



MEMORANDUM

To: ATP Board, Mayor, and Council Members

From: David Couch, Chief Program Officer, ATP
Dottie Watkins, Deputy CEO, Capital Metro
Annick Beaudet, City of Austin Mobility Officer

Date: February 8, 2022

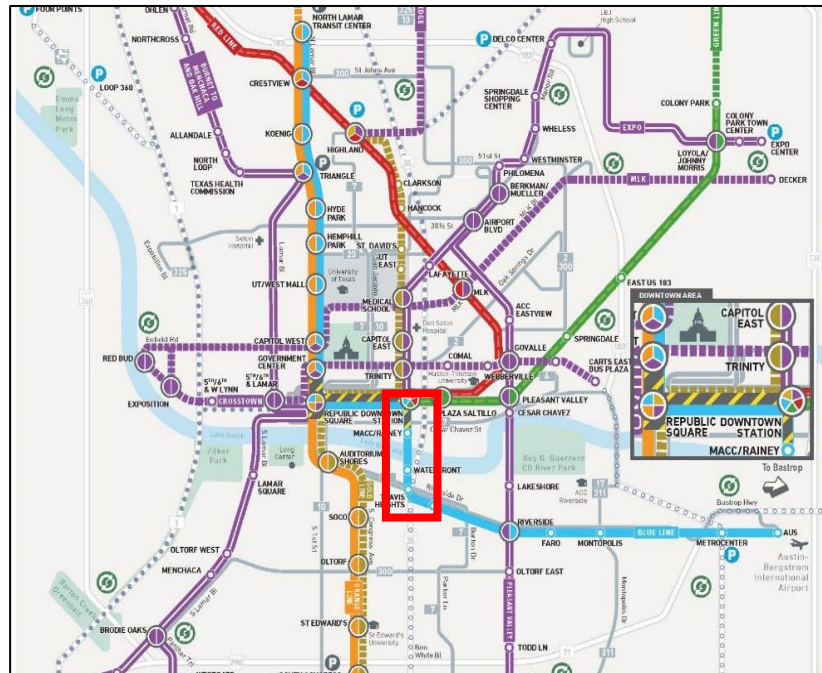
Subject: Project Connect Lady Bird Lake Bridge Programmatic Requirements & Design Process

The purpose of this memo is to outline general considerations and the design process for the design of the Lady Bird Lake Bridge (LBLB) as part of the Blue Line project included in the Project Connect program. During the current Project Development and Preliminary Engineering phase for the Blue Line that includes the Draft Environmental Impact Statement (DEIS), and through discussion with participating agency partners and feedback from the community and stakeholders, the Project Connect team has been asked to explore the possibility of designing the bridge to not preclude bus service in addition to light rail and facilities for pedestrians and cyclists.

The Project Connect system map that was adopted by the Austin City Council and the Capital Metro Board in June 2020, includes a crossing of Lady Bird Lake from the south shore at the South-Central Waterfront to the north shore aligning with Trinity Street. This alignment was consistent with the Austin Strategic Mobility Plan (ASMP) mode-shift goals. The modes currently being considered for the DEIS are light rail transit, pedestrians, and bicycles. Facilities for pedestrian and bicycles had previously been anticipated to be included in a separate bridge as part of the City Council-approved plan for Waller Creek and Waterloo Greenway. The Alternatives Analysis (AA) phase and the approved Locally Preferred Alternative (LPA) did not specifically address bus service on the bridge. The Blue Line project is participating in the Federal Transit Administration (FTA) Capital Investment Grant (CIG) program. Funding that is available under this competitive program represents a significant part of the financing and implementation of the Blue Line. Specifically, the Blue Line is in a phase known as Project Development.



During this phase of analysis, the project sponsor performs engineering and public outreach as required by the National Environmental Policy Act (NEPA) environmental review process. Capital Metro as Project Sponsor has two years from the Federal Register publication of the Notice of Intent, which occurred in May 2021, to prepare an EIS and complete the NEPA documentation and secure a Record of Decision (ROD) from the FTA. In addition, the CIG program requires that the NEPA process concludes within the two-year window of the Project Development phase; in the case of the Blue Line this date is in July 2023.



The system map that was adopted by the Austin City Council and the Capital Metro Board in June 2020 includes a Blue Line crossing of Lady Bird Lake from the south shore at the South-Central Waterfront to the north shore aligning with Trinity Street.

Through this process, there has been comment and feedback about the possibility of including bus operations to the LBLB. The discussion has centered around improving operational reliability for the entire transit network, including buses, and supporting a north/south transit corridor on both the west (1st Street, Guadalupe, Lavaca corridors) and the east (the proposed Blue Line bridge, Trinity St., San Jacinto corridors) sides of downtown. The transit network is constrained by the limited number of crossings over Lady Bird Lake, and there could be long term benefits for additional transit capacity for buses across the lake on the east side of downtown.

The LBLB is a critical element of the proposed Blue Line light rail service. Therefore, resolution of how to address this opportunity will be required to limit delays and cost impacts to the Blue Line project.



Additional Analysis

There are several aspects of the lake crossing that will need to be analyzed as part of the assessment of adding buses to the LBLB, including the following:

Service Planning

When transit infrastructure is expanded and implemented, there is a need to analyze the existing network for changes that may be needed because of the new service. Capital Metro has been analyzing the current bus network to understand how existing bus routes might be redesigned to better connect to light rail, once the investments of the Project Connect program are operational. While this analysis could inform which bus routes might use the LBLB once construction is complete, additional analysis of the entire transit network may be needed to determine exactly which routes could use the bridge. This future analysis will include engaging the community, looking at land use, density, travel patterns, origins and destinations of current riders, and projected future growth to determine the best transit network to meet riders' needs. In addition, once the light rail service is operational, it is expected that Capital Metro will continue to update its bus service plan every 5-years to evaluate route performance and plan for route changes in response to new growth and changes in the community. These future service planning efforts represent additional opportunities to analyze the transit network for changes and evaluate which routes could operate on the LBLB based on the needs and feedback of the community, at that time. All services changes must follow the FTA-required processes, which includes public participation, analysis of disparate impacts (Title VI), and approval by the Capital Metro Board of Directors.

Project Development and Engineering

Engineering and technical coordination is needed to develop feasible alternatives that can be shared with stakeholders. The location of the bridge presents several engineering challenges due to the alignment requirements for the Blue Line and various critical existing site conditions. Primarily, the bridge must be aligned to provide light rail connection from the at-grade Blue Line "Waterfront" station on the south shore to the "Rainey/MACC" station located below grade under Trinity Street. The bridge must be set at an elevation that will be above potential lake flooding levels, but then quickly sink below grade to transition into the light rail subway tunnel. Any changes to flood control tunnel operations and recreational activities on the lake will need to be evaluated to assess and address potential impacts, in coordination with multiple stakeholders including City departments, trail users and trail-related non-profit organizations.



On the south shore, the bridge must be aligned to make the transition from the at-grade Waterfront station to an elevated structure over the Butler Trail and Lady Bird Lake, on the property occupied by the Austin-American Statesman that is currently under review as the 305 South Congress Ave. Planned Unit Development (PUD). The current PUD proposal plans for the Blue Line structure as well as connections to the bridge for pedestrians and cyclists from the area.

At the north shore, the Blue Line will transition from the bridge over the lake to the subway tunnel. The current alignment includes a portal into the tunnel at the edge of the lake to maintain the connectivity of the Butler Hike and Bike Trail at the top of the bank. The pedestrian and cyclist facilities on the bridge will connect to the Butler Trail on the north side of the lake, with connections to the Lance Armstrong Bikeway and to Waterloo Greenway at the top of the bank as well, above the Blue Line tunnel. The addition of bus facilities into this intersection, in a way that minimizes or eliminates conflicts between vehicles and pedestrians and that ensures safe operation among all transportation modes, will require further study. In addition to the Butler Hike and Bike Trail, other existing conditions that must be accommodated and contribute to an already constrained and sensitive site, including Austin Energy transmission facilities, the Waller Creek Flood Control tunnel outlet facility access, as well as residences and businesses between Trinity Street and the lake that require continuous access.

Operations

An operational consideration that needs further analysis is the operating separation between the transit modes of light rail and buses – both the creation of a separate guideway for buses and the possibility of both modes utilizing a shared guideway. While a shared guideway on the LBLB for both rail and bus may be an option, there are operational complexities associated with a shared guideway that require careful evaluation of the benefits and risks of that approach.

Analysis will include the required hazard, risk, and threat assessment by the Capital Metro Chief Safety Officer, in consultation with transportation safety experts in partner agencies. The team will also review systems across the country that operate in similar situations, so that the lessons from other systems can be applied to the specific context of Austin future light rail and bus operation. The results of those assessments will inform the system design, and operating rules and procedures, as well as the bridge design and operational characteristics moving forward.

Moving Forward

In order to complete the study of modes utilizing the bridge, analysis must be completed on several issues, including the following:



1. Design and engineering options that include capacity for buses on the bridge either in a separate, dedicated guideway or in a shared guideway used by both light rail vehicles and buses.
2. Constructability and timing of projects, including a phased approach for construction and implementation.
3. Public and stakeholder outreach. Public discussion is necessary to fully vet options and tradeoffs. It is anticipated that a public meeting will be held in the month of April.
4. The purpose and need of bus access to the bridge, considering existing and future travel patterns and bus service planning opportunities that may occur as part of major mobility infrastructure being constructed.
5. A hazard, risk, and threat assessment. which will inform design solutions and operational plans and procedures.
6. Analysis of other infrastructure improvements and operational procedures needed and/or required to optimize bus operation in the network.
7. Evaluation of any impacts to the Blue Line project with regard to federal funding and its participation in the federal Capital Investment Grant (CIG) program.

Because this analysis was not done earlier in the EIS process and will take some time, the City, ATP, and Capital Metro staff commit to moving swiftly in order to adhere to the Blue Line Project Development and NEPA process and schedule, with a decision by May 31, 2022. The Project Connect partners are committed to creating a process that is thorough and transparent while meeting project timelines.

It has been the intent of the Project Connect team to conduct a global design competition for the design of the Lady Bird Lake Bridge (LBLB). Due to the design and engineering focus of the competition, the launch of the design competition will be postponed until a decision about the programmatic requirements for the bridge has been finalized. Depending on the outcome and timing of a decision, schedule impacts and other factors, the design competition may be revisited.

In summary, Capital Metro, ATP, and City staff are committed to collaborating on the further study and community outreach needed to determine the best design for new Lady Bird Lake Bridge.



Should you have questions or require additional information, please contact Annick Beaudet, at Annick.Beaudet@austintexas.gov.

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Project Connect Community Advisory Committee (CAC)
Urban Transportation Commission (UTC)