# Table of Contents

1. **PURPOSE** .................................................................................................................................1  
1.01 CM/GC BACKGROUND..............................................................................................................1  
1.02 AUTHORITY ..............................................................................................................................2  
1.03 CONTRAST TO CM@RISK UNDER M.G.L. CHAPTER 149A ..................................................2  
1.04 DEFINITIONS ............................................................................................................................4  
1.05 LEGISLATIVE REPORTING REQUIREMENTS & RESULTS .........................................................10  
1.06 PROJECT DEVELOPMENT/PROJECT DELIVERY METHOD DECISION .....................................11  
1.07 GENERAL OVERVIEW OF CM/GC RESPONSIBILITY & PROJECT DELIVERY ...................12  
1.08 CONFIDENTIALITY STATEMENTS ............................................................................................16  
1.09 TIME OF PERFORMANCE REQUIREMENTS ............................................................................16  
1.10 GLX PROJECT PROCUREMENT TEAM ....................................................................................16  
1.11 PREQUALIFICATION AND SELECTION COMMITTEES ...........................................................17  

2. **EXECUTIVE SUMMARY OF THE CM/GC SELECTION PROCESS** .................................19  
2.00 SUMMARY OF CM/GC SELECTION PROCESS – PART 1 STATEMENT OF QUALIFICATIONS (SOQ) 19  
2.01 SUMMARY OF CM/GC SELECTION PROCESS – PART 2 REQUEST FOR PROPOSAL ........19  

3. **EVALUATING & SELECTING CM/GC** .......................................................................................23  
3.00 SELECTION PROCESS OVERVIEW .......................................................................................23  
3.01 EVALUATION & SELECTION OF THE CM/GC .......................................................................23  
3.02 CM/GC ADVERTISEMENT .......................................................................................................24  
3.03 REQUESTS FOR QUALIFICATIONS (RFQ) - SUBMISSIONS .......................................................25  
3.04 STATEMENT OF QUALIFICATION (SOQ) SUBMISSION REQUIREMENTS ............................26  
3.05 SUBMISSION CRITERIA RFQ EVALUATION CRITERIA ............................................................31  
3.06 REQUEST FOR PROPOSALS .....................................................................................................33  
3.07 SCORING AND POINTS FOR THE TECHNICAL PROPOSAL ..................................................34  
3.08 LEFT BLANK ............................................................................................................................35  
3.09 PRESUBMITTAL CONFERENCE FOR THE REQUEST FOR PROPOSAL ...............................35  
3.10 TECHNICAL PROPOSAL ..........................................................................................................36  
3.11 TECHNICAL PROPOSAL EVALUATION CRITERIA ..................................................................45  
3.12 PRICE COMPONENT OF THE RFP .............................................................................................46  
3.13 WEIGHTING OF PRICE (as part of the RFP) ...........................................................................46  
3.14 PRICE COMPONENTS ...............................................................................................................47  
3.15 RECOMMENDATION OF AWARD ............................................................................................47  
3.16 LEFT BLANK .............................................................................................................................47  
3.17 LEFT BLANK .............................................................................................................................47  
3.18 CM/GC INTERVIEWS ................................................................................................................47  
3.19 PROPOSALS SUBMITTED BY MOST QUALIFIED CM/GC PROPOSERS ..............................48  
3.20 TECHNICAL PROPOSAL EVALUATION PROCESS .................................................................48  
3.21 SOQ AND TECHNICAL PROPOSAL SCORING PROCEDURES .............................................48  
3.22 MANDATORY DISCLOSURE FORMS .......................................................................................49  
3.23 PROCUREMENT PROTESTS .......................................................................................................50
# Green Line Extension (GLX) Project

## CM/GC Procurement Manual

### Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. PRECONSTRUCTION SERVICES (DURING DESIGN)</td>
<td>51</td>
</tr>
<tr>
<td>4.01 OVERVIEW OF PRECONSTRUCTION SERVICES</td>
<td>51</td>
</tr>
<tr>
<td>4.02 AWARD OF PRECONSTRUCTION SERVICES &amp; GMP</td>
<td>51</td>
</tr>
<tr>
<td>4.03 PRECONSTRUCTION FEE</td>
<td>51</td>
</tr>
<tr>
<td>4.04 PRELIMINARY EVALUATION (DESIGN PHASE COOPERATION, COORDINATION, &amp; COMMUNICATION)</td>
<td>52</td>
</tr>
<tr>
<td>4.05 CM/GC'S PERFORMANCE &amp; LIMITATIONS</td>
<td>53</td>
</tr>
<tr>
<td>4.06 ADDITIONAL SUPPORT SERVICES</td>
<td>54</td>
</tr>
<tr>
<td>4.07 CM/GC HARMONY/ COLLABORATION</td>
<td>54</td>
</tr>
<tr>
<td>4.08 CHANGES TO THE CM/GC TEAM</td>
<td>55</td>
</tr>
<tr>
<td>4.09 VALUE ENGINEERING (VE)</td>
<td>55</td>
</tr>
<tr>
<td>4.10 INDEPENDENT COST ESTIMATE</td>
<td>55</td>
</tr>
<tr>
<td>4.11 ENGINEERS ESTIMATE</td>
<td>56</td>
</tr>
<tr>
<td>4.12 ESTIMATOR CALIBRATION MEETINGS</td>
<td>56</td>
</tr>
<tr>
<td>4.13 INTENTIONALLY LEFT BLANK</td>
<td>57</td>
</tr>
<tr>
<td>4.14 COORDINATION WITH THE DESIGN AND THE PROJECT MANAGER</td>
<td>57</td>
</tr>
<tr>
<td>4.15 DESIGN DOCUMENT REVIEWS</td>
<td>57</td>
</tr>
<tr>
<td>4.16 CONSTRUCTABILITY REVIEWS</td>
<td>58</td>
</tr>
<tr>
<td>4.17 BIDABILITY REVIEWS</td>
<td>58</td>
</tr>
<tr>
<td>4.18 NOTIFICATION OF VARIANCE OR DEFICIENCY</td>
<td>58</td>
</tr>
<tr>
<td>4.19 ALTERNATIVE EVALUATIONS / OPTIONS ANALYSIS – PRIOR TO GMP</td>
<td>59</td>
</tr>
<tr>
<td>4.20 PROJECT MEETINGS</td>
<td>59</td>
</tr>
<tr>
<td>4.21 DESIGN MEETINGS / PROJECT PROGRESS MEETINGS</td>
<td>59</td>
</tr>
<tr>
<td>4.22 LEFT BLANK</td>
<td>59</td>
</tr>
<tr>
<td>4.23 PUBLIC AGENCY AND COMMUNITY MEETINGS</td>
<td>59</td>
</tr>
<tr>
<td>4.24 TEAM PARTNERING</td>
<td>60</td>
</tr>
<tr>
<td>4.25 PREPARATION OF GUARANTEED MAXIMUM PRICE (GMP) PROPOSALS</td>
<td>60</td>
</tr>
<tr>
<td>4.26 EXTRA WORK ORDERS / AMENDMENTS TO THE GMP</td>
<td>61</td>
</tr>
<tr>
<td>4.27 UNSUCCESSFUL GMP NEGOTIATION</td>
<td>62</td>
</tr>
<tr>
<td>4.28 CONTINGENCY / ALLOWANCES</td>
<td>63</td>
</tr>
<tr>
<td>4.29 NOTICE PROVISIONS</td>
<td>64</td>
</tr>
<tr>
<td>4.30 PRELIMINARY GMP SCHEDULE</td>
<td>64</td>
</tr>
<tr>
<td>4.31 COST ESTIMATES &amp; ESTIMATE CALIBRATION MEETINGS</td>
<td>64</td>
</tr>
<tr>
<td>4.32 LONG LEAD ITEMS / SYSTEM PROCUREMENTS</td>
<td>65</td>
</tr>
<tr>
<td>4.33 CONSTRUCTION MANAGEMENT PLAN</td>
<td>66</td>
</tr>
<tr>
<td>4.34 PROJECT SCHEDULE</td>
<td>67</td>
</tr>
<tr>
<td>4.35 ‘OVER-THE-SHOULDER’ REVIEWS</td>
<td>67</td>
</tr>
<tr>
<td>4.36 CONFIDENTIALITY OF COST MODEL AND GMP DOCUMENTATION</td>
<td>67</td>
</tr>
<tr>
<td>4.37 NON-COLLUSION</td>
<td>67</td>
</tr>
<tr>
<td>4.38 MULTIPLE GMPs</td>
<td>68</td>
</tr>
<tr>
<td>5. CONSTRUCTION ADMINISTRATION</td>
<td>69</td>
</tr>
<tr>
<td>5.01 CONSTRUCTION PHASE</td>
<td>69</td>
</tr>
<tr>
<td>5.02 SUBCONTRACTORS</td>
<td>69</td>
</tr>
<tr>
<td>5.03 SELF PERFORMANCE BY THE CM/GC</td>
<td>69</td>
</tr>
<tr>
<td>5.04 SUPPLEMENTAL AGREEMENTS &amp; TIME EXTENSIONS</td>
<td>70</td>
</tr>
<tr>
<td>5.05 COMPENSATION</td>
<td>70</td>
</tr>
<tr>
<td>5.06 MEASUREMENT AND PAYMENT</td>
<td>70</td>
</tr>
<tr>
<td>5.07 CONTRACTOR AND SUBCONTRACTOR RECORDS</td>
<td>70</td>
</tr>
<tr>
<td>5.08 CONTRACT TERMINATION OR SUSPENSION</td>
<td>71</td>
</tr>
<tr>
<td>5.09 DISPUTE RESOLUTION</td>
<td>71</td>
</tr>
</tbody>
</table>
1. **PURPOSE**

The purpose of CM/GC Procurement Manual is to detail the MBTA’s process for procuring and administering the GLX Project through the utilization of the Construction Manager/General Contractor (CM/GC) project delivery method. Even though CM/GC is used by many states, this document communicates the key aspects of the MBTA’s version of CM/GC to the construction industry, the design community, the Office of Inspector General, the Office of Attorney General, the MassDOT/MBTA Board, and the Federal Transit Administration.

The CM/GC method offers many potential benefits including shorter overall project completion duration, improved risk identification and mitigation responses, increased utilization of innovation design/construction techniques, and improved construction conflict identification and management.

The manual provides the internal MBTA Staff a general guideline and checklist for use in the procurement of the Construction Manager/General Contractor. The manual provides the rationale for selecting CM/GC as the project delivery method for GLX and an overview of the CM/GC procurement process, along with proposed management structure, selection criteria, and selection process parameters.

1.01 **CM/GC BACKGROUND**

The CM/GC project delivery method is an integrated team approach to the planning, design, and construction of a project. The delivery method incorporates procedures to better control the schedule, budget, and quality. The CM/GC method has been developed as a result of public owner demands to enhance quality, decrease cost, compress the delivery period, and better plan for and manage risks. The CM/GC will also be required to provide construction engineering services that are similar to the work performed by Contractors under traditional Design/Bid/Build delivery methods (i.e. working drawings, shop drawings, support of excavation, traffic mgmt. plans, etc.). The MBTA’s Designer/Engineer will provide the primary design services for the project.

With this project delivery method, the MBTA selects a CM/GC to provide construction expertise and contract management and to be contractually responsible for price, schedule and quality during construction. Under separate contract, the MBTA will select a Design Consultant to prepare the final design/construction documents. The CM/GC will begin the project by providing preconstruction advice during the advanced preliminary and final design phases to the MBTA concerning constructability, pricing, scheduling, staging, methods, efficiency, material procurement strategies, risk identification/management, and other areas related to the construction of the project. The CM/GC is not allowed to proceed into construction unless the MBTA agrees that the price provided, as part of a guarantee to complete the project, or a portion of the project, (and independently evaluated) is fair, reasonable and defendable.

Using a ‘best-value’ selection process enables the MBTA to ensure that the CM/GC brings the skills necessary to manage the work in a manner that reduces the disruption to the travelling public and results in a high quality construction of this project. The CM/GC will engage in detailed discussions over key constructability issues, including phasing of the work, access to the infrastructure, and traffic management, before the design is finalized, thereby reducing the risk during construction. The MBTA will procure experienced contractor skill sets: managing complex projects, managing subcontractors and managing a significant amount of ‘self-performed’ work for this type of project.
Many of the procedures and concepts that the MBTA has chosen, as part of this CM/GC process, have been developed utilizing the MBTA’s Design-Build processes, as well as CM/GC concepts/options from the National Cooperative Highway Research Program (NCHRP) Synthesis #402 for Highway Programs. Reference: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_402.pdf.

1.02 AUTHORITY

Legislative authority for the MBTA to use CM/GC as an alternative contract delivery method for the GLX Project is authorized under the Section 62 of Chapter 118 of the Acts of 2012 (enacted on June 19, 2012) and as adopted by the MBTA Board of Directors on 7/11/12.

1.03 CONTRAST TO CM@RISK UNDER M.G.L. CHAPTER 149A

There are many differences with Massachusetts GM/GC (defined herein) and Massachusetts Construction Manager at Risk (CMR) as defined in M.G.L. Chapter 149a. This section highlights the notable differences and for simplicity, does not explain CMR. Note: because the descriptions of these differences use terminology that is explained in the body of this document, it is suggested that the unfamiliar reader defer the review of this section until after reading Sections 1-3 of this manual.

- SELF-PERFORMANCE – The CM/GC must self-perform no less than 50% of the overall contract value (after the value of any specialty sub-contractor work has been deducted).

- SUBCONTRACTOR SELECTION – The CM/GC will not be required to utilize the sub-contractor bidding requirements of Chapter 149a. However, as part of the selection and evaluation process, the CM/GC will be required to provide a Subcontracting Plan and will need to demonstrate that the subcontractor selection will provide a good-faith, competitively bid process that includes at least three competitive bids. Unless a reason is demonstrated for not entering into a subcontract with one of the subcontractors that provide bids, the CM/GC will select the low subcontracted bid. Every subcontractor will need to be approved by the MBTA.

- CONTRACT TYPE – CM/GC construction contracts will be similar to traditional Design-Bid-Build construction contracts with a Guaranteed Maximum Price. The CM/GC and the MBTA will formalize Interim GMP contracts that establish the contract amount as a not-to-exceed ceiling. The MBTA and other governmental agencies (such as FTA and the Office of the Inspector General) will be entitled to monitor and audit all project costs should there be a dispute, change, or claim that warrants such action. Each GMP or Interim GMP shall be based on design documents that are not less than ninety percent developed. The GMP formulates the second phase of the CM/GC contract. The work to start physical construction will be initiated once a GMP or Interim GMP is finalized by the MBTA and the CM/GC. Compensation for construction services within an Interim GMP will be as follows:
  - For Lump Sum Items in the Interim GMP: Paid as a lump sum
  - For Allowance items in the Interim GMP: Paid based on the actual expenditures (T&M)
  - For Unit Price items in the Interim GMP: Paid based on the field quantity at the agreed upon unit price
  - Each Interim GMP will include a Schedule of Values (SOV) that may include one or several units of payment. The SOV will be paid based on the approved cost and resource loaded CPM schedule.
• UNSUCCESSFUL GMP/INTERIM GMP - In the event the MBTA and the CM/GC fail to agree upon a GMP or Interim GMP, then:

1. The CM/GC shall lose the right to construct the work related to the failed Interim GMP and shall not be eligible to rebid the work. If the CMGC’s subcontractors, however, were not significantly involved in determining the price for the unsuccessful Interim GMP negotiation, they shall be eligible to participate in a re-procurement of the work, whether by design-bid-build in accordance with Mass. Gen. Laws c. 30, ch. 39M or any other lawful procurement method selected by the MBTA; or

2. The MBTA may re-procure the work related to the unsuccessful Interim GMP by any other lawful procurement method; or

3. The MBTA may terminate the entire CM/GC process for GLX and procure the remaining elements of the Project by any other lawful procurement method; or

• PRECONSTRUCTION PHASE SERVICES – CONSULTANT SERVICES - Because the Preconstruction Services fee is a much smaller overall percentage of the total CM scope (in the CM/GC version), and because the scope of the preconstruction services is expected to fluctuate as the MBTA requires, the CM/GC version treats the Preconstruction services phase in a similar fashion as the typical MBTA Consultant Services contract is structured. Compensation to the CM/GC will be made based upon actual hours worked plus a 50% overhead multiplier on those hours, with a CM/GC certification of those hours. The CM/GC Proposer’s Technical Proposal will require an ‘anticipated preconstruction services’ fee estimate. However, unlike CMR, this projection will NOT be included in the ‘price component’ for the best value determination. The Selection Committee will use the information to evaluate if the CM/GC understands the goals of the project and the estimate will help to demonstrate the CM/GC’s capabilities to manage the pre-construction phase. The information can be used as the basis for the MBTA Project Manager to start negotiations (based on detailing the deliverables and the priorities of the preconstruction services, once the CM/GC has received award).

Prior to entering into a contract, the MBTA and the CM/GC will collectively draft the preconstruction phase scope of services with an estimate of the amount of hours that will be needed by each member of the CM/GC team to fulfill the agreed to scope/deliverables for pre-construction services. See pre-construction for additional information on reimbursement for these services.
1.04 DEFINITIONS

The following definitions will apply to this CM/GC Manual:

**Best value (for CM/GC selection):** The highest overall evaluation scoring/value to the MBTA, considering qualifications, experience, approach, and a price component.

**Blind Bid Process** – Bidding process set up to verify a comparison between all estimates completed by the Program Manager (PM), Independent Cost Estimator (ICE) and CM/GC. The ICE’s estimate is kept hidden or “blind” from the other two groups to maintain integrity in the bidding process.

**CM/GC Entity / Contractor (Construction Manager/General Contractor):** A contractor, or joint venture, under contract with the MBTA, to perform pre-construction phase and construction phase services. The term CM/GC is also used to describe the project delivery method. The CM/GC Entity is part of the overall project team consisting of the MBTA staff, including members from Design & Construction, Diversity & Civil Rights, Budget, Administration & Finance, Environmental Compliance, Engineering & Maintenance, Railroad Operations, Light Rail Operations and Maintenance, and Project Controls, the Program Manager/Construction Manager (PM/CM), the Owner’s Representative, an Independent Cost Estimator team, and the Designer-of-Record (Design Consultant). The CM/GC Entity will initially provide guidance and recommendations on schedule, phasing, constructability, material procurement, cost control, change management, options analysis, optimal methods, and risk evaluation/reduction - throughout the design phase of the project. During the construction phase, the CM/GC performs the same functions as the MBTA General Contractors under traditional project delivery methods. The CM/GC is not the Designer-of-Record at any time during life of the project duration; the CM/GC and the Designer-of-Record are contracted separately by the MBTA. See section 2 for additional information on task and responsibilities of the CM/GC.

**CM/GC Master Agreement:** The document agreed by the MBTA and CM/GC that sets forth the principal terms, conditions, and the CM/GC’s rights to perform work with respect to the Green Line Extension Project. The CM/GC Master Agreement is supplemented by the following documents, which are intended to be complementary and read together as a complete agreement:

1. Preconstruction services contract
2. Interim GMP construction contract and drawings, including the contract standard conditions, construction standard specifications, and construction standard drawings.

**CM/GC (Construction Manager/General Contractor) Process:** A procurement process in which the MBTA selects a Contractor to provide pre-construction and construction phase services.

**CM/GC - Request for Qualification (RFQ):** The document published by the MBTA requesting qualifications statements from prospective CM/GC Proposers. The RFQ contains specific requirements needed for review and consideration by the MBTA to determine which entities will continue in the CM/GC selection process.

**Critical Path Method schedule (CPM):** The optimal time and cost saving technique for planning, organizing, and scheduling critical construction activities, materials and work force operations. A comprehensive network approach, to manage projects - to be communicated, updated, monitored for all project team members. Additionally, this method can be valuable for evaluation of changes, implementation of efficient delay/recovery efforts, and is the most accepted method when assessing the causes of delays.
Constructability Review: A process that integrates the contractor’s build/assembly skill sets into the design phase. By active/early involvement, the contractor provides its expertise and experience, as the design is being finalized, to identify potential problems, provide details, provide clarity, optimize methods, and to evaluate phasing complexity. These evaluations are beneficial in reducing critical schedule delays, reducing requests for information (RFIs), and reducing change orders, and/or construction claims.

Construction Contract CM/GC: A written agreement between the MBTA and the CM/GC setting forth the obligation of the parties, including the performance of preconstruction services, the furnishing of labor, equipment, and materials, and defining the basis of payment. The construction contract includes the information provided as part of the Price Proposal, the Guaranteed Maximum Price (GMP) or Interim GMP, GMP record documentation, any addenda, contract agreement, contract bonds, certificates of insurance, standard specifications, special provisions, project plans, standard drawings, design performance criteria documents, reference documents, engineering directives, and any supplemental agreements that are required to complete the construction of the work in an acceptable manner, all of which constitute one instrument.

Construction Phase: The time period when the CM/GC performs the Construction. The start of the construction phase is documented when the pre-construction phase is complete and/or after the first amendment establishing an Interim GMP to the CM/GC contract is authorized for the specific start of construction work (Notice-to-Proceed).

Contingencies:

i. **GMP Contingency** - At the sole discretion of the MBTA, during the finalization of the GMP or an Interim GMP, a certain amount of funds may be approved for inclusion in the Interim GMP or GMP as a *GMP Contingency* amount. This will be earned as an allowance within the Interim GMP and will be well defined to tailor specifically to elements of work identified in that particular Interim GMP.

   The **GMP Contingency** is intended for the following:
   - Design changes not represented in construction documents used as the basis of fee (i.e. costs as a result of design changes between 90% and PS&E,
   - Quantity overruns,
   - Minor design changes, and
   - Identified risks.
   - Shared Risk Items

ii. **MBTA Contingency** – This is an overall Program budgeting reserve that the MBTA establishes and maintains exclusively from the CM/GC. The MBTA’s Contingency (a.k.a. Owner controlled contingency) will be an amount, determined by the MBTA, and inclusive in the overall program budget, to properly account for potential increased cost due to changes in the work, made at the discretion of the MBTA, that were not anticipated by the MBTA and are beyond the control of the MBTA and the CM/GC at the start of the program.

   The **MBTA Contingency** is a fund allocation intended to cover the following:
   - Owner directed design or scope changes,
   - Design errors and omissions, and
   - Unforeseen conditions not noted in GMP Contingency.
Cost Estimate Calibration Meetings: As part of preconstruction phase services, the CM/GC, the PM/CM, the MBTA and the Independent Cost Estimator (ICE) will hold regular meetings to plan relevant aspects of the cost estimate organization and break-down for a specific scope of work. This will include a cost estimate narrative, a detailed assessment of the projects limitations of operations, reconciliation of the quantities, crew sizes, production rates, and material costs, the planned ‘method of measurement’ and ‘basis of payment,’ and a description of the CM/GC planned ‘means and methods’ for constructing the project scope.

Cost Model: A cost accounting tabulation for the construction of the project that is developed by the CM/GC prior to development of the Guaranteed Maximum Price (GMP) or Interim GMPs for the program and/or a particular scope within the program. The Cost Model will be generated to properly plan how the production based construction cost estimates will be developed to allow comparison with the PM/CM cost estimate and the independent cost estimates and will be summarized into an MBTA approved work-breakdown-structure (WBS).

Design-Bid-Build (D-B-B): The bid selection method as described under MGL Chapter 30, §39M. This is a low-bid selection method in which a design consulting engineer, working for the MBTA, designs the project. The MBTA then solicits bids and awards a contract to the lowest responsive and responsible bidder to construct the project.

Design-Build (DB): A construction delivery system that provides responsibility for the delivery of design services and construction services within a single contract, as described under MGL Chapter 149a.

Designer or Design Consultant: The consulting engineer selected by the MBTA to develop the final plans, specifications and estimate of qualities for the project.

Design Review Team: Representatives from the CM/GC, the PM/CM the designer, the MBTA Project Manager with supplemental assistance for technical aspects that may be non-routine and necessary to evaluate the design packages.

Direct Costs – The total of all direct cost for field construction to complete the project, which includes loaded labor rates, permanent materials, construction materials, equipment, and subcontracted work.

Equipment Rate – Includes hourly rental rate, either equipment depreciation for contractor owned equipment or outside rental. Also includes Equipment Operating Expense (EOE) consisting of fuel cost, running repairs, repair labor, and consumable items such as tires, ground wear parts, and cables. Also included is the cost of labor and equipment required for running repairs such as fueling and daily and periodic maintenance.

GMP (Guaranteed Maximum Price): The total itemized dollar amount agreed upon between the CM/GC and MBTA for constructing the project – excluding the fee for the preconstruction phase services. It includes, but is not limited to all direct and indirect contractor costs associated with the construction, contracting, self-performance and management of the project, including the preparation of the construction schedules, shop drawing preparation, construction labor, material costs, equipment costs, all traffic control, quality testing, survey, replacement of rejected work or materials, all punch-list work, certain public information and coordination costs, all overhead costs, general condition costs, and fees.
The MBTA anticipates several construction phases and early work construction packages that will result in the CM/GC providing Interim GMP’s for each package in the overall GLX Program, the summation of which equal the GMP for the whole program.

The GMP cost excludes the fees that are paid for services under the preconstruction services phase. The Interim GMPs are not subject to price escalation or de-escalation as a result of inflation (time value of money) costs. However, the MBTA acknowledges the price escalation risk will be included in the Interim GMP price if no clauses are included in the Interim GMP Contracts to allow for it. This issue will be considered on a case-by-case basis as part of GMP Contingency discussions within each Interim GMP. In such instances, an escalation study that is specific to the elements of work, may be used as a basis of comparison and setting of the contingency costs for escalation and de-escalation.

Each Interim GMP will include the CM/GC Multiplier, a pricing element that was bid competitively as part of the CM/GC selection, which is a fixed rate percentage for home office overhead and profit that will be applied to the total of all direct costs, project overhead, and indirect costs. Home office overheads will NOT be included in the Interim GMP pricing.

The work to start any physical construction will be initiated once an Interim GMP is finalized by the MBTA and the CM/GC. Should the MBTA and the CM/GC be unsuccessful in agreeing to an Interim GMP, the CM/GC will loose the rights to perform the work associated with that Interim GMP, which will be re-procured using a Design-Bid-Build or any other lawful procurement method selected by the MBTA. The CM/GC will be prohibited from participating on the re-procured work.

See also ‘Interim GMP’

**GMP Record Documentation**: GMP Record Documentation consists of the approved GMP, all versions of the GMP updates, and all documents used to generate the GMP including all pricing provided in the Request For Proposal, design documents, directives that were incorporated by reference, narratives, basis statements, addenda, contracts, bonds, certificates of insurance, standard specifications, special provisions, project plans, standard drawings, design performance criteria documents, reference documents, engineering directives, and any supplemental agreements (executed after the approved GMP) that are required to complete the construction of the work in an acceptable manner, all of which constitute one instrument. The commercial terms and conditions are considered standard and are generally not negotiable. During the development of an Interim GMP for elements of work, revisions to some terms may be considered based on the overall benefit to the MBTA and the Project.

**Independent Cost Estimator (ICE)**: An independent cost estimator hired by the MBTA to perform a series of detailed cost estimates. These estimates will be performed independently of the CM/GC and independent of the PM/CM, and will become an important tool to set up, compare, and approve each of the Interim GMPs. These estimates, showing all quantities (including temporary materials), anticipated production rates, labor prices, material prices, equipment prices are to be generated to demonstrate the direct costs of the project. For a comparison to specialized work, the ICE may also be required to acquire sub-contractor and material pricing quotations from vendors. Additionally, these estimates will generate a cost for all indirect costs such as project management, supervision, field office support, mobilization costs, construction utility costs, insurances, profits, etc. It is expected that these estimates will be held ‘in the blind’ and only used to determine if the proposed GMP for any piece of the work is within an acceptable range for recommendation to award. The MBTA may elect to have the CMGC provide subcontractor and material pricing to the ICE as part of the estimate reconciliation process.
Indirect Costs – The total of all cost for contractor’s onsite overhead to support the field construction. These include labor costs for project management, supervision, engineering, quality control, safety, indirect equipment maintenance, testing other than third party laboratory testing, and field office administration. The material and miscellaneous costs include set-up of project office, small tools, consumables, and supplies, mobilization of personnel and equipment, insurance, and project administration, along with any other labor and equipment costs necessary to maintain temporary facilities and temporary utilities.

Interim GMP - The MBTA may elect to have the CM/GC provide several Interim Guaranteed Maximum Prices for phases or components of the overall GLX Program. At the completion of the project, the summation of the Interim GMPs equals the Guaranteed Maximum Price (GMP).

See GMP and Section 4.38.

Labor Rate – The hourly prevailing or union wage rate. CM/GC will be required to provide a detailed breakdown of all cost components forming the total wage rate.

Loaded Labor Rates – all additive costs for labor – to the prevailing or union wage rate such as employee insurances, health, life, disability, profit sharing, payroll taxes, union dues, training, social security, retirement, etc. – that are directly attributable to an the individual worker.

Markup (on sub-contracted work): CM/GC general condition costs for managing subcontracted work.

Notice-to-Proceed: A written communication issued by the MBTA, to the CM/GC, authorizing the CM/GC to proceed with the work and establishing the date of the commencement of the work.

Owners Representative (OR): The entity who in accordance with Chapter 30, Section 39M1/2, is providing peer reviews of engineering elements, value engineering, reporting on cost recovery and filing of annual reports on the project to the IG, the Secretary of Transportation and the house and senate chairs of the State transportation subcommittee and the state auditor.

Pre-construction Services (PCS): The activities conducted by the CM/GC during the advancement of preliminary design and final design phases. These include but are not limited to cost estimates at predetermined stages, preparing/updating the schedule for the design and construction phases; preparation of cost modeling and GMP estimates, performing value engineering analysis, risk assessment, performing constructability reviews, developing the construction logistics plan, generating market surveys of construction materials and equipment that have long delivery requirements, solicitation of quotations from specialty sub-contractors (as required as part of the CM/GC sub-contractor selection plan), early purchase of long-lead items, and other services required in the contract.

Prequalified CM/GC Proposers: The CM/GC Proposers that received the highest evaluation score ranked by the Prequalification Committee in response to the Request for Qualifications (RFQ). The most qualified Proposers will receive the Request for Proposals (RFP). The MBTA intends to select three CM/GC Proposers, but reserves the right to select more teams, or fewer teams, based the selection committee’s evaluations/scoring.

Production Based Cost Estimate – Otherwise known as ‘bottoms-up’ estimates, the CM/GC will be required to provide detailed construction cost estimates as the design progresses during the preparation of each GMP, as part of the sub-contractor selection process, and as part of any authorized changes to
the contract prices. These estimates are to be provided with details that clearly display all anticipated costs for, labor, material, equipment, profit, fees, overheads, escalation, and anticipated production rates. The CM/GC estimate, the PM/CM estimate, and the ICE Estimate will reflect this level of detail.

Program manager/Construction Manager (PM/CM) – MBTA’s extension of staff who is tasked to assist the MBTA in the management, oversight and administration of the MBTA Contracts with the Design Consultant and the CM/GC Entity.

Public Advertisement: The MBTA will publicly advertise the CM/GC services in numerous print media as well as on the www.mbta.com website, COMPASS, and Central Register. The public advertisement will contain a description of the project, classifications of work and pre-qualification and surety letter requirements. In addition, the advertisement shall specify the funding source, evaluation criteria, DBE goal and other minority and female utilization goals, and instructions for receiving a copy of the Request for Qualifications.

The advertisement shall appear in the Central Register at least 2 weeks prior to the issuance of the RFQ. Firms registered on the MBTA web site shall receive an email notification upon advertisement referring them to the MBTA website.

Request for Proposals (RFP): Following the prequalification of the most qualified CM/GC Proposers, a request for proposal for certain key aspects of the project to be evaluated as part of the ‘best value’ selection process. The response to the RFP will serve as the basis of the MBTA’s ‘best-value’ evaluation criteria. The pricing component will survive into the Interim GMP pricing (for the applicable components of the project).

The technical portion of this RFP is a detailed description of the CM/GC’s project management and approach. This includes many aspects that demonstrate the CM/GC’s competencies for the specific project. See Section 3.06 for more details.

Selection Committee: Individuals selected to score the CM/GC proposals. The MBTA will require that all team members receive training on the process prior to serving. The Selection Committee will consist of the individuals noted in §1.11 and may also be supported by non-voting advisors, such as the PM/CM and MBTA Project Controls, Environmental Compliance, and Law Departments. Non-voting member advisors to the committee provide subject matter advice to the rest of the selection committee that is considered to be non-routine to the committee. All committee members and non-voting members, will be required to sign a confidentially statement certifying no conflict of interest.

Short-list: Refer to Prequalification.

Subcontracts – Includes all costs to do items of work not self-performed by the CMGC Entity.

Surety (Contract) Bond: The security furnished with each Interim GMP to guarantee that the CM/GC will enter into the contract amendment if its Interim GMP is accepted. This will consist of both performance and payment bonds equal to the full value of the construction of that scope of work.

Value Engineering (VE): A function-oriented, systematic, team approach to add customer value to a project, program, facility, system or service. During the pre-construction phase, the CM/GC will be required to provide value/participate in, value engineering services which are expected to be led by the Owner’s Representative team. Additionally, provisions will be included in the Interim GMP contracts (similar to Article 2.4 of Section 00700 of the MBTA Standard General Conditions) for CM/GC Value Engineering Proposals.
Unit Price: A summarized price for a component of the work. A unit price does not reveal the cost break-down of labor, materials, equipment, and/or any other indirect/mark-ups costs that are anticipated to complete the work. Unit prices will not be acceptable for pricing of self-performed work in the GMP.

1.05 LEGISLATIVE REPORTING REQUIREMENTS & RESULTS

Within two years of the enactment of this section, every two years during the term of the project, and within 6 months of completion of construction of the project, the general manager of the Massachusetts Bay Transportation Authority shall file a report with the house and senate committees on ways and means, the joint committee on transportation and the clerks of the house and senate. Said reports shall evaluate the selection process of the CM/GC, the preconstruction phase services provided by the CM/GC, the effectiveness of the CM/GC as the project transitions thru the development of one or multiple Guaranteed Maximum Price (GMP) contracts leading to the contracting for the full scope of construction, and an evaluation of the construction phase services provided by the CM/GC. Each report shall include, but not be limited to, a determination of the following aspects for the project:

(1) whether any CM/GC best value selection criteria, procedure or requirement set forth in the CM/GC pilot project procedures manual should be revised to improve the outcome of the project, the rationale for the improvements, and recommended revisions;

(2) Whether tangible benefits were achieved from the CM/GC’s input into the preconstruction services phase of the project based on a comparison of traditional procurement delivery methods and examples of any such benefits;

(3) The planned or budgeted cost and duration of preconstruction services, the actual cost and duration of the preconstruction services and a summary of any significant variances of greater than 20 percent between them;

(4) An assessment of whether the CM/GC’s preconstruction services expedited the completion of the design and streamlined the design phase by reducing detailed engineering, which is not required for noncritical aspects of the design, and improved the constructability of the project;

(5) An evaluation of the CM/GC’s overall quality of work during construction, including management of the construction materials and installation and the level of punch-list work required, and a determination of whether the CM/GC’s overall quality of work during construction is directly proportional to the quality of the CM/GC’s input during design;

(6) A comparison of the original guaranteed maximum price to the final or adjusted guaranteed maximum price, at the completion of the project or of each interim guaranteed maximum price, if applicable), provided, however, that this comparison shall be inclusive of all the realized expenditures, for all of the authorized changes beyond the scope of the original guaranteed maximum price, and shall include a narrative to explain the rationale for any significant variances within each of the main cost centers of the project;

(7) An assessment of the effectiveness of any interim guaranteed maximum price that was issued to start and maintain critical construction progress, including the negative and positive impacts
of allowing a CM/GC to proceed on aspects of construction without a guaranteed maximum price for the total project scope;

(8) A detailed evaluation of the CM/GC’s performance, including, but not limited to, the CM/GC’s communication with the designer-of-record and the awarding authority, cooperation with the rest of the project team members and stakeholders, effectiveness of input during the design, ability or willingness to successfully negotiate reasonable and comprehensive guaranteed maximum prices, general contracting effectiveness, quality of construction, cost estimating skill sets, willingness to work on solutions instead of claims, the ability to recover from schedule delays, and the ability to complete the project as efficiently as possible;

(9) An identification of any bid protest filed as a result of the use of the CM/GC project delivery method, the decision and a detailed explanation of the rationale for the decision, and

(10) An assessment of whether and in what ways the CM/GC procurement process, procedures or requirements set forth in the CM/GC pilot project procedures manual have impacted disadvantaged business enterprise and small business contracting opportunities.

Upon expenditure of $100,000,000 for the Green Line Extension Project, the Secretary of Administration and Finance and the Secretary of Transportation shall file a report with the Inspector General, the House and Senate Committee on Ways and Means, the Joint Committee on Transportation, and the clerks of the House of Representatives and the Senate that reviews the success of the CM/GC procurement method and certifies their approval of the procurement method for subsequent expenditures or phases of the Green Line Extension Project.

The final report for the pilot project shall include a recommendation of whether it would be beneficial for the commonwealth to utilize the construction approach authorized in Section 62 of Chapter 118 of the Acts of 2012 in conjunction with other construction projects.

Following the completion of each Interim GMP, lessons learned will be developed and recorded by the MBTA and the CM/GC Entity. The process will be governed by the Section XII of the MBTA Design and Construction Project Controls Manual.

1.06 PROJECT DEVELOPMENT/PROJECT DELIVERY METHOD DECISION

The MBTA used the TCRP Report 131, “A Guidebook for the Evaluation of Project Delivery Methods, Tier 1—Analytical Delivery Decision Approach to determine the most appropriate project delivery method for the Green Line Extension Project.

The Tier 1 approach provides a framework for defining project goals and examining the advantages and disadvantages of each delivery method within the context of these project goals. The aim of this approach is to align project delivery method attributes with the goals of the project. The Tier 1 approach also provides a “go/no-go” review to determine whether one or more project delivery methods should be excluded from further examination.

The Tier 1 approach has three primary objectives:
1. Present a structured framework to assist agencies in examining 22 pertinent issues involved in the project delivery decision,
2. Assist agencies in determining whether there is a dominant or obvious choice of project delivery method, and
3. Provide a structure for documenting the project delivery decision in the form of a Project Delivery Decision Report.

The five steps of the methodology contained in the guidebook were followed, and it was concluded that CM/GC was the most appropriate primary project delivery method to use for the GLX project.

The following are goals identified for the Green Line Extension Project:
1. Meet or exceed MBTA design/service/quality standards
2. Initiate Construction no later than fall of 2012 (not part of this CM/GC Contract). CM/GC to provide Preconstruction Services as soon as possible, which is likely in the 2nd quarter of 2013.
3. Deliver project within the cost range modeled ($1.04B to $1.21B) with a target of being below the $1.15B budget number (excluding project financing) set in Summer 2011
5. Deliver the entire project at the earliest point possible and in agreement with the modeled range of fall 2018 to the summer of 2020.
6. Complete in compliance with impact/mitigation requirements in the FEIR/EA
7. Utilize New Starts Funding
8. Minimize adverse impact to community and natural environments
9. Achieve DBE and workforce participation goals for both the pre-construction and construction phases while ensuring a ‘level playing field.’

1.07 GENERAL OVERVIEW OF CM/GC RESPONSIBILITY & PROJECT DELIVERY

The MBTA CM/GC evaluation process is designed to ensure that the CM/GC possess the necessary resource skills, personnel, systems, and experience to manage the work in a manner that reduces the disruption to the travelling public and results in a high quality construction. The CM/GC will engage in detailed discussions over key constructability issues, contract packaging, phasing of the work, and transit operations, as the design is finalized - thereby reducing the risk that those issues would impact the project during construction. The CM/GC will be contractually responsible for price, schedule and quality during construction. In addition, prospective CM/GC’s will be encouraged to indicate their abilities to utilize accelerated and innovative construction techniques for the specific project.

Other important responsibilities / requirements:
- The successful CM/GC Entity will be required to self-perform no less than 50% of the work, after the value of ‘specialty’ items are deducted. The specialty work has not been identified to date. During preconstruction services and development of an Interim GMP, the CM/GC will be asked to identify work that could be classified as special for the MBTA’s consideration.
- The CM/GC Entity must be qualified by the MBTA in the classes of work selected for the GLX project.
- Specialty subcontractors are required to be pre-approved by the MBTA for the specific portions of the work.
- The CM/GC Entity will not be performing engineering or environmental analysis and the MBTA’s Design Consultant will remain the Engineer-of-Record.
The CM/GC will be responsible for implementing a DBE Program that describes how meaningful DBE participation will be obtained during the development and implementation of the Interim GMPs for the construction phase.

**CONTRACTOR (CM/GC) BENEFITS**

**RISK MANAGEMENT & CONTROL**

The evaluation criteria and scoring system will be outlined in the Request for Qualifications and the Request for Proposal (refer to Section 3).

Throughout the pre-construction services phase, the CM/GC will be providing significant planning, risk management, and constructability expertise. Emphasis will be placed on collaborative discussions of scope contract packaging, limitations of operations, planned sequencing, means and methods, assumptions, basis of payment and method of measurement. These discussions will/may include the MBTA (including MBTA Operations), PM/CM, CM/GC Entity, Design Consultant, Owners Representative (OR) and other stakeholders.

As the design phase of each scope of work evolves for a particular portion/phase of the GLX project, as part of the many preconstruction phase services, the CM/GC Entity will be required to provide detailed pricing updates and options evaluations. When the design progresses to the 60% and 90% completion, the MBTA and the CM/GC Entity will begin to develop and reconcile the estimates that will become the basis of an Interim "Guaranteed Maximum Price" (GMP) for construction of that scope of work. The goal at the end of the program will be to have one GMP based upon fully developed documents (and
inclusive of all Interim GMPs that proceeded). Assuming the parties agree on the Interim GMP (with the amount less than 110% of the ICE estimate), the CM/GC Entity will then function as the general contractor and will be responsible for completing the work on the schedule agreed upon during the Interim GMP discussions. Numerous Interim GMPs may be used for the various phases of the work.

**ROLE OF THE MBTA’S SENIOR DIRECTOR OF DESIGN AND CONSTRUCTION AND PROJECT MANAGER**

The MBTA Senior Director is the MBTA’s lead individual for the project during the design and construction phases. The MBTA Senior Director is responsible for coordinating the procurement and oversight of the PM/CM, Design Consultant, CM/GC, and Independent Cost Estimate (ICE) Consultant.

Other duties:
- Coordination with MBTA Contract Administration in the development of the schedule for advertising, reviewing and selecting the CM/GC.
- Assemble the Prequalification Committee and Selection Committee.
- Provide CM/GC scoring documentation to the Assistant General Manager for approval.
- Oversee the PM/CM, and ICE Consultant.
- Coordinate with the Owners Representative (OR).
- Oversee the Design Consultant and the finalization of the design documents.
- Attend project meetings – to monitor the project for development and preparation of estimates and review of costs.
- Facilitate Selection Committee meetings and to formally notify/communicate with the prospective entities.
- Assist in the development of the Cost Model/GMP.
- Collaborate with key stakeholders to help manage the goals of the project.

**ROLE OF THE MBTA’S CONTRACT ADMINISTRATION OFFICE**

The MBTA Director of Contract Administration, with support from MBTA Law Department, is responsible for the procurement of the CM/GC, which will conform to the requirements of FTA Circular 4220.1F (Third Party Contracting Guidance). The primary responsibilities in the CM/GC process are:
- Advertise the project for selection of the CM/GC
- Finalize all documents used for the Procurement Process
- Issue addenda to all Proposers
- Receive the RFQ and the RFP submittals
- Handle the formal bid opening
- Process the award of the CM/GC contract
- Manage the Owners Representative (OR) contract

**ROLE OF THE OFFICE OF DIVERSITY AND CIVIL RIGHTS**

The Office of Diversity and Civil Rights (ODCR) will monitor the CM/GC’s work plan for the project for FTA compliance with 49 CFR Part 26 in implementing the DBE Program. Work Plan components to be monitored includes, but is not limited to, the following:
- DBE Compliance
- Work Force Utilization

ODCR will serve as the point of contact to the CM/GC Compliance Officer, who is assigned by the CM/GC to be responsible for implementation of the CM/GC’s DBE Plan.
ROLE OF THE MBTA LAW DEPARTMENT

During the procurement process, a member from the Law Department will be assigned to help monitor certain aspects of the procurement process and will provide important training aspects with regard to communication, confidentiality, and conflicts of interest.

ROLE OF DESIGN CONSULTANT

The Design Consultant is contracted directly by the MBTA, separate from the CM/GC, to develop design documents. Once the CM/GC is selected, as part of the pre-construction phase services, the Design Consultant and the CM/GC are to work cooperatively to optimize the finalization of the design of agreed upon scopes of work and prepare for construction. Once construction commences, the Design Consultant performs the same functions in the traditional Design/Bid/Build approach – in accordance with MBTA standard Construction Phase Services scope of work, primarily reviewing shop drawings provided by the CM/GC, answering Requests for Information (RFI), reviewing submittals, and all functions related to the remaining Designer-of-Record.

NOTE: The CM/GC shall not subcontract any portion of the contract to an entity that is, or has been, employed by the PM/CM, OR, or Design Consultant in the design of the project. The RFQ/RFP will identify firms having conflicts of interest, thereby prohibiting them from providing CM/GC services. The list will be updated accordingly.

ROLE OF FTA

FTA provides oversight of the project at various stages, including planning, design, and construction. FTA reserves the right to perform Procurement System Reviews (PSR) and Trienniel Reviews.

ROLE OF THE MBTA’S OWNER’S REPRESENTATIVE

As defined by M.G.L. Chapter 30, section 39 M.5, including the provision of peer reviews of engineering elements, value engineering, reporting on cost recovery and filing of annual reports on the project to the IG, the Secretary of transportation and the house and senate chairs of the state transportation subcommittee and the state auditor.

ROLE OF INDEPENDENT COST ESTIMATE (ICE) CONSULTANT

The ICE Consultant provides a cost estimate at 60% and 90% and at the time of bid for each Interim GMP. The ICE will be used in comparison with the CM/GC cost proposal to determine if the agreed upon Interim GMP amounts are fair and reasonable. The ICE Consultant will participate in the cost estimate reconciliation meetings establishing the quantities, methods of means and methods, production rates, and methods of measurement and payment. The estimate provided by the ICE will be held in the blind and held confidentially until the Interim GMP for the said scope of work has been accepted.
1.08 CONFIDENTIALITY STATEMENTS

Critical to the validity of the selection process is the absolute necessity to maintain confidentiality. Each of the MBTA participants in the evaluation process shall sign a “Confidentiality and Non-Disclosure Agreement” and a “No Conflict of Interest Statement”.

All financial information, trade secrets or other information customarily regarded as confidential business information shall not be deemed to be public information and shall remain confidential to the extent permissible under current law. The CM/GC will be instructed to submit this information in a clearly labeled separately sealed envelope.

1.09 TIME OF PERFORMANCE REQUIREMENTS

The RFP will state the time required for preconstruction services and the overall project durations. Each Interim GMP will state a time period in which the services and/or work are to be delivered. Time of performance requirements that will be provided will be stated in elapsed consecutive calendar days from the date identified as the planned contractual notice-to-proceed. In this way, changes in the schedule to solicit, receive, evaluate, select and award can be changed without unfairly affecting the CM/GC’s ability to finish the project in a reasonable duration.

Once under contract, the CM/GC will be responsible to develop and maintain a project schedule for the construction of the project using a cost and resource loaded Critical Path Method (CPM) schedule. The CPM schedule is to be provided to the MBTA, the PM/CM and the Design Consultant for review and discussion.

During the preconstruction phase, the CPM schedule will include all detailed coordination efforts to optimize the finalization of the design including all Designer activities, remaining permitting / environmental activities, all CM/GC activities, all third-party/stakeholder activities, and all of the MBTA and FTA activities. The interim deadline requirements will also be stated in elapsed days and may be an obligation of the CM/GC or the MBTA. The obligation of the MBTA to complete specific submittal reviews, in accordance with the minimum requirements of the Massachusetts laws, will also be included in the project schedule.

1.10 GLX PROJECT PROCUREMENT TEAM

The GLX Project Procurement Team will include the following:

- MBTA staff (Design & Construction, Contract Administration, Law, Operations, ODCR)
- Program Manager/CM/PE- HDR/Gilbane
- Design Consultant – AECOM/HNTB
- Owners Representative – Hatch Mott Macdonald / Patrick Engineering
- FTA/PMOC
- Other agencies staff members

The MBTA will be responsible for the management of the procurement process, with input from (or delegation to) members of the GLX Project Procurement Team, as appropriate.
1.11 PREQUALIFICATION AND SELECTION COMMITTEES

The Prequalification Committee and Selection Committee are responsible for reviewing and evaluating SOQs in response to the RFQ and the Technical and Price Proposals submitted in response to the RFP to select the CM/GC. The committees will be composed of the below noted individuals and will be chaired by a representative of MBTA Contract Administration:

- Assistant General Manager for Design & Construction,
- Senior Director of Design and Construction,
- Director of Design & Construction – Commuter Rail
- Engineering & Maintenance Representative
- Commuter Rail Operations Representative
- Light Rail Representative
- Director of Contract Administration
- Program Manager/Construction Manager Representative
- Design Consultant Representative

The committees may be supported with Technical Advisors, who are non-voting members from the MBTA or MBTA consultants. The role of the Technical Advisors is to provide ‘subject matter’ advice to the committees that are considered non-routine. Technical Advisors may be assigned to assist, inform, advise, and make recommendations to the committees voting members, who will make their own judgment for the scoring of the proposed material. The Office of Diversity and Civil Rights (ODCR) will provide a Technical Advisor for the evaluation of the diversity related (i.e. DBE and AA/EEO) requirements of the RFQ and RFP for inclusion in the score sheet by each of the voting committee members.

MBTA may assign Observers, such as FTA representatives, to witness and observe the scoring and selection process. Observers are not allowed to provide opinions and judgments during the evaluations.

The MBTA PM will develop and submit a list of potential technical advisors to the MBTA Assistant General Manager for Design & Construction for approval. The MBTA recognizes the advantage of maintaining continuity in the Selection Committee members and will therefore take efforts to retain key personnel throughout the prequalification and selection process.

Once the Prequalification Committee and Selection Committee and Technical Advisors have been approved, the evaluation team shall have a kickoff meeting with the MBTA Law Department to go over the selection process for final listing the CM/GCs. The MBTA will prepare SOQ Evaluation tools and RFP Evaluation tools to brief and review the selection procedures and scoring guidelines with the team members during the kickoff meeting. The committee chairman and key project members will meet with the committees and provide a project overview and thoroughly explain the selection process. The MBTA will ensure that all team members have a complete set of the CM/GC solicitation documents including addenda, supporting concepts drawings, reports, and studies to properly evaluate each CM/GC submission.

All members will be informed that any interest in the project or association that can be construed as a conflict of interest with potential contractors, designers or their subcontractors will be prohibited.
Upon receipt of the Statement of Qualifications (SOQs) submitted to the MBTA, the Prequalification Committee shall evaluate each SOQ using the criteria as provided in the RFQ. Only the most qualified CM/GC Proposers will be selected to proceed to Step 2 and receive a Request-For Proposals (RFP). The prequalification committee’s goal is to select a minimum of 3 qualified CM/GC Proposers to receive the RFP. If the Prequalification Committee is not able to identify a minimum of 3 qualified teams, MBTA may re-advertise the project or proceed with those prequalified teams. The decision of the Prequalification Committee shall be final and shall not be subject to appeal except on grounds of fraud or collusion.

Upon receipt of the Technical and Price Proposals submitted to the MBTA, the Selection Committee shall evaluate each Proposal using the criteria as provided in the RFP. At the conclusion of the evaluation the most qualified CM/GG Proposer will be identified for award and execution of the contract. The decision of the Selection Committee shall be final and shall not be subject to appeal except on grounds of fraud or collusion.
2. EXECUTIVE SUMMARY OF THE CM/GC SELECTION PROCESS

2.00 SUMMARY OF CM/GC SELECTION PROCESS – PART 1 STATEMENT OF QUALIFICATIONS (SOQ)

The MBTA will use a two-step process to select the CM/GC - the first step will consist of the issuance of Request-for- Qualifications. Each prospective Proposer will submit a Statement-of- Qualifications that will be evaluated with the criteria provided in further detail in Section 3. The most qualified proposing entities/joint ventures will be selected to continue into the second portion of the selection process.

Team Experience Criteria
- Joint Venture/Team Experience (organization structure)
- Key Staff/Organizational Structure
- Working with Design Consultant (during design of transit projects)

General Contractor Experience
- Rail and Transit Experience
- Bridge and Viaduct Experience
- Maintenance Facility Experience
- Station Experience
- Commuter Rail & Light Rail System/signals Construction
- Innovative Construction Experience

Skills Criteria
- Cost Control and Job Cost Accounting Reporting
- Project Scheduling Competency
- Constructability Reviews

Safety Criteria
- Construction and Public Safety
- Transit Operations Safety
- Experience Modification Rating (Experience Factor)
- OSHA Incident Rate for the last 3 years (OSHA 300 Summary)

Corporate EEO and Affirmative Action Plan
- Equal Employment Opportunity Profile / Affirmative Action Plan
- Diversity within Team
- Labor Workforce History
- DBE Performance History

2.01 SUMMARY OF CM/GC SELECTION PROCESS – PART 2 REQUEST FOR PROPOSAL

After selecting the most qualified CMGC Proposers, the MBTA will notify each of the selected Proposers that will receive Requests for Proposals and invitations for interviews. Non-selected entities shall also be notified.

The notification to the most qualified firms shall provide instructions on how to receive the Request for Proposal. The Selection Committee shall review the Technical Proposals according the evaluation criteria stated in the RFP. The Price Proposal shall be submitted in a separately sealed envelope and opened after the Technical Proposal scores are completed.
TECHNICAL PROPOSAL:
The most qualified CM/GC Proposers will be required to provide detailed information to address specific project elements, including but not limited to:

GENERAL MANAGEMENT
1. Management Approach
2. Quality Control
3. Project Controls

SUBCONTRACTING PLAN
1. Responsibilities of Subcontractors - Selection Plan
2. DBE/MMU/FMU Integration Plan
3. Equal Employment Opportunity

PRE-CONSTRUCTION PHASE
1. Preconstruction Approach
2. Approach for working with the Designer efficiently
3. Risk Management

CONSTRUCTION PHASE
1. Project Understanding
2. Overall Construction Approach Phasing
3. Uninterrupted transportation services
4. Innovative Approach
5. Construction Safety Plan

PRICE PROPOSAL
The MBTA will require each CM/GC Proposer to submit a CM/GC Multiplier, which is the fixed percentage of home office overhead and profit to be included in the Interim GMP and is applied to the total of all direct costs, project overhead, and indirect costs. The following are applicable to the CM/GC Multiplier.

The proposed CM/GC Multiplier will be used in the calculation of final score. The price component will be scored individually, comparing to all Proposers, as part of the best value selection process. The price component will also be utilized (survives) in development of the Interim Guaranteed Maximum Price for each scope of Work.
**CM/GC SELECTION PROCESS SUMMARY**

1. **SUBMIT STATEMENT OF QUALIFICATIONS**
2. **EVALUATE & SCORE SOQs**
3. **Select Most Qualified CM/GC Proposers**
4. **SUBMIT TECHNICAL PROPOSAL**
5. **EVALUATE TECHNICAL PROPOSAL & SCORE**
6. **SUBMIT PRICE PROPOSAL**
7. **OPEN PRICE PROPOSAL & SCORE**
8. **COMBINED TO DETERMINE TOTAL SCORES**
9. **NOTIFY APPARENT “BEST VALUE” CMGC PROPOSER**

**PRIMARY ROLE**

- **CM/GC BIDDER**
- **MBTA**

**Note:** The RFQ will detail the process to include Advertisement, Pre-proposal meeting, site visit, interviews, and notification of the most qualified CM/GC Proposers and the non-selected entities.
This page left blank intentionally
3. **EVALUATING & SELECTING CM/GC**

3.00 **SELECTION PROCESS OVERVIEW**

The MBTA CM/GC procurement/evaluation process is a two part process. Part one is the submission of qualifications (RFQ). Part two is the submission of a Technical Proposal and Price Proposal (RFP). The duration from Advertisement to Selection of a CM/GC is anticipated to take approximately 5-6 months. The CM/GC is selected based on demonstrated competency, qualifications, and pricing component. Each of these submissions and steps are part of the MBTA’s ‘best-value’ evaluation criteria.

### PROCUREMENT PROCESS

**STEP ONE**

- **RFQ (APPROX. 8 WEEKS)**
  - **M** – Advertise Project (Request for Letter of Interest)
  - **C** – Submit Letters of Interest (LOI)
  - **M** – Issue Request for Qualifications (RFQ)
  - **C** – Prepare and Submit Statement of Qualifications (SOQs)
  - **M** – SOQ Evaluation and Selection of Most Qualified CM/GC Proposers

**STEP TWO – RFP (APPROX. 10 WEEKS)**

- **M** – Issue Request for Proposals (RFP) to Most Qualified CM/HC Proposers
- **M/ C** – Pre-proposal Meeting/Site Visit
- **C** – Prepare and Submit Technical Proposal and Price Proposal (2 Envelopes)
- **M** – Technical Proposal Initial Evaluations
- **M** – Interviews and Technical Proposal Final Evaluations
- **M** – Opening of Price Proposal, Final Scoring, and Selection of the Apparent “Best Value” CM/GC Proposer
- **M** – MBTA Board of Directors Approval of CM/GC Contract(s)

The MBTA expects the duration to prepare SOQs to be at least 4 weeks from the issuance of the RFQ.

3.01 **EVALUATION & SELECTION OF THE CM/GC**

A scoring matrix will be utilized by the Prequalification and Selection Committees that will identify the major categories and the associated points for the scoring system. The scoring sheet will also have a location for a narrative comment summary of strengths and weaknesses as identified by the Prequalification and Selection Committees of each CM/GC. The evaluation categories and scoring points (scoring matrix) will be developed and identified prior to distribution of the RFQ and RFP.

After each committee member has reviewed and scored individual RFQ’s and RFP’s, scores and comments are submitted to the MBTA Selection Committee Chairperson. The team will meet again to discuss strengths and weaknesses of each proposal. MBTA Contract Administration will at this time
check the federal Excluded Parties Listing System (EPLS) to confirm no prime or subcontractors are debarred as required in FTA Circular 4220.1F.

Each Selection Committee member will be encouraged to provide written comments and questions to be used in interviews. These notes are used to compile debriefs with the CM/GC Proposers after CM/GC contract is executed. Debriefs, if requested, will be completed after the execution of the CM/GC contract.

After review, the MBTA will determine the apparent best-value CM/GC Proposer based on the highest total score of the summation of the Technical Score and the Price Score, which is not necessarily awarded to the lowest price. The process will be open and fair and the MBTA will clearly state the evaluation criteria and points assigned to each item. The MBTA will also confirm that the review team evaluation committee members understand and follow the listed criteria.

The specific evaluation criteria will be included in the RFQ and the RFP.

Proposers are required to be prequalified for the classes of work, as defined by the MBTA, identified for the project. MBTA Prequalification approvals are based on the Procedures Governing Classification and Rating of Prospective Bidders. The prequalification requirements will be identified in the RFQ. With regard to teaming with major subcontractors, the CMGC is required to meet the MBTA Subcontractor approval process, similar to that used on traditional DBB projects. If there is concern about teaming with certain major subcontractors, the Proposer may submit the names of major participants to the MBTA for acceptance during the Proposal Phase. Approval of minor subcontractors is not required during the Proposal Phase, but will be required in accordance with the MBTA’s standard practices for construction.

The MBTA will pay particular attention to the qualifications of the proposed power, signal and communications subcontractor(s).

3.02 CM/GC ADVERTISEMENT

The MBTA will publicly advertise the solicitation for CM/GC services in numerous print media as well as on the www.mbta.com website, Central Register, and COMPASS. The public advertisement will contain a description of the project, classifications of work and prequalification, surety letter requirements the funding source, evaluation criteria, DBE goals and other minority and female utilization goals, and instructions for receiving a copy of the Request for Qualifications. The RFQ and all addenda shall be web-based. In the event any addenda are published, the CM/GC interested entities are responsible for obtaining the addenda.

The advertisement shall consist of a Request for Letters of Interest (RLOI), which shall appear in the Central Register at least 2 weeks prior to the issuance of the RFQ. The submitted LOIs will be used to compile an RFQ Notification List, which identifies the email addresses for notification that the RFQ has been uploaded and is available for Proposers use. Firms registered on the MBTA website shall receive an email notification upon advertisement referring them to the MBTA website.

Advertisement will be done in accordance with the MBTA standard operating procedures, FTA Circular 4220.1F (Third Party Contracting Guidance), this manual, and applicable Commonwealth of Massachusetts regulations and laws.
3.03 REQUESTS FOR QUALIFICATIONS (RFQ) - SUBMISSIONS

The CM/GC must submit all of the information and documentation required by the RFQ in the format and order requested. Selection of the most qualified CM/GC Proposers will be based on the submitted information and materials, information on prior project performance, information obtained from references, information obtained from governmental agencies and entities, information contained within the MBTA files, and such other information as may be obtained. The CM/GC must include all of the materials required in the RFQ. The CM/GC Proposers must give complete and accurate answers to all questions and provide all of the information requested. Altering the text of the forms or schedules or making a materially false statement in this submission is grounds for rejecting a Statement of Qualifications submission and may subject to other civil or criminal penalties.

The CM/GC Proposer is responsible for assuring that the Statement of Qualifications (SOQ) is delivered on time and to the correct location as identified by the MBTA. Late submissions shall not be accepted and will be returned to the sender unopened. Delivery of the SOQ shall be at the CM/GC’s expense. The time of receipt shall be considered when the SOQ has been officially documented by the MBTA as having been received at the location designated above. The MBTA will accept no responsibility for mislabeled mail. Any and all damage that may occur due to shipping will be the CM/GC’s responsibility.

The MBTA reserves the right to:
- At its sole discretion, reject any and all SOQs at any time;
- Waive discrepancies and informalities in the SOQs.

**Qualifications of the Proposer - 100 points**

All SOQs submitted must consist of one (1) original and twelve (12) clearly identified copies of the SOQ, including all required attachments, and be accompanied by a signed Transmittal Letter. The original and all copies shall be bound separately, delivered in sealed containers, and permanently marked as indicated above. One CD of each of the SOQ shall be submitted. One copy of the SOQ Transmittal Letter shall be signed by an official authorized to legally bind the CM/GC project team and shall be marked “ORIGINAL.”

The Transmittal Letter shall contain the entity’s primary contact information including:
- Name,
- Title,
- Entity Name,
- Contact Address
- Contact Email Address
- Contact Facsimile Number
- Telephone Number

*Note: The MBTA may consider a page limit for the information submitted in response to this RFQ (excluding forms, resumes, and other noted requirements (i.e. JV agreement, and the accident prevention program)).

Unauthorized communications or contact between the CM/GC, their employees, agents, or other related entities interested in submitting SOQs and the MBTA, the MBTA’s Consultants, and any other person or entity participating on the Prequalification Committee or Selection Committee with regard to this project will be strictly prohibited. The only authorized communications will be inquiries to the MBTA Contract Administration Department for general information about SOQ submission deadlines, issues or...
questions for clarification through addenda and the existence of any relevant addenda to the RFQ. Any questions or issues that the MBTA determines require additional clarification will be addressed by posting addendum. All questions or issues for clarification must be submitted to the contract person that is identified in the legal advertisement in order to provide sufficient time for development and distribution of a response. The MBTA will fax or email addenda only to the official authorized by the CM/GC. It will be the sole responsibility of the CM/GC to ascertain the existence of any and all addenda issued by the MBTA (checking the MBTA web site frequently).

All CM/GC Proposers will be warned that oral and other clarifications not issued through an addendum will be without legal effect. All addenda will be considered part of this RFQ, and the CM/GC shall be required to acknowledge receipt of all addenda through the SOQ. From the date of issuance of the RFQ, any CM/GC that initiates or participates in any unauthorized communication, directly or indirectly, with any member or employee of the MBTA or any member of the Selection Committee or Prequalification Committees, or the contract consultants, will be subject to disqualification.

3.04 STATEMENT OF QUALIFICATION (SOQ) SUBMISSION REQUIREMENTS

The CM/GC must demonstrate their ability to perform the scope of services required, to maintain the project budget and completion date, and to perform the work in a manner consistent with the MBTA’s Quality Control Standards. The demonstration of prior successful completion of projects, in similar scope and magnitude, will be of significant importance in the MBTA’s evaluation. The CM/GC Proposers will be required to demonstrate construction qualifications to be considered for this CM/GC procurement. The CM/GC Proposer must satisfy the MBTA Construction Contractor Prequalification requirements, which are available on the MBTA website.

The prospective CM/GC shall include a statement regarding current prequalification status by the MBTA Construction Prequalification Committee. The statement should indicate which entities currently have (or have applied for and will receive by the submission date for the SOQ's) the requisite prequalification for required classes of work. Prequalification letters will not be considered part of the page limitation.

The CM/GC RFQ will include the criteria for the selection process, preconstruction scope of work, project constraints related to traffic, utilities, environment, permitting, right-of-way, and general construction requirements.

**NOTE:** The CM/GC shall not subcontract any portion of the contract to an entity that is, or has been, employed by the PM/CM, OR, or Design Consultant in the design of the project. The RFQ/RFP will identify firms having conflicts of interest, thereby prohibiting them from providing CM/GC services. The list will be updated accordingly.
Summary Evaluation Criteria to be included in the RFQ are:

Team Experience Criteria
- Joint Venture/Team Experience (organization structure)
- Working with Design Consultant (during design of transit projects)
- Key Staff/Organizational Structure

General Contractor Experience
- Rail and Transit Experience
- Bridge and Viaduct Experience
- Maintenance Facility Experience
- Station Experience
- Commuter Rail & Light Rail System/signals Construction
- Innovative Construction Experience

Skills Criteria
- Cost Control and Job Cost Accounting Reporting
- Project Scheduling Competency
- Constructability reviews

Safety Criteria
- Construction and Public Safety
- Transit Operations Safety
- Experience Modification Rating (Experience Factor)
- OSHA Incident Rate for the last 3 years (OSHA 300 Summary)

Corporate EEO profile and Affirmative Action Plan
- Equal Employment Opportunity Profile / Affirmative Action Plan (for all members of the CM/GC Entity).
- Diversity within Team
- DBE Performance History
- Labor Workforce History (MMU/FMU)

Evaluation of Responses – Overview
Instruction sheets for use by the Prequalification Committee will be developed in order for the team to review in a standardized manner and to pre-select the most qualified CM/GC Proposers.

Detailed Description of RFQ components:

1. Team Experience Criteria
   a. Describe your entity’s past successful approach for completing projects including any joint venture or organizational changes that may affect the project.

   b. History and Structure of Entity: Provide a brief description of the history and structure of the entity.

   c. Organizational Structure: Describe the organizational structure of the entity. Identify how the organizational structure will result in an integrated and cohesive team for managing the project. Certify no organizational conflicts of interest exist as they may pertain to this project.
d. Joint Ventures: If the entity is a joint venture, describe the component parts and identify projects where the joint venture partners have had experience working together in the past in managing projects similar in size, scope, and complexity to this Project. The Proposer should specify the degree of control each member of the Joint Venture will exercise, the distribution of profit and loss, and identification of work responsibilities each member will exercise. Include a signed copy of the joint venture agreement as part of the RFQ Proposal.

e. Describe the most relevant experience your entity has had working with designers during the design phase of transit projects that would benefit the MBTA / GLX project.

f. Provide an Organizational Chart of the anticipated CM/GC team. For both the Preconstruction phase and the Construction phases.

g. List key personnel noted below to be assigned to this project, what their roles will be, and how long they will be committed to the project (by phase if applicable). By listing personnel, the CM/GC agrees to make the personnel listed available to complete work on the Contract at whatever level the Project requires. Personnel changes will be reviewed by the MBTA’s Project Manager to assure the replacement is equally qualified and has adequate experience. Provide resumes of all of the key staff including:

1. Principle-In-Charge,
2. Project Manager,
3. Construction Engineer,
4. Site Supervisors,
5. Chief Estimator,
6. Chief Scheduler,
7. General Foreman,
8. CM/GC Compliance Officer, and
9. any other key staff that your team considers key to your operation.

Resumes should include the years of experience, licenses, certifications and other relevant information. Note: the MBTA will only allow changes in key personnel when caused by circumstances outside the control of the Contractor (i.e. employee leaves employment with the CM/GC). Changes in key personnel for the convenience or benefit of the Contractor will not be allowed. Key personnel will consist of the list presented.

h. Describe the key personnel who have previously worked together as a team, if ever. List at least two comparable projects in which the key personnel have played a primary role. If a project is selected to demonstrate the experience of a key person and that same project is selected to show the work history of the entity then provide just the project name and the role of the key person.

For other projects provide the following:

1. Description of project.
2. Role of the person.
3. Initial construction cost and final construction cost.
4. Original contract construction duration and actual duration.
5. Project owner, contact name, telephone number and address.
6. Design Consultant contact name, telephone number and address.
7. Reference information (two current names with telephone numbers per project). Submit individual resumes for each key person. Include an organizational chart detailing the management staff of your company(ies).

2. General Contractor Experience Criteria
   For items a-e noted below, identify at least 2 comparable projects within the past 10 years in which the entity(s) served as the prime contractor for each of the below noted types of construction. For each project identified, provide the following:
   - A description of the project (with a comparison of similarities to the current project – schedule demands and transportation elements).
   - A narrative of the roles of the entity(s) – Specify amount of work sub-contracted vs. self-performed the relationships of the contracting parties.
   - The value of the initial construction cost by the Owner, the initial estimate/bid by the entity, and final construction cost - with a brief summation of the cost increases that were beyond the control of the entity(s).
   - Original contract construction duration and actual duration – with details of reason, if any, project durations extended beyond the original completion date.
   - Project owner, contact name, telephone number and address.
   - List the name of the Designer/Engineer that your entity worked with and describe the relationship and roles existed to accomplish the goals of the Owner. Provide contact name, current telephone numbers and addresses.

   a. Rail and Transit
   b. Bridge and Viaduct
   c. Maintenance Facilities
   d. Stations
   e. Commuter Rail & Light Rail Systems/Signals Construction
      - In addition to the project experience noted above, describe your entity’s past experience working with on similar transit projects and your role in system start-up and commissioning.

   f. Innovative Construction Methods
      - Describe your entity’s success in the utilization of innovative construction methods for transportation projects and provide a maximum of 5 examples with photos and narratives describing the benefits of cost, schedule, and quality.

3. Skills Criteria
   a. Provide an example Job Cost report that your entity proposes to use to keep track of all costs that the CM/GC self performs and the subcontractor’s costs. Describe how the entity establishes cost control measures for projects, how the entity monitors cost growth, and what the entity’s general approach is to managing budgetary issues as the project progresses. Describe your entity’s Cost Estimating and what software package you would prefer to use in the development of the GMP. The MBTA would like the CM/GC to use construction cost estimating software that is commercially available and comparable to aspects that Heavy Construction Systems Specialist (HCSS) and Timberline can perform. If appropriate, provide examples or demonstrations of why you believe that your software is the best product for all members to use in the development of the GMP.
   b. Describe your entity’s approach to project scheduling. Address how your entity has collaboratively integrated and optimized the construction schedule with outside constraints such as utilities, owner’s activities, designer’s activities, and the overall
monitoring of a program management schedule. Describe how your entity integrates construction cost estimates, into the construction planning process, and how these aspects will be utilized. Describe the most important aspects of construction scheduling that your entity utilizes to develop, update, and report on the construction progress, for the life of the project. Provide two examples of past projects in which your entity implemented acceleration and schedule recovery efforts with a detailed description of the events that lead to the need to take this action and the outcome of those efforts.

c. Describe your entity’s approach for Constructability reviews prior to the start of construction.

4. **Safety Criteria**

   a. Provide statistics to demonstrate your entity’s safety record while performing work (self-performed) and while managing sub-contractors.

   b. Provide a narrative of your overall approach and commitment to safety during construction.

   c. List any references from your insurance company that the MBTA may call to validate aspects of your firm’s/entity’s safety record.

   d. Describe the entity’s overall approach to construction zone safety. Detail number of lost time accidents and number of fatalities.

   e. Describe similar plans, from past transit experience, that you may recommend to alleviate any issues with public safety during construction.

   f. Accident Prevention Program: Submit one copy of your entity’s Accident Prevention Program as part of your Proposal in response to this RFQ (this will be excluded from the RFQ page limit).

   g. Safety History: Provide the Experience Modification Rating (EMR) and the OSHA Incident Rate (OSHA 300 Summary) for the last 3 years for the CM/GC Entities and major subcontracting participants.

5. **Corporate EEO and Affirmative Action Plan Criteria**


      CM/GC Proposers will submit an Affirmative Action/EEO Plan for the employment of minorities and women in response to the RFQ. This submittal requirement is applicable to Proposer entities and identified subcontractors that employ 50 or more persons and will be entering into a contract in an amount of $50,000 or more.

      The Proposer will identify a person to be responsible for securing compliance with and reporting progress on all EEO efforts initiated and taken.

   b. **Employee Profile:**

      Provide Employee Profiles for each Proposer entity identified in the SOQ by the ethnic and gender composition of their firm.

   c. **Diversity within the CM/GC Team**

      Provide the Proposer’s Management Team diversity and employee profile, illustrating the ethnic and gender composition of the proposed organization for the Project.
Points and Weighting of RFQ components:

<table>
<thead>
<tr>
<th>Qualifications – 100 Points</th>
<th>Available Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TEAM EXPERIENCE</strong></td>
<td></td>
</tr>
<tr>
<td>JV / Team Experience (organization structure)</td>
<td>30</td>
</tr>
<tr>
<td>Working with Design Consultant (during design of transit projects)</td>
<td></td>
</tr>
<tr>
<td>Key Staff / Organization Structure</td>
<td></td>
</tr>
<tr>
<td><strong>GENERAL CONTRACTOR EXPERIENCE</strong></td>
<td>30</td>
</tr>
<tr>
<td>Rail and Transit Experience</td>
<td></td>
</tr>
<tr>
<td>Bridges and Viaducts Experience</td>
<td></td>
</tr>
<tr>
<td>Maintenance Facilities Experience</td>
<td></td>
</tr>
<tr>
<td>Stations Experience</td>
<td></td>
</tr>
<tr>
<td>Commuter Rail &amp; Light Rail Systems/Signals Construction</td>
<td></td>
</tr>
<tr>
<td>Innovative Construction Methods</td>
<td></td>
</tr>
<tr>
<td><strong>SKILLS CRITERIA</strong></td>
<td>20</td>
</tr>
<tr>
<td>Cost Control and Job Cost Accounting</td>
<td></td>
</tr>
<tr>
<td>Construction Scheduling Integration / Competency Narrative</td>
<td></td>
</tr>
<tr>
<td>Constructability Reviews</td>
<td></td>
</tr>
<tr>
<td><strong>SAFETY</strong></td>
<td>10</td>
</tr>
<tr>
<td>Construction and Public Safety</td>
<td></td>
</tr>
<tr>
<td>Transit Operations Safety</td>
<td></td>
</tr>
<tr>
<td>Experience Modification Factor</td>
<td></td>
</tr>
<tr>
<td>OSHA Incident Rate (OSHA 300 summary) for the last 3 years</td>
<td></td>
</tr>
<tr>
<td><strong>CORPORATE EEO AND AFFIRMATIVE ACTION PLAN</strong></td>
<td>10</td>
</tr>
<tr>
<td>EEO / Affirmative Action Plan</td>
<td></td>
</tr>
<tr>
<td>Diversity within Team</td>
<td></td>
</tr>
<tr>
<td>Labor Workforce History</td>
<td></td>
</tr>
<tr>
<td>DBE Performance History</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL SECTION POINTS</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

3.05 SUBMISSION CRITERIA RFQ EVALUATION CRITERIA

The Request for Qualifications will be evaluated against the criteria set forth below. The criteria and the selection method are designed to ensure fair competition among the prospective CM/GC Proposers and to assist the Prequalification Committee in making its best value selection.

The Prequalification Committee may, as part of this selection process review the references and other pertinent information and specifically reserves the right to perform due diligence and investigate the prospective CM/GC Proposer and/or its team.
The Prequalification Committee may select a minimum of three most qualified CM/GC Proposers. Each of the selected CM/GC Proposers will be sent a Request for Proposal and may be invited for an interview.

The Prequalification Committee will rate any proposal as incomplete that fails to include any information required in this RFQ.

A. **Team Experience Criteria**
   The Prequalification Committee will rate highly CM/GC Proposers whose staffing plans set forth an effective organization for management of the project, clearly delineate all staff members experience on similar complex projects, and how the CM/GC Proposer’s team will work collaboratively with the MBTA, the Program Management Team and the Designers. As part of the staffing plan, Joint Venture members and/or subcontractors, if any, must be identified and their roles delineated. Managerial and technical personnel for this project will have demonstrated experience in successful projects similar in size, duration and complexity. Resumes must be provided for all personnel anticipated to have a significant role in the project.

   Additionally, the Prequalification Committee will rate highly CM/GC Proposers who demonstrate Key Personnel who have worked together on comparable projects. If a Joint Venture is proposed, the CM/GC Proposer should demonstrate that the JV entities and key personnel have worked in a joint venture on previous successful projects. The CM/GC Proposer should list JV experience together, JV experience with other partners, roles of JV entities, and key personnel experience working in a JV, if applicable.

B. **General Contractor Experience**
   The Prequalification Committee will rate highly CM/GC Proposers who demonstrate their past experience on comparable rail and transit projects, as well as experience in projects involving bridges, viaducts, maintenance facilities and transit stations.

   The Prequalification Committee will rate highly CM/GC Proposers who demonstrate their successful approach and execution on past similar projects and who executed innovative construction methods that saved time and money.

C. **Skills Criteria**
   The Prequalification Committee will rate highly CM/GC Proposers whose schedule approach describes how the CM/GC Proposer will accomplish the preconstruction and construction activity for this project in a timely manner reflecting a practical understanding of the complexities of this project and of critical path activities.

   Highly ranked CM/GC Proposers will demonstrate their successful approach, in past projects, to cost and schedule control and give examples of accelerated techniques used on past projects to keep within the budget and schedule.

D. **Safety Criteria**
   The Prequalification Committee will rate highly CM/GC Proposers whose Experience Modification Rating (EMR), OSHA Incident Rate, and accident prevention programs demonstrate a corporate commitment to safety.
E.  Corporate EEO and Affirmative Action Plan

The Prequalification Committee will rate highly CM/GC Proposers whose Corporate Affirmative Action Plan, DBE performance history, labor workforce (MMU/FMU) history and the diversity of the proposed team demonstrate a corporate commitment to diversity and inclusion.

3.06  REQUEST FOR PROPOSALS

The RFP is the second step of the evaluation process and is to be implemented for entities selected as the most qualified CMGC Proposers. Two major submittals will be provided during this portion of the CM/GC evaluation – Technical Proposal and Price Proposal.

The CM/GC Request for Proposal must include the evaluation criteria for the selection process; preconstruction scope of work; project constraints related to working in and around an operating rail corridor, traffic, utilities, the environment and right-of-way; pricing details; and construction requirements. The CM/GC RFP will be typically organized as follows:

- A description of the selection process including the selection process calendar.
- RFP formatting instructions and documentation requirements with associated scoring criteria.
- The CM/GC Master Agreement
- The Preconstruction Contract, including the agreement, terms and conditions, and scope of work.
- A boilerplate of the Construction Contract agreement, terms and conditions.
- A general description of the Design Consultant’s scope of work.
- Oral interview requirements

The RFP will require 2 submittal packages, one for the Technical Proposal submission and one for the Price Proposal submission. The submittal dates for the Technical and Price Proposals will be identified in MBTA’s procurement schedule.

The MBTA Selection Committee shall first determine whether the proposals are responsible and responsive to the requirements of the RFP and meet the Pass/Fail criteria. Selection Committee members shall evaluate the appropriate components of the proposals against the criteria contained in the RFP. The Selection Committee shall use the evaluation sheets in preparing their initial rankings along with appropriate narratives to support the evaluations. Following the oral presentations, Selection Committee members shall revise their evaluation sheets and narratives, where appropriate. Evaluation forms shall be provided to the Selection Committee with the Technical Proposals. A Price Evaluation sheet for each proposal will be completed by the Selection Committee members.

The RFP will identify the period of time the Proposers may submit questions and written requests for clarifications during the development of their proposals. All inquiries must be in writing and directed to the MBTA individuals identified in the RFP. Answers to all substantive questions will be made available to all RFP recipients via e-mail; and when appropriate, revisions, substitutions, or clarifications will be issued as addenda to the RFP.

The MBTA may request an interview with each Proposer, which will provide an opportunity to fortify their Technical Proposal with a presentation. After the proposals are submitted, and prior to the opening of the Price Proposal, each Proposer will be required to make at least a one-hour oral presentation to all members of the Selection Committee. The presentation will afford the Proposers the opportunity to highlight the significant aspects of their approach and their understanding of the project and offer a
chance for the Selection Committee to ask clarifying questions. The Selection Committee shall decide in advance as to what Proposal information may require clarification and which of the CM/GC’s key personnel to interview. The oral presentation shall not be used to fill in missing or incomplete information that was required in the written proposal.

Following the review of any subcommittee reports and the qualitative ratings, the Selection Committee will determine if clarifications will be required. The MBTA will provide written notification to each Proposer for which clarifications of their proposal is required in accordance with the schedule contained in the RFP.

The commercial terms and conditions are generally considered standard and are not negotiable. The MBTA intends to issue a “draft” of the CM/GC Master Agreement, Preconstruction Services Contract, and the Construction Contract, which will show the contract terms in their substantive form, for review and consideration for the “final” RFP. Additionally, At the MBTA’s sole discretion, some of the construction terms may be negotiated during the development of an Interim GMPs based on the overall benefit to the MBTA and the Project.

3.07 SCORING AND POINTS FOR THE TECHNICAL PROPOSAL

The scoring system to guide the Selection Committee in the review of proposals and selection of the CM/GC Entity is presented herein. A well-structured and comprehensive scoring system allows for selecting the best entity for the project and, if implemented appropriately, ensures that the CM/GC Entity is chosen fairly. Prior to the review of proposals and interviews, MBTA PM will provide scoring guidelines to those evaluating the proposers/entities. The scoring guidelines will educate the scorers about the factors that are important with regards to the project and a CM/GC Entity. Included with the guidelines should be criteria on which each proposer is to be graded. MBTA has chosen criteria that are felt to be necessary for the CM/GC Entity to possess. Use of the criteria is intended to support a best value selection. The MBTA’s prequalification requirements apply to each entity providing construction contracting as part of a CM/GC solicitation. Each CM/GC must be prequalified with the MBTA before submitting their response to the Request for Proposals.

The following major categories will be used for scoring the Technical Proposals from the most qualified CM/GC Proposers.
# Points for Technical Proposal

<table>
<thead>
<tr>
<th>PHASE 2 - TECHNICAL PROPOSALS</th>
<th>Available Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. GENERAL MANAGEMENT</strong></td>
<td>10</td>
</tr>
<tr>
<td>a. Management Approach</td>
<td></td>
</tr>
<tr>
<td>b. Quality Control</td>
<td></td>
</tr>
<tr>
<td>c. Project Controls</td>
<td></td>
</tr>
<tr>
<td><strong>2. SUBCONTRACTING PLAN</strong></td>
<td>5</td>
</tr>
<tr>
<td>a. Responsibilities of Subcontractors – Selection Plan</td>
<td></td>
</tr>
<tr>
<td>b. DBE Integration Plan</td>
<td></td>
</tr>
<tr>
<td>c. Equal Employment Opportunity</td>
<td></td>
</tr>
<tr>
<td><strong>3. PRECONSTRUCTION PHASE</strong></td>
<td>15</td>
</tr>
<tr>
<td>a. Preconstruction Approach</td>
<td></td>
</tr>
<tr>
<td>b. Approach for working with the Designer efficiently</td>
<td></td>
</tr>
<tr>
<td>c. Risk Management</td>
<td></td>
</tr>
<tr>
<td><strong>4. CONSTRUCTION PHASE</strong></td>
<td>30</td>
</tr>
<tr>
<td>a. Project Understanding</td>
<td></td>
</tr>
<tr>
<td>b. Overall Construction Approach</td>
<td></td>
</tr>
<tr>
<td>c. Uninterrupted transportation services</td>
<td></td>
</tr>
<tr>
<td>d. Innovative Approach</td>
<td></td>
</tr>
<tr>
<td>e. Construction Safety Plan</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL TECHNICAL PROPOSAL POINTS</strong></td>
<td>60</td>
</tr>
</tbody>
</table>

Note: the RFP totals to 100 points available, 60 Points for Technical Proposal and 40 Points for the Price Proposal.

## 3.08 LEFT BLANK

## 3.09 PRESUBMITTAL CONFERENCE FOR THE REQUEST FOR PROPOSAL

Prior to the RFP due date, a pre-proposal meeting will be held with the most qualified CM/GC Proposers, with FTA being invited, to discuss the project in detail and to clarify any concerns that the CM/GC Proposers may have.

The meeting will provide a forum to discuss aspects of the Technical Proposal and Price Proposal of the RFP. The MBTA will obtain feedback and, at the MBTA’s sole discretion, may update the criteria as necessary.

At the completion of the Technical and Price Proposal evaluation, the MBTA will select the CM/GC Proposer with the ‘best value’ to the MBTA and the Commonwealth, in which the combination of technical, qualifications, schedule, operating, and pricing factors meet or exceed the MBTA’s requirements identified in the RFP.
3.10 TECHNICAL PROPOSAL

The Technical Proposal is intended to demonstrate the CM/GC abilities to manage this specific project. The Technical Proposal will provide the MBTA Selection Committee with an understanding of which CM/GC Proposer is best prepared to manage the GLX Project. CM/GC Proposers will be requested to prepare aspects from those noted below.

**Technical Proposal Components of the RFP:**

The RFP will include the requirements and criteria for the selection process; the Master Agreement; the preconstruction services agreement and proposed scope of work; the construction contract General Conditions, Supplementary Conditions, and the General Requirement (Division 1); and reference information documents, which includes the initial project constraints, initial design and construction documents, including initial utility plans, environment commitments, and initial right-of-way assessments.

The CM/GC Proposers will be required to provide the following information.

**General Management**

*Management Approach*

Describe the capabilities and management approach of your entity in managing, performing, and completing large and complex projects such as the GLX project. Address your entity’s experience with cost estimating, controlling costs, value engineering, assuring quality of construction work, meeting schedules, facilitating cooperation with other members of the project team and third-party interests, and responsiveness to owner’s requests.

Describe your entity’s project management approach and team organization during the different phases of construction that are indicated in the project phasing plan (that are not already described in the preconstruction approach below). Describe processes, collaboration, partnering, key procedures, methods and systems used for constructability, planning, scheduling, cost control, estimating, and managing sub-contractors, and self-performed construction – including but not limited to:

a. Management and Planning Tools: Describe the management and planning tools your entity will use to ensure an effective project.

b. Communications: Describe your entity’s internal communication and coordination protocols between staff at all levels of the organization who will be working on this project. Also, describe communication and coordination protocols between your entity, other members of your CM/GC team, other contractors working adjacent to or on the project site (s), project stakeholders, and the Green Line extension Project Team.

c. Familiarity with Local Laws, Regulations, and Project Requirements: Demonstrate your entity’s understanding of state and local legal requirements applicable to this project, including identification of applicable state and local permitting and inspecting entities. Include your entity’s familiarity with the local labor and subcontracting market, or state how you will obtain this capability. Environmental and Permit Compliance: Discuss your understanding of the issues related to construction activities in and around an operating rail corridor, traffic control, erosion
control, treatment and control of runoff, noise and dust mitigation and other environmental/permit concerns that will have to be addressed on this project. Describe your approach to dealing with such issues.

d. Anticipated Staffing Plan: the GLX project will likely move toward the implementation of several early construction packages and Interim GMP’s for the various phases as the scope develops for the entire project. Provide your proposed staffing plan to manage the initial, 18 month, pre-reconstruction phase (i.e. working up to the first GMP). Provide a separate proposed staffing plan to address how your entity will transition into construction for the planned phasing plan. Provide resumes of all key staff that your entity will include on the team during the preconstruction phase and the initial transition to construction.

Quality Control
Describe your Construction QC Plan for both self-performed work and for that of your subcontractors. Provide specific examples of how your firm will exceed MBTA standards for quality.

Project Controls:
Describe how your entity would monitor and ensure that the Green Line extension program scope is maximized and its construction budget and project schedule are met at every phase of the project. What estimating, cost control, change management, document control, design schedule interface, and construction scheduling systems and management techniques would your entity employ to achieve success in these items? Describe your entity’s approach project scheduling. Address how your entity has collaboratively integrated and optimized the construction schedule with outside constraints such as utilities, owner’s activities, designer’s activities, and the overall monitoring of a program management schedule. Describe how your entity integrates construction cost estimates into the construction planning process and how these aspects will be utilized. Describe the most important aspects of construction scheduling that your entity utilizes to develop, update, and report on the construction progress, for the life of the project. Describe your entity’s approach for Constructability reviews into the design development process and into construction. Describe any additional Project Controls aspects that you feel distinguishes you from other Contractors.

Provide an example of a detailed production based cost estimate for a horizontal construction project with an estimated value greater than $10M and a vertical construction project (i.e. station) with an estimated value greater than $25M as an example of your cost estimating competency. The report shall show evidence of multi-level Work Breakdown Structure. The estimate should also demonstrate detailed pricing with burdened labor rates, material costs, and equipment costs. Include detail for the crew composition and production rates to demonstrate your firm fully understands the level of detail required for a successful estimate, reconciliation, and GMP development.

Proposers will be required to submit the pricing in a format that details the direct cost elements (i.e. those costs that are directly attributable to a particular operation – excluding indirect costs that are often shared between many operations, such as the field office costs). Proposals showing summarized unit prices will result in a “poor” grade.
**Estimate components expected:**
- Bid Item or cost group
- Quantity (Unit to be measured and installed)
- Description of item being priced
- Coding for labor and equipment
- Crew size/composition
- Material costs / unit – with breakdown of all materials (described) required for the operation (not shown above for simplicity) – shown as temporary or permanent.
- Production rate – MH/Unit, Unit/MH, Unit/Shift, Unit/Hr.
- Sub-Totals – for all labor material and equipment.

*Note: Requirements for detailed production based cost estimates are applicable for all self-performed work. For all sub-contracted work, quantities and unit costs will be required (at a minimum).*

**Subcontracting Plan**

*Responsibilities of subcontractors – Subcontractor Plan*

Based on the information provided in this RFP, describe your approach to subcontracting including your proposed methods to meet the DBE requirements. The CM/GC selected for this Project, including any subsidiaries of the CM/GC or joint venture partners must self-perform more than 50% of the total contract amount after the value of any specialty subcontractor work has been deducted. The Subcontracting Plan should identify the items of work that are considered specialty work, if any. No specialty items are identified during the CM/GC procurement. Discuss the advantages and disadvantages and evaluate any risks associated with your subcontracting approach and how your entity would manage those risks.

The CM/GC entities will need to meet the MBTA Subcontractor approval process (similar to traditional Design/Bid/Build). If, during the proposal stage, the CM/GC has a concern about teaming with certain major subcontractors, the CM/GC Proposer may submit the names of major participants to the MBTA for acceptance during the Proposal Phase.

The CM/CG will need to provide a subcontractor selection plan. The plan should allow for solicitation of bids from the CM/GC’s list of subcontractors, which will be reviewed by the MBTA, from which your entity will make a selection. Describe your selection process, including the proposal outreach to bidders. Your plan will in part be judged on how well it brings market competitive pricing into the Project. The CM/GC is expected to apply their subcontractor selection process and demonstrate a good-faith effort to a minimum of three competing Proposers for each subcontracted item. It is expected that the CM/GC will identify their selections during the design process as the team creates a solution that meets schedule, quality, and budget goals. Describe the role subcontractors will play on your team and what benefits they will provide to your team, the MBTA and the project.

Following:

i. Outline how you will manage the procurement and installation activities;
ii. Approach to managing subcontractors, subcontractor issues and claims;
iii. Recommended subcontractor packaging approach and number of packages;
iv. A discussion of the advantages and disadvantages for this Project of early subcontract bidding options.
v. A discussion of your entity’s subcontract bidding and selection procedures and requirements, the scope of work your entity intends to bid and self-perform, and the entity’s ability to perform such work;

vi. How your entity would ensure quality subcontractors through either subcontractor bidder eligibility or subcontractor responsibility criteria, and how your entity would manage these processes.

**DBE Implementation Plan**

Each CM/GC Proposer shall provide a DBE Implementation Plan that demonstrates the methods by which the CM/GC will achieve the DBE goals. Proposers will be evaluated based on their approach, creativity in their DBE Implementation Plan, their demonstrated commitment to the MBTA’s DBE Program, and ability to successfully respond to project DBE participation goals for all phases of the CM/GC process and compliance with the overall DBE Program requirements set forth in 49 CFR Part 26.

The MBTA is committed to creating a level playing field on which DBEs, as defined in 49 CFR Part 26, can compete and to removing barriers for participation by DBEs on DOT-assisted contracts. By submitting its proposal, Proposer certifies that it will take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that DBEs are given the maximum opportunity to compete for and participate in the performance of this contract.

Overall DBE goals have been established for the GLX Project at 13.5% for DBE. The scope of work and the PM/CM estimate for each scope of work, including preconstruction services and Interim GMPs will be assessed and a DBE goal will be established for that scope. The DBE goal will be developed by the MBTA for each Interim GMP scope of work and will be primarily based on the preliminary cost breakdowns. The goals will be developed based on collaboration between MBTA, ODCR, and the CM/GC for the DBE opportunities associated with the work. The overall goals will be kept in mind and progress towards meeting the overall program goal will be monitored as the project evolves.

The CM/GC will bid subcontractor scopes taking into account the specific DBE goal established for that Interim GMP and the initial DBE Implementation Plan included in the proposal.

Information submitted in response to this evaluation criterion should include the following and is limited to be no longer than five (5) pages.

a. **Past Performance:** Provide the DBE or MBE/WBE goal information for the projects identified under “Past Performance of the Proposer”, as applicable, and the proposer’s achievement of the goals on those projects. Provide information relevant to the proposer’s performance, particularly if goals were not achieved. Provide the following information on projects identified: (1) project name, (2) project location, (3) name of contract person (reference), telephone and fax numbers of the owner’s representative for the project, (4) project DBE or MBE/WBE participation goal commitment versus actual goal attainment, (5) if the DBE participation goal was not obtained (including good faith efforts, partial waivers, explain the lessons learned and recommend preventive measures to be implemented to avoid similar results on the proposed project.

b. **Outreach Efforts:** Describe the Proposer’s planned outreach efforts for ensuring that DBEs have sufficient information about subcontract bid packages on this Project.
c. Strategies and Approach: Discuss your entity’s strategies and approach for arranging and packaging subcontract bid packages to encourage the participation of DBEs.

d. Managing Diversity: Describe the Proposer’s experience and approach in managing diverse teams on projects comparable to the scope of work, size, and duration of this Project.

e. Assistance to DBEs: Include an explanation about the assistance the Proposer has provided in the past to DBEs with expertise but limited resources. Such assistance may include, but not be limited to resource sharing (e.g., office space, equipment, etc.), formal or informal mentoring, and other efforts undertaken to enhance the performance of the DBEs on previous projects of the Proposer.

f. Planned Approach to Support DBEs: Describe the Proposer’s approach in monitoring, mentoring, and supporting DBEs if awarded the contract under this procurement.

g. Personnel Commitment: Provide the name and title of the individual on the Proposer’s team who will be responsible for overseeing efforts to reach out to and assist DBEs to compete for subcontract work and to successfully perform as members of the Proposer’s team. Include the percentage of time this individual’s will be dedicated to DBE outreach and assistance issues.

**Equal Employment Opportunity (EEO):**
The MBTA values diversity in its workforce and in the workforce of those that contract with the Authority. The MBTA recognizes and appreciates that diversity is an advantage in the business community of today. The MBTA encourages, supports and nurtures diversity, and encourages any firm contracting with the MBTA to do the same and will be reviewing:

a. Provide information regarding EEO and internship, training or apprenticeship goals as applicable; and the proposer’s achievement of the goals on the projects identified under “Past Performance of the Proposer”. Provide information relevant to the proposer’s performance, particularly if goals were not achieved.

b. EEO Efforts: Discuss the Proposer’s efforts to ensure that it provides equal employment opportunities to all persons without regard to race, color, age, sex, marital status, sexual orientation, religion, ancestry, national origin or the presence of any sensory, mental or physical disability in an otherwise qualified disabled person on the Proposer’s workforce, and the involvement of such persons on comparable projects. Include an explanation of internship, training, and apprenticeship opportunities as appropriate. If the Proposer currently has under representation of minorities or women, describe how it proposes to remedy the underutilization over remaining contract time.

c. EEO Approach: Discuss the Proposer’s overall approach to EEO. Describe the Proposer’s experience and approach in employing diverse teams on projects comparable to the scope of work, size, and duration of this Project.

d. CM/GC Compliance Officer: Include the name and title of the individual who will be responsible for overseeing the Proposer’s adherence to EEO laws and policies, and who will ensure that employment actions regarding staffing and managing the work will be carried out.
in a nondiscriminatory manner. Include the percentage of time this individual will be
dedicated to EEO issues.

Preconstruction Phase

Preconstruction Approach

MBTA intends to negotiate a cost reimbursable contract for Preconstruction Services.
During the preconstruction phase, the CM/GC will be reimbursed for direct labor on a cost
plus basis, based upon the actual hours worked and the employee’s hourly rate (for direct salary
only) with a Preconstruction Multiplier on direct labor costs of 50%. Prior to entering into a
contract, the MBTA and CMGC will collectively finalize the preconstruction phase services scope of
work with an estimate of the amount of hours that will be needed by each member of the CM/GC
entity to fulfill the agreed to scope/deliverables for preconstruction services.

As part of the evaluation of Preconstruction Approach, each CMGC Proposer will be required to fill
out an ‘anticipated preconstruction services’ fee estimate.

Because the preconstruction services are a smaller portion of the overall price of the project, and
because the scope of these preconstruction services may vary and fluctuate as the project evolves
into construction, the Proposers will be requested to provide preconstruction services cost estimate
for the 18 month duration. This estimate (based upon the annual salaries of the staff) will NOT be
considered in the pricing component of the RFP scoring. However, this effort will help the Selection
Committee to evaluate if the CM/GC understands the goals of the projects and this estimate will
help to demonstrate the CM/GC’s capabilities to manage the preconstruction phase. The
information will provide the basis for the MBTA Project Manager to start negotiations (based on
detailing the deliverables and the priorities of the preconstruction services, once the selected
CM/GC has received award).

The hourly rate proposed for each individual shall be the compensation rate to include the cost for
direct salary only. No costs for taxes, insurances, retirement plans, bonuses, or any other labor
addon/markup costs are to be included and no costs that are considered to be ‘overhead’ or ‘home
office’ costs shall be added onto these rates either. Note, for simplicity and oversight /
transparency, over the course of the 18 month preconstruction service period, no escalation (salary
increases) will be permitted unless approved by the MBTA and in no event shall the salary increases
be greater than 4% annually. Additionally, as a requirement of the preconstruction phase
negotiation, a historic record (showing annual salaries for the full 2011 year) of the current salaries
may be required for each individual on the preconstruction team.

The preconstruction services period has been set at 18 months for the Technical Proposal evaluation
and is subject to change. The duration provides a basis in the likely event that multiple GMP’s will be
established during and after this initial preconstruction phase. The MBTA anticipates many of the
CM/GC staff providing initial preconstruction services will likely transition some or all of their time to
the management of the construction phase (the reimbursement for which is included in the GMP
price). In such cases, the CM/GC and the MBTA will determine a structured
payment/reimbursement plan that delineates the continuation of the preconstruction services
versus those that transition to the management of the scope of work under the GMP.

Describe all additional relevant aspects of the preconstruction

1) Philosophy: Describe your entity’s philosophy and approach to Preconstruction Services.
2) Critical Preconstruction Activities: Identify the Preconstruction activities that you see as being most important to the success of the GLX project and elaborate on the anticipated benefits of those activities to the project.

3) Project Examples: Provide three (3) examples of projects that demonstrate the range of similar preconstruction services your entity has provided on previous projects or similar public or private contracting methods. Describe the services provided and how the experiences gained on these projects will benefit the GLX Project. Provide the name and role of individuals that participated as team member on the projects.

4) Proposed Preconstruction Staffing Plan and Budget: Provide a proposed staffing plan and preliminary budget for preconstruction services. Assume an 18 month period from February, 2013 through July, 2014 (18 months). The preliminary staffing plan and budget is specifically for Preconstruction Services and provides a general idea of the level of effort the Proposer sees as necessary to perform the Preconstruction Services described below.

The CM/GC tasks during the preconstruction services phase will include, but not limited to:

1. Coordination with the Design Team and the MBTA
2. Advising the MBTA on ways to gain efficiencies in project delivery.
3. Project planning and construction scheduling.
4. Identify potential risks to schedule and cost and ways to manage those risks.
5. Providing guidance and suggestions to mitigate impact on users.
6. Suggesting modifications to the design phase that no longer require detailing from the Design Team.
7. Constructability studies and identification of construction access and staging.
8. Value Engineering support services.
10. Options analysis (cost and schedule assessments).
11. Early investigative work to analyze the existing conditions (e.g. test pits) to be by work order request.
12. Construction phasing, scheduling, maintenance of rail operations, and maintenance of traffic staging to minimize interruption to rail and traffic operations.
13. Developing the limitations of operations.
14. Developing detailed equipment and material delivery plans.
15. Detailed cost estimates and knowledge of marketplace conditions.
16. Providing cost estimates at various stages of project development.
17. Development of a plan for working with and contracting with utilities in order to facilitate efficient relocations and provisions of service.
18. Reconciliation of the Interim GMPs with the MBTA.
19. Finalization of the Interim GMPs, with all schedule and cost estimating basis.
20. Attend and facilitate meetings as requested by the MBTA.
21. Public outreach
22. Encouraging DBE and Equal Opportunity participation
23. Development of a Testing, Certification, and Startup Plans
ANTICIPATED PRE-CONSTRUCTION SERVICES
ESTIMATE FORM

<table>
<thead>
<tr>
<th></th>
<th>MONTHS</th>
<th>Period Utilization (%)</th>
<th>No. Hours (@ 176 mhs per mo.)</th>
<th>RATE (hourly)</th>
<th>Anticipated Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal In-Charge</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Senior Project Manager</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Senior Engineer</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Senior Construction Scheduler</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Senior Construction Cost Estimator</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Junior Construction Cost Estimator</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Senior Site Supervisor</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Computer Aided Design</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Junior Office Engineer</td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

|                       |        |                        |                               |               |                    |
| SUBTOTAL (Direct Labor)| $0    |                        |                               |               |                    |
| Preconstruction Multiplier (@ 50%)| $0    |                        |                               |               |                    |
| Reimbursable Direct Costs (travel, lodging, and meal expenses for out-of-town participants) | $0 |                        |                               |               |                    |
| TOTAL PRECONSTRUCTION SERVICES | $0    |                        |                               |               |                    |

Approach for efficient working relationship with Designer/Engineer
Discuss your entity’s strategy and working plan to work collaboratively the MBTA, the PM/CM and Design Consultant during the preconstruction phase and during the progression of the work thru out the entire program, including construction.

Describe your entity’s approach for addressing disputes with the Design Team.

Describe the expected level of involvement and authority with respect to design decisions.

Describe the expected timelines for your entity’s design input and the potential impact on design schedules.

Risk Management
Describe your entity’s approach to specifically manage the initial risks that have been developed and provided a part of the MBTA’s risk register. Provide specific examples of how your entity proposes mitigation measures. Provide a description of the process that you propose to monitor risk during the preconstruction phase, as part of the GMP documentation, and during construction. Describe the top 5 most significant risk elements that your team has identified on this project and the risk mitigation plans that you have developed to manage them.
Construction Phase

**Project Understanding**
Providing more specific information that has been provided in the Overall Construction Approach, discuss the most important elements of this project that your team has identified on this project and how it intends to manage the outcomes successfully. Discuss your approach to innovative methods to be used. Describe specific technical innovations related to construction that may further improve the ability to achieve the project goals.

**Overall Construction Approach**
Demonstrate your entity’s ability to manage specific construction/technical issues related to the more complex aspects of this project. Provide initial strategies and examples of what will be expected. Describe key interfaces between aspects of this GLX project that are vital to manage and the steps that you propose taking to assist in avoiding delays from these interdependencies. Discuss your understanding of the phasing/construction sequencing and traffic control required for this project. The CM/GC must demonstrate a commitment to supporting GLX public outreach. Describe your entities approach and commitment for this level of support. The CM/GC will be required to work with permitting agencies, railroad operations, utilities, and other stakeholders as part of the pre-construction and construction phases. This cooperation will help reduce the risk that a third party may delay the project. The MBTA will assign to the CM/GC a series of tasks to support the development of the public information to educate and help minimize the impact on the traveling public and ensure they are aware of the situation and how it may impact them. Describe your approach to successfully managing what will be anticipated public outreach aspects of the GLX Project. Community Impact Mitigation: Describe your approach to minimize impacts to local residents and your approach to mitigate disruption to commuter rail, freight, pedestrian and vehicular traffic. Describe any additional aspects, related to approach to construction, that you feel distinguishes you from other Contractors.

Describe your entity’s approach to performing the testing and verification of the systems components of the Project and supporting testing, training, certification, and startup of the commuter rail and light rail improvements.

**Uninterrupted transportation services**
Discuss how you will plan the work such that you minimize impact to the traveling public (both rail and road), local businesses and residents and describe how you will monitor effectiveness of the plans that impact the traveling public, local businesses and residents and describe how you will minimize those impacts and traffic delays. Describe some of the key aspects/processes that you plan to deploy to manage the critical construction work-zone, rail and traffic interfaces. Describe what measures you anticipate taking to maintain consistent transit, and avoiding delays, for all modes of transportation for the traveling public. Provide examples of applicable contingency plans that you propose implementing for the key construction phases of the GLX project.

**Innovative Approach**
Describe your entity’s successes in the utilization of innovative construction methods for transportation projects and provide a maximum of 5 examples with photos and narratives describing the benefits of cost, schedule, and quality.
Construction Safety Plan
Describe how you intend to incorporate safety planning into the construction management plan and how you plan to staff and implement that plan.

3.11 TECHNICAL PROPOSAL EVALUATION CRITERIA

The Request for Proposal will be evaluated against the criteria set forth below. The criteria and the selection method are designed to ensure fair competition among the prospective CM/GC Proposers and to assist the Selection Committee in making its best value selection.

The Selection Committee may, as part of this selection process review the references and other pertinent information and specifically reserves the right to perform due diligence and investigate the prospective CM/GC Proposer and/or its team.

The Selection Committee may choose to interview all prospective CM/GC Proposers and/or its team.

The Selection Committee will rate any proposal as incomplete that fails to include any information required in this RFQ.

A. General Management Experience
The Selection Committee will rate highly CM/GC Proposers whose management approach demonstrates their ability to complete large complex projects and addresses their experience and competency in their approach to cost estimating, controlling costs, value engineering, assuring quality of construction work, meeting schedules, working cooperatively in a team environment and being responsive to the needs of the client.

B. Subcontracting Plan Criteria
The Selection Committee will rate highly CM/GC Proposers who demonstrate how their approach to subcontracting provides competition and treats bidders fairly, including your proposed methods to meet the DBE requirements for this contract.

The Selection Committee will rate highly CM/GC Proposers whose Corporate Affirmative Action Plan, DBE performance history, labor workforce (MMU/FMU) history and the diversity of the proposed team demonstrate a corporate commitment to diversity and inclusion.

C. Preconstruction Phase Criteria
The Selection Committee will rate highly CM/GC Proposers whose preconstruction services plan clearly and in detail describes how the CM/GC Proposer will accomplish the preconstruction activities set forth in the contract, and that reflect a practical understanding of the requirements of the contract.

Highly ranked CM/GC Proposers will demonstrate their successful approach, in past projects, to a range of preconstruction services and describe your philosophy and approach to risk management for this project.

D. Construction Phase Criteria
The Selection Committee will rate highly CM/GC Proposers whose management services plan clearly and in detail describes how the CM/GC Proposer will accomplish the construction,
testing, certification, and startup activities set forth in the contract, and that reflect a practical understanding of the requirements, phasing and technical challenges of the project. This plan should include the CM/GC Proposer’s approach and management, safety and quality plans. The Selection Committee will rate highly CM/GC Proposers who excel, for each category below as applicable, in the performance of their contractual responsibilities. Highly ranked CM/GC Proposers will have provided: effective value engineering and quality control programs, maintained construction progress schedules, controlled and reduced change order costs, effective project safety programs, excellent coordination and management of subcontractors, cooperation and coordination with the designer and owner, and minimizing of claims and disputes.

The Selection Committee will rate highly CM/GC Proposers who demonstrate their successful approach and execution on past similar projects and who executed innovative construction methods that saved time and money. Highly rated CM/GC Proposers will also have provided in-depth, thoughtful approaches and solutions to the technical challenges that they identify in this section.

3.12 PRICE COMPONENT OF THE RFP

The Price Proposal is the final step to determine the ‘best value’ score of each of the prospective CM/GC’s. The required prices will be provided in sealed envelope, separate from the Technical Proposal. The pricing component is designed to provide competitive pricing for the CM/GC markup (OH and profit), which will be used in the development of the Interim GMPs.

The MBTA requires each CM/GC Proposer to submit a CM/GC Multiplier, which is the fixed percentage of home office overhead and profit to be applied to the total of all direct costs, project overhead, and indirect costs. The following are applicable to the CM/GC Multiplier.

- The CM/GC Multiplier will be applied to all of the work included in each Interim GMP for the life of the CM/GC Contract. The multiplier is to be rounded to the nearest .00 two decimal points (.00).
- The multiplier will be applied to the total of all direct costs plus project overhead and indirect costs.
- The multiplier will be applied to subcontractor work.
- The multiplier will also be applied to any authorized changes to the GMP (to which the MBTA change provisions will be utilized).
- The costs for all of the CM/GC’s ‘home office overheads’ will be inclusive in this multiplier. Home office overheads will NOT be included in the Interim GMPs.
- The budget and price for the indirect costs and general conditions will be part of the Interim GMPs.

3.13 WEIGHTING OF PRICE (as part of the RFP)

As part of the overall ‘best value’ scoring criteria, the pricing component will be 40% of the total score of the RFP overall. The Technical Proposal will be set at 60 points and the Price Proposal will be set at 40 points.
3.14 PRICE COMPONENTS

The MBTA has chosen to use a ‘best value’ selection process that includes scoring on both the technical score and the price. The MBTA has chosen this method because the early GLX design development does not allow for the GLX project to be hard bid as part of the CM/GC selection. Should a Proposer provide one of the worst pricing score that Proposer may not necessarily be eliminated and may still be the apparent winning CM/GC if they are competitive on the Technical Proposal (in comparison to the other Proposers).

The CM/GC Multiplier (profit and Home Office Overhead %) - 40 Points Available.
Each firm will be eligible to receive a score for their price submission – competitively scored against the other CM/GC Proposers. The CM/GC Proposer with the lowest CM/GC Multiplier will receive a score of 40 points. The other CM/GC Proposers receive a proportion of the available points by dividing the lowest proposed CM/GC Multiplier by their proposed multiplier, rounded to 2 decimal places.

If two or more Proposers provide the same exact multiplier (%), each bidder’s score will be computed as noted, which will result in identical scores.

<table>
<thead>
<tr>
<th>Proposer</th>
<th>Proposed CM/GC Multiplier</th>
<th>Ratio of Max Pts.</th>
<th>% of Max Pts</th>
<th>Max.Pts.</th>
<th>Price Score</th>
<th>Proposer Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposer A</td>
<td>6.00%</td>
<td>6.00</td>
<td>100.00%</td>
<td>40</td>
<td>40.00</td>
<td>1</td>
</tr>
<tr>
<td>Proposer B</td>
<td>6.50%</td>
<td>6.00</td>
<td>92.31%</td>
<td>40</td>
<td>36.92</td>
<td>2</td>
</tr>
<tr>
<td>Proposer C</td>
<td>7.00%</td>
<td>6.00</td>
<td>85.71%</td>
<td>40</td>
<td>34.29</td>
<td>3</td>
</tr>
</tbody>
</table>

3.15 RECOMMENDATION OF AWARD

Unless all proposals are rejected, the MBTA Selection Committee will recommend the approval and the start of contract negotiations with that CM/GC Proposer with the most qualified adjusted score. In the advertisement, and pertinent bid documents, the MBTA shall reserve the right to reject all proposals and waive minor proposal irregularities.

3.16 LEFT BLANK

3.17 LEFT BLANK

3.18 CM/GC INTERVIEWS

The MBTA may include oral interviews as part of the selection process with each of the CM/GC Proposers. The interviews will be held separately with each CM/GC Proposer. The presentations at the interviews will be at least one hour in length, location of, and format of the interview will be detailed in the RFP. At a minimum, the format will include an oral presentation by the CM/GC addressing their plan and approach to the project followed by a question and answer session.

The MBTA shall coordinate the interviews with each selected CM/GC Proposer. The order of the interviews for the contractors shall be random and will be determined prior to the interview date.
notification will include information about location; set limits on the number of people attending (based on room size, occupancy comfort, and safety); state the amount of time for each interview; and include any other scheduling or room constraints. This interview will be recorded and FTA and MBTA Owner’s Representative may be invited to observe.

The Selection Committee will develop and compile a list of standardized questions about the project and CM/GC Proposer specific questions for the interview. The MBTA senior management will approve the questions developed for the interview. Each member of the Selection Committee will adjust their initial scores based on the oral presentation. The oral presentation will not be used to fill in missing or incomplete information that was required in the written proposal. The oral presentation will not be used as an opportunity by the Proposers to improve or supplement their proposals. This step in the selection process will be clearly identified in the RFP.

### 3.19 PROPOSALS SUBMITTED BY MOST QUALIFIED CM/GC PROPOSERS

The MBTA shall strive to request proposals from no fewer than three most qualified CM/GC Proposers. The CM/GC will be asked to develop and submit proposals based on the RFP. The proposals and pricing will be received by the date, time and appropriate office, as noted in the instructions.

### 3.20 TECHNICAL PROPOSAL EVALUATION PROCESS

The Selection Committee will first determine whether the proposals meet the Pass/Fail criteria and whether the proposals are otherwise responsive to the requirements of the RFP. Committee members shall evaluate the appropriate components of the proposals against the criteria contained in the RFP and submit their findings to the full committee. Each Selection Committee member will evaluate each CM/GC Proposer using an evaluation sheet that has been established by the MBTA prior to the issuance of the RFQ and RFP. Each members scoring will be combined with all voting members, averaged, and summarized.

Following the review of any subcommittee reports and the qualitative ratings, the Selection Committee will determine if clarification of minor inconsistencies will be required. The Selection Committee will notify in writing each Proposer for which clarifications of their proposal is required in accordance with the schedule contained in the RFQ and RFP. Committee members may request each Proposer to provide clarifying information only to ensure the committee understands of the proposal.

### 3.21 SOQ AND TECHNICAL PROPOSAL SCORING PROCEDURES

Each major category will be evaluated by each reviewer and ratings will be determined using a numerical rating system as follows:

1. A relative numerical weight has been established by the MBTA for each major category. The sum of the weights equals the total points allocated for the SOQ (100 points) and the Technical Proposal (60 points). All committee members will use these values.

2. The relative weighting assigned to each major category will be the maximum any criterion (subcategory) in the major category can receive.

3. Three degrees of quality (poor (0%-60%), fair (60%-80%), and good (80%-100%)) shall be considered when scoring each subcategory.
4. Each subcategory is equally weighted. Sum the subcategory evaluation scores within each major category and divide by the number of subcategories in the major category to arrive at an overall major category number. Round off to two decimal places.

5. Add up the major category ratings to arrive at the score for the SOQ or Technical Proposal.

6. Each committee member is required to document the rationale used for the scoring of the proposing firms.

The MBTA will use the evaluation criteria included herein for each of the scoring categories in the RFQ and the RFP. These narrative statements will be used by the Prequalification Committee and Selection Committee for consistency in scoring and will quantify the ranges of expected results of the Proposer’s submissions.

Following the oral presentations, committee members shall revise their evaluation scoring if the proposers provide clarification to an area that was included in the RFP but not previously clear to the committee member. These presentations will not be meant to allow Proposers to provide information that has been missing from the qualifications or project approach portion of the previous submissions.

3.22 Mandatory Disclosure Forms

The CM/GC will be directed to provide the Mandatory Disclosure forms as part of the SOQ. The CM/GC will be advised that the submissions of the Mandatory Disclosure forms identified below are not optional. Failure to provide this information will result in the SOQ being deemed Non-responsive.

1. **Terminations and Legal Proceedings:** The CM/GC Proposers are required to submit RFQ Form H (Termination and Legal Proceedings). On Schedule E of Form H respondents are required to list each and every project on which the entity was terminated or failed to complete the work within the past seven (7) years. Respondents are required to list each and every conviction or fine incurred by the respondent entity or any of its principals for violations of any state or federal law within the past seven (7) years; and, a complete list of any and all legal proceedings, administrative proceedings and arbitrations whether currently pending or concluded within the past five (5) years (ten (10) years for litigation or legal proceedings that involving allegations against the entity of false claims, fraud or malpractice) involved a construction project or a construction contract in which the respondent entity was a named party. Attach additional sheets if necessary. Respondents are required to list any outstanding proceedings or other agreements which relate to the procurement or performance of any public or private construction contract which, if unfulfilled, would preclude the entity’s participation in public works projects.

2. **Audited Financial Statement:** The CM/GC will be required to submit in the SOQ a complete copy of audited financial statements and credit rating for each firm comprising the CM/GC entity for the most recent fiscal year. These records are exempt from public disclosure and will need to be stamped as “Confidential/Exempt from public disclosure” or other similar language before being submitted. Information cannot be returned until the completion of both parts of this procurement.
3. **Letter from Surety Company Evidencing Bonding**: The CM/GC will be required to submit in the SOQ a letter from a surety company that is licensed to do business in the Commonwealth and whose name appears on United States Treasury Department Circular 570, on the surety company’s letterhead (or a letter from a surety agent with attorney in fact authority and an original power of attorney accompanying the letter) confirming that it will provide the CM/GC entity with payment and performance bonds on the Project in an amount equal to or greater than 100 per cent of the estimated construction cost of the Project. Surety references will be required.

4. **Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters**: The CM/GC must submit in the SOQ a certification regarding debarment, suspension, ineligibility, and voluntary exclusions.

5. A list of standard MBTA contracts forms that will be included in the RFQ includes, but not limited the following:

   - Form A Transmittal Letter
   - Form B Information Regarding Proposer and Equity Members
   - Form C Certification of Eligibility
   - Form D Certification Regarding Debarment
   - Form E Affidavit of Compliance
   - Form F Affidavit of Prevailing Wage Compliance
   - Form G Certification of Tax Compliance
   - Form H Terminations and Legal Proceedings
   - Form I Safety Record
   - Form J DBE Workforce Compliance Record
   - Form K Firm’s Employee Profile (EEO Profile)
   - Form L Proposer’s Checklist

### 3.23 PROCUREMENT PROTESTS

CM/GC Proposers may only appeal/protest the CM/GC procurement for the following reasons:

1. allegations that the terms of the RFQ are wholly ambiguous, contrary to legal requirements applicable to the procurement, or exceed MBTA’s authority;
2. a determination as to whether a SOQ is responsive to the requirements of the RFQ; and
3. selection of the most qualified proposers based on the submitted SOQs
4. selection of the CM/GC based on the submitted Proposals.

Protests will be processed in the time frames and structure identified in the RFQ and the RFP, which will generally follow the MBTA Appeals and Protest Procedures.
4. **PRECONSTRUCTION SERVICES (DURING DESIGN)**

4.01 **OVERVIEW OF PRECONSTRUCTION SERVICES**

CM/GC project delivery offers the MBTA the most significant benefits by assigning the responsibility of ‘constructability reviews’ to the contractor during the design phases. During this process the designer has the ability to modify the design contract drawings, specifications, and requirements, well in advance of the start of construction and with the inclusion of many, if not all, of the CM/GC’s most important recommendations. With the main benefits being a reduction in the amount of changes after construction, as well as a more efficient way of accommodating the physical construction, the MBTA believes that the cost of these preconstruction services is a reasonable investment.

The CM/GC Entity will be a part of the overall project team consisting of the MBTA staff, including members from Construction, Project Management, Bridge, Traffic, Environmental Permitting, Engineering, and Project Controls, along with an Owner’s Representative, an independent cost estimator team, and the original Designer-of-Record. The CM/GC Entity will provide guidance and recommendations on schedule, phasing, constructability, materials, cost, options analysis, and risk evaluation/reduction throughout the design phase of the project.

4.02 **AWARD OF PRECONSTRUCTION SERVICES & GMP**

The selected CM/GC Entity will enter into a single contract with MBTA that will consist of two phases – each to be initiated with individual Notices-To Proceed (NTPs). The first NTP will be issued to engage preconstruction services and ultimately the development of Interim GMPs. Proposers are required to name their proposed DBE subcontractors for the Preconstruction services, if any, in their proposal. A second NTP will be issued after the parties agree to a contract amendment that provides an Interim GMP for the selected scope of work. Each subsequent contract amendment will also have its own NTP. The terms and conditions for construction services will be based on the MBTA Standard Construction Contract with modifications that are tailored to specific project requirements.

As the final design phase evolves, the successful CM/GC Entity will be required to provide detailed pricing updates and options evaluations. When the design of a scope of work achieves 60% and 90% completion, the MBTA and the CM/GC Entity will develop an Interim GMP for construction of that scope. Assuming the parties agree on the Interim GMP for that scope once design has reached 100% completion, the preconstruction phase services will be reviewed and a reallocation made dividing the CM/GC team to the personnel continuing preconstruction services and the personnel dedicated to the delivery of that component or scope of work. The CM/GC Entity will then function like a general contractor and will be responsible for completing the work on schedule at, or below, the guaranteed maximum price for that scope.

4.03 **PRECONSTRUCTION FEE**

MBTA and CM/GC will negotiate a cost reimbursable contract for Preconstruction Services. The scope of work shall include all anticipated assignments for constructability reviews, value engineering, cost estimating, development of GMPs, risk management, options analysis, and all other preconstruction phase services. The MBTA expects the initial preconstruction services period to last for 18 months.

The CM/GC’s preconstruction services will be will be reimbursed for direct labor, based upon the actual hours worked and the employee’s hourly rate (for direct salary only), with a Preconstruction Multiplier
of 50% applied to the direct labor costs. No direct costs will be reimbursed except for travel, lodging, and meal costs associated with CM/GC employees, approved by the MBTA, to perform work away from their base office or location that is not in Massachusetts. Travel expenses will be limited similar to the standard provisions on MBTA professional services contracts.

The MBTA anticipates many of the CM/GC staff providing preconstruction services will transition some or all of their time to the management of the construction work. The MBTA will continue to compensate the CM/GC for the individual’s preconstruction service efforts. However, compensation for the individual’s efforts on the construction contract(s) will be considered in the Interim GMP. The MBTA and CM/GC will establish a strategy for allocating the labor charges to the appropriate contract when the individual’s efforts are in transition.

MBTA anticipates co-locating key members of the CM/GC with the Design Consultant, and the PM/CM during the preconstruction phase. Co-location has been shown to be a key element in the success of past CM/GC projects. The Project Office and furniture for the CM/GC team will be provided by the MBTA, currently planned through the Design Consultant. The CM/GC will not be required to compensate the MBTA or the Design Consultant for their share of the Project Office costs. The CM/GC will be responsible for their computers, office supplies, and other miscellaneous costs.

The CM/GC Entity will agree to terms of the preconstruction contract and fee. Increases to the CM/GC preconstruction scope of work, fee (using the Preconstruction Multiplier), and time of performance (i.e. duration) will be contracted with supplemental agreements. The CM/GC and MBTA will jointly identify who from the preconstruction services team will continue to perform preconstruction services and who will move on to the construction services, where they will be reimbursed as part of the Interim GMP work.

The CM/GC will not be entitled to recover any lost costs for the actual expenditures or the preconstruction services or any lost profits for the costs of the future construction phase services contract should a GMP or Interim GMPs not be successfully agreed upon with the MBTA for any reason.

No home office overhead costs, or corporate principle salary costs, will be allowed for the preconstruction phase. The costs are considered to be included in the Preconstruction Multiplier, whether the multiplier is high enough to cover the costs or not.

The GLX project is expected to contain several phases and several GMP’s. In this case the MBTA and the CM/GC will determine a payment structure that allows for some selected staff to continue with the preconstruction services after the first GMP is agreed upon. The basis of the initial preconstruction phase will serve as the basis for this continuation of preconstruction services.

4.04 PRELIMINARY EVALUATION (DESIGN PHASE COOPERATION, COORDINATION, & COMMUNICATION)

Once under contact, the CM/GC will provide a preliminary evaluation of the MBTA’s most current project requirements, including a review of all updated drawings, background data, commitments, criteria, priorities, time constraints, and physical and financial limitations.

- The CM/GC will be responsible for becoming thoroughly familiar with the work sites, and conditions surrounding the sites.
- The CM/GC will review other site data such as access, inspection reports, and location of utility services, security, surveys, soils information, and other relevant information.
• The CM/GC will participate in a series of kick-off meetings with Project Team to develop a common appreciation of the scope and goals of the Project and to outline how the estimating organization, method of measurement, basis of payment, working limitations, innovative practices, and possible means and methods will be all part of a collective risk mitigation strategy.

• A full preliminary evaluation report will be due to the MBTA within 60 calendar days after the NTP, to be updated monthly thereafter, for the entire pre-construction phase. This report is to contain the initial evaluation of the program cost estimate and then the construction cost estimate generated by the CM/GC, risk mitigation initiatives, a CPM schedule, constructability aspects, a narrative on the means and methods of the critical components of the project, options analysis, and a log of all suggested changes to the design documents.

4.05 CM/GC’S PERFORMANCE & LIMITATIONS

The CM/GC, to further the interests of the MBTA, will perform the services required by and in accordance with the contract, to the satisfaction of the MBTA, exercising the skill and judgment required for the project. The CM/GC will, at all times, perform the required services consistent with sound and generally accepted construction management and construction contracting practices.

The CM/GC’s services are those necessary and appropriate to successfully complete the Project in a timely and cost-effective manner and will include, but are not limited to, those described or specified herein. The CM/GC will provide all requested services according to the capabilities reflected in its SOQ, inclusive of those described in the RFP, the construction documents, the contract, and all amendments to the contract. The services described or specified will not be deemed to constitute a comprehensive specification having the effect of excluding services not specifically mentioned. Unless otherwise provided in the contract, or as agreed in writing between the MBTA and the CM/GC, the form and content of all systems, submittals, reports, and/or studies will be subject to the MBTA’s prior approval, and the CM/GC will submit such materials to the MBTA for approval prior to implementation. The MBTA’s approval thereof shall not limit the MBTA’s right to thereafter require reasonable changes or additions.

The CM/GC’s preconstruction services are not intended to include the performance of design work. The MBTA’s Design Consultant will remain responsible for the Engineering of all aspects related to finalization of the design documents and will remain the Designer-of-Record throughout the construction phase. During the construction phase, the CM/GC’s responsibilities for design are those typical for the MBTA general contractor (DBB) services (such as formwork design, temporary support-of-excavation design, etc.).

The MBTA will perform audits in accordance with their standard procedures for traditional DBB projects, including claims. In addition, audits will be performed in regard to the applicability of the costs presented by the CM/GC for the Preconstruction Phase Services. All contract documents, created and maintained by the CM/GC Entity, are subject to audit by the MBTA or appointed designee. Other governmental agencies, including FTA (or its agents) and the Office of the Inspector General, have the right to perform audits.
4.06 ADDITIONAL SUPPORT SERVICES

The CM/GC will consult with, advise, assist, and provide recommendations to the MBTA, the PM/CM, and the Design Consultant on all aspects of the planning, efficiency, innovation, sequencing, pricing, and schedule related aspects of the scope of the Work. The CM/GC will also provide recommendations on construction feasibility; actions designed to minimize adverse effects of labor or material shortages; time requirements for procurement, installation and construction completion; and factors related to construction cost including estimates of alternative designs or materials, preliminary budgets and possible economies.

Refer to Section 4.23 for additional support services associated with public agency or community meetings.

4.07 CM/GC HARMONY/ COLLABORATION

The CM/GC will be required to exert every reasonable and diligent effort to assure that all labor employed by the CM/GC and its subcontractors shall work in harmony with and be compatible with all other labor being used at all times for the duration of the project. The CM/GC further agrees that this provision will be included in all subcontracts of the subcontractors as well as the CM/GC's own contract; provided, however, that this provision shall not be interpreted or enforced so as to deny or abridge, on account of membership or non-membership in any labor union or labor organization, or the right of any person to work.

Should the CM/GC deviate from its stated diverse workforce utilization and approved DBE Program, DBE participation goals, and DBE Subcontracting Plan, MBTA shall have the right to find the contractor in default, and to terminate the contract based upon default. The CM/GC will be afforded adequate opportunity to remedy a deviation from goals and plan before finding the CM/GC in default.

The MBTA, the PM/CM, the CM/GC Entity, and the Design Consultant have the common goals of producing a quality project within the budget, maximizing the value of the work to the MBTA, achieving completion without undue inconvenience to the public, producing the work at a reasonable cost to the MBTA, and with a reasonable compensation to the CM/GC and the Design Consultant. In promoting these goals, the CM/GC will cooperate and collaborate with the Design Consultant in reviewing design documents, preparing cost estimates, limitations of operations, sequencing suggestions, constructability reviews, and other items required by the CM/GC’s contract. The CM/GC will work with the MBTA, and other Agencies as necessary when considering alternatives. The CM/GC will actively provide input for alternatives, improved methods, and other ways to maximize the quality of the project. The CM/GC will maintain constant communication with the PM/CM, the Design Consultant and the MBTA.

During development of the Interim GMP prices, all communication with the Independent Cost Estimator (ICE) will be strictly restricted through the MBTA. Any verbal or written communication, between the CM/GC Entity (including any sub-contractors or suppliers) and the ICE will be strictly prohibited unless approved and monitored by the MBTA.
4.08 CHANGES TO THE CM/GC TEAM

Any changes to key CM/GC team members that were identified in the Request for Proposals must receive written approval by the MBTA. Advance notice, with a suitable replacement plan, will be provided to the MBTA. MBTA reserves the right to remove any member of the CM/GC team due to performance or insubordination.

4.09 VALUE ENGINEERING (VE)

During the Preconstruction Phase, the CM/GC will participate and provide support in Value Engineering studies with the MBTA, PM/CM, and the Design Consultant. VE studies within the project are planned to be facilitated by the Owner’s Representative. The CM/GC will follow Certified Value Specialist standards to support the generation of a report by the OR that will be presented to the MBTA. Results of the study will be documented in a report that will include an explanation provided for all recommendations from the VE team that are not able to be adopted.

Innovative cost saving concepts developed during through VE during the Preconstruction Phase may be incorporated into the respective Interim GMP contract documents at the MBTA’s sole discretion. Cost savings as a result of the CM/GC’s participation in the studies will not be shared.

Regarding the contractor’s innovation during the Construction Phase, the CM/GC may submit a Value Engineering Proposal (VEP), which is essentially a contractor initiated cost reduction Change Order. As noted in the Article 2.4 of MBTA Standard General Conditions, the contractor’s innovative cost savings during the construction phase is shared with the contractor at 50% of the net savings of each proposal. The MBTA will limit the sharing of the savings to VEPs that reasonably could not have been contemplated of anticipated during the Preconstruction Phase. A benefit of CM/GC contracting is contractor collaboration during the preconstruction phase. Withholding innovative ideas until the construction phase is not viewed favorably and those savings will not be shared.

Determination of the decrease of the Interim GMP shall consider the decrease in the cost of performance and any ascertainable collateral costs to the MBTA, including the Design Consultant costs, which must reasonably be incurred as a result of the application of the VE Proposal. The decrease in the cost of performance may include shared risk items, to the extent specifically identified in the GMP Contingency, if the VE Proposal is mitigation for the shared risk item.

4.10 INDEPENDENT COST ESTIMATE

The MBTA will procure and contract with an Independent Cost Estimator (ICE) that has a demonstrated ability to perform production based cost estimates. These estimates, showing all quantities (including temporary materials), anticipated production rates, labor prices, material prices, and equipment prices, are to be generated by the ICE at 60%, 90% and at completion of design for a particular scope of work to demonstrate the direct costs of the project. Additionally, these estimates will generate a cost for all indirect costs such as project management, supervision, field office support, mobilization costs, construction utility costs, insurances, profits, etc. The ICE’s detailed cost estimates requirement will be developed and performed independent of the PM/CM or the Design Consultant, but will be set up in a similar manner to the PM/CM and CM/GC estimates. The estimate prepared by the ICE will be used to set up, compare, and evaluate the Interim GMP amount.
The ICE estimate will be held “in the blind” during the Interim GMP cost estimate reconciliation process. The ICE estimate will be disclosed after the successful or unsuccessful negotiation of the Interim GMP. The MBTA will establish protocols and procedures for how the ICE will be held in the blind.

4.11 ENGINEERS ESTIMATE

The MBTA GMP process involves three detailed construction cost estimates. The MBTA will obtain an Engineer’s Estimate from the PM/CM, which will be a detailed, production rate based construction cost estimate (a.k.a. ‘bottoms-up-estimate’) prior to the estimate calibration meetings (see below) and prior to any GMP reconciliation. This construction cost estimate will be compared to the CM/GC’s estimate as part of the estimate calibration meetings. The Independent Cost Estimate (ICE) will also prepare an independent construction cost estimate, will participate in the estimator calibration meetings, but will hold their estimate in the blind to be used in the review of the final Interim GMP reconciled between the MBTA and the CM/GC. Both of these estimates will be strictly confidential and will be reconciled together, prior to the final steps of the Interim GMP acceptance. In some cases, the MBTA’s Project Controls Unit, and/or the Owner’s Representative will be required to assist with the reconciliation process by providing a review of the major variance of each of these estimates.

The PM/CM cost estimate will be used to reconcile with the CM/GC’s milestone submittal estimates, as well as reconciling the Interim GMP amount if the CM/GC’s price is greater than 110% of the ICE.

4.12 ESTIMATOR CALIBRATION MEETINGS

As part of preconstruction phase services, the CM/GC, the PM/CM, the Design Consultant, the MBTA and the Independent Cost Estimator will hold regular meetings to determine the cost estimate organization and break-down. An early activity in the GMP estimate development for a scope of work is establishing quantities and production rates. Labor and equipment rates can also be reconciled between the teams during this time frame.

Topics of discussions during a series of cost estimate calibration meetings include the cost estimate narrative, the limitations of operations, the quantities, the planned method of measurement and basis of payment, and a description of the planned means and methods. The actual comparison of PM/CM and CM/GC prices occurs at each milestone submittal in development of the Interim GMP. This methodology has been proven beneficial in allowing all parties to first focus on the elements of the cost estimate that are to be better defined before pricing comparisons are made.

At each estimate phase, subcontractors will be solicited to supply bid prices for their respective work by the CM/GC. A minimum of three (3) sub-quotes are typically required to be able to make a reasonable comparison that the best “value” was achieved. An analysis will be performed by all estimating teams with “spot” verification and all teams collectively agreed to use the pricing that would be the most beneficial to the project.

MBTA expects the subcontractor pricing for parts of the work scope to be updated through each milestone submittal or reconciliation stage leading to the finalization of the expected Interim GMP. Upon completion of the process, the CM/GC and the PM/CM will submit their final estimate to the MBTA for comparison to the estimate compared by the ICE. The pricing risk is similar to that of traditional DBB project negotiations.
4.14 COORDINATION WITH THE DESIGN AND THE PROJECT MANAGER

The MBTA has contracted separately with a Design Consultant to provide engineering services for the entire project. All communications and submittals by the CM/GC to the MBTA will be issued to or made through the PM/CM unless otherwise directed by the MBTA’s Project Manager. The Project Manager will have the authority to establish procedures, consistent with this contract, to be followed by the PM/CM, the Designer and the CM/GC, and to call periodic conferences, to be attended by the CM/GC, and the CM/GC’s subcontractors, throughout the term of the contract.

4.15 DESIGN DOCUMENT REVIEWS

The CM/GC will meet with the Project Team as required to review the designs as it develops. The CM/GC will thoroughly familiarize itself with the evolving documents through the various design phases.

The CM/GC will routinely conduct constructability and bidability reviews of the drawings and specifications as necessary to satisfy the needs of the MBTA. The reviews will attempt to identify all discrepancies and inconsistencies in the construction documents especially those related to clarity, consistency, and coordination of work of subcontractors and suppliers.

As a preconstruction phase service, the CM/GC will follow the development of design through final construction documents, reviewing the in-progress design development documents, and familiarize itself thoroughly with the evolving architectural, civil, mechanical, plumbing, electrical, and structural plans and specifications as necessary. Upon request by MBTA, the CM/GC will assist the MBTA in preparing comparative life-cycle studies of ownership, operating, and maintenance costs for each schematic design alternative considering costs relating to efficiency, usable life, maintenance, energy, and operation.

The CM/GC will continuously monitor, and document, changes in the design that would impact cost or schedule. The CM/GC will also continuously monitor the impacts of these changes on the project schedule and recommend adjustments in the design documents or construction bid packaging to ensure completion of the Project in the most expeditious manner possible. The CM/GC will advise and assist the PM/CM, and represent the MBTA, if requested, in dealing appropriately with all applicable laws and with local utilities, communications, and other related infrastructure issues, as necessary.

In conjunction with the CM/GC’s “over-the-shoulder” review assistance during the design, a formal design review process will be established. The MBTA’s representatives to the Design Review Team consists of construction and technical representatives from each of the design groups associated with the design (commuter rail, green line, highway, traffic, bridge, and materials). Reviewers may be either consultants or the MBTA in-house staff.

As part of this Design Review Team, the CM/GC will provide constructability comments, feasibility and practicality of any proposed means and methods; selected materials, equipment, and labor; material availability; site improvements; earthwork, and foundation considerations; coordination of the drawings and specifications: verification of quantities, etc. The CM/GC should also provide cost effective alternatives.
4.16 CONSTRUCTABILITY REVIEWS

The CM/GC will evaluate whether:

- There are any conflicts in the manner in which any materials are designed to be installed (including equipment and site access limitations).
- The design has taken into consideration, all efficiency issues concerning access and entrance to the site, work restrictions, environmental commitments, laydown and storage of materials, staging of site facilities, construction equipment mobilization, and all other construction efficiency issues.
- The drawings and specifications are free of conflicts and are configured to enable efficient construction.
- Design elements are standardized.
- Materials chosen are suitable and efficient for the intended use.
- Module/preassembly has been considered and optimized to best facilitate fabrication, transport and installation.
- The design promotes accessibility of personnel, material and equipment, and facilitates construction under adverse weather conditions.
- Sequences of work, phasing, and interfaces are practicable and free of conflict.
- There has been adequate sub-surface investigation to the extent possible to avoid differing site conditions once under construction.

4.17 BIDABILITY REVIEWS

The CM/GC will check cross-references on drawings and in the specifications, and in general evaluate whether:

- The drawings and specifications are sufficiently clear and detailed to minimize ambiguity and to reduce scope interpretation discrepancies.
- Named materials and equipment are commercially available and are performing well or otherwise, in similar installations.
- The design adequately represents existing conditions.
- Specifications include alternatives in the event a requirement cannot be met in the field.

The results of the reviews, and the constructability reviews (above) will be provided to the MBTA in formal, written reports clearly identifying all discovered discrepancies and inconsistencies in the drawings and specifications with notations and recommendations made. The CM/GC will regularly meet with the MBTA, the PM/CM and the Design Consultant to discuss and review these reports.

The CM/GC's reviews will be from the CM/GC's perspective, and though will serve to reduce the number of changes during the construction phase, responsibility for the Drawings and Specifications will remain with the Design Consultant, not the CM/GC.

4.18 NOTIFICATION OF VARIANCE OR DEFICIENCY

The CM/GC will assist the Design Consultant in ascertaining if the construction documents are in accordance with applicable laws, statutes, ordinances, building codes, rules and regulations. If the CM/GC recognizes that portions of the construction documents are at variance with applicable laws, statutes, ordinances, building codes, rules, and regulations it will promptly notify the Design Consultant and the MBTA in writing, describing the apparent variance or deficiency.
4.19 ALTERNATIVE EVALUATIONS / OPTIONS ANALYSIS – PRIOR TO GMP

During the finalization of design (i.e. from 30% to 100% development), the CM/GC will routinely identify and evaluate options, using value engineering principles and comprehensive analysis. The CM/GC will perform a cost benefit analysis of the viable alternatives/options and submit a report to the MBTA. The MBTA, the PM/CM and the CM/GC will collectively decide which alternatives/options will be incorporated into the Project. The Design Consultant will have full responsibility for the incorporation of the alternatives/options into the drawings and specifications. The CM/GC will also include the cost of the chosen alternatives/options into the cost estimate, construction schedule, and any GMP proposals. This process is one of the most significant expectations of the CM/GC. The MBTA will be monitoring the pace and effectiveness of both the CM/GC and the Design Consultant to generate these innovative/efficient ideas.

Additional design costs will be considered in the cost benefit analysis submitted for acceptance.

4.20 PROJECT MEETINGS

The CM/GC, the PM/CM, the MBTA, and project team members will meet regularly as the progress of the projects require, but in no case less than every week for the project, to review and agree upon detailed construction schedule, critical items, cost and budget related issues, the work performed to date, and to establish the controlling items of work for the upcoming month.

The CM/GC will attend additional weekly Project Team meetings which may include, but are not limited to, weekly project management meetings, project workshops, special project meetings, contract documents rolling reviews and partnering sessions.

4.21 DESIGN MEETINGS / PROJECT PROGRESS MEETINGS

The CM/GC, the PM/CM, the Design Consultant and the MBTA will attend all regular meetings. Project progress meetings will be held at least 2 times per month more likely weekly. The PM/CM will take meeting notes of the Project Progress Meetings and distribute them within 3 days of the meeting. The Design Consultant hold design specific meetings that the CM/GC may be asked to attend. The Design Consultant will take minutes of the Design Meeting and distribute them within 3 days after the meeting. The Project Team will promptly review and provide any comments on the minutes to use at the next meeting. These design meetings will present general project progress, address design options that arise during the design process, and will help to provide input and direction from the MBTA engineering and operational maintenance staff. Project meetings will be conducted throughout the design portion of the project, to complement the project schedule and design review meetings. The CM/GC will participate in each meeting, report on the state of the costs estimates, project construction schedule, constructability reviews, and provide pertinent input when required.

4.22 LEFT BLANK

4.23 PUBLIC AGENCY AND COMMUNITY MEETINGS

The CM/GC, when requested by the PM/CM, the MBTA or at its own initiative, if approved by the MBTA, will attend, make presentations and participate as may be appropriate in public agency and community meetings relating to the project. The CM/GC’s prime involvement during these public agency and community meetings will be to address construction scheduling and phasing, construction staging and
access plans, construction impacts and mitigation issues. The CM/GC will assist the Design Consultant in the preparation of drawings, schedule diagrams, budget charts, and other materials describing the project, when needed for any such meetings.

4.24 TEAM PARTNERING

The MBTA is planning on using a formal Partnering process on the GLX Project. At the start of the CM/GC contract, all members of the project team will attend an initial partnering meeting involving the PM/CM the Design Consultant and subconsultants, the CM/GC and subcontractors, and the MBTA and other agencies required by the project. The meeting is expected to take place within 30 working days after the CM/GC’s Notice to Proceed.

The partnering meeting will concern:
- Development of common goals for the project
- Procedures designed to maximize cooperation and collaboration between the PM/CM, the Design Consultant, the CM/GC, and the MBTA.
- Communication between Design Consultant and the CM/GC regarding constructability, value analysis, and other collaborative efforts.
- Schedules for submittals such as staging plans, specifications, cost estimates, and analysis of alternatives.
- A partnering escalation ladder.
- Public involvement.
- Such other matters as may be appropriate.

Partnering Meetings are planned for intervals of at least two times/year.

The direct expenses associated with partnering (i.e. facility and facilitator) will be borne by the MBTA.

Partnering can be used for the resolution of disputes in addition to that noted in Section 5.09.

4.25 PREPARATION OF GUARANTEED MAXIMUM PRICE (GMP) PROPOSALS

As part of preconstruction phase services, when the construction documents for a scope of work are sufficiently complete to establish a price for the project (or portion of the project) and the estimate reconciliation process is complete, the CM/GC will establish and submit a formal Interim GMP proposal to the MBTA in writing, guaranteeing the maximum price not to be exceeded for the scope of work.

As part of the process to achieve acceptance of an Interim GMP, the MBTA anticipates several Interim GMP proposals from the CM/GC may be required to allow for development, exchanges, work-sessions, estimate calibration meeting, and review time. As noted above, the GMP proposals will be the sum of the anticipated cost of all of the work, and include overhead costs, along with the profit and markup.

Each Interim GMP is expected to include certain allowances and a GMP Contingency for changes in the agreed upon scope. If the allowances or GMP Contingency are not fully utilized, the unspent amounts remain with the MBTA. The CM/GC guarantees to complete the scope of work for that Interim GMP or the final approved GMP amount (i.e. the contract amount for the construction phase contract) and agrees to be solely responsible for any difference between the actual cost of work and the GMP amount, provided that no extra work orders were previously approved by the MBTA.
The CM/GC will meet with the PM/CM, the MBTA and the Design Consultant to review any Interim GMP proposal(s) and the written statement of the assumptions which form its basis. In the event the MBTA, the PM/CM or the Design Consultant discovers inconsistencies or inaccuracies in the information presented the CM/GC and PM/CM will make adjustments as necessary to the estimate, its basis or both.

If design changes are required during the review and reconciliation of Interim GMP proposals, the MBTA will authorize and request the Design Consultant to revise the construction documents to the extent necessary to reflect the agreed-upon assumptions and clarifications contained in the final approved Interim GMP proposal. Such revised construction documents will be furnished to the CM/GC. The CM/GC will promptly notify the Design Consultant and the MBTA if any such revised Interim GMP construction documents are inconsistent and with the agreed-upon assumptions and clarifications. Upon signing of the Interim GMP contract, the CM/GC will take full responsibility for the estimate basis and assumptions that were provided.

At the sole discretion of the MBTA, some construction contract terms may be negotiated for Interim GMP based on the overall benefit to the MBTA and the Project.

Compensation for construction services within an Interim GMP will be as follows:

- For Lump Sum Items in the Interim GMP: Paid as a lump sum
- For Allowance items in the Interim GMP: Paid based on the actual expenditures (T&M)
- For Unit Price items in the Interim GMP: Paid based on the field quantity at the agreed upon unit price

Each Interim GMP will include a Schedule of Values (SOV) that may include one or several units of payment. The SOV will be paid based on the approved cost and resource loaded CPM schedule.

4.26 EXTRA WORK ORDERS / AMENDMENTS TO THE GMP

One of the main benefits of the CM/GC concept is to improve the ‘completeness’ of final design and the accuracy of the final design. The most significant benefit of this collaborative team effort is the reduction of costly changes during construction. Extra Work Orders for a CM/GC contract are formal/written changes to the contract that increases (or decrease) costs and/or increases (or decrease) the schedule to perform. These changes are prompted by necessary or desired modifications to the contractual requirements, specifications, or drawings, which could not have been reasonably anticipated during the pre-construction phase, and/or development of Interim GMPs. An extra work order, or amendment to the contract, will only be issued for elements that are not in conformance with the GMP documents, including assumptions, environmental commitments, narratives, basis statements, and/or the complete listing of contract documents at the execution of the approved GMP. The introduction of an extra work order must first be clearly justified by the CM/GC in writing, and must be authorized by the MBTA. Extra work items as described in Section 4.28 will be processed as a Change Order, funded from the GMP Contingency within the Interim GM, provided adequate funds exist within the GMP Contingency. Extra work outside those described in Section 4.28 would be amended to the Interim GMP by adding the scope of work and increasing the Interim GMP amount.

All Extra work orders will need to include a production based cost estimate that shows detailed costs for labor materials, equipment. Furnishing summarized unit prices will not be acceptable to the MBTA in the approval of extra work orders and this process will be governed by the MBTA procedures for changes and extra work orders.
A Project Schedule Update and justification of adjustments will be included with Extra Work Order proposals from the CM/GC that reflects the scope of work shown in the current set of design documents upon which the Extra Work Order proposal(s) is based.

No GMP or Interim GMP Contract Amendments will be issued unless the MBTA has committed funds for the work. The MBTA can continue to execute GMP Contract Amendments up to the funded amounts and additional GMPs can be issued as more funds become available.

4.27 UNSUCCESSFUL GMP NEGOTIATION

At the completion of the cost estimate calibration meetings, the CM/GC, PM/CM, and ICE will provide their estimates of probable costs to the MBTA for evaluation and comparison. The CM/GC’s price will be compared to Independent Cost Estimator’s (ICE) estimate. If the CM/GC’s price is less than 110% of the ICE, then the proposal may be accepted and the construction contract may be executed. In the event that the GM/GC proposal is greater than 110% of the ICE, the MBTA may elect to implement a recovery method at the sole discretion of the MBTA Assistant General Manager for Design and Construction. A report will be filed with the Office of the Inspector General (OIG) documenting the reasoning and findings for these proposed actions.

RECOVERY METHODS:

1.) Recovery Method 1 - CM/GC pricing resubmission - The MBTA may allow the CM/GC to resubmit their pricing and Interim GMP documentation basis, with the specific goal of reducing the proposal price to an acceptable threshold (i.e. less than 110% of the ICE).

2.) Recovery Method 2 - GMP Estimate Reconciliation Workshop – The MBTA may facilitate an estimate reconciliation workshop. The purpose of the estimate reconciliation meeting is to evaluate the major variances between the Interim GMP estimates generated by the CM/GC and the ICE. All aspects of the GMP documentation and estimate, including basis, production rates, quantities, risk, crews, methods, are to be open for discussion. If the MBTA determines a solution that changes the values of the cost estimates, documenting a fair-and-reasonable price to proceed into construction, the MBTA will present a report to the MBTA Board of Directors for approval to proceed with the Interim GMP and submit the findings to the OIG. The workshop will be limited to 3 business days or less, and may be extended at the sole discretion of the MBTA Assistant General Manager for Design and Construction.

UNSUCCESSFUL NEGOTIATIONS AFTER RECOVERY:

In the event the MBTA and the CM/GC fail to successfully negotiate a GMP or Interim GMP, then:

1. The CM/GC shall lose the right to construct the work related to the failed Interim GMP and shall not be eligible to rebid the work. If the CMGC’s subcontractors, however, were not significantly involved in determining the price for the unsuccessful Interim GMP negotiation, they shall be eligible to participate in a re-procurement of the work, whether by design-bid-build in accordance with Mass. Gen. Laws c. 30, ch. 39M or any other lawful procurement method selected by the MBTA; or

2. The MBTA may re-procure the work related to the unsuccessful Interim GMP by any other lawful procurement method; or
3. The MBTA may terminate the entire CM/GC process for GLX and procure the remaining elements of the Project by any other lawful procurement method; or

MBTA will provide written documentation of the reasoning behind the termination of the Interim GMP discussions and will take possession and ownership of all documents produced by the CM/GC for that work. In this event, the CM/GC will not perform, nor be compensated for any preconstruction services beyond the date of the termination of the Interim GMP discussions.

4.28 CONTINGENCY / ALLOWANCES

GMP Contingency. The GMP Contingency is an allowance that will be tailored to the scope of work for each Interim GMP that may not have been finalized/defined/specified, as part of the finalization of the drawings and specifications. The GMP Contingency will be approved and used at the sole discretion of the MBTA. The amount of GMP Contingency will be approved by the MBTA prior to the execution of the Interim GMP and will be based upon risk modeling. The GMP Contingency may only be used to pay for said defined elements. For example, the CM/GC can’t elect to use $200,000 of the GMP Contingency amount set aside to address a portion of the bridge approach work, which had yet to be designed at the time of GMP, to pay for quantity overruns of concrete that was underestimated at the time of GMP. When establishing the GMP Contingencies, the CM/GC may request and provide the MBTA adequate reasoning as to why they are to be allowed. The utilization of any portion of the GMP Contingency will be processed similar to the procedures used for change orders, must first be clearly justified by the CM/GC in writing, and must be authorized by the MBTA. If the GMP Contingency is not fully utilized, the unspent amounts remain with the MBTA.

The GMP Contingency is intended for the following:
   a) Design changes not represented in construction documents used as the basis of fee (i.e. costs as a result of design changes between 90% and PS&E,
   b) Quantity overruns,
   c) Minor design changes
   d) Other identified risks, and
   e) Shared risk Items.

MBTA Contingency. The MBTA Contingency (a.k.a. Owner controlled) will be an amount determined by the MBTA and is included in the overall program budget. The purpose is to properly account for potential increased cost due to changes in the work, made at the discretion of the MBTA, that were not anticipated by the MBTA and are beyond the control of the MBTA and the CM/GC at the start of the program. The MBTA Contingency is an overall program budgeting reserve that the MBTA establishes and maintains exclusive from the CM/GC.

The MBTA Contingency is a fund allocation intended to cover the following:
   a) Owner directed design or scope changes,
   b) Design errors and omissions, and
   c) Unforeseen conditions, not noted in GMP Contingency
4.29  NOTICE PROVISIONS

When the CM/GC has reason to believe that impacts have, or will, cause a change to the contract that is not accounted for in the GMP, and that could not have been reasonably anticipated during the CM/GC’s preconstruction phase services, it will be the CM/GC’s responsibility, to provide the MBTA with sufficient advance written notification, and in no case less than 14 days from the start of work, a reasonable opportunity to avoid such costs. No change or claim will be reviewed/allowed unless the CM/GC has provided the detailed notice as specified by Mass General Laws and herein, nor shall it be allowed if existing conditions have been disturbed prior to the MBTA’s ability to investigate the apparent changes.

4.30  PRELIMINARY GMP SCHEDULE

At the time of submission of an Interim GMP proposal, the CM/GC will submit a schedule to meet the MBTA’s goals for the substantial completion date of the scope of work under that Interim GMP. The CM/GC will plan, schedule and execute all aspects of the work and will be responsible for coordinating its activities with all parties who are directly impacted by the work. The CM/GC will document and report all work in accordance with the requirements of the Contract Documents.

4.31  COST ESTIMATES & ESTIMATE CALIBRATION MEETINGS

Within 30 calendar days of the date of the Notice to Proceed, the CM/GC will develop and submit an overall program Cost Model to the MBTA for review. The CMGC will review and use all available information regarding the design and scope of the project to develop the model. The cost model will be prepared in a format agreed upon by the MBTA, PM/CM, and the CM/GC.

Once approved by the MBTA, the Cost Model will be populated and kept current as the design progresses throughout the Preconstruction phase and as Interim GMPs are constructed. The Cost Model will represent the complete functional project’s construction costs. The Cost Model will not include the CM/GC’s preconstruction services fee, the Design Consultant fees, the cost of land, right of way, or other costs that are the responsibility of the MBTA. The CM/GC will communicate to the Project Team any assumptions made in preparing the Cost Model.

Between milestone estimates, the CM/GC will provide and update a construction cost report, on a monthly basis or when requested by the MBTA, that identifies the upward or downward movements of costs due to value engineering or scope changes. It will be the responsibility of the CM/GC to keep the MBTA, the PM/CM and the Design Consultant informed as to the changes in costs relative to previous estimate versions and the MBTA’s overall budget.

As the design progresses, the CM/GC will be required to provide detailed construction cost estimate and a written narrative basis for the scope associated with each Interim GMP. The timeframe for the estimate will be established by the MBTA based on the size of the scope of the work. Small Interim GMP packages will likely be within 30 days, while larger packages will be allotted additional time. The CM/GC cost estimates will be submitted to the MBTA and PM/CM, but will not be provided to the Independent Cost Estimator until the MBTA determines it is appropriate to do so. However, the MBTA, PM/CM, and CM/GC will work collectively to develop a cost estimate narrative, the limitations of operations, the quantities, the detailed description of the planned method of measurement and basis of payment, and the planned production rates to both the PM/CM and the Independent Cost Estimator for discussion at what is expected to be a series of Estimate Calibration meetings.
The CM/GC and the PM/CM will reconcile any disagreements on the basis of the estimate as part of the reconciliation process. If no consensus is reached; the MBTA will make the final determination and what will be done as a course of action.

Each cost estimate submitted will be accompanied by backup documentation which will include the following:

- Detailed prices and quantity take-offs, including all calculations to arrive at quantities.
- Material costs, equipment costs, labor costs, full loaded hourly labor rates (including employee benefits, payroll taxes and other payroll burdens).
- The detailed total cost for any portion of the work to be performed by subcontractors. The pricing for subcontractor work shall include subcontractor labor, materials, equipment, and general conditions (including subcontractor bonds and insurance). Subcontractor quotations shall be supported with quantities, qualifiers and assumptions appropriate for the elements being priced. The subcontractor pricing does not need to break out the overhead and profit. (The Interim GMP escrow documents shall contain the selected subcontractor quote obtained through the bid process.)
- Copies of quotations from subcontractors and suppliers.
- Production rates for all operations.
- Transportation and other facilities and services necessary for the proper execution of the work, whether temporary or permanent, and whether or not incorporated or to be incorporated into the work.
- All fixed equipment, site improvements, and utility and equipment installations.
- CM/GC Multiplier
- Project overhead, general condition costs, indirect costs.
- GMP Contingencies
- Allocated general and administrative expenses not accounted for in the CM/GC Multiplier, such as bonds, non-exempt taxes, and insurances.
- Memoranda, narratives, consultant’s reports, and all other information included by the CM/GC to arrive at the price shown in the Cost Model or GMP. Include a list of all assumptions and description and breakdown of all allowances.

The CMGC Entity shall develop detailed bidding information and provide such information to each subcontractor on the list of approved subcontractors and invite each approved subcontractor to submit a bid for the work. The CMGC Entity shall present a list of the bids submitted by approved subcontractors to MBTA. The CMGC Entity shall indicate the bidders who are selected to be awarded a subcontract. Should the CMGC decide that the low bidder is non-responsive, or that the CMGC finds reasonable cause not to award to the lowest sub-contracted bid, the CMGC will present all detailed findings to the MBTA and it will be the MBTA’s sole discretion to allow that the next lowest MBTA approved sub-contractor be awarded the sub-contracting bid.

4.32 LONG LEAD ITEMS / SYSTEM PROCUREMENTS

The CM/GC will recommend to MBTA a schedule for procurement of long-lead time items which will constitute part of the Work as required to meet the Project schedule. These items will be procured by the CM/GC upon execution of an Interim GMP contract amendment.

Provisions for materials stored or on hand will be similar to Article 1.8 of Section 01150 of the MBTA Standard General Conditions/Specifications.
The CM/GC will recommend a procurement strategy to the MBTA for the buyout of the signal and communications elements of the project on a competitive basis while providing single system responsibility for these items.

4.33 CONSTRUCTION MANAGEMENT PLAN

The CM/GC will prepare and submit a Construction Management Plan (CMP) to the MBTA. The CM/GC’s initial CMP will be required 45 days after NTP. Afterwards, the CMP will be required to be updated monthly until MBTA approval. The CMP shall include the following aspects:

1. The organizational chart of the CM/GC team
2. A matrix summarizing each Project Team member’s responsibilities and roles
3. Communications protocol
4. Project milestone dates and the Project Schedule, including the broad sequencing of the design and construction of the project
5. A plan for cost control and monitoring
6. Change management protocol – during preconstruction and construction
7. A listing of important investigations, to be undertaken/supplemented
8. Construction staging and access plans
9. Alternate strategies for fast-tracking or phasing the construction
10. A list of possible work segments to be constructed under multiple GMPs and reasons (time savings).
11. Anticipated sub-agreements to be awarded to subcontractors and suppliers for the project construction
12. Quarterly status reports to confirm implementation and compliance with DBE and Workforce Utilization Plan
13. Permitting finalization and compliance strategy
14. Safety and training programs
15. Construction quality control
16. Construction security plan
17. Listing of deliverables that the CM/GC and the PM have included in the preconstruction phase services
18. Risk assessment and monitoring plan
19. Listing of all critical submittals and shop drawings
20. Traffic management plans
21. Schedule management plan
22. Basis / methodology for monthly cash flow projections
23. Cost accounting and records retention procedures
24. Public outreach initiatives – with schedule of deliverables/meetings
25. Start up and testing plans

The CM/GC will update and add detail to its previous version of the CMP to keep it current throughout the Preconstruction Phase, so that the CMP is ready for implementation at the start of the Construction Phase. The update/revisions will take into account:

1. Revisions in drawings and specifications
2. The CM/GC’s examination of the results of any additional investigatory reports of subsurface conditions, drawings of physical conditions of existing surface and subsurface facilities and documents depicting underground utilities placement and physical condition, whether obtained by the MBTA, the Design Consultant or the CM/GC
3. Unresolved permitting issues, and significant issues, if any, pertaining to the acquisition of land and right of way
4. The status of the procurement of long-lead time equipment and materials and the implementation of the signal and communications buyout plan
5. Funding issues identified by the MBTA
6. Input from the public involvement process

4.34 PROJECT SCHEDULE

The CM/GC will review the PM/CM schedule for the program and the construction portions of the work specifically and will prepare their own CPM schedule, in accordance with the MBTA’s latest schedule specifications, for the construction and will provide monthly updates to it. Those updates will be provided to the PM/CM for comparison / reconciliation and for inclusion in monthly overall program reporting.

4.35 ‘OVER-THE-SHOULDER’ REVIEWS

Over-the-Shoulder Reviews are informal reviews of design packages that are intended to provide feedback on the design prior to a milestone submittal. The Design Consultant is responsible for recording the review comments, but formal responses and disposition of comments will not be required. A formal design review process will be used on the milestone submittals, which will require responses and dispositions.

During the design process, the CM/GC will assist the PM/CM and the designer in “over-the-shoulder” reviews. The CM/GC will suggest possible alternatives which could reduce costs and/or shorten the schedule. The CM/GC will advise on constructability.

4.36 CONFIDENTIALITY OF COST MODEL AND GMP DOCUMENTATION

The CM/GC will be allowed to request that some documents be protected as confidential information to the extent that Massachusetts laws allow. Note: typical construction costs estimates, including those that clearly identify anticipated production rates, are not deemed to be proprietary and will not be approved as confidential information.

4.37 NON-COLLUSION

The CM/GC will sign and submit a non-collusion certification on a form provided by the MBTA with each GMP Proposal.
4.38 MULTIPLE GMPs

One of the main goals of the CM/GC delivery method is to arrive at cost certainty prior to starting construction of a scope of work. The MBTA plans to start portions of early/critical work by executing a separate amendment to the contract with the CM/GC detailing the scopes of work selected to commence before execution of the final guaranteed price amendment. The separate amendment will state the sum for the scope of work, which will include the cost of the work, the general conditions and any fee that has been established as part of the bid process.

The MBTA will consider multiple Interim GMP proposals that meet all the following criteria:

1. The implementation of multiple Interim GMPs must be clearly understood by the MBTA to be in the best interest of the Commonwealth.
2. The segment of work proposed for construction under a separate Interim GMP will have been reviewed by the MBTA’s Environmental, Right-of-Way and Utility Sections in advance of the start of construction. Additionally, work constructed under an Interim GMP must not affect/impact adjacent areas that do not have all required clearances.
3. Use of Interim GMP’s on the project must be demonstrated to save time, reduce inconvenience to the travelling public, and/or reduce construction costs.
4. A revised/updated full CPM project schedule has been submitted and approved by the MBTA. Inclusive of resource loading (to be used for monitoring progress).
5. The Interim GMPs are within the GLX program budget.
5. CONSTRUCTION ADMINISTRATION

5.01 CONSTRUCTION PHASE

During the construction phase of the project, the goal of the MBTA, PM/CM, Design Consultant, and the CM/GC is to construct the project in accordance with the construction documents, to finish the project sooner than the required completion date, to minimize disruption to the neighborhoods and the traveling public, and if possible, complete the project for less than the project budget costs. The construction phase will begin when all the following have occurred:

- The CM/GC and the MBTA agree on a Guaranteed Maximum Price (GMP) for the entire project or the Interim GMPs for a portion of the construction work
- The CM/GC and the MBTA execute a construction contract with all current GMP documentation – including estimates, drawing, specifications, requirements, attachments, and addenda.
- The FTA has approved the issuance of the NTP for the construction phase.
- The MBTA Board has approved the issuance of the NTP for the construction phase.
- The MBTA issues a written NTP letter for the construction phase of the contract.

The construction phase may begin before all activities of the preconstruction services phase are complete. Whether or not the construction phase begins prior to design completion, the CM/GC will remain obligated to complete the previously agreed to scope elements of the preconstruction services contract, unless otherwise approved by the MBTA.

Construction phase service activities are not to be billed under preconstruction phase services. After execution of an Interim GMP, the preconstruction services for that Interim GMP is considered to have been completed. Compensation for management and administration of the Interim GMP from this time forward will be included in the Interim GMP. No further compensation will be allowed in the Preconstruction Services contract for the work associated with that Interim GMP. The CM/GC will continue to be compensated for preconstruction service on other Interim GMP assignments.

5.02 SUBCONTRACTORS

The CM/GC will be responsible to select and contract with subcontractors approved by the MBTA. The CM/GC is expected to apply their subcontractor selection process and demonstrate a transparent/good-faith effort to a minimum of three competing bidders for each subcontracted items. The CM/GC will identify their selections during the design process, prior to the GMP finalization, as the team creates a solution that meets schedule, quality, and budget goals. The GMGC is to update the description of the roles/scopes of each subcontractor as changes occur. The CM/GC will provide the Compliance Officer responsible for oversight in the Office of Diversity and Civil Rights copies of all DBE subcontractor contracts.

The CM/GC must implement the DBE and Workforce plan in accordance with the plans developed and must maintain the established goals through the life of the project.

5.03 SELF PERFORMANCE BY THE CM/GC

The CMGC Entity is required to perform no less than 50% of the work excluding the work performed by specialty subcontractors.
5.04 SUPPLEMENTAL AGREEMENTS & TIME EXTENSIONS

The MBTA will process change orders based on the MBTA Change Order Guidelines, with consideration being given to modify the payment process approvals to accommodate the CM/GC delivery method.

In considering any request for additional compensation and/or an extension of time as a result of a contract modification, the MBTA will consider the fact that the project has been developed using the CM/GC project delivery process. As part of this process, the CM/GC has had the responsibility to review the contract documents throughout the Preconstruction Phase and to verify the accuracy and completeness of the plans, specifications, and quantities included in the GMP Record Documentation. If the reasons for the requested modification to the contract could have reasonably been foreseen given the CM/GC’s participation in the Preconstruction Phase, the CM/GC will not be entitled to any compensation and/or an extension of time. A determination will made whether the change of scope will be funded from the GMP Contingency or paid as a change order funded from the MBTA Contingency. The use of all contingency must be approved in writing by MBTA.

5.05 COMPENSATION

The MBTA intends to follow the standard MBTA procedures, for which compensation for construction work is based on, i.e. a cost and resource loaded CPM schedule.

5.06 MEASUREMENT AND PAYMENT

The method of measurement and the basis of payment, for all quantities installed, will be in accordance with the MBTA standards. During development and finalization of each Interim GMP, the MBTA and CM/GC will define the method of measure and basis of payment.

5.07 CONTRACTOR AND SUBCONTRACTOR RECORDS

The CM/GC Entity, subcontractors and all suppliers will keep and maintain all books, papers, records, files, accounts, reports, and a copy of the GMP Record Documents with backup data, including electronic data, and all other material relating to the contract and project for five years following completion and acceptance of the work. All of the above material will be made available to the MBTA and other governmental agencies (such as FTA and the Office of the Inspector General) for auditing, inspection and copying and will be produced, upon any dispute or claim that appears to be irreconcilable. The contractor will insert the above requirement in each subcontract, purchase order and lease agreement and will also include in all subcontracts a clause requiring subcontractors to include the above requirement in any lower-tier subcontract, purchase order or lease agreement.

The CM/CG is required to provide the basis of Interim GMP pricing as an escrow document, which may be used to settle disputes and claims. The escrow document requirements will be incorporated into the Interim GMP contract.
5.08 CONTRACT TERMINATION OR SUSPENSION

The contracts developed for the execution of the work will include provisions for terminations or suspensions, which will include the following situations:

1. Prior to the execution of an Interim GMP, the MBTA may terminate the CM/GC Master Agreement or Preconstruction Services Contract at any time without cause.
2. After execution of an Interim GMP, the MBTA may terminate or suspend work for cause.
3. After execution of an Interim GMP, the MBTA may terminate or suspend work for convenience.
4. The CM/GC may terminate the contract for an MBTA material breach of contract.

5.09 DISPUTE RESOLUTION

The MBTA is considering options for dealing with disputes should they arise. As a matter of principle, the MBTA would like to resolve disputes at the lowest level of coordination possible. Options include escalation to a senior core group of CM/GC, PM/CM, and MBTA staff, all of which have been part of the partnering process, use of non-binding mediation or arbitration, use of a jointly named Disputes Review Board. The CM/GC may be asked as part of their Technical Proposal for a recommendation of a means of resolving disputes.