I-90 Austin Bridges Improvement & Mobility Project

2022 BRIDGE INVESTMENT PROGRAM (BIP) GRANT OPPORTUNITY

Project Name: I-90 Austin Bridges Improvement & Mobility Project
Project Type: Bridge Project - Rural
Future Eligible Project Costs: $53.94M
2022 BIP Funds Requested: $25M

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Supporting Information can be found at:
https://www.srfconsulting.com/mndot-i-90-austin-bip/

DEPARTMENT OF TRANSPORTATION

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I. BASIC PROJECT INFORMATION

The Minnesota Department of Transportation (MnDOT) is submitting this 2022 Bridge Investment Program (BIP) grant opportunity request for $25M in federal funds. The requested funds will be used towards the I-90 Austin Bridges Improvement and Mobility Project (herein known as the Project) in the city of Austin, MN. Austin is an important economic, research, and recreational hub in southeastern Minnesota. The Project's total future eligible cost is $53.94M and complies with the requirements of the Bridge Projects category. The Project is further categorized as a bridge bundling project to optimize cost and schedule efficiencies.

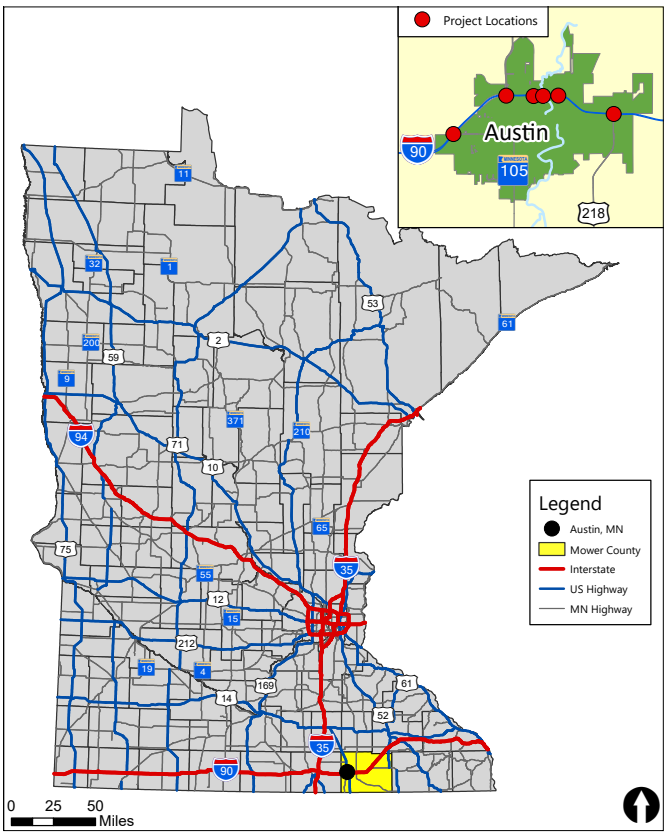

Figure 1 Project Location in Regional Context

Interstate 90 (I-90) is an important east-west interstate corridor that connects vital economic centers across the United States. I-90 through Austin was the first section of the interstate constructed in Minnesota, in the late 1950s. It spans across southern Minnesota for a total of 276 miles between the South Dakota and Wisconsin state lines and runs mostly parallel to the Iowa state line (Figure 1). This Project is significant both regionally and nationally because I-90 is classified as a primary national freight corridor and is part of the Eisenhower Interstate System, National Highway System (NHS) route, National Highway Freight Network (NHFN) Non-Primary Highway Freight System, and National Multimodal Freight Network (NMFN) in the National Freight Strategic Plan. I-90 is also classified by MnDOT as one of Minnesota's Principal Freight Corridors in Minnesota Statewide Freight System and Investment Plan.

The I-90 corridor connects regional trade centers including Sioux Falls, Worthington, Fairmont, Albert Lea, Austin, Rochester, and La Crosse. As a regional center, Austin is home to the corporate headquarters of Hormel Foods Corporation – a Fortune 500 company and the largest employer in Austin, the world-famous SPAM museum, and the Hormel Institute – a leading cancer research institution operated by the University of Minnesota and the Mayo Clinic, all located within one mile of the Project corridor. Other important facilities along the Project corridor include Hormel Foods Processing Plant, Riverland Community College, Mayo Clinic Health System, Minnesota Department of Natural Resources (MnDNR) Site of Biodiversity Significance, Oakwood Cemetery, Cedar River, Hormel Nature Center, Austin Municipal Airport, Austin Public Schools, several parks, churches, senior living, and public and subsidized housing.

Within the Project corridor, I-90 is a divided rural highway with two-lanes in each direction and has a posted speed limit of 65 miles per hour (mph). Current annual average daily traffic (AADT) in the Project corridor along I-90 ranges from 16,700 to 24,400 vehicles per day. I-90 along with a network of several principal arterial, minor arterial, and major collectors including US 218, MN 105, County State Aid Highway (CSAH) 45, and CSAH 16 provide direct access to the key destinations noted above, cross city access for commuters and freight, and local access for the numerous businesses and residents along the interstate.

Project Description

The bridges along I-90 in Austin were constructed between 1958 and 1959. These bridges have served the transportation network for over 60 years and are well past their design life. Between 2015 and 2017, MnDOT conducted a pre-scoping study to identify bridges for replacement within a five-mile section of I-90. Several operational and safety concerns were noted for the roadway users, pedestrians, freight haulers, and businesses along the Project corridor. The existing transportation challenges in the area include:

- poor state of repair of ten bridges including structurally deficient and/or functionally obsolete structure, poor deck condition and geometry, insufficient vertical clearances, and significant scour conditions at piers under water,
- significant crash and safety concerns due to narrow bridges and insufficient sight lines, for both motorist and non-motorists,
- congestion along the corridor due to inadequate traffic operations and queuing, and
- lack of Americans with Disabilities Act (ADA) compliant multimodal infrastructure.

The community of Austin is deeply engaged in the Project and have expressed their needs and challenges with current conditions. The absence of ADA accessible multiuse walkways across I-90 is a huge barrier to multimodal connectivity for the community. I-90 acts as a barrier between downtown Austin (south of I-90) and the area north of I-90. This has impacted the growth of communities north of I-90. Additionally, according to MnDOT Priority Areas for Walking Study (PAWS), a mapping tool to identify priority walking areas, the Project corridor was identified as the highest priority for developing pedestrian and bicyclist infrastructure in Austin. The Project will remedy this issue and provide multimodal connections to/from the thriving industrial community, housing development of various densities, employment centers, medical facilities, and retail/ commercial/tourist destinations, thereby, supporting diverse community needs in the city of Austin.

MnDOT has connected with the public, stakeholders, and partners since 2015, to implement a cost-effective solution that the community supports. The Project consists of a bundle of ten bridges that includes reconstruction of eight bridges (five overhead structures, two mainline bridges, and one pedestrian bridge) and rehabilitation of two mainline bridges along I-90, at six sites (Figure 2). Five of these locations are interchanges with other US, state, and county highways. Additionally, the Project includes roadway improvements associated with the bridges, construction of a network of ADA accessible multiuse sidewalks and trails, and replacement of stormwater infrastructure to expand capacity to resolve flooding along the corridor. The replacement/rehabilitation of the bridges is planned between 2024 and 2026.

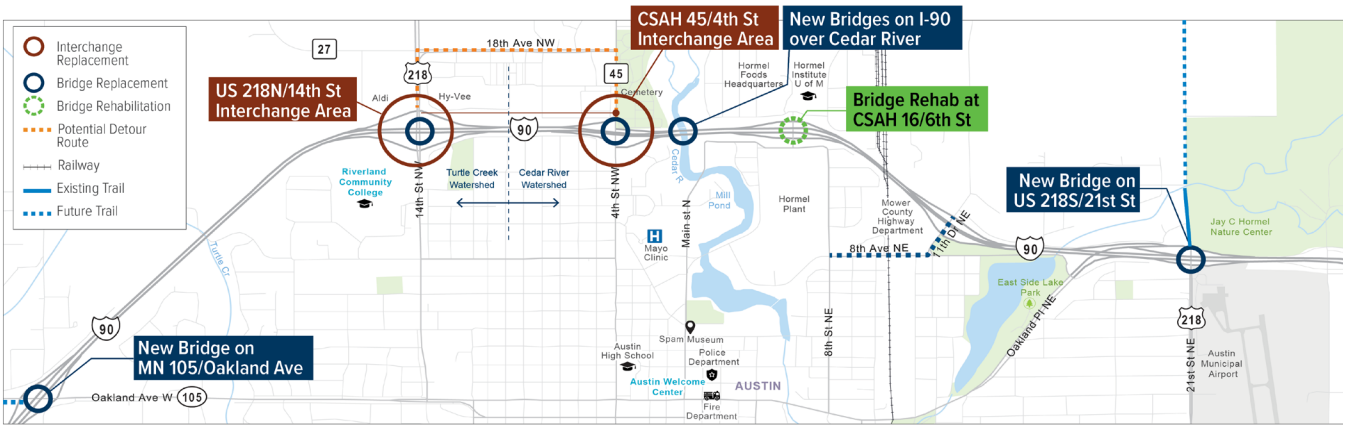

Figure 2 Project Locations

Proposed Improvements

MnDOT's vision for the Project will develop and construct long-term solutions that will improve the existing safety issues due to failing infrastructure as well as provide better quality of life to the local communities. As noted above, the transportation challenges in the Project corridor are because of structural issues due to aging infrastructure, safety and congestion issues, and lack of ADA compliant multimodal connectivity.

According to the National Bridge Inventory Report, the bridges are either structurally deficient, functionally obsolete, or in need of repair due to other existing moderate to serious issues (Table 1). In general, the bridges are experiencing significant structural issues including moderate to severe transverse and longitudinal cracking, substructure delamination, cracking of abutments and columns, spalled concrete, and exposed rebar. Other issues include steel girder fatigue, steel corrosion, and minor paint failure along with the bridge railings. All five of the overhead bridges have insufficient vertical clearance, as per MnDOT standards. Additionally, two of the bridges over the Cedar River are experiencing critical river scour resulting in exposed footings. The pedestrian bridge over the Cedar River does not meet current ADA guidelines for width.

Table 1 Bridge Condition Ratings

Bridge	Location	NBI Condition Rating*					Remarks
		Deck	Super Structure	Sub-Structure	Channel	Culvert	
9183	MN 105 / Oakland Ave. over I-90	4	6	5	N	N	Structurally deficient
50803	US 218N over I-90	6	5	5	N	N	Functionally obsolete
50804	US 218N over I-90	5	5	6	N	N	Reconstructed to accommodate reconfiguration of the interchange and address critical safety concerns
9180	CSAH 45 / 4th Street NW over I-90	5	6	5	N	N	Functionally obsolete
6868	I-90 WB over the Cedar River	5	6	5	6	N	Scour critical, footing is exposed
6869	I-90 EB over the Cedar River	5	7	5	6	N	Scour critical, footing is exposed
9178	I-90 WB over CSAH 16/6th Street NE	5	6	6	N	N	The bridge will be rehabilitated and not replaced
9179	I-90 EB over CSAH 16/6th Street NE	5	6	6	N	N	The bridge will be rehabilitated and not replaced
9201	US 218S over I-90	4	6	6	N	N	Structurally deficient
9218	Ped bridge over the Cedar River	7	7	7	7	N	Bridge does not meet current ADA guidelines for width

** Bridge condition scores greater than 7 suggest a bridge is new or was repaired to a good condition. Scores 5 and less indicate a fair to serious condition and repair is required.*

The proposed improvements include:

- Reconstructing six bridges to restore them to a state of good repair, address structural and safety issues, add bike and pedestrian accommodations, and reduce future annual maintenance costs. These include:
  - » Bridge 9183 along MN 105 (Oakland Avenue W) over I-90
  - » Bridge 50804 along US 218N over I-90
  - » Bridge 9180 along CSAH 45 (4th Street) over I-90
  - » Bridges 6868 & 6869 along I-90 over the Cedar River
  - » Bridge 9201 along US 218S over I-90

- Reconstructing the pedestrian bridge 9218 over the Cedar River to meet ADA guidance for width.
- Removing existing bridge 50803 along southbound US 218N to reconfigure the interchange.
- Rehabilitating bridges 9178 & 9179 along I-90 over CSAH 16 (6th Street NE) to repair structural issues such as cracking, spalling, and minor delamination in the bridge superstructure. These bridges are in better condition than the others and therefore are recommended for rehabilitation and not replacement.
- Constructing 6-foot to 12-foot-wide multiuse trails/walkways along the four overhead bridges (9183, 50804, 9180, and 9201) and along the associated interchange connections to provide multimodal connectivity to the existing and planned trail networks in the area.
- Constructing two new tear drop roundabouts (RABs) at the I-90/ US 218N interchange ramp connections to address critical safety issues at this interchange. These RABs are designed to accommodate the heaviest trucks (Lowboy truck and trailer) traveling through the interchange.
- Improving vertical clearances on four overhead bridges (9183, 50804, 9180, and 9201) to meet the 16.5-foot minimum vertical clearance consistent with MnDOT standards for bridge design.
- Reconstructing ramp connections at four I-90 interchanges (MN 105, US 218N, CSAH 45, and US 218S) to match revised bridge profile and to improve safe merging of vehicles including heavy trucks.
- Reconstructing approximately 1,000 feet of CSAH 45 to match revised bridge profile, reconstruct existing driveways, median, and sidewalks.
- Reconstructing approximately 1,400 feet of I-90 mainline to match revised bridge profile over the Cedar River to provide required freeboard for State Water Trail on the Cedar River.
- Widening of all the reconstructed bridges to include 8-foot paved shoulders along both traffic directions to allow for safer passing of queued vehicles or stopping of emergency vehicles as well as improved sight distances.
- Installing a new traffic signal at I-90/CSAH 45 interchange.
- Installing median inlets and storm sewer infrastructure throughout the Project corridor to resolve flooding and increase resiliency.

This Project will be constructed under traffic with lane closures controlled with approved temporary traffic control devices/practices and signed local detour providing alternate routes, where necessary. Access to adjacent properties will be maintained during construction but may be limited at times due to phasing requirements. The Project layout and typical sections can be found here.

Project History

The Project was initiated in 2015 when MnDOT conducted a Pre-scoping Corridor Study. The study identified a need for reconstructing/rehabilitating 10 bridges along I-90 as they were past their design life and were experiencing significant deterioration. The condition of the bridges was further analyzed in the Project Scoping Report, finalized in February 2020, which reported significant safety and operational concerns. Of the 10 bridges identified in the Pre-scoping Corridor Study, the bridge at 28th Street NE was replaced in 2021. The other nine bridges are part of the Project and are scheduled to be reconstructed or repaired between 2024 and 2026. So far MnDOT has spent $2.08 million, in state bond funds, on the corridor study, environmental assessment, and preliminary design of the Project. The public outreach for the Project has been going on since July 2019.

In addition to the bridges identified in the Pre-Scoping study, other investment in the area include the bridge at 11th Drive NE which was replaced in 2017.

Project Location

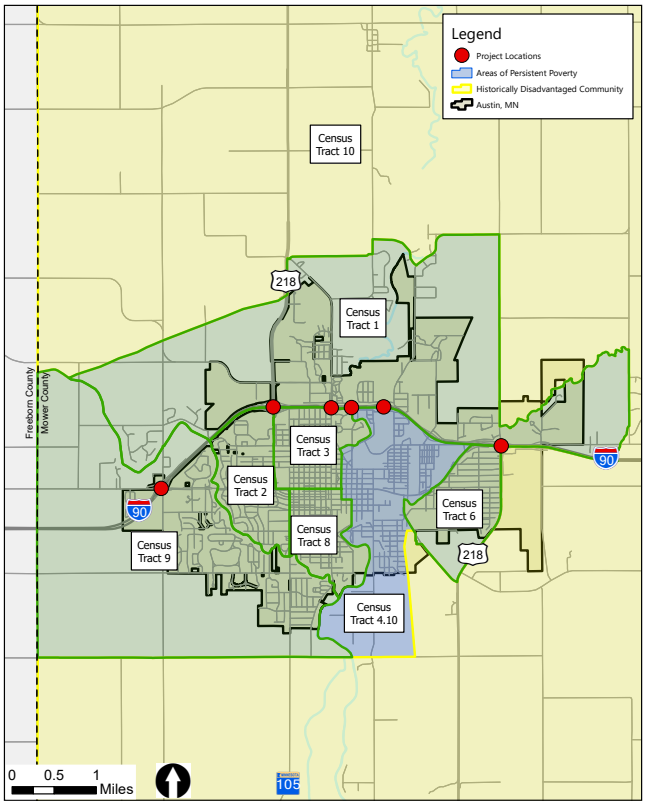

Figure 3 Project Location in Regional Context

The Project will reconstruct and rehabilitate ten bridges at six different locations along five miles of I-90, in the city of Austin, MN as shown in Figure 3. The Project limits are between mile posts 175.637 and 180.523 along I-90. The geospatial location of the Project is approximately 43.68057°,-92.97971°.

Austin is a vital economic hub in southeast Minnesota and is the county seat for Mower County. According to the Mower County Economic Development Report, the County has a lower median household income than the state of Minnesota, and a higher percentage of households with incomes below $50,000. Overall, Mower County has the 62nd highest median household income of the 87 counties in Minnesota. Mower County also has a higher percentage (more than twice) of Hispanic or Latinx population compared to the state. Austin has a population of nearly 26,174 residents as per the 2020 American Community Survey (ACS) estimates. The demographics for the city of Austin are 92.6 percent White, 2.22 percent Asian, and 1.81 percent African American. Hispanic or Latinx populations of any race are 15.4 percent of the population. There is also a significant North African (Karen) community in Austin. The Project is located within a rural area, and therefore, is designated as a rural project. The Project sits across seven census tracts (1, 2, 3, 4.10, 6, 9, and 10), of which one (4.10) is designated as the only **Area of Persistent Poverty (APP)** in Mower County. Census tract 4.10 is also designated as a Qualified Opportunity Zone. Additionally, census tract 10 is the largest census tract in and around Austin and is designated as a **Historically Disadvantaged Community (HDC)**. The Project is **not** located in 2010 Census-designated Urbanized Area, Empowerment Zones, Promise Zones, or Choice Neighborhoods.

Project Parties

Grant Recipient

The Minnesota Department of Transportation (MnDOT) is the applicant and primary point of contact of this BIP application. MnDOT has been a proactive leader and advocate for this Project for several years. MnDOT has extensive experience with procuring and developing transportation and bridge improvement projects. With over 14,000 miles of trunk highway (including interstates) and nearly 4,500 bridges under their ownership, MnDOT is experienced and committed to the maintenance and expansion of the roadway system. Within the last 10 years, MnDOT and its partners have procured 10 federal grants used to increase efficiency and safety on the MnDOT system.

Primary Contact

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Project Partners

The Project is overwhelmingly supported by various public and private organizations including Mower County, the City of Austin, Hormel Foods Corporation, Hormel Institute, Mayo Clinic, and several other local institutions. Mower County and the City of Austin are also funding partners. The Project is also supported by various members of Congress both at federal and state levels. The letters of support can be found here.

II. NATIONAL BRIDGE INVENTORY DATA

Detailed information from the National Bridge Inventory database is provided for each bridge here.

III. PROJECT COSTS - GRANT FUNDS, SOURCES, AND USES OF PROJECT FUNDS

Detailed Budget

Total Future Eligible Project Cost: $53.94 million

BIP Grant Request Amount: $25 million (46 percent of future eligible project cost)

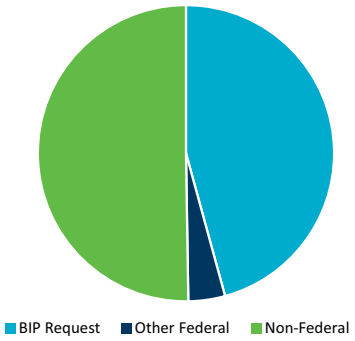


Figure 4 Project Fund

Availability and commitment of funding sources:

The total Project cost is $56.02 million which includes construction, utilities, right-of-way, design engineering, contingency, construction administration, and past expenditure. MnDOT has secured $26.1 million in state funds for the Project. The secured funds are programmed in State of Minnesota's approved 2022- 2025 State Transportation Improvement Program (STIP) as Project No. 5080-170, as of Fall 2021. To date, $2.08 million in MnDOT funds have been spent on corridor study, environmental assessment, and preliminary design to advance project delivery. Table 2 presents the project budget. Detailed construction cost estimate for the Project has been prepared and can be found here.

Table 2 Project Funding Breakdown

	Project Element	Project Funding										Total Cost Estimate
		Federal		Other Federal		Non-Federal						
		BIP		CRRSAA		MnDOT		Mower County		City of Austin		
		Dollars	Project Percentage	Dollars	Project Percentage	Dollars	Project Percentage	Dollars	Project Percentage	Dollars	Project Percentage	
Previously Incurred Expense	Environmental assessment / Prelim Design	$0	0%	$0	0%	$1,740,280	84%	$0	0%	$0	0%	$1,740,280
	Corridor Study	$0	0%	$0	0%	$340,000	16%	$0	0%	$0	0%	$340,000
	Total Incurred Expenses	**$0**	**0%**	**$0**	**0%**	**$2,080,280**	**100%**	**$0**	**0%**	**$0**	**0%**	**$2,080,280**
Future Eligible Cost	Final Design Engineering	$0	0%	$0	0%	$2,200,000	4%	$0	0%	$0	0%	$2,200,000
	Right-of-Way Acquisition	$0	0%	$0	0%	$620,000	1%	$0	0%	$0	0%	$620,000
	Utility Agreements	$0	0%	$0	0%	$1,120,000	2%	$0	0%	$0	0%	$1,120,000
	Construction Cost	$20,000,000	37%	$2,100,000	4%	$10,507,660	19%	$83,340	0.2%	$709,000	1%	$33,400,000
	Contingencies	$5,000,000	9%	$0	0%	$4,863,500	9%	$0	0%	$136,500	0%	$10,000,000
	Inflation to mid-point of project	$0	0%	$0	0%	$6,600,000	12%	$0	0%	$0	0%	$6,600,000
	Total Future Costs	**$25,000,000**	**46.3%**	**$2,100,000**	**3.9%**	**$25,911,160**	**48%**	**$83,340**	**0.2%**	**$845,500**	**1.6%**	**53,940,000**
	BIP Participation Maximum (60/40)											
	BIP Request	$25,000,000	46%									
	Other Federal	$2,100,000	4%									
	Non-Federal	$26,840,000	50%									
	Total Future Eligible Project Costs	$ 53,940,000										
											Total Project Costs	**$56,020,280**

Non-Federal Funding Source

MnDOT

MnDOT has committed to providing $26.1 million (48 percent) in state funds through the Trunk Highway Bond funds to be invested for infrastructural improvements of bridges along the I-90. $3.66 million of this funding is currently programmed in the 2022-2025 State Transportation Improvement Program (STIP) under Project Number #5080-170 (SEQ# 930). However, due to increase cost of inflation, additional funding is required to completely fund the project.

Mower County

Mower County supports the Project and will provide approximately $83,340 towards the construction costs of the new traffic signal at CSAH 45.

City of Austin

The City of Austin supports the Project and will provide approximately $845,500 towards the construction costs for a new traffic signal, roadway construction on CSAH 45, and aesthetic enhancements on the bridges.

Other Federal Funding Sources

Coronavirus Response and Relief Supplemental Appropriation Act (CRRSAA)

The Project secured $2.1 million in Coronavirus Response and Relief Supplemental Appropriation Act in federal funds in August 2021. This award covers the cost of ADA compliant bicycle and pedestrian improvements associated with the bridges and interchanges, for providing safer and improved connections for non-motorized system users. The Project was selected due to its significance in removing the barriers to multimodal connections in the area as it scored the highest EJ Analysis score in the region.

BIP Funding Need

If the BIP funding is not awarded, the Project could be significantly delayed from its existing schedule. All bridges in the Project corridor are reported to be either structurally deficient or functionally obsolete. As a result, immediate reconstruction/rehabilitation is recommended to maintain safe levels of service and operations along I-90. Additionally, the impacts of inflation have required MnDOT to reassess its upcoming capital program.

This Project is a priority project for MnDOT, and it has committed to fully fund the Project using future National Highway Performance Program (NHPP) funds or Bridge Program funds, regardless of the grant outcome. The Project has also applied for MPDG funding under the small INFRA project category. The current funding gap will be programmed in the upcoming 2023-2026 STIP. However, securing the BIP funds for this Project will allow MnDOT to reconstruct/rehabilitate the bridges along I-90 in the most timely and efficient manner possible as well as reallocate the state dollars to other critical projects in the region. In absence of the BIP award, while the schedule for this Project might slip, several other transportation projects in the area will be limited in scope or have severe schedule delays as critical resources will be shifted to this Project.

IV. PROJECT OUTCOME CRITERIA

1. State of Good Repair

There are over 20,000 bridges in the Minnesota bridge inventory. Around, 4,500 of these bridges are owned by MnDOT. It is critical to maintain the performance and value of the state transportation assets to enable Minnesota to continue to provide safe and high-level service to its citizens while minimizing the lifecycle costs. The investment made by the USDOT, MnDOT, Mower County, and the City of Austin will ensure that the current state of failing infrastructure is restored, upgraded, and maintained to build a safe transportation network that reduces future maintenance needs and lower life-cycle costs.

Addressing Current and Projected Vulnerabilities

The bridges along I-90 show major signs of physical deterioration and are designated as structurally deficient, functionally obsolete, or have other structural issues which necessitate immediate remediation. The bridges are currently experiencing severe transverse and longitudinal cracking, substructure delamination, cracking of abutments and columns, spalled concrete, exposed rebar, and potential risk of failure due to scouring, etc. (Figure 5). It is expected that under a No-Build condition, the bridges will no longer be serviceable. Since I-90 is a vital interregional freight network, this will cause a huge impact to the residents of Austin and a major strain on the transportation network and economy in the region.

Figure 5 Existing Infrastructure

The Project improvements address current and projected vulnerabilities, through full reconstruction of the bridges, associated ramps, and upgrading of the pedestrian infrastructure to ADA compliant standards, which not only provides much needed safety enhancements but also ensures future efficiency of the transportation network in the future, mobility of goods, improved accessibility and mobility of people, and accelerated economic growth. Additionally, reconstructing bridges 6868 and 6869 will also improve protection against river scour which in turn will improve the long-term resiliency of these bridges. Therefore, the Project is a sound investment as it maximizes and preserves the long-term value of I-90 and the surrounding transportation network, by sustaining its long-term performance under growing traffic volumes.

Operations and Maintenance Funding

MnDOT is committed to implementing timely investments in capital and preventative maintenance treatments to extend the service life of assets while reducing lifecycle costs. Ongoing operating and maintenance (O&M) costs on the state highway system are funded by taxes and fees from four main revenue sources:

- State gas tax (motor fuel excise tax)
- State tab fees (motor vehicle registration tax)
- State motor vehicle sales tax, and
- Federal highway funds (highway user tax distributions, flexible highway account, and County State Aid Highway fund).

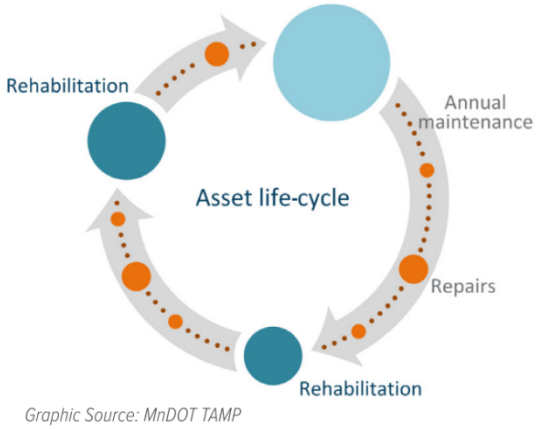
Operations and Maintenance Cost

The 10 bridges associated with the Project will require scheduled routine maintenance occurring every five years after the Project is completed. MnDOT calculates remaining service life (RSL) for bridges based on deck deterioration curves developed for the Minnesota trunk highway bridges, from past inspection data. The RSL reaches "0" once the bridge is predicted to reach poor condition (Deck NBI = 4 or less).

At this stage, MnDOT requires the inspection cycle to become much more frequent (typically from 24-months to 12-months), thereby, increasing inspection costs. In addition to this, both proactive and reactive maintenance efforts (costs) also increases. Expected cost increases for annual maintenance and inspection costs, over the last ten years, are provided for all bridges here.

The maintenance costs over the first 30 years of project life will amount to roughly $227,000. Further detail of the maintenance cost at each bridge is included in the Benefit-Cost Analysis workbook.

MnDOT Transportation Asset / Bridge Asset Management Plans (TAMP)



Graphic Source: MnDOT TAMP

Figure 6 Annual Life Cycle

MnDOT has a demonstrated history of fully funding maintenance improvements and has established the agency as a leader in asset management. MnDOT developed its first Transportation Asset Management Plan (TAMP) in accordance with the 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21) which was updated to its current form in June 2019. MnDOT's TAMP expanded beyond minimum requirements per MAP-21 to include the entire state highway system as well as other infrastructure within the right-of-way corridor. MnDOT's TAMP was a national pilot project and serves as a guide for other states (Figure 7).

Additionally, MnDOT has a Bridge Asset Management Plan which is dedicated specifically to assess, maintain, and improve the 4,500 bridges under MnDOT's ownership. MnDOT applies these plans as a guide to analyze life-cycle costs, evaluate risks and develop mitigation strategies, establish asset condition performance measures and targets, and develop investment strategies. The asset management plans will serve as a guide to ensure all necessary Project operation and maintenance is implemented.

2. Safety

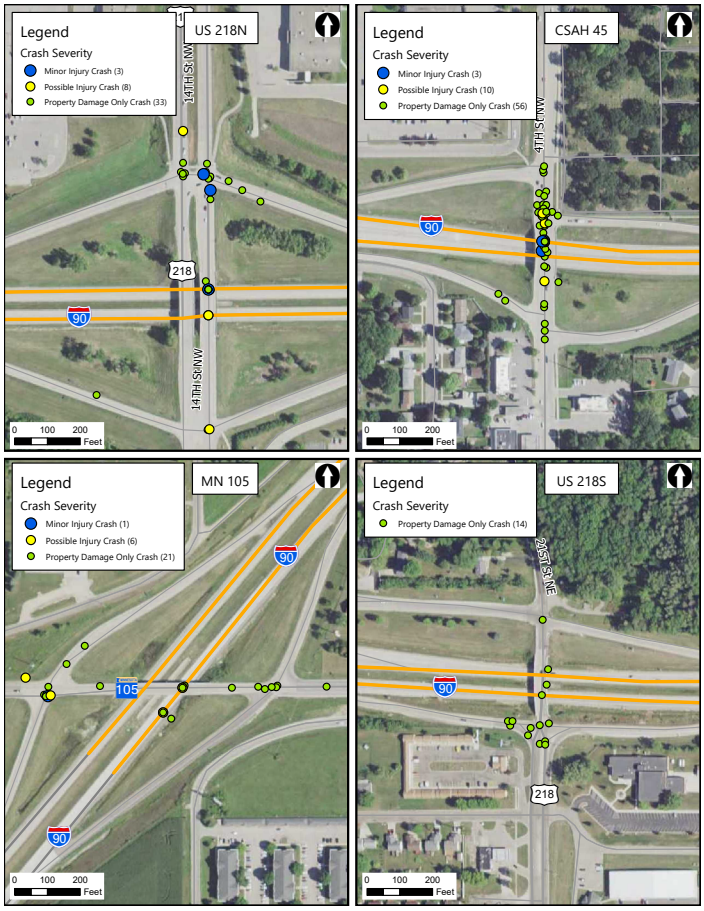


Figure 7 Crash mapping at interchanges along the corridor.

One of the primary needs of the Project is to improve the safety of all users traveling through Austin and beyond. The Austin Corridor Study identified operational and safety issues along the corridor. Subsequently, through a robust public engagement campaign, it was discovered that existing pedestrian and bicycle facilities were inadequate to meet the community demand and that I-90 was a barrier for people to travel to and from employment centers and for recreation. The Project significantly improves pedestrian and bicycle access across I-90 by providing at least 10 foot wide walkways on each bridge that is being reconstructed. The walkways will be constructed on both sides of the CSAH 45 (4th Street) bridge, which experiences the heaviest pedestrian demand.

Presently, there are seven interchanges in the five-mile study segment which do not meet current interchange spacing standards. The intersection of westbound I-90 and CSAH 45 (4th Street) had significant crash history related to two closely spaced offset ramps that creates driver confusion and lane designation issues resulting in a high number of left turn related crashes. This intersection also experiences disruption of traffic operations due to queuing problems related to the offset intersections, one of which is signalized while the other is uncontrolled.

Similar high percentage of left turn related crashes were observed at the eastbound and westbound off ramps at the intersection of I-90/US 218S. This safety issue was attributed to the narrow bridge width, continuous bridge railing, and guard railing that create limited sight lines for the off-ramp approaches. Some of the crashes also involved through vehicles trying to bypass a left turning vehicle in the single ramp approach lane. All intersections noted above are above the critical rates indicating a sustained crash problem.

AADT counts indicate 2018 corridor volumes along I-90 carry between 16,700 to 24,400 vehicles per day through the Project corridor. The crash analysis at all four interchanges was re-analyzed with current crash data from 2012 to 2021. The crashes were reviewed by type and severity for all users along the four interchanges in the Project corridor (Figure 7). The crash rates were then calculated and compared to the critical crash rates. The critical rates were based on vehicular exposure and the statewide average crash rate for similar intersections. Table 3 records the intersection crashes by severity at the four interchange locations. While there has been no fatal or serious injury crash, there were seven minor injury, 24 possible injury, and 120 property damage only crashes at these locations, cumulatively, with an Annual Average Crash Cost of more than $10 million. These crashes are reflective of the issues noted above.

Table 3 Intersection Crashes by Severity

Bridge #	Location	Crashes				
		Fatal	Serious Injury	Minor Injury	Possible Injury	Property Damage Only
9183	MN 105 / Oakland Ave. over I-90	0	0	1	6	21
50803 & 50804	US 218N over I-90	0	0	3	8	30
9180	CSAH 45 / 4th Street NW over I-90	0	0	3	10	55
9201	US 218S over I-90	0	0	0	0	14

Project Elements to Improve Safety

The proposed Project improvements support the goals of MnDOT's Towards Zero Deaths program which emphasizes the safety of all users using the transportation system. The program, adopted in 2012, calls for the elimination of traffic fatalities and serious injuries through the integrated application of education, engineering, enforcement, and emergency medical and trauma services. The Project elements to improve safety include:

- Wider replacement bridges to improve sight lines,
- Construction of 10-foot-wide walkways on all new bridges to provide safe multimodal connectivity to pedestrians and bicyclists,
- Interchange ramp reconfigurations at all four interchanges to improve safety and minimize maintenance needs,
- Roundabout control at both ramp terminals of I-90/US 218N interchange to implement traffic calming methods, address safety concerns, improve traffic flow during construction,
- The Single Point Urban Interchange (SPUI) configuration at the CSAH 45 interchange to eliminate the existing offset ramp configuration which generates many of the crashes at this location, and
- Construction of 10-foot-wide outside shoulders along I-90 between the ramp gores at I-90/CSAH 45 interchange and 12-foot-wide auxiliary lanes between CSAH 45 and CSAH 16.

A crash analysis was performed for the Project using 30 year crash data. The analysis evaluated crashes in the area that could occur if the bridges were not reconstructed and detours routes were instead placed. Under a No Build scenario, eventually traffic would have to reroute to other, less safe corridors where severe crashes have been observed. It was found that under such a case, there would be an occurrence of 2.5 severe crashes and 131 total crashes on average, annually. Table 4 presents the details of crash savings due to the Project. The key detour routes also have a demonstrated history of crashes for the non-motorized users. Between 2015-2019, there were a total of 16 pedestrian/bicyclist crashes on the identified detour routes that include 1 fatal injury and 2 serious injuries. In absence of the Project improvements, the bike/ped crashes along the detour routes are likely to increase due to the increased vehicle exposure.

Table 4 Thirty-Year Crash Summary

Average Annual Severe Crashes Avoided	Average Annual Total Crashes Avoided	Average Annual Crash Savings (Year 2020 Dollars)	Total Discounted Crash Savings (Year 2020 Dollars)
2.5	131	$10,391,000	$83,117,000

The improvements to this Project will resolve the existing safety issues along the corridor today by reducing congestion, reconfiguring traffic controls and access to reduce weaving conflicts, and adding pedestrian/bicyclist infrastructure that will provide safer movement for all users including the vulnerable population. The implementation of strategic improvements will greatly reduce the crash occurrence and crash severity along the I-90 corridor. Further details are documented in the Benefit Cost Analysis Section V.

3. Mobility & Economic Competitiveness

Economic Impacts & Freight Movement

As noted above, I-90 through Austin is an important freight corridor and part of the National Highway Freight Network (NHFN). Austin is unique in its proximity to several major economic hubs nearby such as Minneapolis-St. Paul Metropolitan Area, Rochester, MN, Cedar Rapids, IA, Sioux Falls, SD etc. I-90 connects Austin to Rochester, the third largest city in Minnesota, and to I-35 in Albert Lea, 20 miles west of Austin. Both of these corridors are significant regional freight corridors, as they further move goods and people to industrial, agriculture, commercial, and manufacturing hubs across Minnesota, South Dakota, Wisconsin, and Iowa.

According to the MnDOT District 6 Freight Plan, freight-dependent industries created 37 percent of Minnesota's Gross Domestic Product (GDP) (Figure 8). All the different multimodal freight options (highway, rail, pipeline, water, and air cargo) are utilized in transporting freight across the region through 12 intermodal facilities in southeastern Minnesota. However, most freight in Minnesota (~ 58 percent by tonnage and ~ 67 percent by value) moves by truck (Figure 9). Therefore, corridors such as I-90 are keepers of safe and efficient movement of freight and critical in ensuring travel time reliability for supply chain operations. I-90, through the Project corridor, carries between 1,450 and 1,750 freight vehicles per day as recorded by the 2020 Heavy Commercial Average Annual Daily traffic (HCAADT) counts.

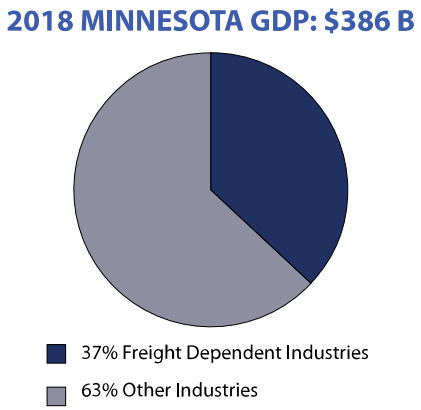


Figure 8 Minnesota GDP Distribution

Figure 9 Southeastern Minnesota Highway Freight Summary

In addition to the regional significance, Austin is home to Hormel Foods Corporation, a Fortune 500 global branded food company with over $9.5 billion (2019) in annual revenue across more than 80 countries and over 18,700 employees worldwide. The company, established in 1891, has nine company locations within Austin including a flagship plant boasting over one million square feet, a research and development facility, the SPAM Museum, global headquarters, and another corporate office building. Many of these facilities are within 1 mile of the Project corridor and directly served by I-90 and the network of state highways, county and local roads.

Based on the turning movement data, all the interchanges along I-90 between US 218N and US 218S have significant truck demands that range up to 24 percent of the total ramp traffic during the peak hour. The 11th Drive NE interchange experiences the highest truck demands which is consistent with it being designated as the main access to the Hormel Foods Corporation Plant. The Project improvements are crucially important due to the existing insufficient vertical clearance on all five overhead structures along I-90. The Project will remedy this particular transportation challenge by ensuring bridge vertical clearance height is according to MnDOT bridge design standards. This will ensure safe movement of large freight trucks in the Project corridor.

Job Creation

As Austin is a regional employment center, most residents live and work within the city limits. Additionally, a high number of non-residents commute into Austin for employment. According to 2019 Census data, approximately 7,570 people commute into Austin and approximately 3,766 people commute out, using I-90 in the Project corridor (Figure 10). There are also 4,785 residents who both live and work within one mile of the Project corridor.

The Project corridor acts as a key link for the major employers in Austin (Figure 12) in terms of employee commutes, freight inputs/outputs, and as the major route leading to and from the Hormel Foods Plant. Several of these employers provide a choice to join a union for their employees and hire locally. This project will also generate employment as MnDOT partners with several local contractors and businesses as per their Equity and Inclusion Programs detailed in Criteria 5 below.

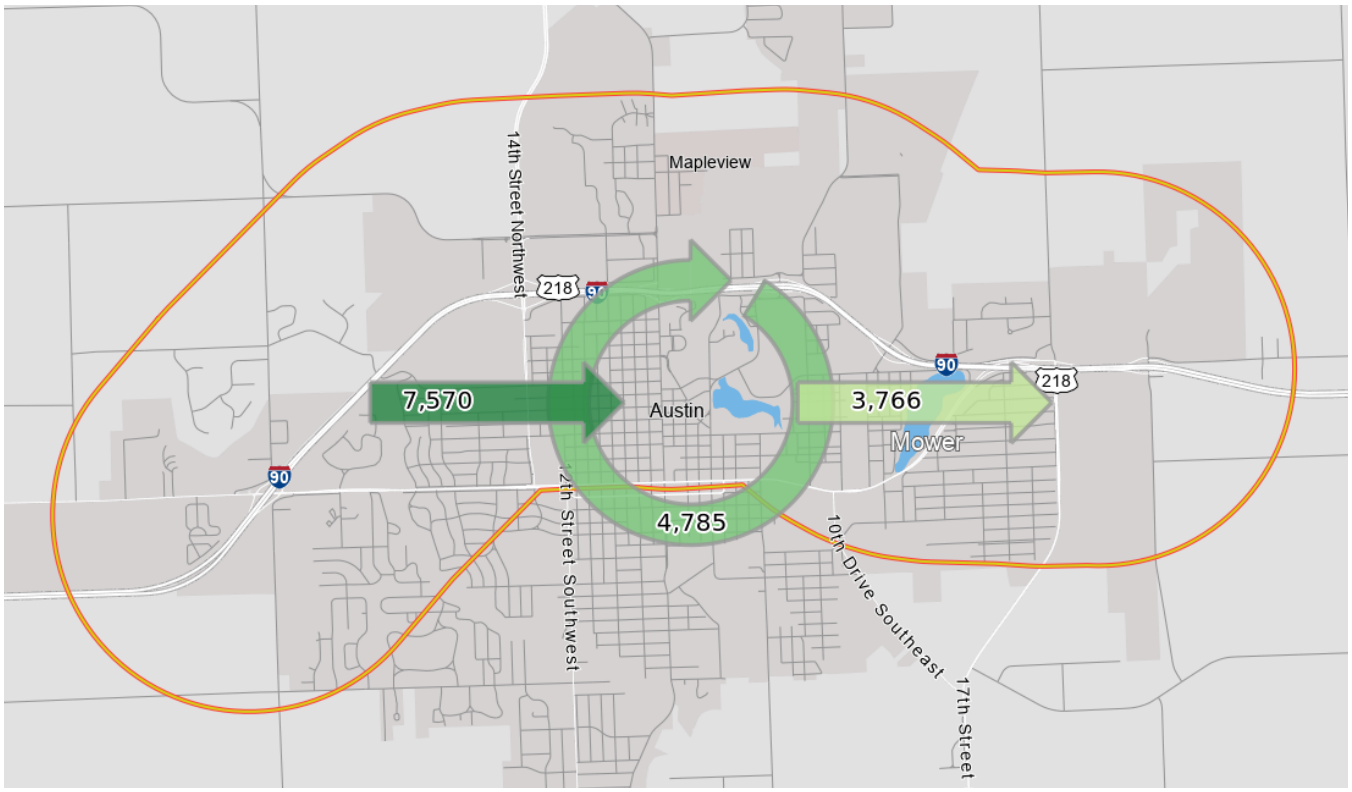


Figure 10 Inflow/Outflow Analysis

The Project improvements will build a resilient infrastructure which will ensure decreased travel time and increased trip reliability in the future. This in turn will lead to expanding the capacity of critical supply chain bottlenecks and will positively impact the economic health of the local, regional, national, and global communities.

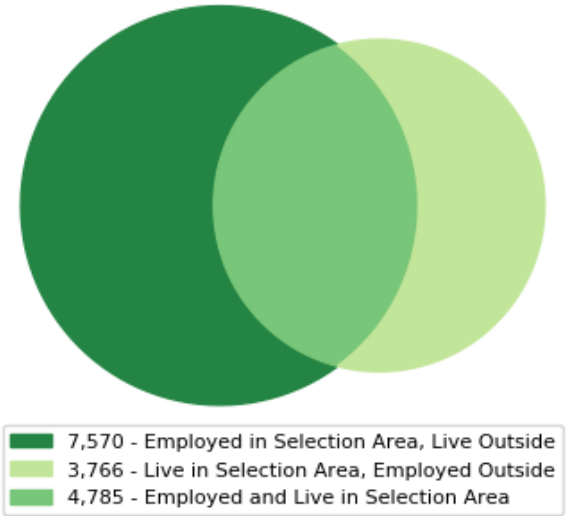


Figure 11 Inflow/Outflow Job Counts in 2019

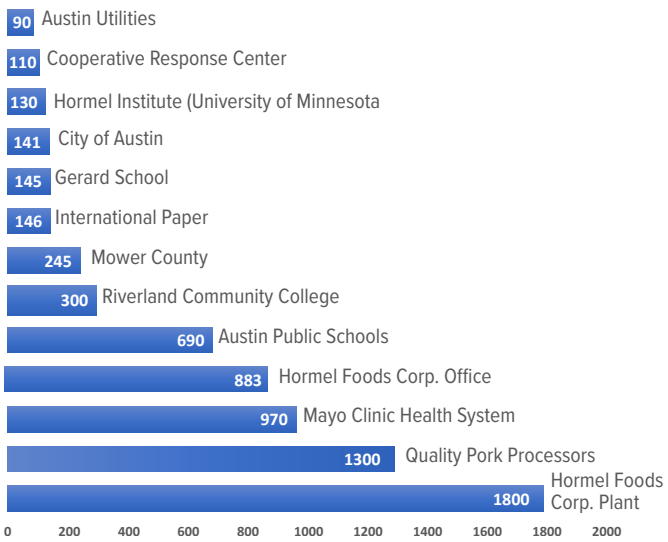


Figure 12 Major Employers in Austin

4. Climate Change, Resiliency, and the Environment

The Project incorporates climate change and environmental justice-based methodology in both project planning and project delivery components.

Project Planning Components

Climate Action & Equitable Development Plans

In 2007, the State of Minnesota passed the bi-partisan Next Generation Energy Act (NGEA) that established goals for the state to reduce greenhouse gas (GHG) emissions by 15 percent below 2005 levels by 2015, 30 percent by 2025, and 80 percent by 2050 compared to a 2005 baseline. MnDOT was the first state agency to apply the Next Generation Energy Act GHG reduction goals to all agency operations. However, further work is needed towards achieving the goals of reducing greenhouse gas (GHG) emissions from the transportation sector 30 percent by 2025. The agency did exceed its goals of reducing facility related GHG emissions by 39 percent, reducing water use by 27 percent, and converting all highway lighting to light-emitting diode (LED) by 97 percent, in 2020, as outlined in MnDOT's Sustainability and Public Health Report. The Project directly supports the Climate Action Plan by improving traffic flow in the corridor and through modal shift in passenger movement which leads to reduction in GHG emissions.

Table 5 Reduction in GHG Emissions

Emission Type	Reduction
CO2 (metric tons)	948
NOx (kg)	992
SO2 (kg)	5
PM2.5 (kg)	20

In 2017, MnDOT partnered with the University of Minnesota Center for Transportation Studies, to advance transportation equity by assessing structural inequities built into society and the transportation barriers that affect underserved communities. This Project directly supports the goals of advancing transportation equity by

- incorporating inclusive and culturally sensitive community engagement and adopting the feedback into decision-making processes,
- providing quality and affordable multimodal infrastructure for safe movement of vulnerable users,
- creating and expanding connections between employment centers and underserved neighborhoods,
- creating a collective vision with mutually beneficial outcomes, potentially following successful collaborative practices that are part of the Minnesota Toward Zero Deaths program, and
- contracting to businesses owned/operated by underrepresented populations to support wealth-building among underrepresented communities.

Project Delivery Components

Environmental Justice Analysis

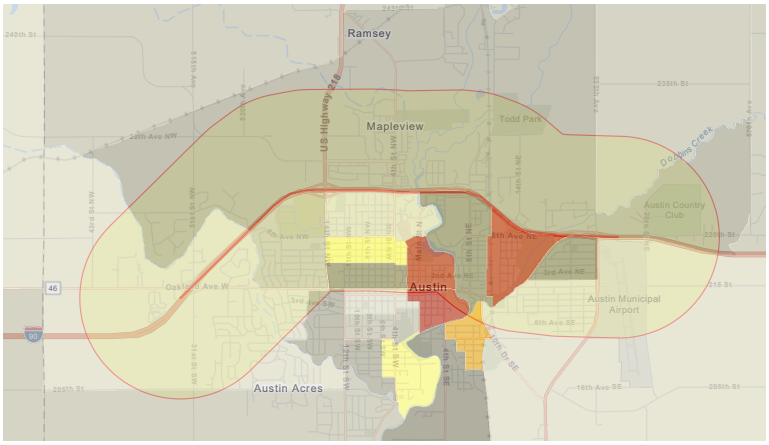


Figure 13 Low Income Population within one mile of the Project

As part of the Categorical Exclusion Determination (CATEX) process and in compliance with Executive Order (E.O.) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, the Project underwent an Environmental Justice (EJ) Analysis. The data for the analysis was determined using the demographic data complied using U.S. EPA's EJSCREEN tool, 2014-2018 ACS estimates, field review, input from local agency partners, and extensive public outreach, and other known concentrations of low-income and/or minority residents. It was found that there is a significantly higher percentile of minority and low-income populations within one mile of the Project area compared to the national data (Figure 13). It was also noted that this population is affected by proportionally higher risk of environmental justice indices such as unemployment rate, linguistically isolated, air toxics cancer risk, wastewater discharge, proximity to Risk Management Plan (RMP) facilities, etc. Further analysis demonstrated that there is a significant need for non-motorized transportation facilities in the Project corridor that benefits the underserved communities in the Project area.

Avoiding Floodplain and Wetland Impacts

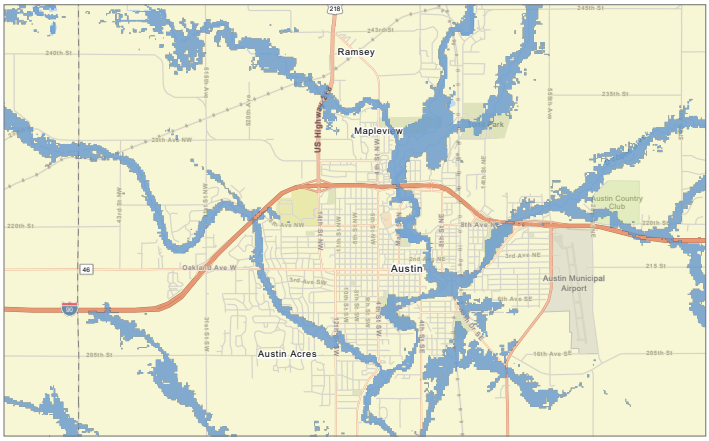


Figure 14 100-year Flood Plain Map in Austin

Bridges 6868 & 6869 carry westbound and eastbound I-90, respectively, over the Cedar River. In addition, there is a pedestrian bridge (no. 9218), over the Cedar River, approximately 50 ft north of bridge 6868. Cedar River is a FEMA Zone AE Floodplain and a Minnesota Department of Natural Resources (MnDNR) designated State Water Trail (Figure 14). MnDOT will achieve a "no stage increase" condition while addressing scour conditions at the existing bridge piers. To achieve this goal, the new bridge design requires a delicate balance of hydraulic modeling and design, permit coordination, informed structural design, cost evaluation, and constructability consideration. The new bridges are designed to increase the available freeboard during flooding events to meet State Water Trial requirements. Based on Level I Wetland Delineation Report completed in October 2021, impacts to the wetland should be minimal and any wetlands impacted would be restored to their existing or improved condition. Level II Wetland Delineation analysis is currently underway and the report will be available June 2022.

Avoiding Adverse Environmental Impacts

The Project falls within two Watershed Districts. The general drainage pattern in the corridor directs flow to either Turtle Creek to the west of 12th Street NW or the Cedar River to the east, both of which are listed as impaired waters by the Minnesota Pollution Control Agency (MnPCA) and requires robust best management practices (BMPs) during construction to protect these water resources. The Project will be subject to the National Pollutant Discharge Elimination System (NPDES) permit administered by the MnPCA. As the design progresses, the project design team will review the amount of disturbance and new impervious area created with the project to make sure the NPDES requirements are met. The Project improvements include improved erosion protection at storm sewer outfalls and water quality manholes to provide stormwater treatment prior to discharge.

Electrification Infrastructure/EV Charging Stations:

As a rural regional hub, there is a need of developing a robust electrification infrastructure in Austin. Austin is located on an electric vehicle (EV) charging corridor in Minnesota. Currently, there are three Level 2 electric vehicle charging stations at businesses and nearby hotels within 1 mile of the Project corridor. The Project team is considering adding additional 150 kW DC fast charger to facilitate access and reliability for EV drivers in rural Minnesota. As Project design progresses, the number and location of the EV charging station will be finalized.

Improving Resiliency and Disaster Preparedness

As noted earlier, the bridges over the Cedar River are experiencing critical river scour resulting in exposed footings. In a case of severe flooding (potentially due to heavy rains or large snow melts), the footing can be undermined or damaged, leading to risk of bridge collapse. The reconstruction of bridges 6868, 6869, and pedestrian bridge 9218, over the Cedar River, will remedy these challenges. This in turn will improve resiliency and disaster preparedness along the corridor.

5. Quality of Life

One of the main goals of the Project is to improve walkability and bikeability in Austin through Project Planning and Project Investments.

While I-90 provides vital connections to the key destinations in the region, it has also been viewed as a barrier to local circulation of non-motorized travelers due to the lack of pedestrian and bicycle infrastructure that cross I-90. To remedy this, MnDOT has actively engaged the community and participated in activities directly related to improving pedestrian/bicycle/vehicular movement and safety through a deliberative, inclusive, and comprehensive design/planning approach discussed below.

Planning And Policies

Public Involvement Plan

In 2021, MnDOT drafted a public involvement plan for the Project that outlines the recommended tasks associated with public involvement and outreach. The goals of the plan were to effectively engage under-represented community members, conduct targeted outreach, record community inputs, establish appropriate community expectations, and to provide clear and consistent communication with the identified stakeholders. The outcomes of the plan are discussed further below.

Equity-Focused Community Outreach and Public Engagement

The ongoing efforts of a broad range of Project stakeholders are responsible for every aspect of design, development, and funding for this Project. Public engagement and community outreach activities were initiated to assess whether potential adverse effects of the proposed project fall disproportionately on low-income or minority populations. It was identified that census tract 4.10 is an APP while tract 10 is a designated HDC. A large percentage of population living within one mile of the Project corridor consists of underserved communities. Issues that were considered included social impacts, traffic impacts, visual impacts, safety impacts, and right-of-way impacts, for each bridge location in the Project corridor. Extensive outreach has been ongoing since March 2021.

Outreach format includes the Project website, community presentations, targeted focus groups, in-person/hybrid/virtual events, pop up events, surveys, direct mailing/emailing, social media, newspaper, and television ads etc. The information provided at each event generally includes project information, improvements and benefits, updates, schedule, opportunity for comments and feedback, and links for in-person and virtual engagement. The community engagement consisted of all populations in Austin including Caucasian, African American, Latino, Asian, Somali, and Karen populations (Figure 15).

Figure 15 **Community Engagement Open House**

Equity Impact Analysis

As discussed in the Project Outcome Criteria 4, an equity analysis was conducted for the Project corridor using EJScreen. The analysis mapped underserved populations within the Project corridor, residences and destinations for low-income populations, communities of color, immigrant populations, children, the elderly, and people with disabilities. The results from the equity analysis can be found here. The analysis identified a need to improve walkability and bikeability in the Project corridor as several high density public and subsidized housing, schools, parks, and places of worship exist withing one mile of the Project corridor (Figure 16). These destinations overlap with the underserved communities in the area. The absence of a safe, accessible multimodal transport option is a barrier for local circulation for the underserved communities and adversely affect the quality of life of the community.

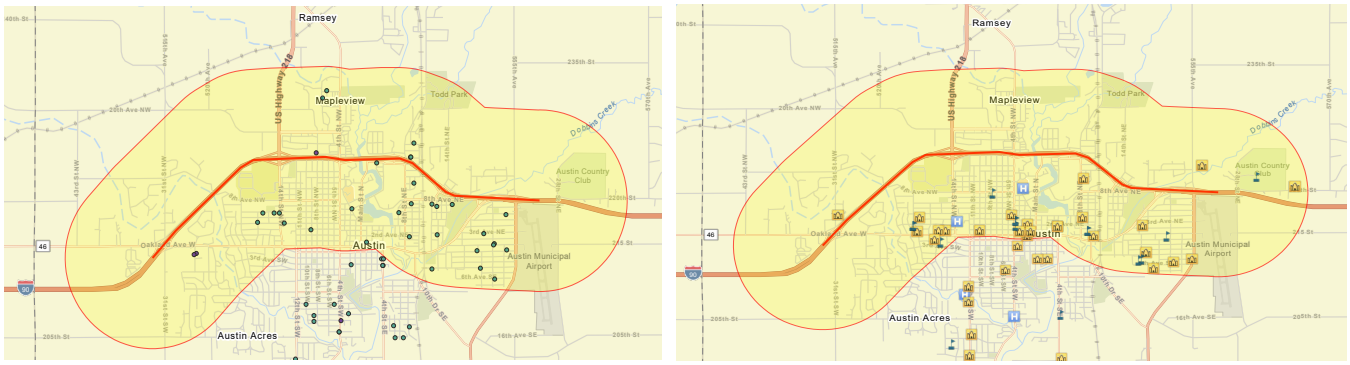


Figure 16 Subsidized and Public Housing, Schools, Places of Worship, etc. near the Project.

Additionally as part of project planning, an analysis was conducted using Priority Areas for Walking Study (PAWS), a mapping tool to identify priority areas to invest in creating or improving the pedestrian/bicyclist infrastructure. Developed as part of MnDOT's Statewide Pedestrian System Plan, this analysis shows scores for half-mile hexagons based on equity, safety, health, infrastructure, and land use factors, across Minnesota.

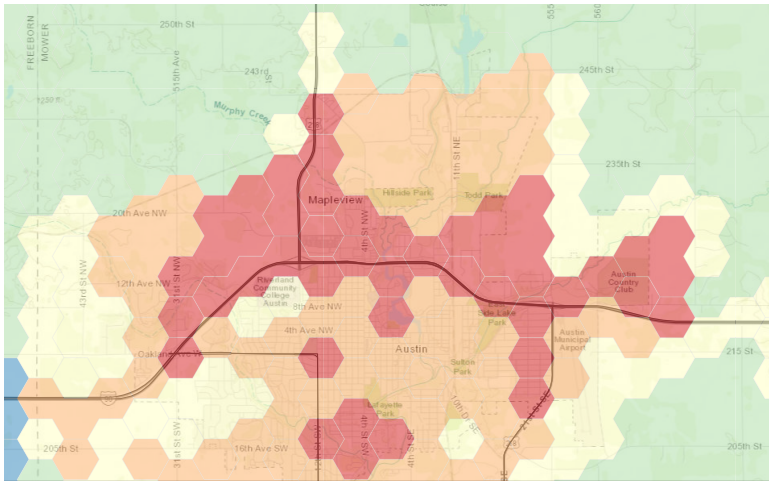


Figure 17 PAWS Score

Figure 17 shows the PAWS score for the Project corridor. The red hexagons indicate the highest PAWS score which implies a need for prioritizing comfort and safety for people walking over convenience for people using other modes of transportation. A need for improved ADA compliant pedestrians and bicyclist connections was found to overlap with the entire Project corridor including the underserved communities in the area.

MnDOT's Equity and Inclusion Programs

MnDOT has proactively developed a strong portfolio of several Equity and Inclusion Programs such as Disadvantage Business Enterprise (DBE), Targeted Group Business (TGB), Equal Employment Opportunity (EEO) Program, among others. MnDOT encourages and awards private business contracts to minority- or women-owned businesses. MnDOT has awarded more than $173 million in prime contracts and goods purchases with under-utilized businesses in the past 5 years to mitigate its contracting disparity, increasing from $19 million in FY16 to over $38 million in FY20.

Based on the Project planning described above, the Project adopted and prioritized elements at each bridge location that would bring equitable development through public involvement, collaborative problem solving, and would make a visible difference in underserved, under-resourced, and overburdened communities.

Project Elements

Addressing Equity and Barriers to Opportunities by Increasing Walkability and Accessibility

I-90 creates a barrier for pedestrians as it cuts through the north side of Austin. The Project includes new walking and bicycling infrastructure in the form of ADA compliant multiuse trails and sidewalks along the I-90 overhead bridges. These improvements directly remedy the lack of current multimodal infrastructure, reduces automobile dependence, and improves access for people with disabilities. As these bridges are improved, the City of Austin plans to add sidewalk and trail connection to the bridges to connect areas that were previously cut off, noted as a goal in its 2022-2026 Capital Improvement Plan. The Project improvements will proactively prepare the area to incorporate several elements of Universal Design and Safe Systems approach such as wider sidewalks, green spaces, ADA compliant upgrades, perpendicular tactile paving, raised medians and pedestrian safety islands, and improved lighting and landscaping, among others.

The Austin community also has an active Safe Routes to School (SRTS) plan that encourages students to walk and bike to schools, which benefits the health, safety, and access for students as well. In addition, the new trail connections at I-90/US 218S interchange will provide connectivity to the Shooting Star State Trail, a 29 mile trail between Austin and LeRoy, MN. On the west side of Austin, the new trail connections at I-90/US 218N interchange will provide future connection to the Blazing Star State Trail, upon its planned completion. This is a crucial step towards improving mobility and increasing community connectivity for non-motorized travelers in the region. Upon completion, the Project will enhance the unique characteristics of Austin, MN.

Improving Access to Medical Care

Mayo Clinic Health System is the largest health care facility in Austin and serves people in communities across Iowa, Minnesota, and Wisconsin every day. It is in downtown Austin, within 1 mile of the Project corridor. I-90 provides access to this facility, with several medical specialties, ranging from comprehensive trauma care to a family-oriented women's special care maternity program, for communities in and surrounding Austin. The Project will significantly improve travel time and trip reliability while receiving medical care in emergency as well as non-emergency situations.

Direct Partnership with Underserved Communities

In accordance with the goals of MnDOT's Equity and Inclusion programs, MnDOT actively seeks to grant small contracts well-suited for under-utilized businesses and hire from the local communities for the Project. MnDOT plans to employ DBE companies for planned demolition, hauling, and other construction activities on this Project.

6. Innovation

Innovative Technique

MnDOT Construction Management Resources

MnDOT provides construction management services in-kind at times to projects that intersect their roadways. This helps MnDOT to streamline construction management and reduced project cost through innovative project delivery techniques.

In accordance with the goals of MnDOT's Equity and Inclusion programs, MnDOT will issue small contracts well-suited for under-utilized businesses; simplify contracting processes and documents and incorporate equity into reporting systems; track all contracts to identify progress and gaps in terms of equity; train and

incentivize offices to identify work well-suited for under-utilized businesses; train small businesses on MnDOT requirements and specifications; and collaborate with local partners to connect under-utilized businesses to opportunities in the wider marketplace.

Transportation Management Plans for Mitigating Risks

A project-specific transportation management plan (TMP) will be implemented to maintain acceptable levels of safety, accessibility, and mobility. The plan will minimize traffic congestion near the work zone because of temporary roadway closures and detour routes. The TMP will also identify a variety of management strategies to mitigate negative impacts on traffic. These strategies will include increased incident management and vehicle removal capabilities, intelligent transportation system (ITS) technologies to divert traffic and inform travelers of delays and encourage alternate routes, work zone traffic simulations to forecast impacts on traffic flow and congestion, alternative scheduling and phasing including nighttime construction, and scheduling work to minimize lane closures and delays during peak traffic hours.

Innovative Technology

Electric Vehicle Infrastructure

To allow EV drivers to conveniently travel anywhere in Minnesota, the state would need a network of 85 DC fast charging stations installed at 50-to-70-mile increments on key state transportation corridors. I-90 is identified as a key corridor, in MnDOT's Accelerating EV Adoption Plan, for expansion of charging network based on critical economic connections within the state, as well as the number of vehicles using a particular roadway (Figure 18). The potential addition of EV chargers along the Project corridor will further the expansion of EV infrastructure in Minnesota.

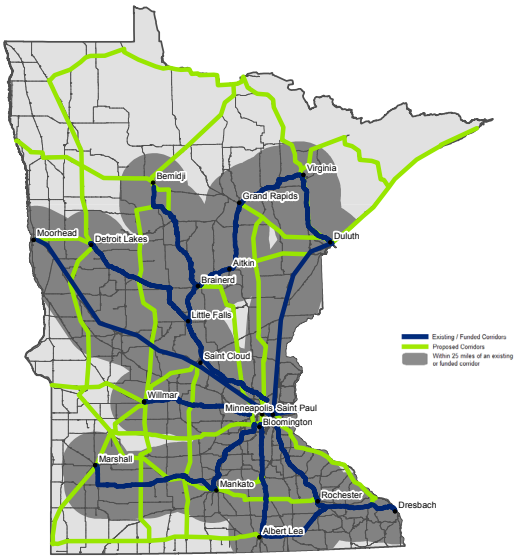


Figure 18 EV Corridor in Minnesota

Innovative Financing

MnDOT recognizes that transportation investments directly and indirectly foster economic growth through the provisioning of construction jobs, enabling goods to be transported through a commerce friendly network of corridors and providing mobility to citizens; MnDOT is committed to investing in our roads and bridges that contribute to a growing economy and will continue supporting commerce.

V. BENEFIT COST ANALYSIS

The objective of a benefit-cost analysis (BCA) is to bring all the direct effects of a transportation investment into a common measure (dollars), and to account for the fact that benefits accrue over an extended period while costs are incurred primarily in the initial years. The primary elements that can be monetized are travel time, changes in vehicle operating costs, vehicle crashes, environmental impacts, remaining capital value, and maintenance costs. The results of the BCA are briefly summarized below. A detailed technical memorandum of the analysis is attached and available to view at the grant application website: https://www.srfconsulting.com/mndot-i-90-BIP/

No Build Alternative

The No Build Alternative assumed that no major rehabilitation work would be undertaken on any of the I-90 bridges associated with the project. The bridges were expected to close to traffic in future years based on current bridge condition and remaining service life. The remainder of the transportation network assumed no changes relative to its existing layout.

Build Alternative

The Build Alternative included the reconstruction and rehabilitation activities noted in the project description section of the application. Maintenance costs associated with the bridges were expected to be incurred over the benefit cost analysis period. Similar to the No Build, no other improvements were considered for the Build Alternative in the analysis.

BCA Methodology

The following methodology and assumptions were used for the benefit-cost analysis:

Main Components: The main components analyzed included:

- Travel time/delay
- Vehicle operating costs
- Crashes by severity
- Environmental and air quality impacts
- Initial capital costs: Capital costs were expected to be incurred in years 2024 through 2026
- Remaining Capital Value: The remaining capital value (value of improvement beyond the analysis period) was considered a benefit and was added to other user benefits.
- Operating and maintenance costs

Project Costs

Year 2020 Project costs for the BIP components of the overall Project are expected to be about $43.3 million. The current 2020 project costs discounted at a rate of seven percent is approximately $31.0 million.

BCA Results

The benefit-cost analysis provides an indication of the economic desirability of a scenario, but results must be weighed by decision-makers along with the assessment of other effects and impacts. Projects are considered cost-effective if the benefit-cost ratio is at least 1.0. The larger the ratio number, the greater the benefits per unit cost. Results of the benefit-cost analysis are shown in Table 6, with detailed documentation presented in the technical memorandum and workbook.

Table 6 Total Project Results

	Initial Capital Cost (2020 Dollars)	Project Benefits (2020 Dollars)	Benefit-Cost Ratio (7% Discount Rate)	Net Present Value (2020 Dollars)
No Build vs. Build	$31.0 million	$196.9 million	**6.4**	$165.9 million

Additionally, the Project benefits under various categories results in the cost benefits/savings listed in Table 7.

Table 7 Project Benefits

Benefit Categories	Benefit (2020 dollars)
Travel Time	$111,614,000
Vehicle Operating Costs	$447,000
Safety	$83,117,000
Air Quality	$69,000
Maintenance	($227,000)
Remaining Capital Value	$1,897,000
Total	$196,917,000

VI. PROJECT READINESS & ENVIRONMENTAL RISK

Technical Feasibility

MnDOT is prepared to deliver the Project in accordance with the project schedule. Additional analysis of project readiness factors is provided below, but in summary, MnDOT assesses minimal project delivery risks for the following reasons:

- **MnDOT is substantially through the Project's preliminary engineering phase.** Design and environmental work done to-date lowers uncertainty around scope, impact, and cost. Project layouts were approved by MnDOT in March 2022 and the environmental documentation will be completed by October 2022.
- **Project limits are established.** The Project footprint is substantially within state right of way and negotiations with impacted landowners are to begin soon.
- **A detailed cost estimate has been prepared** which accounts for appropriate contingency levels and lowers the uncertainty in project costs.
- **The Project is noncontroversial and supported by Project partners.** MnDOT has maintained ongoing coordination with FHWA, Mower County, the City of Austin, and other Project partners. MnDOT has been collaborating with local agencies to develop a project that meets the needs of all involved partners.
- **MnDOT has secured funding sufficient to cover 54% of project costs.**

MnDOT has extensive experience delivering large-scale projects completed through the National Environmental Policy Act (NEPA) review process. The selected alternative will be advanced to begin construction in 2024 and will conform to all current USDOT, AASHTO, and MnDOT standards for roadway design and ADA compliant pedestrian infrastructure. Preliminary design layout and typical sections have been completed for the Project, which demonstrate the Project can be designed effectively to meet the needs of the corridor and surrounding communities.

Additionally, MnDOT, as a recipient of federal financial assistance, complies with Title VI of the Civil Rights Acto of 1964; 49 CFR Part 21 (Department of Transportation Regulations for the Implementation of Title VI of the Civil Rights Act of 1964); and related statutes and regulations.

Project Schedule

The Project is proceeding through a CATEX process. The Purpose and Need was prepared in Spring 2021 and will be included in the Categorical Exclusion which is expected for approval by July 2022. A Phase I Environmental Site Assessment (ESA) has been performed. The intent of the report is to assess if current or historical property uses have impacted the soil or groundwater beneath the property and could pose a threat to the environment and/or human health. The Phase I ESA identified no high-risk sites. Level II (field) Wetland Delineation was also completed in June 2022.

MnDOT guarantees that all necessary activities will be completed to allow BIP funds to be obligated sufficiently in advance of the statutory deadline (September 30, 2025). All property and right-of-way (ROW) acquisition will be completed in accordance with 49 CFR Part 24 and other Federal regulations by September 2023. MnDOT has an experienced ROW acquisition staff who have been actively involved in the project development process. MnDOT anticipates construction will begin April 2024 and be completed by October 2026. Figure 19 shows the Project schedule.

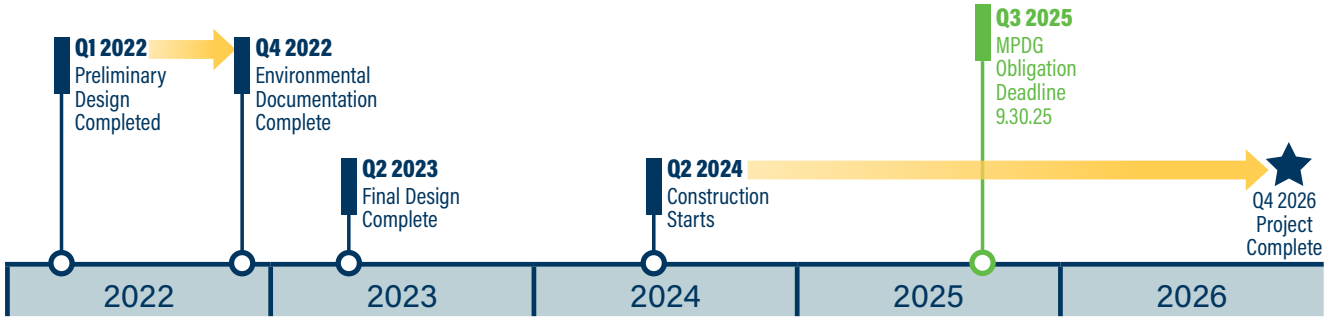


Figure 19 Project Schedule

Required Approvals

MnDOT has closely coordinated with federal, state, and local partners throughout the preliminary design phase of the Project. As a result of this coordination, the Project is expected to achieve all approvals necessary to begin construction in April 2024.

Environmental Permits & Reviews

The Project qualifies for a Categorical Exclusion under current regulations. As described above, the NEPA process is currently underway and is 90 percent complete. The final CATEX document is expected for approval by October 2022.

State and Local Approvals

There is a broad base of state and local support for the project, as shown by the Letters of Support submitted for this application. The Project is included in the State of Minnesota's approved 2022 – 2025 STIP as of Fall 2021 as Project No. 5080-170. All required State and Local approvals will be obtained prior to construction per Table 8.

Federal Transportation Requirements Affecting State and Local Planning

As noted earlier, the Project is included in the State of Minnesota's approved 2022 – 2025 STIP as of Fall 2021 as Project No. 5080-170.

Table 8 Required Approvals

Permits/Approvals	Agency	Action Required (Status)
COE Section 404 Permit	MnPCA	To be acquired
Section 401 Water Quality Certification	MnPCA	To be acquired
Wetland Conservation Act (WCA) Permit	MnDNR	To be acquired
Public Water Work Permit	MnDNR	To be acquired
National Pollutant Discharge Elimination System (NPDES) Permit	MnPCA	To be acquired
Cedar River Watershed District Permit	Cedar River Watershed District	To be acquired
Turtle Creek Watershed District Permit	Turtle Creek Watershed District	To be acquired
FAA Form 7460-1 Notice of Proposed Construction	Federal Aviation Administration	To be acquired
Local Governmental Unit (LGU) Permit	City of Austin	To be acquired

Assessment of Project Risks and Mitigation Strategies

MnDOT has completed an extensive risk assessment for the Project to be able to anticipate and mitigate risks to the Project's schedule and cost. The risk assessment includes identifying the probability the risk occurs, identifying the impact of the risk, and calculating a severity that combines the probability and impact. Based on the risks identified, mitigation methods have also been identified. With the proactive approach taken, MnDOT does not anticipate any of the identified risks to significantly alter the schedule or costs. The results of the completed risk assessment can be found here.

VII. PROJECT PRIORITY CONSIDERATIONS

As established in prior sections, the ten bridges along the I-90 corridor in Austin are either in poor condition or fair condition and at risk of falling into poor condition within the next 3 years. The Project is achieving all established milestones and is set to begin construction April 2024. The BIP funding will ensure and facilitate the completion of final design and any necessary right-of-way acquisition to deliver the project within 12 months of completion of environmental documentation..

The Project is based on the results of preliminary engineering, completed in Q1 2022. If the Project is awarded a two-phased BIP funding, it will be feasible to complete final design, and any right-of-way acquisition, and proceed to the construction phase within 12 months of the initial award of FY 2022 BIP funds. As demonstrated in the schedule, the Project is reasonably expected to begin construction within 18 months of the first obligation of BIP funds.

I-90 Austin Bridges Improvement & Mobility Project is extremely beneficial for the people of Austin as well as of Minnesota, and therefore, is a high priority project for MnDOT. The BIP funds for this Project will allow MnDOT to reconstruct/rehabilitate the bridges, as a bundle, in the most timely and efficient manner possible. In absence of the BIP award, the schedule for this Project might slip beyond it planned timeline.

VIII. SUPPORTING DOCUMENTS

Links to supporting documents are included throughout this narrative. All supporting documents and the BIP grant application narrative are available to view at the following webpage: https://www.srfconsulting.com/mndot-i-90-austin-bip/