

KSTEP Funding Proposal Form

Date Submitted: September 24, 2020

Project Name: KSURP Bus Service Improvement Planning

Implementing Partner: Cambridge Redevelopment Authority

Primary Contact: Alexandra Levering

I. PROJECT DESCRIPTION

To analyze the potential and develop design concepts for bus priority measures along Broadway and Main Street in Kendall Square, considering streetscape infrastructure, lane markings, and/or traffic signal optimization such as transit traffic signal priority systems at intersections.

The bus service improvement planning scope for this project, is prepared as an additional scope to the CRA's Kendall Square Urban Renewal Plan (KSURP) 2020 Broadway, Main and Third Streetscape Redesign project, using Sasaki and HDR as consultants. The goals for that project are to design the streetscape for safe multi-modal use, including separated bicycle facilities, pedestrian and bicycle infrastructure at intersections, and bus/shuttle priority, while also planning for and around new development, stormwater and utility infrastructure, the tree canopy, and pick-up/drop-off and commercial loading zones. The project will also seek to design Broadway, Main and Third Street as a high-quality public space that maximizes the pedestrian experience. This additional scope will further develop the bus priority measures in context with the goals described for the project above.

II. INVESTMENT JUSTIFICATION

Bus priority measures, if designed and implemented effectively, can help increase bus ridership as a result of faster and more reliable trip experiences. As buses become more reliable, more people may be willing to leave their car and use bus transit, further easing local traffic congestion. Further, more efficient bus service provides a higher level of mobility to transit dependent populations.

III. KEY ASSUMPTIONS & POTENTIAL RISKS

- That the existing traffic signal infrastructure can accommodate traffic signal priority technology.
- That existing, pre-COVID traffic data is sufficient to evaluate traffic impacts of bus priority measures.

IV. REFERENCE DOCUMENTS & LINKS

- Kendall Square Mobility Task Force (KSMTF) – Route 85 Bus Stop Optimization and Transit Priority Plan (https://www.cambridgema.gov/-/media/Files/CDD/Transportation/Projects/KSMTF/memoroute85analysiswithattachments92816_reduced.pdf)
- Bus Delay and Unreliability Areas of Concern Map – 2018 (https://www.cambridgema.gov/-/media/Files/CDD/Transportation/Transit/Studies_and_Reports/serviceanalysis2018/summarymaponly.pdf)
- Sasaki/HDR 2020 Kendall Square Urban Renewal Area Streetscape Redesign – Main, Broadway and Third - Scope of Work (pending).
- Transport Kendall <https://www.transportkendall.org/> and Kendall Square Mobility Task Force <https://www.cambridgema.gov/CDD/Projects/Transportation/kendallsquaremobilitytaskforce>, recommendations for bus priority treatments, including re-timed traffic signals and traffic signal priority, inbound queue jump lanes and dedicated bus lanes.

V. LONG-TERM FINANCIAL SUSTAINABILITY

This bus service improvement planning study will include a construction estimate detailing expected costs for the installation of bus priority measures. Once installed, bus priority traffic signals will be operated and maintained by the City of Cambridge’s Traffic, Parking and Transportation (TPT) department, and road installations will be maintained by the Cambridge Department of Public Works (DPW). The opportunity to provide additional service on affected routes would be evaluated by the Massachusetts Bay Transportation Authority (MBTA) and Charles River Transportation Management Association (CRTMA).

VI. TIMELINE

ACTIVITY	ESTIMATED DURATION
Project review and approval	9/23/20 – 10/7/20
Execution Plan refinement	10/7/20 – 10/14/20
Bus Priority Improvement Planning - Sasaki	12/1/20 – 3/31/20
Report Completion for Working Group Review	3/31/20

VII. BUDGET & SCOPE

Included in Scope

See Attachment 1 – Scope of Work.

ITEM DESCRIPTION	PRICE
KSTEP ITEMS	
Bus Service Improvement Planning	\$9,500
TOTAL	\$9,500
ITEMS FUNDED BY OTHER SOURCES	
CRA – KSURP Streetscape Redesign – Main & Broadway	96,000

TOTAL	\$96,000
OVERALL TOTAL	\$105,500

ITEMS EXCLUDED FROM SCOPE / ADDITIONAL RESOURCE NEEDS

VIII. PROJECT MANAGEMENT

Team Members	Project Responsibilities
Alexandra Levering - CRA	Project Manager
Andy Reker – City of Cambridge	Project Assistance and Integration

External Partners	Project Responsibilities
Steve Engler - Sasaki	Consultant Project Manager
Rosie Jaswal – HDR Massachusetts Bay Transportation Authority (MBTA) Service Planning CRTMA	Consultant Transportation Engineer

IX. IMPLEMENTING PARTNER AUTHORIZATION

ORGANIZATION: Cambridge Redevelopment Authority
NAME: Alexandra Levering
TITLE: Project Manager
DATE: September 23, 2020

X. APPENDIX

Attachment 1: Kendall Square Bus Service Improvement Planning Scope

Attachment 1

Kendall Square Bus Service Improvement Planning

Additional considerations for bus priority measures will be implemented as part of the long-term strategy for the area. Analysis and design of bus lanes and/or transit traffic signal priority systems at intersections within the study area and at Broadway and Galileo Galilei Way, may be considered in coordination with the Kendall Square Transit Enhancement Program initiatives. This work would be limited to detailing the location of proposed bus lane markings and transit traffic signal priority equipment within the conceptual plan. The team will also evaluate current and proposed transit service enhancements including extended service for the 64 and 70 Routes into Kendall Square and increased frequency for the EZRide Shuttle within the study area.

The bus corridor evaluation and design assume the evaluation and potential integration of the following elements. We understand that some of this evaluation has already been completed in prior studies that we will be reviewing, validating and incorporating into our design.

- Exclusive bus lanes
- By-pass/short bus lanes; queue jump lanes
- Traffic signal optimization, transit traffic signal priority, exclusive traffic signal phases for buses
- Bus stop relocation/elimination/optimization
- Bus stop improvements – including curb extensions, floating bus stops, seating, shelter/shade
- Intersection improvements – ADA upgrades, proposed crosswalks, including crossing control
- Evaluate the traffic impacts of bus priority measures at intersections and along the corridor to help provide an understanding of how buses could be prioritized at the selected locations. Capacity analysis will be completed for the weekday morning and weekday afternoon peak hours under an existing and build condition. This would be coordinated with the overall traffic analysis model, with an additional analysis of bus priority traffic signals.

Assumptions:

- A draft and final conceptual drawing using an aerial base map will be prepared

Deliverables:

- Technical Memo
- Presentation for public presentation of draft concept plan
- Final Concept Plan
- Design Report
- Opinion of probable construction cost