



**Massachusetts Bay
Transportation Authority**

Architectural and Engineering Services for MBTA Design Standards and Guidelines

Fiscal and Management Control Board

October 5, 2020

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MBTA Design Standards and Guidelines Overview

Vision:

To improve Safety, Service, Equity, Quality, and Consistency of MBTA assets through the modernization of engineering and design standards and guidelines.

Purpose:

Updated standards will provide a consistent level of engineering and design expectations for engineers, designers, contractors, manufacturers, and suppliers when planning for and executing improvements to MBTA assets. Updated Standards and Guidelines will help the MBTA achieve its goals of improving customer experience, reducing costly change orders, improving asset life-cycle costs, lowering energy consumption, and providing resilient and environmentally friendly designs by providing consistency across asset classes.

Need:

This project proposes to update the existing 1977 MBTA “Manual of Guidelines and Standards” and other related documents, as well as to generate new standards and guidelines based on industry best practices, and MBTA needs, organized into a user-friendly electronic format.



MBTA Design Standards and Guidelines Overview

Engineering

Design manuals, guidelines, and maintenance standards for work on MBTA projects have been collected here for design consultants and project managers. The documents, within 7 categories, are available as PDFs.

[Read a message on our guidelines and standards from the Chief Engineer](#)

For situations not covered by these documents, consult an MBTA project manager for further information.

Note: Standards are evaluated and updated on an ongoing basis. Every attempt will be made to include updates in the Directives section. It is the design consultant's responsibility to ensure the latest standards and requirements are used. Where conflicts exist, typically the most stringent requirement applies.

Directives

Directives override standards and guidelines for specific elements in prior documents.



Design Standards and Guidelines

Guides, manuals, and materials provide design requirements and goals for MBTA facilities including stations, bridges, and signage.



Maintenance Standards

Procedures and requirements in these documents outline facilities' maintenance and operational needs



Project-Specific Standards and Criteria

Several project design manuals, including select manuals for South Coast Rail and the Green Line Extension, are available for reference and guidance only.



Procedures

Requirements and expectations for drawings and specifications offer guidance for different stages of design development.



Specifications

These materials describe requirements for work on, over, under, within, or adjacent to MBTA railroad property.



Strategy

Programs focusing on MBTA system upgrade plans and priorities.



www.mbta.com/engineering

- All Engineering and design standards can be found on our website
- Includes legacy standards



MBTA Design Standards and Guidelines Overview

- Update the existing Transit Design Guidelines and Standards to incorporate the result of current research and best practices including recommendations from APTA, the Transportation Research Board, and other Transit Agencies
- Collate and review the existing MBTA Design Guidelines and Standards and practices in use
- Coordinate with all Standards and Guidelines currently being developed and used across the MBTA:
 - System Wide Accessibility: Design Guide for Access
 - South Coast Rail (SCR) Project-specific standards
 - Green Line Extension (GLX) Project-specific standards
- Development of material lists as applicable to specific asset classes
- Update/modernize existing Construction Basis Specifications
- Develop an MBTA CAD Standards Manual
- Develop design standards, guidelines, illustrations and/or CAD files for individual asset classes



Procurement Process and Timeline

This procurement process was conducted consistent with a qualifications-based selection process for the requested architectural and engineering services.

Key Dates:

- | | |
|---------------------|---|
| • February 20, 2020 | RFQ Due (4 firms submitted qualifications) |
| • February 27, 2020 | RFQs evaluation complete (2 firms selected [Arup and VHB] for RFPs) |
| • April 23, 2020 | RFP evaluation and scoring complete |
| • May 3, 2020 | Selected firm notified |
| • May 12, 2020 | Negotiations commenced |



Request of the Fiscal Management and Control Board

Today's Board action will provide for Engineering and Architectural professional services to review, modify and create Design Standards and Guidelines that will guide MBTA consultants and developers to prepare plans and specifications for new and rehabilitated stations, support facilities and infrastructure.

Staff request that the Fiscal and Management Control Board authorize the MBTA General Manager, or his designee, to award and execute MBTA contract **Z94PS11: Architectural and Engineering Consulting For MBTA Design Standards and Guidelines to Arup** for an amount not to exceed **\$10,000,000**.

