



## Appendix E

### Apple Capital Loop Detailed Technical Feasibility Analysis

February 2019 – Prepared to support INFRA Grant Application

#### Introduction

The Apple Capital Loop is a large project with many facets that work together to complete the network. Much work has been invested into preparing this network of projects to be ready to execute in full. The notice of funding availability requests a detailed description of the work to be performed, which allows USDOT to evaluate project readiness. The objective of this analysis is to demonstrate that the project is ready to proceed ahead of statutory timelines and the schedule provided in Project Budget and Schedule, Appendix D. The analysis provides background information behind the work performed to date and work efforts currently underway to support the grant application narrative. This technical feasibility analysis shows that the INFRA funds will be utilized in accordance with statutory requirements and will meet critical dates such as obligation and construction deadlines.

This analysis is organized into the following sections:

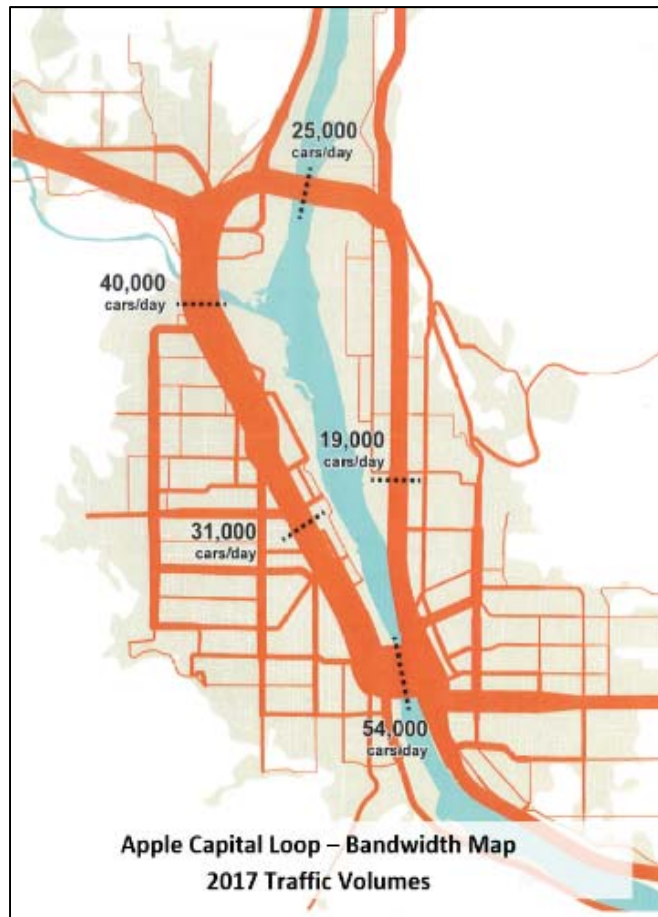
1. [Project Description](#). The network of projects comprising the Apple Capital Loop consists of 4 key segments.
2. [Regional and Local Planning](#). This section provides a summary and references for substantial planning efforts supporting the network of projects.
3. [Public Engagement](#). Public engagement is key to project delivery and provides a basis for support for transportation investments. Public engagement is ongoing; however, several key efforts are summarized in this analysis.
4. [Pre-design and Environment](#). Predesign documents and environmental documents are provided in this section for each segment.
5. [Project Approvals](#). A list of project approvals is provided in this section.
6. [Project Delivery and Schedule](#). The last section of this analysis provides a delivery summary to illustrate the approach for each of the project segments within the network.



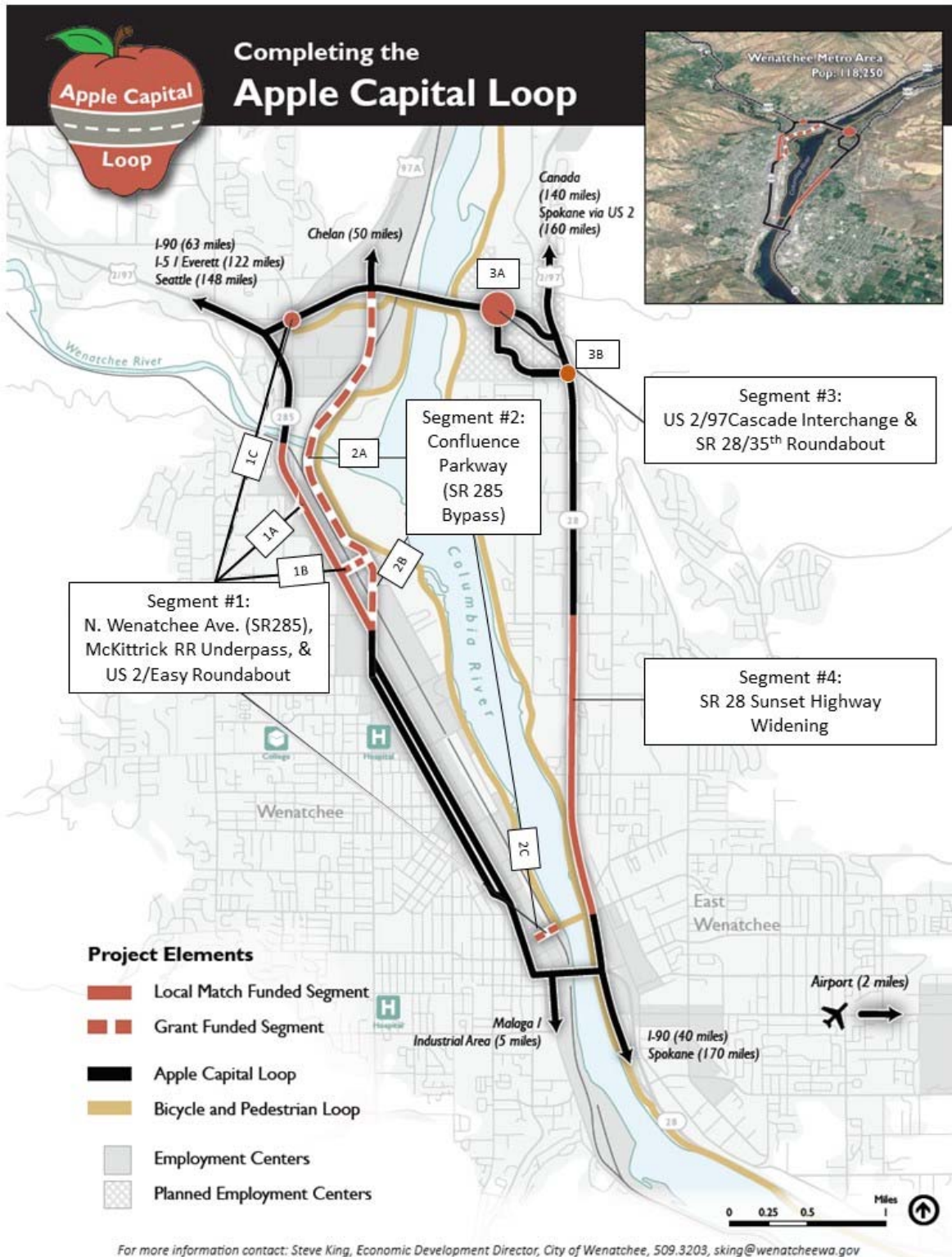
## Section 1: Project Description

The Apple Capital Loop grant application narrative describes a network of projects that work together to make up the backbone of the Wenatchee Valley. The network of projects is broken down into subprojects or segments to mitigate risks and to allow respective partner agencies to manage and implement each segment under their responsibility as detailed in this analysis. In addition, the suite of project segments are on different timelines which improves the ability to deliver. The City of Wenatchee is honored to be the lead applicant for this grant application on behalf of multiple agencies in our valley.

The traffic volume bandwidth illustration demonstrates the value of the loop in terms of traffic capacity and clearly shows why our region's transportation planning efforts focus on this loop to improve traffic circulation, safety, adequate emergency response including evacuation routes, and to support economic vitality in a growing community. Any portion of this loop in failure mode brings the transportation system in the valley to a halt. This is particularly important to the tree-fruit industry with more than \$1B of fruit coming into the valley and an additional \$1B of fruit product being shipped worldwide out of the valley. Presently, North Wenatchee Avenue is in failure mode and putting strain on the other network components. The following map provides detail for how the network of project segments is broken down for the purpose of this grant application and technical feasibility analysis.



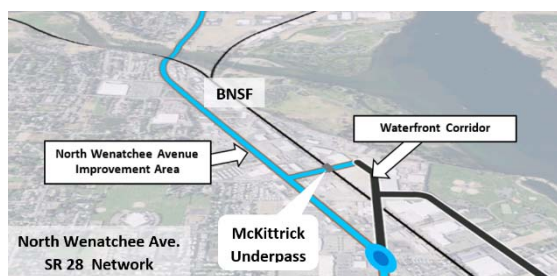
# Completing the Apple Capital Loop





As illustrated above, the network of projects includes the following sub projects or segments. All of the projects are eligible for INFRA funding as they are on the National Highway System or are associated with BNSF mainline railroad crossings. Nearly 100% of trips in the Wenatchee Valley touch the Apple Capital Loop given the Valley's topography and transportation network.

- Segment 1: North Wenatchee Avenue (SR 285) Improvements, McKittrick RR Underpass, & US2/Easy St. Roundabout. North Wenatchee Avenue is currently the most restrictive bottleneck on the loop and it was recently designated as a Critical Urban Freight Corridor on the National Highway Freight Network. North Wenatchee Avenue experiences consistently heavy volumes of traffic during many more hours of the day than isolated congestion at peak hours. North Wenatchee Avenue is also one of only two access points to the city and was blocked during the 2015 Sleepy Hollow Wildfire disaster. This project includes: installing medians; u-turn intersections; implementing intelligent traffic control systems; active signal prioritization for transit, and extending McKittrick to the east of North Wenatchee Avenue underneath the railroad tracks, providing



a direct connection to the waterfront corridor. This segment also includes the replacement of a signal with a roundabout at the US 2/Easy Street intersection at the very north end of the corridor where access there is an access to a growing residential area to the north and a commercial/industrial area to the south. All of these improvements will create better connectivity and more efficient traffic flow, transit operations, and greatly improve safety for motorists and non-motorized modes of traffic. This project will not create additional lane capacity along the existing corridor. Widening North Wenatchee Avenue was ruled out as an option due to business impacts, cost, and for conflicting with the city's goal of intensifying this business district. In addition, the ability to increase lane capacity on this corridor is limited by the existing 4 lanes on the bridge crossing of the Wenatchee River. Construction of the parallel Confluence Parkway alignment emerged as the preferred alternative for adding corridor capacity as well as a third point of access.

- Segment 2: Confluence Parkway & Pedestrian RR Overpass. Confluence Parkway is a new bypass route with a proposed alignment that is parallel to the congested North Wenatchee Avenue (SR 285). Without a bypass, very little growth in future traffic volume can be achieved on this corridor due to the lack of any parallel streets that span the Wenatchee River.

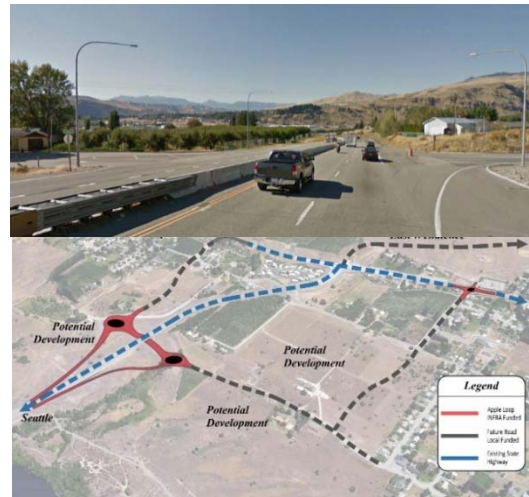




Confluence Parkway will provide additional traffic capacity and a new secondary access across the Wenatchee River. Aside from day-to-day public safety and mobility concerns, the recent fires and loss of life in Paradise California demonstrate the importance of adequate evacuation routes. Wildfire disaster threat is also a focus in Wenatchee as detailed in the Benefit Cost Analysis. Wenatchee is rated number 5 in the Pacific Northwest for wildfire disaster risk. The transportation congestion plans detail that Confluence Parkway will accommodate projected growth of approximately 20,000 additional vehicles per day on an access-restricted two-lane section and will also provide a much needed secondary evacuation route at the north end of the City. Confluence Parkway has been the regionally approved solution for improving traffic mobility and safety on North Wenatchee Avenue for over a decade. The Confluence Parkway project also includes a pedestrian railroad overpass in South Wenatchee which is physically removed from the project; this overpass provides vital access for our concentrated minority and low-income population center in South Wenatchee who need access to the adjacent Apple Capital Loop Trail as a transportation corridor for access to employment and other destinations along North Wenatchee Avenue and beyond. This new pedestrian bridge over the Burlington Northern Santa Fe railroad tracks addresses a serious safety issue because trespassing frequently occurs, and the installation of fencing has not solved the problem. The proposed pedestrian bridge will tie directly into the historic 1908 non-motorized Columbia River bridge providing mobility across the Columbia River to East Wenatchee's downtown. Most importantly, this new walking and cycling connection will complete access to and from the Loop Trail and ensure that our most disadvantaged neighborhoods directly benefit from this transportation investment.



- Segment 3: US 2/97 - Cascade Interchange and SR 28/35<sup>th</sup> Roundabout. Cascade Interchange lies in the NE quadrant of the Loop. This area has been designated for growth as it is one of the few locations where vacant land is ready for large-scale development. Before development can occur, safe highway access is needed. This project will make use of an existing bridge on US 2 as a cost-savings measure to create a safe grade separation interchange. While originally envisioned as a full diamond interchange in the 2006 EIS the project team used a Practical Solutions review to find a cost savings alternative of a half-diamond interchange with easterly connections on arterial streets to new roundabouts on SR 28, as depicted here. The Cascade Interchange is the critical ingredient for accomplishing the Wenatchi Landing master plan for development, enabling diversification of industry and needed employment growth of





living wage jobs while maintaining safe access and preserving traffic volume capacity on SR 2/97.

- Segment 4: Sunset Highway (SR28)

Widening. Sunset Highway, State Route 28 remains a functionally obsolete rural 2 lane highway that was developed years ago prior to urbanization on the east side of the Loop.

Current traffic volumes are causing delays and impeding freight mobility. The improvement will include widening this segment to 4 lanes with existing signalized intersections converted to roundabouts to improve safety and create U-turn opportunities.

These improvements will significantly reduce delay for freight and will increase the capacity of the east side of the Loop to approximately 35,000 vehicles per day, as determined in the regional model. Because the Record of Decision for this project dates back to 2006, an update to re-confirm the traffic analysis is being undertaken by WSDOT as part of project implementation.





## Section 2: Regional and Local Planning

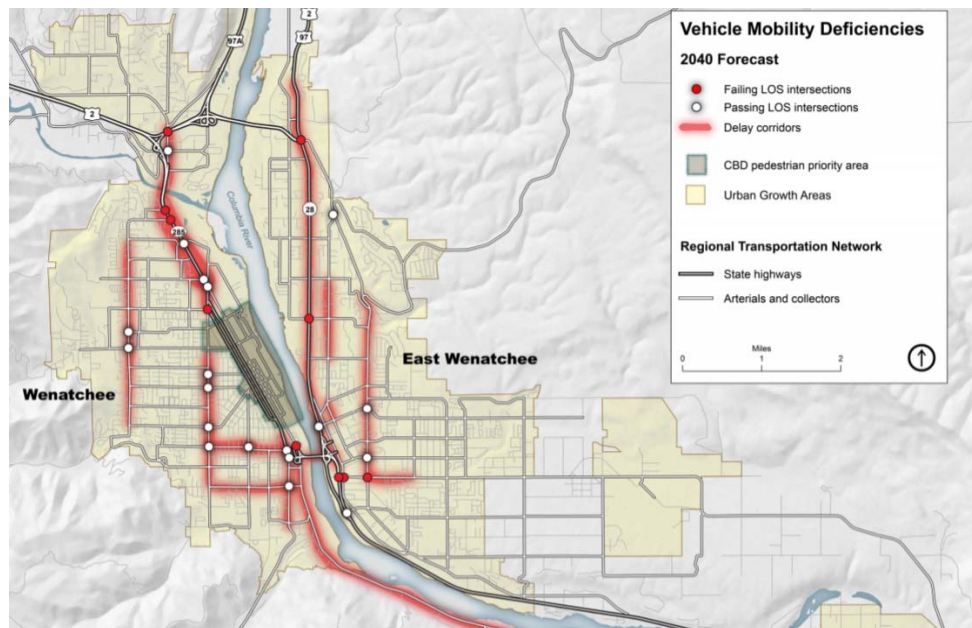
This network of projects emerged from and is in consistent with all relevant regional and state planning documents. These plans include the following and are included on the project website,

[www.applecapitalloop.info](http://www.applecapitalloop.info).



- [2040 Metropolitan Transportation Plan](#)
- [Washington State Freight Plan – 2014](#)
- [Washington State Freight Plan Technical Update - 2017](#)
- [Washington State Rail Plan](#)
- [Metro Freight and Truck Routes Plan](#)
- [North Wenatchee Avenue Transportation Master Plan \(Segments 1 &2\)](#)
- [Wenatchee Bicycle Master Plan](#)

The overarching transportation plan for the region is the Metropolitan Transportation Plan, entitled [Transportation 2040](#). This plan was adopted in 2015 by the MPO (Chelan Douglas Transportation Council). Transportation 2040 provides the basis for project-level planning and development, with ongoing technical support from an up-to-date regional travel demand model providing key traffic volume projections based on locally-planned areas of residential and business growth. Mobility deficiencies identified in Transportation 2040 are illustrated below as LOS failures (below LOS “E”) in which the most impactful failures occur on the Apple Capital Loop.



Transportation 2040 – Mobility Deficiencies

# Completing the Apple Capital Loop



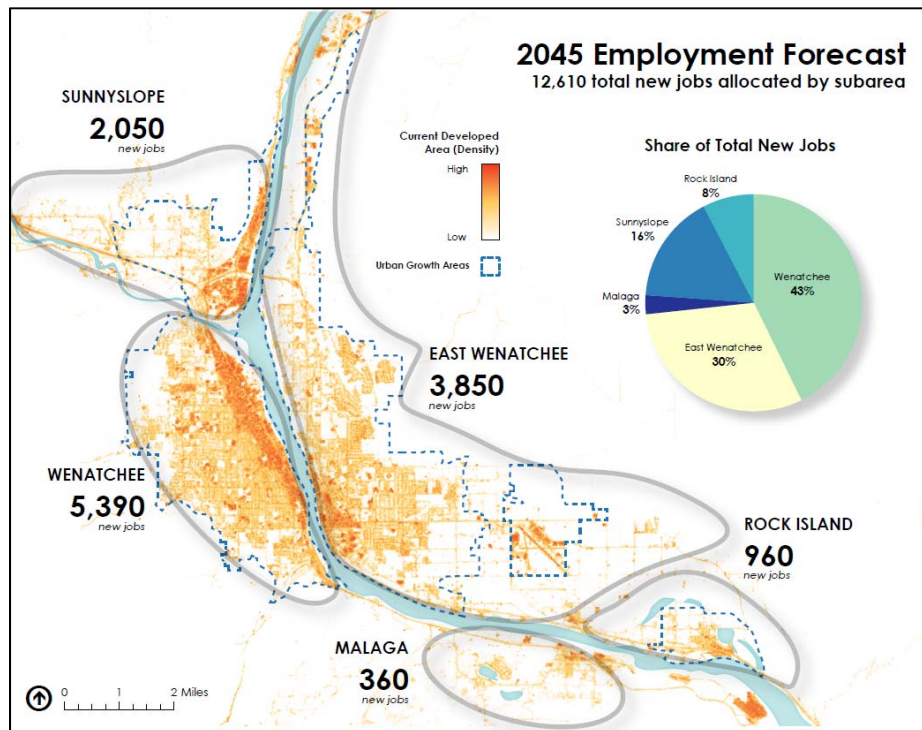
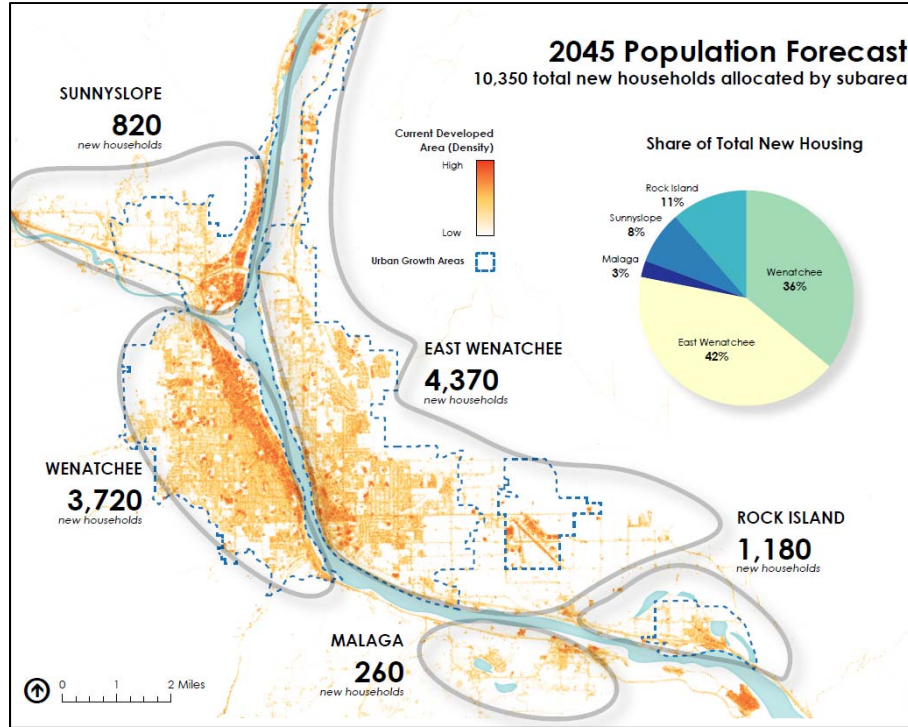
Within the Transportation 2040 metropolitan transportation plan, the North Wenatchee Avenue, Confluence Parkway and SR 28 Sunset Highway segments are included within fiscal constraint as funded improvements; the Cascade Interchange was identified as an illustrative or “vision” project because it was beyond the plan’s fiscal constraint at the time of adoption but is still considered by CDTC and FHWA as part of the plan. Additionally, per INFRA grant requirements, the Confluence Parkway segment is identified as the solution to freight congestion on the NHFN-designated segment of North Wenatchee Avenue in the [2014 WSDOT Statewide Freight Plan](#). North Wenatchee Avenue improvements are also included in the [2017 Technical update to the WSDOT Statewide Freight Plan](#). As federal funds are secured for these regionally significant sub-projects, the CDTC will amend them into the Regional Transportation Improvement Program to be submitted to WSDOT and FHWA for programming in the Statewide Transportation Improvement Program. The Chelan Douglas Transportation Council maintains and periodically updates a regional travel demand model. The table below illustrates traffic volumes modeled for the benefit cost analysis. Each row represents a node on the Apple Capital Loop.

PM Peak Hour Volumes (Post-Processed) Both Directions									
Location	Dir	Existing	2040 Baseline	2040 Baseline (63pc)	2040 Wenatchee Ave	2040 Confluence Pkwy	2040 Cascade IC	2040 Sunset Hwy	2040 Full Build
Wenatchee Ave, n/o McKittrick St	Both	2,995	3,635	3,580	4,230	2,910	3,685	3,605	3,450
Wenatchee Ave, at Wenatchee River Bridge	Both	3,740	4,595	4,505	4,880	3,465	4,735	4,570	3,925
Confluence Pkwy, at Wenatchee River Bridge	Both	0	0	0	0	2,095	0	0	2,030
Euclid Ave, s/o US 2 interchange	Both	615	770	740	780	1,880	860	760	1,985
US 2, at Columbia River Bridge	Both	2,380	3,875	3,685	3,950	4,120	4,375	3,870	4,630
Cascade IC Ramps, at Empire Ave	Both	0	0	0	0	0	1,985	0	2,100
Sunset Hwy, s/o 23rd St	Both	1,295	2,660	2,590	2,610	2,535	2,700	2,980	2,745
Seller Bridge, at Columbia River	Both	5,260	6,810	6,745	6,725	6,565	6,700	6,860	6,390
ADT Volumes (Post-Processed) Both Directions									
Scenarios (ADT Volumes)									
Location	Dir	Existing Counts	2040 Baseline	2040 Baseline (63pc)	2040 Wenatchee Ave	2040 Confluence Pkwy	2040 Cascade IC	2040 Sunset Hwy	2040 Full Build
Wenatchee Ave, n/o McKittrick St	Both	34,000	41,300	40,600	48,000	33,000	41,800	40,900	39,200
Wenatchee Ave, at Wenatchee River Bridge	Both	43,600	53,600	52,600	56,900	40,400	55,200	53,300	45,800
Confluence Pkwy, at Wenatchee River Bridge	Both	0	0	0	0	24,400	0	0	23,700
Euclid Ave, s/o US 2 interchange	Both	6,900	8,700	8,400	8,800	21,200	9,700	8,600	22,400
US 2, at Columbia River Bridge	Both	26,900	43,800	41,600	44,600	46,500	49,400	43,700	52,300
Cascade IC Ramps, at Empire Ave	Both	0	0	0	0	0	22,400	0	23,700
Sunset Hwy, s/o 23rd St	Both	16,000	32,800	32,000	32,200	31,300	33,300	36,800	33,900
Seller Bridge, at Columbia River	Both	59,300	76,800	76,000	75,800	74,000	75,500	77,300	72,000

The Chelan Douglas Transportation Council has just begun the process of updating the regional transportation model for 2045 based on updated population as well as origin destination data as shown in the following two figures. While the model results have not been finalized, increasing urbanization trends are yielding even greater congestion projections as compared to the 2040 traffic modeling results shown above.



# Completing the Apple Capital Loop

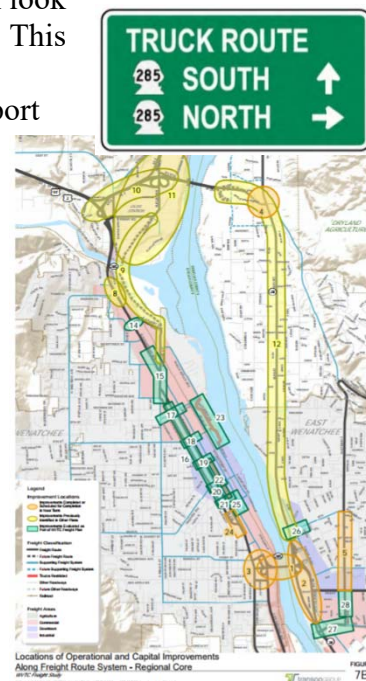
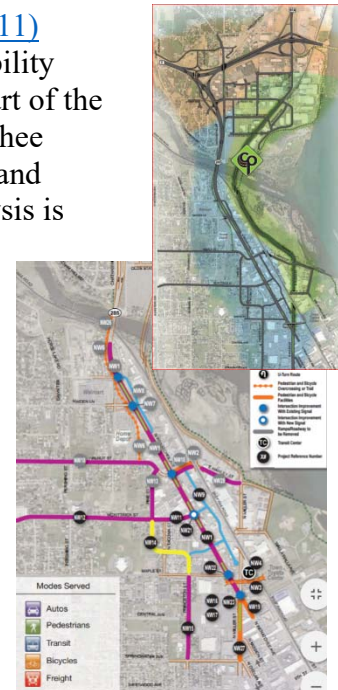


# Completing the Apple Capital Loop



In addition to these required planning elements of the MPO, numerous studies have been completed locally to further refine the project scope and needs. Key studies include the following.

- The [North Wenatchee Avenue Transportation Master Plan \(2011\)](#) studied alternatives to addressing growing congestion and mobility problems on this 40,000 vehicle a day principal arterial. As part of the early planning process, alternatives of widening North Wenatchee Avenue to 6 lanes, developing a third Columbia River bridge, and building a bypass route were evaluated. This alternatives analysis is summarized in the pre-NEPA risk Assessment, located in the appendix. The plan recommendation is to build a bypass route entitled Confluence Parkway in order to accommodate project traffic volumes of 63,000 vehicles per day utilizing both the bypass and North Wenatchee Avenue. In addition, the plan identified a suite of projects. The projects include medians, u-turn intersections and a number of network street improvement necessary to distribute volumes evenly along the corridor to minimize signal delay at each intersection. The purpose of the plan was to look at the balance of needs for this corridor which include from improving through put to downtown, providing business access, improving safety, accommodating freight, and improving non-motorized travel. The total estimate for these projects was estimated at \$73-\$92 million over time. The bypass, Confluence Parkway also was estimated in this plan at \$89 million.
- The [Metro Freight and Truck Route Plan](#) took an in depth look at freight mobility with in the Wenatchee urbanized area. This study and plan were critical to evaluating which corridors needed to be able to accommodate freight via truck transport and plays a critical role in the development of the network of loop projects. In 2016 CDTC analyzed highly detailed origin-destination and routing data to determine regional truck freight travel patterns. GPS-based data was purchased from INRIX Corporation with a large 100,000 truck sample size covering a three-month period. Combining freight trip routing data with actual traffic counts on the Loop that included truck/vehicle splits allowed CDTC to develop a more disaggregated picture of estimated truck volumes on secondary freight routes throughout the two-county region where count data is unavailable. Among other study findings, it became clear that the vast majority of local freight movements as well as import/export truck deliveries in and out of the region all traverse part of the Apple Capital Loop. It is also noted that in this region freight traffic is particularly intense between July and November associated with fruit



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harvest. The Apple Capital Loop is the key backbone for distribution of fresh fruit product to the Ports of Seattle as identified in the Washington State Freight Mobility Plan. The loop is also critical from a farm-to-market standpoint in which fruit from the farms is short-hauled to processing and storage warehouses and then long-hauled to domestic and international destinations.

- The [2014 Washington State Freight Plan](#), the [2017 technical update](#) to the freight plan and the [Washington State Rail Plan](#) all address freight in our region. The State freight plan identifies North Wenatchee Avenue as a Critical Urban Freight Corridor and is part of the NHFN. The remainder of the loop is part of the NHS. The Washington State Freight plan includes many objectives consistent with INFRA.

Exhibit 2-1: National Highway Freight Network in Washington

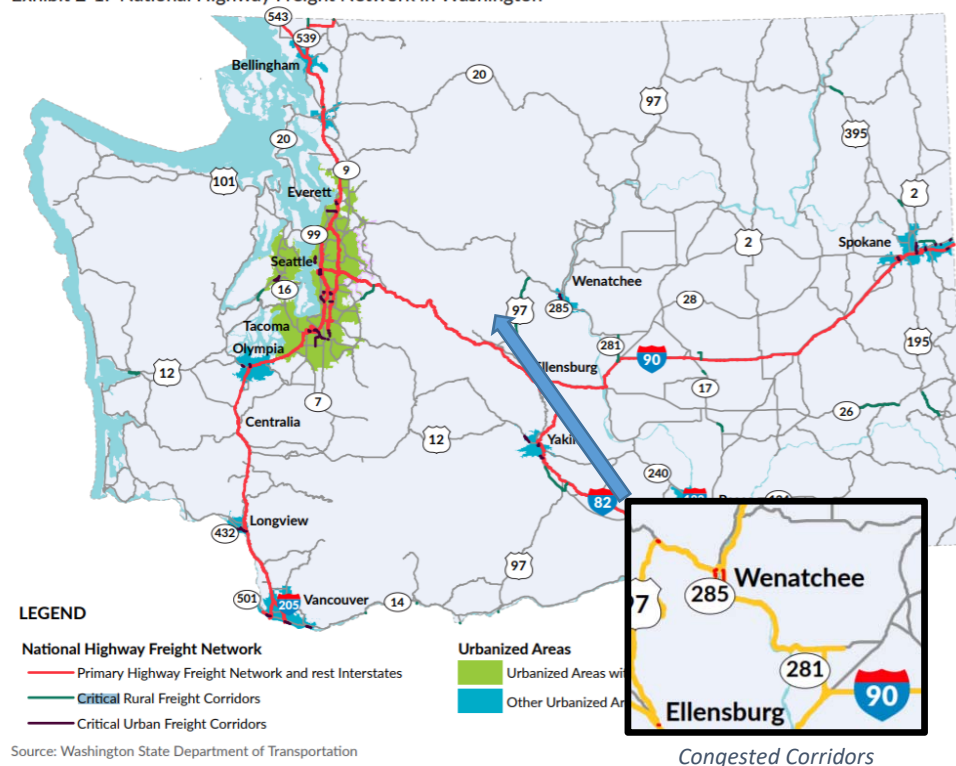
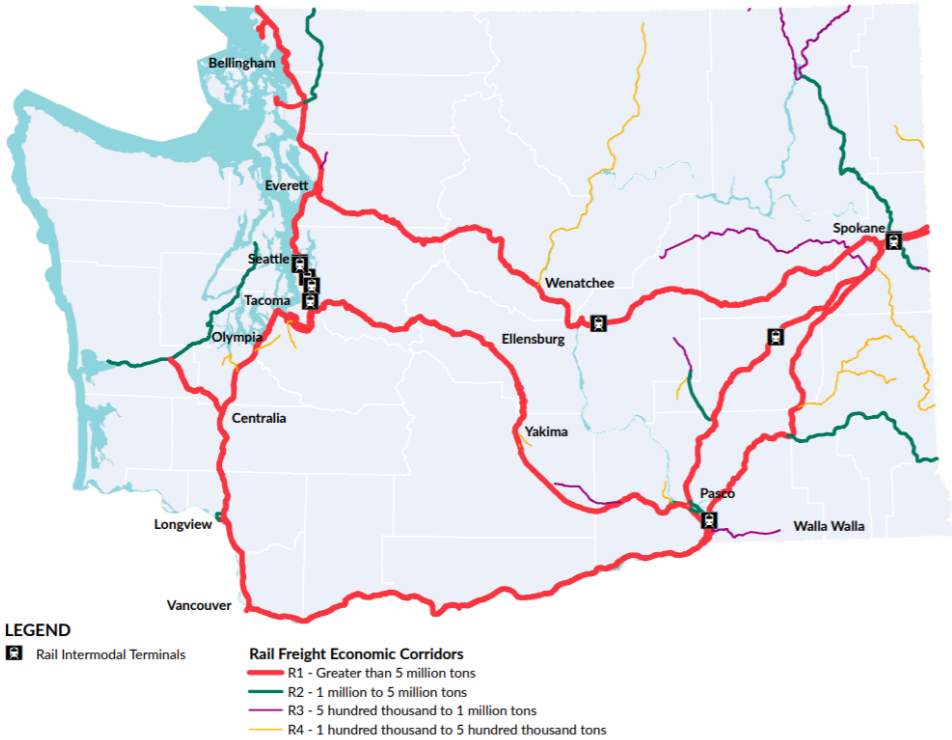




Exhibit 2-3: Rail Freight Economic Corridors





## Section 3: Public Engagement

Public outreach has been extensive for the network of projects and more importantly, these projects represent public sentiment of fixing the greatest bottleneck, North Wenatchee Avenue, improving safety and access to properties, and investing in our backbone system. The recent success of the \$57 million invested in the George Sellar Bridge is an example where the public was supportive of investing in the loop. Grass roots public support for this effort has been demonstrated in the regional action plan entitled “Our Valley Our Future” and by overwhelming support for this application as demonstrated in the attached letters from private industry. Over 3,400 people have provided input into the Our Valley Our Future plan with the goal of identifying actions that will make our community better as we grow. This plan is rooted in engagement including over 20% of the respondents self-identifying as Latino. The plan identifies the need for improved transportation systems to address congestion and accommodate growth. Below are several individual quotes regarding transportation. [www.ourvalleyourfuture.org](http://www.ourvalleyourfuture.org)



### How We Plan and Grow focus area

No. 4 in votes: Mixed-Use Planning (Encourage mixed-use planning region wide, emphasizing higher density, pedestrian- and transit-friendly development in designated urban centers that is coordinated with regional transportation planning.)

No. 10 in votes: Corridor Beautification (Beautify urban corridors, including city/town entry points.)

No. 11 in votes: Plan with Transportation in Mind (Integrate transportation needs in land use planning.)

### How We Prosper focus area

No. 1 in votes: Outdoor Recreation Destination (Capitalize on the region’s outdoor recreation resources as a way to attract businesses, professionals and tourists)

No. 5 in votes (tie): Riverfront Redevelopment (Promote riverfront development on both sides of the Columbia River, including housing, shops, entertainment, and a large marina.)

No. 5 in votes (tie): Bike Lanes and Bike Trails (Develop more bike lanes and bike trails throughout Our Valley.)

No. 16 in votes: Better Coordination (Ensure better integration and coordination between transportation, land use and utility projects.)

In addition to presentations to governmental organizations and numerous non-governmental organizations, the city, in partnership with the Washington State Department of Transportation

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conducted an extensive outreach effort to facilitate public feedback for North Wenatchee Avenue. In this outreach effort 45,655 bilingual post cards were sent out inviting all residents in the valley to attend an in person open house. Notification for the open house also included outreach via newspaper, radio, websites, social media, emails, and flyers. A full on-line version of the open house content was placed on a custom website which recorded over 2,500 sessions and included a survey. The in-person public open house was held on Nov. 14, 2018 and was attended by 118 members of the community. This effort is well documented in the [North Wenatchee Avenue Fall Outreach Report](#) located on the project website. The results of this outreach favored creating a bypass, reducing congestion, improving aesthetics and improving safety.

Stuck in traffic?

## HELP IMPROVE N. WENATCHEE AVE!

Share your thoughts on improvements on this roadway

Join our open house  
Nov. 14 | 4-7 p.m.  
Washington State  
Department of Transportation  
2830 Euclid Avenue Bldg. B  
Wenatchee, WA 98801

Take our survey by Dec. 4  
[NWenatcheeAveImprovements.participate.online](#)

In an effort to show the whole picture for North Wenatchee Avenue improvements, information was also shared regarding the SR 285 Bypass, Confluence Parkway. Overwhelming support was received for the Confluence Parkway/SR 285 Bypass alignment, with the recognition that the bypass and the North Wenatchee Avenue business district work together to address traffic and safety along this portion of the Apple Capital Loop.



Outreach for the Cascade interchange (Segment #3) and Sunset Highway (Segment #4) was extensive as part of the WSDOT EIS. Since the EIS was completed, the Port of Douglas County and the Douglas County Commission have worked to refine the project scope using a collaboration model in which all the stakeholders were at the table. This work included economic development analysis and public meetings engaging property owners, the public, businesses, and agencies.



## Section 4: Predesign and Environmental

This section of this analysis provides a before and after improvements description to illustrate pre-design for each of the project segments. In addition, key design points and background are included for each segment to demonstrate due diligence, readiness to proceed as provided in the project schedule, and the scope of work to be provided as detailed in the Apple Capital Loop INFRA application.

### ***Segment 1: North Wenatchee Avenue, McKittrick RR Underpass, & US2/Easy St. Roundabout***

Segment 1: includes three principle areas of work:

- Improvements to Wenatchee Avenue (SR285), an existing NHS principle arterial (Segment 1A), are funded through the 2015 Connecting Washington fuel tax;
- A new RR underpass at McKittrick Street replacing an existing at-grade RR crossing at Hawley Street (Segment 1B). Segment 1B includes a federally funded signal and roundabout with funding proposed for the underpass through INFRA;
- A new roundabout replacing an existing signalized intersection at US2/97 and Easy Street (Segment 1C). Segment 1C is funded through Connection Washington.

#### Segment 1A - North Wenatchee Avenue (SR 285) - Before Improvements

North Wenatchee Avenue before the improvements consists of approximately 1.5 miles of a 5 lane section with no shoulder, narrow sidewalks and signals ranging from approximately 1,500 to 2,000 feet apart. This corridor also includes two parallel bridges over the Wenatchee River. This segment of the loop experiences traffic volumes ranging from 34,000 vehicles per day at the south end of the corridor to 40,000 vehicles today at the Wenatchee River Bridges. The street section is unsafe for pedestrians and other non-motorized forms of transportation. This corridor also represents the greatest congestion and transit delay in the region making transit service difficult given it is the only way in and out of the city from the north via US2, US 97A, and US 97. The corridor is confined by an intense business district with the highest valued commercial property in the entire city. Additionally, this corridor experiences the highest rate of traffic accidents in the city, due to the two-way left turn lanes and poor business access.



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The Existing North Wenatchee Avenue Wenatchee River Bridges limit the capacity of Wenatchee Avenue to approximately 40,000 vehicles per day with only 4 lanes. The improvements planned on this corridor do not provide for expansion or replacement of these bridges, and the bridge limitation is one of several justifications for Segment #2, Confluence Parkway (SR 285 Bypass).



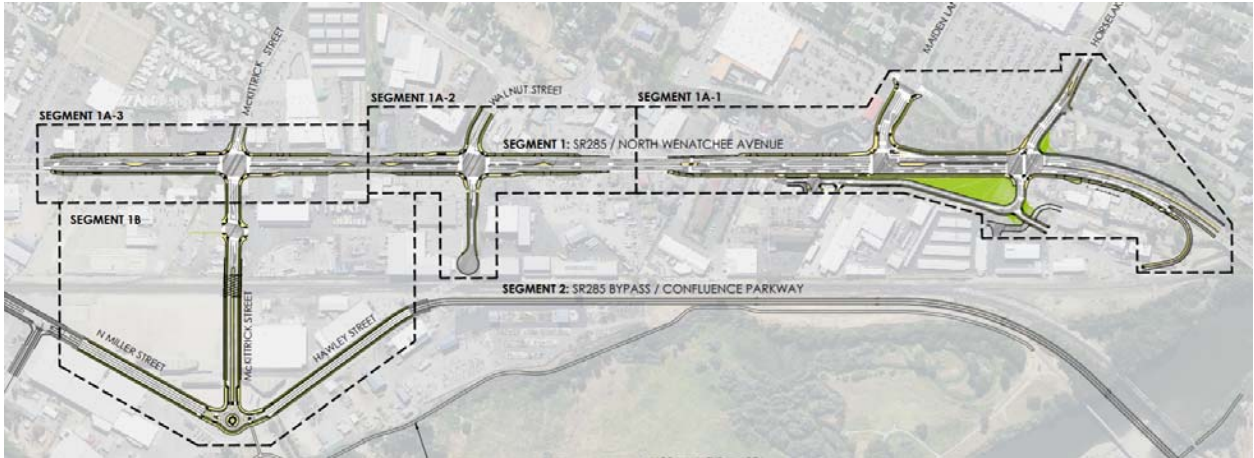
*Existing Street Cross Section*

## Segment 1A - North Wenatchee Avenue (SR 285) - After Improvements

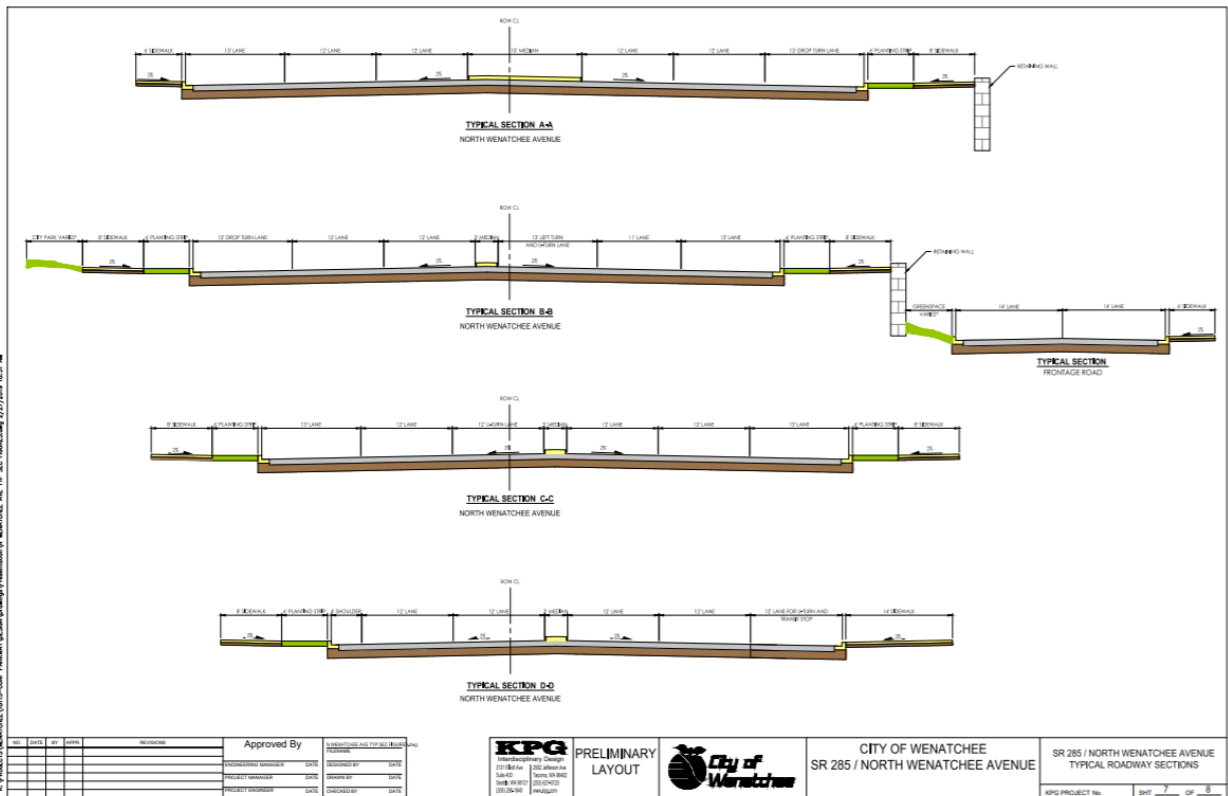
North Wenatchee Avenue after the improvements consists of approximately 0.4 miles of a 7 - lane section and approximately 0.35 miles of a 5-lane section with median access control at intersections and U-turn capacity. The city, in cooperation with the Washington State Department of Transportation, has recently undergone an extensive preliminary design and public outreach effort. The goal of this effort has been to build upon the North Wenatchee Avenue Form and Function Study to develop [North Wenatchee Avenue \(SR 285\) preliminary design drawings](#) for the corridor. The following figures and illustrations are based upon the preliminary engineering design that has been completed for North Wenatchee Avenue:



# Completing the Apple Capital Loop



North Wenatchee Avenue (SR 285) – Preliminary Design Drawings

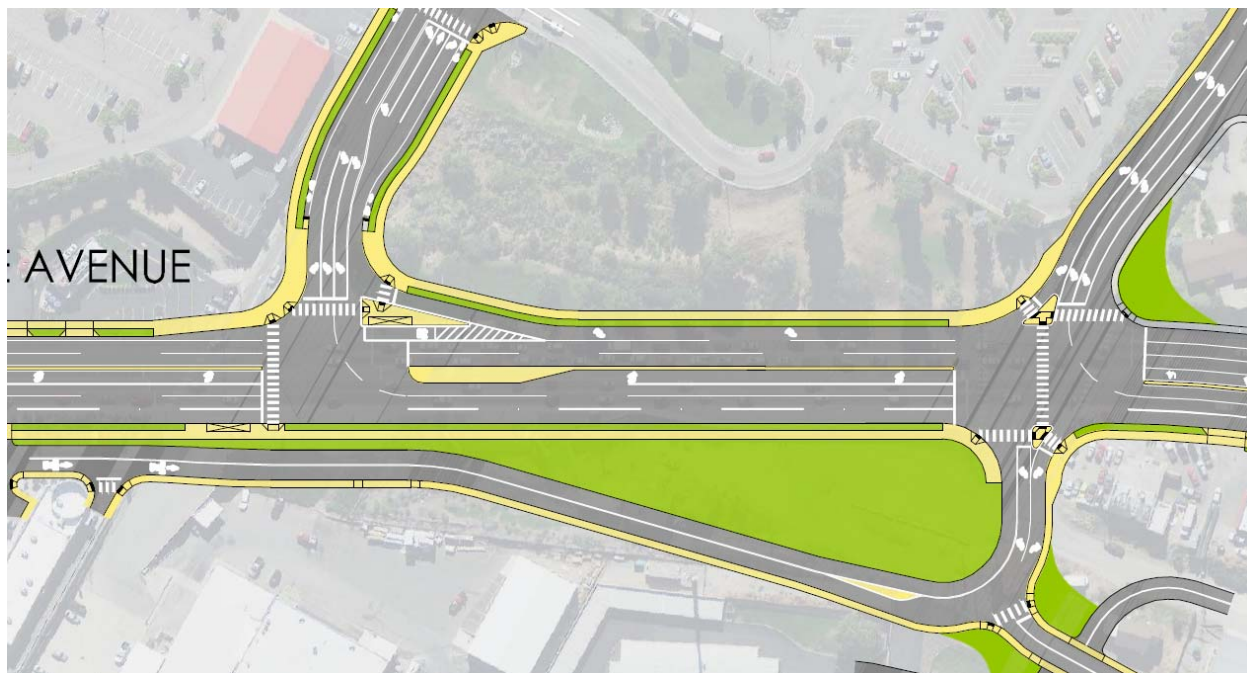
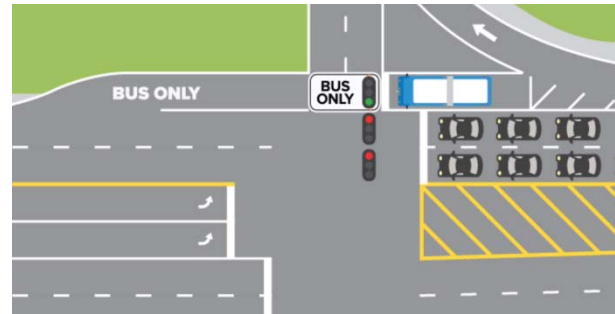


North Wenatchee Avenue (SR 285) – Typical Sections

# Completing the Apple Capital Loop



North Wenatchee Avenue (SR285) is a key transit corridor for Link Transit. Both local routes and commuter busses travel North Wenatchee Avenue. Local routes have bus stops along the corridor while commuter routes connect riders from outlying communities to the center of the city. The commuter routes are very successful in supporting employee's access to and from workplace. Operational delays along this corridor remove the incentive for the commuter routes thereby impacting ridership. In addition to impacting the quality of service, these delays have significant impacts to operational costs in terms of maintaining bus frequency. The Benefit Cost Analysis includes quantified costs associated with delay to riders and operational costs to the Link Transit. As a result, a key component of the North Wenatchee Avenue Connecting Washington project is to include Intelligent Traffic Systems and, through an active signal priority system in which the signals and busses work together, to move transit through the corridor. This project will employ the latest technology available at the time of construction in partnership with Link Transit. A [transit design memo](#) has been prepared to help determine the appropriate scope and investment level associated with transit improvements along North Wenatchee Avenue. These improvements will move transit stop locations outside of the traveled lanes, add transit queue jump signal priority at Maiden Lane, and utilize widening for business access and U-turns at the intersections of Maiden Lane and Horse Lake Road.



North Wen. Ave. / Maiden Lane / Horse Lake Rd. Queue Jump Lanes

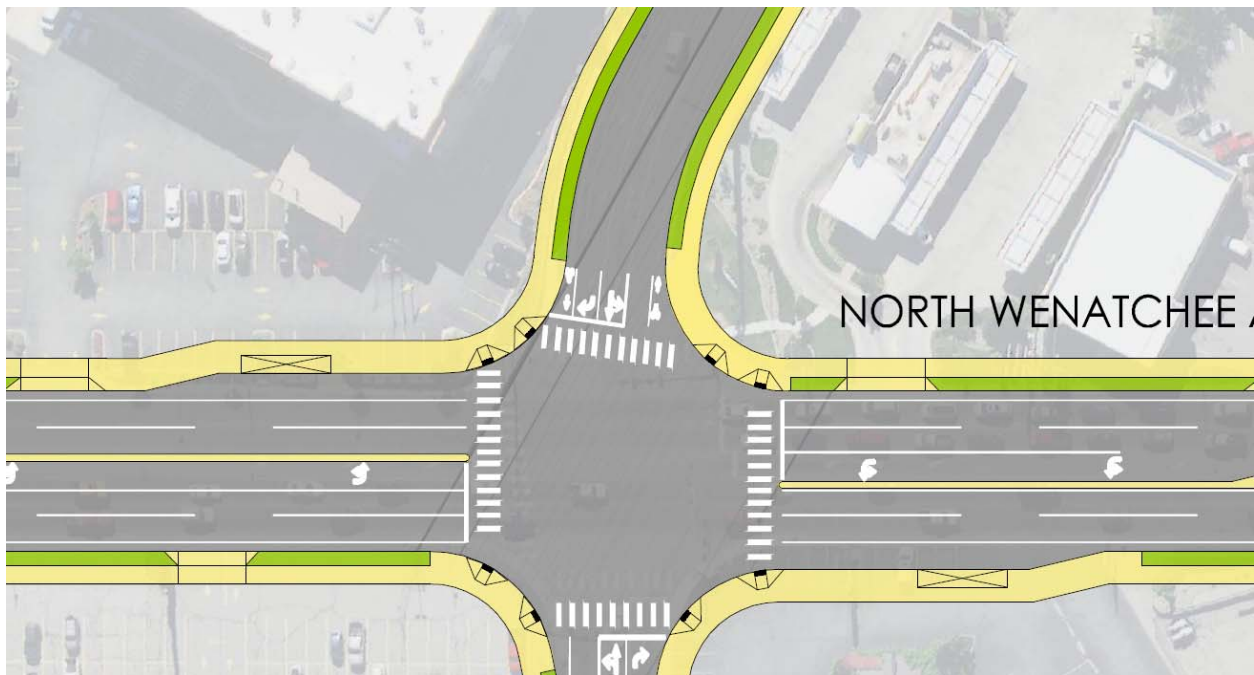
# Completing the Apple Capital Loop



*North Wen. Ave. / Maiden Lane / Horse Lake Rd. Visual*

In addition to transit queue jump priority shown above at the most congested location on the corridor, other areas of the corridor will utilize widening for U-turns to include far side transit stop locations and transit signal priority to help buses move through the corridor.

The project will include 4 new far-side bus stop locations in combination with U-turn capacity at the new McKittrick Street and existing Hawley Street signals.



*Example of Downstream Bus Stop and U-turns*

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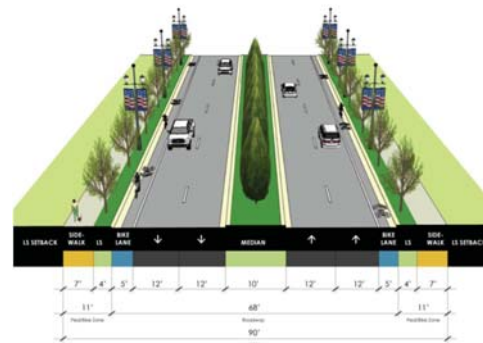
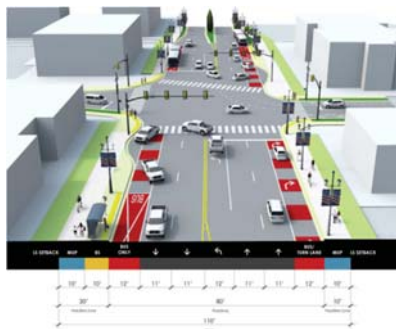


Right of way for this project will include strip acquisition along approximately .75 centerline miles of the corridor. The existing right of way width along Wenatchee Avenue is 70 feet. Acquisition will expand right of way widths to between 100 and 130 feet depending on the location. The right of way phase is programmed for the 2021 Biennium according to the State Connecting Washington funding program.

The basis for the design work described above builds upon the North Wenatchee Avenue Transportation Master Plan and a Form and Function Study. Wenatchee Avenue – [Form and Function Study](#) entitled “North Wenatchee Avenue Concept”.



The study looked at the roadway sections and the adjoining land use with the intent of establishing the form relative to Wenatchee Avenue’s function. The purpose was to look deeper into how North Wenatchee Avenue inter-relates with the business district. The study identified the need to utilize queue jump lanes to support bus rapid transit. The study also made recommendations on how medians, U-turns, pedestrian crossings, and access control can improve safety as well as the aesthetics. Below are several images from the study that is serving as the basis for pre-design that is currently under way. Additional information for this plan is on the project website.



## TYPICAL ROADWAY SEGMENTS

### Signalized Intersection with Bus Queue Jump - 110' ROW (with U-turn Bulbs)

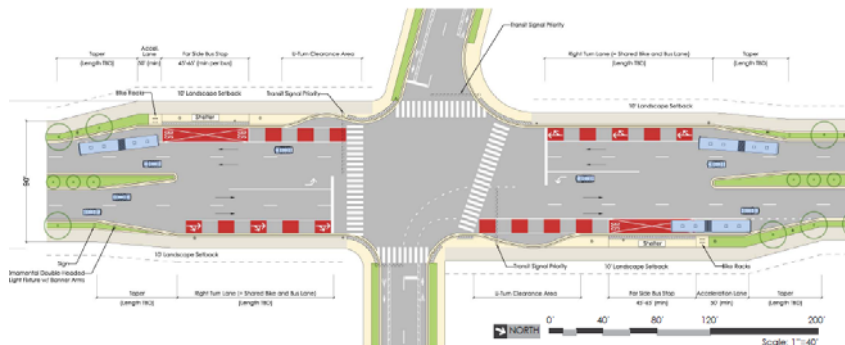
Expanded ROW at major intersections allows for bus queue jump bypass lane and bus stop shelters for riders.

Major intersections are carefully planned to accommodate mobility, safety, and efficiency of all modes, departing the above an additional ten feet on either side of the proposed 110' typical ROW will ensure adequate space for the following (from outside-in):

- Two bike lanes (each side of street)
- Four side bus stop with shelter and seating
- Bus queue jump bypass lane (with signal priority)
- Four travel lanes (with turn bus)
- Left and right turn pockets

**Bus Queue Jump Bypass Lane:**  
Red paint marks bus lanes on both sides of the traffic light. On the inside of the intersection, this lane is shared with general traffic as a right turn lane. With priority signal, buses can advance through the intersection to the bus queue jump zone and bus stop on the far side where the bus will exit of general traffic to avoid congestion.

Additionally, all major intersections will have complete crosswalks for pedestrians and bicyclists. U-turns by passenger vehicles are permitted at these intersections and meet AASHTO standards. Larger trucks will be directed to roundabouts to the north and south of the project area to make desired turnarounds.



FINAL DESIGN DOCUMENT

APRIL 2017



## Segment 1B - McKittrick Street - Before Improvements

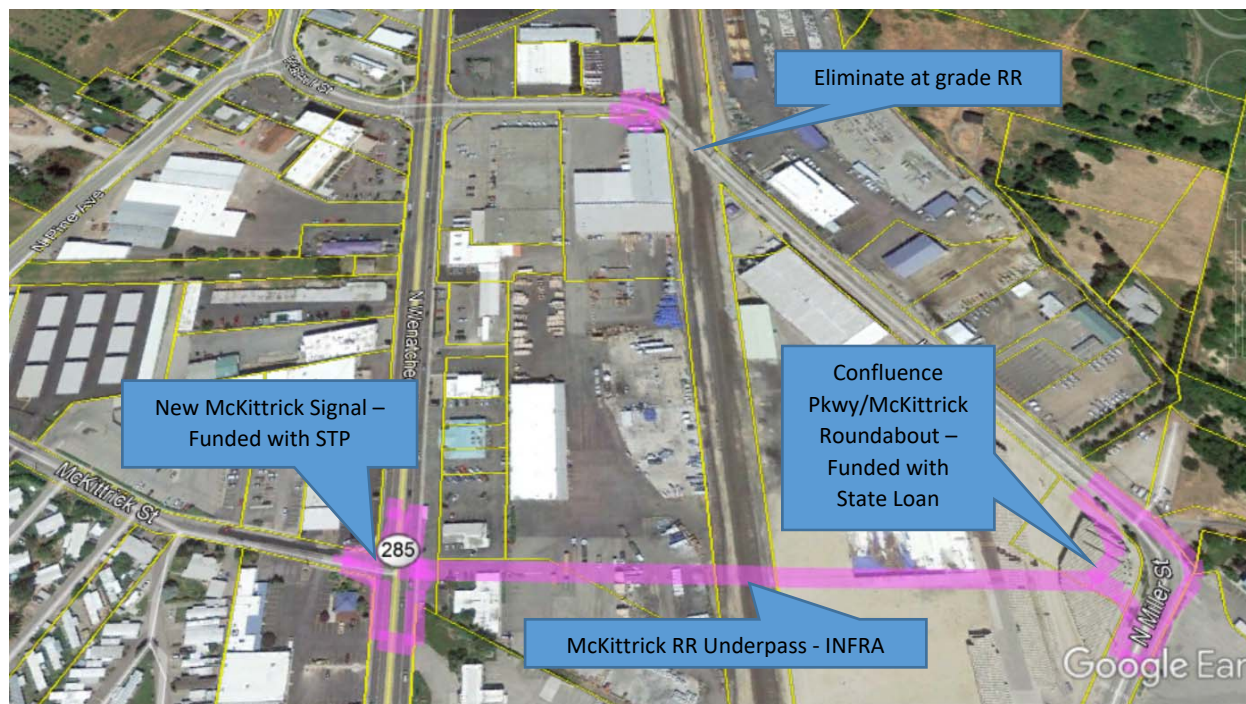
The following image illustrates the existing McKittrick intersection and at-grade RR crossing at Hawley Street. With a new underpass connecting McKittrick Street and Confluence Parkway, the Hawley Street at-grade RR crossing will be removed.



*Existing – Open Area Resulting from Wildfire Disaster*



## Segment 1B - McKittrick Street RR Underpass - After Improvements



McKittrick Street and RR Underpass

## Segment 1B - McKittrick Street RR Underpass - After Improvements

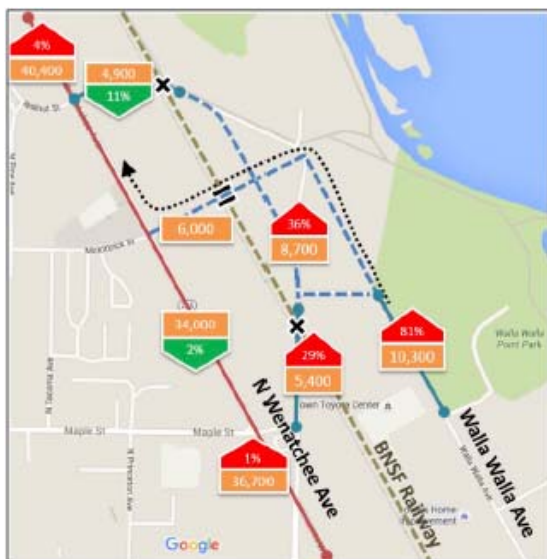
The “[North Wenatchee Master Plan](#)” was developed by the city after the devastating Sleepy Hollow wildfires. The wildfires destroyed 30 acres of industrial warehouses in the heart of the city when wildfires spread into the city from the adjacent mountains. Given these business decided to rebuild in nearby industrial parks, the city has been looking at needing to develop a strategic plan to replace the job base in the city. This effort by the city demonstrates the resilient spirit of responding to a natural disaster. The North Wenatchee Master Plan provides a key infrastructure elements that supports redevelopment goals. The market study also estimates private redevelopment investments of approximately \$240 million with an infrastructure cost of approx. \$37 million. This provides a private to public investment ratio of 6:1. The infrastructure recommendations for the plan take into account the 2011 North



# Completing the Apple Capital Loop



Wenatchee Avenue Transportation Master Plan goals and reconfigures some of the roadways to better suit redevelopment of the property. One of the keys to this development and transportation network is to create a signature street (McKittrick) which includes a RR underpass. This underpass creates a front door and uninterrupted access to the waterfront. Previous plans, including the North Wenatchee Master Plan, provided for a rail underpass at nearby Hawley Street. However, that location is on a skew crossing and a corner making the underpass very difficult to construct. The McKittrick Street underpass is perpendicular to the tracks and much easier to construct. From a safety standpoint, this underpass is critical in connecting the waterfront arterial corridor to North Wenatchee Avenue. Presently, traffic will back up across the tracks. The city has installed emergency detection that is tied to the North Wenatchee Avenue signal at Hawley Street to allow the RR tracks to clear from the queue of cars. In addition, the BNSF mainline at this location sees anywhere from 20 to 28 trains per day creating disruption of access to the waterfront. As BNSF improves operations these trains are extending in length to 8,000 to 10,000 feet causing greater delay at grade crossings. The following diagram illustrates traffic volumes of 8,000 – 10,000 vehicles per day around the development area which impacts North Wenatchee Avenue.



Traffic Modeling



Master Plan Road Configuration

# Completing the Apple Capital Loop



McKittrick Street Underpass



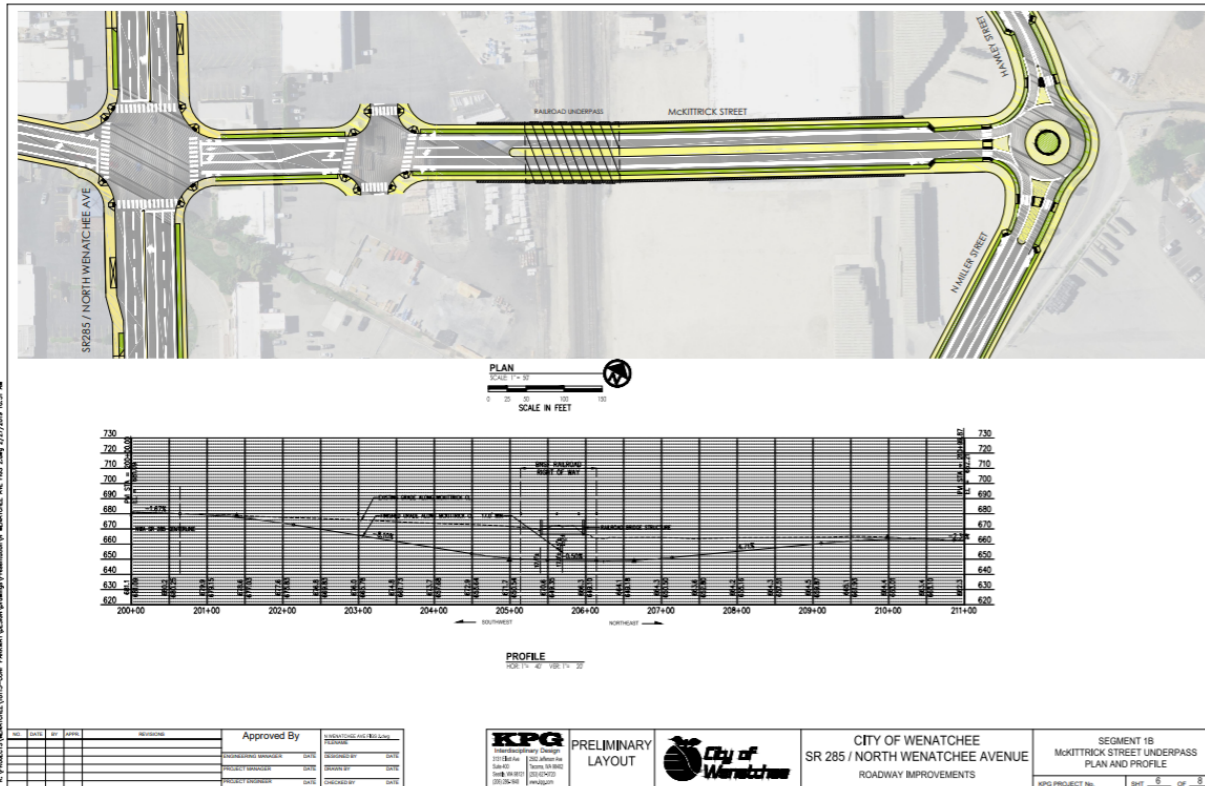
Confluence Parkway

In order to refine improvements identified in the North Wenatchee Master Plan, the City engaged KPG Engineering to perform additional preliminary engineering. To date preliminary [McKittrick plan and profiles](#) have been developed for the underpass. The KPG team, which includes Hanson Engineering and GeoEngineers, is developing pre-design drawings to obtain a BNSF crossing permit to install the underpass. Furthermore, a geotechnical investigation has been completed to support design of the underpass. This work supports the guidance provided by BNSF for the development of the McKittrick Street underpass. This new McKittrick Street section includes approximately 1200 LF of a 2 and 3 lane section, buffered bike lanes, sidewalk, and an approximate 70 ft span RR underpass with a center pier. At the intersection of Confluence Parkway (Segment 2A) and McKittrick, a traffic signal or roundabout will be provided as a safe and efficient connection. The predesign below shows a roundabout as the preferred option.





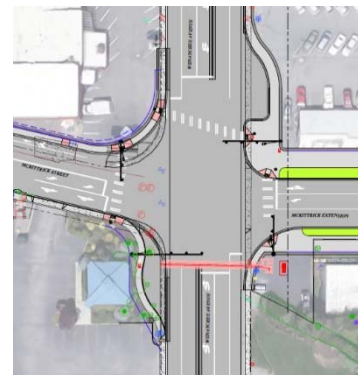
# Completing the Apple Capital Loop



McKittrick Street RR Grade Separation Plan and Profile

To further the delivery of the project, the city has engaged in a public private partnership and has secured all of the right of way for McKittrick Street given it is a new alignment. The City obtained a State of Washington Community Economic Revitalization Board grant and loan to secure 80 feet of right of way in preparation for construction of a new underpass to further redevelopment effort in response to the destructive Sleepy Hollow Wildfires in which over 30 acres of industrial businesses were destroyed. [Right of way drawings](#) are provided on the project website. It is important to note that the City worked with WSDOT Local Programs to ensure the early right of way acquisition procedures were followed correctly and consistent with FHWA and WSDOT rules and procedures.

Finally, Segment 1B incorporates an existing federally funded intersection project in which a new signal will be installed at the intersection of McKittrick Street and North Wenatchee Avenue. The existing intersection is a non-signalized three leg intersection which will be replaced with a 4-leg signalized intersection with medians and U-turns. The following predesign drawing illustrates 30% design level drawings. This project sub-component is currently in the right of way phase. Construction is expected in 2020.



# Completing the Apple Capital Loop



## Segment 1C - US 2/Easy Street Intersection - Before Improvements

The US2/97 Easy Street intersection is a signalized intersection falling in the middle of the interchanges system that connects HWY 97A, US 2, HWY 97, and SR 285 as shown below. Easy street is a high-volume intersection providing access to a residential area to the north and a commercial area to the south. This project includes replacing the existing signalized intersection with a roundabout. The project is funded with Connection Washington funds.



Existing US 2/97 and Easy Street Intersection

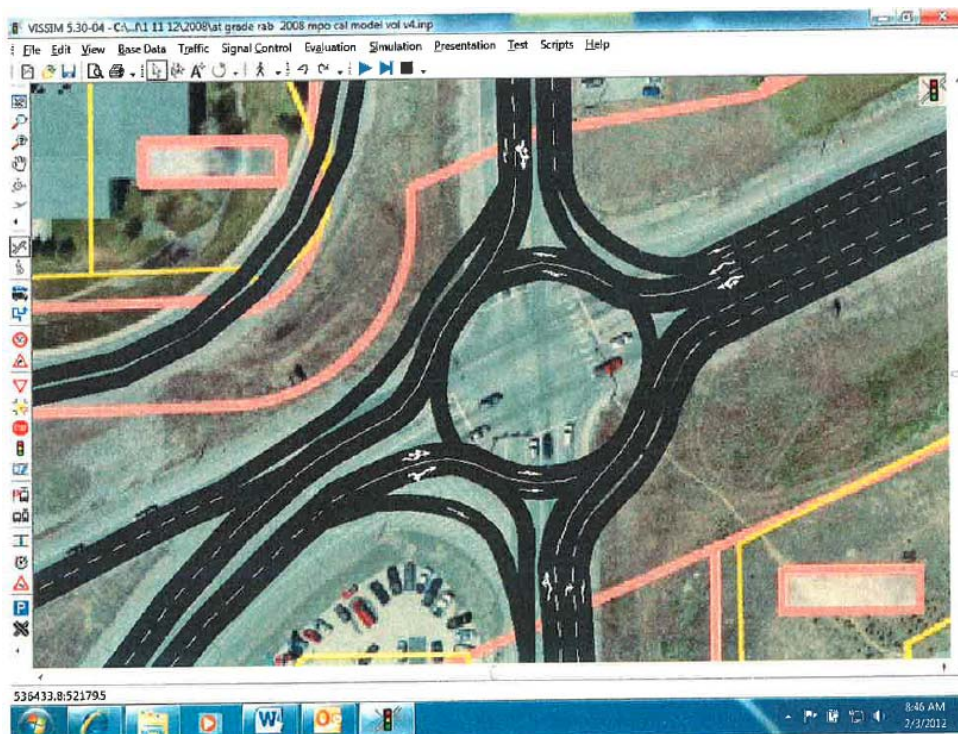


Existing Signal Configuration



## Segment 1C - US 2/Easy Street Intersection - After Improvements

The WSDOT performed a value engineering study to consider options for improvements to this intersection ranging from various forms of grade separations. An outcome of the VE study was to build a multilane roundabout as a value-based solution to the much more costly grade separated options. The VE study analyzed a multilane roundabout from a modeling standpoint as illustrated below. Final design and construction of this roundabout is part of the Connecting Washington funding project.



*Value Engineering Study Traffic Modeling*

While the Value Engineering study identified the roundabout as an interim solution, construction of the Confluence Parkway SR 285 bypass will extend the service life of the roundabout from approximately 20 to over 30 years. The roundabout is a practical design solution to improve safety and address current traffic volumes. Traffic currently traveling through this intersection utilizing will be able to avoid this area by using the existing interchange at US2/97A using the new bypass.



## *Environmental Compliance Strategy*

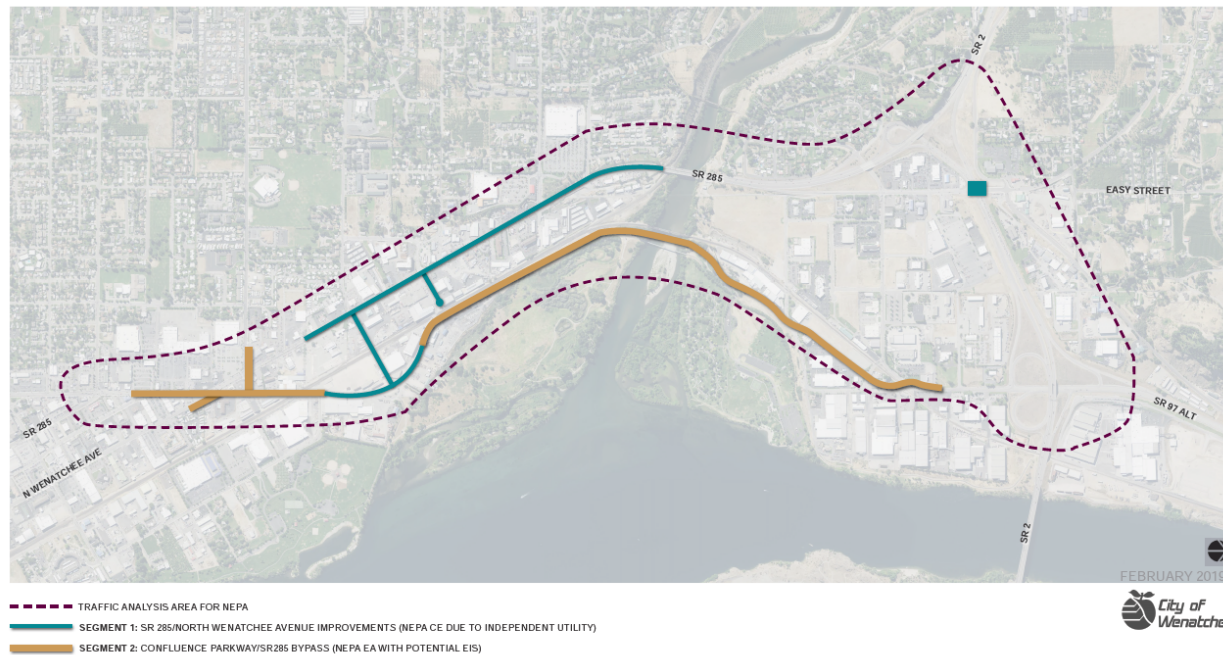
### *Overview*

A North Wenatchee environmental compliance strategy has been developed in cooperation with FHWA and WSDOT for the each of the work elements shown in the below figure. Based on independent utility and the scope of work, the projects have been divided up between those segments that will utilize the NEPA Categorical Exclusion (CE) compliance process versus those segments that will require an NEPA Environmental Assessment or an Environmental Impact Statement. It is noted that the State Environmental Policy Act will be addressed concurrently with NEPA.

### *Environmental Compliance for Segment 1 (Categorical Exclusion)*

All of the work included in Segment 1 involves improvements in a highly urbanized area and based on research conducted for the project, no significant environmental impacts are expected. All of the segment 1 projects (which include 1A, 1B, and 1C as described previously) have independent utility from Segment 2, Confluence Parkway (SR 285 Bypass), and are expected to achieve NEPA compliance through a Categorical Exclusion (CE) process. Segment 1 projects are distinguished from Segment 2 projects in the figure below.

**NEPA CHARACTERIZATION MAP**  
PREPARED BASED ON CONSULTATION WITH WSDOT & FHWA





## *Segment 2: Confluence Parkway (SR285 Bypass) & RR Pedestrian Overpass (Broken down into subcomponents)*

The combined projects that make up Segment 2 have independent utility from the projects making up Segment 1. Segment 2 includes three principle areas of work necessary to complete a bypass to North Wenatchee Avenue (SR285) and provide traffic congestion benefits. From south to north, the individual components of Segment 2 include:

- Segment 2A: The southern section of Confluence Parkway will replace an existing at grade RR crossing at Miller Street with a new RR underpass. It will also reconstruct the existing SR 285/Miller Street intersection to accommodate the new traffic volumes associated with Confluence Parkway (Segment 2B). INFRA funding is requested for this segment.
- Segment 2B: The northern section of Confluence Parkway includes development of a new two-lane roadway serving as a bypass to SR 285/North Wenatchee Avenue and provides an entirely new connection to the existing Highway 97A/US2 interchange to the north. INFRA funding is requested for this segment.
- Segment 2C: Construct a new RR pedestrian overpass for non-motorized access to the existing waterfront trail system. This segment is located in South Wenatchee along the Apple Capital Loop. INFRA funding is requested for this segment.

# Completing the Apple Capital Loop



## Segment 2A – Confluence Parkway - Hawley St. South (SR 285 Bypass) Before Improvements

The southerly portion segment of Confluence Parkway will transverse an existing industrial area that is in transition after the Sleepy Hollow wildfires destroyed many of the existing buildings. The road will generally follow the existing street network. The figures below illustrate existing conditions.



*Confluence Parkway Southern Segment – Existing Urban Environment*



*Confluence Parkway – Southern Terminus – SR 285 (Wen. Ave./Miller Intersection)*

# Completing the Apple Capital Loop



SR 285 – Wenatchee Ave./Miller Intersection



Existing at Grade RR Crossings to be Eliminated – Miller (left) and Hawley (right)



Confluence Parkway Alignment – Existing Urban Environment – Existing Right of Way

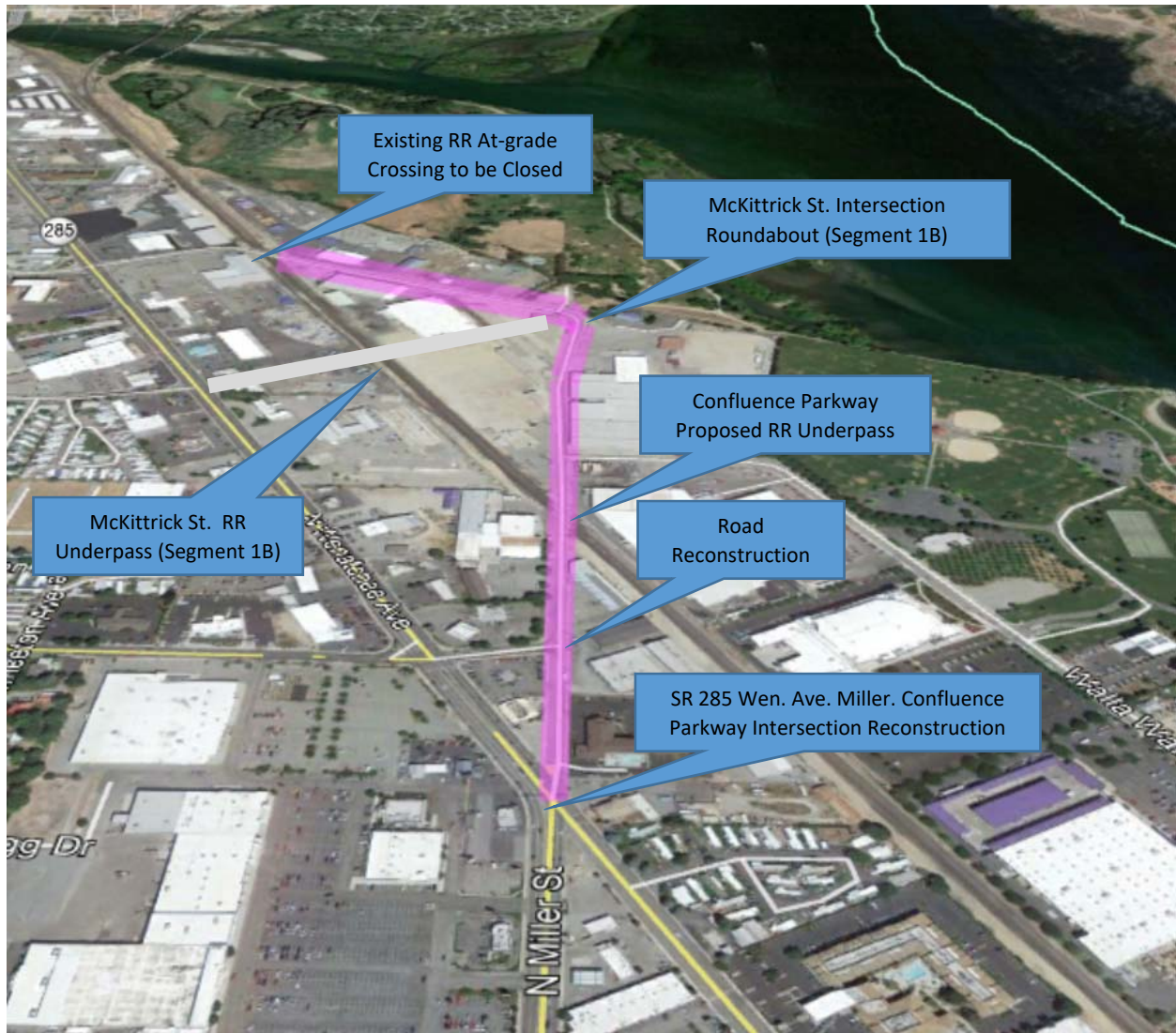


As shown above in the photos, Segment 2A, or the southern portion of Confluence Parkway utilizes existing streets and rights of way. This minimizes the environmental impact as well as facilitates efficient use of land. These rights of ways are also critical trunk line utility corridors for domestic water supply, sewer, and stormwater. The city has a State Public Works Trust Fund loan to work on this section of Confluence Parkway including rehabilitation of a 48” diameter Stormwater trunkline.



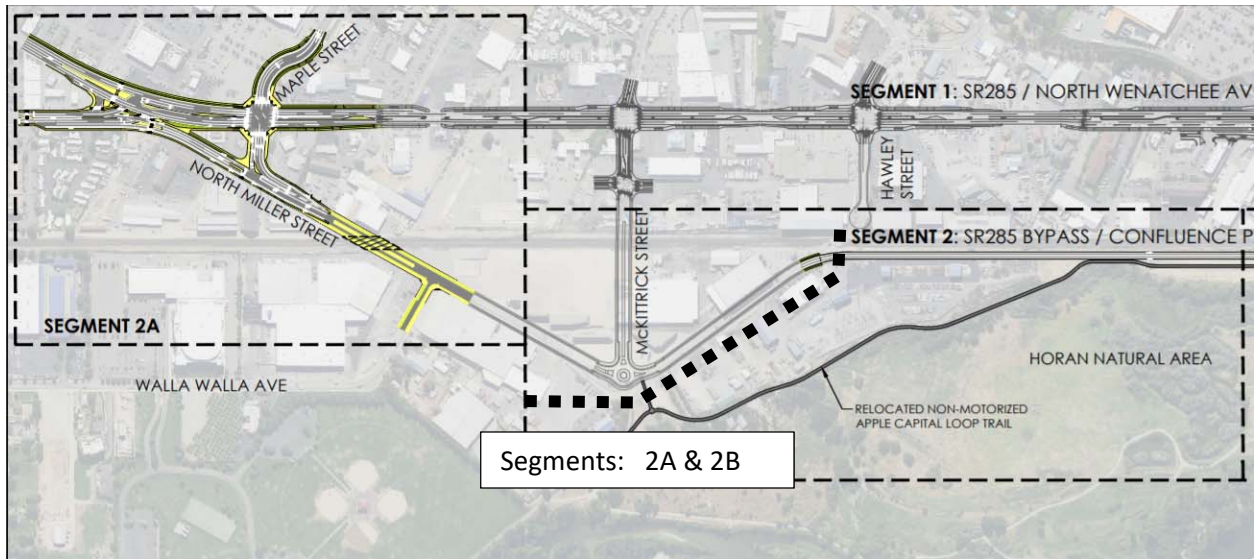


## Segment 2A – Confluence Parkway - Hawley St. South (SR 285 Bypass) After Improvements

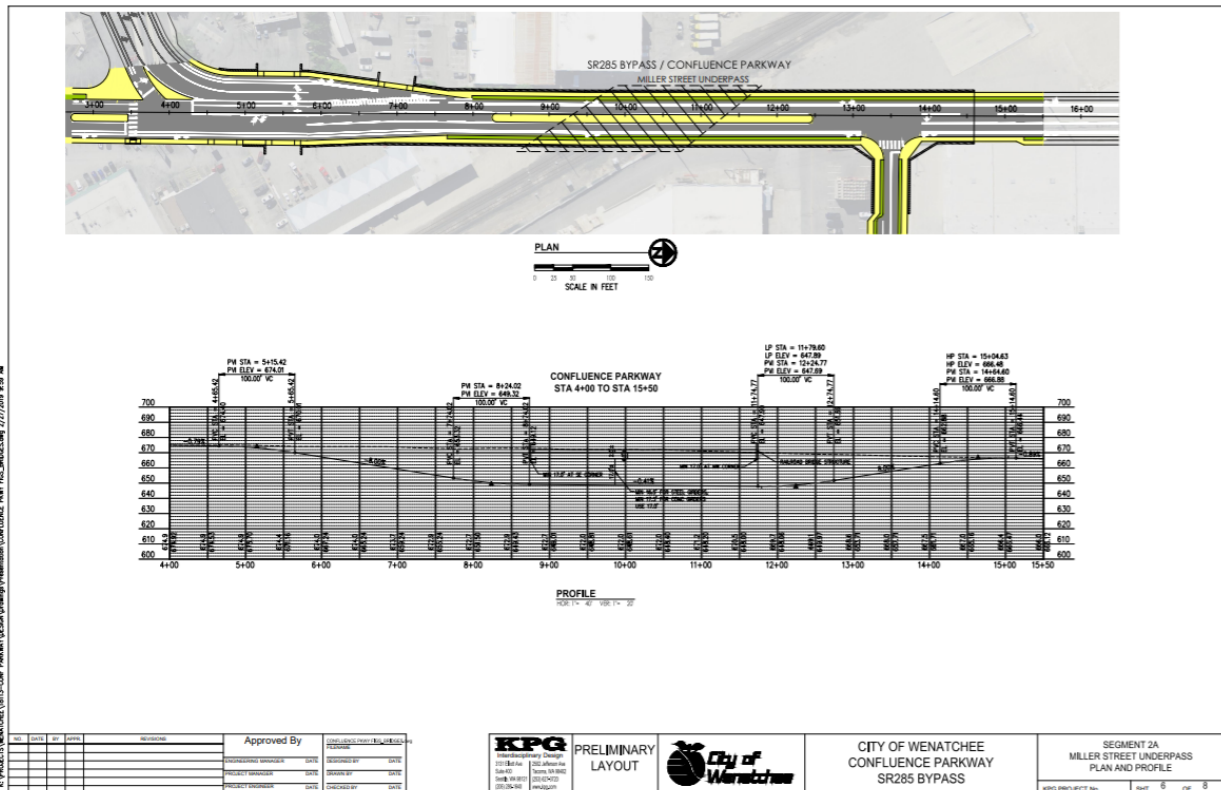


The southern portion of Confluence Parkway (Segment 2A) includes the reconstruction of the Miller-Maple-Wenatchee Avenue intersection, the replacement of an at grade RR crossing with an underpass, and reconstruction of 3,700 linear feet of 3 and 2 lane existing arterial streets which is in pavement failure mode. These improvements are shown in the [Confluence Parkway preliminary design plans](#) posted on the project website.

# Completing the Apple Capital Loop



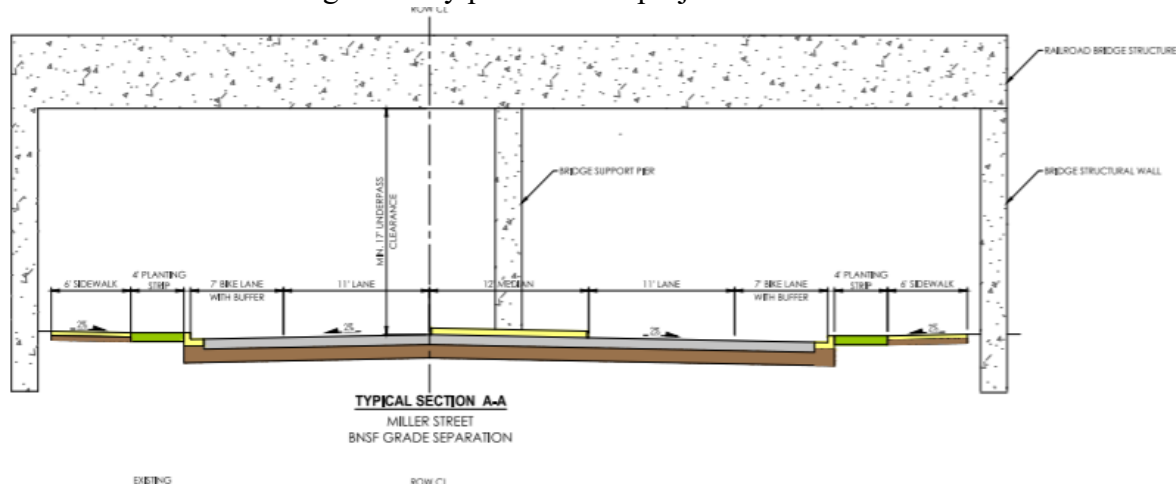
Confluence Parkway (SR 285 Bypass) – Segment 2A Southern Section Preliminary Design Plans



Confluence Parkway (Segment 2A) – Miller Street RR grade separation plan & profile



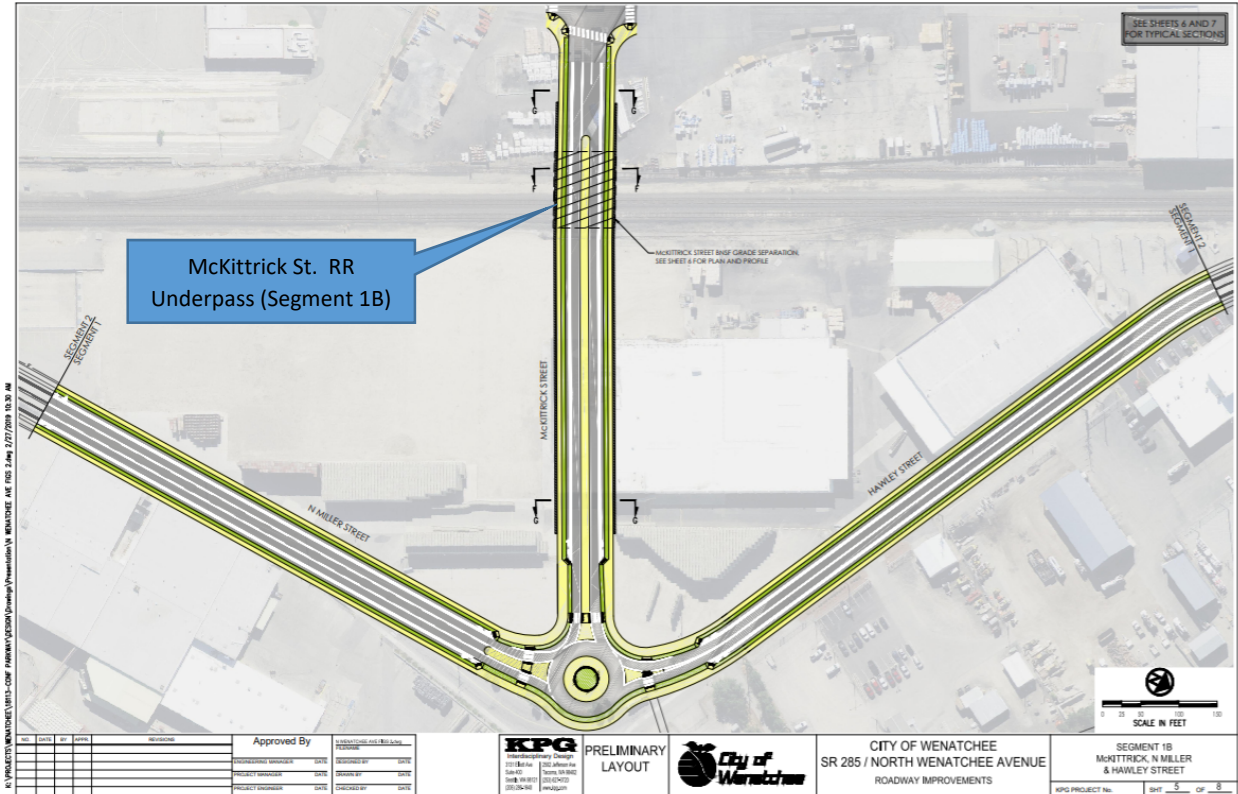
The Miller Street at grade crossing is on approximately a 23-degree skew. This grade separation is expected to have a center pier as shown given the length of the new RR bridge that is required. The city of Wenatchee is in coordination with BNSF for this grade separation as well as the McKittrick street crossing. Presently, the BNSF mainline, and a parallel track are heavily utilized at this location. In coordination with BNSF, the grade separation structure will be designed to accommodate an additional parallel track. The cross section below illustrates the road section and overpass structure. This overpass structure is approximately 140 feet in length given it crosses the street on a skew. Additionally, access impacts to existing businesses will need to be addressed in the right of way phase of this project.



*Confluence Parkway (SR 285 Bypass) Segment 2A – Miller Street RR Grade Separation Cross Section*

The following preliminary design plans shows the section of existing urban street reconstruction (Miller St. and Hawley St.) to transform the corridor into Confluence Parkway. Please, note that the drawings illustrate some overlap in this area relative to McKittrick Street (Segment 1B). The city has secured loan funding to construct a roundabout or signal as well as to reconstruct the street between the Walla Walla intersection and the Hawley Street RR crossing. With the construction of the McKittrick grade separation and Confluence Parkway Segment 2B to the north, the at grade Hawley Street RR crossing will be closed. The construction of this portion of Confluence Parkway has independent utility in conjunction with construction of the McKittrick St. RR underpass (Segment 1B). For cost estimating purposes, this section of street and the roundabout or signal shown are included in the (Segment 1B) given the independent utility from an environmental compliance standpoint and construction schedules.

# Completing the Apple Capital Loop



Confluence Parkway (SR 285 Bypass) Segment 2A

For sequencing of environmental compliance and construction, please refer to the Project delivery schedules and the budget worksheets which illustrate how the segments inter relate from a timing standpoint.

# Completing the Apple Capital Loop



## Segment 2B – Confluence Parkway – Hawley Street North (SR 285 Bypass) Before Improvements

The area where Confluence Parkway will traverse North of Hawley Street is located along the existing BNSF mainline. The area is currently occupied overhead power lines and the Apple Capital Loop Trail. Near the terminus of Confluence Parkway, the corridor rejoins the existing road network via Euclid Avenue, an urban arterial. Euclid turns into HWY 97A at its intersection with US 2/97.



*Confluence Parkway Northern Segment – Hawley St North to US 2/97*



# Completing the Apple Capital Loop



*Confluence Parkway Existing Environment Along BNSF Mainline*



*Confluence Parkway River Crossing - Between BNSF Shortline and Non-Motorized Trail Bridges*



*Confluence Parkway Along Edge of Park and Industrial Area*

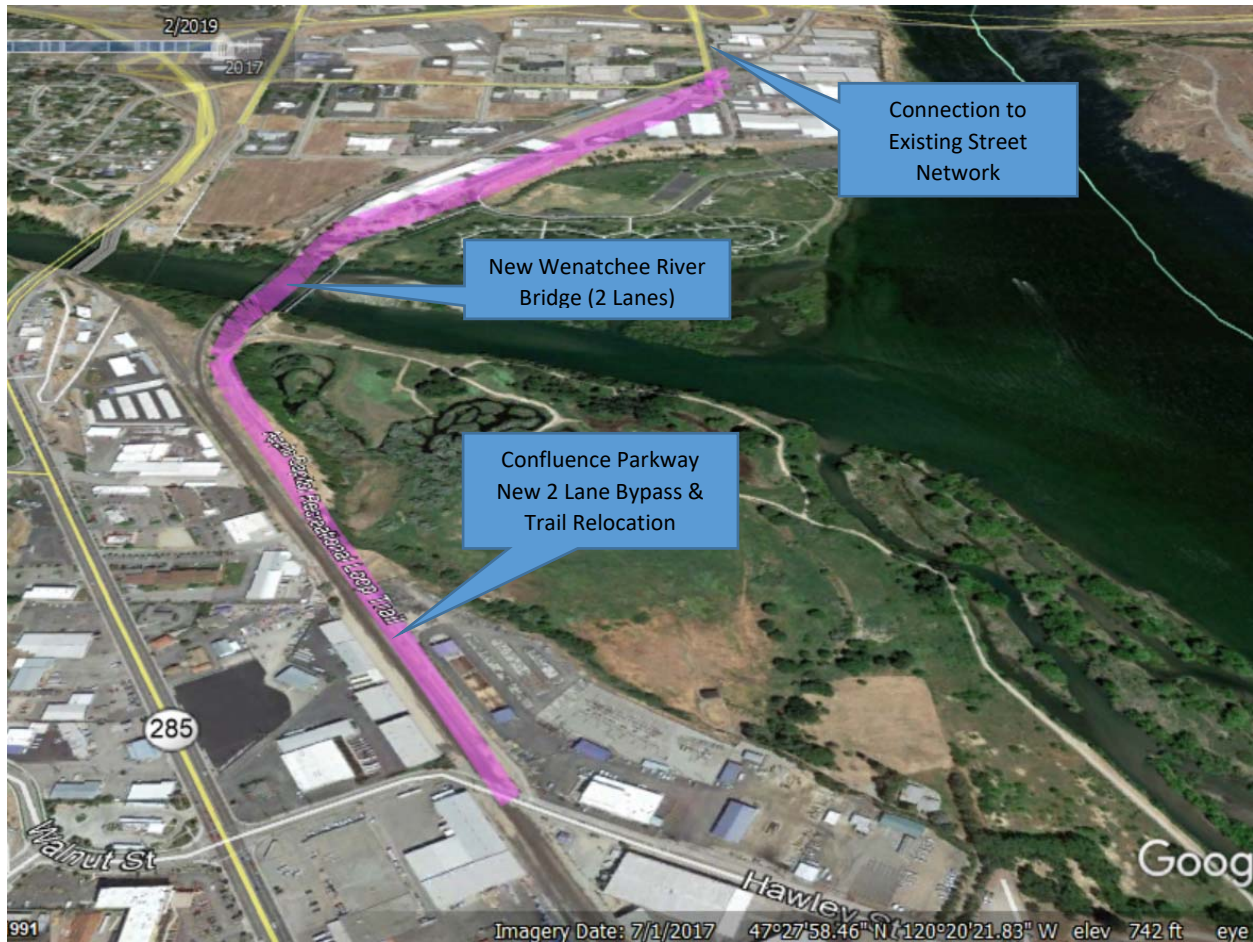


*Confluence Parkway Northern Terminus*

*Note: Confluence Parkway will have One at-grade RR Shortline At-grade Crossing with only 2 trains per week*



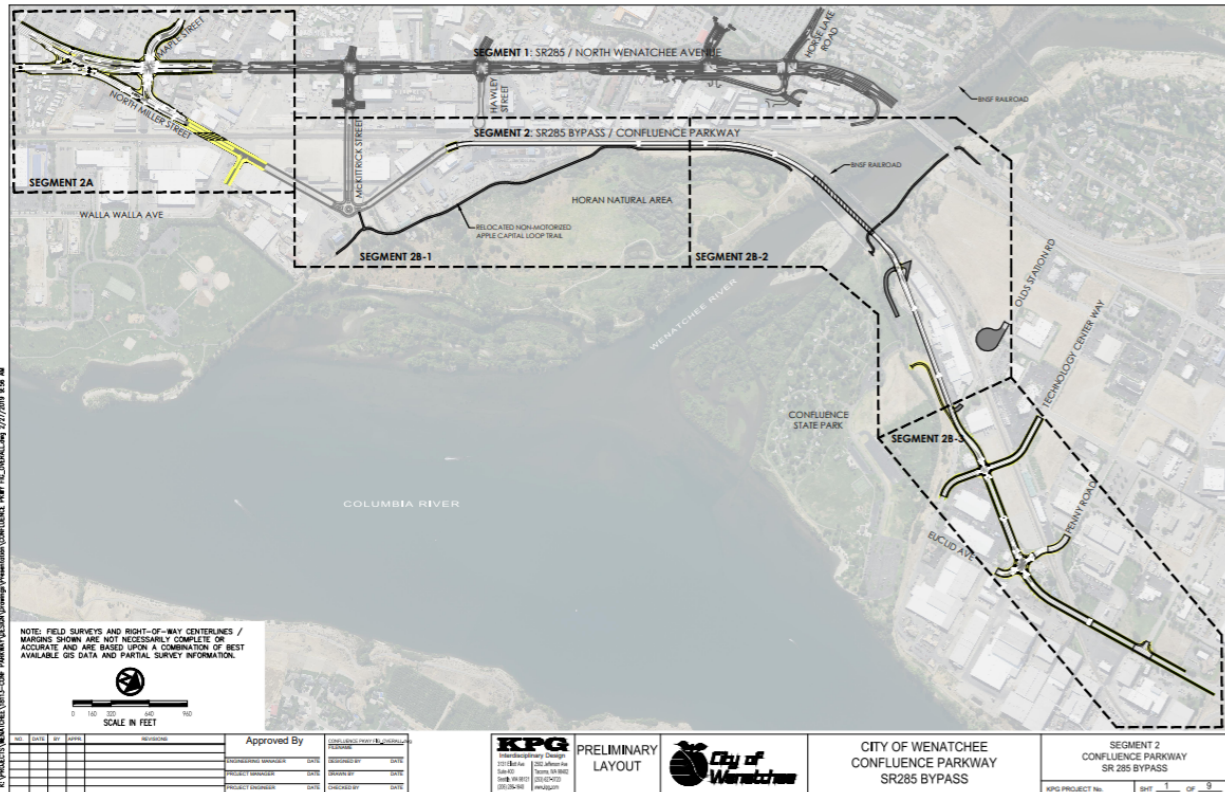
## Segment 2B – Confluence Parkway – Hawley Street North (SR 285 Bypass) After Improvements



*Confluence Parkway (SR 285 bypass) - Segment 2B Visualization*

[Confluence Parkway \(SR 285 bypass\) predesign drawings](#) have been developed based on the work performed associated with the Pre-NEPA risk assessment study. The pre-design drawings have been refined to show potential configuration based on agency and public feedback resulting from the Pre-NEPA risk assessment study. The following drawings illustrate key design elements along the corridor.

# Completing the Apple Capital Loop

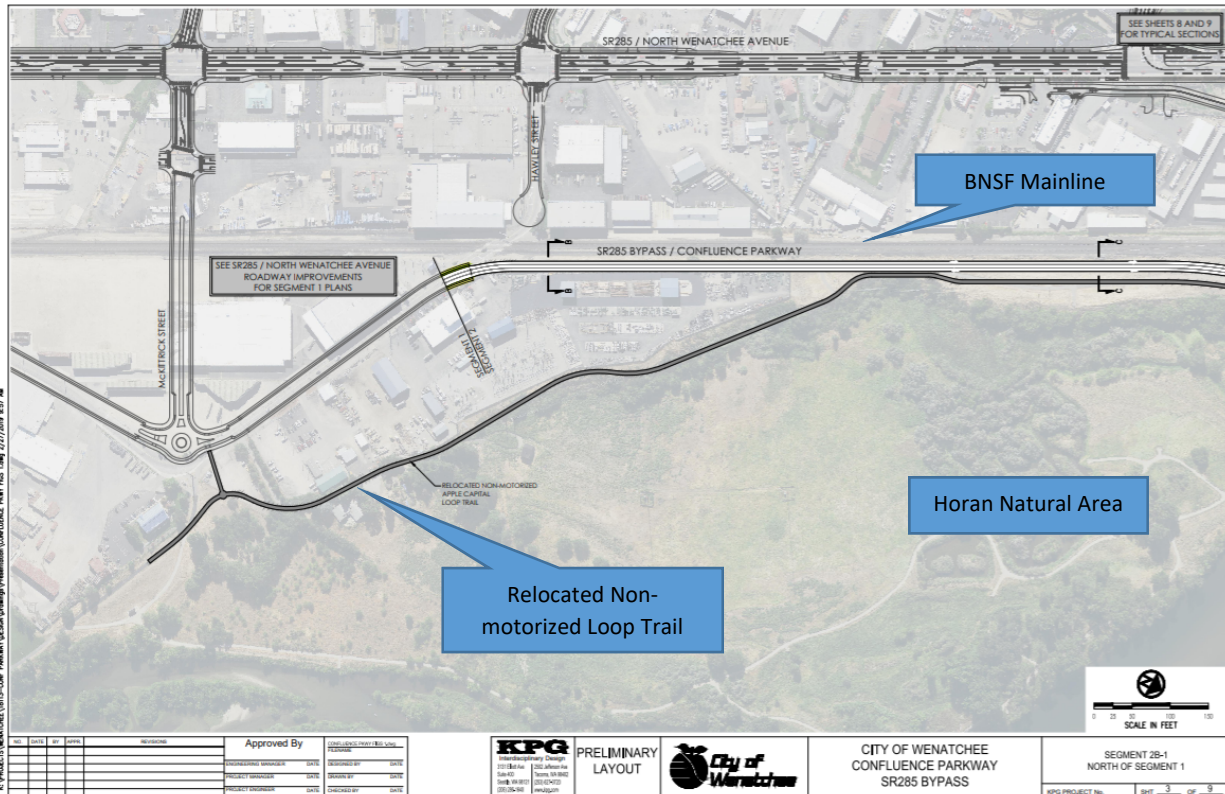


Confluence Parkway (SR 285 Bypass) Segment 2B Pre-design Drawings

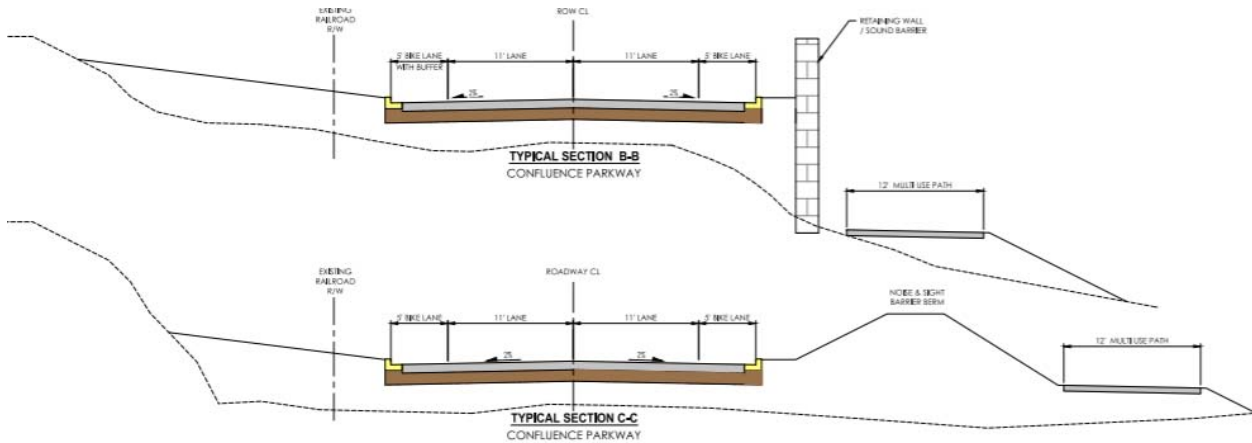
Confluence Parkway along the BNSF Mainline is proposed as approximately 3,200 LF of a 2 - lane uninterrupted corridor with a design speed of 35 mph that will connect to a new Wenatchee River Bridge. Bike lanes/shoulders will be provided for commuter bikes. Approximately 4,000 LF of the Apple Capital Loop Trail will be relocated. This section of the road way provides the opportunity to use the roadway to create a buffer between the RR tracks and the trail and the Horan Natural Area.



# Completing the Apple Capital Loop



Confluence Parkway and Loop Trail Relocation – Preliminary Design Drawing



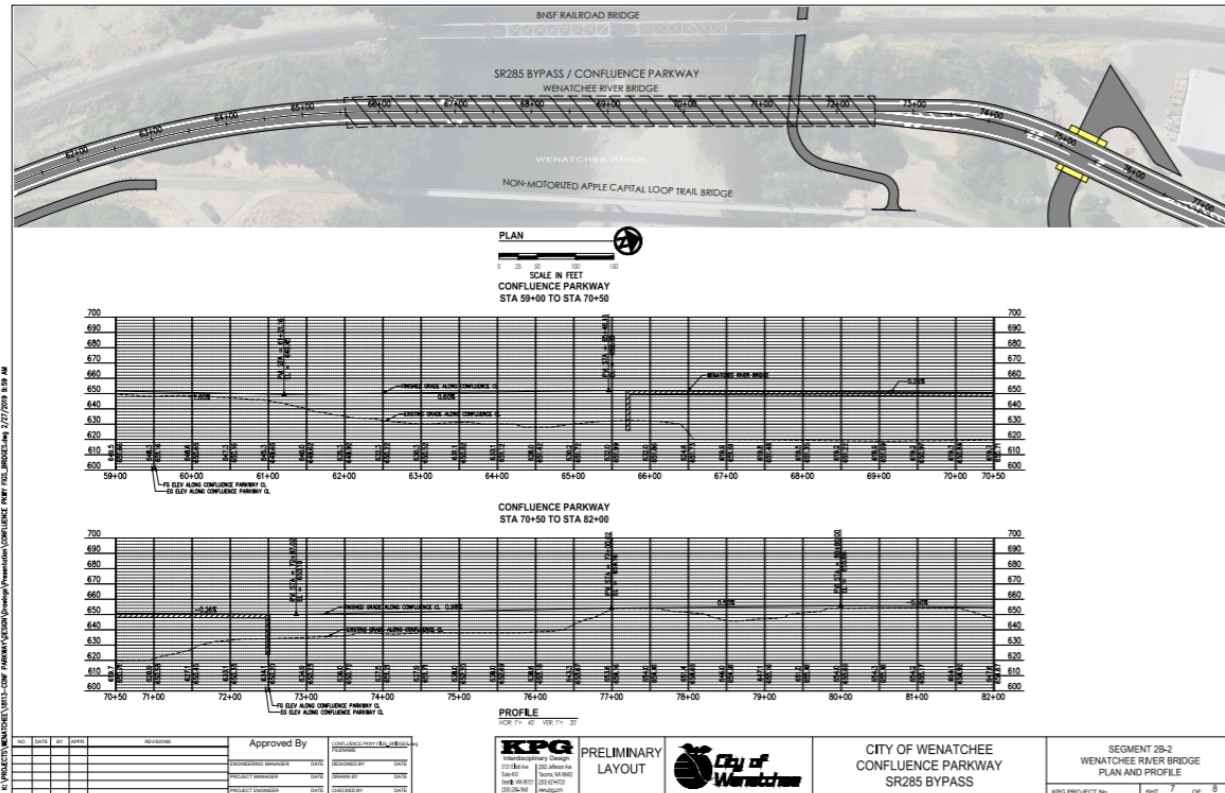
Confluence Parkway Sections – Parallel to BNSF Mainline – Trail Relocation

As shown in the above sections, the trail is physically separated and either sound walls or berms will protect the recreational area from noise and visual impacts of the new roadway as well as the existing RR tracks. A complete noise analysis and mitigation measures will be determined through NEPA compliance.

# Completing the Apple Capital Loop



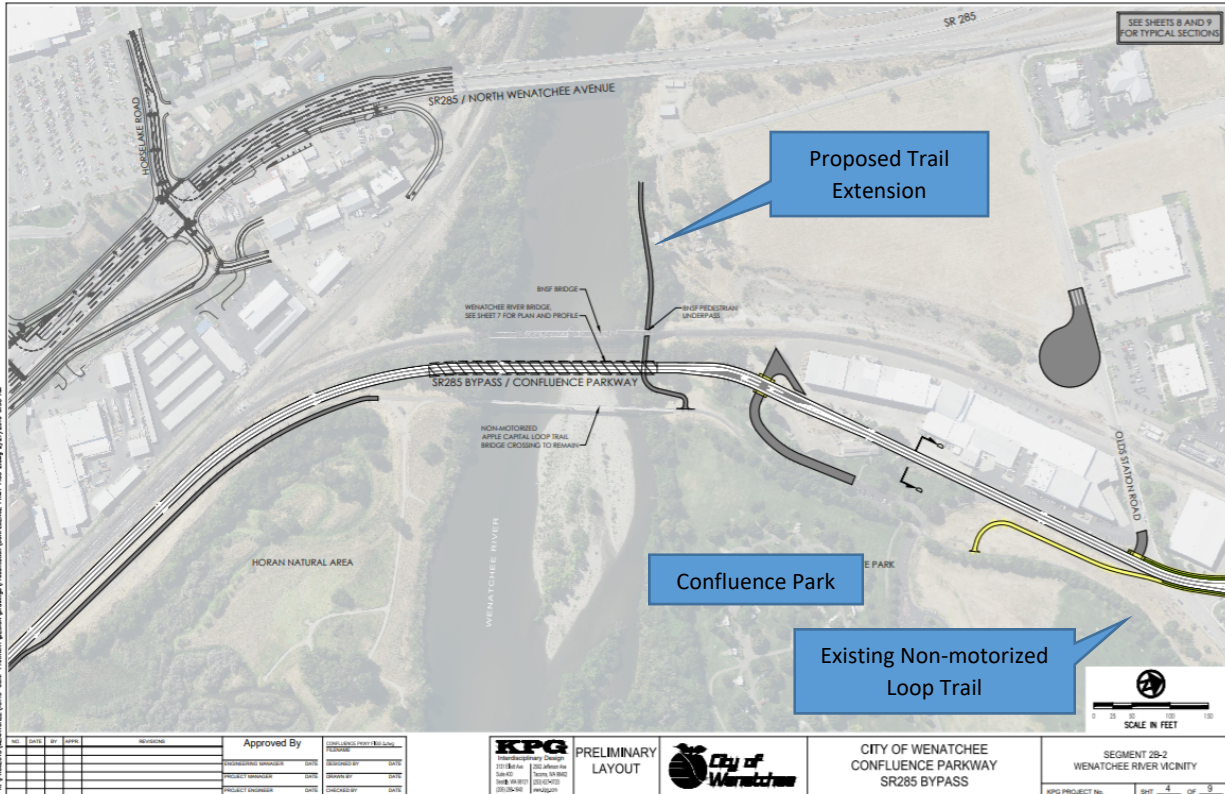
A new Wenatchee River bridge will span the river at approximately 520 feet long. NEPA and value engineering will determine whether a mid-span pier is the best option. A [preliminary Type Size and Location analysis](#) provided options for bridge types at the planned location. The following predesign drawing illustrates the bridge location between the existing BNSF shortline bridge and the existing Apple Capital Loop non-motorized trail bridge.



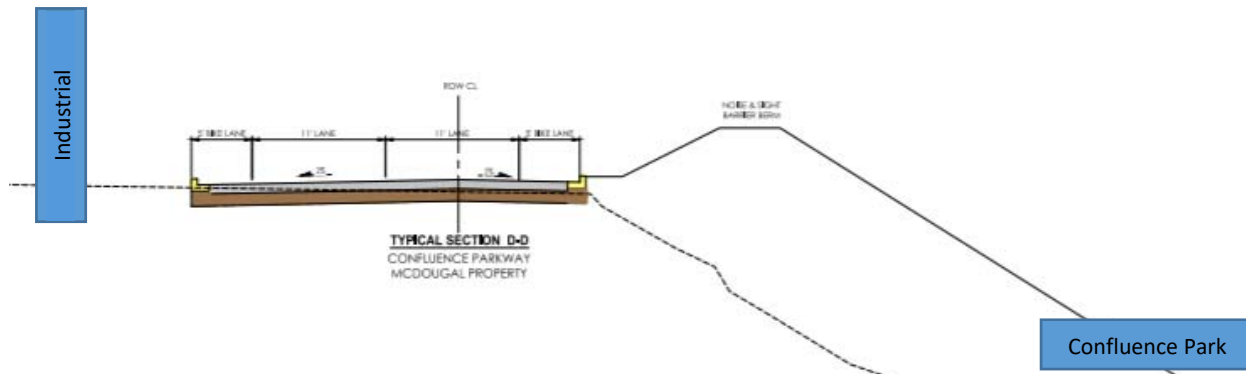
Confluence Parkway Bridge Plan and Profile

The section of Confluence Parkway bordering Confluence Park and the existing industrial area is the most challenging 1,700 LF of the project. Additional emphasis is being placed on this 2 lane section as described in the Environmental Compliance section below. The following drawing provides a concept option in which the roadway is elevated above the park and protected by sound berms and walls. This section of Confluence Parkway will impact the existing park maintenance facilities. The city is working closely with the park owner, Chelan County Public Utility District (Chelan PUD) and Washington State Parks and Recreation Commission (the park operator) to ensure that Confluence Parkway has no impact on the park operations and users through developing appropriate mitigations. Additionally, an option is being evaluated to move the road away from the park where there are existing industrial buildings. This is a contingency option for this portion of Confluence Parkway should the NEPA process require greater separation from the park. The following pre-design drawing provides a solid basis for design refinement and options.

# Completing the Apple Capital Loop



Confluence Parkway River Crossing and Alignment along Confluence Park



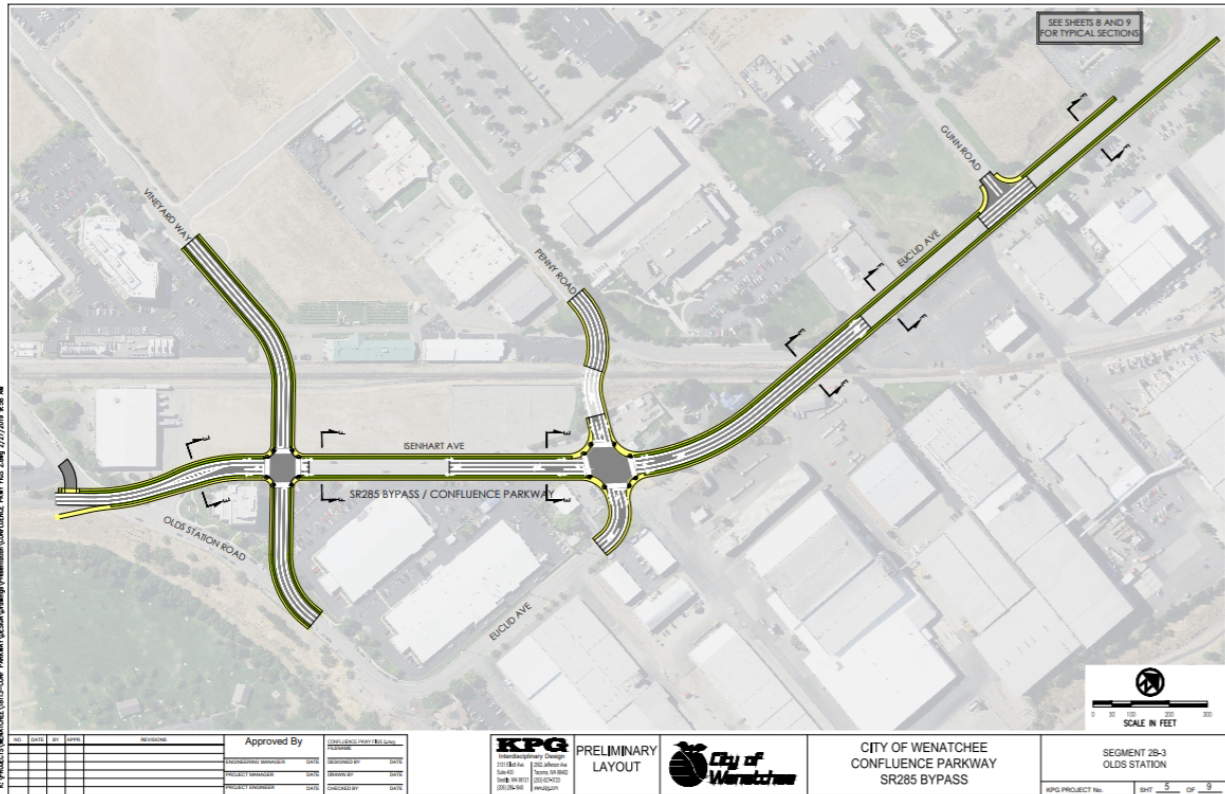
Confluence Parkway Typical Section Along Confluence Park

The last section or most northerly section of Confluence Parkway is located within the existing commercial and industrial area known as Olds Station. This 3,000 LF 3 lane section of Confluence Parkway primarily follows existing streets. Intersection improvements include connections to the existing street network as shown below. Additionally, this section includes 3 at-grade rail crossings of the BNSF shortline. This track is a low speed track with only 1-2 trains per week. The track serves Northern North Central Washington. Based on the low train volumes, BNSF has provided guidance that improved at-grade crossings are acceptable in on this RR spur line. The improvements on this section include sidewalks and bicycle facilities to

# Completing the Apple Capital Loop



support connectivity in this business district. Improvements also include connections to the non-motorized loop trail at both ends. This portion of Confluence Parkway serves as a vital connecting to the State Highway system utilizing existing the US 2/97 and Hwy 97A interchange.



Confluence Parkway Preliminary Design – Northern Terminus

## Segment 2C – Bridge Street RR Pedestrian Overpass - Before Improvements

As identified in the City’s South Wenatchee Subarea Plan, a significant access barrier exists for the residents who live in our most at-risk neighborhoods. These neighborhoods struggle with poverty and blight and yet are home to some of the most resourceful citizens. The city’s goal is to invest in these neighborhoods to create a supportive and resilient environment to maximize life outcomes. Presently, there is no reasonable access across the BNSF mainline RR tracks to the non-motorized trail (Apple Capital Loop Trail) that parallels the roadway loop. As a result hazardous RR trespassing occurs on a regular basis despite enforcement efforts and the installation of fences. The following aerial image illustrates this existing barrier.

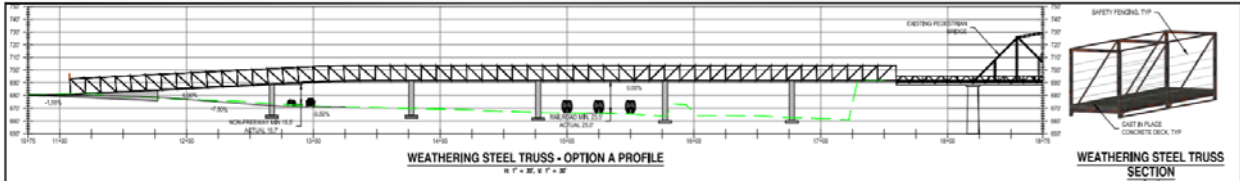
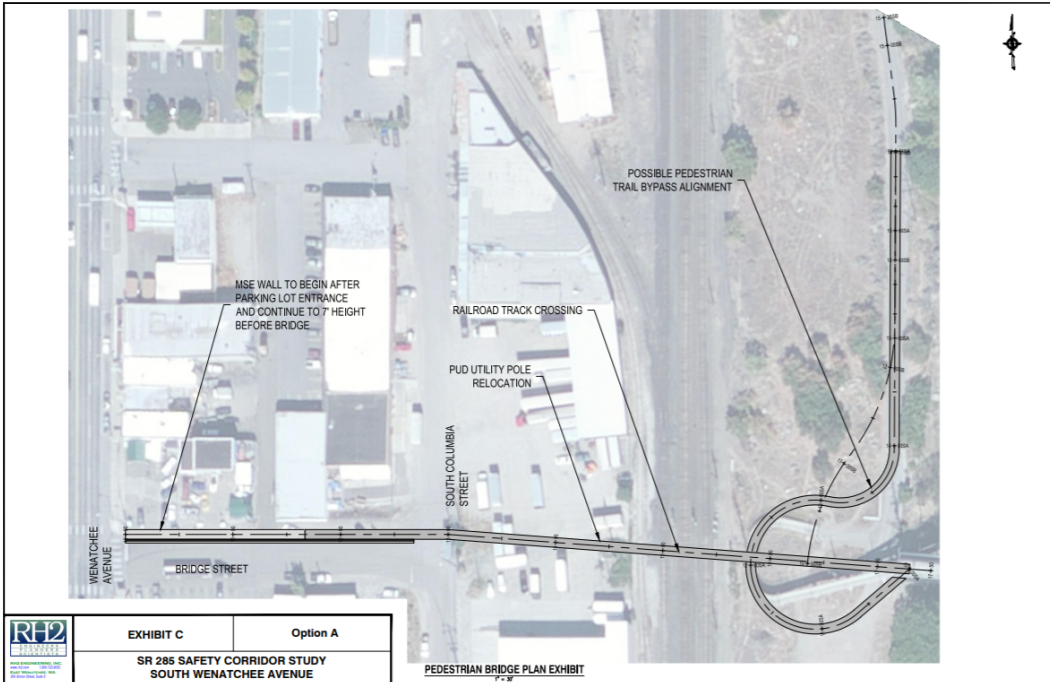


*Existing Pedestrian Barrier*

## Segment 2C – Bridge Street RR Pedestrian Overpass - After Improvements

Prior to 1954, the pedestrian bridge shown above served as a narrow highway bridge. The bridge included a connection across and over the tracks to South Wenatchee Avenue. However, the overpass was too low to allow double stack RR cars to pass under the bridge so it was removed. The City hired RH2 Engineering to develop a [preliminary pedestrian bridge design technical report](#) and cost estimate to construct a foot bridge over the tracks with ample clearance to open access to the non-motorized trail. The pre-design study called for a weathering steel truss bridge, 650 feet long, 10 feet wide with a minimum clearance of 23.5 feet above the BNSF RR tracks.

# Completing the Apple Capital Loop



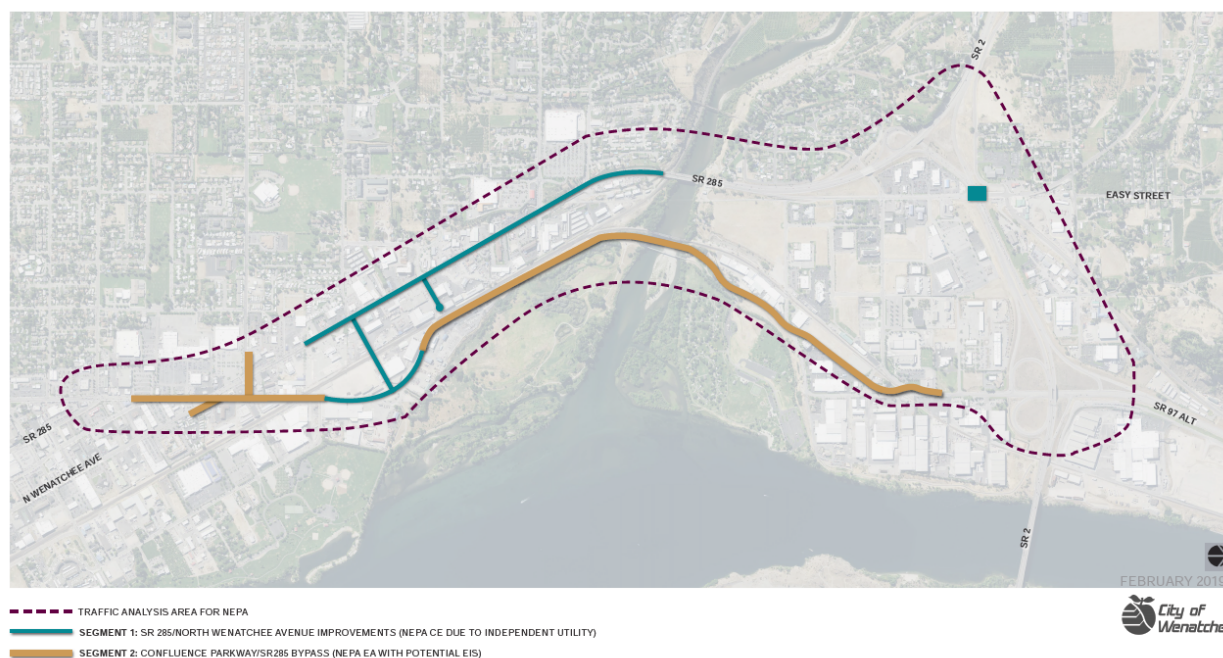


## *Environmental Compliance for SR 285 Bypass/Confluence Parkway (Segment 2)*

The city was funded by the State of Washington to initiate the NEPA process for Confluence Parkway in 2018 and, in cooperation with FHWA and WSDOT, a NEPA strategy has been developed and the project NEPA compliance process is underway. The process outlined below was developed to address NEPA considerations and serves as a demonstration of permitting innovation in which an extensive risk analysis was performed in conjunction with targeted studies, partnerships, and public outreach efforts. This process includes early engagement with FHWA and a strong partnership through WSDOT Local Programs who provides NEPA oversight of the City of Wenatchee, leading to a streamlined and yet thorough and effective NEPA process. The city plans to secure FHWA NEPA approval no later than November 2021 with a target date of September 2021 for completion of the NEPA document (if an EIS is required, earlier if an EA is required). This NEPA schedule is consistent with Executive Order 13807.

The following figure illustrates the NEPA compliance approach for Segments 1 and 2 in the North Wenatchee area of the Apple Capital Loop. As depicted, the Confluence Parkway project is expected to achieve NEPA compliance through an EA or EIS and the ultimate required documentation will be determined based on consultations with FHWA and WSDOT.

**NEPA CHARACTERIZATION MAP**  
PREPARED BASED ON CONSULTATION WITH WSDOT & FHWA



The Chelan PUD owns the Horan Wilderness Area and Confluence Park and has a lease and operating agreement with Washington State Parks and Recreation Commission to operate and maintain both areas. The Horan Wilderness Area and Confluence Park recreational areas have potential to contain cultural and historic resources (i.e., these areas represent potential Section



106 and 4(f) resources). These parks are also identified as recreational facilities in the Chelan PUD's Federal Energy Regulatory Commission (FERC) license for the Rock Island Hydroelectric Project (FERC No. 943). Based on potential impacts to these Section 106 and 4(f) resources and other potential project impacts, FHWA has confirmed that the minimum level of project NEPA documentation would be an EA. Over the next several months, the final determination on whether an EA or EIS process is appropriate for the project will be made based on whether significant environmental impacts are identified and whether those impacts can be readily mitigated. A steering committee consisting of FHWA, WSDOT Local programs, the Chelan PUD, the Chelan Douglas Transportation Council, and Link Transit have jointly developed a progressive NEPA strategy to advance work between now and June to establish baseline information on and identify mitigation options for addressing potential impacts to the 4(f) and Section 106 resources. These baseline reports will build upon the information developed for the Pre-NEPA Risk Assessment as described at the end of this section.

The Chelan PUD also owns, operates and maintains power lines that are within the Confluence Parkway planning area, including high voltage distribution and transmission lines, along with fiber telecommunication infrastructure. This infrastructure is located on property owned by the PUD or under easements and consideration of these facilities would be included in the NEPA process.

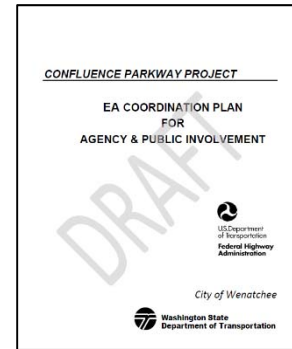
If the advance NEPA work leads to an expectation of a 4(f) de minimus determination, then it is expected that FHWA will determine that an EA will be the appropriate NEPA compliance mechanism. It should be noted that because the resources evaluated under 4(f) and Section 106 are also regulated under the Chelan PUD's FERC license, that the final decision on the appropriate NEPA compliance mechanism will be made in conjunction with Chelan PUD and FERC. Additionally, Chelan PUD will be required to obtain approvals from FERC for any non-project land uses, changes to land ownership, and or any changes to the existing park as-built design resulting from the Confluence Parkway and mitigation measures. The city already has community support to look for opportunities to mitigate the impacts of Confluence Parkway by improving and enhancing these existing 4(f) and Section 106 resources. These mitigation measures additionally have the potential to advance Chelan PUD's FERC re-licensing process for the Rock Island Hydroelectric Project that will formally begin in 2023. FHWA and FERC are in consultation to ensure an appropriate Federal Regulatory framework is defined and agreed upon and the overall NEPA strategy is designed to work under the One Federal Decision process, if an EIS is warranted. Included on the project website is a stakeholder support letter from Chelan PUD.



# Completing the Apple Capital Loop



In addition to the prework with FHWA, the PUD and FERC, a project EA Coordination Plan for Agency and Public Involvement Plan has been developed which provides greater details of all the agency and public involvement that has and will be conducted for the project. As described above, this plan details the very close working relationship between the FHWA, WSDOT, the City of Wenatchee, the Chelan PUD, Federal Energy Regulatory Commission (FERC), and the steering committee.



Available on website at [www.applecapitalloop.info](http://www.applecapitalloop.info)

As with all the entire network of projects, public engagement is critical to ensuring that any proposed mitigation actions enhance the community. In particular, the city's NEPA process for Confluence Parkway will recognize the importance of our region's assets and community values such as our cultural history and the Apple Capital Loop Trail, as well as the wetlands and parks along the Wenatchee and Columbia Rivers. Considerable and critical community engagement efforts have already been completed and is ongoing to bring stakeholders to the table and ensure that the NEPA process is effective in addressing project impacts. More importantly, this engagement offers the opportunity to enhance our community through agreed-to appropriate and effective mitigation.

The project website [www.applecapitalloop.info](http://www.applecapitalloop.info) will be kept up to date with NEPA materials become available.

In October 2017, the Chelan Douglas Transportation Council (CDTC) completed the "[North Wenatchee Capacity Improvements Pre-NEPA Risk Assessment](#)"; a risk assessment for the Confluence Parkway project. The aforementioned NEPA strategy was developed from and builds upon the good work completed by the CDTC. The study included a draft NEPA Purpose and Need statement and an expanded evaluation of the alternatives previously studied in the adopted 2011 plan North Wenatchee Avenue Transportation Master Plan. Key environmental resources were evaluated using a NEPA framework to identify if the project would result in any potential impacts that could not reasonably mitigated. The study identified cultural resources and impacts to adjacent park and recreation lands as moderate-to-high risk, with anticipation of potentially significant mitigation measures. The study was used to successfully initiate a dialogue with the Colville Confederated Tribes and the Yakama Nations, along with the State Historic Preservation Office, concerning cultural resources in advance of formally initiating the NEPA process. The study also indicates that park impacts can be mitigated in coordination with the guidance from the park owner (Chelan PUD) and the park lease operator (Washington State Parks). As part of this study, the consultants also provided estimates for potential mitigation measures. Ultimately, the Pre-NEPA study concluded that no fatal flaws were likely to arise during the environmental review of Confluence Parkway. For more information, the entire study can be downloaded from the project website at [www.applecapitalloop.info](http://www.applecapitalloop.info).



North Wenatchee Capacity Improvements  
Risk Assessment  
October 2017  
Presented by  
Chelan-Douglas  
TRANSPORTATION COUNCIL  
CDTC

# Completing the Apple Capital Loop



Several key excerpts from the Pre-NEPA study follow.

The following table provides a summary of the alternatives evaluated for addressing congestion on North Wenatchee Avenue. Evaluation of these alternatives led to the development of the Confluence Parkway alternative in which a bypass provides the greatest benefit to North Wenatchee Avenue in terms of congestions, safety, and facilitating an improved business climate.

**Table A-2. Initial Concepts Considered in North Wenatchee Transportation Master Plan**

Concept	Description	Analysis	Recommendations
<b>Second Sellar Bridge and Extend One-Way Couplet</b>	Construct a new 3-lane bridge approximately one-half mile north of the existing Sellar Bridge to serve only westbound traffic. The existing Sellar Bridge would be converted to a 3-lane bridge serving only eastbound traffic.	<ul style="list-style-type: none"> <li>Would not provide significant improvements to North Wenatchee Avenue or along Western Avenue</li> </ul>	Not recommended for further analysis because it would not meet the plan's objectives.
<b>New Central Columbia River Bridge</b>	Construct a new 4-lane bridge (two lanes each direction) between Wenatchee (east end of 9th Street) and East Wenatchee (west end of 19th Street).	<ul style="list-style-type: none"> <li>Would provide alternative route to North Wenatchee Avenue</li> <li>Would help reduce traffic volumes in the vicinity of Maiden Lane and Horse Lake Road</li> <li>Would not fully resolve key issues of throughput, travel speeds, or safety in the corridor due to changes in travel patterns and "induced" traffic</li> </ul>	Not recommended for further analysis because it would not meet the plan's objectives.
<b>New Wenatchee River Bridge and Western Avenue Extension</b>	Construct a new 2-lane bridge over the Wenatchee River beginning at the north end of the Western Avenue corridor, winding down to the river, and climbing back up to a new interchange with US 2.	<ul style="list-style-type: none"> <li>Improvements would slightly reduce volumes and delays in North Wenatchee Avenue corridor, but would not resolve key mobility and accessibility issues, and would not serve planned growth in Olds Station and Sunnyslope areas.</li> <li>Traffic destined for bridge would create impacts along Western Avenue.</li> <li>Steep terrain between Western Avenue, the Wenatchee River, and US 2 would make this concept technically challenging and expensive.</li> </ul>	Not recommended at this location because of limited benefits and high cost; however, a bypass farther east may warrant exploration.
<b>Widen North Wenatchee Avenue to six lanes</b>	Widen North Wenatchee Avenue and the existing bridges to six lanes from Miller Street to north of the Wenatchee River. Medians would restrict left turns to/from driveways. Left turns and U-turns would be allowed at major intersections.	<ul style="list-style-type: none"> <li>Widening would increase capacity but would displace businesses and parking along North Wenatchee Avenue, significantly affecting existing and future development in the corridor.</li> <li>Wider roadway cross-section and higher traffic volumes would increase safety risks for pedestrians and bicyclists.</li> <li>Extensive access management and traffic control would be required to fully utilize the new capacity and to improve safety.</li> </ul>	Not recommended for further analysis due to displacement, economic development, and safety concerns; however, improvements to maximize the existing capacity could be considered.

# Completing the Apple Capital Loop



The following table illustrates the results of the pre-NEPA risk assessment. As shown, the Confluence Parkway best addresses the considerations of the draft purpose and need statement when compared to widening North Wenatchee Avenue to 6 lanes.

**Table ES-3. Summary of Alternatives' Support for Purpose and Need**

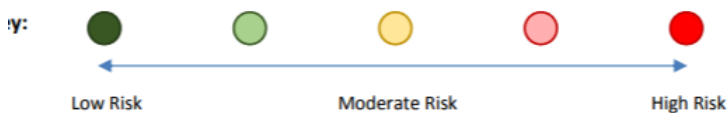
Project Need	Confluence Parkway	North Wenatchee Avenue	No Action
Transportation Capacity/Congestion Relief	●	●	●
Connectivity to Regional System	●	●	●
Support for Transit/Reduced Bus Travel Times	●	●	●
Community and Economic Development	●	●	●
Safety and Emergency Response	●	●	●



The following chart illustrates the environmental components that pose the greatest risk as discussed above. Even though the environmental risks are slightly higher compared to widening North Wenatchee Avenue to 6 lanes, it is anticipated that all environmental impacts can be mitigated per NEPA requirements.

**Table ES-1. Summary of Risk Related to Environmental Permits and Appro**

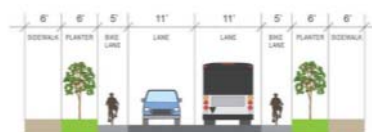
Resource	Confluence Parkway	North Wenatchee Avenue
Cultural	●	●
Wetlands	●	●
Fisheries	●	●
Parks and Section 4(f)	●	●
Land Use	●	●



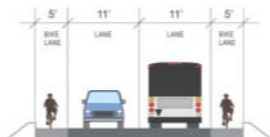
# Completing the Apple Capital Loop



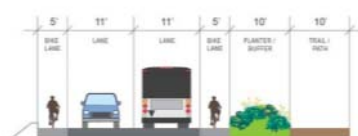
The risk assessment was based on a preliminary layout of the Confluence Parkway. The analysis was done on the alignment which represented the highest risk (i.e., the alignment with the most potential environmental impacts) to provide a high level of conservatism in the analysis. The designs presented in the risk assessment are being refined and the updated alignments are expected to result in fewer impacts to environmental resources than the original alignment. These improved designs provide greater noise protection, greater setbacks from the parks and improved mitigation measures for the existing pedestrian and bike trail and the wetlands, an attraction for bird watchers, both locally and nationally.



SECTION A  
CONFLUENCE PARKWAY



SECTION B  
CONFLUENCE PARKWAY



SECTION C  
CONFLUENCE PARKWAY



Refer to Section 2B for refined design information. The images above are now outdated.



## Segment 3: Cascade Interchange (US 2/97) & SR 28/35<sup>th</sup> Roundabout

The impetus for Segment 3 is to provide adequate access to the highway system and ensure the highway system continues to function to avoid interrupting critical freight to and from the area. A traffic analysis for the development potential as described here is the basis for the improvements.

The Port of Douglas County along with partners developed a Master Plan and Market study for the green field development of 280 acres. The plan is entitled Wenatchi Landing in which private investment of over \$200 million is anticipated. This area represents the only greenfield development area of any size in the entire valley. The master plan identifies an intense development schedule offering the opportunity for diversity in the region's job base. Below is an illustration of the brochure that markets the property. Infrastructure is the biggest road block to realizing the benefits of this development plan. Preliminary design studies have been done and identified impact fees as a possible revenue source to fund infrastructure. However, the infrastructure needs may be too large to realize development without public investment. Preliminary design for the ½ diamond interchange has been performed to establish costs and impacts.



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[www.portofdouglas.org](http://www.portofdouglas.org)  
[www.facebook.com/PortOfDouglasCounty](https://www.facebook.com/PortOfDouglasCounty)

**Guiding Principles**

- Facilitate private investment in the study area and create public/private partnerships to guide infrastructure planning and phasing.
- Implement a Planned Action for the study area to provide streamlined SEPA review and regulatory certainty for developers.
- Spur economic development through job growth.
- Explore opportunities for a wide variety of mixed-use waterfront development types.
- Take advantage of the study area's location and create a vibrant, attractive place.



### Wenatchi Landing

# THE DEVELOPMENT OPPORTUNITY

The Wenatchi Landing is a place with over 280 acres of ready-to-develop land envisioned as a prosperous center for job-creating industry and a tourist and recreation destination with impressive views of the Columbia River and connections to the regional highway system and recreational trails network. The Port of Douglas County, together with Douglas County and the City of East Wenatchee, have created and approved a Master Site Plan and Planned Action (October 2016) with a cohesive vision, infrastructure plan and fast-tracked permitting authority.

**Key assets include:**

- Large parcel ownerships within the East Wenatchee Urban Growth Area.
- Regional highway access and high visibility along US Highway 2.
- Natural amenities, including expansive views of the Cascade Mountains and a Columbia River waterfront location.
- Access and proximity to segments of the Apple Capital Loop Trail and the Rocky Reach trail.
- Waterfront Mixed Use and General Commercial zoning that allow a wide range of high value uses.
- Location within the growing and vibrant Northcentral Washington region with a dedicated workforce, long-time residents and enthusiastic visitors and tourists.

**Planned Investments include:**

- \$33.8 million in road investments including a new Cascade Interchange at US Highway 2 and improvements to arterial and collector roads.
- \$8.1 Million in planned regional sewer facilities.
- \$0.6 Million in regional water system improvements.

The Master Site Plan provides a public and private funding framework, while the planned action establishes predictable mitigation measures, including an equitable traffic mitigation fee for certainty and shared investment. The Port is leading a multi-agency stakeholder process to develop the infrastructure improvements to support the development of Wenatchi Landing.

With like-minded private developers and investors, we can create a unique and successful job and tourist recreation center serving the whole region for years to come.



# Completing the Apple Capital Loop

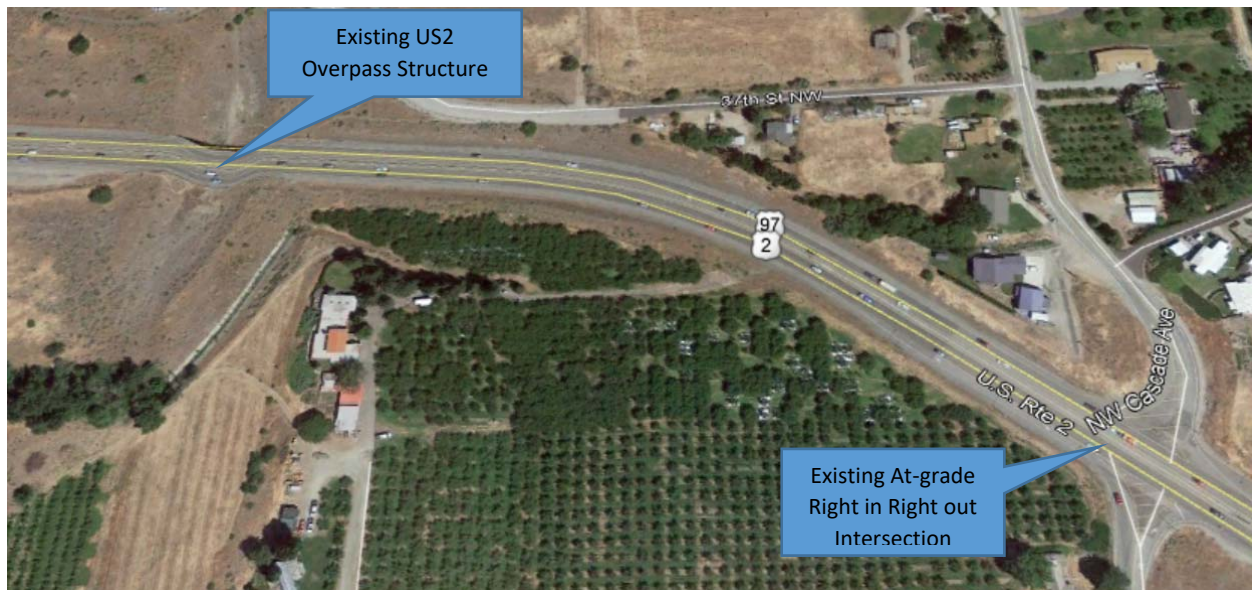


Segment 3 includes two principle areas of work necessary to create a fully functioning intersection that will access new lands designated for urban development without compromising the integrity of the NHS. These areas of work include:

- Development of a ½ diamond interchange on US 2/97 to replace an existing right in – right out at grade intersection at Cascade Street (Segment 3A). This segment is included in the INFRA request.
- Construct a roundabout replacing an uncontrolled intersection at SR 28 and 35<sup>th</sup> Street (Segment 3B) This segment is funded through the WSDOT.



## Segment 3A – Cascade Intersection - Before Improvements



*Existing Underpass to be Used to Replace Existing At-Grade Intersection*

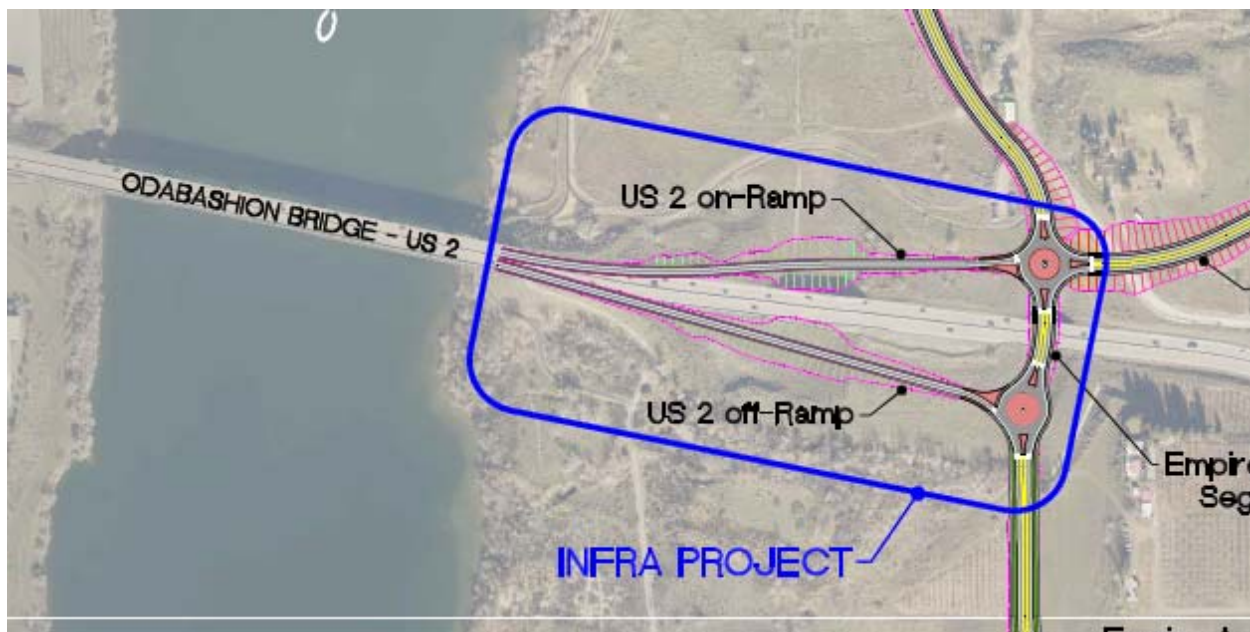
# Completing the Apple Capital Loop



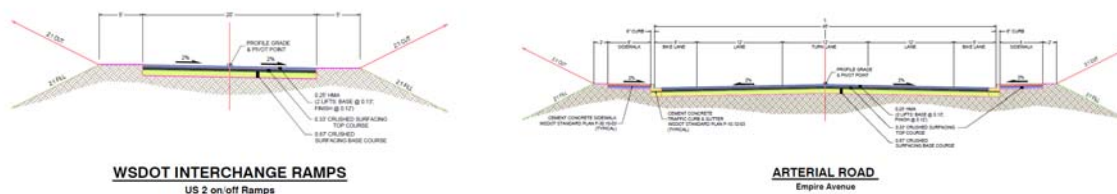
## Segment 3A – Cascade Interchange - After Improvements

[Cascade Interchange preliminary design drawings](#) have been developed by Douglas County Transportation and Land Services which are included on the project website. The design for the area of the project includes 2,600 LF of on/off ramps, two roundabouts, and 500 LF of a 2 lane roadway with medians, sidewalk, and bike lanes under the existing US 2 overpass structure. Connecting roadways that service the development area will be built in conjunction with development and are not included in this project. The primary purpose of this project is to provide access to the developable land within the urban growth area while maintaining the function of the National Highway System.

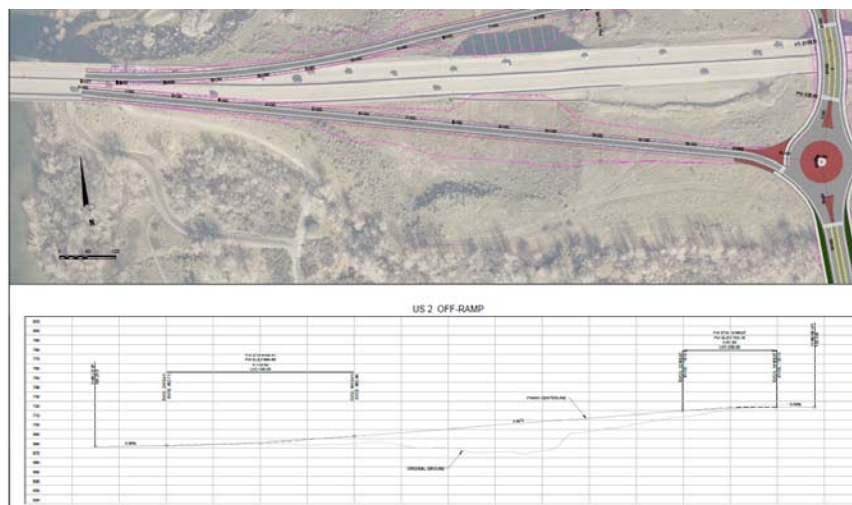
All of the scope of work for this project segment lies within existing WSDOT right of way and thus there is no right of way acquisition required.



Project Map Delineation



Typical Sections



Example Plan Profile (See Pre-design Plan Set)

## Segment 3B – SR 28 and 35<sup>th</sup> Intersection - Before Improvements

The SR 28 and 35<sup>th</sup> intersection will experience considerable traffic congestion with development of the Cascade Interchange area. Thus, this intersection works in concert with the Cascade interchange to access the area. Progressive infrastructure planning of these improvements will prevent congestion on US 2 and SR 28 caused by the development and at the same time, these intersection provide economic opportunity for the highway system to serve the area. Presently this intersection is a signalized intersection.



Cascade Interchange Area and 35<sup>th</sup> Street Intersection





*Existing SR 28 and 35<sup>th</sup> Intersection Geometry*

### Segment 3B – SR 28 and 35<sup>th</sup> Intersection - After Improvements

WSDOT has funding to replace this intersection with a roundabout in 2020. The following pre-design drawing illustrates the roundabout geometry.



*Proposed Roundabout - SR 28 and 35th St.*

### ***Environmental Compliance for Segment 3***

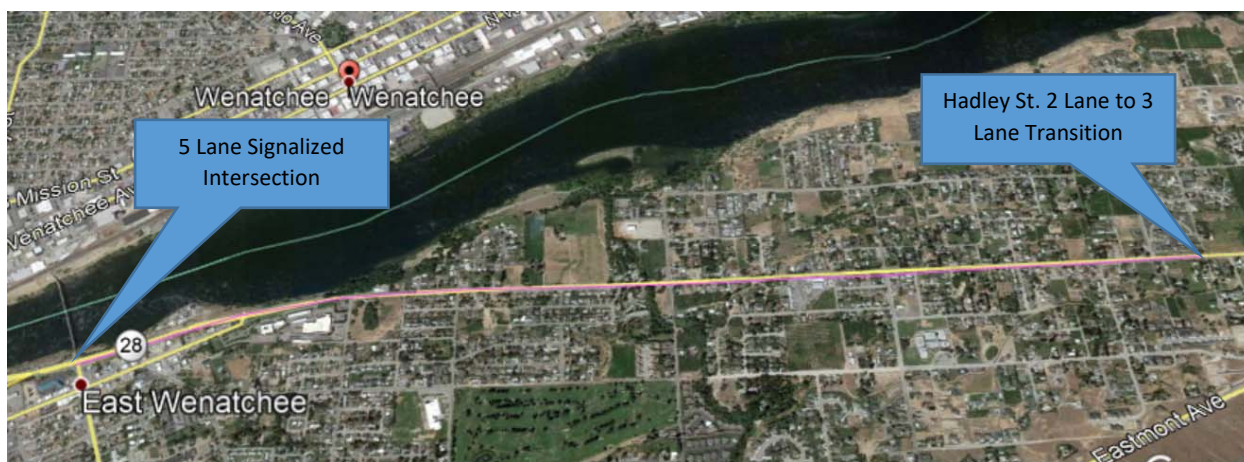
The Washington State Department of Transportation secured a Record of Decision from FHWA in 2006 for the [Eastside Corridor EIS](#) which includes Sunset Highway (SR28) and the Cascade Interchange. The EIS provided for a full diamond interchange. Subsequent practical design has yielded a more cost-effective solution with a ½ diamond interchange. While there haven't been any changes to the physical environment, the WSDOT is performing re-analysis of the EIS to ensure that none of the factors included in the EIS have changed since 2006 and that the [Record of Decision](#) still stands.



## Segment 4: Sunset Highway (SR 28) Widening

Segment 4 includes reconstruction and widening 2.5 centerline of a 2-lane rural highway between 9<sup>th</sup> and Hadley St. to a 4-lane section in the city of East Wenatchee. Presently a 5-lane section transitions to a 2-lane section at 9<sup>th</sup> Street. SR 28 then returns to a 3-lane section. Thus, this work addresses this gap. The region secured \$58 million in Connecting Washington funds. The aging the funds associated with project have been determined by the Department and is included in the Budget Summary worksheets.

### Segment 4 – Sunset Highway (SR 28)- Before Improvement



Limits of SR 28 Segment 4 Project



Existing Roadway Configuration

As shown above, the current configuration of Sunset Highway consists of two lanes with varying shoulder widths. There are no sidewalks and the road is not a divided road in an urban core.



## Segment 4 – Sunset Highway - After Improvements

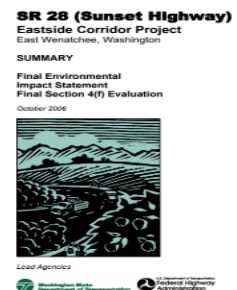


The improvement includes reconstructing a 2-lane road way according to the section above with turn lanes at 6 intersecting streets. An existing signal at 19<sup>th</sup> Street will remain. The WSDOT and City of East Wenatchee are also evaluating roundabout options for intersections.

The WSDOT has developed a schedule for improvements in which design is beginning in 2019. This will build upon predesign efforts performed to secure funding from the Washington State Legislature and completed for the Environmental Impact Statement.

### *Environmental Compliance for Segment 4*

The Washington State Department of Transportation secured a Record of Decision from FHWA in 2006 for the [Eastside Corridor EIS](#) which includes Sunset Highway (SR28) and the Cascade Interchange. The alternatives analysis for Sunset Highway resulted in the design described above. While there haven't been any changes to the physical environment, the WSDOT is performing re-analysis of the EIS to ensure that none of the factors included in the EIS have changed since 2006 and that the [Record of Decision](#) still stands.



## Section 5: Project Approvals

The majority of project approvals in Washington State are associated with the environmental process. NEPA and the State Environmental Policy Act (SEPA) are process concurrently to minimize confusion. Environmental project approvals have already been secured for many of the segments as described above in the environmental compliance discussions for each segment. Segments 3 (Cascade Interchange) and 4 (Sunset Highway Widening) are covered by an approved EIS from 2006. The WSDOT will refresh those EIS documents and analysis ensuring that no changes have occurred with respect to the approved Record of Decision. The agency does not anticipate any changes. Segment 1 (North Wenatchee Avenue Improvements, McKittrick RR Underpass, and the US2/Easy St Roundabout) and Segment 2C (Pedestrian RR Overpass) require Categorical Exclusion approval to satisfy NEPA. It is Segment 2 (Confluence Parkway) requires the most project approvals. The following table is taken from the EA Coordination Plan for Public and Agency Involvement providing a list of project approvals. This coordination plan is available on the project website at [www.applecapitalloop.info](http://www.applecapitalloop.info). The project

# Completing the Apple Capital Loop



schedule is planned for an EIS. If an EA is the appropriate environmental compliance pathway, the project will be ahead of schedule.

**Table 1. Anticipated Federal Permits and Approvals**

Federal Permits	Federal Agency	Date Anticipated
Bridge Permit <sup>1</sup>	U.S. Coast Guard	September 2020 1 month post- finding of no significant impact (FONSI) to incorporate NEPA findings
Clean Water Act Section 402, National Pollutant Discharge Elimination System Permit	Washington Department of Ecology	November 2020
Endangered Species Act (ESA) Consultation	National Marine Fisheries Service, U.S. Fish and Wildlife Service	July 2020
Magnuson-Stevens Fishery Conservation and Management Act, Section 305 Essential Fish Habitat Consultation	National Marine Fisheries Service	July 2020 Concurrent with ESA consultation
Section 10 of the Rivers and Harbors Act of 1899	U.S. Army Corps of Engineers	September 2020 1 month post-FONSI to incorporate NEPA findings
Section 106 of the National Historic Preservation Act	Advisory Council on Historic Preservation	July 2020
Section 404 of the Clean Water Act	U.S. Army Corps of Engineers	September 2020 Issued with Section 10
Federal Approvals	Federal Agency	Date Anticipated
Bald and Gold Eagle Protection Permit <sup>1</sup>	U.S. Fish and Wildlife Service	
Bald and Gold Eagle Programmatic Take Permit <sup>1</sup>	U.S. Fish and Wildlife Service	
Conditional Letter of Map Revision <sup>1</sup>	Federal Emergency Management Agency	December 2020
Floodplain or Wetland Assessment	All federal agencies	September 2020
Migratory Bird Treaty Act Permit <sup>1</sup>	U.S. Fish and Wildlife Service	July 2020 Concurrent with ESA consultation
Native American Graves Protection Act Compliance <sup>1</sup>	All federal agencies	July 2020 Concurrent with Section 106 consultation (and through construction)
Right-of-Way Authorization <sup>1</sup>	Bureau of Indian Affairs, Bureau of Land Management, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service	December 2020
Section 4(f) Determination	FHWA, Department of Interior	July 2020

Note: 1. To be confirmed following specific agency outreach



Other non-environmental agency approvals for Confluence Parkway include:

- Issuance of a permit from Burlington Northern Sante Fe railroad for two mainline underpasses, one mainline pedestrian overpass, and modifications to at-grade crossings on the shortline. Early coordination with BNSF is ensuring that this approval can be secured along with ample time provided in the project schedule.
- Issuance of approval from Chelan PUD for right of way purchase and construction. This is handled as part of the NEPA process.
- The City will need to receive approval from FHWA and WSDOT to perform design build.

All other agency approvals have been granted by virtue of these projects being included in the appropriate planning documents.



## Section 6: Project Delivery and Schedule

A detailed project budget and schedule is included in Appendix D of the grant application and thus the reader is referred to the project website, [www.applecapitalloop.info](http://www.applecapitalloop.info) for additional detail.

The technical feasibility of delivery begins with work already completed as outlined above in the various planning and preliminary engineering studies. Considerable progress has been made during 2018 and is ongoing in 2019 in preparing for the delivery of this project within INFRA statutory timelines. This previous work represents over \$15.6 million already invested in planning, environmental, preliminary engineering, and right of way acquisition. This table correlates to milestone identified in the grant application and to the detailed project schedule.

**The following schedule is based on INFRA award being issued prior to October 2019 and INFRA fund obligation in November of 2021. Construction will begin prior to 18 months following INFRA fund obligation per the program requirements.**

Sub-project	Planning	Env. Rev.	PE. (% Comp.)	ROW Compl.	Const. Start	Const. End
1A – N. Wen. Ave	Complete	CE – Jul '21	10% Design	Dec '22	Q1 '23	Q4 '27
1B - McKittrick Underpass	Complete	CE – Jul '19	20% Design	Complete <sup>1</sup>	Q3 '20	Q4 '23
1C - US2 Roundabout	Complete	CE – Dec '19	Underway	Dec '20	Q2 '21	Q4 '23
2A – Confluence Pkwy - S	Complete	EA – Dec 20 or EIS – Nov '21	5% Design	Dec '22	Q1 '22	Q4 '23
2B - Confluence Pkwy – N	Complete	EA – Dec 20 or EIS – Nov '21	5% Design	Jun '22	Q1 '23	Q4 '25
2C - Ped. RR Overpass	Complete	CE – Jun '20	10% Design	Complete	Q1 '23	Q4 '23
3A - Cascade Interchange	Complete	EIS Complete	10% Design	Complete	Q3 '21	Q4 '21
3B – SR 28 & 35 <sup>th</sup> Int.	Complete	EIS Complete	10% Design	Dec. '19	Q2 '20	Q4 '20
4 – SR 28 Widening	Complete	EIS Complete	Q1 2019	Dec '25	Q1 '24	Q4 '27

<sup>1</sup>Early Acquisition ROW, subject to CE Env. Approval.

### *Capacity to Deliver: Project Partners*

The capacity to deliver all the projects is rooted in a multi-agency partnership. The City of Wenatchee is the lead agency; however, key delivery partners include the Washington State Department of Transportation and Douglas County. The responsible agency is shown below under the project delivery table. The City and partner agencies have committed to enter into an interlocal agreements upon notice of award:

- a. WSDOT will also manage the investments associated with the Connecting Washington funds for No. Wenatchee Ave (segment 1A- \$18,457,708)
- b. The City of Wenatchee is a Certified Agency operating under oversight of WSDOT Local Programs and will manage the McKittrick Street underpass. (segment 1B - \$26,784,000)
- c. The City of Wenatchee is a Certified Agency operating under oversight of WSDOT Local Programs and will manage Confluence Parkway (segment #2 - \$122,000,000).
- d. Douglas County is a Certified Agency and will manage the Cascade Interchange (segment 3A - \$13,266,024).
- e. The WSDOT will manage the SR28/35<sup>th</sup> Roundabout (segment 3B - \$2,661,000)
- f. The WSDOT will manage SR28, Sunset Highway (segment 4 - \$57,478,724)



As shown below, given the size of Segment 2, the City of Wenatchee will utilize design build approach rather than staffing up to perform the project internally. The city does anticipate bringing on a consultant with WSDOT design build experience to help manage delivery of Confluence Parkway. The City of Wenatchee has a history of delivering over large projects for a small agency with a typical capital budget of \$50 million per year.

## ***Project Delivery Methods***

Project delivery methods have been identified for each of the segments as outlined in the following table. Successful project delivery of a project of this size in a rural area is rooted in a partnership with three agencies being responsible for delivery for each segment. Each agency has the capacity to deliver the project segments outlined in the table below.

<b>Segment (Subproject)</b>	<b>Responsible Agency</b>	<b>Delivery Method</b>
Segment 1A – N. Wen. Ave.	WSDOT	Design – Bid – Build
Segment 1B – McKittrick Underpass	City of Wenatchee	Design – Bid – Build
Segment 1C – US 2 Roundabout	WSDOT	Design – Bid – Build
Segment 2A – Confluence Pkwy South	City of Wenatchee	Progressive Design – Build
Segment 2B – Confluence Pkwy North	City of Wenatchee	Progressive Design – Build
Segment 2C – RR Overpass	City of Wenatchee	Design – Bid – Build
Segment 3A – Cascade Interchange	Douglas County	Design – Bid – Build
Segment 3B – SR 28 & 35 <sup>th</sup> Int.	WSDOT	Design – Bid - Build
Segment 4 – SR 28 Widening	WSDOT	Design – Bid – Build

Most of the project segments utilize traditional design-bid-build delivery approach based on the project size and each agency’s criteria for utilizing appropriate delivery methods. The City of Wenatchee proposes to utilize design build as an innovative project delivery as authorized by Washington State. The WSDOT has a well-established set of design build procedures and processes developed for larger projects. (See the [WSDOT Design-Build Manual](#) for more information). With approval of FHWA and WSDOT and under the oversight of WSDOT, the City of Wenatchee proposes to use progressive design build process to maximize the project delivery schedule and to realize a higher quality product with efficiencies associated with this process. The progressive design-build process involves procurement of a design build firm prior to completion of NEPA such that the design build firm helps inform the NEPA process. This process requires that careful measures be taken to protect the NEPA process and ensure NEPA is performed objectively. The benefit of progressive design build is that the design build firm for the purpose of defining project alternatives. As described under Environmental Compliance for Segment 2, the city has begun the NEPA process and is the timing is right to initiate progressive design build with an anticipated procurement timeline of Spring 2020. This will bring the design build contractor on board at a time when additional predesign to inform mitigation measures.





# Completing the Apple Capital Loop



The benefits of a design-build approach for this project is that construction risks will be assigned to the design build firm allowing the greatest flexibility for construction methods within the technical requirements and objectives. This is particularly valuable for the bridges in Segment 2. Additionally, the delivery schedule risks are transferred to the contractor allowing the most efficient design – build approach. Finally, quality of the end product risks are transferred to the contractor. The City will evaluate and may utilize a partial maintenance contract as part of the project to help facilitate ensuring the quality of work. A full risk assessment will be performed as provided in the example table from the Design Build Manual. Given Segment 2 eligible Design – Build dollar value is approximately \$100 Million, the design-build process provides the city with opportunity to deliver this project on time and within budget.

**Exhibit 3-3 Example Risk Allocation Matrix**

RISK ALLOCATION MATRIX	Design-Bid-Build			Change	Design-Build Process		
	Owner	Shared	Contractor		Owner	Shared	Design Builder
<b>Design Issues</b>							
Definition of Scope	X				X		
Project Definition	X				X		
Establishing Performance Requirement	X				X		
Preliminary survey/base map	X				X		
Geotech Investigation - Initial Borings based on prel des.	X				X		
Geotech Investigation - Initial Borings based on proposal	X			→			X
Establish/Define initial subsurface conditions	X				X		
Int proj Geotechnical Anal/Report based on prel. Des.	X				X		
Proposal specific Geotechnical Analysis/Report	X			→			X
Plan conformance with regulations/guidelines/RFP	X			→			X
Plan accuracy	X			→			X
Design Criteria	X				X		
Conformance to Design Criteria	X				X		
Design Review Process	X			→			X
Design QC	X			→			X
Design QA	X			→			X
Owner Review Time	X				X		
Changes in Scope	X				X		
Constructability of Design	X				X		X
Contaminated Materials	X			→	X	X	

The city and its partners are confident that delivery in compliance with the statutory requirements of INFRA and in accordance with the milestones set forth in the application narrative. The City of Wenatchee as an example, is providing a milestone in which reimbursement only occurs after successful NEPA demonstrates the commitment of the City of Wenatchee elected official to make the necessary investments to deliver the project.

## Conclusion

Finally, Wenatchee is a resilient community whom has faced challenges time and again with game changing solutions. Furthermore, Wenatchee Valley agencies have a history of success in implementing win – win projects. As an example, the Wenatchee waterfront redevelopment has seen over \$150 million in public and private investments over the last 15 years. These investments were made possible through collaborative partnerships with the Chelan PUD, multiple Washington State agencies, the federal government, and local interest groups. Our track record is unparalleled for a community of our size. The waterfront redevelopment has been highlighted as a success model to replicated all across Washington State. The Apple Capital Loop project has this same opportunity to provide immense positive change for this community and region.

This technical feasibility analysis illustrates in great detail the work that has been done to support delivery of the project. Through continuing our efforts in due diligence, this project will be completed with success for all involved. This is the project spirit that Wenatchee brings to the table in building community that serves our people, the state, and the Nation. There are no short cuts around doing the work, however, there are ways to streamline and innovate processes as demonstrated in this analysis. We are thankful USDOT has opened the door to innovation and new ways of doing business and welcome the opportunity to demonstrate these opportunities for others to utilize.