

ENVIRONMENTAL ASSESSMENT EAST-WEST CORRIDOR PROJECT

YAKIMA COUNTY, WASHINGTON

Lead Agencies

Federal Highway Administration



U.S. Department of Transportation

Federal Highway Administration

Washington State Department of Transportation



**Washington State
Department of Transportation**

Cooperating Agencies

US Army Corps of Engineers



Participating Agencies

US Bureau of Reclamation
Department of Archaeology and Historical Preservation

Federal Emergency Management Agency
National Marine Fisheries Service
Yakama Nation

FEBRUARY 2023

ENVIRONMENTAL ASSESSMENT SIGNATURES

Submitted by:



Matt Pietrusiewicz, P.E.
County Engineering
Yakima County Public Works

2/16/23

Date

Concurred by:



Jay Drye
Director
Washington Department of Transportation
Local Programs

2/16/2023

Date

Approved by:



for Gary Martindale
Area Engineer, Washington Division
Federal Highway Administration

2/17/2023

Date

The Federal Highway Administration may publish a notice in the Federal Register, pursuant to 23 United States Code (USC) § 139(l), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions would be barred unless such claims are filed within 150 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims would apply.

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PUBLIC COMMENT PERIOD

The public comment period for this document begins February 20th, 2023 and ends March 22nd, 2023. Written comments on this document can be submitted through the project website (cityofyakima-terraceheights.org) or by mail or email to the following addresses:

Attention: Mr. Brett Sheffield
Yakima County Engineering
128 N 2nd St
Yakima, WA 98901

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[\(HTTPS://CITYOFYAKIMA-TERRACEHEIGHTS.ORG/EAST-WEST-CORRIDOR\)](https://cityofyakima-terraceheights.org/east-west-corridor)

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- Appendix B. Project Drawings and Plans
- Appendix C. Agency Coordination
- Appendix D. Right of Way Acquisitions
- Appendix E. Section 106 Consultations
- Appendix F. Section 4(f) Compliance
- Appendix G. ESA Section 7 Consultation
- Appendix H. Public Comments

LIST OF ACRONYMS AND ABBREVIATIONS

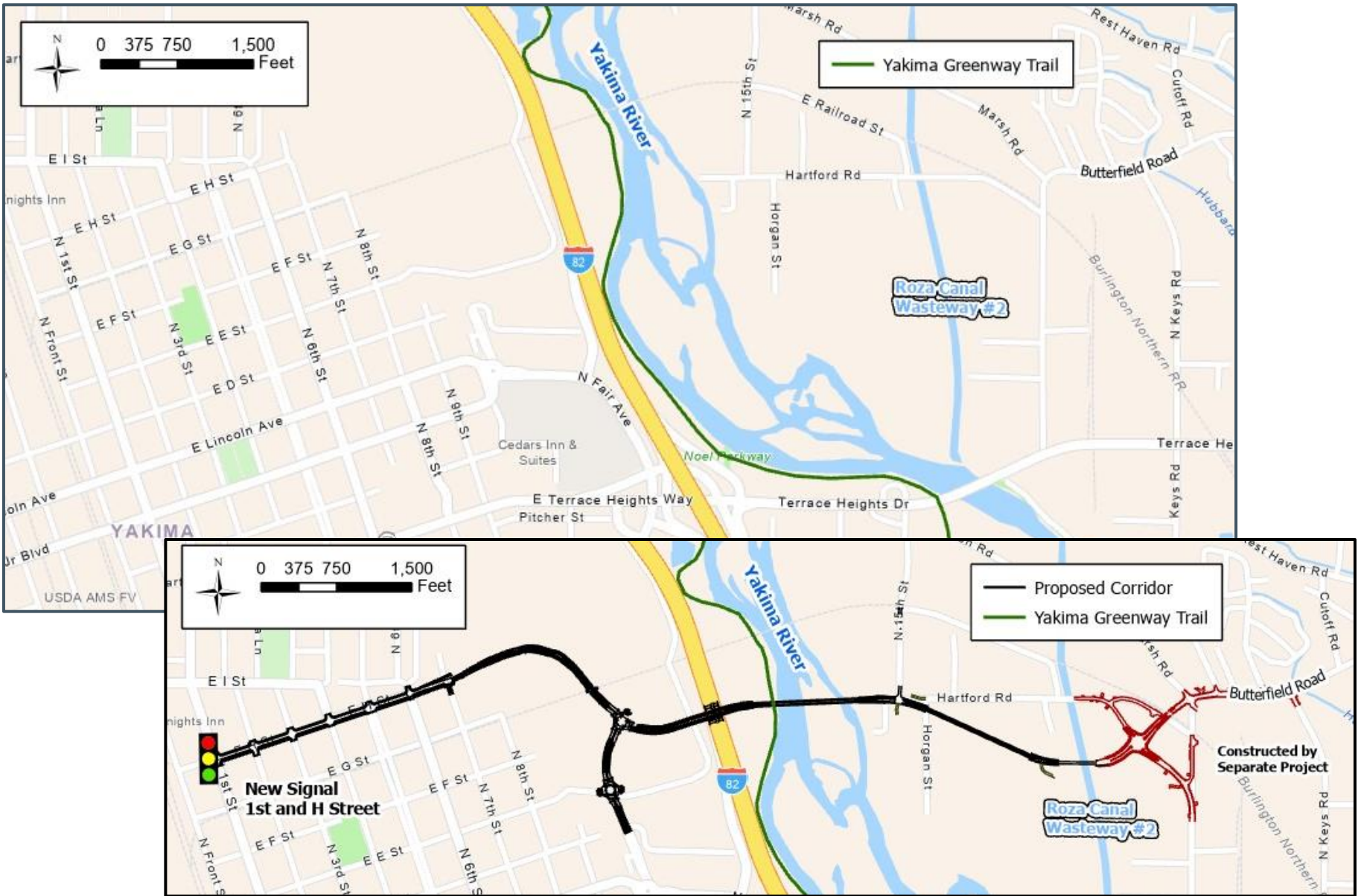
| | | | |
|-------|--|-------|--|
| ADA | Americans with Disabilities Act | LOS | Level of Service |
| APE | Area of Potential Effect | NAC | Noise Abatement Criteria |
| BA | Biological Assessment | NEPA | National Environmental Policy Act |
| BFE | Base Flood Elevation | NMFS | National Marine Fisheries Service |
| BMPs | Best Management Practices | OHW | Ordinary High Water |
| CFR | Code of Federal Regulations | OHWM | Ordinary High-Water Mark |
| CESCL | Certified Erosion and Sediment Control Lead | PGIS | Pollution-Generating Impervious Surface |
| CLOMR | Conditional Letter of Map Revision | PM | Particulate Matter |
| CO | Carbon Monoxide | RIS | Roza Irrigation District |
| CY | Cubic Yard | ROW | Right-of-way |
| DAHP | Washington State Department of Archaeology and Historic Preservation | SEPA | State Environmental Policy Act |
| dB | Decibel | SPCC | Spill Prevention Control and Countermeasures |
| EA | Environmental Assessment | SPLs | Sound Pressure Levels |
| ECY | Washington State Department of Ecology | TESC | Temporary Erosion Sediment Control |
| ELJ | Engineered Logjam | TCE | Temporary Construction Easement |
| EPA | US Environmental Protection Agency | USBR | US Bureau of Reclamation |
| FEMA | Federal Emergency Management Agency | USACE | US Army Corps of Engineers |
| FHWA | Federal Highway Administration | USFWS | US Fish and Wildlife Service |
| I-82 | Interstate 82 | WDFW | Washington State Department of Fish and Wildlife |
| IJR | Interchange Justification Report | WSDOT | Washington State Department of Transportation |
| | | YVCOG | Yakima Valley Conference of Governments |

1. INTRODUCTION

Yakima County is proposing to construct an East-West Corridor in Yakima County, Washington from the intersection of East H Street and North 1st Street on the west side of Interstate 82 (I-82) in the City of Yakima to the eastern terminus at the Roza Canal Wasteway # 2 in the community of Terrace Heights. The corridor would serve some of the traffic from the existing Yakima Avenue/Terrace Heights Drive corridor and provide more direct access to the northern part of Yakima/Terrace Heights. The improvements included in this Proposed Project are elements of the local transportation corridor which are compatible with the recommended alternative from the I-82/Yakima Avenue/Terrace Heights Drive Interchange Justification Report (IJR) (Lochner 2017). In addition to connecting to the possible future interchange and providing congestion relief, the Proposed Project would add bicycle and pedestrian facilities. This would include a new connection to the Yakima Greenway Trail. The Yakima Greenway Trail is an approximately 20-mile trail adjacent to the Yakima and Naches Rivers that stretches from the Town of Naches to the City of Union Gap.

The existing features of East H Street, I-82, and the other existing local roads represent the No Build Alternative. The No Build Alternative includes routine maintenance to keep the existing transportation network in good operating condition. See **Figure 1** for a comparison of the No Build Alternative and the Proposed Project.

Figure 1. No Build Condition and Proposed Alignment



2. WHAT IS THE PURPOSE OF THE PROJECT?

The purpose of the Proposed Project is to reduce congestion and connect the growing neighborhood of Terrace Heights to the City of Yakima:

- Provide an alternative Yakima River crossing for east-west travel between the City of Yakima and Terrace Heights.
- Increase mobility, by decreasing travel delay, and relieving traffic congestion at the I-82/Yakima Avenue Interchange and on Terrace Heights Drive and Yakima Avenue.
- Construct the local road corridor which would allow for the consideration of construction of the recommended alternative for an interchange with I-82 identified in the WSDOT I-82/Yakima Avenue/Terrace Heights Drive IJR (Lochner 2017).
- Provide bicycle and pedestrian facilities including a connection to the Yakima Greenway Trail.
- Serve the existing approved transportation and land use planning along the roadway corridor as documented in the Yakima Valley Conference of Governments (YVCOG) 2020-2045 Metropolitan and Regional Transportation Plan (YVCOG 2020).

3. WHERE WOULD THE PROJECT BEGIN AND END? (LOGICAL TERMINI AND INDEPENDENT UTILITY)

Policies and procedures for implementing NEPA prescribed in FHWA's regulation 23 CFR 771 include criteria for project development in Part 771.111(f), requiring that a transportation improvement:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scale;
- Have independent utility or independent significance (i.e., be usable and be a reasonable expenditure of funds even if no additional transportation improvements are made in the area); and
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The terminus at East H Street and North 1st Street is "logical" because it would connect to a principal arterial. To minimize congestion impacts to the surrounding neighborhood and provide the necessary capacity for additional traffic, the existing East H Street corridor must be brought up to current standards before the rest of the corridor can be constructed. This would also allow the project to address the lack of pedestrian and bicycle facilities along East H Street.

The terminus at Roza Canal Wasteway #2 is logical because it connects to a previously constructed phase of Cascade Mill Parkway at a roundabout intersection with Butterfield Road.

The Proposed Project would produce significant improvements without the need for completion of any future projects. It would provide a new Yakima River crossing accommodating potential future closures of the Terrace Heights bridge by providing a new route which reduces the detour distance that would have to be travelled by Terrace Heights residence to cross the Yakima River. The new route between Terrace Heights and the City of Yakima also reduces traffic delays by providing an alternative to which traffic would be diverted from the E Yakima Avenue/Terrace Heights Drive corridor. Pedestrian and bike facilities would provide access to the Greenway Trail via Cascade Mill Parkway and bike lanes provided on H Street and Bravo Company Boulevard are consistent with the City of Yakima’s Bicycle Master Plan (City of Yakima 2017c).

The project’s relationship to other future proposals is discussed in detail in Section 5 below.

4. WHAT ARE THE NEEDS FOR THE PROJECT?

The needs for the project include the following:

- **Congested Corridor** –The current road network cannot support the growth anticipated in the area under the current comprehensive plan. The Terrace Heights neighborhood lies just to the east of the City of Yakima (City). The neighborhood—an unincorporated part of Yakima County—has grown considerably over the last five decades, with its population increasing fivefold in the 30 years between 1970 and 2000, to a 2019 total of 8,507 (BergerABAM 2011, US Census Bureau 2019). Redevelopment of the Boise Cascade Mill Site consistent with the planned land use in the current City of Yakima Comprehensive Plan (City of Yakima 2017a) is also anticipated to increase traffic demand within the City of Yakima.

The LOS on the Yakima Avenue/Terrace Heights Drive corridor has been getting steadily worse and by 2035 it is expected to have multiple turning movements operating at LOS E or F (Lochner 2017). LOS is a letter grade corresponding to the amount of congestion a road has when completed to a standard. LOS A is the best or the least congested grade. LOS F indicates failure because the demand for a road is more than its capacity (Transportation Research Board 2016).

The current level of service (LOS) along the Yakima Avenue/Terrace Heights Drive corridor has triggered Yakima County’s concurrency requirements, which limits new development permits along the corridor. In order to relax the restrictions, the County must either increase the capacity of the existing corridor or divert sufficient traffic volume onto another route. Right-of-way constraints along the existing Yakima Avenue/Terrace Heights Drive route prevent widening of the existing roadway. The future LOS at the Yakima Avenue interchange is also anticipated to cause back-ups onto the I-82 mainline (Lochner 2017).

- **Emergency Response** – The Yakima River poses a natural barrier to travel between Yakima and Terrace Heights. Historically, east-west traffic in the project vicinity has had only one option to travel between these two locations: the Yakima Avenue/Terrace Heights Drive corridor. A new corridor is needed to provide an alternative route to Terrace Heights during any future closures of the Terrace Heights Bridge as well as an additional route for emergency services.
- **Lack of pedestrian and bicycle connectivity** – Access to the Greenway Trail is limited as it travels between I-82 and the Yakima River. The existing East H Street corridor does not include sidewalks or bike lanes and there is no access for pedestrians to the Greenway Trail from the surrounding residential neighborhood.

5. HOW DOES THE PROPOSED PROJECT RELATE TO OTHER PROPOSALS IN THE AREA?

The Proposed Project is related to two other transportation projects in the vicinity, the I-82/Yakima Avenue/Terrace Heights Drive Interchange and Phase 1 of Cascade Mill Parkway which will be discussed below.

The I-82/Yakima Avenue/Terrace Heights Drive Interchange is a possible future improvement which may be constructed by WSDOT. The East-West corridor provides a local transportation improvement which is compatible with the recommended alternative from the I-82/Yakima Avenue/Terrace Heights Drive IJR (Lochner 2017).

Yakima County has completed Phase 1 of Cascade Mill Parkway which was cleared through a separate State Environmental Policy Act (SEPA) determination (Yakima County Public Services 2018). This project constructed the roundabout intersection with Butterfield Road to which the proposed project would connect. The roundabout alignment is shown on **Figure 1**.

6. WHAT IS THE PROPOSED PROJECT?

With available project funding to implement the Proposed Project, Yakima County is now transitioning to the National Environmental Policy Act (NEPA) process, in coordination with FHWA. This Environmental Assessment (EA) evaluates the Proposed Project benefits and environmental impacts, relevant to the No Build Alternative.

The Proposed Project (**Figure 2**) would include construction of three separate streets:

- **East H Street** – This road would include one 11-foot-wide travel lane and a 5-foot-wide bike lane with a 2-foot-wide buffer in each direction and a center turn lane. 7-foot-wide sidewalks would be provided on both sides of the road. The road would be extended to the east from the current terminus at North 7th Street where it would connect to Bravo Company Boulevard as the road turns to the south. The existing portion from North 1st Street to North 7th Street would be widened to allow for addition of the center turn lane and bike lanes. A new signal would be installed at the intersection with North 1st Street. The East H Street corridor upgrade to the current standard must occur prior to the opening of Bravo Company Boulevard north of its proposed roundabout connection with Cascade Mill Parkway. East H Street is currently a narrow local access road with no lane markings which is not adequate for additional traffic.
- **Bravo Company Boulevard** – An extension of Bravo Company Boulevard connecting to East H Street would be constructed which would turn south and connect to the current terminus near Fair Avenue. This road would include two travel lanes, a buffered bike lane in both directions, center median, and 10-foot-wide sidewalk on both sides of the roadway. A 14-foot-wide shared use pathway would be constructed in lieu of a sidewalk on the north side of the roadway between East H Street and Cascade Mill Parkway. One new at-grade railroad crossing would be required. A roundabout intersection with Cascade Mill Parkway would be constructed along with one additional roundabout intersection to connect to an existing access road to the adjacent properties.
- **Cascade Mill Parkway** – This road would include two travel lanes in both directions, center turn lane or median as appropriate, bike lanes in both directions, shared use pathway on the north side and sidewalk on the south side. Cascade Mill Parkway would connect to Bravo Company Boulevard at a roundabout intersection and then continue east beneath I-82 and across the Yakima River and Roza Canal Wasteway #2.

This proposed corridor alignment would require construction of four bridges including:

- **Yakima River Pedestrian and Vehicular Bridge** – Approximately 869 feet long, 72 feet wide and constructed in four spans, the proposed bridge would carry four vehicular travel lanes as well as two bike lanes and a shared use pathway. A pier for the proposed permanent bridge over the Yakima River would need to be installed below the Ordinary High-Water Mark (OHWM) of the river while others would be installed within the limits of the 100-year floodplain. The construction of the bridge would require a temporary work bridge within the Yakima River. See **Figure 4**.

- **Roza Canal Wasteway #2 Pedestrian and Vehicular Bridge** – A 129-foot long, 79-foot wide, single-span bridge would be constructed at a new crossing location to connect the corridor to the existing portion of Cascade Mill Parkway. The proposed bridge would have four vehicular travel lanes, two bike lanes, a shared use pathway on the north side, and sidewalk on the south side. See **Figure 5**.
- **Interstate 82 Eastbound and Westbound Overpass Bridges** – Two single-span bridges, one for each direction of traffic, would be constructed to carry I-82 over the proposed corridor. The roadway widths would match existing I-82 geometry with 2 lanes in each direction, plus the off-ramp for Fair Avenue. The bridges would accommodate future widening or the addition of collector-distributor ramp bridges by WSDOT in the future. See **Figure 6**.

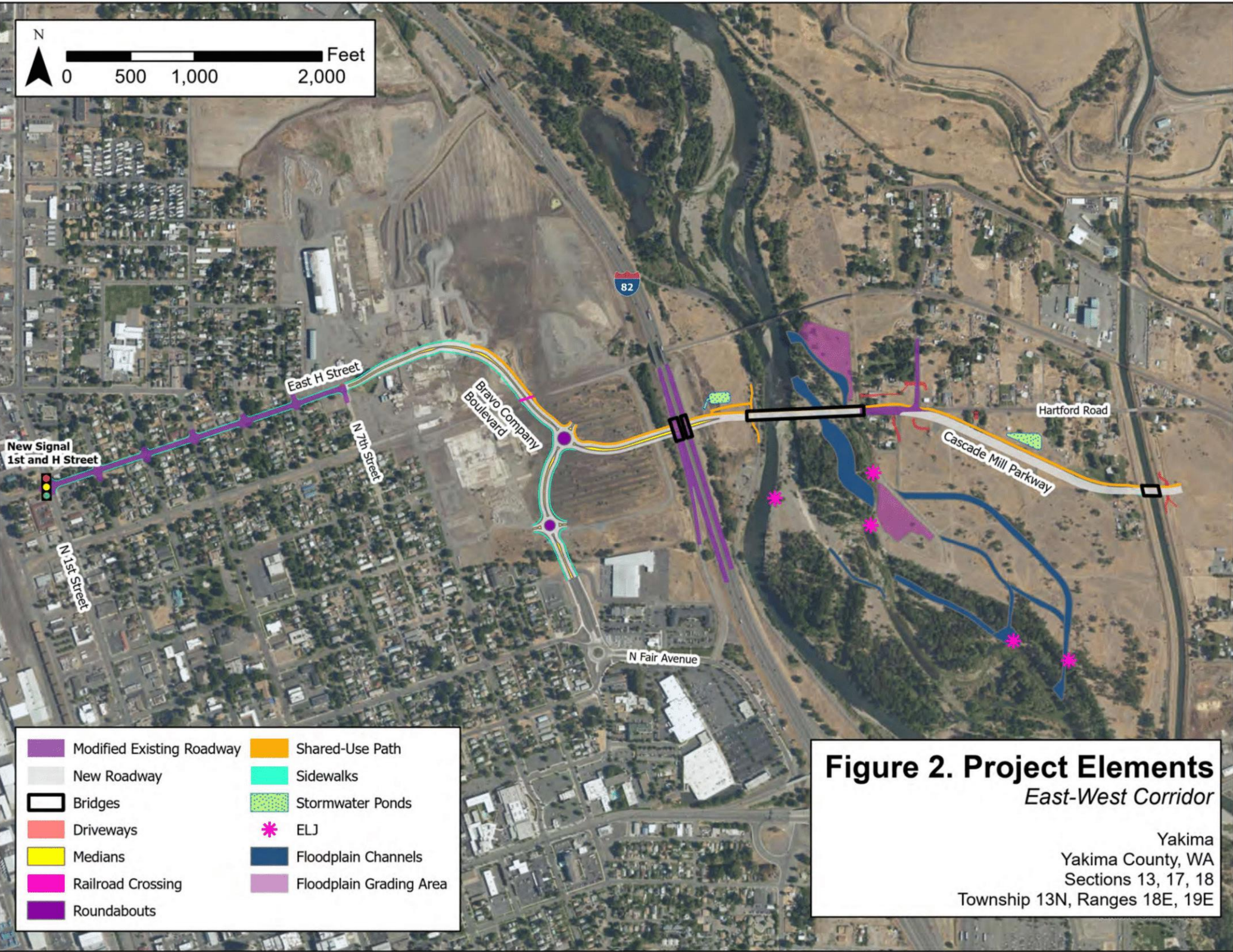
Several utilities would be installed along the H Street or Bravo Company Boulevard roadway corridors including domestic water, sanitary sewer, stormwater, and an underground duct bank for fiber optic/broadband service. Lighting would be provided along the entire corridor. Existing overhead power and communications utilities would be relocated within the right-of-way (ROW) along H Street, Hartford Road and Butterfield Road to accommodate roadway construction.

Stormwater water quality treatment would be provided consistent with the requirements of the Yakima County Regional Stormwater Manual (Yakima County 2010). The Proposed Project would provide treatment and flow control for all impervious surfaces, both new and replaced, through the installation of infiltration trenches parallel to the proposed roadway and two ponds north of the proposed roadway.

Floodplain mitigation would be provided for the impacts created by construction of the new Yakima River Bridge piers and floodplain fill. This mitigation would be in the form of floodplain grading, backchannel construction, levee improvements, and large wood habitat structures as appropriate. See **Figure 7** for proposed locations. Mitigation work conducted as part of this project would be consistent with the work currently being done with Yakima County's Yakima River Gap to Gap Ecosystem Restoration Project. The purpose of this mitigation work is to encourage river flow towards the area of the floodplain with conservation status rather than its current path that flows against the west bank levee, provide cover for juvenile salmonids in areas that currently have poor cover, and to encourage the establishment of cottonwood stands further upland in the floodplain.

Construction is anticipated to begin in the summer of 2023 and last 7 years. Construction would be done in phases (**Figure 8**):

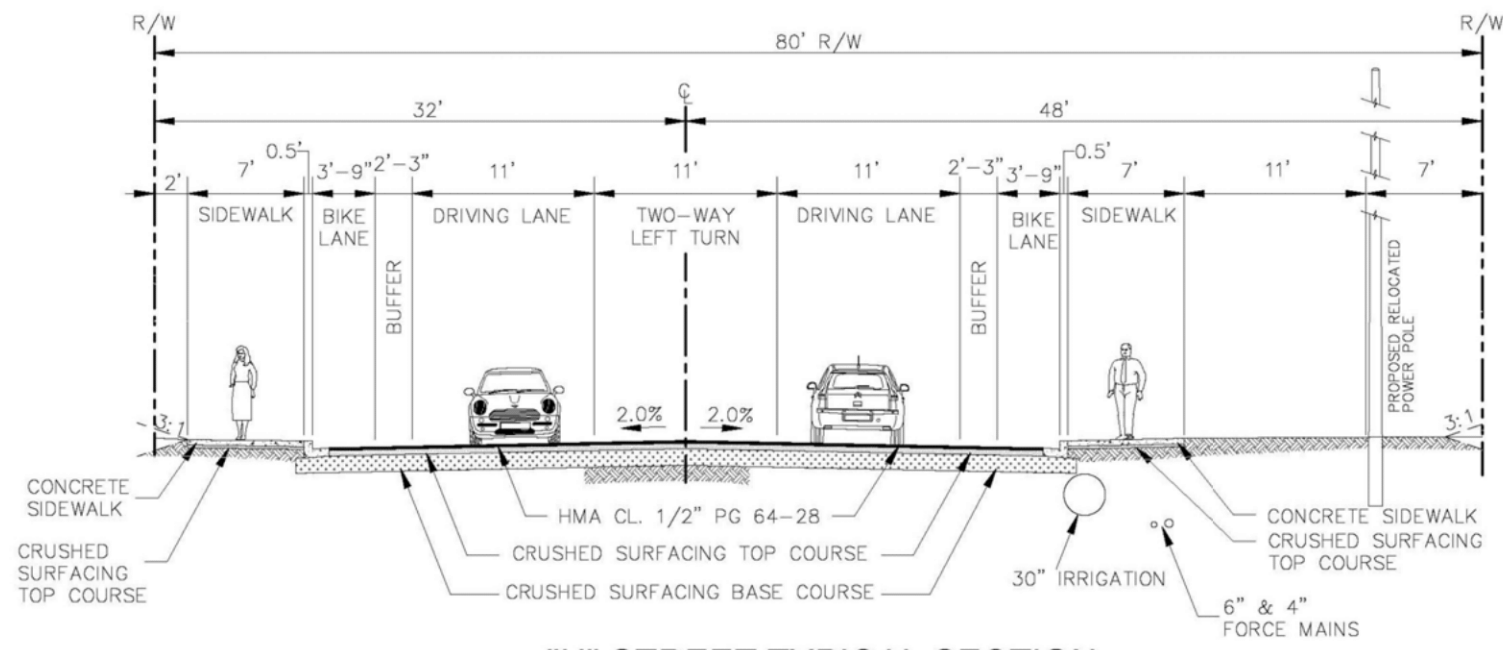
- Phase 2 - **Roza Canal Wasteway #2 bridge to N 15th Street and floodplain mitigation work**): summer 2023 to fall 2024
- Phase 3 - **Yakima River Bridge to westernmost roundabout on Bravo Company Boulevard and I-82 work**: 2024 to 2027
- Phase 4 - **Bravo Company Boulevard and H Street**: 2027 to 2028



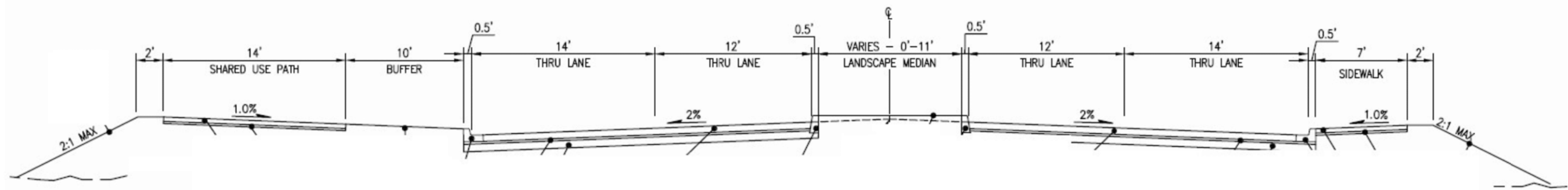
- | | | | |
|--|---------------------------|--|-------------------------|
| | Modified Existing Roadway | | Shared-Use Path |
| | New Roadway | | Sidewalks |
| | Bridges | | Stormwater Ponds |
| | Driveways | | ELJ |
| | Medians | | Floodplain Channels |
| | Railroad Crossing | | Floodplain Grading Area |
| | Roundabouts | | |

Figure 2. Project Elements
East-West Corridor

Yakima
 Yakima County, WA
 Sections 13, 17, 18
 Township 13N, Ranges 18E, 19E

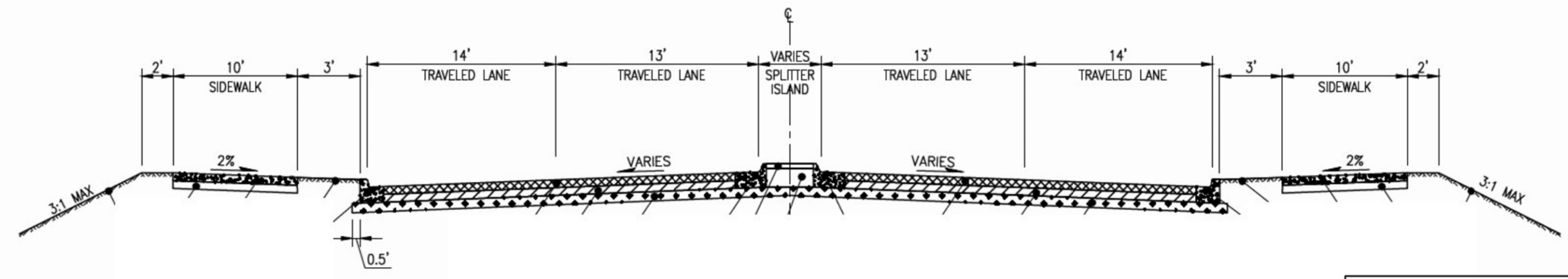


"H" STREET TYPICAL SECTION



TYPICAL ROADWAY SECTION

MILL PARKWAY 87+84.52 TO 102+70.29
NTS

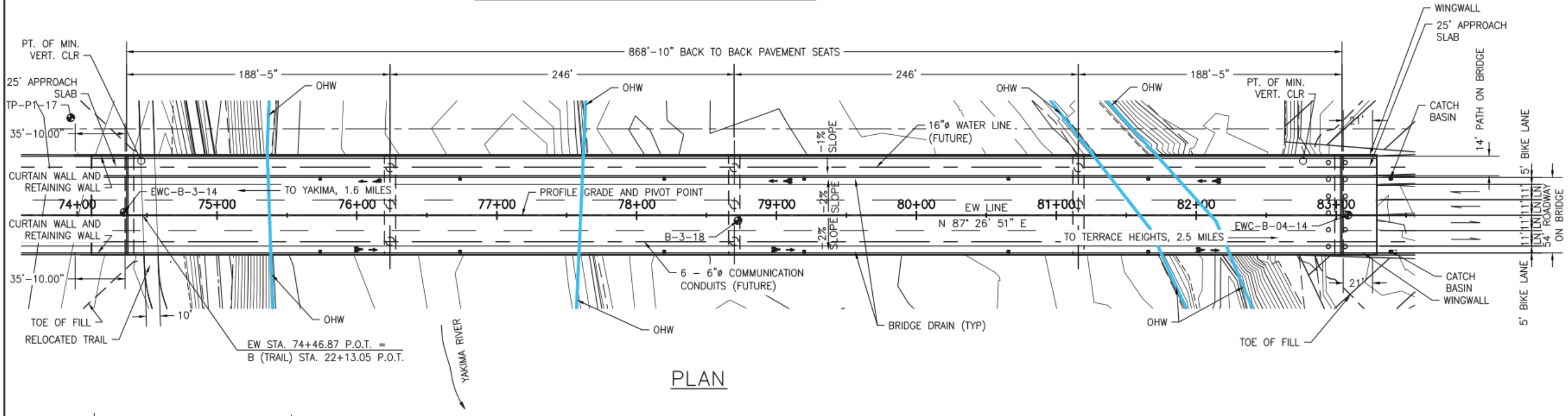


Bravo Blvd.
506+00 TO 509+50
NTS

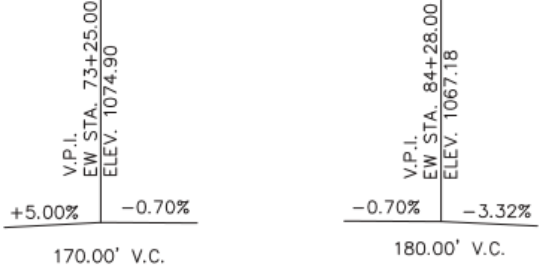
Figure 3. Typical Sections
East-West Corridor

Yakima
Yakima County, WA
Sections 13, 17, 18
Township 13N, Ranges 18E, 19E

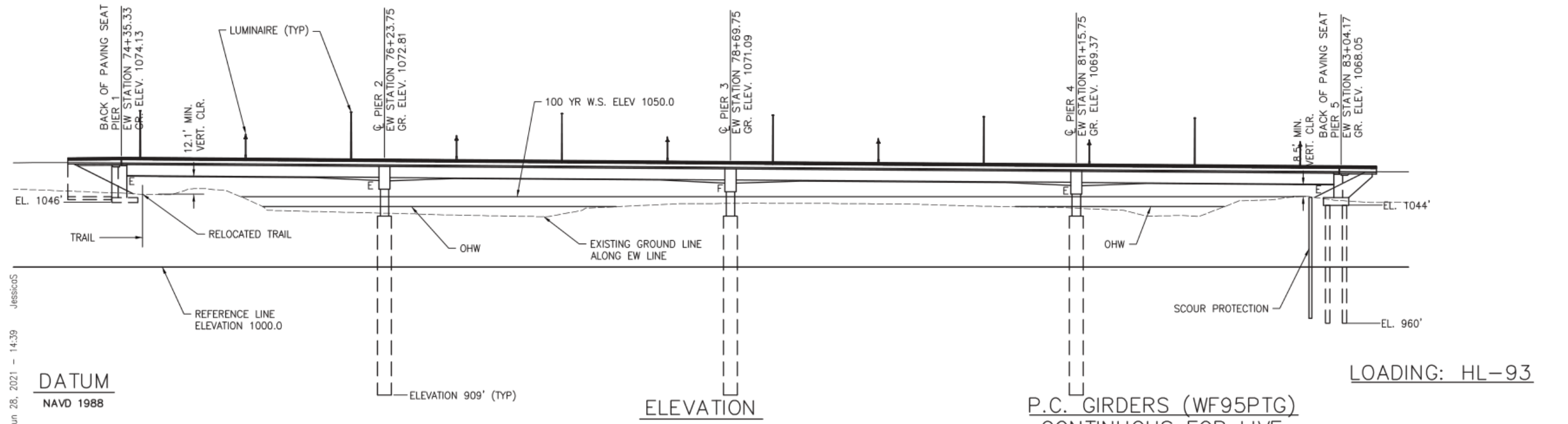
SEC. 17&18, T. 13 N., R. 19 E.



PLAN



EW PROFILE GRADE



ELEVATION

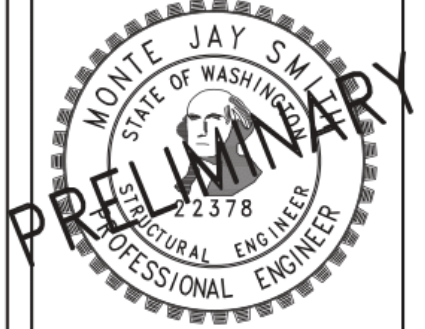
P.C. GIRDERS (WF95PTG)
CONTINUOUS FOR LIVE
LOAD. DECK CAST AFTER
POSTTENSIONING. DO NOT SCALE REDUCED SHEETS



CASCADE MILL
CORRIDOR
PROJECT
PHASE 3

CRP#

PREPARED UNDER
THE DIRECTION OF:



DATE:

PROJECT ENGINEER:
M J SMITH

DRAWN: M. SMITH CHECKED BY: -

REVISION:

FILENAME: Yakima River Bridge 5-20-21.dwg

Yakima River
Bridge Plan &
Profile

Figure 4

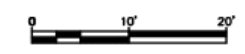
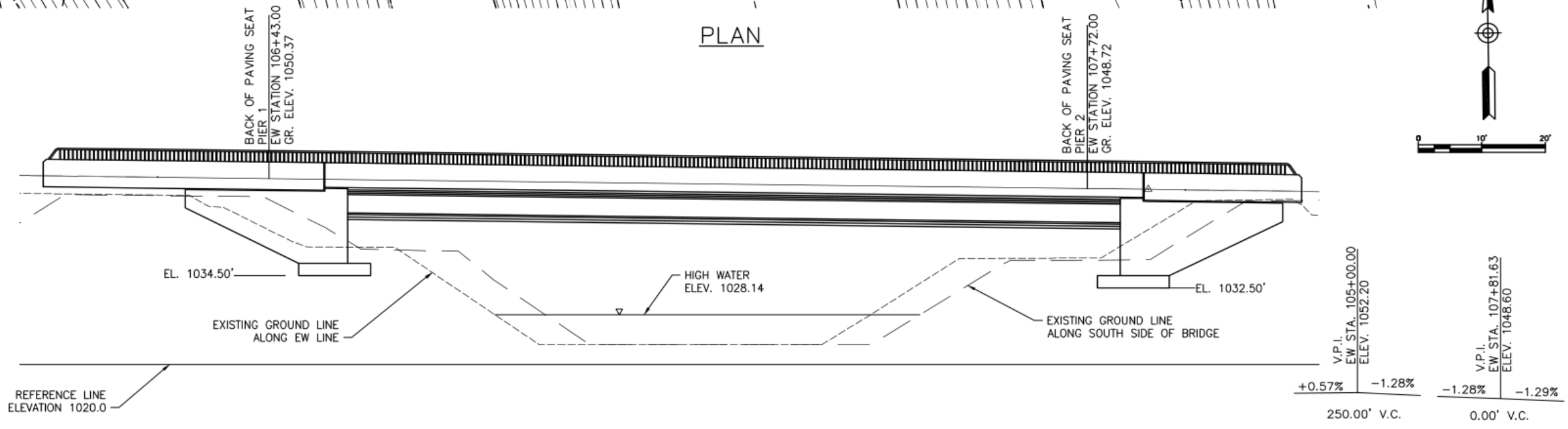
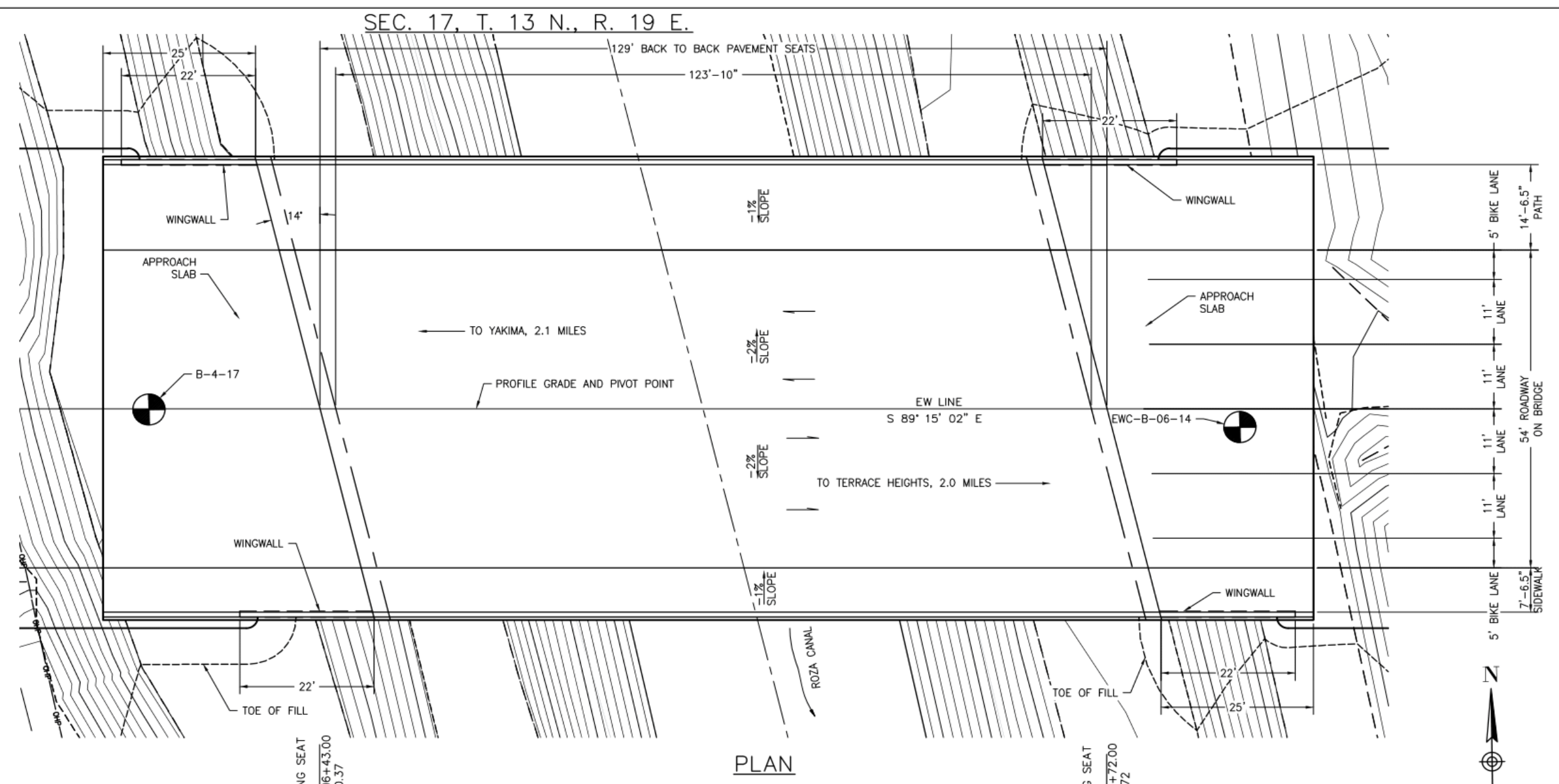
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DATUM
NAVD 1988



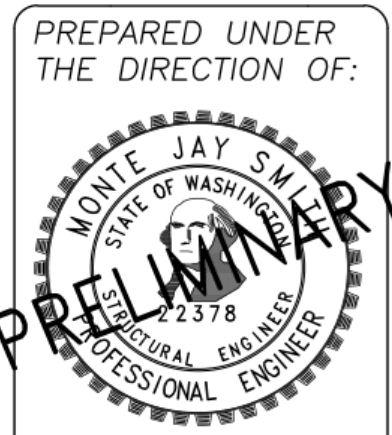
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GRADE ELEVATIONS SHOWN ARE FINISH GRADES ALONG EW LINE AND ARE EQUAL TO THE PROFILE GRADE.



CASCADE MILL
CORRIDOR
PROJECT
PHASE 2

CRP#



PREPARED UNDER
THE DIRECTION OF:

COUNTY ENGINEER
DATE:

| | |
|--------------------------------|------------------|
| PROJECT ENGINEER: M J SMITH | |
| DRAWN: M. SMITH | CHECKED BY: - |
| REVISION: | |
| FNAME: Roza Canal.dwg | |

Roza Canal
Wasteway #2
Bridge
Plan and Profile

Figure 5

DO NOT SCALE REDUCED SHEETS

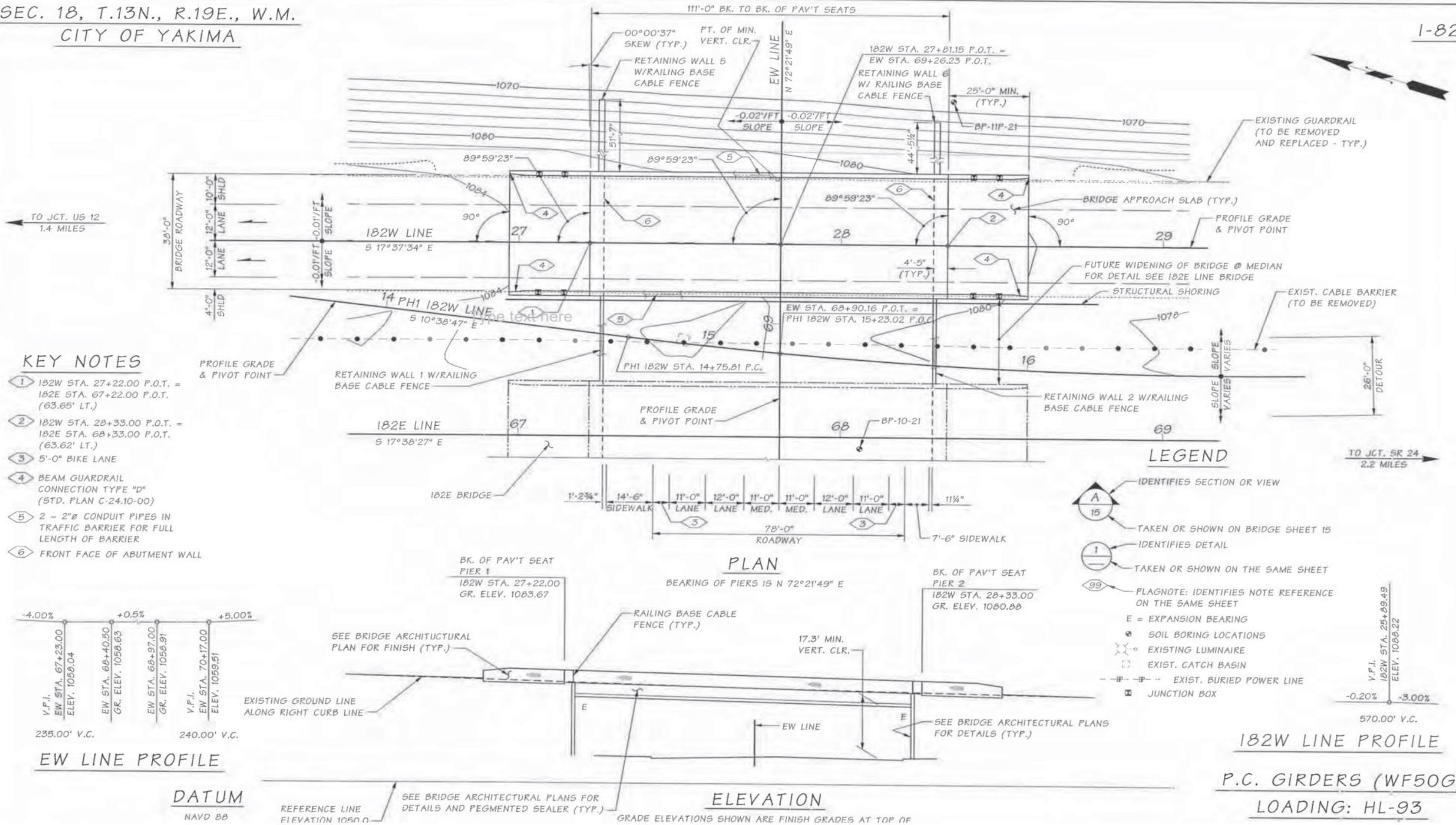


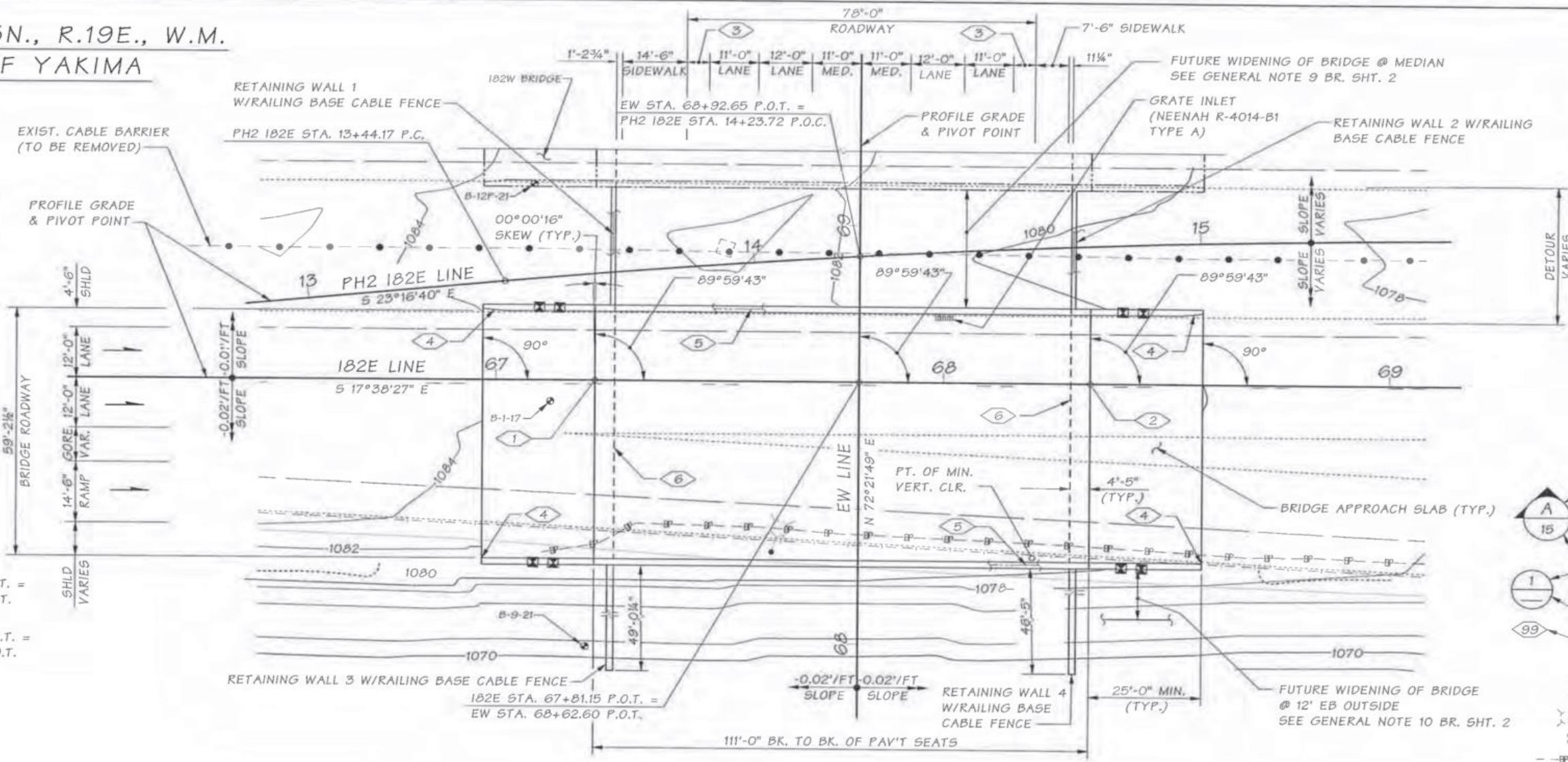
Figure 6.1
I-82 Westbound Bridge
Plan and Profile

SHEET 1

SEC. 18, T.13N., R.19E., W.M.
CITY OF YAKIMA

1-82

NOTE:
ALL EXISTING UTILITY LINES SHALL BE REMOVED UNLESS OTHERWISE NOTED.



KEY NOTES

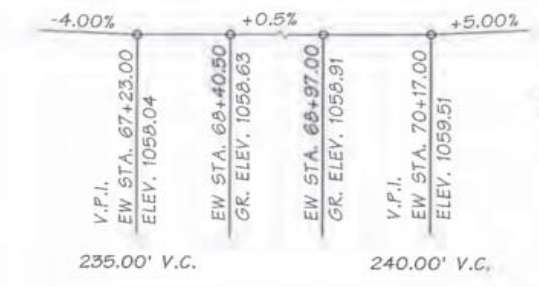
- ① 182E STA. 67+22.00 P.O.T. = 182W STA. 27+22.00 P.O.T. (63.65' RT.)
- ② 182E STA. 68+33.00 P.O.T. = 182W STA. 28+33.00 P.O.T. (63.62' RT.)
- ③ 5'-0" BIKE LANE
- ④ BEAM GUARDRAIL CONNECTION TYPE "D" (STD. PLAN C-24.10-00)
- ⑤ 2 - 2" CONDUIT PIPES IN TRAFFIC BARRIER FOR FULL LENGTH OF BARRIER
- ⑥ FRONT FACE OF ABUTMENT WALL

LEGEND

- ⊙ IDENTIFIES SECTION OR VIEW
- ⊙ TAKEN OR SHOWN ON BRIDGE SHEET 15
- ⊙ IDENTIFIES DETAIL
- ⊙ TAKEN OR SHOWN ON THE SAME SHEET
- ⊙ FLAGNOTE: IDENTIFIES NOTE REFERENCE ON THE SAME SHEET
- E = EXPANSION BEARING
- ⊙ SOIL BORING LOCATIONS
- ⊙ EXISTING LUMINAIRE
- ⊙ EXIST. CATCH BASIN
- ⊙ EXIST. BURIED POWER LINE
- ⊙ JUNCTION BOX

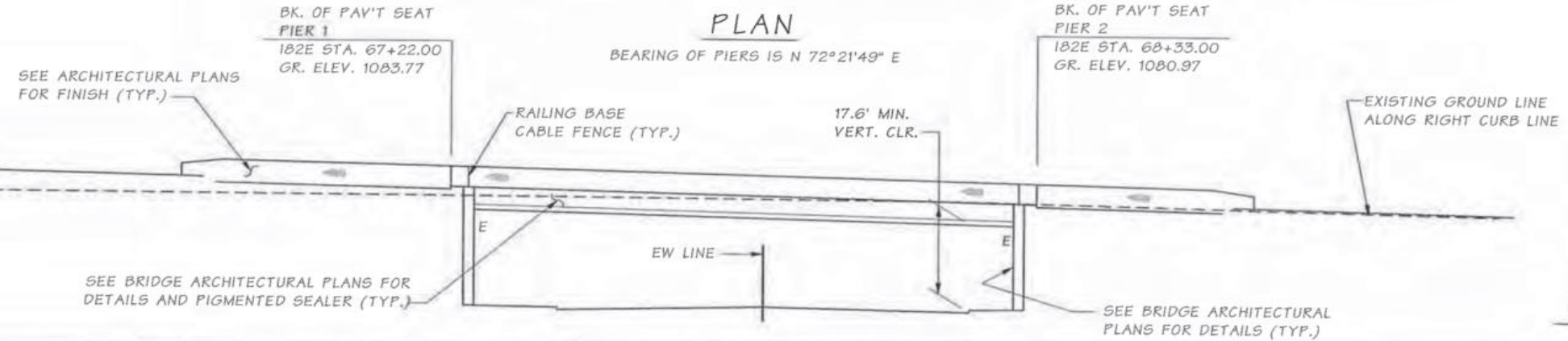
PLAN

BEARING OF PIERS IS N 72°21'49" E



EW LINE PROFILE

DATUM
NAVD 88



ELEVATION

GRADE ELEVATIONS SHOWN ARE FINISH GRADES AT TOP OF BRIDGE DECK ON 182E LINE AND ARE EQUAL TO PROFILE GRADE

182E LINE PROFILE

P.C. GIRDERS (WF50G)
LOADING: HL-93

SHEET 1

Figure 6.2
I-82 Eastbound Bridge
Plan and Profile

Figure 7. Floodplain Mitigation

East-West Corridor

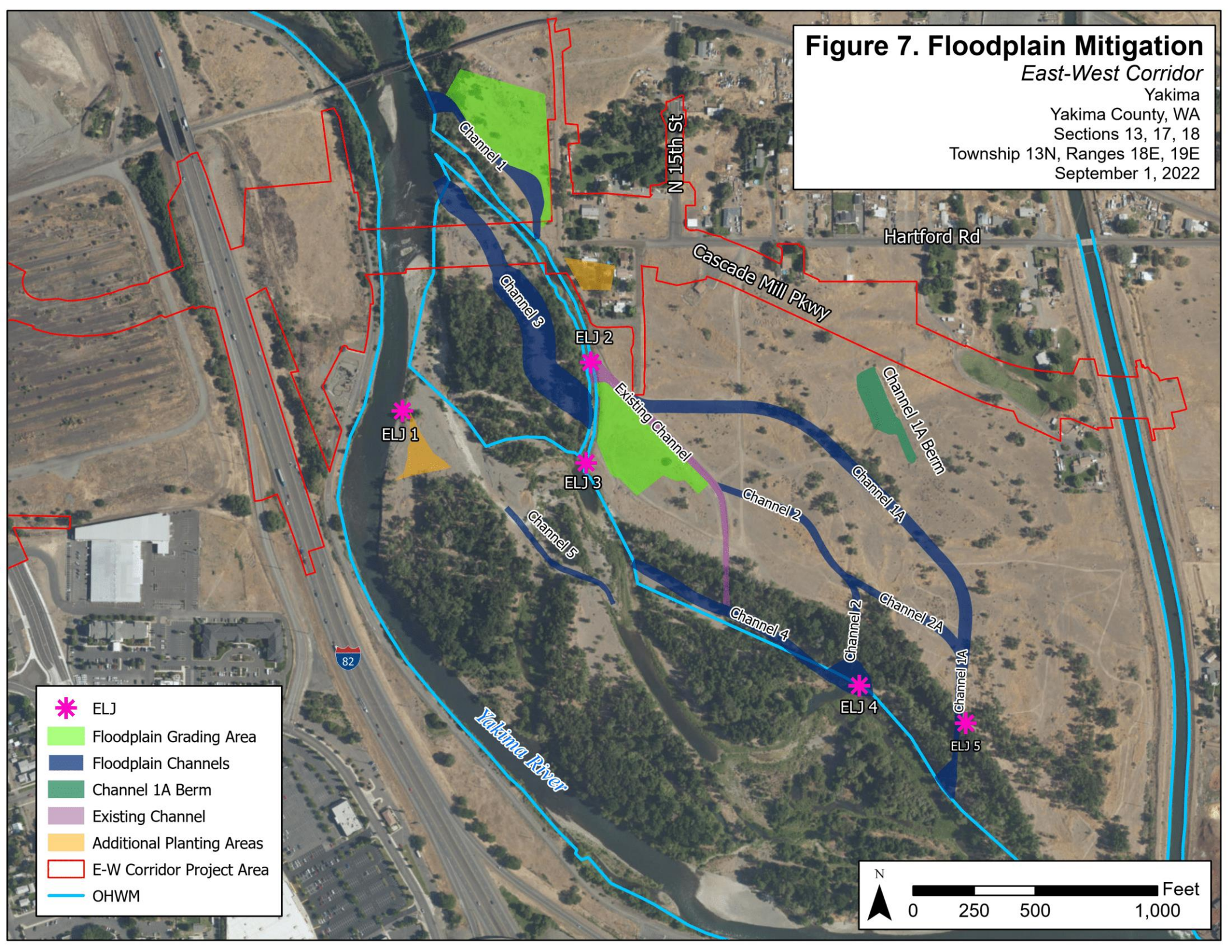
Yakima

Yakima County, WA

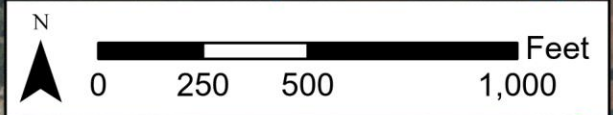
Sections 13, 17, 18

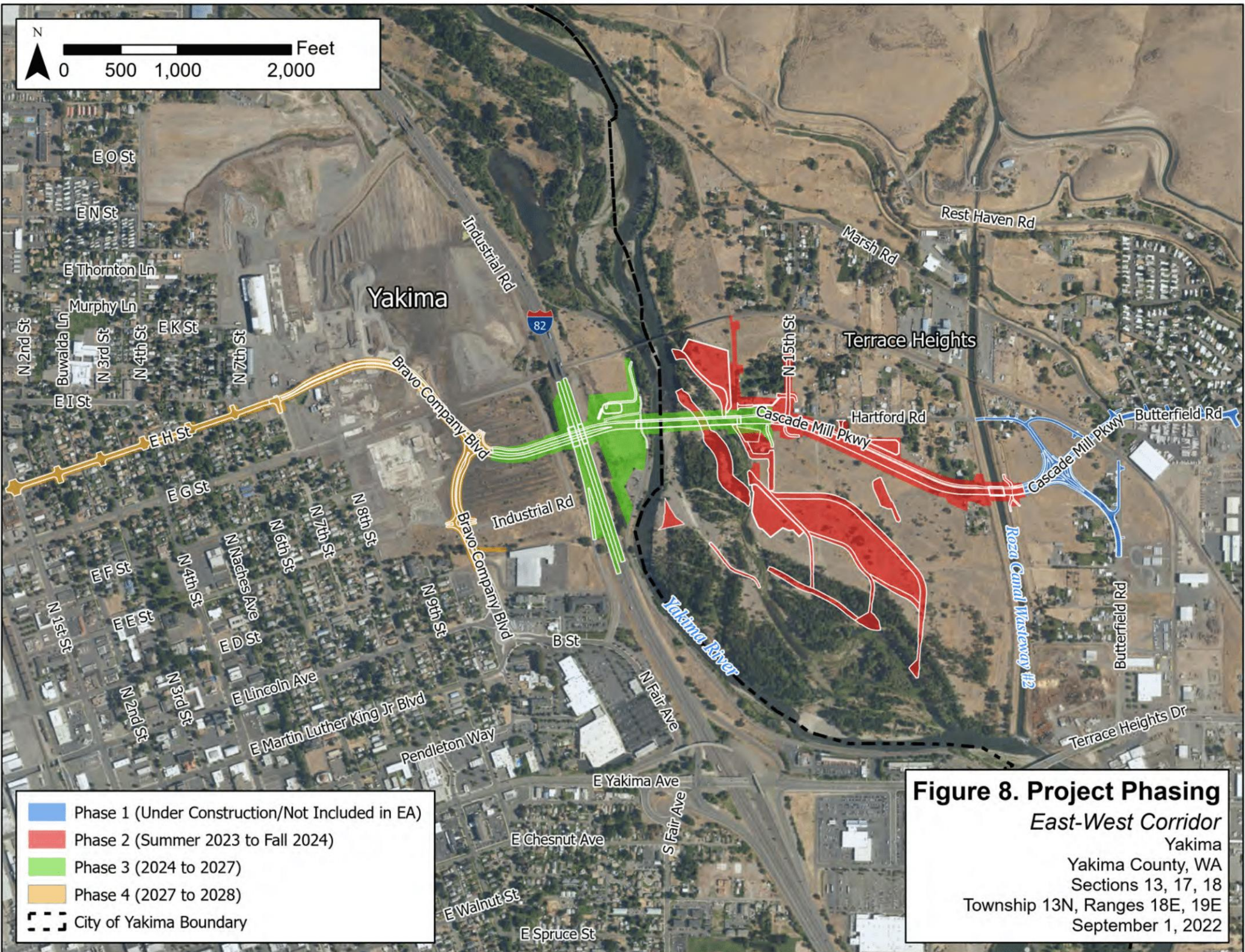
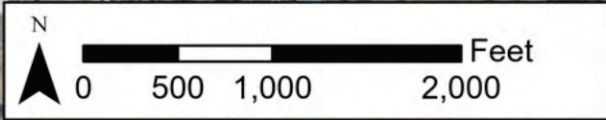
Township 13N, Ranges 18E, 19E

September 1, 2022



-  ELJ
-  Floodplain Grading Area
-  Floodplain Channels
-  Channel 1A Berm
-  Existing Channel
-  Additional Planting Areas
-  E-W Corridor Project Area
-  OHWM





- Phase 1 (Under Construction/Not Included in EA)
- Phase 2 (Summer 2023 to Fall 2024)
- Phase 3 (2024 to 2027)
- Phase 4 (2027 to 2028)
- City of Yakima Boundary

Figure 8. Project Phasing
East-West Corridor
 Yakima
 Yakima County, WA
 Sections 13, 17, 18
 Township 13N, Ranges 18E, 19E
 September 1, 2022

7. WHAT WOULD HAPPEN IF THE PROPOSED PROJECT WERE NOT IMPLEMENTED?

If FHWA does not select the Proposed Project for implementation, no new corridor would be provided between the City of Yakima and Terrace Heights and access to the Cascade Mill Site would not be provided. Increased traffic volumes over time would continue to create congestion and delays on the Yakima Avenue/Terrace Heights Drive corridor and negatively affect I-82 operating conditions. The WB off-ramp at the Yakima Avenue Interchange would operate at LOS E. The LOS at the existing interchange is anticipated to cause back-ups onto the I-82 mainline by 2035 (Lochner 2017).

Under the No Build Alternative, WSDOT, the City of Yakima, and Yakima County would continue to perform routine maintenance to keep existing roadways in good operating condition. If repairs or maintenance of the Terrace Heights bridge which require bridge closure become necessary, Terrace Heights residents would have to detour south to the next river crossing at Nob Hill Boulevard, approximately 5 miles. In addition, no floodplain improvements or habitat improvements would be completed.

8. HOW WELL DO THE NO BUILD ALTERNATIVE AND PROPOSED PROJECT MEET THE PURPOSE AND NEED?

Table 1 summarizes the specific project needs and how the No Build Alternative and the Proposed Project address them.

Table 1. Purpose and Need Summary for the No Build Alternative and Proposed Project

| Project Needs | No Build Alternative | Proposed Project |
|--|--|---|
| Improve Congestion | Does not have adequate capacity for the growth anticipated in the area under the current comprehensive plan. The LOS on the Yakima Avenue/Terrace Heights Drive corridor by 2035 is expected to have multiple turning movements operating at LOS E or F (Lochner 2017). This LOS along the Yakima Avenue/Terrace Heights Drive corridor has triggered Yakima County’s concurrency requirements, which require public facilities are sufficient to support the planned development without decreasing levels of service below the minimum standards (Yakima County 2017). The No Build Alternative may result in the rate of development in the Terrace Heights neighborhood being slowed over the next 20 years. The future LOS at the Yakima Avenue interchange under the No Build Alternative is also anticipated to cause back-ups onto the I-82 mainline (Lochner 2017). | Provides a new route between Terrace Heights and the City of Yakima to which traffic would be diverted from the E Yakima Avenue/Terrace Heights Drive corridor. Would allow development permits along E Yakima Avenue/Terrace Heights Drive in accordance with comprehensive plan. |
| Emergency Response | Does not provide a new route across the Yakima River in the event of emergency repairs or maintenance necessary for the Terrace Heights Bridge. | Accommodates future closures of the Terrace Heights bridge by providing a new route which reduces the detour distance that would have to be travelled by Terrace Heights residence to cross the Yakima River. |
| Pedestrian and Bicycle Facilities | Does not provide a connection to the Greenway Trail. No bicycle lanes or sidewalks exist on H Street or in Terrace Heights within the project area. | Pedestrian and bike access provided to the Greenway Trail from Cascade Mill Parkway via a shared use path. Provides buffered bike lanes along East H Street and Bravo Company Boulevard which meet requirements of City of Yakima’s Bicycle Master Plan (City of Yakima 2017c). Sidewalks provided on Bravo Company Boulevard and H Street. |

9. WHY ARE FHWA AND WSDOT RECOMMENDING THE PROPOSED PROJECT?

FHWA and WSDOT are recommending that the Proposed Project be implemented because it provides an additional route across the Yakima River, improves the existing Yakima Avenue/Terrace Heights corridor congestion, and accommodates bicycle/pedestrian facilities.

10. WHAT IMPACTS ARE ASSOCIATED WITH THE NO BUILD ALTERNATIVE AND PROPOSED PROJECT?

The No Build Alternative and Proposed Project have been evaluated for impacts to various resources present within the study area. **Table 2** provides a summary of impacts to these resources for the No Build Alternative and Proposed Project. The corresponding technical documentation in **Appendix A** provides more detailed information on the impacts. The Environmental Commitment Number corresponds to measures identified in **Table 4** that would be implemented to reduce impacts from the Proposed Project.

Table 2. Environmental Impacts of the No Build Alternative and Proposed Project

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|---|---|--|--|---------------------------------|
| Transportation Resources (SCJ Alliance, 2021 a, b, and c – Appendix A8) | Transportation resources associated with the Proposed Project include I-82 as well as existing portions of H Street and Bravo Company Boulevard in the City of Yakima and Hartford Road in Terrace Heights. The project would alter traffic volumes on Yakima Avenue/Terrace Heights Drive south of the project area. | Continued increases in congestion would result from anticipated traffic growth. The pattern of traffic accidents would also continue. | Permanent Impacts: Addresses congestion on Yakima Avenue/Terrace Heights Drive by providing an additional route to which traffic can be diverted. The Proposed Project would increase traffic in the Terrace Heights neighborhood and along East H Street. Temporary Impacts: No marked detours would be required, local access would be maintained on all existing roadways throughout construction. Lane closures may be necessary during I-82 bridge construction. | 1 |
| Water Quality | There are currently no water quality treatment facilities for the majority of the project area. There are currently 8.09 acres of pollution-generating impervious surface (PGIS) within the project area, 7 acres of which is untreated. | Would not change water quality. There is no water quality treatment currently provided for more than 85 percent of PGIS in the project area. | Permanent Impacts: Would result in a net increase of 17.56 acres of total impervious surface (PGIS and non-PGIS) and in a net increase of 10.15 acres of PGIS for the construction of the new roadway. All new PGIS would receive treatment and more than 75 | 2, 3 |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|----------|--|----------------------|---|---------------------------------|
| | <p>The receiving waterbody for a portion of the project is the Yakima River. During the summer months, the Yakima River can exceed 59°F. The Washington State Department of Ecology (ECY) data from water quality monitoring station 37A205 at Nob Hill shows both phosphorus and persulfate nitrogen levels were classified as a “moderate concern” for 2016 and 2017. The last year of published data for this site had only turbidity as a “moderate concern” (ECY 2021).</p> <p>While the Yakima River is not on the ECY 303(d) list for any parameter within the project reach, it is 303(d) listed for pH approximately 1 mile downstream and listed for temperature and pH 1.95 miles downstream.</p> <p>Runoff from I-82 is isolated from the remaining project area and would continue to flow into the same conveyance and treatment facility. No changes in impervious surface would occur from any work on I-82.</p> | | <p>percent of existing PGIS would be treated following project construction. The total treated PGIS at the completion of the project would be 16.49 acres. An additional 1.75 acres of existing PGIS composed of private driveways in Phase 3 would remain untreated. All non-PGIS would also receive treatment.</p> <p>An increase in impervious surface alters the volume and quality of stormwater runoff, a portion of which would reach the Yakima River. Runoff from a total of 5.01 acres of new PGIS from Bravo Company Boulevard would flow to the existing Yakima River outfall.</p> <p>I-82 improvements located north of Cascade Mill Parkway would receive oil treatment due to the high average daily traffic (ADT). A coalescing plate oil-water separator would treat runoff prior to entering a biofiltration swale. I-82 south of Cascade Mill Parkway is isolated from the rest of the project and would continue to flow into I-82’s conveyance and treatment facility. There would be no expansion of impervious surface for the I-82 work.</p> <p>All other required stormwater treatment would be provided by ponds, infiltration trenches, or subsurface infiltration facilities which would not reach any surface waterbody.</p> <p>The biofiltration swales would feature a bioretention soil mix. Research in the last decade has shown that a bioretention soil mix consisting of 60% sand or mineral aggregate and 40% compost is effective in lowering concentrations</p> | |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|---|---|--|---|---------------------------------|
| | | | <p>and decreasing toxicity of harmful pollutants in runoff. More recently, the discovery of the extremely harmful effects of 6PPD-quinone has triggered significant funding towards researching this pollutant. Initial lab testing conducted by Dr. Jennifer McIntyre and Dr. Ed Kolodziej indicates that bioretention media appears to remove 6PPD-quinone to below detection levels (McIntyre & Kolodziej 2021).</p> <p>Temporary Impacts: Stormwater runoff during construction could carry sediment to the Yakima River and surrounding wetlands from graded areas.</p> | |
| <p>Wetlands (Widener and Associates, 2019-Appendix A10)</p> | <p>A wetland delineation was conducted in 2015, 2016, and 2019 which identified thirty-nine wetlands with a total area of 81.3 acres. Thirty-six of those wetlands are presumed to be jurisdictional by the US Army Corps of Engineers (USACE) as they are abutting or hydraulically connected to the Yakima River, a Traditional Navigable Water (USACE 2008).</p> | <p>Avoids all impacts to wetland or waterbodies.</p> | <p>Permanent Impacts: Permanent impacts totaling approximately 2.08 acres would occur to three wetlands during construction. These wetlands include two Category I/II riverine wetlands in the Yakima River floodplain which will have grading for floodplain mitigation and one Category III depressional wetland west of I-82 which will be partially filled for construction of the new road. Only 0.08 acre of wetland fill will occur for roadway construction, the remaining area will continue to provide wildlife habitat functions, and much is anticipated to maintain wetland characteristics.</p> <p>Temporary Impacts: No construction activities would result in temporary impacts to wetland areas. However,</p> | <p>4</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|-----------------------------|---|--|---|---------------------------------|
| | | | stormwater runoff could carry eroded sediments to wetlands during construction. | |
| <p>Surface Water</p> | <p>The Yakima River flows to the south through the project area. Within the project reach, the majority of the Yakima River flows through a single channel with levees existing on both banks. One side channel exists within the project area.</p> | <p>Avoids all impacts to surface waters.</p> | <p>Permanent Impacts: Would result in one new pier below OHWM of the Yakima River and two additional piers on an island above OHWM between the main channel and existing side channel. These piers may affect the channel morphology by altering the flow pattern and erodibility of the channel. Backchannel construction and placement of five ELJs would impact approximately 0.84 acre below OHW of the Yakima River. A net quantity of 5,490 CY of material would be removed. Each ELJ would be approximately 30 feet by 30 feet, however ELJs 4 and 5 may be slightly larger due to additional felled trees. ELJ 1 would require the greatest erosion protection and would be secured with eleven 24-inch diameter timber piles. The remaining ELJs would require one, 30-inch diameter timber pile. Temporary Impacts: Sedimentation/turbidity impacts would result within the Yakima River during the placement</p> | <p>5</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|--|---|---|--|---------------------------------|
| | | | and removal of work bridge piles, and casings for pier construction as well as connection of new side channels. These impacts are not expected to exceed the water quality standards set forth in the ECY Section 401 water quality certification. | |
| <p>Floodplains (Yakima County, 2022 - Appendix A4)</p> | <p>The Proposed Project crosses the Federal Emergency Management Agency (FEMA) regulated floodplain of the Yakima River.</p> <p>Projects which create an increase in the base flood elevation are required to obtain a Conditional Letter of Map Revision (CLOMR). There are five existing levees within the project area including:</p> <ul style="list-style-type: none"> • USACE levee on the west side of the Yakima River (accredited) • USBR levee on the east side of the Yakima River, north of the project (non-accredited) • Yakima County - Y-9 (Marsh Road) levee on the east side of the Yakima River (non-accredited) • Roza Canal - on the east side of the canal (accredited), on the west side of the canal north of the BNSF Railway (accredited), and on west side of the canal south of the BNSF Railway (non-accredited) | <p>Does not change the FEMA floodplain of the Yakima River.</p> | <p>Permanent Impacts:</p> <p>The construction of the new Yakima River bridge would result in net fill within the FEMA mapped floodplain. However, floodplain grading and backchannel construction would create more natural floodplain connectivity.</p> <p>The project would remove a portion of the Y-6 (Marsh Road) levee south of the proposed bridge.</p> <p>The construction of the Yakima River bridge would occur over the accredited USACE levee, reducing the clearance height over the levee access.</p> <p>The project including the floodplain grading and channels would not result in a net rise of Base Flood Elevation (BFE) elevation within the mapped floodplain and has therefore been determined to be exempt from CLOMR requirements. Floodplain modeling with all project elements included show a drop in the BFE of more than 1 foot. Because additional planned downstream actions in the Yakima River Gap to Gap Ecosystem Restoration Plan would reduce the BFE and require map amendments, a LOMR for the area is anticipated to be completed once those downstream actions are completed.</p> <p>Temporary Impacts:</p> | <p>6</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|----------------------------|---|--|--|---------------------------------|
| | | | <p>The project would require the temporary placement of a work bridge within the FEMA regulated floodway. This bridge would be in place for two years.</p> | |
| <p>Right-of-Way</p> | <p>ROW controlled by the City of Yakima occurs along the existing H Street corridor and proposed Bravo Company Boulevard alignment. Yakima County controls ROW along Hartford Road and Phase 1 of Cascade Mill Parkway. WSDOT ROW exists for I-82 through the project area.</p> | <p>Would not change the City of Yakima, Yakima County, or WSDOT ROW.</p> | <p>Permanent Impacts:</p> <p>Would require additional ROW for transportation and water quality improvements and utilities. Property acquisition in the form of full ROW acquisitions, partial ROW acquisitions, utility easements, and permanent easements would be required. A total of 44 properties would be impacted by at least one of these acquisitions. A total of 16 parcels would require a full ROW acquisition or a permanent easement for the full area, more than half of which are vacant with no developments. No right-of-way purchase is necessary along East H Street. All relocations are in Terrace Heights.</p> <p>Six acquisitions of single-family residences have been completed by Yakima County and structures have been demolished. One additional relocation has been determined to be warranted and will be completed at the request of the property owner. Suitable replacements are available in the area and relocation assistance will be provided. Acquisitions are shown in Appendix D.</p> <p>Permanent easements would be acquired from a total of 14 federally owned parcels managed by</p> | <p>7</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|--------------------------|---|--|---|---------------------------------|
| | | | <p>the USBR in Terrace Heights. This includes 6 parcels for which the total area would be needed for the roadway and stormwater facilities.</p> <p>No changes in WSDOT ROW limits would occur along I-82. An airspace lease will be acquired from WSDOT for the new corridor under I-82.</p> <p>Temporary Impacts:</p> <p>Temporary construction easements (TCEs) would be required from 11 parcels, all of which would also have some form of permanent acquisition described above.</p> | |
| <p>Vegetation</p> | <p>The project is located within the Big Sagebrush-Bluebunch Wheatgrass (<i>Artemisia Tridentata-Agropyron spicatum</i>) zone of the Shrub-Steppe major vegetation area (Franklin and Dyrness 1973).</p> <p>Vegetation within the project area consists of shrub-steppe vegetation and forested riparian vegetation, as well as native and non-native self-recruiting invasive species.</p> <p>The forested area includes black cottonwood (<i>Populus balsamifera</i>), willows (<i>Salix spp.</i>), red-osier dogwood (<i>Cornus sericea</i>), and reed canarygrass (<i>Phalaris arundinacea</i>). Along the edge of this zone is dominated by willows, roses (<i>Rosa spp.</i>), and weedy invasive species. The upland areas were dominated by noxious weeds including tall tumbledustard (<i>Sisymbrium altissimum</i>), small tumbleweed mustard (<i>Sisymbrium loeselii</i>), hoary cress (<i>Lepidium draba</i>), pepperweed (<i>Lepidium latifolium</i>), Canada</p> | <p>Does not impact vegetation resources.</p> | <p>Permanent Impacts:</p> <p>Roadway and bridge construction would result in the permanent loss of 0.2 acre of riparian vegetation along the Yakima River. An additional 3.1 acres of riparian vegetation would be cleared for backchannel grading. A total of 50 trees greater than 12 inches diameter at breast height (DBH) would be removed during construction. These trees are almost entirely black cottonwood and approximately 45 are within the floodplain mitigation areas.</p> <p>Temporary Impacts:</p> <p>Temporary clearing of 0.3 acre of riparian vegetation would be necessary for temporary work bridge construction, work area access, and staging. Temporary clearing would create conditions conducive to the introduction and further spread of noxious weeds during construction.</p> | <p>8</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|--------------------|--|---|---|---------------------------------|
| | <p>thistle (<i>Cirsium arvense</i>), and cheat grass (<i>Bromus tectorum</i>). Many weedy invasive plants were also found along the river islands within the project area.</p> | | | |
| <p>Fish</p> | <p>Aquatic habitat within the project area and impacts area is limited to the Yakima River. The Roza Canal Wasteway #2 has a fish barrier installed at its connection to the Yakima River. Fish species confirmed to utilize the Yakima River in the project reach include (WDFW 2021a; b):</p> <ul style="list-style-type: none"> • Smallmouth bass (<i>Micropterus dolomieu</i>) • Mountain whitefish (<i>Prosopium williamsoni</i>) • Rainbow trout (<i>Oncorhynchus mykiss</i>) • Largemouth bass (<i>Micropterus salmoides</i>) • Chinook salmon (<i>Oncorhynchus tshawytscha</i>) • Steelhead trout (<i>Oncorhynchus mykiss</i>) [NMFS: Threatened] • Coho salmon (<i>Oncorhynchus kisutch</i>) • Dolly Varden (<i>Salvelinus malma</i>) • Bull trout (<i>Salvelinus confluentus</i>) [USFWS: Threatened] • Walleye (<i>Sander vitreus</i>) • Brown trout (<i>Salmo trutta</i>) | <p>Would not change the aquatic habitat conditions.</p> | <p>Permanent Impacts:</p> <p>Permanent vegetation removal would result in a loss of refugia and a temporal loss in large woody debris (LWD) recruitment. Minor alterations to the shading of the Yakima River would occur though most trees being removed are in the floodplain mitigation area away from the existing river channel and separated from the water by additional tree cover. Vegetation removal could also result in a reduction in insects within the action area. Insects are a prey source for juvenile salmonids and other fish species. The construction of the Yakima River bridge could result in fewer food sources and result in disruption to fish behavior, affecting predation rate.</p> <p>The placement of one in-water pier would reduce habitat (substrate) for fish in the Yakima River by approximately 85 square feet. An additional 170 square feet of riparian area above OHW would be eliminated by the two piers on the island within the river.</p> <p>Backchannel construction would include approximately 3,460 CY of dredge and 370 CY of fill over 32,924 square feet of substrate below OHW. Additionally, ELJs installed below the existing OHWM would cover 3,600 square feet of</p> | <p>9, 10, 11, 12</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|----------|---------|----------------------|--|---------------------------------|
| | | | <p>substrate and require 2,400 CY of dredge for excavated pools.</p> <p>Possible changes in current flow patterns created by floodplain mitigation and pier placement within the channel and erodibility of the channel could affect potential holding/ overwintering habitat for salmonids.</p> <p>Artificial lighting on the proposed bridge could affect juvenile salmonids. Migrating juvenile salmonids have been documented both congregating in areas of artificial light and avoiding lit areas all together. This could affect predator-prey dynamics between juvenile salmonids and their natural predators in the area.</p> <p>Stormwater from 5.01 acres of new PGIS would flow to the Yakima River through an existing outfall. During extreme rain events some stormwater would bypass the treatment system leading to the potential for untreated stormwater to enter the Yakima River. Some contaminants in untreated stormwater are known to be toxic to salmonids.</p> <p>Temporary Effects:</p> <p>Increased sound pressure levels (SPLs) created by impact pile driving could physically injure fish and cause behavioral disturbance up to 0.7 miles upstream and 0.4 miles downstream. This work is expected to occur in water for 57 hours over a span of 19 days.</p> <p>Vibratory pile driving could cause behavioral disturbance up to 0.7 miles upstream and 0.4</p> | |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|-----------------|--|---|--|---------------------------------|
| | | | <p>miles downstream from pile driving activities. Vibratory pile driving is anticipated to occur for 29 hours over a period of 19 days during the first year of bridge construction.</p> <p>The temporary placement of 57 piles for the work bridge as well as three 16-foot diameter casings for Pier 2 below OHW would reduce habitat (substrate) for fish in the Yakima River by approximately 700 square feet.</p> <p>Increased sedimentation from in-water work could impact fish by reducing in-water visibility, clogging fish’s gills, and disturbing aquatic insects and vegetation.</p> <p>Temporarily cleared riparian vegetation totaling 0.3 acre and cleared trees would result in a temporary decrease in refugia and LWD recruitment.</p> <p>All in-water work would be conducted during the agreed-upon WDFW in-water work window of July 15 to February 1. Impact and vibratory pile driving would both occur from July 15 to October 1. Only vibratory pile driving would occur after October 1 until February 1.</p> | |
| Wildlife | <p>The project area is located within the Pleistocene Lake Basins within the Columbia Plateau ecoregion. Portions of the project action area overlap with the Yakima Folds of the Columbia Plateau ecoregion (EPA 2010). The project is located in an urban and suburban areas lacking in suitable habitat for most animals. Limited riparian habitat exists along the Yakima River within the</p> | <p>Would not change wildlife habitats or migratory bird habitats, other than the continued potential for wildlife vehicle collisions that may increase as traffic volumes increase.</p> | <p>Permanent Impacts:</p> <p>Would include permanent riparian habitat loss of 3.3 acres, however 3.1 acres of this area would be converted into side channel habitat for the Yakima River. Permanent vegetation removal could result in a reduction in insects and reduce available habitat for other terrestrial animals.</p> | 13, 14 |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|---|---|---|---|---------------------------------|
| | <p>project area. In general, few animals occupy the project area given the proximity to human developments, but birds and small mammals may be present within the project area.</p> <p>Yakima Sportsman State Park is within the limits of potential noise impacts from the Proposed Project and may provide habitat for deer, migratory and native birds, and other small mammals. Yakima Sportsman State Park also provides riparian wooded habitat that could be utilized by Endangered Species Act (ESA) listed bird: yellow-billed cuckoo (<i>Coccyzus americanus</i>). See the Threatened/Endangered Species section.</p> | | <p>Vehicle traffic would occur on newly constructed roadway where motorized vehicles were not previously present. This further fragmentation of habitat could increase the potential for wildlife-vehicle collisions and make travel along the riparian corridor more difficult for wildlife.</p> <p>Artificial lighting and traffic noise along the project corridor could affect animal behavior.</p> <p>Temporary Impacts:</p> <p>Construction noise could disturb terrestrial animals up to 1.4 miles from the project area.</p> <p>Temporary vegetation removal would impact 0.3 acre of riparian vegetation. and reduce available habitat for other terrestrial animals.</p> | |
| <p>Threatened/Endangered Species (Widener and Associates, 2022b)</p> | <p>A project specific listed species list from the United States Fish and Wildlife Service (USFWS) and the “Status of ESA Listings & Critical Habitat Designations for West Coast Salmon and Steelhead” from the National Marine Fisheries Service (NMFS) were reviewed to determine potentially present ESA listed species. Potentially present listed species and designated critical habitat within the project action area include (NMFS 2016; USFWS 2021):</p> <ul style="list-style-type: none"> Western Distinct Population Segment (DPS) of gray wolf (<i>Canis lupus</i>) [USFWS: Proposed Threatened] Western U.S. DPS of yellow-billed cuckoo (<i>Coccyzus americanus</i>) [USFWS: Threatened] | <p>Would not affect listed species or habitats.</p> | <p>Effect Determinations:</p> <p>The Proposed Project were determined to have the following effects on listed species and designated critical habitat:</p> <ul style="list-style-type: none"> Yellow-billed cuckoo: “May affect, not likely to adversely affect” Bull trout: “May affect, likely to adversely affect” Bull trout critical habitat: “May affect, likely to adversely affect” Steelhead trout: “May affect, likely to adversely affect” Steelhead trout critical habitat: “May affect, likely to adversely affect” <p>Permanent and Temporary Impacts:</p> | <p>15</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|---|---|---|--|---------------------------------|
| | <ul style="list-style-type: none"> • U.S.A., coterminous, lower 48 states population of bull trout (<i>Salvelinus confluentus</i>) [USFWS: Threatened] • Bull trout critical habitat [USFWS: Designated] • Middle Columbia River DPS steelhead trout (<i>Oncorhynchus mykiss</i>) [NMFS: Threatened] • Steelhead trout designated critical habitat [USFWS: Designated] <p>Gray wolf was eliminated from further review due to the lack of suitable habitat in the project action area. The yellow-billed cuckoo has been extirpated from Washington and they have not been confirmed to breed in Washington since the 1930s (Halterman et al. 2015; Wiles and Kalasz 2017). However, suitable yellow-billed cuckoo habitat exists within the project action area. The above-mentioned listed fish species have been confirmed to be present in the Yakima River within the project action area (WDFW 2021a; b).</p> | | See Fish and Wildlife Sections for further details. | |
| <p>Historic and Archaeological Resources</p> | <p>No National Register of Historic Places eligible resources were found within the project area.</p> | <p>Would not affect historic or archaeological resources.</p> | <p>Permanent Impacts: Would have no adverse effect on historic resources. Ground disturbance necessary for construction could potentially discover unknown buried cultural material. Section 106 concurrence from the Department of Archaeology and Historic Preservation (DAHP) is provided in Appendix E.</p> <p>Temporary Impacts: No temporary impacts to historic or archaeological resources are anticipated.</p> | <p>16</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|--|--|---|---|---------------------------------|
| <p>Land Use (Widener and Associates, 2021e-Appendix A5)</p> | <p>The Proposed Project area and surrounding development includes mostly residential uses, with some business, recreational, and industrial uses. Both the City of Yakima and the Terrace Heights neighborhood have experienced significant growth.</p> <p>Historically, the City of Yakima’s economy has been largely dependent on agriculture. Currently the City of Yakima is working to redevelop the downtown area as a community hub for the entire Yakima Valley, as well as redevelopment of currently unused lands like the Boise Cascade Mill site. Much of the population growth in the Yakima Urban Area has occurred in the Terrace Heights Neighborhood. The proposed project aims to improve multi-modal travel between the City of Yakima and the Terrace Heights.</p> <p>Adopted planning documents directing land use and growth for the area include:</p> <ul style="list-style-type: none"> • <i>Yakima Valley Metropolitan and Regional Transportation Plan 2020-2045 (YVCOG 2020)</i> • <i>Horizon 2040 Yakima County Comprehensive Plan (Yakima County 2017)</i> • <i>Yakima Comprehensive Plan 2040 (City of Yakima 2017)</i> | <p>Would be incompatible with the planning objectives in the area. Increased traffic congestion would prevent development along the Yakima Avenue/Terrace Heights Drive corridor in accordance with the comprehensive plan.</p> | <p>Permanent Impacts:</p> <p>Construction of the Proposed Project would support and be consistent with adopted plans and regulations.</p> <p>Approximately 33.5 acres are being converted to a transportation land use.</p> <p>Property acquisition in the form of full ROW acquisitions, partial ROW acquisitions, utility easements, and permanent easements would be required.</p> <p>Temporary Impacts:</p> <p>This project would have unavoidable short-term effects on surrounding land uses from construction and construction staging. The project may limit business or enjoyment of outdoor activities or events due to increased noise levels from equipment, changes in access to individual properties, increased dust from vegetation removal/grading, and work zone traffic control measures.</p> <p>Traffic disruptions that affect land use may be caused by temporary construction easements and changes in access. No marked detours would be required, local access would be maintained on all existing roadways throughout construction.</p> | <p>1, 17</p> |
| <p>Environmental Justice</p> | <p>Environmental Justice communities are located in the vicinity of the Proposed Project. In order to assess social and economic conditions within the</p> | <p>Would not result in any disproportionately high or adverse impacts to the environmental</p> | <p>Permanent Impacts:</p> <p>Traffic noise on E H Street would increase due to the conversion of E H Street between N 1st Street and N 7th Street from a residential street to an</p> | <p>1, 7, 18, 20</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|---|--|---|--|---------------------------------|
| <p>(Widener and Associates, 2021c-Appendix A2)</p> | <p>area, statistical data was reviewed including 2010 Census data and local school district information.</p> <p>According to the 2010 Census data, within 0.5 mile of the project area, the majority of the population in the study area is considered minority and is 55 percent white. Hispanics make up the largest minority group, consisting of 64 percent of the population in the study area. According to the 2014-2018 American Community Survey, 26 percent of those in study area spoke a language other than English at home and low-income households account for 21 percent of households within 0.5 mile of the Proposed Project.</p> | <p>justice populations in the study area.</p> <p>Would create additional traffic delays due to increased traffic without added route to which traffic can be diverted. All populations present within the community would continue to experience traffic congestion problems.</p> | <p>arterial. This noise increase would impact people who live on East H Street. The population surrounding East H Street is primarily Hispanic, accounting for approximately 70 percent of residents. Approximately 28 percent are limited English speaking and ten percent are low-income with household income below \$10,000.</p> <p>10 full ROW acquisitions will be necessary for this project leading to 7 relocations (6 of which have already been acquired). 6 full permanent easements will also be required. All relocations are in Terrace Heights neighborhood. The 2010 Census data shows the population surrounding the project in Terrace Heights to be approximately 80 percent white, has no low-income residents, and only five percent speak a language other than English in the home.</p> <p>The residents of Terrace Heights and the City of Yakima would benefit from reduced congestion along the Yakima Avenue/Terrace Heights Drive corridor, a new route across the Yakima River, and greatly improving pedestrian and bicycle access to either side of the river.</p> <p>Temporary Impacts:</p> <p>Would create delays in traffic and temporary noise increases for while construction is occurring on existing roadways. Temporary impacts to environmental justice populations would not be disproportionately high or adverse compared to the population as a whole.</p> <p>There are currently no public transit routes that service the Terrace Heights neighborhood. The</p> | |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
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| | | | <p>closest routes to the Proposed Project are the number 6, which has stops on E Lincoln Avenue and N Fair Avenue, and the number 11, which utilizes I-82 transporting people to and from Ellensburg. Neither route is anticipated to be affected by the Proposed Project.</p> | |
| <p>Utilities</p> | <p>Types of underground and overhead utilities within the project area include:</p> <ul style="list-style-type: none"> • Water line • Overhead power lines • Industrial waste force mains • Irrigation • Gas line • Sanitary sewer <p>A railroad line owned by BNSF Railway which is currently operated by the Columbia Basin Railroad crosses through the project area and over the Yakima River north of the proposed bridge location.</p> | <p>Would not impact any utilities or BNSF tracks in the project limits.</p> | <p>Permanent Impacts:</p> <p>There would be no loss of service from utilities currently operating in the project area. The project would install new water and sewer lines along the Bravo Company Boulevard alignment. A new at-grade crossing of the BNSF owned tracks would be constructed for Bravo Company Boulevard.</p> <p>Temporary Impacts:</p> <p>Relocation of underground utilities may be required during construction. There may be temporary loss of service during relocations.</p> | <p>19</p> |
| <p>Noise (Widener and Associates, 2022f-Appendix A6)</p> | <p>Traffic noise is assessed through the noise levels at areas of frequent human use at noise-sensitive locations such as homes. Noise impacts occur when noise levels would exceed the WSDOT/FHWA Noise Abatement Criteria (NAC) or would significantly increase by ten decibels or more.</p> <p>Existing noise conditions were examined within and adjacent to the Proposed Project footprint. One receiver representing the Greenway Trail is impacted by equaling the NAC, 66 dB(A).</p> | <p>The 2044 conditions with no improvements were examined. Three receivers, representing the Greenway Trail, an apartment complex with seven units, and one single-family residence were identified as impacted by traffic noise. The noise levels at these locations ranged from 66 to 67 dB(A).</p> | <p>Permanent Impacts:</p> <p>The 2044 traffic conditions with the Proposed Project in place were modeled. A total of eleven receivers experienced traffic noise impacts, including eight additional receivers which were not impacted in the No Build Alternative. All of the impacted receivers represent single-family homes or apartment complexes along East H Street except for one single-family residence along East Lincoln Avenue and the Yakima Greenway Trail.</p> | <p>20</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
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| | | <p>The Greenway trail location is also over the noise abatement criteria in the existing 2021 condition.</p> | <p>Five of the additional receivers, single family residences along East H Street, experienced a significant increase in decibel level, increases of 10 to 12 dB(A), but remain at noise levels below 66 dB(A). The remaining receivers were above the NAC, with modeled levels ranging from 66 to 68 dB(A). Noise barriers were evaluated to mitigate noise levels at all eleven impacted receivers.</p> <p>No barriers were found to be feasible and reasonable; therefore, no noise abatement barriers are recommended.</p> <p>Temporary Impacts:</p> <p>Construction noise could temporarily affect adjoining properties within and adjacent to the Proposed Build footprint. This would include impact pile driving which may occur overnight in the vicinity of I-82.</p> | |
| <p>Air Quality (Widener and Associates, 2022a-Appendix A1)</p> | <p>The US Environmental Protection Agency (EPA) has established maintenance areas for carbon monoxide (CO) and particulate matter (PM10) within Yakima County.</p> <p>Only the area near the intersection of North 1st Street/East H Street is within the CO maintenance area, while the entire project is within the PM10 maintenance area.</p> <p>Air quality from vehicles degrades under congested, stop-and-go traffic conditions when compared with free-flowing traffic conditions.</p> | <p>Would not cause exceedances of regulatory thresholds for any criteria pollutants, nor would it result in changes in traffic volumes, vehicle mix, or any other factors that would cause an increase in mobile source air toxics (MSATs).</p> <p>Increases in traffic along the Yakima Avenue/Terrace Heights Drive corridor would continue to reduce LOS and increase vehicle delays. The LOS at the intersection</p> | <p>Permanent Impacts:</p> <p>The Proposed Project meets project level air quality conformity since the signalized intersection created by the project at North 1st Street/East H Street would maintain a LOS of C or better under future build conditions.</p> <p>Removing traffic from the Terrace Heights Drive/Yakima Avenue corridor would improve the level of service of the existing corridor thereby reducing the vehicle hours of delay (VHD) and improving air quality in the area.</p> <p>Temporary Impacts:</p> | <p>21</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
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| | | of North 1st Street/East H Street would degrade in the future without the installation of a signal. | Construction activities would generate emissions from construction equipment and fugitive dust from ground disturbance. | |
| <p>Visual Resources (Widener and Associates, 2022g-Appendix A8)</p> | <p>The general character and physical attributes of the Project area include undeveloped, cleared land, waterways, and distant urban terrain areas that transition to more urban views of residences and roadway. The region climate is desert and dry, so views of brown landforms and vegetation and gray road, with sparse green riparian vegetation are standard. The northern portion rises abruptly through a series of terraces to form the Yakima Ridge.</p> <p>Alterations to visual resources include both the character of the visual experience along the corridor as well as the effect of the proposed action upon the viewer.</p> | <p>Would not result in any landscape changes or visual impacts.</p> | <p>Permanent Impacts:</p> <p>The Proposed Project would increase views of pavement and roadway due to the creation of a bridge and new travel lanes and roundabouts. Greater visibility from new roadway sections and particularly crossing the bridges would be created with views never previously possible.</p> <p>The new roadway would increase sensitivity due to light pollution from new streetlights and heightened traffic in new areas.</p> <p>The Proposed Project would increase views for pedestrians and bicycles with the addition of sidewalks and shared-use paths.</p> <p>Views of retaining walls along the roadway and bridge structures would be created.</p> <p>Distant views to visual resources such as the Yakima River and the Roza Canal Wasteway #2 would be seen easier from the proposed bridges.</p> <p>Temporary Impacts:</p> <p>This project would have unavoidable short-term effects on viewers from construction and construction staging. The project may limit business or enjoyment of outdoor activities or events due to increased noise levels from construction equipment, changes in access to individual properties, increased dust from</p> | <p>22</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
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| <p>Hazardous Materials/ Waste (Widener and Associates, 2022d- Appendix A4)</p> | <p>The ECY Facility/Site database was searched to identify locations which may have soil and water contamination within 0.5 mile of the project footprint. Twenty sites were assessed which have confirmed or suspected contamination and/or have not received a No Further Action determination from ECY. These facilities have reported contamination for petroleum products, petroleum byproducts, heavy metals, and fertilizer byproducts.</p> <p>The project area is partially within the Boise Cascade Mill Site which has confirmed contamination. The remaining nineteen sites are considered low risk of the project encountering contamination due to previous contamination being remediated, the site being downgradient of the project, of other factors which make the site unlikely to impact the project.</p> <p>Cleanup of the Interstate 82 Exit 33A Yakima City Landfill site has been completed within the proposed ROW limits. Remediation has been fully completed and no contamination would be encountered.</p> | <p>No contamination would be removed.</p> | <p>vegetation removal/grading, and work zone traffic control measures.</p> <p>The project may encounter groundwater during construction of the proposed bridge abutments, but no groundwater would be extracted or handled. Groundwater contact would be avoided for all other construction activities by scheduling excavation deeper than four feet below the ground surface between December and April when the groundwater is the deepest.</p> <p>Contaminated soil is likely to be encountered at the Boise Cascade Mill Site. Additional investigation would be conducted that would include soil and groundwater sampling to identify any areas above MTCA Method A cleanup levels.</p> <p>A Contaminated Soil and Groundwater Management Plan would be prepared prior to construction and would include procedures for moving any suspected contaminated soils and groundwater to a staging area so it can be tested and analyzed.</p> <p>A Spill Prevention Control and Countermeasures (SPCC) plan would be prepared and implemented during construction.</p> | <p>23</p> |
| <p>Parks/Recreational Resources and Section 4(f) and Section 6(f)</p> | <p>The Greenway Trail is travels north-south through the project area between the Yakima River and I-82 and is considered a 4(f) resource. Section 4(f) protects public recreational resources and historic sites from transportation uses.</p> | <p>Would have no use of existing or planned parks and recreation resources or other Section 4(f) resources.</p> | <p>Permanent Impacts:</p> <p>The bridge over the Yakima River would cross above the Greenway Trail. The project would provide a new connection to the Greenway Trail</p> | <p>24</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
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| | <p>Sunrise Rotary Park is located along the Greenway Trail south of the project area and would not be impacted by the project.</p> <p>No 6(f) resources are present in the project area.</p> | | <p>for bicycles and pedestrians via a shared use path from Cascade Mill Parkway.</p> <p>Temporary Impacts:</p> <p>Construction would result in temporary closure and detours of the Greenway Trail. In order to prevent a longer-term closure and ensure the safety of trail users, overhead protection would be installed to prevent any debris from bridge construction from landing on the trail. Two closures of up to one week in duration would be needed for the construction of the temporary work bridge and placement of the girders. Warning signs providing notification of the week-long closures would be placed along the trail for a minimum of five days in advance of the closures.</p> <p>Construction would also result in temporarily elevated noise up to 1.4 miles from the project area. The Greenway Trail is within this radius.</p> <p>The temporary occupancy determination for the Greenway Trail is included in Appendix F.</p> | |
| <p>Indirect Effects</p> | <p>Indirect effects are defined as effects caused by the Proposed Project that are later in time or farther removed in distance, but still reasonably certain to occur.</p> <p>Indirect impacts were identified for the topics of Land Use, Traffic, and Visual Quality.</p> | <p>Not applicable</p> | <p>Traffic along the new corridor will increase due to the diversion of traffic from Terrace Heights Drive to the new route. The project will not create new sources of traffic; however, it will result in increased traffic along the existing H Street Corridor as well as creating new roadway through the Boise Cascade Mill Site which is anticipated to be developed in the future. It will also reduce traffic along the Yakima Avenue/ Terrace Heights Drive corridor.</p> | |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
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| | | | <p>The Proposed Project would not induce a change in land use designation. No change in zoning or amendment to an existing land use plan would be required. By improving mobility in the study area, the Proposed Project is anticipated to increase the rate of development in Terrace Heights. The project will prevent the Yakima County concurrency requirements from hindering growth and allow the current rate of development to continue with land uses allowed by zoning.</p> <p>The Proposed Project would provide direct access to the Terrace Heights neighborhood on the east side of the Yakima River and result in an increase in development. As the area becomes more developed, it may result in increased night sky impacts. Over time, the visual quality of the area will improve as landscaping and other vegetation matures and softens the appearance of retaining walls and other structures associated with the project, and screens various project features from affected viewers.</p> | |
| <p>Cumulative Impacts</p> | <p>Cumulative impact issues analyzed for the Proposed Action include Noise, Land Use, Environmental Justice, Water Quality, fish and wildlife habitat associated with the Yakima River.</p> <p>No impacts were identified for the topics of Public Services and Utilities, Cultural Resources, and Air Quality. Therefore, no cumulative effects analysis is warranted for these topics. Impacts can be effectively mitigated for the topics of Floodplains, Section 4(f), Surface Water, Visual Quality, and</p> | <p>Not applicable because the No Build Alternative is considered as part of the past, present, and reasonably foreseeable future actions identified in the cumulative impacts analysis.</p> | <p>This analysis examines the potential cumulative impacts of the past, present, and reasonably foreseeable future actions in the area.</p> <p>While no specific plans have been made, it is anticipated that the Boise Cascade Mill site will be developed. The City of Yakima has discussed the possibility of developments such as an auto mall, general retail, light industry, an office park, and education facilities (City of Yakima 2017; 2019). This development would provide new economic opportunities for surrounding</p> | <p>1, 2, 3,</p> |

| Resource | Context | No Build Alternative | Proposed Project | Environmental Commitment Number |
|----------|---|----------------------|---|---------------------------------|
| | <p>Vegetation. Therefore, no cumulative effects analysis is warranted for these topics.</p> | | <p>residents. However, it is not anticipated that the current project would affect the rate of development in the area. No building permits are contingent on this project and this project would not change the current land use or zoning in the Boise Cascade Mill Site. The development of the site would increase traffic and associated noise along the project corridor. I-82 runs between the mill site and the Yakima River, so no impacts to riparian habitat are anticipated.</p> <p>All runoff from new streets would be treated in accordance with the City of Yakima’s Stormwater Management Program. The City currently requires that construction project comply with the <i>Stormwater Management Manual for Eastern Washington</i> (2004) and the <i>Yakima County Regional Stormwater Manual</i> (2010). The Boise Cascade Mill site development is anticipated to treat all on-site stormwater.</p> | |

11. WHAT ENVIRONMENTAL COMMITMENTS WOULD BE MADE FOR THE PROPOSED PROJECT?

Table 3 provides a summary of environmental commitments for Proposed Project impacts. The tracking number corresponds to the associated environmental impacts identified in Table 2. Appendix A provides additional details regarding the methodology and analysis of impacts and mitigation in their respective technical reports or technical memoranda.

Table 3. Summary of Impacts and Environmental Commitments for the Proposed Project, East-West Corridor

| Tracking Number | Category | Impact | Environmental Commitment From Source Document | Timing/Phase that Commitment will be Implemented |
|-----------------|--------------------------|--|--|--|
| 1 | Transportation Resources | Temporary disruptions to traffic | <p>A construction traffic management plan and signage would be implemented to minimize impacts for motorists and pedestrians during construction. There would be public information updates during construction. Access would be maintained for local traffic on existing roads at all times. At least one lane in each direction on I-82 would remain open at all times.</p> <p>The existing East H Street corridor must be brought up to current standards before being connected to the new corridor to minimize congestion for the surrounding neighborhood and provide the necessary capacity for additional traffic.</p> | Design and Construction |
| 2 | Water Quality | Stormwater runoff from new impervious surfaces | <p>The level of water quality treatment which would be provided for this project would fill the requirements of the ECY Stormwater Management Manual for Eastern Washington (ECY 2019). Permanent water quality facilities would be constructed including infiltration trenches parallel to the proposed roadway and 2 ponds north of the proposed roadway. All facilities are designed with capacity for waterflow during the 10-year 24-hour storm.</p> <p>Runoff from areas around the Roza Canal Wasteway #2 crossing would flow into Yakima County's Phase 1 of the Cascade Mill Parkway where stormwater would be infiltrated. The remaining areas of Cascade Mill Parkway (Phases 2 and 3) would flow into proposed biofiltration swales before entering shallow infiltration ponds which would be placed on the north side of the proposed roadway, one on either side of the Yakima</p> | Design and Construction |

| Tracking Number | Category | Impact | Environmental Commitment From Source Document | Timing/Phase that Commitment will be Implemented |
|-----------------|---------------|--|--|--|
| | | | <p>River. The biofiltration swales will feature a bioretention soil mix. Research in the last decade has shown that a bioretention soil mix consisting of 60% sand or mineral aggregate and 40% compost is effective in lowering concentrations and decreasing toxicity of harmful pollutants in runoff. Recent initial lab testing conducted by Dr. Jennifer McIntyre and Dr. Ed Kolodziej indicates that bioretention media appears to remove 6PPD-quinone to below detection levels (McIntyre & Kolodziej 2021). The bioretention soil mix used will meet Department of Ecology standards (ECY 2019).</p> <p>Runoff from areas along Bravo Company Boulevard (Phase 4) would be treated using a General Use Level Designation (GULD) basic treatment bio-filtration vault before flowing to an existing outfall to the Yakima River. The basins that flow to this outfall amount to 8.48 acres of total impervious surface and include 5.01 acres of new PGIS.</p> <p>Runoff from H Street would be conveyed to a dynamic separator for pretreatment and then conveyed to a subsurface infiltration facility.</p> | |
| 3 | Water Quality | Erosion and runoff during construction | <p>A Temporary Erosion and Sediment Control (TESC) plan and Stormwater Pollution Prevention Plan (SWPPP) would be approved and implemented prior to commencement of construction. Typical BMPs that are anticipated to be used for this project include:</p> <ul style="list-style-type: none"> • Street Sweeping • Silt fence • Native seeding to temporarily cleared areas • Stabilized construction entrances • Placement of plastic high visibility fencing to protect sensitive areas including wetlands • Catch basin filter inlet protection • Straw wattles (certified weed free) | Design and Construction |

| Tracking Number | Category | Impact | Environmental Commitment From Source Document | Timing/Phase that Commitment will be Implemented |
|-----------------|----------------|---|--|--|
| | | | Trucks transporting dredged material during drilled shaft construction must be adequately sealed to prevent spillage. | |
| 4 | Wetlands | Wetland fill during road construction | Mitigation for all wetland area fill would be undertaken in accordance with USACE and Ecology guidelines. BMPs would be implemented to ensure no unauthorized fill would occur and prevent stormwater from entering wetlands. Wetland protection measures are included in Tracking Number 3. | Design and Construction |
| 5 | Surface Waters | Sedimentation during in-water work in the Yakima River. | <p>During removal of material from within the casings for drilled shaft construction, precautions would be taken to make sure the equipment handling the dredged material does not allow material to spill into the water.</p> <p>If at any time during pile extraction, a pile breaks off below the existing ground elevation the remaining pile would be left in place, as no equipment would operate below the OHWM.</p> <p>Preceding pile extraction, a turbidity sleeve would be placed around all in-water piles. Piles would be pulled up slowly to minimize impacts.</p> | Design and Construction |

| Tracking Number | Category | Impact | Environmental Commitment From Source Document | Timing/Phase that Commitment will be Implemented |
|-----------------|---------------------|--|---|--|
| | | | <p>To ensure compliance with these standards outlined in WSDOE’s Section 401 permit, qualified personnel would be on-site monitoring turbidity during the installation/removal of temporary pilings.</p> <p>Backchannel grading and excavation as well as ELJ installation would occur below OHW during dry conditions.</p> | |
| 6 | Floodplains | Alterations to levees and placement of fill in the 100-year floodplain for bridge construction | <p>Floodplain mitigation consists of floodplain grading, backchannel construction, ELJ construction, and cottonwood planting. This work would be consistent with Yakima County’s ongoing Yakima River Gap to Gap Ecosystem Restoration Project. Cottonwoods would be stingered into place within the proposed floodplain grading areas, along ELJs, and on the south side of the proposed channels. Stingering cottonwoods involves using a backhoe attachment called a stinger to drive cottonwood poles into the ground. The purpose of this mitigation work is to encourage river flow towards the area of the floodplain with conservation status rather than its current path that flows against the leveed west bank, provide cover for listed juvenile salmonids in areas that currently have poor cover, and to encourage the establishment of cottonwood stands further upland in the floodplain. Floodplain grading would occur in two sections over a total area of 5 acres. 9.5 acres of back channels would be created which would also activate an existing 1-acre channel.</p> | Design and Construction |
| 7 | Right-of-Way | ROW acquisitions and permanent and/or temporary easements | <p>The Proposed Project has been designed to limit impacts to residences as much as feasible. Suitable replacements will be identified for all relocations and relocation assistance provided.</p> | Design, ROW Acquisition |
| 8 | Vegetation | Permanent and temporary clearing of riparian, shrub-steppe, and landscape vegetation. | <p>Riparian planting would occur in 6.9 acres of the floodplain mitigation areas. Cottonwoods would be stingered into place within the proposed floodplain grading areas, along ELJs, and on the south side of the proposed channels. The planting of cottonwoods would mitigate the permanent loss of riparian vegetation and encourage the establishment of cottonwood stands further upland in the floodplain.</p> | Design and Construction |

| Tracking Number | Category | Impact | Environmental Commitment From Source Document | Timing/Phase that Commitment will be Implemented |
|-----------------|----------|---|---|--|
| | | | Temporarily disturbed areas would be replanted with native vegetation when they are no longer needed for the project. | |
| 9 | Fish | Potential injury/death or behavioral disturbance from increased SPLs during in-water pile driving | <p>All in-water work would take place within the designated in-water work period (July 15 to February 1). In-water impact and vibratory pile driving would both occur from July 15 to October 1. In-water work would continue from October 1 through February 1, but it would only be vibratory pile driving; no impact pile driving would occur after October 1.</p> <p>A bubble curtain would be placed around any pile impact driven in > 2 feet of water. No more than 7,950 impact pile strikes would be allowed, within the wetted channel, in a given day.</p> <p>A vibratory hammer would be used to drive piles to a depth of 20 feet below the riverbed in order to minimize increases in Sound Pressure Levels (SPLs).</p> <p>To ensure compliance with the NMFS underwater SPL threshold, a biologist would be on site monitoring underwater SPLs during all impact pile driving activities.</p> | Construction |
| 10 | Fish | Potential injury or death during construction or during removal from the in-water work area | An underwater camera would be lowered into the caisson to ensure no fish are within the casing. Any fish observed would be allowed to escape prior to installation of drilled shafts. | Construction |
| 11 | Fish | Reduced in-water visibility and clogged gills from increased sedimentation from in-water work. | See water quality protection measures included in Tracking Number 4. | Construction |
| 12 | Fish | Decrease in refugia and LWD recruitment due to tree removal from riparian area. | <p>Felled trees greater than 8-inch DBH would be placed along the banks of the Yakima River within the project action area (½ below and ½ above the OHWM). Logs with a 24-inch minimum DBH with branches will be the main logs used in the ELJs.</p> <p>See Mitigation Tracking Number 8.</p> | Design and Construction |

| Tracking Number | Category | Impact | Environmental Commitment From Source Document | Timing/Phase that Commitment will be Implemented |
|-----------------|---|---|---|--|
| 13 | Wildlife | Permanent impacts from increased impervious surface, added vehicle traffic in the action area, permanent vegetation removal, and artificial lighting. | See Tracking Numbers 2 and 8. | Design and Construction |
| 14 | Wildlife | Temporary impacts from increased construction noise and temporary removed vegetation. | See Tracking Number 20. | Construction |
| 15 | Threatened/ Endangered Species | Permanent Impacts from vegetation removal, habitat loss due to the placement of in-water piers, possible changes to current flow, artificial lighting, shading, and stormwater. Temporary impacts from vegetation removal, vibratory and impact pile driving, habitat loss due to piles and casings, sedimentation from in-water work, and construction noise disturbance. | See Tracking Numbers 4, 8, 11, 12, 13, and 14. | Design and Construction |
| 16 | Historic and Archaeological Resources | Ground disturbance during construction activities have the potential to encounter unknown buried cultural material. | An Unanticipated Discovery Plan would be prepared for the project. This plan would describe the notification process and the appropriate work stoppage and consultation in the event of a discovery of cultural resources during construction. | Construction |
| 17 | Land Use | Property access during construction and following project completion. | The Proposed Project is designed to maintain existing access to surrounding parcels in the Cascade Mill site through the construction of two roundabout intersections on Bravo Company Boulevard. Access would be maintained for local traffic during construction. | Design and Construction |
| 18 | Environmental Justice | Temporary traffic impacts | See Tracking Number 1. | Construction |

| Tracking Number | Category | Impact | Environmental Commitment From Source Document | Timing/Phase that Commitment will be Implemented |
|-----------------|---------------------------------|---|--|--|
| 19 | Utilities | Utility relocation | Coordinate with utility companies during final design regarding necessary relocations. | Design and Construction |
| 20 | Noise | Construction Noise | <p>The project would involve construction in residential areas. Elevated noise levels may be experienced during construction; however, abatement measures would be utilized as much as feasible in order to minimize impacts. These would include:</p> <ul style="list-style-type: none"> • Minimize night construction adjacent to residential areas where feasible for safety and operations • Locate stationary equipment as far from sensitive receivers as possible. • Maintaining exhaust systems of equipment on a regular basis and ensuring engine enclosures are properly designed. | Construction |
| 21 | Air Quality | Air emissions and fugitive dust | Dust would be minimized by applying water to disturbed areas and unpaved surfacing as needed, depending on weather conditions. Emissions from construction equipment would be kept to a minimum by reducing the time that construction equipment is idling while not actively in use. Staging areas are located as close as possible to work sites to limit distance travelled. | Construction |
| 22 | Visual Resources/ Aesthetics | Addition of the roadway and bridge structures | New retaining walls would most likely have customized aesthetic design treatments to soften the look and feel of these new structures. Light and glare from streetlights would be minimized by directing the light towards the roadway. | Design and Construction |
| 23 | Hazardous Materials/ Waste | Encountering hazardous materials | A Contaminated Soil and Groundwater Management Plan would be prepared prior to construction and would include the procedures for moving any suspected contaminated soils and groundwater to a staging area so that it can be tested and analyzed. If contaminated soil is encountered during construction, the contract would require it to be contained, removed, and appropriately disposed of off-site in accordance with federal, state, and local regulations. | Construction |

| Tracking Number | Category | Impact | Environmental Commitment From Source Document | Timing/Phase that Commitment will be Implemented |
|-----------------|------------------|--|---|--|
| 24 | Section 4(f) | Temporary closure of Greenway Trail during Yakima Bridge construction. | Trail closure would be limited to two closures with each lasting no more than one week. Detours would be provided and overhead protection would be installed to prevent any debris from bridge construction from landing on the trail. | Design and Construction |
| 25 | Summary Tracking | Impact is all items in Table 2. | The Contract Agreement between the City of Yakima or Yakima County and the Construction Contractors is required to demonstrate and document all environmental commitments were fulfilled to close the project. The County will maintain the commitment files documenting the adherence to all requirements. WSDOT would review a summary and send it to FHWA at project completion. | Construction / Project Closeout |

12. WHAT ADDITIONAL CLEARANCES AND PERMITS ARE REQUIRED FOR THIS PROJECT?

In addition to the NEPA evaluation of environmental impacts provided by this EA, the Proposed Project must comply with all other federal, state, and local regulations, including the Clean Water Act, Endangered Species Act, City of Yakima and Yakima County Critical Areas Ordinances, among others. This would require obtaining permits and other approvals. The following permits are likely to be required prior to construction, but this list may change during and after final design:

Airspace Lease – Yakima County would obtain an airspace lease from WSDOT for construction and operation of the new roadway under I-82.

Construction Access Permits – The construction contractor would be required to obtain construction access permits for lane closures from the WSDOT Access Control Manager. Yakima County would also be obtaining approval for temporary construction access from the USBR.

Clean Water Act, Section 404 – Yakima County would prepare a 404 Nationwide permit application for submittal to the USACE.

Critical Areas Ordinances – Yakima County would apply for all required variances from the City of Yakima and Yakima County critical areas ordinances necessary for proposed wetland and wildlife habitat impacts.

Endangered Species Act, Section 7 – Formal consultation has been conducted with the USFWS and NMFS for ESA listed species. The Biological Opinions received from the Services are provided in **Appendix G**.

Floodplain – Yakima County Roads Department would obtain a Floodplain Development Permit from Yakima County.

National Historic Preservation Act, Section 106 – Consultations were completed with DAHP and concurrence was provided in the determination of No Adverse Effect to historic properties. The concurrence is provided in **Appendix E**.

Noise – If it is determined that overnight work on I-82 is required, a City of Yakima noise variance would be obtained.

Right-of-Way – All acquisitions would follow the Uniform Relocation Act.

Section 408 – Yakima County would file for Section 408 permission for access modifications to the Corps accredited levee on the west bank of the Yakima River due to the reduced clearance created by the bridge construction.

Shoreline – Shoreline Development Permits would be obtained from the City of Yakima and Yakima County.

State Waters – Yakima County would obtain a Hydraulic Project Approval from WDFW for all work within the Yakima River.

Stormwater – Yakima County would apply for coverage under the current National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit (ECY 2020). This permit is required to protect state water during any construction activity that disturbs more than one acre of land.

13. WHAT OUTREACH AND OPPORTUNITIES FOR STAKEHOLDER PARTICIPATION WERE PROVIDED?

Outreach, coordination, and consultation have been conducted with federal, state, and local agencies during the preparation of this EA, including:

- City of Yakima
- US Bureau of Reclamation
- Federal Emergency Management Agency
- Washington Department of Fish and Wildlife
- US Army Corps of Engineers
- National Marine Fisheries Service
- US Fish and Wildlife Service
- WA Department of Ecology
- Department of Natural Resources
- Department of Historic Preservation

The letters sent from FHWA to participating and cooperating agencies can be found in **Appendix C**.

The Confederated Tribes and Bands of the Yakama Nation (Yakama Nation) have also been consulted during the Section 106 process and have also accepted the role of participating agency.

Public Outreach

Public outreach for this project has been ongoing since the project was in the alternative analysis phase. Numerous public meetings have been held in the City of Yakima where city, county, and design team representatives have discussed proposed alternatives, proposed project facilities, project phasing, and other project aspects. The first open house meeting occurred on June 9, 2010. In this meeting, personnel representing the design team, Yakima County, and the City of Yakima discussed the four proposed alignments for the East-West Corridor. Attendees of the meeting were asked to leave contact information if they wanted to be kept informed of project updates through mailed or emailed notices. Meeting attendees were asked to leave questions and/or comments on comment forms for project representatives to respond to. These comments mainly pertained to personal preference of proposed alignments which minimized impacts to personal property and the community as a whole from the different proposed alignments. Comments in support of Greenway Trail connections and pedestrian facilities were also received.

A follow-up open house meeting occurred on November 16, 2010. As the meeting discussed the same alternatives as the first meeting, the majority of the comments addressed the same issues as the first one.

A public comment period occurred following the publishing of the August 2011 Alignment Study for the project. Notices were sent out to residents and property owners within the project vicinity, as well as people who left their contact information at previous open-house meetings. A phone number was provided on the notice to contact for information in Spanish. Comments were submitted by October 15, 2011. A follow-up public meeting occurred on October 25, 2011. The meeting began with an introduction from a Yakima County representative summarizing the alternatives analysis process. The majority of these comments again pertained to concerns over chosen alternative alignments including right-of-way acquisitions. Comments both for and against roundabout intersections were received as well as support for transit options on the new route. The Alignment Alternatives Study Supplemental Report for this project was released in June 2012 which addressed comments from the study comment period as well as the meeting.

With the alignment chosen, public meetings resumed in 2019 to discuss the Proposed Project phasing and the environmental review process. An open house meeting occurred on April 17, 2019, which all property owners within the project vicinity were notified by mail in a letter provided in both English and Spanish. A Spanish language interpreter was present at the open house to answer questions regarding the project. The majority of the comments received pertained to concerns with the bicycle facility design and concerns with how this project would impact the surrounding neighborhoods on both sides of the river. Based on the comments provided at these meetings, the project design along East H Street has been altered in order to provide sidewalks and bike lanes rather than a shared use path.

A full list of comments responses provided is included in **Appendix H**.

14. WHAT ADDITIONAL OPPORTUNITIES FOR STAKEHOLDER PARTICIPATION WOULD BE PROVIDED?

With the COVID-19 pandemic, in-person public meetings have not been feasible. However, there are still opportunities for the public to comment on the project using the project website (<https://cityofyakima-terraceheights.org/>). The project website offers project descriptions for this project and related ones, public documents, and maps.

15. WHAT ARE THE NEXT STEPS?

After initial acceptance of the EA by WSDOT and FHWA, a public and agency review of the EA would occur. The EA would be available for review for 30 days. After the 30-day public comment period ends, comments submitted would be evaluated to determine if any changes to the analysis would alter the decision. Responses to comments would be prepared and included in the decision document.

If feedback received during the comment period suggest changes to the Proposed Project should occur, clarification would be made in the decision document to:

- Reflect changes to the Proposed Project or additional mitigation measures resulting from comments received on the EA and any impacts resulting from these changes
- Include any necessary findings, agreements, or determinations completed (Corps permit, 4(f) temporary occupancy, etc.)
- Include a copy of the comments received on the EA and responses to the comments

When the comment period concludes, WSDOT and FHWA would prepare a decision document after comments are assessed and responses provided. It is anticipated that the project would be advertised for construction in 2023 and construction would take place for five years.

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APPENDIX A. SUPPORTING DISCIPLINE REPORTS BY SUBJECT

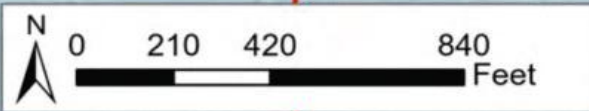
A1 Air Quality
A2 Environmental Justice
A3 Floodplains
A4 Hazardous Materials
A5 Land Use

A6 Noise
A7 Traffic
A8 Visual
A9 Wetlands

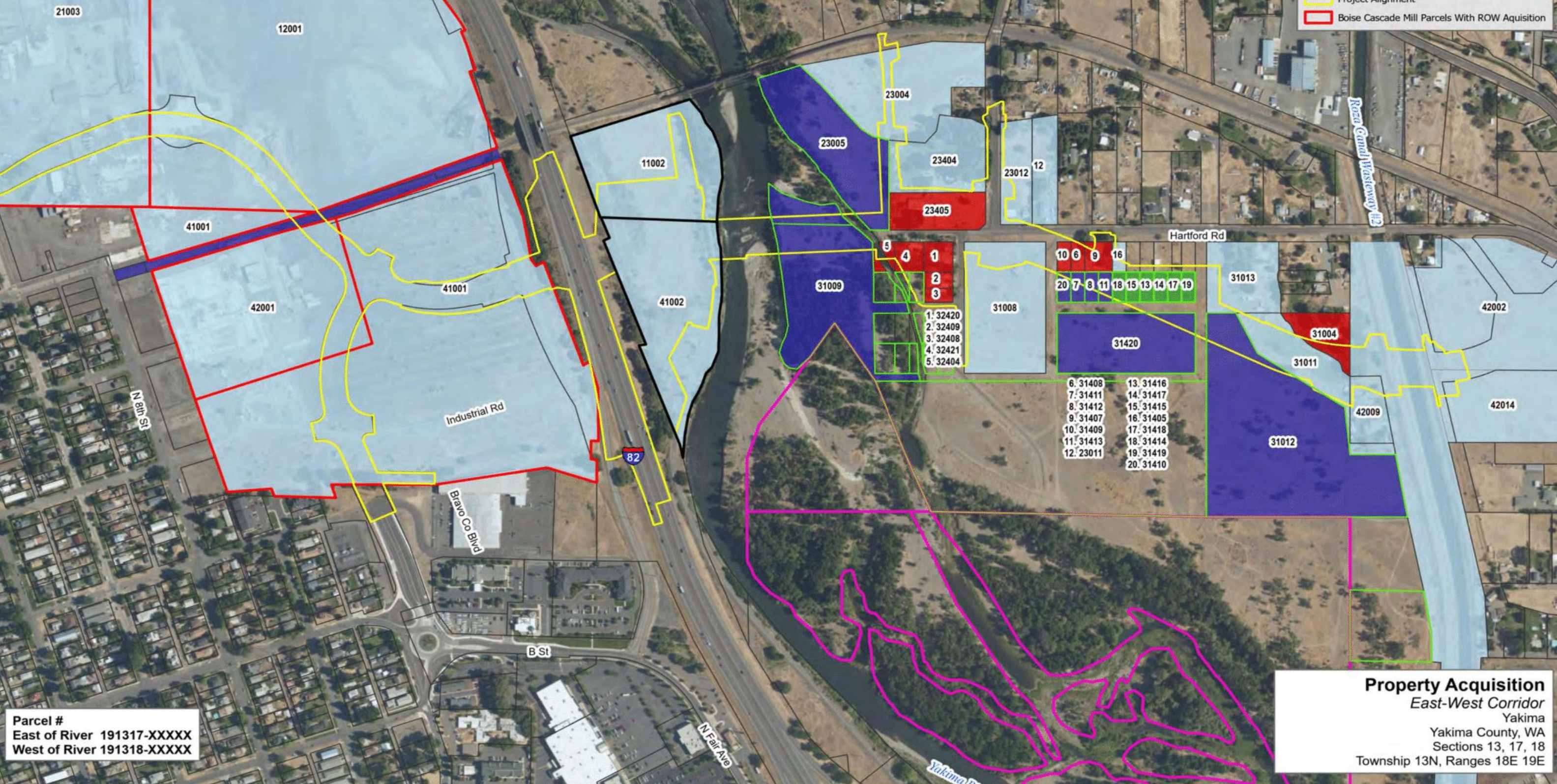
APPENDIX B. PROJECT DRAWINGS AND PLANS

APPENDIX C. AGENCY COORDINATION

APPENDIX D. RIGHT OF WAY ACQUISITIONS



- Bureau of Reclamation Parcels
- Parcels
- Full Acquisition
- Full Permanent Easement
- Partial Acquisition
- Partial Permanent Easement
- County Owned Parcels
- DOT Owned Parcels
- Project Alignment
- Boise Cascade Mill Parcels With ROW Acquisition



Parcel #
 East of River 191317-XXXXX
 West of River 191318-XXXXX

Property Acquisition
 East-West Corridor
 Yakima
 Yakima County, WA
 Sections 13, 17, 18
 Township 13N, Ranges 18E 19E

1. 32420
2. 32409
3. 32408
4. 32421
5. 32404

- | | |
|-----------|-----------|
| 6. 31408 | 13. 31416 |
| 7. 31411 | 14. 31417 |
| 8. 31412 | 15. 31415 |
| 9. 31407 | 16. 31405 |
| 10. 31409 | 17. 31418 |
| 11. 31413 | 18. 31414 |
| 12. 23011 | 19. 31419 |
| | 20. 31410 |

- | | | | |
|----|----|----|----|
| 10 | 6 | 9 | 16 |
| 20 | 7 | 8 | 11 |
| 18 | 15 | 13 | 14 |
| 17 | 19 | | |

APPENDIX E. SECTION 106 CONSULTATIONS

APPENDIX F. SECTION 4(F) COMPLIANCE

APPENDIX G. ESA SECTION 7 CONSULTATION

APPENDIX H. PUBLIC COMMENTS