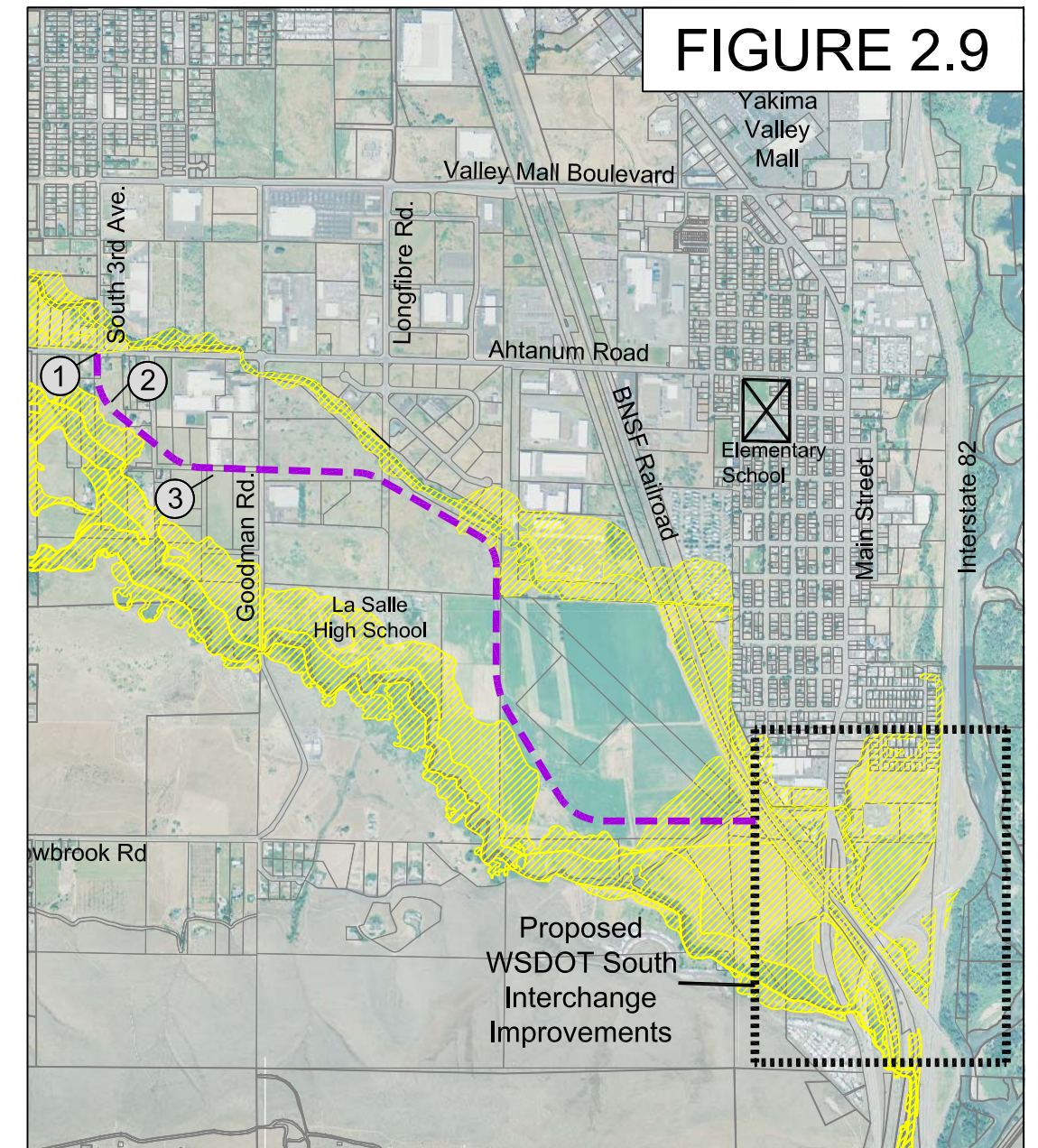
ALTERNATE A

- ① EXISTING SIGNALIZED INTERSECTION WITH 5-LANE AHTANUM ROAD SECTION AND 3-LANE LONGFIBRE ROAD SECTION.
- ② EXISTING AHTANUM RIDGE BUSINESS PARK WITH INTERSECTING STREETS. EXISTING 70 FOOT RIGHT-OF-WAY ON LONGFIBRE ROAD TO SOUTH OF CREEK.
- ③ NEW MINIMUM 3-LANE BRIDGE ACROSS WIDE HOLLOW CREEK REQUIRED. REASONABLY SHORT SPAN, NO EXISTING STRUCTURE TO REMOVE AND NO EXISTING TRAFFIC TO DETOUR.



ALTERNATE B

- ① EXISTING SIGNALIZED INTERSECTION WITH 5-LANE AHTANUM ROAD TO THE EAST AND 2-LANE WIDTH TO THE WEST. GOODMAN ROAD IS 2-LANE SECTION TO THE SOUTH EXCEPT SHORT DISTANCE OF 3-LANE SECTION AT THE INTERSECTION. GOODMAN ROAD DOES NOT EXTEND NORTH OF THE INTERSECTION.
- ② EXISTING 2-LANE BRIDGE ACROSS WIDE HOLLOW CREEK WILL REQUIRE REPLACEMENT WITH NEW MINIMUM 3-LANE STRUCTURE. TRAFFIC ON GOODMAN ROAD WILL NEED TO BE DETOURED TO SOUTH 16TH AVENUE DURING CONSTRUCTION.
- ③ EXISTING 2-LANE ROADWAY WILL REQUIRE WIDENING TO 3-LANES. COLUMBIA VALLEY FRUIT WAREHOUSE COMPLEX INGRESS/EGRESS ACCESS FOR TRUCKS IMMEDIATELY SOUTH OF BRIDGE.



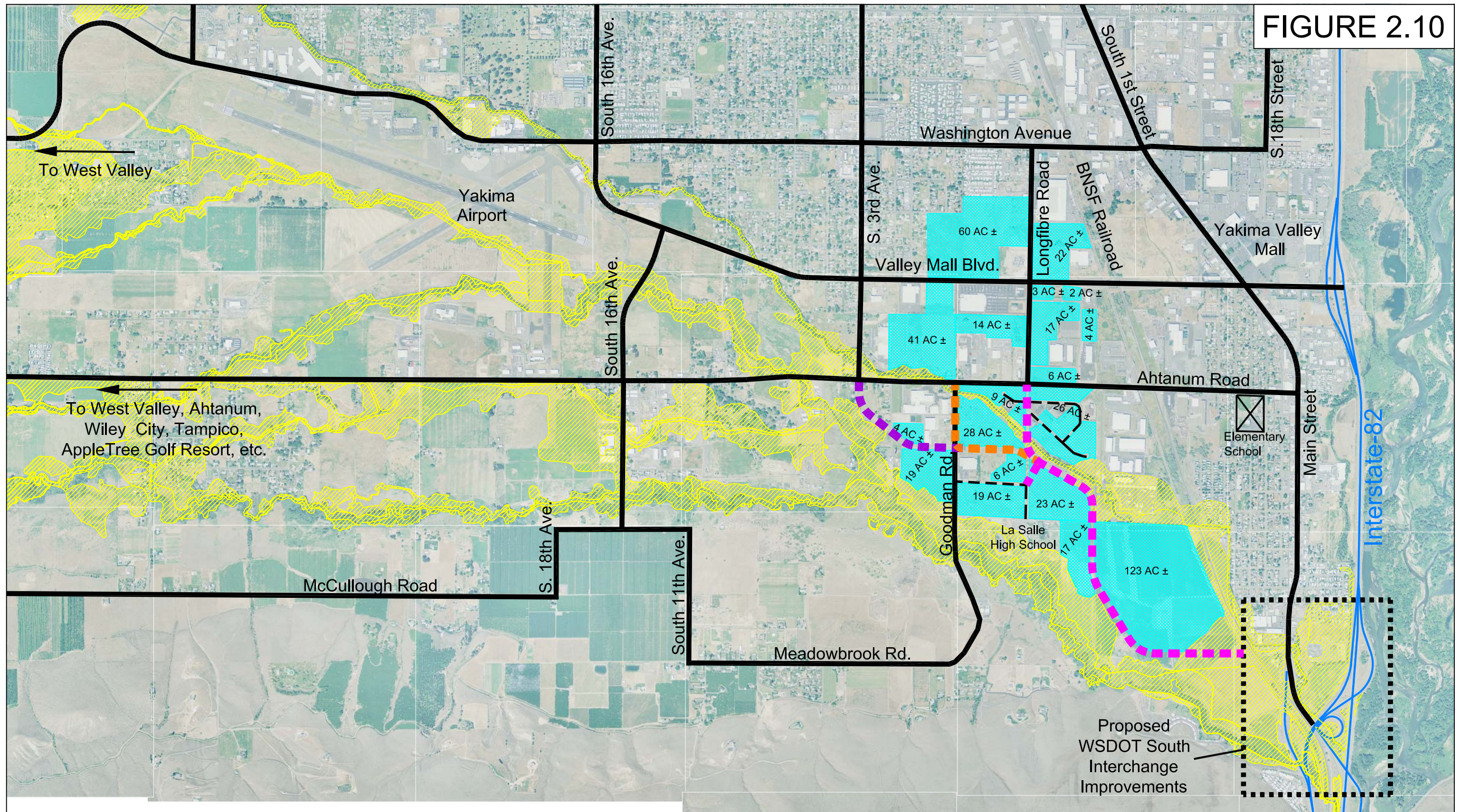
ALTERNATE C




- ① EXISTING SIGNALIZED INTERSECTION WITH 3-LANE SECTION ON BOTH AHTANUM ROAD AND SOUTH 3RD AVENUE.
- ② TO AVOID FLOODPLAIN, THE NEW BELTWAY MUST CURVE A SHORT DISTANCE SOUTH OF THE INTERSECTION.
- ③ NEW BELTWAY WILL BISECT THE FRUIT WAREHOUSE PROPERTY.






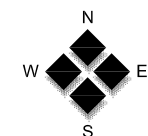
City of Union Gap
REGIONAL BELTWAY CONNECTOR
ALIGNMENT ALTERNATES

FIGURE 2.10



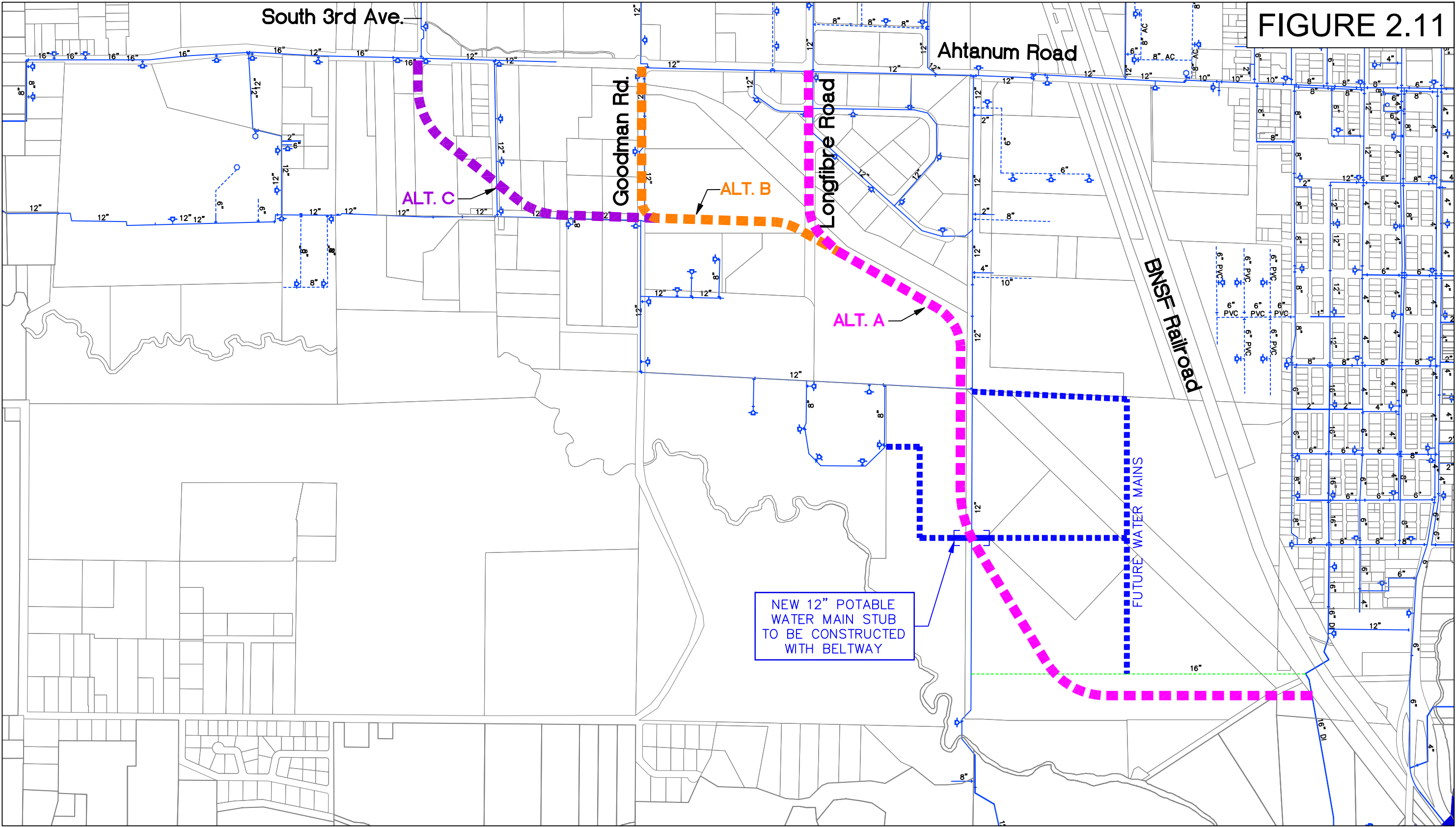
-  EXISTING MAJOR TRAVEL ROUTES
-  100 YEAR FLOOD PLAIN
-  UNDEVELOPED/ VACANT PROPERTIES

-  ALIGNMENT ALTERNATE A
-  ALIGNMENT ALTERNATE B (Common with Alt. A to the East)
-  ALIGNMENT ALTERNATE C (Common with Alt. A and B to the East)



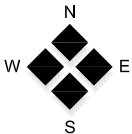
City of Union Gap
REGIONAL BELTWAY CONNECTOR
UNDEVELOPED/ VACANT PROPERTIES

FIGURE 2.11



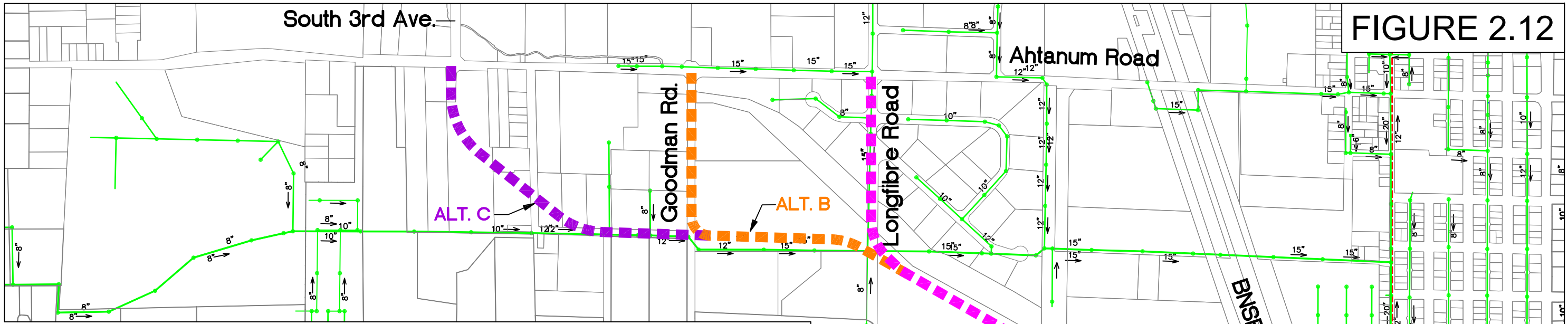
— EXISTING WATER MAIN
- - - EXISTING PRIVATE WATER

- - - NEW WATER MAIN TO BE
CONSTRUCTED IN 2012

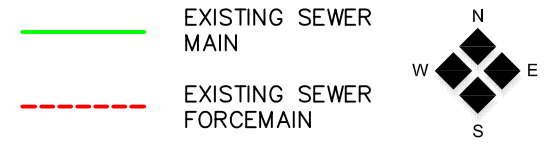
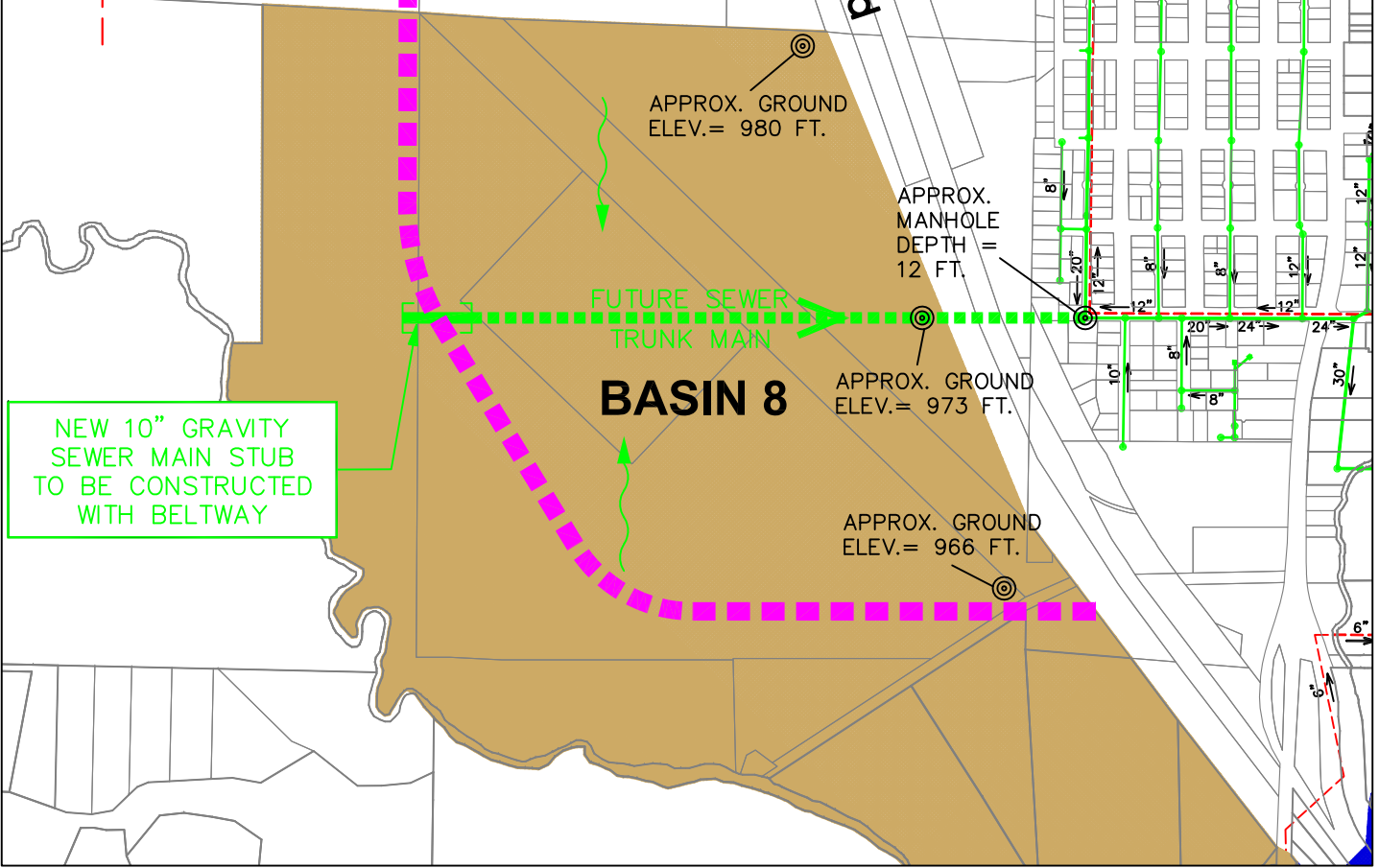
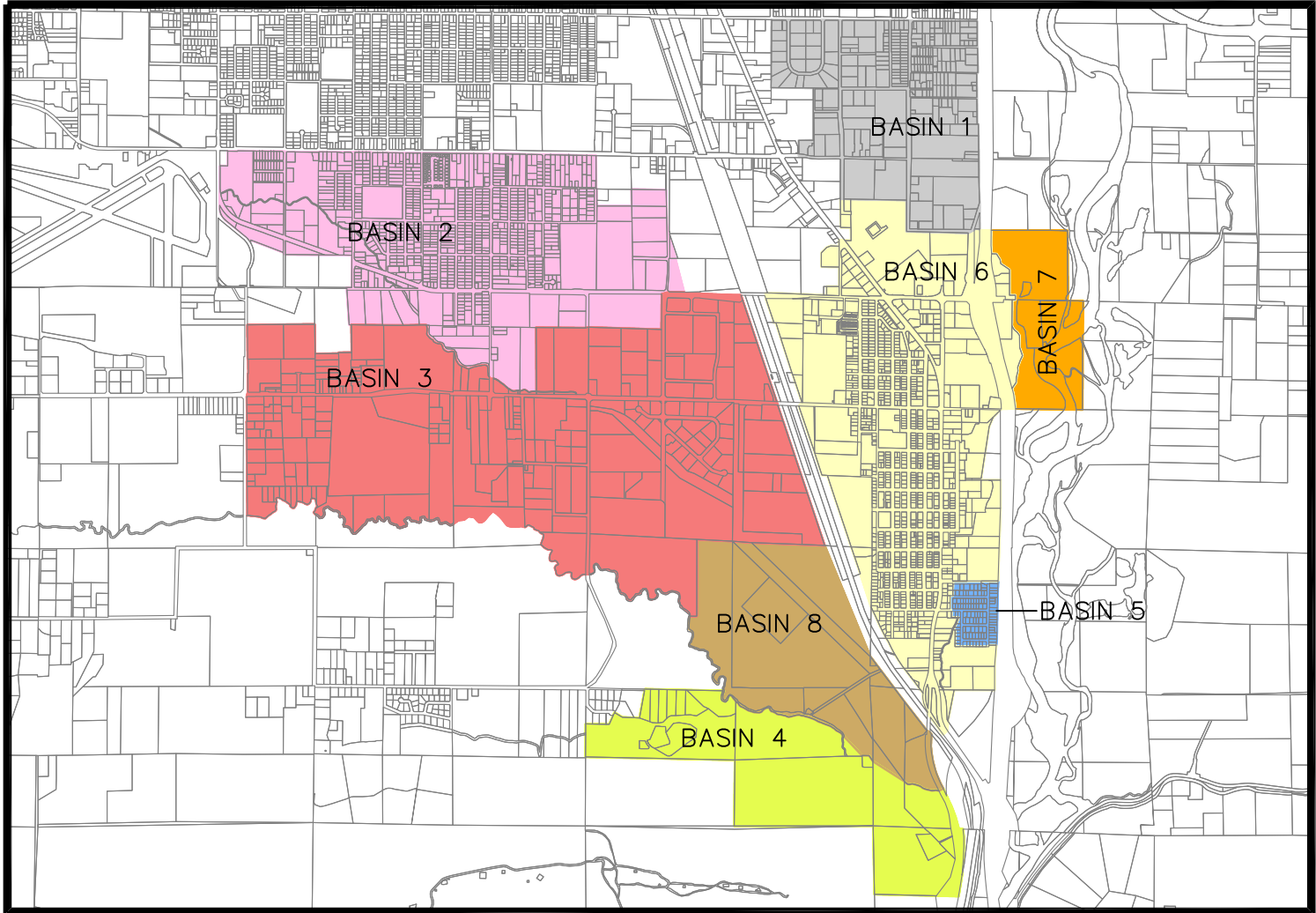


City of Union Gap
REGIONAL BELTWAY CONNECTOR
POTABLE WATER IMPROVEMENTS

FIGURE 2.12



GENERAL SEWER PLAN DRAFT
EXISTING COLLECTION SYSTEM BASIN BOUNDARIES



City of Union Gap
REGIONAL BELTWAY CONNECTOR
SANITARY SEWER IMPROVEMENTS

