

BostonBRT Station Design Competition

BOSTON BRT

Bus rapid transit (BRT) is being considered for the Greater Boston area as a means to deliver high quality rapid transit to underserved areas. A critical component of a good BRT system is the station – the most visible part of the system – a symbol of that system. It is the interface between the movement of the system and the status of the neighborhood. At stations, passengers board and alight the vehicle, buy tickets, validate them and enter to wait. Passengers look for information. Buses have to approach and align with the correct place in the station. Stations are where everything comes together in the BRT system and the efficiency of the station design and the technologies built into the stations is of primary importance to success of the system. And while they are important components of the transit system and need to be designed for to ensure buses

Background

To better understand whether and where BRT could work in the region, the Barr Foundation convened the Greater Boston BRT Study Group. Made up of diverse stakeholders and transit experts from across the Boston metropolitan area, the BRT Study Group partnered with the Institute for Transportation & Development Policy (ITDP), an internationally respected authority on transit and BRT, to investigate the possibilities for implementing BRT throughout the metropolitan area. In particular, the Study Group focused on the highest performance level of BRT, the Gold Standard. The "Better Rapid Transit for Boston" report was released to outline the group's conclusions. The report identified five prime

achieve operational efficiency, they also need to be designed for people and for the community.

The BostonBRT Station Design Competition is an ideas competition for BRT stations in Boston. It seeks to solicit creative and inspiring designs for this most important piece of the BRT system: the stations. This contest seeks BRT stations that inspire, create a sense of civic pride, and deliver a world-class transit experience to Bostonians.

The contest will be administered by the Institute for Transportation & Development Policy (ITDP) and sponsored by the Barr Foundation.

corridors for BRT and recommended that they be built to meet the Gold Standard. These corridors are:

- Dudley to Downtown
- Dudley to Mattapan
- Harvard to Dudley
- Readville to Forest Hills
- Sullivan to Ruggles

Background

A station design competition is being held to encourage creative visions of what a BRT system in Boston could look like. Iconic, aesthetically welcoming and pleasing stations will serve as anchors in their communities and inspire the Greater Boston to think big about improving the daily commute.

The competition is an ideas competition. Entrants will be required to submit concept-level designs for center platform BRT stations (See examples in Design Precedents). The first place winner will receive a cash prize of \$4,000 and two travel packages to ITDP's Mobilize conference on June 28-30 in Santiago, Chile. 2nd place shall receive a cash prize of \$2,000, and 3rd place shall receive a cash prize of \$1,000.

What is BRT?

BRT is a high-quality bus-based transit system that delivers fast, comfortable, and cost-effective services at capacities comparable to a rail transit. ITDP's BRT Standard evaluates BRT corridors based on a wide range of metrics to establish a common definition of BRT through the BRT Basics, and recognizes particularly high-quality corridors with either Bronze, Silver, or Gold rankings. The BRT Standard can be found at brtstandard.org.

The BRT Basics are the five features that define BRT. These features most significantly result in a faster trip for passengers and make traveling on transit more reliable and more convenient.

The goal of the design competition is to develop a station concept that accomplishes the following:

- Reflects the character of Greater Boston and its neighborhoods
- Creates a sense of comfort and elegance
- Meets the requirements of the BRT Standard and maximizes benefits to future BRT riders
- Allows for integration with other modes including walking and biking
- Demonstrates a effective and reliable rapid transit system





Dedicated Rightof-Way

Bus-only lanes fully segregated from mixed traffic



Busway Alignment

Bus-only lanes aligned to the middle, not the curb, of a road



Off-Board Fare Collection

Turnstile-controlled or proof-of-payment fare collection system



Intersection Treatments Mixed-traffic is prohibited from making turns across

the busway



Platform-Level Boarding

Station platforms level with bus floors when boarding and alighting

Why is BRT Station Design important?

The aesthetic design of a station is important as they demonstrate to the public that BRT is a lasting investment that provides tangible benefits to the area in which it is implemented. Each station will serve as a point of introduction for the system so it is important to leave riders with a lasting positive impression. A prominent, attractive station has the potential to inspire the communities around it while encouraging further improvement in the surrounding neighborhood. Iconic station designs, such as those in Rio de Janeiro's TransOeste corridor seen below, can raise the profile of the BRT system, as well as convey a sense of pride to the users. Stations can become highly prized public spaces as train stations used to be.

But stations also need to be designing to support a well-functioning system that minimizes bus delays and maximizes user experience.

BRT station design requires including basic aspects like platforms, transition areas and integration infrastructure to access stations. The station design and size can vary based on demand. In general, BRT station design is largely a function of user requirements:

- Comfort: Seats, leaning bars, and space for passenger movement
- Safety: Adequate lighting, visible interiors
- Accessibility: Minimal level differences and ramped access from street level
- Aesthetics: Attractive to passengers, giving a sense of civic pride and belonging
- Provision of customer information: Both static and realtime



Design Precedents

The photographs below provide example of BRT stations found in the US and around the world. These stations are notable examples of well-designed BRT stations that enhance the neighborhoods they serve while providing a high quality passenger experience.



MOVE BRT, Belo Horizonte, Brazil



Metrobús, Mexico City, Mexico



HealthLine BRT, Cleveland, Ohio



Emerald Express, Eugene, Oregon



Yichang BRT, Yichang, China



Rea Vaya, Johannesburg, South Africa

Design Objectives

The design submissions will be judged around three design objectives (station area, rider experience, and feasibility). These objectives are intended to help guide your station designs to be both attractive to commuters and practical from an engineering standpoint. All design submissions must be compatible with the BRT Basics and aim to satisfy the Gold Standard as outlined in the BRT Standard

Station Area

Station designs should reflect Boston's character and be aesthetically appealing.

- Stations should express the culture of Boston while establishing a unique identity for the BRT corridors.
- Designs should complement neighborhood character and not conflict with their surroundings.
- Space should be provided to allow for the addition of cultural and historic district identification as well as the display of local public art.
- Designs incorporate a strong consistent brand identity with customizable features that allow stations to be adjusted post construction to reflect the character of an individual neighborhood.
- Stations can be ambitious and contemporary in design, but form, mass, scale and proportion should fit in with surrounding buildings.
- Materials, colors, and textures should be of a similar quality to and compatible with those found in Boston and its neighborhoods.

Rider Experience

The stations should create a safe and welcoming place. Stations should provide rider services that provide an integrated experience with existing services in Boston such as the T and Hubway. Stations should serve to attract ridership.

- Designs integrate the advantages of Bus Rapid Transit.
- Stations are easily accessible by both able-bodied pedestrians as well as those with mobility limitations.
- Stations should possess real-time arrival information.
- Station should allow for pre-board ticketing through gate control, fare validation, or proof-of-payment methods.
- Stations allow for implementation of wayfinding measures to assist those making transfers or visitors to the city.
- Designs should provide bicycle access. Bicycle racks and nearby Hubway station placements are encouraged.
- Stations should provide shelter in all seasons. Riders should feel comfortable during snowy winters and hot, humid summers.

Feasibility

Stations should be robust, easy to replicate, and built to last. Stations must facilitate the operation of the bus rapid transit system and not include elements that limit its ability to function as a high capacity system.

- Designs do not limit the functionality of the bus rapid transit system and buses are able to easily dock at stations.
- Stations mitigate their overall impact on the environment
- Stations recognize Boston's climate and are able to stand exposure to inclement weather.
- Designs should be adaptable to potential future BRT station locations.

Design Specifications

Submissions should include conceptual design renderings for two separate station types: a center platform station designed to board passengers on both sides, and a curbside platform station designed to board passengers only on the right side. It is expected that the major design details for the two configurations would largely match each other. Please note that passengers are expected to board at the platform height. Station will be considerably taller to make space for passengers inside the station itself.

Station 1: Center-of-street platform with boarding on both sides. Buses with doors on the left-side would utilize such stations.

• Platform Dimensions: 12 ft. wide x 75 ft. long x 14 in. tall

Station 2: Right-side platform with boarding through right-side doors. Right-side platforms could be used in the center of the street or against the curb, outside of the BRT corridor. When placed in the center of the street, it is recommended that they are staggered from each other so that the reduction in space for travel lanes is minimized.

- Platform Dimensions: 10 ft. wide x 60 ft. long x 14 in. tall Submissions must incorporate:
- Americans with Disability Act (ADA) compliant ramps and clearances
- Overhead rain/snow protection for riders
- Bus arrival information
- Wayfinding
- Space for fare payment equipment
- Opportunities for neighborhood customization

Submissions should consider, but are not required to include, elements which address:

- Bicycle parking or Hubway docks at the station or nearby
- Protection from wind and sun
- Drainage needs
- Seating
- Trash receptacles
- Durability
- Ease of maintenance

Contest Timeline

- Announce competition and release design guidance: March 2nd
- Questions about competition details due: March 29th
- Entrant registration due: April 5th
- Design submission due April 12th
- Public and online review forums: April 26th
- Winning design announcement and event: May 10th

Submission Process

There is no fee or prequalification for participation in this competition. Individuals or firms may submit more than one entry. To register for the contest, entrants shall submit an email to stationdesign@bostonbrt.org by April 5th at 5:00pm ET. The subject line of this initial email should read "BostonBRT Station Design Competition." The email shall include firm name (if applicable), identification of a team leader, and the team leader's email address. A confirmation of registration along with a 5-digit registration number will be emailed to the confirmed registrant in response.

Each design submission will require a separate registration number and this registration number will be used for the remainder of the competition to identify each entry. Other than the registration number, all submittal documents should be free of any names, logos, or other personally or professionally identifying features of the entrant(s).

Any questions about competition details shall be submitted in writing to stationdesign@bostonbrt.org no later than 5:00pm ET on March 29th. A complete list of all questions and answers will be maintained on the project website.

For registered entrants, the following narrative and graphic materials should be submitted via email to stationdesign@ bostonbrt.org no later than 5:00pm ET on April 12th in a single zip file with the 5-digit registration number, e.g. "12345.zip". The email subject line should read "Registration Number_1235."

Narrative Material

• A short (one or two page) design brief describing the overall design, inspiration, and notable features with a clear expression of design objectives. Features/areas that can be customized for each station/neighborhood

should be described. The file should be submitted as "Statement_12345.doc".

- A single page document with team identification and contact information. The file should be submitted as "ID_12345.doc" and should include the following:
- o Project title
- o Firm name (if applicable)
- o Team member name(s)
- o Identification of team leader (if applicable)
- o Team leader/entrant telephone number
- o Team leader/entrant mailing address
- o Team leader/entrant email address

Graphic Material

- A maximum of six (6) views in .jpg or .png at a resolution of at least 300 dpi. The files should be submitted as "View1_12345.jpg", "View2_12345.jpg", etc. The 5-digit registration number should be the only identifying feature in these images, no other personal or professionally identifying features are allowed. The "View1" file will be used as the primary image for the submission.
- One (1) view of the station, annotated to identify the location of required design elements (i.e. ADA compliance ramps, protection from weather, bus arrival time, ticket vending machine, bicycle parking, and customizable areas) as well as any other elements the entrant considers noteworthy, in .jpg or .png at a resolution of at least 300 dpi. The files should be submitted as "Annotated_12345.jpg". The 5-digit registration number should be the only identifying feature in these images, no other personal or professionally identifying features are allowed.

Evaluation Process

This design competition is a single phase process that will be reviewed by the Institute for Transportation and Development Policy (ITDP) for technical feasibility prior to the judging process. Qualifying submittals will be blindly judged by a 7-person selection panel of community leaders. In addition to the selection panel, all qualified submittals will be voted on by the public both online and via an in-person public forum. The design with the highest total votes from the public will receive the equivalent of three votes on the selection panel.

The aggregate rankings from the panel and the public vote will select first place, second place, third place, and honorable mention designs. Rankings will be assessed based on how well the designs achieve and address the questions and goals of each of the three design objectives. A summary report will be distributed explaining the rationale for the decision.

It is expected that final determinations will be made by May 10th and announced at a public event.

The first place winner will receive a cash prize of \$4,000 and two travel packages to ITDP's Mobilize conference on June 28-30 in Santigo, Chile. 2nd place shall receive a cash prize of \$2,000, and 3rd place shall receive a cash prize of \$1,000. Anyone receiving a prize will be required to submit a valid W9 form for payment.