SUMMARY OF ENGINEERING RECOMMENDATIONS

"Eastbound Kellogg Blvd RiverCentre Bridge" Project

Report Prepared 05-16-2022
Public Hearing

PROJECT

This project is to reconstruct the Eastbound Kellogg RiverCentre Bridge No. 90378 and approach roadways between W 7th Street and Market Street, and reconstruct infrastructure located under the bridge including Exchange Street viaduct from Eagle Street to Washington Street and Loading Dock exit road. The project aims to replace structurally-deficient bridge infrastructure, modify adjacent westbound Kellogg bridge structures, reconstruct approach roads, and improve facilities for motorists, bicyclists and pedestrians.

EXISTING CONDITIONS

The Eastbound Kellogg Blvd bridge was constructed in 1936 against the edge of the river bluff as a multi-span cast-in-place concrete structure measuring just over 1,000 feet. The bridge was designed to carry two 11-foot vehicle lanes for eastbound thru traffic, a turn lane and a sidewalk. The project limits generally consist of eastbound Kellogg Boulevard from W. 7th Street to Market Street, including segments of Eagle Street and Exchange Street.

The Eastbound Kellogg Blvd bridge is integral to the Exchange Street viaduct, which provides vehicular access from the intersection at Eagle/Exchange to Kellogg Boulevard at Washington Street. The existing sidewalk on Exchange Street ends abruptly at the RiverCentre ramp, where pedestrians looking to reach Kellogg Boulevard must utilize the RiverCentre Ramp stairway or elevator during its times of operation, thus offering no viable ADA-accessible connection.

The Eastbound Kellogg Blvd bridge also provides access to the Xcel Energy Center/RiverCentre Loading Dock facilities. Commercial and delivery vehicles, buses and shuttles utilize the one-way loading dock road underneath the bridge. Vehicles leaving the loading dock currently exit at a signalized intersection below the bridge, where drivers must maneuver a very difficult left turn onto Exchange Street in an area marked by inadequate sight distances and limited visibility.

The bridge serves as a gateway to major downtown Saint Paul attractions including the Xcel Energy Center/RiverCentre, the Ordway Theatre, the George Latimer Central Public Library and the Science Museum of Minnesota. The bridge also makes physical connections to important downtown facilities including the RiverCentre Ramp, the Science Museum Parking Ramp and the District Energy Downtown Plant, adding to project complexity.

Kellogg Boulevard is classified as an "A-minor reliever" and serves as the main thoroughfare across the south end of downtown, connecting two major freeways (I-35E on the west and I-94 on the east). The bridge is essential to Kellogg Boulevard and after 86 years of service, it has reached the end of its useful design life. To safeguard the welfare of the public and to prevent irreversible damage to the bridge, the City has placed load restrictions on the route that limit freight use. Reconstructing the bridge will reestablish critical linkage between Saint Paul and the surrounding region thereby promoting tourism, commerce, and an overall competitive economy.

The City applied for and received federal funds through the Regional Solicitation for transportation projects in the amount of $7M for program year 2021. The City requested a one-time program year extension from 2021 to 2022, which was reviewed and approved by the Met Council Technical Advisory Committee. In 2020, the City committed local funds to begin the development of design plans. The City is pursuing $29.5 million in general bond funding with the state legislature to help fund the project. Design plans and specifications are nearing completion and Public Works expects to be ready to bid the project in Fall 2022. If full funding is secured for the project, construction could start as early as 2023. The expected construction duration is 2.5 years.

PROPOSED IMPROVEMENTS

The project reconstructs the Eastbound Kellogg Bridge No. 90378 at RiverCentre. The project limits include MSAS 158 (Kellogg Boulevard) between West 7th Street and Market Street, and Exchange Street (MSAS 258) between Eagle Parkway and Washington Street. The total project length is 1,800 feet, with existing bridge length (to be replaced) of approximately 1,040 feet. The reconstruction and rehabilitation of eastbound Kellogg Boulevard includes retaining walls, roadways, the Exchange Street viaduct, and Bridge No. 90378 over the river bluff ravine. Bridge No. 90378 will be demolished and replaced with a series of tunnels including Exchange Street tunnel (BR #62671) and Loading Dock tunnel (BR # 62672). The loading dock road will be re-directed through a tunnel to exit on Eagle Street, eliminating the at-grade intersection under the bridge and thus improving overall traffic safety.

Existing traffic patterns will be maintained on Kellogg Boulevard and Exchange Street. The typical section for Kellogg Boulevard will support two 11-foot lanes, a sidewalk, a turn lane, and a drop-off lane at the Science Museum Plaza. The intersection design at Kellogg and RiverCentre Ramp will include improved geometry, ADA-compliant curb ramps with detectable warning domes, a 20-foot wide crosswalk, reduced crossing distances, standardized median layouts and new traffic signals.

The typical section for the proposed Exchange Street tunnel will include a new 12-foot wide shared-use path for pedestrians and bicyclists. A concrete barrier will separate vehicular traffic from the dedicated ped/bike path. The new shared-use facility will connect the existing Sam Morgan Regional Trail (Shepard Road) and the future Capital City Bikeway (CCB) on Kellogg Boulevard (to be built in 2025).

Other improvements include aesthetic treatments to the Exchange Street tunnel walls. The City and its consultant design team retained a professional artist to incorporate public art. The art design intends to create an inviting and comfortable space with ample lighting for all travel modes, especially pedestrians and bicyclists.

The project achieves multiple transportation goals set forth in the regional 2040 Transportation Policy Plan. Some of these goals include maintaining a multimodal transportation system, operating roads to support movement of people and freight, providing and improving facilities for safe walking and biking, supporting access to the region's job (downtown), activity (Saint Paul urban core attractions), and industrial and manufacturing Concentrations (District Energy) and making improvements to motorist safety and non-motorized use.

PROPOSED ROW ACQUISITION

The project will not require acquisition of permanent ROW easements (PE's) or temporary construction easements (TE's) adjacent to Kellogg Boulevard and Exchange Street viaduct. The City is the fee owner of the adjacent land south of the bridge including the area where the RiverCentre Ramp and the Science Museum facilities currently reside.

The Department of Public Works intends to submit a declaration of right-of-way easement rights for City Council approval in a separate resolution to establish necessary right-of-way on adjacent City-owned land to accommodate a new shared-used trail, a series of tunnels, retaining walls, sidewalks, moment slabs, utilities, and other public infrastructure.

ALTERNATES

The project design team evaluated options including repair, and bridge alternatives such as a traditional beam bridge. Due to the structural degradation and overall condition of the existing structure repair was not a viable option.

Unique site challenges exist including working in an urban setting, having limited right-of-way, and undertaking construction on the edge of the river bluff. The project site is constrained with structures to the north and with ramp facilities to the south. The design considered site logistics, and the need to temporarily shore the bluff and protect adjacent infrastructure during construction.

After extensive review with public works staff, the design team determined that a system of walls and tunnels offered improved safety, cost-efficiency, and opportunity for improvements to functionality, operations of adjacent facilities, and maintenance of the public infrastructure.

POSITIVE BENEFITS

The Eastbound Kellogg RiverCentre Bridge forms an essential connection between W 7th Street to the west and Mounds Boulevard to the east, and I-35E to the west and I-94E to the east connecting downtown access to regional transit system, creating a vibrant downtown core attracting long-term economic development.
The project will improve pedestrian and bicycle safety and access to downtown, the river and the Sam Morgan Regional trail with improved and barrier-protected pedestrian and bicycle facilities.

PROJECT IMPACTS

The MnDOT Cultural Resource Unit (CRU) in agreement with the State Historic Preservation Office (SHPO) determined that the project will have no adverse effect to historic properties such us the Rice Park Historic District, Saint Paul Club and the Saint Paul Library/James J. Hill Reference Library.

Normal disruptions typical of construction including dust, noise, detour routes, and access issues will occur during the course of the project.

CONSTRUCTION SCHEDULE

Plans and specifications are nearing completion and Public Works expects to be ready to bid the project in late 2022. Construction start is dependent on City's ability to secure full funding. If adequate funding is obtained, the project could start as early as 2023. The expected construction duration is 3 years. Exact timing and schedule of the project will be coordinated with major facility operators and stakeholders, and other major work activities that are planned in the area.

COST ESTIMATE

Final estimate of project cost will be developed prior to bidding. Due to recent-year volatility and increases in bid prices (due to cost escalation factors including labor shortages, supply chain issues, and global pandemic) costs shown below are preliminary and subject to change.

Construction	$	36,218,500.00
Design Engineering and Inspection	$	9,055,000.00
PROJECT TOTAL (2022 dollars)	**$**	**45,273,500.00**

ESTIMATED FINANCING

State General Obligation Bonds STBGP	$	29,500,000.00	Pending
Federal Regional Solicitation Grant LBRP	$	7,000,000.00	PY 22/ STIP 24
Local Municipal State Aid MSA	$	3,710,307.00	MSA 2020/2021
Local Tax Increment Financing (TIF)	$	1,500,000.00	TIF 2021
Local Capital Improvement Bonds CIB	$	3,563,193.00	Pending
PROJECT TOTAL	**$**	**45,273,500.00**	

SOURCE OF ADDITIONAL INFORMATION

For additional information, contact the Project Engineer, Dag Dejene, at 266-5603 or visit the project website at www.stpaul.gov/eastboundkellogg.

SUMMARY AND RECOMMENDATION

The Department of Public Works believes that this is a critical project, and the Engineering Recommendation is for approval of the project and financing.

Respectfully submitted,

Dag Dejene, PE
Public Works