



Arlington Avenue Bridges NEPA/Design/EDC

Project Update

November 2022

Prepared for
Regional Transportation Commission of Washoe County

In cooperation with
City of Reno

Prepared by
Jacobs *in conjunction with*  **Stantec**



Existing Three Span (Two Pier) North Bridge

1. Introduction and Background

Spanning the Truckee River in the Riverwalk District of downtown Reno, Nevada (Figure 1), the Arlington Avenue Bridges are identified as Nevada Department of Transportation (NDOT) bridges B-1531 (south) and B-1532 (north). The two bridges were built in 1921 (north) and 1938 (south) and rehabilitated in 1967.



Figure 1. Project Location

Both bridges are structurally deficient and need to be replaced, as shown in the Regional Transportation Commission of Washoe County's (RTC's) 2040 Regional Transportation Plan (RTP) adopted in 2017 and amended in 2018; and RTC's recently approved and adopted 2050 RTP.

A Feasibility Study and Planning and Environmental Linkages (PEL) was completed in June 2021. The Feasibility Study reduced the range of possible bridge types and aesthetic themes through engineering analysis, and agency, stakeholder, and public outreach efforts between December 2018 and April 2021. The PEL formally identified the purpose and need of the Project: to address the deteriorating condition of the bridge structures, provide community access to the Truckee River and Wingfield Park, and improve the hydraulic capacity of the Truckee River during flood events.

The results of the Feasibility and PEL Studies were to replace the existing three span north bridge (Figure 2) with a single pier bridge type, and replace the existing clear span south bridge (Figure 3) with a clear span bridge type. In addition, an aesthetic theme of modern art-deco was the consensus.



Figure 2. Existing North Bridge



Figure 3. Existing South Bridge

2. Project Status Updates

The 30% preliminary design was submitted for Agency review in July 2022 and the 60% design is currently in-progress.

The design incorporates pedestrian and micro-modal safety enhancements with 8-foot wide sidewalks and dedicated 5-foot bicycle lanes separated by a 2-foot striped buffer from the travel lane. Safety enhancements also include continuous pedestrian scale lighting along Arlington Avenue and widened sidewalk overlooks on both sides of the north bridge.

2.1 Project Team Meetings

Agency coordination, site visits, and public meetings that have been held since the June 2022 update for the design and Environmental Study process include:

- **Miscellaneous Meetings**
 - June 29, 2022 – Internal design team and RTC discussed constructability issues. The discussion focused on surface water diversions vs. localized dewatering, pile drilling and tree impacts, shoring options and layback minimums, complexity added with integral lighting, construction material procurement, drilling challenges, and bridge placement.
 - July 15, 2022 – Met with Gary Lacy, the designer of the kayak white water park, to discuss the hydraulics of the kayak park water features with the new single pier north bridge geometry.
 - July 26, 2022 – RAISE Grant Kick-off meeting reviewed grant agreement templates, discussed intent, requirements, and schedule.
 - September 14, 2022 – Field walk with NV Energy and PK Electrical to discuss undergrounding of overhead electrical facilities west of I-580, and east of I-580 for approximately 1,000 feet, to Matley Lane.
 - September 15, 2022 – Coordination with NV State Lands to determine the OHWM for construction easements and permanent easements for the project.
 - September 21, 2022 – City of Reno and TRFMA to discuss the 100-year hydraulic model for existing and proposed conditions, using TRFMA's current model.
 - October 12, 2022 – Coordination with UNR Professor Dr. Motamed to discuss coordination for a research project about deep foundation design for bridges. The existing soils along the Truckee River are categorized as glacial outwash which AASHTO bridge design recommendations identify low resistance factor for. During construction of the drilled shafts, load testing will be performed to determine a more appropriate resistance factor, resulting in higher capacities and shorter drilled shafts. The cost savings will be quickly realized by RTC for the upcoming Keystone St. and Sierra St. Bridge replacement projects.
 - October 27, 2022 – CTWCD to discuss the 14,000 cfs hydraulic model existing conditions and proposed bridge conditions with CTWCD's current approved hydraulic model.
 - On-Going – Utility coordination meetings to define improvements and potential upgrades to existing infrastructure.
- **Agency Coordination Meeting – July 11, 2022**
 - This meeting provided environmental updates on the NEPA clearance, Cultural Resources (Section 106 Consultation), Park & Recreation Resources (Section 4(f) Approvals), and Threatened and Endangered Species (Section 7 Consultation).
 - USACE Section 408 Permit requirements for civil works projects within the 14,000 cfs inundation delineation along the Truckee River.
 - Design updates and summary of decisions made through ASWG and DRC meetings.

- Landscape and aesthetics options for bridge railing, lighting, and pylon shape/size.
- Environmental study, permitting, design, landscape and aesthetic project updates.

- **Aesthetic Stakeholder Working Group Meetings**

- June 22, 2022 – Finalize which modern Art-Deco themed bridge railing, lighting, and pylon shape/size options to present to the public to vote on.
- September 27, 2022 – Provide a recommendation, based on the public survey results and ASWG discussion, to move forward to final design. See Public Meeting Survey Results (Figure 10) for results of the public voting.

Discussions included placement of custom column lights at the bridges and use of pedestrian scale post-top lights along Arlington Avenue. The City of Reno reminded the design team of the need for the lights to be easility removable for maintenance equipment performing debris removal from atop the bridges.

Even though the RTC does not have a public art budget, there is an opportunity to incorporate public art into the project. In coordination with the City of Reno, a public art contest for the formliner pattern along the bridge abutments and center pier of the north bridge is being considered. Since formliner patterning is already required for the project, having public input on what the patterning looks like does not increase project costs. Design team to provide guidance on formliner to ensure the project purpose and need are met.

Decisions Made - The ASWG concurred to include path up-lighting to illuminate the south abutment of the north bridge and provide safety lighting along the path. In addition, programmable color lighting for the bridge rail strip and custom column lights on the bridges.

- **Design Review Coordination Meetings**

- July 19, 2022 – Discussion included tree removal and replacement, constructability, access restrictions during construction, potential detour routes, review of 30% design submittal.
- August 9, 2022

Utility Coordination Discussion included existing utilities and needs for upgrades.

Pedestrian Safety:

- a) The design team is looking at modifying the existing pedestrian activated RRFB to include pedestrian crossings for both the north and south side of Island Avenue, pending approval from Reno.

Miscellaneous Discussion included:

- a) City of Reno Maintenance and the Reno Police Department requested removable bollards be installed at the 1st Street and Island Avenue intersections to restrict vehicular access during special events.
- b) Pedestrian railing will NOT be included along Arlington Avenue to discourage Jaywalking. Utilizing Arlington Avenue as a plaza area for special events is a need of the project.

- September 13, 2022

Utility Coordination Discussion included:

- a) Coordination with new bridge structures for size, number of facilities needed by each utility company. NV Energy has a main transmission line across the north bridge. AT&T, Charter, and Zayo will require facilities across both bridges. TMWA has facilities within the intersections, but does not currently have or need to have facilities across either bridge.

Miscellaneous Discussion included:

- a) Removable bollards detail for installation at the 1st Street and Island Avenue intersections to restrict vehicular access during special events.

2.2 Public Meeting – August 2022

A pre-recorded public presentation and accompanying survey was posted on the project website, www.ArlingtonBridges.com for the month of August. Also included on the website was a link to the Build-A-Bridge website application, an interactive website to select which combination of the three bridge rail options, two lighting options, and three bridge pylon options was preferred. Website application allowed users to see the options together on a photo rendering; each participant could then record their preference through the survey.

An in-person meeting, presenting the same material, was held on August 11, 2022 at the McKinley Arts Center. In person attendance was low, with only 20 people, two of which provided written comments at the meeting and a few others providing verbal comments captured in the meeting transcript. The various options presented at the August Public Meeting are shown on Figures 4 through 9.



Figure 4. Texas DOT Concrete Railing



Figure 5. Metal Railing



Figure 6. Hybrid Concrete with Metal Railing at Overlook



Figure 7. Pole with Post-Top Luminaire Lighting



Figure 8. Custom Column Lighting



Figure 9. Tall End Pylon

Short End Pylon

Mid-Size End Pylon

There were 400 participants that viewed the virtual presentation, 386 of which took the survey, voting on which combination of bridge railing, lighting, and pylon they preferred. The survey also allowed the opportunity for the community to ask questions and provide feedback. Based on survey results (Figure 10), the preferred options included the all metal bridge railing with custom column lights and tall end pylons.

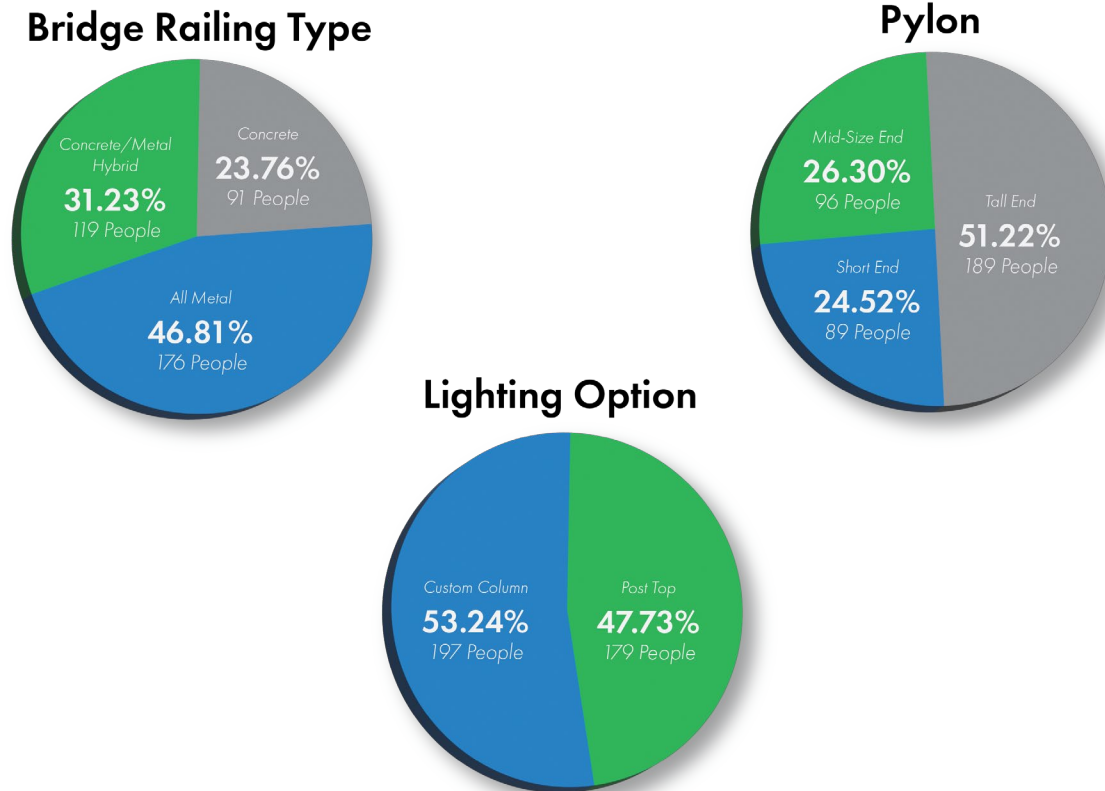


Figure 10. Survey Results (August 2022 Public Meeting)

2.3 Environmental Updates

- **Environmental Clearances for Geotechnical Borings**

- NDOT is obtaining the necessary Section 106 clearances. Clearance for SB-22-03 and SB-22-04 was received on July 1, 2022. Clearance for SB-22-05 is anticipated by November 3, 2022. NDOT is leading the tribal coordination, which includes the opportunity to monitor borings.
- For SB-22-04, which is in the Truckee River, informal consultation is needed with USFWS. The Biological Assessment (BA) is currently being reviewed by RTC and will be submitted to USFWS in November, with approval anticipated in December.
- For SB-22-04, we will obtain a 404 NWP 6 for survey activities. The Pre-construction Notification (PCN) is in progress and will be submitted once we have USFWS approval of the BA.
- A Section 408 permit will be obtained for SB-22-03 and SB-22-04, which are both within the CTWCD 14,000 ft inundation limits. The permit application is currently being reviewed by CTWCD and USACE. Anticipate authorization in spring 2023.
- NDOT issued a Programmatic Categorical Exclusion (PCE) for SB-22-05 on October 18, 2022. NDOT will issue a separate PCE for SB-22-04 and SB-22-05 when permits are received.

- **Environmental Clearances for Project**

- NDOT has initiated Section 106 consultation. SHPO has concurred with the project area of potential effects (APE). NRHP-eligible resources exist in the study area. NDOT will consult with SHPO on eligibility and effects. Section 106 clearance is expected in Jan/Feb 2023.
- FHWA/NDOT consulted with Native American tribes and identified a segment of the Truckee River within the APE that has the potential to be a traditional cultural property (TCP). FHWA/NDOT will leave the potential TCP unevaluated and treat as National Register eligible for the purpose of this project.
- Section 4(f) approval is needed from FHWA for impacts to Wingfield Park (including the whitewater park) and the Truckee River Walk Trail. FHWA agreed that a temporary occupancy exception could be used for the Truckee River Walk Trail and a de minimis impact finding could be made for Wingfield Park. City of Reno concurrence is required for both approvals. However, several written comments were received from the kayak community expressing concerns about closing the whitewater park for two years during construction. These public comments must be considered for the 4(f) approvals and may discourage FHWA from making a de minimis impact finding for Wingfield Park. The alternative is an individual Section 4(f) approval, which is a lengthier process and requires us to demonstrate that there is no “feasible and prudent” way to avoid the impact. Coordination with the City of Reno is on going to determine if river access can be maintained when in-water work is not occurring. This would allow continuous recreational access to at least one channel of the river through the two-year construction period. This approach should facilitate an FHWA de minimis impact finding for Wingfield Park (including the whitewater park).
- A Section 408 permit will be obtained for work within the CTWCD 14,000 ft inundation limits. The permit application will be submitted to CTWCD by the end of 2022.
- We will obtain a 404 NWP 14 for linear transportation projects. The PCN will be submitted in spring 2023. USACE can issue the 404 permit when the Section 408 permit is authorized.
- NDOT will use a Categorical Exclusion (CE) for NEPA clearance. FHWA approval is required. Jacobs is preparing technical memorandums to support the CE.
- RTC and NDOT are currently reviewing draft memorandums including the BA, the Initial Site Assessment (ISA) for hazardous materials, the Water Quality Memo, the Floodplain Memo, and the Land Use Memo.
- Additional memorandums are expected for review in November including cultural resources, socio-economics, multi-modal, parks/recreation, visual resources, and wetlands.
- The recreation resources in the study area were not developed or improved with Land and Water Conservation Act funding. Therefore, Section 6(f) does not apply.
- NDOT will prepare the Native American Consultation Report and TCP Report. NDOT will also prepare documentation for the archaeology and paleontology clearances to support the CE.

3. Project Team Recommendations

Results of the survey from the Public Meeting held in August 2022 were reviewed with the aesthetic stakeholder working group and based on community feedback the group's recommendation is to move the metal railing with tall end pylons and custom column lights forward to final design.

Streetscape elements recommended include overlooks on both sides of the north bridge, large canopy shade trees, diagonal joint pattern accents on sidewalks to compliment the bridge railing design, pedestrian scaled lighting along sidewalks and along path under the north bridge, smooth transitions from the street to the sidewalk and into the park, and buffered bike lanes (Figure 11). Recommended railing, pylon, and lighting options have been updated on photo renderings to provide visuals to show the public final recommendations (Figures 12 – 14) at the third public meeting planned to be held in February 2023.

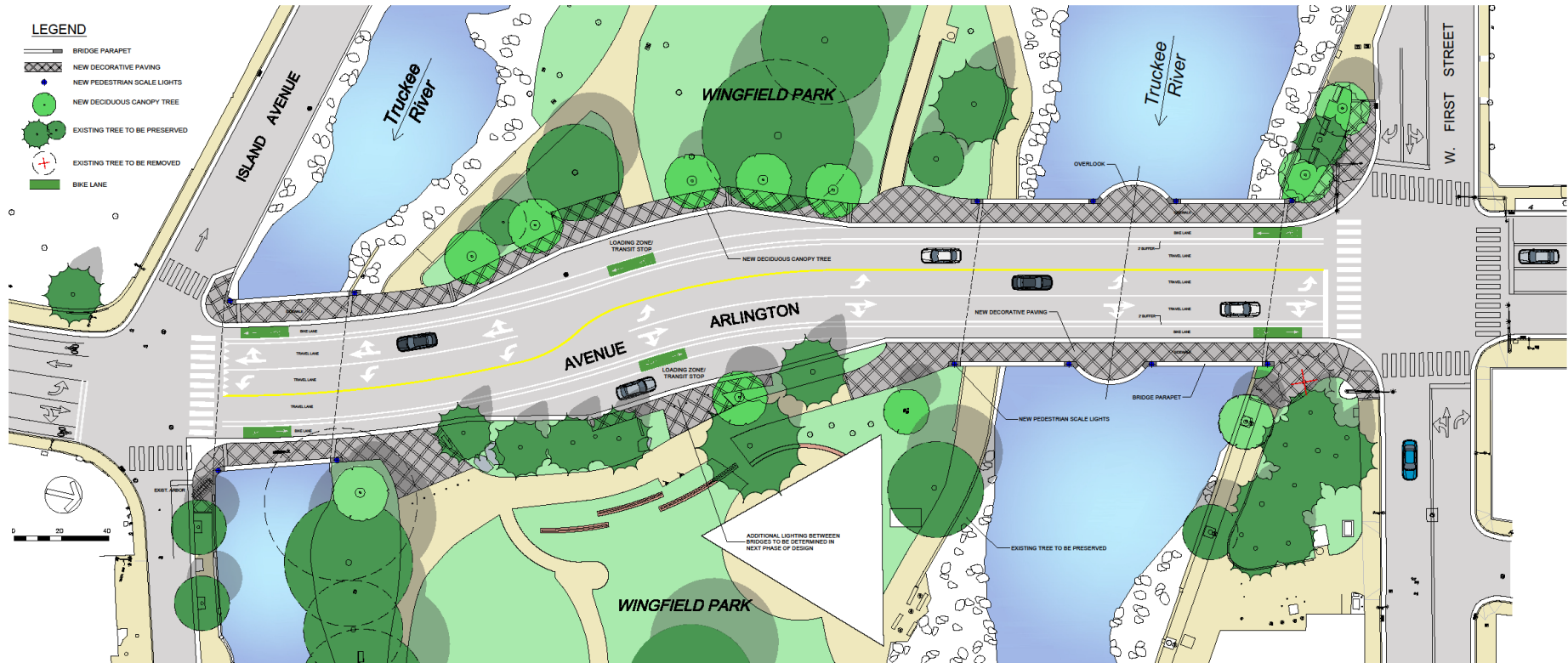


Figure 11. Propsed Streetscape Elements



Figure 12. Overall Recommendations



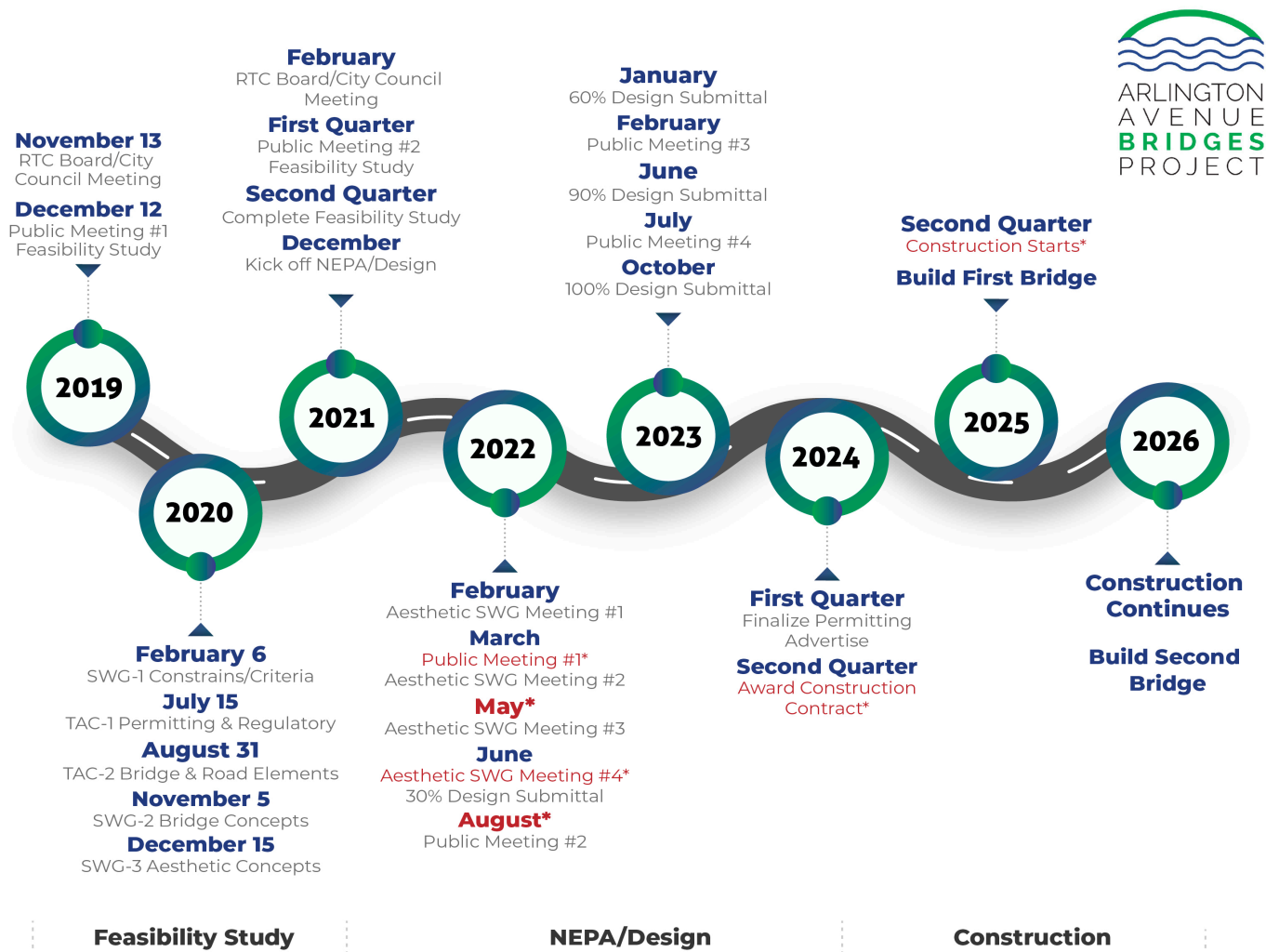
Figure 13. North Bridge Blow up



Figure 14. South Bridge Blow-up

4. Project Schedule

The RTC has received \$7 million for construction of the Arlington Bridges that must be obligated by fall of 2024. RTC plans to award the construction contract in Fall of 2024, allowing the contractor flexibility to procure materials and properly plan for in-river construction, anticipated to begin in early 2025 and continue through 2026. Access within the Truckee River channel is allowed from July 1 through October 31, yearly. Below is a schedule (Figure 15) with milestones and events to meeting this deadline. Obtaining the USACE permit, finalizing NEPA clearance, certifying Right-of-Way, and certifying utilities are the key steps to maintain the overall project schedule.



* Schedule changes highlighted in red

Figure 15. Project Timeline

5. Project Funding

The project is fully funded through construction as indicated on the approved funding table (Figure 16). Amendment No. 1 to the Local Public Agency (LPA) Agreement with NDOT executed on June 3, 2021 will reflect the current project funding. Amendment No. 1 to the LPA Agreement is anticipated to be executed by the end of 2022. In September 2022, FHWA submitted a Material Changes form defining how the Right-of-

Way and Construction phases of the project are being funded to the US Department of Transportation Office of the Secretary (OST). The Material Changes Form, once approved, will be included with the RAISE Grant Agreement. The overall project funding split is 64% federal and 36% local.

Description	Total	RAISE Grant Funds		STBG Funds		COVID Funds	Congressional Directive		RTC Funds
	Project	Match		Match			Match		Gas
	Cost	Federal	RTC Fuel Tax	RTC Fuel Tax	RTC Fuel Tax		Federal	RTC Fuel Tax	Tax
Prelim Engineering	\$ 3,300,944					\$ 3,300,944			
Right-of-Way	\$ 300,000								\$ 300,000
Construction	\$ 24,700,000	\$ 7,000,000	\$ 1,750,000	\$ 5,900,000	\$ 310,526		\$ 2,000,000	\$ 105,263	\$ 7,634,211
Total Project Cost	\$ 28,300,944	\$ 7,000,000	\$ 1,750,000	\$ 5,900,000	\$ 310,526	\$ 3,300,944	\$ 2,000,000	\$ 105,263	\$ 7,934,211

Figure 16. Project Funding Table

6. Agency Coordination

RTC, FHWA, and NDOT are meeting twice a month to ensure appropriate administrative coordination with our partners. The RAISE Grant Material Changes form has been reviewed, approved, and submitted to OST. The team continues to work through the RAISE Grant Agreement so it's ready for signatures well in advance of construction. Discussions regarding the LPA Agreement and invoice submittal requirements necessary to receive federal reimbursements are ongoing. Work performed this year under the Preliminary Engineering Phase has been submitted to NDOT for reimbursement.

Hydraulic design criteria for the bridges needs to be defined for the design team to maintain the project schedule. The existing bridges are inundated during the 100-year storm event and the proposed bridges will also be inundated due to existing condition constraints (i.e. unable to raise bridges and maintain access at First Street and Island Avenue). 30% design slightly decreased the water surface elevation within the project limits but no freeboard is provided under either bridge during large storm events. City of Reno, Truckee River Flood Management Authority, and Carson Truckee Water Conservancy District (CTWCD) coordination is ongoing to gain consensus on hydraulic design criteria. Additional hydraulic modeling is being performed to show the group the results of various options being analyzed by the design team. Once consensus is achieved, the design team in conjunction with CTWCD, will present findings to the US Army Corps of Engineers (USACE) at our second pre-application meeting for the project.

Discussions with Nevada State Lands and the Nevada Division of Environmental Protection are under way. Permit requirements for the bridge construction have been provided and the team continues gathering appropriate documentation. Dewatering and river diversion plans are under development. The design team will survey the ordinary high-water mark of Truckee River so property boundaries between the City of Reno and Nevada State Lands can be defined.

7. Next Steps

The project team has submitted most of the environmental technical memorandums required for NEPA Clearance. The next major milestones are to define hydraulic modeling criteria, received NEPA Clearance for the geotechnical borings and then for the project, develop in-channel design for adjustments to the whitewater park, submit USACE permit application, and submit 60%, 90%, and 100% Plans, Specifications, and Estimate packages. The team continues to compile feedback received from the community and prepare for the third Public Informational meeting with a focus on addressing questions and concerns received and presenting final recommendations. Additional information can be found on the project website at: www.ArlingtonBridges.com.