

FY25-29 CIP | Updated Scoring Framework

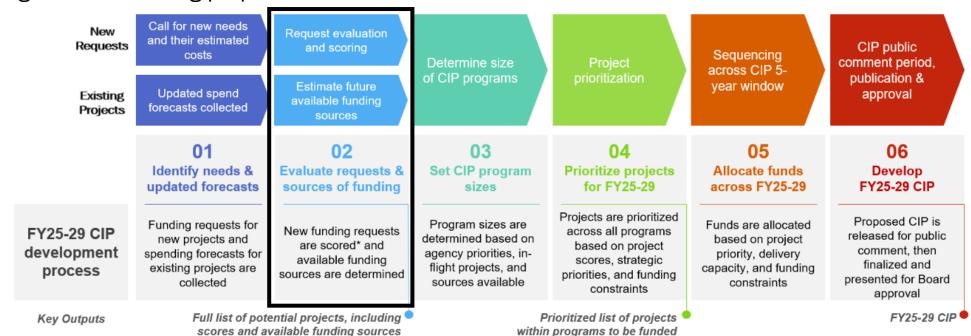
Audit & Finance Subcommittee October 12, 2023

Overview

- As part of the annual CIP development process, all funding requests for new and existing projects go through an evaluation and scoring step ("CIP scoring"), which is a process supported by MBTA staff to evaluate a project's expected outcomes.
- The results of CIP scoring serve as a starting point for funding recommendations and are one of the many inputs that inform project funding prioritization with MBTA leadership.
- For the FY25-29 CIP development cycle, the MBTA is proposing an update to CIP scoring to align criteria with the MBTA's own strategic goals and policies and the priorities of the Healey-Driscoll Administration.
- The updated framework aims to:
 - I. Enhance alignment of CIP scoring and development process with the MBTA's strategic goals and policies and Commonwealth-wide goals
 - II. Incorporate the Asset Prioritization Framework, an agency-wide standard approach to assessing condition, criticality, and risk to inform prioritization of asset repair or replacement, and
 - III. Streamline scoring process and increase clarity of evaluation criteria based on staff feedback

Project Scoring & the CIP Development Process

- As the second step in the CIP's development process, CIP scoring allows us to review all project requests and clarify request aspects with project managers before scoring takes place
- The results of CIP scoring establish an initial foundation for prioritizing projects that is further informed and refined through the program sizing and project prioritization steps
- While CIP project scores are used to inform project prioritization, other key inputs including available funding, agency capacity, program sequencing, and legal or regulatory requirements are also considered and play a role in developing the final funding proposal



CIP Scoring | Key Aspects

- All CIP funding requests, either for new or existing projects, undergo CIP scoring
- Scoring is the evaluation of a project's benefits and impacts by teams of 3-4 MBTA staff based on standard scoring criteria
- The CIP is structured around asset-based programs, evaluators are tasked with only scoring projects within the same CIP Program to ensure scoring consistency for same or like assets
- In drafting the initial funding proposal, CIP project scores are utilized to inform decisions only within the same CIP Program
 - Project scores are compared to other projects within the same program (e.g., all station facilities are evaluated for prioritization under the Passenger Facilities program)
 - Funding requests within the same CIP Program are ranked by CIP score to understand how requests align with available funding

CIP Scoring By the Numbers: FY24-28 CIP

Requests for new and existing projects were evaluated using eight scoring criteria, encompassing 23 sub-criteria across 10 CIP Asset-based Programs

200

Requests received

\$11.8B

Requested funding for existing and new projects

58

MBTA staff volunteered to evaluate requests

19

Evaluation teams set up for project scoring by CIP Program

112

Requests recommended for partial or full funding

\$1.5B

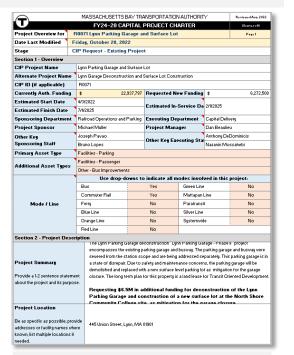
New funding for existing and new projects

CIP Scoring | Step-by-Step Process and Scoring Tools

Scoring results are used to inform the larger prioritization exercise

Step 1: Request submission

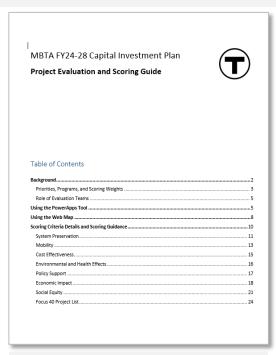
PMs and executing departments submit project requests with project charter for evaluation. CPP reviews all requests



Project Charter: submitted by PMs when requesting funding. Provides info about project's scope, benefits, and impact in line with scoring criteria

Step 2: Evaluator training

MBTA staff are trained on how to evaluate projects and evaluator teams are set up, by CIP program to score requests



Scoring Evaluation Guide: gives detailed guidance and examples on how to score each criterion in the CIP scorecard

Step 3: Project scoring

Evaluator teams discuss projects, and each team member submits individual project scores that are averaged for a final project score





Scoring PowerApps Tools: each project is scored through a questionnaire app. A Web Map provides evaluators with project location and supporting data

Step 4: Scoring results

Results of project scoring are assembled and used to support discussions with MBTA leadership during the program sizing and prioritization steps



Project Request Report Card: project request information and scoring results are captured in a request report card



CIP Scoring Update | Major Goals

FY24-28 CIP scoring

Basis for scoring was 2015's Project Selection Advisory Council (PSAC)

Uniform project selection criteria used in all capital investments funded by MassDOT, transit-related or otherwise, focused on:

- State of Good Repair
- Safety and Security
- Mobility
- Cost Effectiveness
- Sustainability and Resiliency
- Policy Support
- Social Equity
- Economic Impact

PSAC scoring has not been significantly updated since 2015

FY25-29 CIP scoring proposal

Major goals for proposed CIP scoring

- Align CIP scoring with MBTA policies, Healey-Driscoll administration priorities, Commonwealth-wide goals and Federal policy objectives
- Incorporates the Asset Prioritization
 Framework, an agency-wide standard approach to assessing asset condition, criticality, and risk
- Strengthen project scoring by integrating available, up-to-date and comprehensive datasets
- Streamline and improve clarity on scoring process and criteria to support project evaluators

Basis for proposed CIP scoring

MBTA's Strategic Plan

Outline of the MBTA's vision, mission, and strategic priorities, around 5 values:

- Safety
- Service
- Equity
- Sustainability
- Culture

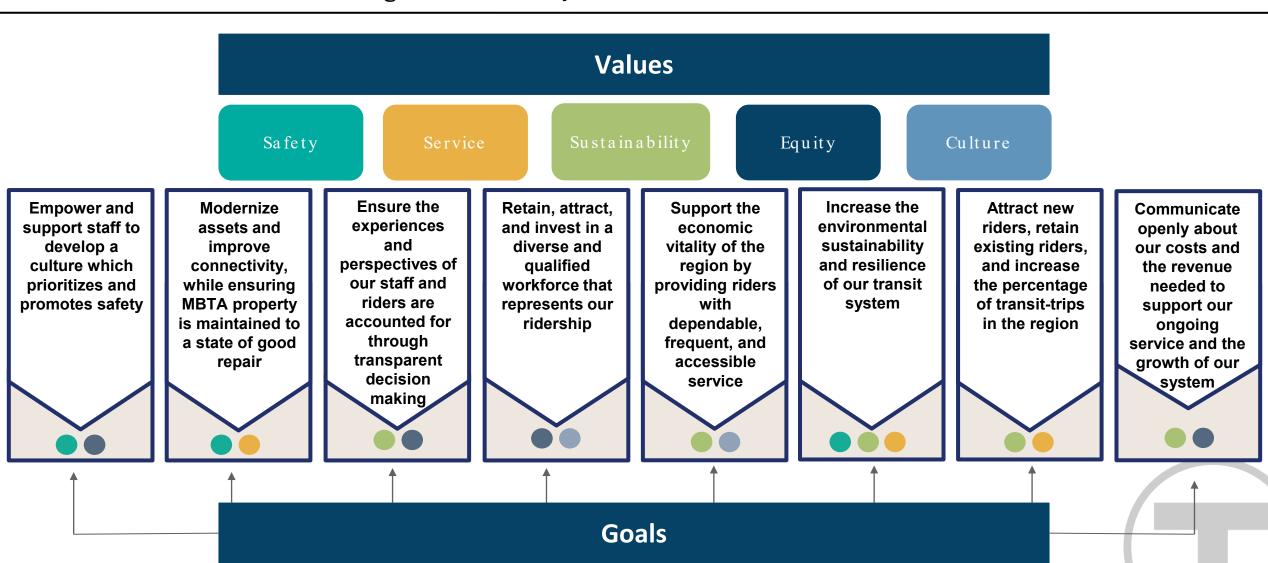
Asset Prioritization Framework

Standard approach to assessing and integrating asset risk into asset prioritization that is aligned with the T's Strategic values:

- Asset Condition
- Safety Criticality
- Climate Vulnerability
- Operations & Maintenance
- Ridership (Overall)
- Accessibility
- Ridership Equity Impact

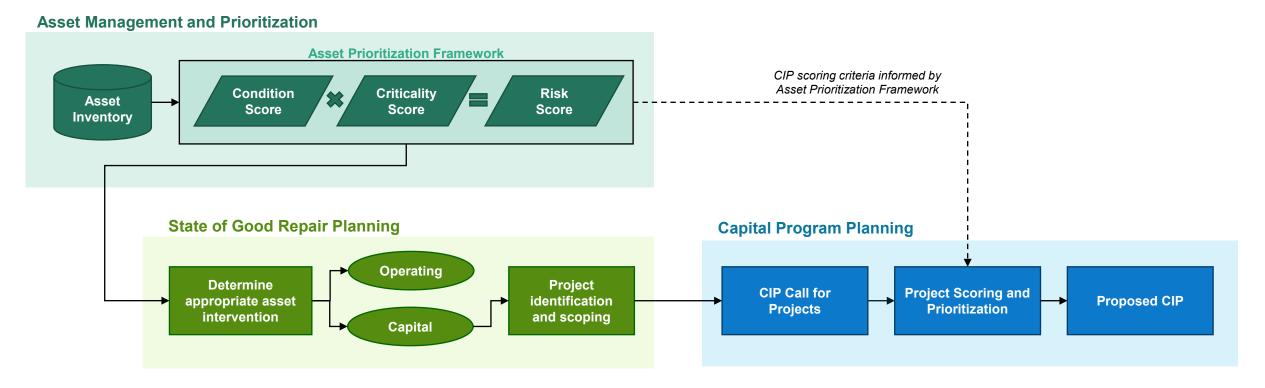
Alignment with the MBTA Strategic Goals

Aligned to the Healey-Driscoll Administration Priorities



Alignment with Asset Management

- The Asset Management and Capital Program Planning teams, in collaboration with stakeholders across the MBTA, have developed an agencywide standard approach to assessing asset condition, criticality, and risk.
- The Asset Prioritization Framework directly integrates the MBTA's strategic goals of safety, service, equity, and sustainability into asset prioritization through increased data availability, better-defined business processes, and strong coordination between the Asset Management and Capital Program Planning teams.
- The FY25-29 CIP scoring proposal would directly integrate the new asset prioritization framework with project scoring.



FY25-29 Proposed Scorecard Highlights

The updated scoring framework:



Was developed in close coordination with key MBTA stakeholders and subject matter experts



Strengthens Service criteria and scoring weight to support investments that impact the highest number of riders as well as operations and maintenance functions that are critical for service



Aligns Sustainability and Resilience sub-criteria with climate vulnerability assessments, energy efficiency targets, and state design standards



Incorporates ridership data on transit critical populations to strengthen Equity scoring beyond mapping data

J40

Adds Justice 40 data into Equity scoring to ensure sources are also aligned with Federal policy

• The Justice 40 Initiative, as per *Executive Order 14008*, seeks to ensure that 40% of the overall benefits of Federal investments, including transportation, flow to disadvantaged communities



Includes housing and land-use development sub-criteria in alignment with Healey-Driscoll Administration priorities

FY25-29 Proposed Scorecard | Types of Sub-Criteria

The updated scoring framework, includes 20 sub-criteria that collect and utilize data in four distinct ways:

Automated project scores

(10 Data-driven sub-criteria)

Asset Prioritization Framework

6 sub-criteria under Safety, Service, Equity, S&R

 Includes sub-criteria that incorporate the Asset Prioritization Framework's asset condition and criticality factors to generate project scores

Project Location and Mapping Data

4 sub-criteria under Equity, Economic Vitality

 Includes sub-criteria that use project location and their relationship with census data and other sources to generate project scores

Evaluator-driven sub-criteria

(10 sub-criteria scored using data provided in the project charter)

MBTA Subject-Matter Experts

2 sub-criteria under Safety

 Includes sub-criteria scored by MBTA subject-matter experts who evaluate how projects address safety risks and security vulnerabilities

Scoring by MBTA Evaluators

8 sub-criteria under Service, Equity, S&R, Financial Sustainability

 Includes sub-criteria scored by evaluators based on information available on the project charter and a scoring evaluation guide

FY25-29 Proposed Scorecard

Scoring has been modified to place a holistic emphasis on Safety and Service Reliability with added emphasis on Asset Condition, Safety and Service Criticality, Operations and Maintenance functions, Climate Vulnerability, and Impact on Ridership.

			Proposed Scoring Weights
Criteria ¹	Description	Sub-criteria (bold indicate new or updated sub-criteria)	Reliability and Modernization ²
State of Good Repair, Safety, and Security	The extent to which the project contributes to a state of good repair; alignment with asset management goals; addressing documented or identified safety issues and hazards; and addressing security vulnerabilities and risks	State of Good Repair Criteria (25%) • Asset Condition (5 points) • Safety Criticality (5 points) Safety and Security Criteria (15%) • Impact on System Safety (7 points) • Impact on System Security (3 points)	40% (50% before)
Service	The extent to which the project contributes to improved service reliability, decreases headways, and improves customer experience and ridership as per the MBTA's Service Delivery Policy	 Operations and Maintenance (2 points) Impact on Ridership (2 points) Service Criticality (2 points) Impact on Service Reliability (2 points) 	20% (10% before)
Sustainability and Resiliency	The extent to which the project supports sustainability and climate mitigation, adaptation, and resilience, improves air quality and reduces greenhouse gases, and results in a reduction of pollution	 Climate Vulnerability (4 points) Severe Weather Resiliency (2 points) Air Quality and GHG Reduction (2 points) Reduce Pollution and/or Natural Resource Consumption (2 points) 	15% (10% before)
Equity	The extent to which the project equitably distributes economic, social, and health benefits to residents and removes barriers to accessibility through the MBTA system	 Benefits to Ridership Equity (4 points) Benefits to Justice 40 Disadvantaged Communities (2 points) Benefits to Accessibility (2 points) Benefits to EJ and Title VI Communities (2 points) 	15% (10% before)
Economic Vitality	The extent to which the project supports abundant housing and job growth in the Commonwealth	 Impact on Communities with Transit-Supportive Land Use (5 points) Impact on Housing Choice Communities (5 point) 	5% (5% before)
Financial Sustainability	The extent to which the project impacts operating costs and revenues and maximizes the return on the public's investment	 Impact on Operating Costs (5 points) Impact on Operating Revenues (5 points) 	5% (10% before)

¹Recognizing that the proposed criteria has been aligned with the MBTA's Strategic Plan goals and values, the previous Policy Support criteria, which scored how projects were aligned with the Strategic Plan, has been removed; ²The totals in parenthesis (% before) will sum up to 95%, with the remaining 5% tied to the removed Policy Support criteria. The proposed weights, highlighted in bold, allocate those 5% to Service

Key Milestones and Next Steps for CIP Development

September	CIP kick-off and call for projects, CIP information sessions held with MBTA departments
October	Project proposals due via CIP intake process
November	 Review of CIP requests and scoring of all CIP requests by multidisciplinary evaluation teams Develop initial estimate of capital funding sources using the outcome of the Q2 cashflow exercise
December	Program sizing with leadership, asset condition incorporated to help set agency investment priorities
January	 Prioritization of project proposals, based on scoring and evaluation Refine and finalize CIP public engagement approach with MBTA Community Outreach
February	 Development of initial project list, including new projects for funding Refine sources and sequencing for draft project list
March	 Release proposed FY25-29 CIP for public comment Hold 30-day public engagement process, host public meetings to collect feedback on the proposed plan
April	 Incorporate any CIP changes in response to public comments; submit draft plan to MassDOT Release 5-year TIP to the Boston Metropolitan Planning Organization (MPO)
May	 Present final FY25-29 CIP to MBTA Board of Directors for approval MassDOT-wide CIP presented to MassDOT Board and vote to release for public comment
June	MassDOT Board vote to approve final MassDOT-wide CIP

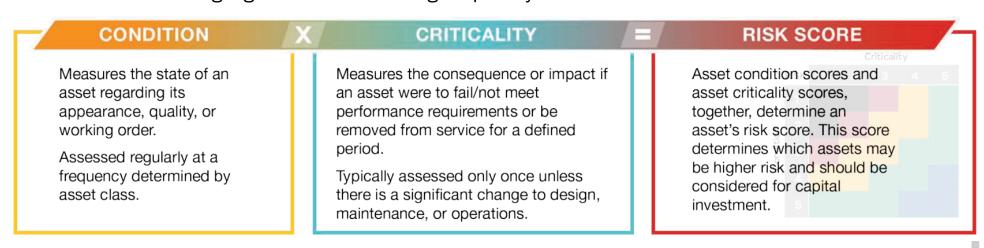
^{**}As details are known, the following key milestones will be updated to incorporate scheduled MBTA Subcommittee and Board Meetings

Appendix



Asset Prioritization Framework

- The Asset Management and Capital Program Planning teams, in collaboration with stakeholders across the MBTA, have developed an Asset Prioritization Framework, using each asset's condition and criticality, to support the agency's understanding of which assets are higher risk and should be considered and prioritized for capital investment
 - The **Condition Score** refers to the state of an asset regarding its appearance, quality, or working order and the probability of asset failure or underperformance. Condition is rated on a scale of 1-5, with a lower Condition Score indicating worse condition.
 - The **Criticality Score** refers to the relative impact of an asset's failure or underperformance <u>regarding safety, service, equity, and sustainability</u>. Criticality is rated on a scale of 1-5, with a lower Criticality Score indicating the asset is more critical.
- **Risk Score** is the product of an asset's Condition and Criticality Scores. <u>Risk indicates both the likelihood of failure and the consequence of failure and informs the relative priority for capital investment. The Risk Score is calculated on a scale of 0-25, with a lower score indicating higher risk and thus higher priority for investment.</u>



Asset Prioritization Framework | Criticality Score

• The **Criticality Score** refers to the relative impact of an asset's failure or underperformance regarding safety, service, equity, and sustainability. Criticality is applied to all assets and is rated on a scale of 1-5, with a lower Criticality Score indicating the asset is more critical.

MBTA Strategic Priorities	Criticality Factor	Factor Weight	Description
Safety	Safety	30%	Consider whether an asset is classified as safety-critical or not
Sustainability	Climate Vulnerability	20%	Consider climate vulnerability including extreme heat, sea level rise and storm surge, inland flooding, high winds, and winter weather
Service	Operations & Maintenance	20%	Consider impacts on operations and maintenance including an asset's operational importance, redundancy, time to repair, and regulatory compliance.
	Ridership (Overall)	10%	Consider the volume of riders impacted should an asset fail or go out of service for a period of time.
Equity	Ridership Equity Impact	15%	Consider the proportion of riders impacted that are low income, minority, low vehicle households, seniors, or persons with disabilities.
	Accessibility	5%	Consider whether an asset is an accessibility feature or not that would impact people with disabilities or seniors

FY25-29 Proposed Scorecard with Data Sources

Criteria (Strategic Values)	Description	Sub-criteria (bold indicate new or updated sub-criteria)	Data Sources
State of Good	The extent to which the project contributes to a state of good repair and asset management	Asset Condition (5 points)	Asset condition indicator
Repair		Safety Criticality (5 points)	Asset criticality factor
Safety and Security	The extent to which the project addresses documented or identified safety issues/hazards and security vulnerabilities/risks	Impact to Safety (7 points)	Safety department scores
		Impact to Security (3 points)	Security department scores
	The extent to which the project contributes to improved service reliability, decreases headways, and positively impacts ridership as per the	Operations and Maintenance (4 points)	Asset criticality factor
Service		Impact on Ridership (2 points)	Asset criticality factor / Ridership data
Sel vice		Service Criticality (2 points)	Project charter and evaluators
	MBTA's Service Delivery Policy	Impact on Service Reliability (2 points)	Project charter and evaluators
	The extent to which the project supports sustainability and climate mitigation, adaptation, and resilience, improves air quality and reduces greenhouse gases, and results in a reduction of pollution	Climate Vulnerability (4 points)	Asset criticality factor
Sustainability		Severe Weather Resiliency (2 points)	Project charter and evaluators / RMAT
and Resilience		Air Quality and GHG Reduction (2 points)	Project charter and evaluators
		Reduce Pollution and/or Natural Resource Consumption (2 points)	Project charter and evaluators
	The extent to which the project equitably distributes economic, social, and health benefits to residents and removes barriers to accessibility through the MBTA system	Benefits to Ridership Equity (4 points)	Project charter and evaluators
Equity		Benefits to Justice 40 Disadvantaged Communities (2 points)	USDOT
		Benefits to Accessibility (2 points)	Project charter and evaluators
		Benefits to MBTA's Title VI Communities (2 points)	CTPS / MBTA Title VI Analysis
Economic Vitality	The extent to which the project supports abundant housing and job growth in the Commonwealth	Benefits to Communities with Transit-Supportive Land Use (5 points)	MAPC / eTOD initiative
		Benefits to Housing Choice Communities (5 points)	Housing Choices Initiative
Financiai Sustainahility	The extent to which the project impacts	Impact on Operating Costs (5 points)	Project charter and evaluators
	operating costs and revenues and maximizes the return on the public's investment	Impact on Operating Revenues (5 points)	Project charter and evaluators

FY25-29 Proposed Scoring Criteria and Weights

	Proposed Scoring Weights	
Criteria ¹	Reliability and Modernization ²	Justification
State of Good Repair	25% (30% before)	The goal is to prioritize projects that curb safety hazards and risks, that support asset management and service reliability, and that positively impact the highest numbers of riders
Safety and Security	15% (20% before)	 A current sub-criterion was updated to score projects on how they contribute to safe, redundant, and critical operations and maintenance (O&M). Previously under State of Good Repair, the sub-criterion was moved to Service which explains the rebalancing of weights
Service	20% (10% before)	The Service criteria was also strengthened to integrate ridership impact based on ridership data and the service criticality of assets, which supports the weight increase in this criteria
Sustainability and Resiliency	15% (10% before)	Better data and new sub-criteria that relies on the results of up-to-date climate vulnerability assessments to score projects is a key reason for the proposed weight increase
		Scoring was aligned with energy efficiency targets and the state's climate change guidelines
Equity	15% (10% before)	 New sub-criterion that looks at ridership equity based on ridership data to complement census/mapping data is a key reason for the proposed weight increase
		Scoring now includes Justice 40 data which is required for federal programs related to the BIL
Economic Vitality	5% (5% before)	Weights for the Economic Vitality criteria remain the same as in the current scorecard
Financial Sustainability	5% (10% before)	Weights for the Financial Sustainability criteria were reduced to allow increase in Sustainability and Resilience and Equity criteria

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FY24-28 CIP Scoring Criteria and Weights

			Scoring Weights
Criteria	Description	Sub-criteria	Rel. / Mod.
State of Good Repair	The extent to which the project contributes a state of good repair on the transportation system and aligns with asset management goals	 Asset Condition (6 points) Impact to Other Assets (2 point) Operations Criticality (2 points) 	30%
Safety and Security	The extent to which the project addresses documented or identified safety issues and hazards, and security vulnerabilities and risks	Impact on System Safety (7 points)Impact on System Security (3 points)	20%
Mobility	The extent to which the project is intended to provide modal options efficiently and effectively for all users through benefits to reliability, accessibility, and other measures of service quality.	 Impact on Reliability (2 points) Impact on Accessibility (2 points) Impact on Customer Experience (2 points) Impact on Riders (4 points) 	10%
Cost Effectiveness	The extent to which the project impacts operating costs and revenues and maximizes the return on the public's investment.	Impact on Operating Costs (5 points)Impact on Operating Revenues (5 points)	10%
Sustainability and Resiliency	The extent to which the project supports climate sustainability and resiliency, meets state goals of improving air quality and reducing greenhouse gases, and results in a reduction of pollution.	 Flood Risk (3 points) Severe Weather Resiliency (3 points) Air Quality and GHG Reduction (2 points) Reduce Pollution and/or Natural Resource Consumption (2 points) 	10%
Policy Support	The extent to which the project is aligned with MBTA policy priorities, including Focus 40.	Alignment with Focus40 (5 points)Alignment with MBTA Strategic Planning Report (5 points)	5%
Social Equity	The extent to which the project equitably distributes social, economic, and health benefits to residents and local businesses.	Benefits to EJ and Title VI Communities (7 points)Additional Equity Benefits to Vulnerable Populations (3 points)	10%
Economic Impact	The extent to which the project supports economic growth in the Commonwealth.	 Impact on Connectivity to Employment Centers (3 points) Impact on Corridors At or Near Capacity (3 points) Impact on Communities with Transit-Supportive Land Use (3 points) Impact on Housing Choice Communities (1 point) 	5%