



**METROPOLITAN
TRANSPORTATION
COMMISSION**

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January 27, 2017

INDUSTRY REVIEW DRAFT

For Next Generation Clipper® (C2) Regional Transit Fare Payment System Integrator

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The Metropolitan Transportation Commission (MTC), on behalf of the regional transit operators, plans to issue a Request for Proposal (RFP) in Summer 2017 for the Next Generation Clipper® (C2) Regional Transit Fare Payment System Integrator (SI) project.

MTC and the transit operators are soliciting industry feedback on the draft RFP prior to issuing the final RFP. The Draft RFP and supporting documentation for this project are available for download on the MTC website at <http://procurements.mtc.ca.gov/Solicitations/solicitation-list.html>.

Your decision to participate or not participate in this industry review process will not in any way impact (positively or negatively) MTC's consideration of any proposal you may submit in response to the final RFP.

Desired Feedback

MTC and the transit operators participating in Clipper are interested in understanding industry perspectives in order to help refine and improve the RFP documents prior to issuance. Specifically, we are interested in receiving feedback on:

- Changes that might be considered to reduce project cost, time or risk while still providing a highly functional, best-in-class system that meets or exceeds the program goals described in the document;
- The proposed design process, which would involve finalizing the system design jointly with the Contractor;
- Requirement that the C2 System Integrator assume the operations and maintenance of the current Clipper system; and
- Any major items that appear unclear or missing.

Review guidance and specific areas where we desire industry feedback and comment are included as an Attachment to this cover letter.

An information webinar will be at the date and time listed in the Draft Industry Review Timeline below. Instructions on how to participate in the information webinar will be posted on the MTC website prior to that date and time.

Interested vendors should submit their feedback via SurveyMonkey at <https://www.surveymonkey.com/r/C2RFPIndustryFeedback> or Bonfire at <http://mtc.bonfirehub.com> by 4:00 p.m., April 3, 2017.

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MTC may elect to revise the Draft RFP prior to issuing the Final RFP based on the written responses.

Submittals in response to this solicitation of industry comment are subject to public inspection, except as provided in Section IX.D of the attached draft RFP.

Draft Industry Review Timeline

Friday, January 27, 2017	Draft RFP published
12:30p.m., March 1, 2017	Industry Review Draft Information Webinar
4:00 p.m., April 3, 2017	Industry Responses Due

General Conditions

MTC will not reimburse any individual or firm for costs related to participating in the webinar or preparing a written response. Please do not submit proposals at this time.

Thank you for your participation in this industry review process.

Sincerely,

DocuSigned by:
Steve Heminger
021DA2847D43405
Steve Heminger
Executive Director

ATTACHMENT TO COVER LETTER
C2 System Integrator RFP for Industry Review
Review Guidance and Specific Areas for Feedback
January 27, 2017

1.0 Instructions and Guidance

MTC and the Transit Operators ask that interested vendors provide feedback on the Industry Review Draft for the C2 Regional Transit Fare Payment System Integrator RFP, which has been organized in terms of the three main elements below:

- The body of the RFP (Sections I through IX);
- A draft Scope of Work (“Attachment A” of the RFP) outlining the functional requirements that the C2 system and Contractor would be expected to meet; and
- A draft of the proposed Contract (“Attachment E” of the RFP) that would be executed with a successful vendor.

The main Table of Contents provides direct links to each section of the RFP, as well as each attachment. Both the Scope of Work and the Contract also have a Table of Contents which provide direct links to areas within each respective section as well. Vendors may also find Bookmarks within the document to be useful in organization and navigation.

MTC and the Transit Operators are interested in receiving feedback on:

- Changes that might be considered to reduce project cost, time, or risk while still providing a highly functional, best-in-class system that meets or exceeds the program goals described in the document;
- The proposed design process, which would involve finalizing the system design jointly with the Contractor;
- Requirement that the C2 System Integrator assume the operations and maintenance of the C1 system; and
- Any major items that appear unclear or missing.

Specific comments may be provided on some or all of the questions below. Interested parties are requested to provide their comments via [SurveyMonkey](#) or [Bonfire](#) for ease of review.

2.0 Draft RFP

The draft RFP document describes the overall process MTC expects to follow in any future procurement including timelines, submission requirements, the evaluation process, and other conditions that will need to be met. Interested parties are invited to comment on any aspect of the RFP; however, MTC is specifically interested in industry perspectives on the following elements of the draft RFP:

- 2.1 Proposal Pricing (see Attachment C of the RFP and Article 3 of the Contract);
1. The overall proposed approach to pricing and payment;

2. The ability to price a target, minimum, maximum for the design phase of the project, as described in Attachment C-3 of the RFP, Design, Implementation, and Testing Price Forms and Article 3.4.2 of the Contract;
 3. Payment models that potential vendors or contractors would like MTC to consider related to ongoing operations and maintenance of the system, and equipment supply and installation;
 4. Any areas of the work that a Contractor may find difficult to price and/or would have to add a premium to cover risk;
 1. e.g. O&M firm-fixed price (see Article 3.3 of the Contract), Liquidated Damages (see Article 3.4.4 of the Contract), financial guaranties (including Bid Bond, Letter of Credit, Performance and Payment Bonds, and Parent Guarantee (see Section IX.J of the RFP), responsibility for lost revenue (see Article 13.4 of the Contract), assuming C1 operations and maintenance (see Attachment A-2 of the RFP)
 5. Alternative pricing schemes that MTC and Transit Operators may wish to consider based on other projects or what vendors have found to be effective; and
 6. Feasibility of executing individual contracts with the Transit Operators to supply equipment and implications for spares management, maintenance responsibilities, and asset management, and contract mechanisms required, given that the Contractor is expected to maintain responsibility for the entire C2 system.
- 2.2 Section II: Submission Eligibility;
1. Minimum qualifications and additional desired experience.
- 2.3 Selection Process;
1. The separate evaluation of the vendor's proposal for operating and maintaining the C1 system; and
 2. MTC's option to award a contract that does not include this work component (see Sections III.A and VIII.B.3 of the RFP).
- 2.4 Section VIII: Evaluation;
1. The proposed evaluation criteria and weightings (see Section VIII of the RFP); and
- 2.5 Section IX.J: Financial Guaranties; and
- 2.6 Attachment E-1: Insurance Requirements.

3.0 Draft Contract

The draft Contract represents the document that a Contractor would be expected to execute if selected. Interested parties are encouraged to identify any specific areas of concern and identify any changes that they may wish to have considered by MTC. References below are to articles of the draft Contract, unless otherwise stated. Specific areas of interest include:

3.1 Schedule and Progress of Work;

1. The Critical Milestones identified in Attachment B of the RFP, Critical Milestones and Guaranteed Completion Dates, as appropriate points in the project

to measure progress and assess liquidated damages if those milestones are not achieved by the scheduled dates (see Articles 2.3 and 3.4.4 of the Contract);

2. The development of the final project schedule in the first 60 days after Notice To Proceed (see Article 2.5 of the Contract);
3. The suitability and appropriateness of the proposed “Revenue Ready” milestone as the primary conditions for going live to the public with the C2 system and of the proposed “System Completion” milestone for achieving completion and final payment for the build phase of the project respectively (see Articles 6.8 and 6.9 of the Contract);
4. The application and amount of liquidated damages (see Article 3.4.4 of the Contract); and
5. The process and the assessment amount of incentives and disincentives regarding performance (see Articles 3.6.2 and 3.6.3 of the Contract and Attachment A-8 of the RFP).

3.2 Article 4: Intellectual Property;

1. Requirements for assigning ownership to intellectual property, software escrow, protection of personal information, and data security.

3.3 Article 13: Risk Allocation;

1. Indemnification and risk allocation, including responsibility for lost revenue and damage to C2 System;

3.4 Any areas of ambiguity or conflict in the draft contract; and

3.5 Any provisions that have the potential to materially increase risk or cost.

4.0 Attachment A/Scope of Work

Attachment A summarizes the technical requirements and work required to design, test, implement and operate the C2 System; the C2 Contractor’s assumption of operations and maintenance of C1 while C2 is being designed and deployed; and transition of transit operators and customers from the C1 System to the C2 System. MTC and Transit Operators strongly desire that:

- The C2 System be implemented through a close, cooperative working relationship with the Contractor and ways to incentivize and manage a strong relationship; and
- Implementation of open-payment requirements not be in an initial roll-out of the C2 System, and instead, a proposed design with the ability to add this feature in the future.

Specific areas where MTC and the Transit Operators seek feedback include:

4.1 Attachment A-1 System Requirements:

1. Any areas where the requirements as stated would add significant new development work;
2. Alternative requirements or concepts that could be considered to maximize innovation and cost effectiveness while achieving the fundamental intent of the requirements;

3. Any areas where the a vendor is unable to meet the requirements based on the proposed pricing model described in Attachment C-3 of the RFP; and
4. Integration of specific Transit Operator systems (see Section A-1.16 of Attachment A).

4.2 Attachment A-2 Operations and Maintenance of C1

1. Level of difficulty or uncertainty associated with assuming responsibility for each of the major elements of the current C1 system, including assumption of current operations, equipment maintenance, software maintenance, and software/system enhancement development.
2. Ability of C2 Contractor to reasonably take on O&M of the C1 System with a 9-12 month training and transition period.

4.3 Attachment A-3 Design, Implementation and Testing of C2 System:

1. Opportunities and limitations related to the proposed iterative/interactive design approach where demonstrations, prototyping, etc. is used to help develop the final design(see Section A-3.01 of Attachment A); and
2. Proposed industry best practices for software and hardware development.

4.4 Attachment A-4 Transition of C1 System to C2 System:

1. Overall approach to transition from both a customer and Transit Operator perspective;
2. The role the Contractor would ideally play in the roll-out of C2 System to the public; and
3. Level of Contractor involvement in promoting and marketing C2 and responding to customer needs.

4.5 Attachment A-5 Operations and Maintenance of C2 System:

1. Proposed approach to resolution of disputes between the C2 Contractor and the Customer Service Center contractor.

4.6 Attachment A-6 Upgrades or Enhancements to the C2 System:

1. Concepts and approaches to make the C2 System as flexible as possible to accommodate future changes in evolving technology and customer expectations.

4.7 Attachment A-7 End of Term Transition:

1. Requirements that should be considered now to provide a smooth, seamless transition at the end of the Contract term to the next fare collection system.

4.8 Attachment A-8 Service Level Agreements:

1. Effectiveness of the proposed service levels and measurement methods of incentivizing excellent system and contractor performance;
2. Performance incentives that are most and least likely to result in a system that achieves the C2 Goals described in Section I.B.4 of the RFP;
3. Performance measures that are most and least likely to result in reliable operation of the C2 System and suggestions for alternative measures; and
4. The most effective means of incentivizing the implementation of evolving technology and solutions to accommodate changing customer expectations.

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I. MTC AND PROJECT DESCRIPTION

A. Description of MTC

MTC was created by the state Legislature in 1970 (California Government Code § 66500 *et seq.*) to serve as the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area. MTC is the contracting agency for the Clipper® Fare Payment System on behalf of participating San Francisco Bay Area transit operators.

B. Project Description

1. Definitions

As used throughout this RFP, the following terms have the meaning stated below.

- B.1.1 Best and Final Offer (BAFO) – the Proposer’s revised Proposal that represents its offer to enter into a Contract in accordance with the terms and conditions of a Request for BAFO issued by MTC.
- B.1.2 C1 – operation and maintenance of the Clipper® Fare Payment System utilizing the C1 System.
- B.1.3 C1 Contractor – the entity responsible for the operation and maintenance of the current Clipper® Fare Payment System (Cubic Transportation Systems, Inc.).
- B.1.4 C1 System – the current Clipper® Fare Payment System.
- B.1.5 C1 Contract – MTC’s contract with the C1 Contractor to operate and maintain the C1 System.
- B.1.6 C1 Transition – transition of the Clipper® Fare Payment System from C1 to C2, following the Revenue Ready Date to the final migration of all Clipper® customers to C2.
- B.1.7 C1 Transition Services – the operation, maintenance, repair and replacement of the C1 System during C1 Transition.
- B.1.8 C2 – the design, development, testing and integration, operation and maintenance of the Clipper Fare Payment System utilizing the C2 System and services provided under Other C2 Contracts.
- B.1.9 C2 Services – the operation, maintenance, repair and replacement of the C2 System at the Service Levels and all other services to be provided by the Contractor with respect to C2 pursuant to the Contract.
- B.1.10 C2 System – the next generation Clipper® Fare Payment System to be designed, implemented and tested, operated, maintained, and repaired, replaced, or modified by the Contractor pursuant to the requirements of the Contract.

- B.1.11 Clipper® – registered trademark of the regional transit payment system in the San Francisco Bay Area.
- B.1.12 Clipper® Fare Payment System or FPS – the electronic fare payment system for San Francisco Bay Area Transit Operators.
- B.1.13 Clipper® Program – the Clipper® FPS implemented and managed by MTC, as contracting agency on behalf of the Transit Operators.
- B.1.14 Concept of Operations – the document that provides a qualitative description of the capabilities and functionality that C2 is expected to provide [link]
- B.1.15 Contract – the signed agreement to be entered into between MTC and the Contractor to design, develop, install, test, integrate, operate, maintain and refresh the C2 System.
- B.1.16 Contractor – the firm or joint venture selected for award of the Contract pursuant to the RFP.
- B.1.17 Customer Service Center Contract or CSC Contract – the contract to be entered into by MTC with a third-party contractor to provide telephone, email and other C2 customer support, including staff, facilities, computers, telephones and other equipment required to provide high quality, responsive customer service.
- B.1.18 End of Term – the end of the ten-year O/M Term described in Article 8.4 of the Contract, or any extension thereof.
- B.1.19 Fare Media Contract – the contract to be entered into by MTC with a third-party contractor to supply physical fare media for use in C2.
- B.1.20 Key Personnel – individuals who will perform a key role in the delivery of the C2 System, including, at a minimum, the following: President/Vice President/Principal-in-Charge, Project Manager, Lead Software Engineer, Lead Hardware Engineer, Lead Business Analyst, System Architect, Security Officer, Implementation Manager and Lead System Administrator, and the lead for every work component described in Attachments A-2 through A-7.
- B.1.21 Measured C2 System Service – a C2 System operations and maintenance service identified in Attachment A-8 measured according to agreed-upon standard(s) identified in Attachment A-8.
- B.1.22 Other C2 Contracts – MTC third-party contracts related to implementation and operation of C2, including, but not limited to the Customer Service Center Contract, the Fare Media Contract and the Payment Gateway Contract.
- B.1.23 Other C2 Contractors – the vendors or service providers under contract to MTC to perform the Other C2 Contracts.
- B.1.24 Payment Gateway Contract – the contract to be entered into by MTC with a third-party contractor for a regional payment gateway or the provision services to process credit and debit card transactions in C2.

- B.1.25 Proposal – a signed, binding response to the RFP, submitted by a Proposer.
- B.1.26 Proposer – a firm or joint venture that submits a Proposal pursuant to the RFP or Request for BAFO to provide the C2 System, according to the terms and conditions of the RFP or Request for BAFO.
- B.1.27 Request for Best and Final Offer – the last addendum to the RFP that includes the final Scope of Work, System Design Requirements, Contract terms, and other requirements of the RFP.
- B.1.28 Revenue Ready Date – The date on which MTC issues written notice to Contractor that the C2 System has met the requirements in Article 6.8 of the Contract that make it ready for use by the general public.
- B.1.29 Scope of Work – the goods and services the Contractor will be expected to supply and perform under the C2 System Contract, as particularly described in Attachment A to the RFP, with its attachments.
- B.1.30 Service Level – with respect to a particular C2 System service, performance of that C2 System service at least in accordance with the performance levels and standards set forth in the Contract, including (a) with respect to all C2 System services (including Measured C2 System Services), performance in accordance with the skill, care, and diligence as required by the Contract including Attachment A-8, and (b) with respect to a C2 System Service that is a Measured C2 Service, performance in accordance with the applicable Target C2 System Service Level from and after the Revenue Ready Date.
- B.1.31 Specifications – the detailed requirements, descriptions and specifications for the C2 System and C2 Services as set forth herein and in the attachments to the Contract.
- B.1.32 Transit Operators – the transit agencies operating within the San Francisco Bay Area participating in the Clipper Program under a Memorandum of Understanding with the other Transit Operators and MTC, including: Alameda-Contra Costa Transit District (“AC Transit”); Golden Gate Bridge Highway and Transportation District (“GGBHTD”); the San Francisco Bay Area Rapid Transit District (“BART”); the City and County of San Francisco, acting by and through its Municipal Transportation Agency (“SFMTA”); the San Mateo County Transit District (“SamTrans”); the Santa Clara Valley Transportation Authority (“VTA”); the Peninsula Corridor Joint Powers Board (“Caltrain”); Central Contra Costa Transit Authority; City of Fairfield, as the operator of Fairfield and Suisun Transit; City of Petaluma; Eastern Contra Costa Transit Authority; Livermore/Amador Valley Transit Authority; Marin County Transit District; Napa County Transportation and Planning Agency; Solano County Transit; Sonoma County Transit; Sonoma-Marin Area Rail Transit; Vacaville City Coach; Western Contra Costa Transit Authority; San Francisco Bay Area Water Emergency Transportation Authority; City of Santa Rosa; and City of Union City; and any other transit operators that implement the Clipper® Program by joining in the MOU referred to in Section I.B.3 below.
- B.1.33 Work – all of the Contractor’s efforts necessary to complete all of its obligations under the Contract, including without limitation all devices, equipment, materials, software, facilities and services, whether physical or conceptual in nature, involved in performing the functions required by the Contract.

2. Introduction

In cooperation with and under the direction of the Transit Operators, MTC is planning for C2, including the C2 System and the services to be provided by the Other C2 Contractors.

The C1 Contract with the C1 Contractor expires at the end of November, 2019, and its equipment, software and services are due for replacement. Under this RFP, MTC and the participating Transit Operators are seeking a Contractor to design, develop, install, test, integrate, and operate the C2 System under a new Contract, providing current technology and a high level of service for both customers and the Transit Operators.

3. *Clipper® Program - Background*

Originally called Translink®, the Clipper Fare Payment System (FPS) began operations in the Bay Area in 2002 and was expanded to Transit Operators through a phased implementation. Today, Clipper is available on some 20 Transit Operators and is currently available to 95 percent of all transit customers in the Bay Area. Expansion to the remaining Bay Area transit agencies is planned to continue during the development and implementation of C2.

The C1 System reliably supports over 100 fare products, calculates transfer discounts between agencies and handles complex payment, revenue settlement and reporting functions. These include a variety of Transit Operator-specific fare policies including flat fares on some services, distance-based fares on others, tap-in only with free exit, and tap-in/tap-out; all of which co-exist and operate in the C1 System. The region also operates a variety of employer and institutional transit programs.

The original system was supplied by ERG Transit Systems (now Vix Technology), which was responsible for providing all of the fare collection devices and back-end transaction processing, reporting and customer service systems as a subcontractor under MTC's original C1 System Contract with Motorola. ERG and Cubic Transportation Systems reached an agreement for the purchase or license of the ERG assets relating to the C1 System by Cubic, negotiated with MTC terms and conditions for a revised C1 System Contract, and Cubic took over as contractor pursuant to the revised C1 System Contract in July 2009. In 2010, the system was rebranded as "Clipper®".

Since its inception in 2002, the C1 System has had to evolve, due to unforeseen technological developments, obsolescence of some equipment, and customer demand, and now represents a blend of the original ERG systems, software and equipment, and Cubic-supplied systems, software and equipment. Additionally, agencies such as BART, SFMTA, SMART, and VTA maintain their own fare collection equipment and systems with Clipper FPS validator devices integrated into that equipment.

Transit operator oversight of the Clipper® Program is provided through the Clipper Executive Board, created by a Memorandum of Understanding (MOU) entered into by MTC and the participating Clipper Transit Operators. Under the MOU, Transit Operators agree to pay their share of Clipper FPS operating costs (based on a formula in the MOU), and MTC agrees to fund a portion of the operating and maintenance costs and to serve as contracting agency for Clipper and employ the Clipper Executive Director. The Board's oversight activities include adoption of the Clipper budget, approval of the Clipper Operating Rules, appointment of MTC as the contracting agency for contracts relating to Clipper, approval of a Contractor for the C2 System recommended by MTC, and approval of the C2 goals and objectives and roll-out strategy.

Today, Clipper is generally well-liked by Bay Area transit customers and highly regarded among industry professionals. With more than 700,000 transactions processed on a typical weekday and a high customer satisfaction rate, the C1 System functions soundly. While the strengths of the C1 System have provided the Bay Area with a sound fare payment system, there are several opportunities for expansion, improvement

and wholesale modernization. To continue supporting the mission of the Clipper Program, MTC and the Transit Operators will build on the current successes of C1 to implement C2.

4. C2 Goals

The Clipper MOU establishes the following Goals for the Clipper Program:

- a. Provide an intuitive, efficient and familiar customer experience;
- b. Provide excellent, proactive customer service;
- c. Create a transparent, consistent, inclusive and timely decision-making process;
- d. Govern the program efficiently and cost-effectively;
- e. Ensure that accurate and complete data is available to support decision making at every level;
- f. Ensure program flexibility and responsiveness; and
- g. Ensure operational efficiency and reliability.

5. C2 Description

C2 will be a customer-focused, cost-effective fare collection system that supports a modern, consistent and seamless transit experience in the Bay Area, providing a flexible platform for providing future regional efficiencies, delivered through a collaborative design, development and implementation approach between the Contractor, Other C2 Contracts, MTC, and the Transit Operators, described as follows:

- a. **Contractor:** Contractor will be responsible for providing the Scope of Work as described in Section III A. Contractor will be responsible for overall coordination of C2 including coordination and oversight of the Other C2 Contracts (as described below) to be entered into by MTC with Other C2 Contractors.
- b. **Other C2 Contracts:**
 - (i) **Customer Service Center Contract.** A separate Customer Service Center (CSC) will be established to provide telephone, email, and other C2 customer support. The customer relationship management system, interactive voice response system, websites and all other systems required to access customer and fare system data will be provided by the (C2) Contractor. The Customer Service Center Contract will provide the staff, facilities, computers, telephones and other equipment required to provide high quality, responsive customer service.
 - (ii) **Payment Gateway Contract.** MTC anticipates contracting for a regional payment gateway or acquiring services to process credit and debit card transactions. While that gateway will be used by the majority of the Transit Operators, some Transit Operators may continue to use their own gateway or may acquire services for credit and debit card transactions conducted on their premises.
 - (iii) **Fare Media Contract.** MTC anticipates contracting with one or more suppliers of physical fare media including plastic and limited use smart cards for C2. Contractor will be responsible for testing and managing all fare media and Contractor will work with MTC to include appropriate media requirements in the Fare Media Contract.

This RFP focuses on requirements for the C2 System Contract to be entered into with Contractor.

II. MINIMUM QUALIFICATIONS AND ADDITIONAL DESIRED EXPERIENCE

A. Minimum Qualifications

Proposals must demonstrate that the Proposer meets the following Minimum Qualifications (MQs) to be eligible for consideration for this project:

Have reached revenue service and substantial completion on at least one (1) project that involved system design, implementation, operation and maintenance of a multi-agency or multi-issuer and acquirer electronic payment system. “Substantial completion” means that the system design and implementation has been accepted and the system operations and maintenance is underway or concluded.

The Minimum Qualifications may be met by a subcontractor or by any party to a joint venture, or as a total of projects among the firms in a joint venture.

B. Additional Desired Experience

In addition to the MQs listed above, each Proposer’s experience will be qualitatively evaluated on the following areas of experience, based on the collective experience of members of the Proposer team:

1. Comprehensive experience with the design and implementation of transit fare collection, smart card, and/or payment technology implementation projects;
2. Experience working with transit technology operations and/or maintenance, either nationally or internationally;
3. Experience working with transit customer service centers operated by other entities;
4. Experience supporting a broad range of electronic fare systems similar to that provided in the Bay Area and understanding of the transit and operating challenges posed by a region as large and diverse as the Bay Area; and
5. Experience working with multi-operator fare collection projects.

III. SCOPE OF WORK, CONTRACT AND PERIOD OF PERFORMANCE

A. Scope of Work and Contract

The Scope of Work for the C2 System Contract is set forth in Attachment A and its attachments. Contractor will be expected to perform the Scope of Work as described in Attachment A pursuant to the terms of the Contract, including:

- A-1: System Requirements
- A-2: Operations and Maintenance of C1 (see below)
- A-3: Design, Implementation, and Testing of C2 System
- A-4: Transition of C1 to C2
- A-5: Operations and Maintenance of C2
- A-6: Upgrades and Enhancements to the C2 System

- A-7: End of Term Transition
- A-8: Service Level Agreements

MTC requires that Proposers describe an approach and work plan for Attachment A-2, Operation and Maintenance of C1. However, the price form (Attachment C-2) for the Work provided under Attachment A-2 will not be included in the cost/price evaluation, and MTC reserves the right to award a Contract that does not include the Work described in Attachment A-2, and to extend its contract with the C1 Contractor until the Work transitions from the C1 to the C2 System.

The Contractor shall provide the Scope of Work in accordance with the Service Levels as set forth in Attachment A-8: Service Level Agreements.

The form of the proposed Contract to be awarded pursuant to this RFP is attached hereto as Attachment E. Additional information concerning the Contract is set forth in Section IX.B below.

B. Period of Performance

MTC expects Contractor's performance under the Contract to commence on or about October 2018, and to be completed ten years following initiation of the C2 System Operation and Maintenance term, as defined in Attachment A-5. At MTC's sole option, the Contract may be extended for an additional five (5) year term, at the price specified in the Contract, and thereafter, with both parties' approval, in annual increments of up to five (5) consecutive years, if necessary, in order to bridge a subsequent procurement or system implementation.

IV. PROPOSERS' CONFERENCE, ADDENDA, REQUESTS FOR CLARIFICATION, EXCEPTIONS

A Proposers' conference will be held at ____ a.m./p.m. on _____, July ___, 2017 at the Bay Area Metro Center, 375 Beale Street, San Francisco, in _____<Insert Conference Room>. **Please arrive by the start time listed.**

Any addenda will be posted on MTC's website at <http://procurements.mtc.ca.gov/>. It is the Proposers' responsibility to check for addenda and questions and answers related to this RFP and comply with new or revised requirements that may be stated therein.

Any requests for clarification, or questions regarding RFP requirements, or requests for exceptions to the RFP requirements must be received by MTC no later than ____ a.m./p.m. on _____, _____, 2017, to guarantee a response or consideration.

V. CONTRACTOR SELECTION TIMETABLE

4:00p.m., on Monday, April 3, 2017	Closing date/time for receipt of comments to Industry Review Draft RFP
Week of June 12, 2017 (Approximate)	Release of final RFP
Week of July , 2017	Proposers' Conference, at 375 Beale Street, San Francisco, CA 94105, [Conference Room TBD] and site visits with Transit Operators [TBD]
____p.m., on July _____, 2017	Closing date/time for receipt of requests for modifications/exceptions to RFP requirements

No later than twenty (20) business days prior to the date Proposals are due.

___ p.m., ____, August ____, 2017

August – October, 2017

October ____, 2017

November, 2017

December 2017 – April 2018

April, 2018

June 2018

June – August 2018

September 18, 2018*

October ____, 2018*

October , 2018

**Discussion and approval dates are approximate and are subject to change before or after the closing date of this RFP.*

Deadline for protesting RFP provisions

Closing date/time for receipt of Proposals

Initial evaluation of responsive, responsible, technically viable Proposals and optional requests for clarification

Optional oral Presentations by Proposers in the competitive range, site visits, and references;

Second Evaluation of Proposals and Notice to Proposers in the competitive range

Negotiation of Contract terms and Proposals with Proposers in the competitive range

Release of Final Contract and request for Best and Final Offers (BAFO)

Deadline for submittal of BAFO

Evaluation of BAFO and Recommendation of award of Contract

Clipper® Executive Board Approval

MTC Operations Committee Approval

MTC Commission Approval

VI. SUBMITTAL OF PROPOSAL

References in this Section VI to Proposal also refer to BAFO. References to RFP also refer to Request for BAFO.

- Interested firms must submit one electronic Proposal uploaded to: <https://mtc.bonfirehub.com/login>.

Proposals will be received only at the website shown above and **no later than the date and time indicated**. MTC is not responsible for submissions or deliveries delayed for any reason. Any Proposal received after said date and time will be returned to the Proposer without review.

- Proposer agrees and acknowledges all RFP specifications, terms and conditions and indicates ability to perform the Contract by its submission of a Proposal.

If selected, a signed Proposal submitted to MTC in response to this RFP shall constitute a binding offer from Proposer to contract with MTC according to the terms of the RFP for a period of one hundred eighty (180) days after the Proposals are due to MTC.

- A Proposal may be withdrawn at any time before the date and time when Proposals are due by submitting a written request for its withdrawal to the MTC Project Manager.

4. This RFP does not commit MTC to award a contract or to pay any costs incurred by any Proposer in the preparation of a Proposal in response to this RFP.
5. Only one Proposal will be accepted from any one person, partnership, corporation, joint venture or other entity; however, several alternatives may be included in one response. Firms may submit a Proposal as a prime and also participate in one or more Proposals as subcontractors.
6. MTC reserves the right to accept or reject all Proposals submitted, waive minor irregularities, request additional information, and negotiate with any or all Proposers.
7. MTC reserves the right in its sole discretion not to enter into any Contract as a result of this RFP.
8. If the selected Proposer fails to enter into a Contract with MTC in a timely manner as determined by MTC, in accordance with the terms and conditions of this RFP, MTC reserves the right to enter into a Contract with the next highest scoring Proposer.
9. Online Vendor Registration is required to be eligible for contract award. Proposers should visit <http://procurements.mtc.ca.gov/Vendors/vendor-information.html> to register in the MTC Vendor Database.
10. The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of Central Contractor Registration / Federal Agency Registration (CCR/FedReg), Online Representations and Certifications Application (ORCA), and Excluded Parties List System (EPLS). Firms submitting proposals for contracts with federal funds must register on the SAM website at <https://www.sam.gov/portal/SAM/##11> prior to Proposal submission.

VII. FORM OF PROPOSAL

A. General

1. References in this Section VII to "Proposal" refer also to BAFOs, if applicable.
2. Proposal responses are to be straightforward, clear, concise and specific to the information requested.
3. In order for Proposals to be considered complete, Proposer must provide all information requested. Sections that should be included in each Proposal are listed herein.
4. Maximum page limits, where specified, are for each side of print. Proposers are encouraged to use recycled paper and print double-sided copies to save paper. Use of 11" x 17" pages should be limited to presenting complex graphics or other information to maintain clarity.
5. Proposals shall be divided into five parts: Part 1, Proposer Information; Part 2, Technical Proposal; Part 3, Proposer Certifications; Part 4, Cost/Price Proposal; and Part 5, Financial Responsibility Qualifications. Table 1 indicates the required Proposal Organization and page limits, if any.
6. Any material deviation from the requirements set forth in this Section VII may be cause for rejection of the proposal, as determined in MTC's sole discretion. Proposals shall be organized into sections set forth in Table 2, and the Proposal shall be tab-indexed to correspond to the sections listed. Each Proposal component shall be clearly titled and identified. Include only the information specified for each section. **Any materials exceeding the page limitations set forth in Table 1 will not be read.**

Page limits exclude the tabs, anything listed as having no page limit on Table 1, and the required forms that have been provided with the RFP. The minimum font size for the text of the Proposal shall be 11 point. Font sizes for graphic representations (i.e. organizational charts) may be less than 11 point, but must be readable without magnification in standard printed format.

7. As noted in the Proposal Organization (Table 1), the original Proposal shall contain all five sections with Parts 1, 2, and 3 submitted in one document and Part 4 (Cost/Price Proposal) and Part 5 (Financial Responsibility Qualifications) each submitted as a separate document entitled “Cost/Price Proposal” and “Financial Responsibility Qualifications” respectively.

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Table 1: Proposal Organization and Mandatory Page Limits

PROPOSAL SECTION	Maximum Page Limit
PART 1: Proposer Information	
1.1 Transmittal Letter	2
1.2 Title Page	1
1.3 Table of Contents	No Page Limit
1.4 Proposer Overview and Summary	4
1.5 Qualifications and Experience	
1.5.1 Minimum Qualifications and Project Experience	5
1.5.2 Project Organization and Staffing	5
1.5.3 Key Personnel and Résumés	2/person
1.6 Conflict of Interest Statement, including Mitigation Plan if applicable	No Page Limit
PART 2: Technical Proposal	
2.1 Overview and Summary	10
2.2 Technical Solution	100
2.3 Proposed Approach	
2.3.1 Work Plan for Operation and Maintenance of C1 System	12
2.3.2 Work Plan for Design, Implementation & Testing of C2 System	15
2.3.3 Work Plan for Transition from C1 to C2 System	15
2.3.4 Work Plan for Operations and Maintenance of C2 System	60
2.3.5 Approach to Upgrades and Enhancements of C2 System	10
2.3.6 Approach to End of Term Transition	10
2.3.7 Approach to Service Level Agreements	10
2.3.8 Software List	No Page Limit
2.4 Proposed Project Schedule	3
2.5 Required Supplemental Documentation (see Section 2.5 of VII.B)	15 pages per plan except samples. Permitted samples: No Page Limit
PART 3: Proposer Certifications	
3.1 California Levine Act Statement (Attachment D)	N/A
3.2 Iran Contracting Act (Attachment F)	N/A
3.3 Insurance Requirements Acknowledgment (Attachment E-1)	N/A
3.4 Certifications regarding Debarment, Suspension, Lobbying & Other Matters (Attachments G-1 and G-2)	N/A
3.5 DBE Information and Commitment (Attachments G-3, G-4, and G-5)	N/A
3.6 SAM Registration	
3.7 Taxpayer Identification Number and Certification	
3.8 Requests for Exception	
PART 4: Cost/Price Proposal	
4.0 Completed Cost/Price Forms (Attachments C-1 through C-10)	N/A
PART 5: Financial Responsibility Qualifications	
5.1 Bid Guaranty	No Page Limit
5.2 Audited Financial Statements	No Page Limit
5.3 Letter of Credit Commitment Letter	No Page Limit
5.4 Disclosure of Past and Pending Legal Actions	No Page Limit

B. Form of Proposal

PART 1: Proposer Information
1.1 Transmittal Letter: The transmittal letter shall be on the official letterhead of the Proposer and shall be signed by an official authorized to solicit business and enter into contracts for the Proposer and include the name and telephone number of a contact person, if different from the signature. An authorized official shall certify that all information in the Proposal is true and correct by including the statement: “I, the undersigned, certify and declare that I have read each Section of this Proposal and know its contents. The matters stated in each Section are true and correct to the best of my information, knowledge, and belief.” The transmittal letter shall also include the following information: - Statement affirming Proposer can and shall comply with requirements set forth in the RFP and resulting Contract. - Acknowledgement of the receipt, understanding, and full consideration of any addenda to the RFP. List RFP addenda by number and release date. - Statement that the proposal is a binding offer to contract with MTC according to the requirements of this RFP for a period of 180 days from the due date for submission of proposals.
1.2 Title page: that includes the RFP subject, the full legal name of the Proposer’s firm, local address, telephone and fax numbers, website, name of contact person, contact person’s telephone number and email address, and the date.
1.3 Table of contents: that includes a clear identification of the material by section and page number.
1.4 Proposer Overview and Summary The Proposer shall provide the Proposer’s corporate address and a brief history of the Proposer as it pertains to its ability to carry out the requirements of the RFP and Contract.
1.5 Qualifications and Experience
1.5.1 Minimum Qualifications and Project Experience (1) In this section, the Proposer shall provide all necessary information to demonstrate that the requirements shown in <u>Section II.A, Minimum Qualifications</u>, have been met at the time of Proposal submission and to describe all experience that addresses the Additional Desired Experience described in Section II.B. This section shall also include a discussion of the applicability and relevance of the Proposer’s experience as it relates to providing the C2 System and performance of the Contract, and the unique qualifications and any areas of value that the Proposer brings to MTC and the Transit Operators pursuant to its Proposal. The Proposer shall provide a summary of all projects that demonstrate the Proposer experience (required and desired) outlined in Section II of the RFP, including name of client, time of performance, amount of contract, description of scope, lead project personnel, contractor and sub-contractor roles on the project, and current contact information. Identify and describe the site of all transit systems for which Proposer or key team members delivered an electronic fare payment system that is still operating and provide contact information including contact name, address, email and telephone number.
1.5.2. Project Organization and Staffing

The Proposer shall provide a C2 System organization chart that indicates how the C2 System Contract would relate to the rest of the Proposer's organization and a staff organization chart that identifies Key Personnel, and the reporting relationships between the proposed Key Personnel and other team members. At a minimum, Key Personnel include the following: President/Vice President/Principal-in-Charge, Project Manager, Lead Software Engineer, Lead Hardware Engineer, Lead Business Analyst, System Architect, Security Officer, Implementation Manager and Lead System Administrator, and the lead for every work component described in Attachments A-2 through A-7. This section should also include a brief description of the value Key Personnel bring to the Project.

1.5.3 Key Personnel and Resumes

Provide the professional resumes of the Key Personnel addressed in 1.5.2. The resumes are to include the following information:

- a. Name and proposed assignment;
- b. Years of experience, and years with present employer;
- c. Education - degrees, schools and years obtained;
- d. Professional registration and any history of state disciplinary action;
- e. At least two client references, including contact names, addresses, email and telephone numbers; and
- f. Description of relevant projects worked on in the past ten years. Identify personnel's role on each project.

1.6 Conflict of Interest Statement: Provide a statement representing and warranting that, to the best of its knowledge, the Proposer will not violate the requirements of California Government Code Section 1090 if awarded the resulting Contract and that no impermissible interests have been or will be acquired by Proposer, as prohibited by California Government Code Sections 871000 *et seq.* (See Section IX.F) Indicate whether there are any organizational conflicts of interest, actual or potential, as further defined in Section IX.F, that could limit, influence or impair the Proposer's ability to provide the requested services; and propose a plan for mitigating such actual or potential conflicts.

PART 2: TECHNICAL PROPOSAL

2.1 Overview and Summary: This section should clearly convey understanding of the nature of the work to be provided by the Contractor. In the Proposer's own words, include the following, at a minimum:

- a. A summary of the Proposer's understanding of the scope and complexity of C2 and the C2 System, the Scope of Work and the Contract, including an understanding of the Transit Operators and transit operations in the San Francisco Bay Area; and
- b. A summary of the Proposer's proposed technical solution and services, and how they are intended to achieve the C2 System Goals described in Section I.B.4 and the C2 Outcomes set forth in the Concept of Operations, including how the Proposer's Technical Solution will accommodate changes in technology, life-cycle evolution and replacement of equipment, and integration of new media and services.

2.2 Technical Solution

The Technical Solution shall describe the Proposer's system and how it meets the requirements of Attachment A-1. Proposals that simply indicate compliance with the Scope of Work without describing in detail how the Proposer's systems, solutions and services fulfill that Scope of Work may be deemed non-responsive. An introduction shall address the following:

- a. How the proposed technical solution and associated services are intended to fulfill the Life Cycle Concept of Operations, along with any major gaps between the proposed solution and the Concept of Operations.

- a. Functional and physical architecture of the proposed technical solution, along with a description of the technical solution functions, devices, software and services to be provided; and
- b. Approach to integration with legacy devices and networks including communications networks, ticket vending machines, add-fare machines, parking vending machines, and faregates.
- c. A description of any proposed cost-saving changes to the system design with a cross reference to the amount of savings in the Cost Proposal.

(1) Field Devices

- a. Information and description of all equipment to be supplied including photographs or images, dimensions and weights, mounting arrangements, processing capabilities, capacity, operating systems, and typical screen displays and user interfaces (as applicable); and
- b. Proposed approach to mitigate revenue risks and customer impacts when equipment is in off-line operation, considering both tap-on only and tap-on/off bus operations, tap-on/off rail and ferry operations, and tap-on only rail and ferry operations.

(2) Back Office Systems

- a. Description of all back-office systems and their functions;
- b. Approach to hosting or cloud-based operation of back-office systems;
- c. Use and adoption of standards and commercial off-the-shelf and open source software;
- d. Approach to providing system interfaces; and
- e. Approach to coordinating with the Customer Service Center Contractor.

(3) Communications Network

- a. Overall network architecture and integration with existing bus and rail communications networks;
- b. Network capacity, redundancy and reliability; and
- c. Network monitoring and management.

(4) Websites, Web Portals and Mobile Applications

- a. Approach to providing, maintaining and updating websites and web portals;
- b. Approach to user interface development; and
- c. Approach to providing mobile applications for customers.

(5) Customer Service Systems

- a. Approach to providing self-service and walk-in customer service systems.

(6) Fare Media Management

- a. Fare media ordering, inventory and management including coordination with the fare media supplier; and
- b. Virtual media to be provided.

(7) Retail Sales and Distribution Network

- a. Providing and managing the retail sales and distribution network, including products to be offered and any constraints or limitations.

(8) Program Management

- a. Approach to managing the C2 program and implementation;
- b. Support for marketing and business process improvements; and
- c. Quality control, risk management, and change management.

2.3 Proposed Approach:

This section shall include:

- a. A description of the proposed approach to and detailed project management plan for the overall C2 Scope of Work and all major work components, as described in Attachment A (and in detail in Attachments A-1 to A-7), including major risks and challenges and potential solutions;
- b. A description of the proposed approach to and detailed work plan for the operation and maintenance of the C1 System, as described in Attachment A-2, including the major risks and challenges and potential solutions;
- c. A description of the approach to and detailed work plan for the design, implementation and testing of the C2 System as described in Attachment A-3, including the major risks and challenges and potential solutions;
- d. A description of the proposed approach to and detailed work plan for the Transition from the C1 System to the C2 System, as described in Attachment A-4, including the major risks and challenges and potential solutions;
- e. A description of the proposed approach to and detailed work plan for C2 and C2 System operations and maintenance as described in Attachment A-5, including the major risks and challenges and potential solutions;
- f. A discussion of the Proposer's approach to addressing upgrades and enhancements, as described in Attachment A-6;
- g. A discussion of the Proposer's approach to the End of Term transition as described in Attachment A-7; and
- h. A discussion of the Proposer's approach to meeting or exceeding the standards set forth in the service level agreements in Attachment A-8.

2.4 Proposed Project Schedule

A proposed initial Critical Path Method (CPM) Project Schedule in GANTT format describing how the Project will be delivered within the total proposed price set forth in Attachment C-8. The Project Schedule shall demonstrate the Proposer's understanding of the process, timing, dependencies, sequences and duration of the work from Notice to Proceed through to full operation of C2. (The initial CPM Project Schedule will be revised by Contractor and MTC as provided in Article 2.5 of the Contract, within sixty days of Notice to Proceed.)

The schedule shall include at a minimum the following detail:

- a. Critical Milestones as set forth in Attachment B-1, Critical Milestones and Guaranteed Completion Dates, which will be defined in the Contract as representing the commencement or completion of activities or stages of the Project the timing of which is timely completion of the Work and which will be associated with Guaranteed Completion Dates in the Contract (see Article 2.3 of the Contract);
- b. Project phases showing the planning, design, development, testing, installation, and transition stages of the project and interdependencies;
- c. Major activities within each project phase at a level of detail sufficient to communicate the anticipated progression of work (e.g. design iteration 1, design iteration 2; factory acceptance testing, integration testing; etc.);
- d. Relationships and dependencies between milestones, phases and activities; and
- e. Anticipated critical path.

The CPM Project Schedule shall be accompanied by a narrative describing any key assumptions, dependencies on third parties, dependencies on MTC and the Transit Operators, opportunities to accelerate the schedule, and major risks that could materially disrupt the schedule. Any task longer than 6-8 weeks in duration should be broken down into smaller sub-tasks to more clearly demonstrate the progression of work.

2.5 Required Supplemental Documentation

The Proposer shall include as an attachment to its Proposal conceptual or high-level draft versions of the following plans. Alternatively, the Contractor may provide examples of such plans as developed for other projects.

- a. Program Management Master Plan as described in Attachment A-1 [this plan cannot be a sample; it must be specific to C2]
- b. Test Plan as described in Attachment A-3
- c. Security Management Plan as described in Attachment A-5
- d. Risk Management Plan as described in Attachment A-1
- e. Maintenance Management Plan as described in Attachment A-5
- f. Training Plan as described in Attachment A-3
- g. Business Continuity Plan as described in Attachment A-1
- h. Asset Refresh Plan as described in Attachment A-5
- i. Transition Plan from C1 to C2 as described in Attachment A-4 [this plan cannot be a sample; it must be specific to C2]
- j. End of Term Transition Plan as described in Attachment A-7

PART 3: Proposer Certifications

3.1 Signed California Levine Act Statement: Proposer and each subconsultant are required to provide a signed *Attachment D*, California Levine Act statement.

3.2 Signed Iran Contracting Act: Per AB 1650, Iran Contracting Act of 2010, which adds Sections 2200 *et seq.* to the California Public Contract Code, requires Proposers for contracts equal to or in excess of one million dollars (\$1,000,000) to certify, at the time of Proposal submission that Proposer is not identified on a list created pursuant to subdivision (b) of Section 2203 as a person engaging in investment activities in Iran described in subdivision (a) of Section 2202.5, or as a person described in subdivision (b) of Section 2202.5, as applicable. Submit a signed Iran Contracting Act Certification, (*Attachment F*).

3.3 Signed Insurance Requirements Document: Submit a signed acknowledgement that the Proposer agrees to provide the required certificates of insurance providing verification of the minimum insurance requirements listed in *Attachment E-1, Insurance Requirements*, within ten (10) days of MTC's notice to firm that it is the successful Proposer.

(See Section IX.B of the RFP for how to request exceptions to the minimum insurance requirements.)

3.4 Certifications Regarding Lobbying, Debarment, Suspension and Other Matters: Submit all completed federally-required certifications in *Attachment G, Federal Requirements*, related to lobbying and debarment. (*Attachments G-1 and G-2*)

3.5 DBE Forms: Submit all completed federally-required certifications in *Attachment G, Federal Requirements*, related to Disadvantaged Business Enterprise (DBE) subcontractor information (*Attachments G-3, G-4, and G-5*.)

3.6 SAM Registration: Submit a verification of SAM registration.

3.7 Taxpayer Identification Number and Certification: Submit a W-9, Request for Taxpayer Identification Number and Certification (containing original signature) available at <http://www.irs.gov/pub/irs-pdf/fw9.pdf>.

3.8 Requests for Exception: Identify each provision of the RFP and Contract, including bonding or insurance requirement for the C2 RFP included in this RFP as *Attachment E, Next Generation Clipper® (C2) System Integrator Contract, Attachment E-1, Insurance Requirements, and Attachment E-2, Bonding Requirements*

for which the respondent requests an exception. Explain why the provision is unacceptable and provide an alternative. A Word version of the Contract is available on the MTC web site, and Proposers are required to provide a redlined (tracked changes) version with specific language implementing the change.

PART 4: Cost/Price Proposal

Completed Cost/Price forms (*Attachments C-1 through C-11*). Proposers shall submit a cost/price proposal for each of the identified work components in Attachment A. Note that three price forms for *Attachment C-3* are required (see instructions in Attachment C-1). The cost/price proposal for assumption of operations and maintenance of the C1 System (Attachment A-2) shall be submitted separately from the other price forms, and Attachment C-2 will not be considered in the cost/price evaluation. However, MTC will review *Attachment C-2* for soundness of approach, price reasonableness and cost realism prior to award (see Section VIII.B.3).

PART 5: Financial Responsibility Qualifications

5.1 Bid Guaranty: Proposals must be accompanied by a bid guaranty in the form of a cashier's check, a certified check, or a bid bond executed by an admitted surety insurer ("Best Guide rating of "A-10" rating or better"), in the amount of 20% of the total bid amount identified in line 38 of Attachment C-8, payable to MTC. Such check or bond shall be given as a guaranty that the Proposer will enter into the Contract and provide the following within the required timeframes established in this RFP:

- Required Letter of Credit
- Parent Guarantee, if applicable
- Performance Bonds and Payment Bonds
- Certificates of Insurance

Each of the above as described in Section IX, General Conditions, item J, *Bid Guaranty*, *Parent Guarantee (if applicable)*, *Letter of Credit*, and *Performance and Payment Bonds*; and *Attachments E-1, Insurance Requirements*, and *E-2, Bonding Requirements*, of this RFP.

If a bid bond is furnished as the Bid Guaranty, it must conform to the form provided in *Attachment E-2, Bonding Requirements of this RFP*.

5.2 Audited Financial Statements: Provide evidence of financial capacity of the Proposer by including Proposer's audited financial statements for the past two most recent fiscal years. One copy of the financial statements may be submitted in a separate sealed envelope marked "Proposal Attachment: CONFIDENTIAL FINANCIAL RECORDS." The financial statements submitted by the Proposer will be reviewed to determine financial responsibility only. All statements will be returned prior to shortlisting.

5.3 Letter of Credit Commitment Letter: Proposals must be accompanied by a commitment letter executed by a qualified bank, as described in Section IX.J, stating its agreement to deliver a Letter of Credit, as described in Section IX.J within ten (10) days of issuance of a notice of award of a Contract to the Proposer and in any event, prior to Contract execution.

5.4 Disclosure of Past and Pending Legal Actions: A description of past litigation over contract disputes, notices of default, and contracts involving significant change orders and a description of same.

VIII. EVALUATION

A. MTC Review

Only Proposals that meet the Minimum Qualifications in Section II.A of the RFP, are responsible and responsive (as described below), and that are technically viable, based on MTC's assessment, will be evaluated.

1. Verification of Minimum Qualifications and Responsibility

MTC will review Proposals to ensure that each Proposer meets the Minimum Qualifications set out in Section II.A of the RFP and is a responsible bidder, based on financial submissions and other factors relevant to legal responsibility. (Refer to Parts I and V of the Proposal, as described in Section VII of the RFP). Proposers failing to meet the Minimum Qualifications or otherwise found not to be responsible will not be evaluated. MTC reserves the right to request additional information in the event that it is unable to determine whether Minimum Qualifications and responsibility have been established.

2. Review for General Responsiveness

MTC will then conduct a review of the Proposals for general responsiveness and inclusion of the items requested in Section VII, Form of Proposal, including the required certifications. Any Proposal that does not include enough information to permit the evaluators to rate the Proposal in any one of the evaluation factors listed below will be considered non-responsive and will not be evaluated. A Proposal that fails to include one or more items requested in this RFP may be considered responsive, if evaluation in every criterion is possible. MTC reserves the right to request additional information or documentation from responsive respondents prior to evaluation.

3. Technical Viability

MTC, in consultation with the Transit Operators and technical consultants, will then conduct a review to determine whether the Proposals are technically viable. A Proposal is not technically viable if there is no reasonable expectation that the Proposal could meet the RFP's technical requirements, even after requesting clarifications.

B. Evaluation Panel Review

1. Evaluation Panel

Responsive, responsible, viable Proposals meeting the Minimum Qualifications will then be evaluated and scored by an evaluation panel of MTC and Transit Operator representatives. The evaluation panel may be advised by technical experts. The evaluation of the Proposals and the recommendation to the MTC Executive Director to award to a particular Proposer shall be within the sole judgment and discretion of the evaluation panel.

2. Evaluation Process, Generally

The evaluation process consists of a three-stage approach including (a) an initial evaluation of the written Proposals to develop a short list of Proposers; (b) site visits, reference checks and requests for clarifications from those short-listed proposers; and a second evaluation; and (c) discussions, contract negotiations, issuance of a Request for Best and Final Offer (BAFO), and evaluation of the BAFOs. All Proposers not selected for the short list invited to submit BAFOs will be notified; however, the preliminary scores at that time will not be communicated to Proposers and the evaluation record shall remain confidential until the Clipper® Executive Board acts to approve a Contractor.

All contact during the evaluation phase shall be through the MTC Point of Contact only. Proposers shall neither contact nor lobby any MTC or Transit Operator personnel, including evaluation panel members, regarding the RFP during the evaluation process. This restriction shall be interpreted broadly by MTC to

include direct and indirect references to the RFP, C2 or the C2 system. Any attempt by Proposer to influence members of the evaluation panel will result in disqualification of Proposer.

MTC reserves the right not to convene discussions during its evaluation of Proposals and to make an award on the basis of written Proposals alone. Accordingly, Proposals should be submitted on the most favorable terms from technical and price standpoints. References may be contacted at any point in the evaluation process, and project managers or primary contacts from any project referenced in the Proposer's Proposal may be contacted as references. Any recommendation for award will be made to the firm whose Proposal is the most advantageous to MTC, based on the evaluation criteria listed below.

MTC reserves the right to accept or reject all Proposals submitted, waive minor irregularities, request additional information or revisions to offers, hold oral interviews, and negotiate with any or all Proposers.

3. Evaluation of Attachment A-2, Operation and Maintenance of C1 System by C2 Contractor

In Section VII.B, Part 2.3.b, MTC requires that Proposers describe an approach and work plan for Attachment A-2, Operation and Maintenance of C1. The cost/price proposal (Attachment C-2) for assumption of operations and maintenance of the C1 System (as described in Attachment A-2) shall be submitted separately from the other price forms as provided in Section VII.B, Part 4, and Attachment C-2 will be considered separately and will not impact the cost/price evaluation set out in Section VIII.B.4.c. However, MTC will review Proposer's *Attachment C-2* for soundness of approach, price reasonableness and cost realism prior to award. **MTC reserves the right at its sole discretion to award a Contract that does not include the work described in Attachment A-2, for the operations and maintenance of C1 by the C2 Contractor and to extend its contract with the C1 Contractor until the Work fully transitions from the C1 to the C2 System.**

4. Evaluation Criteria

Responsive proposals shall be evaluated with their relative importance indicated by percentages and the overall scores assigned a weight based on price, as described below:

- Proposer Qualifications and Experience Qualifications – Part 1 of the Proposal (20%)
- Technical Proposal – Part 2 of the Proposal (50%)
- Cost/Price Proposal – Part 4 of the Proposal (30%)

Proposer Qualifications and Experience will be evaluated based on the following factors:

a. **Proposer Qualifications and Experience– Part 1 of the Proposal (20%)**

- i. Depth and relevance of experience of Proposer and key personnel;
- ii. Demonstrated capability of proposed team/firm;
- iii. Past performance of team/firm based on references and site visits (short-listed Proposers only);
- iv. Proposed team structure and allocation of personnel resources, based on Project organization and staffing plan, specifically for Key Personnel; and
- v. Thoroughness and adequacy of mitigation plan for potential conflicts of interest, if applicable.

b. **Technical Proposal – Part 2 of the Proposal (50%)**

The technical proposal will be evaluated based on the following:

i. Proposed Approach to the Scope of Work

- a) Clarity, logic, innovativeness and appropriateness of the Proposer's approach to carry out the tasks described in Attachment A, Scope of Work, including all work components (Attachments A-2 through A-7);
- b) Understanding of and strategy to address risk;
- c) Thoroughness of approach to the work components described in Attachments A-2 through A-7;
- d) Demonstration of project management capabilities, including appropriateness of communication strategies with MTC and Transit Operators that ensure transparency;
- e) Quality assurance and quality control procedures and tools;
- f) Testing and software release management provisions and procedures;
- g) Approach to maintaining the system on supported platforms, software and hardware for its anticipated life;
- h) Approach to asset refresh, system expansion, and backwards compatibility;
- i) Demonstration of robust, effective data security plan and practices, as evidenced by security management plan and references;
- j) Tools, procedures and approaches utilized to provide effective asset management;
- k) Strategy and provisions to accommodate technology evolution, new payment methods, and additional services;
- l) Thoroughness and reasonableness of the proposed implementation plan; and
- m) Feasibility of the proposed transition plan and potential impacts on staff and customers.

ii. Technical Solution

- a) Clarity of information;
- b) Effective demonstration of how the solution will meet the Scope of Work and support the goals set forth in Section I.4 and the Concept of Operations;
- c) Proposed methods to maintain operations and protect revenue during off-line operations;
- d) Suitability of equipment, software and systems for the intended use in a multi-operator, multi-modal transit environment;
- e) Effective utilization of standards-based products, commercial off-the-shelf software, and provision of open or published interfaces;
- f) Software development capabilities and maturity;
- g) Data management architecture, resiliency, expandability and suitability for deployment in a high-volume, multi-agency fare collection system;
- h) Approach to maintaining system security and Payment Card Industry (PCI) Data Security Standards (DSS) compliance; and
- i) Ability to deliver some public facing benefits quickly.

iii. Project Schedule

- a) Logic, risk and appropriateness of proposed schedule;
- b) Thoroughness of defined activities, events, and durations; and
- c) Sufficiency of the proposed resources to meet the schedule.

Reference checks and site visits may be used to supplement Proposers' written proposals in the evaluation of any or all of the factors listed above

c. **Cost/Price Proposal – Part 4 of the Proposal (30%)**

Cost/Price Proposals shall be evaluated based on the combined total price, cost effectiveness and cost realism of the Proposal. **Proposers shall submit a separate Cost/Price Proposal for the assumption of operations and maintenance of the C1 System (Attachment A-2), which will not be included as part of the cost evaluation of the C2 proposal.**

After assigning each Proposal a total score, a weighting factor will be applied using the lowest price as the denominator, to assure both that (a) the lowest priced Proposals are given credit for their economies and (b) the technical proposal and experience have sufficient weight to ensure that low price does not result in the selection of an inferior solution.

5. Initial Evaluation of Written Proposals and Conflict of Interest Assessment

The panel will score the technical and cost proposals, assigning points based on the percentages and process described above. The panel may issue requests for clarification during this stage of the evaluation. The result will be the selection of an initial short list of Proposers to move on to the next phase: site visits, interviews, and reference checks.

Concurrent with the initial panel evaluation, MTC will consider any potential conflicts of interest and the mitigation plans submitted by Proposers (see Section IX, General Conditions, Subsection F). MTC may request additional information from any Proposer that appears to have an organizational conflict of interest, including its plan to mitigate any such conflicts. MTC will not award a Contract to a Proposer with an actual conflict of interest, or with an apparent conflict of interest that cannot be adequately mitigated, in MTC's sole opinion.

6. Site Visits, Interviews, Reference Checks

At the panel's option, site visits and oral interviews may occur. References will be checked. Following these activities, panelists will be given the opportunity to revise their initial scores, and the result will be the selection of a short list of Proposers that score within a competitive range of Proposers likely, in the opinion of the evaluation panel, to be awarded the Contract based on the evaluation factors listed above. These short-listed firms will be invited to participate in the second stage of this procurement: discussions and Request for Best and Final Offer.

7. Discussions, Request for Best and Final Offer (BAFO) and Final Evaluation

Following the initial evaluation of written Proposals, the evaluation panel will enter into discussions with the short-listed Proposers. One purpose of discussions will be to identify to the Proposer specific deficiencies and weaknesses in its Proposal and to provide the Proposer with the opportunity to consider possible approaches to alleviating or eliminating them. These deficiencies or weaknesses may include such things as technical issues, management approach, cost, and team composition. The discussions will also provide the Proposers with the opportunity to discuss and negotiate final contractual terms and conditions with a contract negotiation team appointed by MTC. Discussions may take place through written correspondence and/or face to face meetings. The Proposer's project manager, as well as other key personnel identified by the evaluation panel, will be expected to participate in discussions.

Following discussions, MTC will issue a Request for Best and Final Offer (BAFO) to the short-listed Proposers, to allow Proposers to modify their Proposals, addressing concerns raised during discussions. The final Contract will be included in the Request for BAFO, and Proposers will be required to certify that they will enter into the Contract upon award, with **no** substantive changes. Proposers may also elect not to submit a BAFO, if the Contract terms are not acceptable.

Following receipt of BAFOs, the evaluation panel will conduct a final evaluation of the BAFOs against the evaluation criteria set out in Section VIII above and recommend an award to the MTC Executive Director. The MTC Executive Director will review the recommendation and, if he agrees, forward the recommendation to the Clipper® Executive Board for approval. If the Clipper® Executive Board approves an award, the action will be forwarded to MTC's Operations Committee for its approval.

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IX. GENERAL CONDITIONS

A. Award

Any award made will be to the Proposer whose Proposal is most advantageous to MTC based on the evaluation criteria and procedures defined in Section VIII. If the selected Proposer fails to enter into the Contract with MTC as set forth in the Request for Best and Final Offer, in a timely manner as determined by MTC, in accordance with the terms and conditions of this RFP, MTC reserves the right to reject the Proposal of the selected firm and enter into a Contract with the next highest scoring Proposer.

B. Contract Arrangements

MTC's Contract for the C2 System is included in this RFP as Attachment E. If a Proposer objects to any Contract provision, the provision and the proposed alternative language must be submitted with the initial Proposal in revision text form. Any changes so requested by a Proposer will be the subject of discussions if the Proposer is short-listed, after the initial evaluation of Proposers. A final Contract will be included in the Request for Best and Final Offer. The Proposer ultimately selected to act as the Contractor as a result of the RFP will be required to enter into a Contract in substantially the form as attached to the Request for BAFO. Failure to do so will result in forfeiture of the bid bond and award to the next highest-ranked Proposer.

The selected Proposer will be required to maintain insurance and bond coverage, during the term of the Contract, at the levels described in *Attachment E-1, Insurance Requirements* and *Attachment E-2, Bonding Requirements*. Proposer agrees to provide the required certificates of insurance providing verification of the minimum insurance requirements in *Attachment E-1*, within ten (10) days of MTC's notice to firm that it will be issuing a Contract to the Proposer. Requests to change MTC's insurance requirements should be submitted on or prior to the closing date for receipt of requests for clarifications/exceptions. MTC will review the requests and issue an addendum if material changes requested by a prospective Proposer are acceptable. Objections to MTC determinations on requests to change insurance requirements pursuant to the protest provisions of this RFP must be brought to MTC's attention no later than the deadline for protesting RFP provisions. Failure to protest a provision or MTC's determination with respect to a provision shall require compliance with all material insurance requirements.

C. Selection Disputes

A Proposer may object to a provision of the RFP or to the selection of a particular Proposer on the grounds that MTC procedures, the provisions of the RFP, or applicable provisions of federal, state or local law have been violated or inaccurately or inappropriately applied by submitting to the Project Manager a written explanation of the basis for the protest:

1. No later than 4:00 p.m. on the twentieth business day prior to the date Proposals are due, for objections to an RFP provision; or
2. No later than 4:00 p.m. on the third business day after the date the Proposer is notified that it did not meet the minimum qualifications or was found to be non-responsive; or
3. No later than 4:00 p.m. on the fifth business day after the date on which the Proposer is notified that it was not selected or if applicable the date the MTC Operations Committee authorizes award, whichever is later, for objections to Proposer selection.

Protests of recommended actions must clearly and specifically describe the basis for the protest in sufficient detail for the MTC review officer to recommend a resolution to the MTC Executive Director. At MTC's sole discretion, the period for submission of the protest documentation may be extended by MTC for up to three additional business days.

The MTC Executive Director will respond to the protest in writing, based on the recommendation of a staff review officer and following appropriate consultation with the Chair and Vice Chair of the Clipper® Executive Board. Should a Proposer wish to appeal the decision of the MTC Executive Director, it may file a written appeal with the MTC Operations Committee, no later than 4:00 p.m. on the third business day after receipt of the written response from the MTC Executive Director. The MTC Operations Committee's decision will be the final agency decision.

Except with regard to initial determinations of non-responsiveness, the evaluation record shall remain confidential until the Clipper® Executive Board approves an award and shall not be made available to a protesting interested party until such time.

Any award to a particular Proposer shall be deemed conditional until the expiration of the protest period or, if a protest is filed, the issuance of a written response to the protest by the MTC Executive Director or, if the decision of the MTC Executive Director is appealed, the issuance of the MTC Operations Committee's decision.

D. Public Records

This RFP and any material submitted in response to this RFP are subject to public inspection under the California Public Records Act (Government Code §6250 *et seq.*), unless exempt by law. Other than proprietary information or other information exempt from disclosure by law, the content of Proposals submitted to MTC will be made available for inspection consistent with its policy regarding Public Records Act requests.

If the Proposer believes any Proposal content contains trade secrets or other proprietary information that the Proposer believes would cause substantial injury to the Proposer's competitive position if disclosed, the Proposer may request that MTC withhold from disclosure such proprietary materials by marking each page containing proprietary information, including financial information, if any, required to be submitted under Section VII.B (Part 5.2 of the Form of Proposal) of this RFP, as confidential and shall include the following notice at the front of its Proposal:

"The data on the following pages of this Proposal, including financial information submitted under Section VII.B (Part 5.2 of the Proposal) of the RFP marked along the right margin with a vertical line, contain technical or financial information that constitute trade secrets and/or that, if disclosed, would cause substantial injury to the Proposer's competitive position. The Proposer requests that such data be used for review by MTC only, but understands that exemption from disclosure will be limited by MTC's obligations under the California Public Records Act. If a contract is awarded to the

Proposer submitting this Proposal, MTC shall have the right to use or disclose the data, unless otherwise provided by law. [List pages].”

Failure to include this notice with relevant page numbers shall render any “confidential/proprietary” markings inadequate. Individual pages shall accordingly not be treated confidentially. By submitting a Proposal with portions marked as confidential or proprietary, a Proposer represents it has a good faith belief that such portions are exempt from disclosure under the California Public Records Act. **ANY LANGUAGE PURPORTING TO RENDER THE ENTIRE PROPOSAL CONFIDENTIAL OR PROPRIETARY WILL BE REGARDED AS INEFFECTIVE AND WILL BE DISREGARDED. In addition, the Proposer may not designate any required Proposal forms or the cost Proposal as confidential. Consequently, any language purporting to render any Proposal forms or the cost Proposal as confidential or proprietary will be regarded as ineffective and will be disregarded.**

In the event properly marked data is requested pursuant to the California Public Records Act, the Proposer will be advised of the request. If the Proposal requests that MTC withhold such data from disclosure and MTC complies with the Proposer’s request, the Proposer shall assume all responsibility for redacting the Proposal; defending any challenges resulting from the non-disclosure; indemnifying, defending MTC and holding MTC harmless from and against all claims, legal proceedings, and resulting damages and costs (including but not limited to attorneys’ fees that may be awarded to the party requesting such Proposer information); and paying any and all costs and expenses relating to the withholding of the Proposer information. Proposer agrees that MTC’s sole involvement in any litigation resulting from MTC’s withholding of records shall be to retain the records until otherwise ordered by a court.

If the Proposer does not follow all of the requirements in this section for withholding proprietary information as exempt from disclosure under the California Public Records Act, MTC shall have no obligation to withhold the information from disclosure, and the Proposer shall not have a right to make a claim or maintain any legal action against MTC or its commissioners, officers, employees or agents in connection with such disclosure.

E. Key Personnel

The Key Personnel assigned to the Project will be listed as an attachment to the Contract. Any change in Key Personnel on the proposed project team is subject to prior written approval of MTC. Removal of any Key Personnel identified in the Proposal without written consent of the MTC Project Manager may be considered a material breach of Contract.

F. Conflicts Of Interest

By submitting a Proposal, the Proposer represents and warrants that no commissioner, officer or employee of MTC is in any manner interested directly or indirectly in the Proposal or in the Contract that may be made under it or in any profits expected to arise therefrom, as set forth in California Government Code Section 1090.

The Proposer further warrants and represents that it presently has no interest and agrees that it will not acquire any interest that would present a conflict of interest under California Government Code Sections 1090 *et seq.* or 87100 *et seq.* during the performance of services under any Contract resulting from this RFP and that it will not knowingly employ any person having such an interest. Violation of this provision may result in the Contract being deemed void and unenforceable.

Whenever MTC is awarding a contract that involves the rendering of advice, it will consider whether there exists the potential for bias, because of other activities, relationships or contracts of the Proposer, and if so, whether any potential bias can be mitigated acceptably by MTC and the Proposer. After award, the winning Proposer shall take all reasonable measures to preclude the existence or development of an organizational

conflict of interest in connection with work performed under the agreement resulting from this and other MTC solicitations. An organizational conflict of interest occurs when, due to other activities, relationships, or contracts, a firm or person is unable, or potentially unable, to render impartial assistance or advice to MTC; a firm or person's objectivity in performing the Contract work is or might be impaired; or a firm or person has an unfair competitive advantage in proposing for award of a contract as a result of information gained in performance of this or some other project. If the potential for such conflict arises after Contract award, the Contractor shall be required to notify MTC for the purpose of determining whether the potential for a conflict can be mitigated to MTC's satisfaction.

Proposer shall not engage the services of any subcontractor or independent contractor on any work related to this RFP if the subcontractor or independent contractor, or any employee of the subcontractor or independent contractor, has an actual or apparent organizational conflict of interest related to work or services contemplated under this RFP.

G. Personally Identifiable Information

Proposer agrees to comply with the special provisions related to the access and protection of personally identifiable information set forth in *Attachment G* to the Contract, Special Conditions Relating to Personally Identifiable Information.

H. Pre-Award Audit

Federally funded contracts may require a pre-award audit. The pre-award audit examines the Proposer's accounting, estimating, administrative systems, proposed costs, financial condition, and the proposed contract language.

I. Disadvantaged Business Enterprise (DBE) Requirement

Effective July, 2012, the California Department of Transportation (Caltrans) requires recipients of DOT grant funds through Caltrans to impose DBE utilization requirements on its consultants and contractors. Consultant's DBE participation on the C2 System Contract will assist Caltrans in meeting its federally mandated statewide overall DBE goal. See *Attachment G, Federal Requirements*.

J. Bid Guaranty, Letter of Credit, Performance and Payment Bonds, and Parent Guarantee

Proposals must be accompanied by a Bid Guaranty as described in Section VII, Part 5.1 and J.1 below and a Commitment Letter to provide a Letter of Credit, as described in J.1 below. In addition, within ten (10) days of issuance of a notice of award by MTC, and as a condition of execution of the Contract, the successful Proposer shall file with MTC a) a Letter of Credit (LOC); b) a Performance Bond; c) a Payment Bond; and d) a Parent Guarantee, if applicable, in the amounts and for the purposes noted below. All surety bonds shall be on the forms provided in *Attachment E-2*. Contractor shall pay all premiums and costs relating to the required Bid Guaranty, Letter of Credit, Performance and Payment Bonds, and Parent Guarantee, if applicable. .

1. **Bid Guaranty:** Proposals must be accompanied by a Bid Guaranty as described in Section VII, Part 5.1.

If the Proposer to whom the Contract has been awarded fails to execute the Contract and all other documents or instruments required at the time of execution or fails to deliver the Letter of Credit, Performance Bond, Payment Bond, and Parent Guarantee, if applicable, and certificates of insurance within the timeframes required by this RFP, the check shall be forfeited to MTC or the principal and surety on the bond shall be liable to MTC up to the full penal amount thereof in

accordance with its terms. Bid Guaranties will be held until the Contract has been finally executed and the protest period has expired or any protests resolved, after which all Bid Guaranties, except any guaranties that have been forfeited, will be returned to each respective unsuccessful Proposer. In no event will Proposer's Bid Guaranty be held by MTC beyond three hundred sixty five (365) days from the date of receipt of Proposals.

2. **Commitment Letter and Letter of Credit (LOC):** Proposals must be accompanied by a commitment letter from a qualified LOC Bank, as described below, stating its commitment to issue an initial Letter of Credit as described below. Contractor shall be required to maintain a Letter of Credit, as described herein, throughout the Contract Term and for a period of one year thereafter. The Letter of Credit is intended to secure the performance by Contractor of its obligations under the Contract and to provide MTC a rapid response capability to address a potential default and liquidity to undertake necessary mitigation and investigation in advance of surety engagement to cure defaults. MTC will be the beneficiary of the Letter of Credit and will have the right to draw on the Letter of Credit on its certification to the LOC bank issuing the Letter of Credit of the occurrence of an Event of Default under the Contract, non-renewal without provision of a substitute Letter of Credit as described above, or the occurrence of other material adverse events to be specified by MTC in the Contract.

The initial LOC and any substitute LOC shall have an expiration date not less than 24 months from the Contract Effective Date, and shall be annually renewed, unless MTC receives written notice of non-renewal from the issuer of the current Letter of Credit at least ____ days before the then-current expiration date of the current Letter of Credit. In the event MTC receives a notice of non-renewal, the Contractor must provide MTC with a substitute Letter of Credit at least ____ days prior to the then-current expiration date of the Letter of Credit then in effect, and in a form substantially similar to such Letter of Credit then in effect. If the Contractor fails to provide a substitute Letter of Credit within the time frame required, MTC may draw down the Letter of Credit for the full stated amount thereof.

The amount of the LOC shall be \$5,000,000 at least until the date upon which the Contractor achieves System Completion of the C2 System Design, Implementation and Testing (see Article 6.10 of the Contract). Thereafter, the required stated amount of the LOC may be reduced to \$1,500,000, which shall continue in effect throughout the remaining term of the Contract. The LOC shall be a standby Letter of Credit issued by a LOC bank authorized to transact business in California and with a rating by a nationally recognized ratings service at the level specified by MTC in the Contract.

3. **Performance Bond and Payment Bond:** The Contractor shall be required to provide a Performance Bond in the amount of 100% of the total Proposal Price indicated in Proposer's completed Attachment C-8, line 38, to guarantee faithful performance of Contractor's obligations under the Contract. This bond shall be maintained in full force and effect throughout the term of the Contract.

The Contractor shall be required to provide a Payment Bond in the amount of 100% of the total Proposal Price indicated in Proposer's completed Attachment A-8, line 38, to inure to the benefit of persons performing labor or furnishing materials in connection with performance of Contractor's obligations under the Contract. This bond shall be maintained in full force and effect throughout the term of the Contract, and until all claims for materials and labor have been paid.

Notwithstanding the above, after System Completion as defined in Article 6.10 of the Contract, Contractor may submit a request to reduce the amount of the Performance Bond and Payment Bond. Such request shall include cost savings identified and the revised amounts must cover all remaining work to be performed. MTC reserves the right to accept or reject any request to reduce the amounts of the Performance Bond and Payment Bond, or MTC can offer an alternative amount. Such reduction, if approved by MTC, will be by consent of the surety reducing the bond amount.

The Performance and Payment Bonds will be issued by surety companies acceptable to MTC, generally with a Best's Rating of A- or better with a Financial Size Category of VIII or better. Both the Performance Bond and Payment Bond shall be annually renewable per the instructions on each bond form in *Attachment E-2, Bonds to Accompany Contract*.

Should any surety or sureties be deemed unsatisfactory at any time by MTC, notice will be given to Contractor to that effect, and Contractor shall be required to substitute a new surety or sureties satisfactory to MTC. The direct and indirect costs for replacement bonds shall be the sole responsibility of the Contractor.

Performance and Payment Bonds must provide that any and all alterations, time extensions, extra work, additional work or any other changes authorized in the Contract may be made without notice to, or securing the prior consent of, the surety or sureties on the Performance or Payment Bonds.

4. **Parent Guarantee:** A Parent Guarantee of the performance of Contractor's obligations under the Contract is required if the Contractor fails to provide assurance of its financial ability to perform all obligations under the Contract throughout the term of the Contract to the satisfaction of MTC and to the standards established by MTC in the Contract. .

Full compensation for furnishing the Letter of Credit, Performance and Payment Bonds, and Parent Guarantee, if required, is included in the prices paid for the various contract items of work and no separate payment will be made for such financial guaranties.

See *Attachments E, E-1 and E-2* for additional insurance and bonding requirements, including bid forms.

K. Web-Based Communication

Proposer agrees to submit all communication and required documentation, including but not limited to invoices, requests for Contract modifications, etc. to the MTC Project Manager or his/her designee via a web-based system designated by MTC to which MTC will provide system access.

L. Payment, Subcontractor and Prevailing Wage Information

Proposer agrees to submit payment, subcontractor utilization and, if applicable, certified payroll information for contracts with prevailing wage requirements via a web-based system designated by MTC to which MTC will provide system access.

M. Cooperative Use

The Transit Operators may utilize this RFP to obtain equipment, at the same terms and conditions included in this RFP and resulting Proposals during the period of time that the contract resulting from this RFP is in effect. The Transit Operators will contract with the Contractor for equipment needs either (a) by issuing a Purchase Order (PO), or (b) by entering into a contract with the Contractor and remitting payment for equipment based on invoices received. Any change to the terms of a Transit Operator-issued PO or contract shall require a written amendment to the PO or contract. A signed Transit Operator PO or Contract mailed or delivered to the Contractor shall constitute a binding contract, which incorporates this RFP and its addenda, if any, and all documents referenced herein, any deviations from the specifications expressly accepted by MTC, and all terms and conditions of the PO or contract.

DRAFT

Attachment A - Scope of Work

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A - 0: OVERVIEW

A - 0.01 GENERAL

The Scope of Work under this Contract includes the design, development, testing, installation, implementation, transition, operation and maintenance of a complete, Fit for Purpose and fully functioning C2 System, as well as the operation and maintenance of the current C1 system through the completion of C1 Transition and decommissioning. Contractor shall also be responsible for all integration activities, and managing and coordinating third party contractors that interact or interface with C2.

This document, along with the attached requirements (A-1 through A-8), collectively comprise the Scope of Work. Information on the organization of the Scope of Work is provided below.

A - 0.02 CRITICAL AREAS OF SCOPE

Within the fully functioning C2 System, the following areas are considered critical areas of scope. These elements are core features of the C2 System, are complex in nature, and will require thorough testing prior to deployment. This section is not intended to be a comprehensive description, and additional details are provided in the requirements included in Attachment A-1.

A - 0.02 (1) Fare Validation Devices:

Metropolitan Transportation Commission (MTC) requires that Contractor provide the devices, infrastructure from multiple vending channels, and Software as necessary for all Transit Operators to collect, process and inspect fares. These items will include fare devices and related equipment installed in vehicles, at rail platforms, and at ferry terminals, and in some cases will integrate with legacy devices such as faregates and vending machines provided by others.

A - 0.02 (2) Back Office Systems

MTC requires that Contractor provide a proven multi-operator Back Office system with the ability to process fare Transactions, provide financial management, manage accounts, manage customer information, manage data and reports, manage Assets, and Interface with both internal and external elements of the C2 Systems.

A critical element of the Back Office systems will be new Customer service systems and functionality, some of which may be operated by Contractor, with others operated by a third party pursuant to Other C2 Contracts, such as the Customer Service Center that will handle all C2-related Customer inquiries (with the Systems provided by Contractor) as may come in by telephone, email, or through web contact Contract..

A - 0.02 (3) Communications Network

MTC requires that Contractor provide, manage and maintain a comprehensive, wide area online communications network to connect all fare validation and other devices to the System Back Office, and also to connect the C2 System to MTC and the Transit Operators. MTC will require that Contractor's communications network integrate with existing and updated Transit Operator networks.

A - 0.02 (4) Websites and Mobile Applications

MTC requires that Contractor provide a C2 System that is forward looking and that makes maximum use of modern web and mobile technology to deliver services to Customers, Transit Operators, and others. MTC requires that Contractor develop websites and mobile applications using current standards so that they can be readily updated and refreshed by Contractor as technologies and standards evolve.

A - 0.02 (5) Institutional and Discount Program Management

MTC requires that Contractor to implement a C2 System that provides efficient, automated tools to assist the C2 Contractor, MTC, the Transit Operators, Institutions and others with managing special programs including Institutional Programs and discount programs for eligible Customers.

A - 0.02 (6) Fare Media Management

MTC anticipates issuing a Fare Media Contract for the purchase and fulfillment of both physical and virtual (mobile application) Fare Media orders, with the management of that media and creation of Fare Media orders provided by the C2 System delivered under this Contract. MTC will require that Contractor have a process in place to certify Fare Media for use on an ongoing basis throughout the life of the Contract, and also to track and manage Fare Media orders and inventory.

A - 0.02 (7) Retail Sales and Distribution Network

A critical element of the C2 System is the provision of a comprehensive, geographically diverse retail network to provide convenient retail Fare Media purchase and reload for Customers, particularly those from disadvantaged populations who may not have easy access to other purchase and reload methods. MTC requires that Contractor provide an efficient reload network either using equipment available at the retailer or using an application provided by the Contractor that can be used on commercial off-the-shelf devices such as a tablets or smartphones. The reload network must be able to communicate to the Back Office without the need for dedicated communications infrastructure or lines.

A - 0.02 (8) Program Management

MTC requires that Contractor manage all elements of the Clipper® Program for which it is responsible throughout the life of the Contract, and cooperate with Other C2 Contractors and MTC and the Transit Operators in key areas such as marketing and Organizational Change Management in order to help make C2 a success for Customers, MTC and the Transit Operators.

A - 0.03 WORK COMPONENTS

The scope includes the Work components shown below, all of which are included in more detail in Attachments A - 2 through A - 7. In general, the Work components shall include the following activities:

Operations and Maintenance of C1

To provide a smooth transition between the C1 and C2 Systems, MTC requires Contractor to take over the operation of the C1 System when the current C1 System Contract expires, and to operate and maintain the C1 System until such time as (a) C2 System equipment and services are available on all Transit Operator operations; (b) all Customers have been transitioned to the C2 System in accordance with A-4 (Transition of C1 System to C2 System); and (c) C1 System is no longer required, and has been decommissioned.

Design, Implementation, and Testing of C2 System

MTC will require Contractor to be responsible for the design, implementation, testing of all equipment, systems, Software and networks to provide a fully-functioning System. A key element of this responsibility will be an interactive design process throughout which where Contractor demonstrates the features and functions of its system in order to identify and implement any changes and modifications that are necessary to support the needs of MTC and the Transit Operators.

Transition of C1 to C2 System

MTC requires Contractor to provide the services, systems and expertise required for the smooth transition of operations and Customers from the C1 System to the C2 System, minimizing impacts on all parties. During the transition period MTC will require that Contractor ensure that a Customer with either a C1 or C2 fare medium will be able to travel on all Transit Operator services without impediment.

Operations and Maintenance of C2

Contractor shall provide all services required to efficiently operate and maintain the C2 System throughout the term of the Contract. Paramount will be maintaining high levels of customer satisfaction, data, and system security, high reliability of the equipment and system, and financial integrity and transparency, while employing a system that maximizes the use of configuration parameters.

Upgrades and Enhancements to the C2 System

MTC will require that, at all times once operable, the C2 System will be maintained on Software and Hardware platforms supported by the Original Equipment Manufacturer (OEM) supplier, and that Contractor shall cause Software patches, updates and bug fixes to be made in a timely manner. MTC will also require Contractor to design the C2 System for expandability and future enhancements to take advantage of technology advancements without the need for extensive modification or rewriting of Software.

End of Term Transition

MTC will require Contractor to maintain all Assets in a state of good repair, and to be able to transfer all Assets and intellectual property to a successor entity at the end of the Contract term such that the successor entity would be able to operate, maintain, and enhance the C2 System.

A - 0.04 ASSUMPTIONS AND KNOWN CONSTRAINTS

Key assumptions and known constraints include:

- MTC and the Transit Operators make no assertions regarding the suitability of existing wiring, power, communications networks, and field conditions to support the C2 System. Contractor shall be responsible for all verifications required.
- Equipment quantities, fleet sizes and other Transit Operator information is subject to change.

- All current fare policies, products, transfer agreements and fare structures will remain in place unless otherwise directed by the MTC, and new fare policies and structures may be introduced from time to time on an ongoing basis throughout the life of the Contract.
- Any existing third party payment functions such as paying for parking at BART stations will be retained or replicated under C2.
- All equipment not described as being provided or replaced by Contractor shall be retained and potentially modified under C2.
- Contractor shall be responsible for all integration Work required to reuse C1 components and integrate with existing vending machines, faregates, on-bus networks and devices, and other legacy components not replaced under this Contract, and shall also be responsible for coordinating the work of all third party contractors conducting work to integrate with C2.
- All Transit Operators will transition to the C2 System, and additional transit operators may be added in the future.
- Contractor may expect reasonable cooperation from the C1 Contractor to assist with transition and handover of C1 operations and transfer of Assets. The C2 Contractor will remain responsible for all Hardware, Software and systems maintenance, development, modifications, etc. as required for ongoing C1 operations.

A - 0.05 SCOPE OF WORK REQUIREMENTS

Specific technical, operational and other requirements associated with each element of the C2 System are described in the following attachments:

A - 1	System Requirements
A - 2	Operations and Maintenance of C2
A - 3	Design, Implementation, and Testing of C2
A - 4	Transition of C1 System to C2 System
A - 5	Operations and Maintenance of C2 System
A - 6	Upgrades and Enhancements to the C2 System
A - 7	End of Term Transition
A - 8	Service Level Agreements
A - 9	Task Order Process and Form

A - 1: SYSTEM REQUIREMENTS

This section describes requirements for the systems to be supplied under this Contract. They include:

- The field devices to be installed in bus, rail and ferry facilities;
- The back-office systems used to process Transactions, conduct financial management, manage data, provide Customer service, and provide reporting;
- The communications networks to be supplied and integrated with;
- Websites, web portals and mobile Customer service applications;
- Walk-in Customer services systems;
- Fare Media management systems; and
- The retail sales and reloading network.

A - 1.01 FIELD DEVICES

Contractor shall provide all of the equipment, accessories, Software and services required to collect, process and inspect fares on bus vehicles and at rail and ferry terminals including but not limited to:

- Fare Validators and associated onboard equipment for bus, rail and ferry operation, including integration with certain legacy equipment and systems; and
- Mobile solutions for fare enforcement and fare payment;

Contractor shall provide sufficient quantities of all Hardware, Software, Interfaces, and support required to support the operation of the replacement system under this Contract.

In general, it is anticipated that it will not be possible to reuse existing C1 validation devices due to the technology used and age of the devices. Validator devices in the ticket vending machines and faregates (Cubic TR3 devices), and newer C1 System (CID 5) bus Validator devices are, with software modification, capable of processing both card and account-based transactions. MTC will make these newer devices available to Contractor for reuse and reprogramming at Contractor discretion. In the event that a C1 System validation device is reused, Contractor will be responsible for conducting all Work required to make that device fully operational as part of the C2 System.

Functional Architecture views Appendix 4 related to fare validation devices include:

- FA-001 Fare Validation and Payment
- FD-001 C2 Field Devices
- FA-014 Onboard Devices
- FA-002 Manual Fare Enforcement

A - 1.02 FIELD DEVICES – GENERAL REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
FD-1	All field devices shall be branded in accordance with the current C2 branding standard at the time of design.	
FD-2	Field devices shall utilize non-volatile memory such that data and configuration information is not lost or corrupted in the event of power interruption or sustained power loss.	
FD-3	Field devices shall include sufficient storage capacity to retain a minimum of thirty (30) Days of data.	
FD-4	Field devices shall be modular and designed for easy replacement in the field.	
FD-5	Field devices shall be designed for operation in their intended environment(s).	
FD-6	All field devices and physical case(s) shall be rugged and hardened, and designed to protect the system from unauthorized access, such that any unauthorized attempt to access the device shall destroy the data on the device.	
FD-7	Field device installation shall comply with all ADA Accessibility Guidelines (ADAAG) requirements, including:	
FD-7.1	a. all installation requirements for height and reach;	
FD-7.2	b. all audible alarms, signals, and notifications; and	
FD-7.3	c. all visual alarms, signals, and notifications.	
FD-8	Field devices shall include tactile pathways (i.e. haptic feedback) on buttons and touchscreens and simple button sequencing to provide accessibility for visually or cognitively impaired passengers.	
FD-9	In the event of power loss, all devices shall have sufficient back-up power to complete their current activity, and shall perform an orderly shutdown upon completion of that activity.	
FD-10	Field devices shall have customer displays as appropriate to display required information.	
FD-11	Customer displays shall have sufficient lines and characters to display required information regarding the transaction, such as transaction details, remaining balance, pass expiration, and authorization or proceed, efficiently and effectively while the Customer is in position to make a Transaction.	

REQ. ID	REQUIREMENT	NOTES
FD-12	Customer displays shall be supplemented by a configurable audio signal in MP3, WAV, or other similar digital audio format, indicating the status of the Transaction.	
FD-13	Separate, distinct sounds shall be available for successful Transactions, unsuccessful Transactions and warnings. These sounds shall be configurable.	
FD-14	Customer displays shall be capable of being read at arm's length in all lighting conditions, including direct sunlight and darkness and capable of eliminating glare or washout conditions caused by direct sunlight.	
FD-15	Field devices shall enable an Authorized User to issue control commands both locally and remotely.	
FD-16	Contractor shall provide a Field Devices Design Document (CDRL-DD-010) that includes, but is not limited to, the following:	
FD-16.1	a. Device specifications for all devices;	
FD-16.2	b. System architecture diagram;	
FD-16.3	c. Software concept and design;	
FD-16.4	d. Communications design and data flow diagram;	
FD-16.5	e. Software integration design;	
FD-16.6	f. Installation diagram;	
FD-16.7	g. User Interface design and messaging;	
FD-16.8	h. System interfaces;	
FD-16.9	i. Configurability; and	
FD-15.9	j. Maintenance information.	
FD-17	The Field Device Design Document shall include Transit Operator-specific chapters that address Transit Operator-specific needs.	
FD-18	Field devices shall allow for manual data extraction both locally and over the network.	
FD-19	Field devices shall integrate any communication antennas within the device enclosure to avoid damage to the device or its surroundings.	

REQ. ID	REQUIREMENT	NOTES
FD-20	Field devices shall provide secure and encrypted data storage.	
FD-21	All personal information stored on a device, and any automatic or manual data extraction processes, shall be secure and encrypted.	
FD-22	Field devices shall be resistant to vibration and accept any electromagnetic interference (EMI) received from other devices.	
FD-23	Field devices shall be ergonomically designed, with no sharp edges or corners, both internally and externally, to protect both Customers and maintenance personnel.	
FD-24	Contractor shall be responsible, at its cost, for any required certifications, tests, or waivers to comply with local, Regional and national codes, laws and regulations.	
FD-25	All reasonable measures shall be taken to mitigate the risk of electromagnetic or radio interference with any other equipment, including that belonging to the public.	
FD-26	Contractor shall certify, through testing, the electromagnetic compatibility of any equipment to be furnished.	

A - 1.03 FARE VALIDATOR GENERAL REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
FV-1	Contractor shall provide the Validator as a type of field device, subject to the general field devices requirements.	
FV-2	Contractor shall provide a Fare Validator Supplemental Design Document (CDRL-DD-010a) that includes, but is not limited to, the following:	
FV-2.1	a. Device specifications;	
FV-2.2	b. System architecture diagram;	
FV-2.3	c. Software concept and design;	
FV-2.4	d. Communications design and data flow diagram;	
FV-2.5	e. Software integration design;	
FV-2.6	f. Installation diagram;	
FV-2.7	g. User Interface design and messaging;	

REQ. ID	REQUIREMENT	NOTES
FV-2.8	h. System interfaces;	
FV-2.9	i. Configurability; and	
FV-2.10	j. Maintenance information.	
FV-3	Fare Validators shall automatically determine applicable fare zone based on either pre-defined system configuration or current location. Faregate and Standalone validators shall be pre-programmed with appropriate fare zone. On-board validators shall determine accurate fare zone based on current location as available from built-in Global Positioning System (GPS) receivers.	
FV-4	When any valid Fare Media is presented to a Validator, the Validator shall read required data and information from the Fare Media.	
FV-5	The Validator shall verify that the Fare Media is valid for use.	
FV-6	The Validator shall verify that applicable Fare Products or minimum value thresholds are available to permit travel.	
FV-7	If Positive Lists of Fare Media are used, the Validator shall verify the presence of the Fare Media on the Positive List.	
FV-8	The Validator shall have the capability to write to Fare Media if required to support authorization and field inspection.	
FV-9	If the Fare Media and Fare Products are valid for use, the Validator shall allow the Customer to access the transit system.	
FV-10	The Validator shall check if the Fare Media is on a Negative List and if so shall deny access.	
FV-11	The Validator shall include a Transit Operator-configurable “risk-based” algorithm to determine whether or not to allow access for instances where validity cannot be confirmed or denied at the point of use. Each Transit Operator shall be able to individually set its thresholds for determining whether or not to allow access.	
FV-12	All validation and access control functions shall be performed regardless of whether a Validator or other device is online or off-line.	
FV-13	Positive and Negative Lists for all wired rail and ferry devices shall be updated within fifteen (15) minutes of a change.	

REQ. ID	REQUIREMENT	NOTES
FV-14	Positive and Negative Lists for all bus and wireless devices shall be updated within thirty (30) minutes of a change.	
FV-15	If required for a Transit Operator, the Validator shall be configured with its location.	
FV-16	If required by a Transit Operator, the Validator shall enable an Authorized User to issue control commands, including but not necessarily limited to:	
FV-16.1	a. Turn-on;	
FV-16.2	b. Turn-off;	
FV-16.3	c. Restart; and	
FV-16.4	d. Change operating mode.	
FV-17	The Validator shall enable an Authorized User to manage a Customer's fare, including but not necessarily limited to:	
FV-17.1	a. Extend a transfer window;	
FV-17.2	b. Cancel a fare or tap; and	
FV-17.3	c. Deduct additional fares.	
FV-18	The Validator shall provide configurable, distinct, audible indications when the Customer's fare was paid or tap executed successfully or not. The validator shall not charge the account multiple times if the Customer accidentally taps the Media multiple times on the target.	
FV-19	When Fare Media is validated, the Validator shall provide the Customer with a configurable, audible indication of validity status including valid, invalid and low balance.	
FV-20	The Validator shall provide a visual indication that the Customer's fare was paid or tap executed successfully or not.	
FV-21	The Validator shall provide the remaining value in card-holder's account by verifying that in real-time with the Back Office or indicate pass validity.	
FV-22	When a Clipper®-branded C1 Smart Card is presented to a Validator, the Validator shall accept and process the C1 card.	
FV-23	The System shall include functionality to convert C1 cards to C2 operation.	

REQ. ID	REQUIREMENT	NOTES
FV-24	The Validator shall automatically upload any updated configuration information without interruption in service.	
FV-25	The System shall perform all necessary system actions and communications to allow the Back Office to manage Positive and Negative Lists.	
FV-26	Positive and Negative List updates shall not require the Validator to be placed out of services and shall not interrupt fare collection operations.	
FV-27	When a security, Software, firmware, configuration or positive and Negative List update is received, the Validators shall apply that update with no interruption of operation.	

A - 1.04 ONBOARD (BUS AND RAIL VEHICLE) EQUIPMENT SUPPLEMENTAL REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
OES-1	Contractor shall provide onboard equipment as types of field devices, subject to the general field devices requirements.	
OES-2	All onboard equipment shall power on with the vehicle ignition and shall automatically perform system diagnostics and attempt to connect to the Back Office to download all data, parameters and other information necessary for operation.	
OES-3	An operator control unit (OCU) shall be provided to operate onboard devices.	
OES-4	Contractor shall provide an Onboard Equipment Supplemental Design Document (CDRL-DD-010c) that includes, but is not limited to, the following:	
OES-4.1	a. Device specifications for all devices;	
OES-4.2	b. System architecture diagram;	
OES-4.3	c. Software concept and design;	
OES-4.4	d. Communications design and data flow diagram;	
OES-4.5	e. Software integration design;	
OES-4.6	f. Installation diagram;	
OES-4.7	g. User Interface design and messaging;	

REQ. ID	REQUIREMENT	NOTES
OES-4.8	h. System interfaces;	
OES-4.9	i. Configurability; and	
OES-4.10	j. Maintenance information.	
OES-5	The Onboard Equipment Design Document shall include Transit Operator-specific chapters that address Transit Operator-specific needs.	
OES-6	Onboard equipment shall remain powered on after the ignition is turned off for sufficient time to complete all data transfers.	
OES-7	The OCU shall enable a vehicle operator to manage all operational and fare-related functions requiring operator interaction including:	
OES-7.1	a. Login and logout of the fare system;	
OES-7.2	b. Entering and validation of operator identification;	
OES-7.3	c. Block and trip changes; and	
OES-7.4	d. Override of default fares and fare categories.	
OES-8	The OCU shall indicate the status of all onboard Validators.	
OES-9	The OCU shall indicate the status of all fare Transactions.	
OES-10	The OCU shall display the status of all communication links.	
OES-11	The OCU shall display any faults or operational issues.	
OES-12	The OCU shall display status of data transfer progress with estimated remaining connection time required.	
OES-13	The OCU shall include an Interface to allow an existing system such as an automatic vehicle location system to automatically change login, logoff, operator ID, block, and trip parameters.	
OES-14	The OCU shall be equipped with a touchscreen keypad to operate onboard devices and display fare system information.	
OES-15	Software and firmware updates for onboard equipment shall be transmitted over the wireless network.	
OES-16	The OCU shall transfer data over the wireless communications network.	
OES-17	The OCU shall be capable, with maintenance staff input, of displaying device diagnostic data and versions of all software, tables and data on the OCU and associated validator devices.	

REQ. ID	REQUIREMENT	NOTES
OES-18	The OCU shall be capable, with operator input, of displaying current data not yet uploaded.	
OES-19	Onboard equipment shall be designed for sustained operation within a voltage range to +10 to +38.5 VDC (Volts of Direct Current) without interruption.	
OES-20	Onboard equipment shall protect against noise, voltage fluctuation, over and under voltage, and Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI) protection.	
OES-21	Onboard equipment designed requiring passenger viewing or interaction shall be located and oriented for convenient access by passengers.	
OES-22	Onboard equipment shall be installed such that it does not:	
OES-22.1	a. Block the driver's line of sight;	
OES-22.2	b. Hinder the driver's ability to get into or out of the seat;	
OES-22.3	c. Interfere with the physical configuration of existing on-board equipment;	
OES-22.4	d. Hinder maintenance access for any existing on-board equipment; and	
OES-22.5	e. Block or impede passenger movements, including those with mobility devices.	

A - 1.05 PARATRANSIT VEHICLES SUPPLEMENTAL REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
PVS-1	Contractor shall provide onboard equipment for paratransit vehicles as types of field devices, subject to the general field devices requirements.	
PVS-2	Contractor shall provide a Paratransit Equipment Supplemental Design Document (CDRL-DD-010d) that includes, but is not limited to, the following:	
PVS-2.1	a. Device specifications for all devices;	
PVS-2.2	b. System architecture diagram;	

REQ. ID	REQUIREMENT	NOTES
PVS-2.3	c. Software concept and design;	
PVS-2.4	d. Communications design and data flow diagram;	
PVS-2.5	e. Software integration design;	
PVS-2.6	f. Installation diagram;	
PVS-2.7	g. User Interface design and messaging;	
PVS-2.8	h. System interfaces;	
PVS-2.9	i. Configurability; and	
PVS-2.10	j. Maintenance information.	
PVS-3	Physical characteristics of field devices shall not impede maneuverability for passengers with mobility aids.	
PVS-4	Field devices shall be designed to assist passengers with impaired motor skills to physically deposit coins, bills, or cards where applicable.	

A - 1.06 FAREGATE VALIDATOR SUPPLEMENTAL REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
FVS-1	Contractor shall provide faregate validators, subject to the general field device requirements.	
FVS-2	Contractor shall provide a Faregate Validator Supplemental Design Document (CDRL-DD-010b) that includes, but is not limited to, the following:	
FVS-2.1	a. Device specifications for all devices;	
FVS-2.2	b. System architecture diagram;	
FVS-2.3	c. Software concept and design;	
FVS-2.4	d. Communications design and data flow diagram;	
FVS-2.5	e. Software integration design;	
FVS-2.6	f. Installation diagram;	
FVS-2.7	g. User Interface design and messaging;	
FVS-2.8	h. System interfaces;	

REQ. ID	REQUIREMENT	NOTES
FVS-2.9	i. Configurability; and	
FVS-2.10	j. Maintenance information.	
FVS-3	When a Validator is connected to a faregate that physically controls access or egress to a fare-controlled zone, the Validator shall actuate the legacy device to provide or deny access or egress, and shall provide transaction data to the legacy device as required for its processing and reporting needs.	
FVS-4	If the Customer has insufficient fare to enter or exit the system, based on Transit-Operator specific configurable business rules, the Validator shall deny entry or exit.	
FVS-5	The Validator shall provide customer audio and visual feedback of transaction status and details through the existing audio and visual displays.	
FVS-6	The Validator shall integrate with the faregate through the faregate computer processor (single board computer) for the purpose of controlling the gate and providing audio and visual transaction information.	

A - 1.07 STANDALONE VALIDATOR SUPPLEMENTAL REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
SVS-1	Contractor shall provide standalone Validators as a type of field device, subject to the general field devices requirements.	
SVS-2	Contractor shall provide a Stand-alone Validator Supplemental Design Document (CDRL-DD-010ee) that includes, but is not limited to, the following:	
SVS-2.1	a. Device specifications for all devices;	
SVS-2.2	b. System architecture diagram;	
SVS-2.3	c. Software concept and design;	
SVS-2.4	d. Communications design and data flow diagram;	
SVS-2.5	e. Software integration design;	
SVS-2.6	f. Installation diagram;	

REQ. ID	REQUIREMENT	NOTES
SVS-2.7	g. User Interface design and messaging;	
SVS-2.8	h. System interfaces;	
SVS-2.9	i. Configurability; and	
SVS-2.10	j. Maintenance information.	
SVS-3	If required for a Transit Operator, the standalone Validator shall include a remote display so that station staff can monitor Validator status and operation from an office or booth.	
SVS-4	The standalone Validator mounting system shall be flexible and able to be optimized to accommodate a variety of installation types and locations.	

A - 1.08 ENVIRONMENTAL DESIGN SUPPLEMENTAL REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
EDS-1	Contractor shall provide an Environmental Design Specifications Document (CDRL-DD-009) that details the environmental conditions under which each device, enclosure, or connection will operate.	
EDS-2	Field devices shall maintain specified performance while subject to operating temperature conditions between -20F and 160F.	
EDS-3	Field devices shall maintain specified performance while subject to storage temperatures between -40F and 170F.	
EDS-4	Field devices shall maintain specified performance while subject to humidity between 0-90% relative humidity, non-condensing.	
EDS-5	Field devices shall maintain Ingress/International Protection (IP)54 or National Electrical Manufacturers Association (NEMA)4 specified performance with solid object and moisture protection.	
EDS-6	Field devices shall maintain compliance with Society of Automobile Engineers (SAE) J1455 standard on buses and wayside devices and EN50155:2007 standards on rail for shock, vibration, dust, water, temperature, and pressure.	

REQ. ID	REQUIREMENT	NOTES
EDS-7	Field devices shall be reasonably protected against falling dirt, rain, ice, snow, windblown dust, vibration, pressured hose-directed water, corrosion, extreme temperature variations and formation of ice, vandalism, and knock out.	
EDS-8	Wayside field devices shall include any provisions necessary to maintain the internal hardware at the manufacturer's specified environmental conditions.	
EDS-9	Wayside field device enclosures shall be designed to prevent entry of moisture during a driving rainstorm and to minimize entry of dust in accordance with IP65 or NEMA5.	
EDS-10	In some cases, equipment will be physically proximate to bodies of saltwater and may be subject to saltwater spray. Corrosion resistance for all equipment and installation materials is required for these installations.	

A - 1.09 FARE ENFORCEMENT MOBILE SOLUTION

REQ. ID	REQUIREMENT	NOTES
FEMS-1	Contractor shall provide a Fare Enforcement Mobile Solution to allow fare inspectors to check fare payment, and collect fare payments and fare payment penalties.	
FEMS-2	Contractor shall provide Fare Payment and Enforcement Management Plan (CDRL-O&M-010), to be used by Transit Operators, describing the process of using the C2 System for:	
FEMS-2.1	a. validating Fare Media;	
FEMS-2.2	b. granting or denying access;	
FEMS-2.3	c. managing authorizations;	
FEMS-2.4	d. collecting fares and penalties;	
FEMS-2.5	e. issuing warnings and citations; and	
FEMS-2.6	f. protecting and managing data.	
FEMS-3	The contractor shall provide a Fare Enforcement Mobile Solution Supplemental Design Document (CDRL-DD-010f) that includes, but is not limited to, the following:	
FEMS-3.1	a. Device specifications for all devices;	

REQ. ID	REQUIREMENT	NOTES
FEMS-3.2	b. System architecture diagram;	
FEMS-3.3	c. Software concept and design;	
FEMS-3.4	d. Communications design and data flow diagram;	
FEMS-3.5	e. Software integration design;	
FEMS-3.6	f. Installation diagram;	
FEMS-3.7	g. User Interface design and messaging;	
FEMS-3.8	h. System interfaces;	
FEMS-3.9	i. Configurability; and	
FEMS-3.10	j. Maintenance information.	
FEMS-4	The Fare Enforcement Mobile Solution shall enable an Authorized User to read Fare Media for identification and retrieve account information to determine the validity of a Customer's current trip, purchased Fare Products and current account status.	
FEMS-5	The Fare Enforcement Mobile Solution shall provide audible indication of the status of the Fare Media and product validity.	
FEMS-6	The Fare Enforcement Mobile Solution shall provide a visual indication of the status of the Fare Media and product validity.	
FEMS-7	The Fare Enforcement Mobile Solution shall retain an inspection history that shall be able to be retrieved when the devices is on- or offline.	
FEMS-8	The Fare Enforcement Mobile Solution shall enable an Authorized User to add or remove Fare Media from a negative (blocked Fare Media) list.	
FEMS-9	The Fare Enforcement Mobile Solution shall retain fare warnings and citations history (for all warnings and citations) and upload/retain this history to the Back Office.	
FEMS-10	The Fare Enforcement Mobile Solution shall have the capability for identifying Repeat Offenders in a manner that is compliant with Federal, State and local privacy related laws.	
FEMS-11	The Fare Enforcement Mobile Solution shall be configurable for use for each applicable Transit Operator, based on Operator-specific business rules.	

REQ. ID	REQUIREMENT	NOTES
FEMS-12	The Fare Enforcement Mobile Solution shall transmit and receive application, configuration and Software related data to and from the Back Office.	
FEMS-13	The Fare Enforcement Mobile Solution shall be fully operational regardless of whether the device is online or offline. Data collected during offline operation shall be synchronized with the central system upon restoration of connectivity.	
FEMS-14	The Fare Enforcement Mobile Solution shall determine its location via GPS and shall mark all inspections with location data.	
FEMS-15	Using GPS location, the Fare Enforcement Mobile Solution shall automatically determine the current fare zone.	
FEMS-16	The Fare Enforcement Mobile Solution shall enable an Authorized User to adjust its screen brightness, screen contrast, volume and other similar display and audio features.	
FEMS-17	The Fare Enforcement Mobile Solution shall enable easy interaction with existing features and data input by Users.	
FEMS-18	The Fare Enforcement Mobile Solution shall enable information to be transferred from/to it via cellular communications, with WiFi (IEEE 802.11) as secondary communications.	
FEMS-19	The Fare Enforcement Mobile Solution shall comply with all Federal, State and local requirements, and Payment Card Industry data security standard (PCI-DSS) requirements for privacy with regards to Customer information.	
FEMS-20	The Fare Enforcement Mobile Solution shall be designed to be resilient and persistent, with data protected from loss in case of any device Failures or restarts.	
FEMS-21	The Fare Enforcement Mobile Solution shall be ergonomic and easy-to-use, providing for arm's-length inspection of Fare Media.	
FEMS-22	The Fare Enforcement Mobile Solution shall be designed to withstand daily use in a transit environment.	
FEMS-23	The Fare Enforcement Mobile Solution shall include a belt-mounted holster for the device.	

A - 1.10 MOBILE FARE PAYMENT SOLUTION

REQ. ID	REQUIREMENT	NOTES
MFPS-1	Contractor shall provide a Mobile Fare Payment Solution to allow fare inspectors or other Authorized Users to collect fare payment and fare payment penalties from Customers while traveling.	
MFPS-2	Contractor shall provide a Mobile Fare Payment Solution Supplemental Design Document (CDRL-DD-010g) that includes, but is not limited to, the following:	
MFPS-2.1	a. Device specifications for all devices;	
MFPS-2.2	b. System architecture diagram;	
MFPS-2.3	c. Software concept and design;	
MFPS-2.4	d. Communications design and data flow diagram;	
MFPS-2.5	e. Software integration design;	
MFPS-2.6	f. Installation diagram;	
MFPS-2.7	g. User Interface design;	
MFPS-2.8	h. System interfaces;	
MFPS-2.9	i. Configurability; and	
MFPS-2.10	j. Maintenance information.	
MFPS-3	The Mobile Fare Payment Solution shall incorporate payment media reader capabilities to enable payment using credit cards, debit cards, mobile payment technologies and other commonly used payment media.	
MFPS-4	The Mobile Fare Payment Solution shall include the ability to issue proof of payment or receipts via a separate Bluetooth printer.	
MFPS-5	The Mobile Fare Payment Solution shall enable an Authorized User to select Fare Products or fare payment penalties and associated fare values for payment by Customers.	
MFPS-6	The Mobile Fare Payment Solution shall enable payment for Fare Products or fare payment penalties using authorized payment media. All Transactions shall be recorded through the Back Office systems and payment gateway.	
MFPS-7	The Mobile Fare Payment Solution shall provide an audible and visual indication of the status of the fare payment.	

REQ. ID	REQUIREMENT	NOTES
MFPS-8	The Mobile Fare Payment Solution shall be configurable for use for each applicable Transit Operator, based on operator-specific configurable business rules.	
MFPS-9	The Mobile Fare Payment Solution shall enable an Authorized User to adjust its screen brightness, screen contrast, volume and other similar display and audio features.	
MFPS-10	The Mobile Fare Payment Solution shall be operated via touch screen (without stylus) and/or a combination of alphanumeric keys and soft keys.	
MFPS-11	The Mobile Fare Payment Solution shall incorporate wireless communications capability to enable secure real-time communications with the Back Office systems and payment gateway.	
MFPS-12	The Mobile Fare Payment Solution shall transmit and receive application, configuration and Software related data to and from the Back Office.	
MFPS-13	The Mobile Fare Payment Solution shall enable information to be transferred from/to it via Wi-Fi or cellular when available; otherwise shall function in an offline mode.	
MFPS-14	The Mobile Fare Payment Solution shall determine its location via GPS.	
MFPS-15	The Mobile Fare Payment Solution shall comply with all Federal, State and local requirements and Payment Card Industry (PCI) data security standard requirements, for privacy with regards to Customer information.	
MFPS-16	All personal information stored in the Mobile Fare Payment Solution memory shall be secure and encrypted.	
MFPS-17	The Mobile Fare Payment Solution shall retain a minimum thirty (30) day history of recent payment Transactions conducted by the each device.	
MFPS-18	The Mobile Fare Payment Solution shall be ergonomic and easy-to-use.	
MFPS-19	The Mobile Fare Payment Solution shall include a belt-mounted holster for the device.	
MFPS-20	The Mobile Fare Payment Solution shall be ergonomically designed, with no sharp edges or corners.	

A - 1.11 BACK OFFICE SYSTEMS

Contractor shall be responsible for providing all of the Back Office systems required to:

- Collect and process fare Transactions;
- Process, apportion, settle and reconcile funds;
- Provide accounting functions;
- Provide a Customer relationship management system (to be operated by a third party Customer Service Center operator under separate Contract);
- Provide websites, web portals and an interactive voice response system for telephone Customer service;
- Manage Customer accounts;
- Provide Fraud Management tools;
- Administer Transit Benefit Program;
- Manage data and log events;
- Manage configurable business rules, device, and system operation;
- Provide User access to data and generate reports and Dashboards;
- Set, receive and respond to alerts of unanticipated system activity;
- Monitor and manage all system Assets; and
- Provide and manage all system Interfaces, including both internal and external Interfaces.

A program-wide payment gateway will be acquired under separate Contract to achieve economies of scale for credit and debit processing, but Transit Operators with their own gateways or acquiring services (up to a reasonable limit of three or four) may continue using those. Contractor shall be responsible for all integration and certifications required with these gateways.

Functional Architecture views in Appendix 4 related to the Back Office include:

- FA-010 Financial Management
- FA-003 Customer Services
- FA-004 Account Management
- FA-011 Data Management and Reporting
- FA-012 Data Exchange
- FA-022 Asset Information Management

A - 1.11 (1) Back Office General Requirements

REQ. ID	REQUIREMENT	NOTES
BOS-1	Contractor shall be responsible for all application Software used by the Back Office and they shall be designed to be modular, structured, user-friendly, and allow Authorized Users (including remote access by MTC and Transit Operators) to	

REQ. ID	REQUIREMENT	NOTES
	access all User-accessible functions and features through modern, web-based Interfaces or standard and documented system-level Interfaces.	
BOS-2	The Back Office shall be based on the current industry standard operating platforms (Hardware and Software) available at the time of computer equipment procurement and shall have sufficient processing capability and memory to deliver the specified System functionality and performance.	
BOS-3	The Back Office shall be extendible to offer its full functionality to additional Regional Transit Operators without additional Software development.	
BOS-4	Contractor shall define the User-Configurable Parameters and modules of the system in a System Configuration Management Plan (CDRL-O&M-015b).	
BOS-5	Contractor shall provide a Back Office System Design Document (CDRL-DD-002) that includes, but is not limited to, the following:	
BOS-5.1	a. Back Office Specifications;	
BOS-5.2	b. System Architecture Diagram;	
BOS-5.3	c. Software Concept and Design;	
BOS-5.4	d. Communications Design and Data Flow Diagram;	
BOS-5.5	e. Hardware Integration Design / Installation Diagram;	
BOS-5.6	f. User Interface Design and messaging;	
BOS-5.7	g. System interfaces;	
BOS-5.8	h. Configurability; and	
BOS-5.9	i. Maintenance.	
BOS-6	Contractor shall operate in accordance with the latest Approved System Monitoring and Control Management Plan (CDRL-O&M-021).	
BOS-7	The Back Office shall allow for system modules to be accessed via a User Interface.	
BOS-8	User-Configurable Parameters shall include those related to Business Rules pursuant to User access permissions.	

REQ. ID	REQUIREMENT	NOTES
BOS-9	The Back Office shall enable Authorized Users to remotely monitor field devices.	
BOS-10	Field devices shall enable an Authorized User to run diagnostic utilities and Software both locally and remotely (subject to network availability).	
c	The Back Office shall enable an Authorized User to remotely access the Back Office through a web-enabled device.	
BOS-12	When a fault occurs in a field device, the Back Office shall alert an Authorized User through configurable email and text messages.	
BOS-13	Field devices shall be able to be monitored and controlled through remote access or a mobile device, accessible from the field.	
BOS-14	The Back Office shall enable Authorized Users to remotely manage and control field devices at a minimum:	
BOS-14.1	a. Bring in service/take out of service;	
BOS-14.2	b. Open/close gates;	
BOS-14.3	c. Change gate direction, as applicable;	
BOS-14.4	d. Enable/disable payment type;	
BOS-14.5	e. Enable/disable accepted bill and coin denominations;	
BOS-14.6	f. Synchronize current date and time;	
BOS-14.7	g. Download configuration data;	
BOS-14.8	h. Retrieve data; and	
BOS-14.9	i. Run diagnostic utilities and Software.	
BOS-15	The Back Office shall allow Authorized Users to view all current configuration parameters.	
BOS-16	The Back Office shall enable an Authorized User to view the record of the configurable parameter changes.	
BOS-17	The Back Office shall limit access to information and functionality to Authorized Users only.	
BOS-18	The Back Office shall control access to User-Configurable Parameters based on User access permissions.	

REQ. ID	REQUIREMENT	NOTES
BOS-19	The Back Office shall enable an Authorized User (system administrator level) to configure User access permissions for Users belonging to the same Transit Operator as the Authorized User.	
BOS-20	The Back Office shall store a minimum of 26 months of data at its lowest Transaction level and a minimum five years of summary data such that it is available for online access, query and report generation.	
BOS-21	Transaction level data older than 26 months may be archived, provided that Contractor supplies for itself and MTC and Authorized Users the tools, Software, Hardware, processes and instructions required to retrieve archived data and restore it to its original format.	
BOS-22	The Back Office shall log access in the Data Store when a remote device is accessed.	
BOS-23	When a fault occurs in a field device, the Back Office shall log the fault in a Data Store accessible to Authorized Users.	
BOS-24	The Back Office shall record all changes made to configurable parameters, including at a minimum:	
BOS-24.1	a. What was changed;	
BOS-24.2	b. Timestamp when the change was made and took effect	
BOS-24.3	c. Who made the change;	
BOS-24.4	d. The reason for the change;	
BOS-24.5	e. Test results;	
BOS-24.6	f. Release information; and	
BOS-24.7	g. Original and new parameter values/settings.	
BOS-25	The Back Office shall maintain a detailed log of system performance.	
BOS-26	The Back Office shall monitor field devices for performance.	
BOS-27	The Back Office shall monitor field devices for faults.	
BOS-28	The Back Office shall monitor Back Office systems for faults.	
BOS-29	The Back Office shall monitor Back Office systems for performance.	

A - 1.11 (2) Transaction Processing

REQ. ID	REQUIREMENT	NOTES
BOS-30	Contractor shall provide the Back Office systems, infrastructure and services to capture, consolidate and process sales Transactions.	
BOS-31	Contractor shall provide the Back Office systems, infrastructure and services to capture, consolidate and process use (fare payment) Transactions.	
BOS-32	Contractor shall provide the Back Office systems, infrastructure and services to capture, consolidate and process financial Transactions.	
BOS-33	The Back Office shall process transactions as identified in the Financial Management and Operations Plan (CDRL-O&M-011).	
BOS-34	The Back Office will provide configurable Business Rules, by Transit Operator Fare Product, and original payment method, for Exception Transaction processing such as refunds and adjustments.	
BOS-35	The Back Office will capture reason codes for Exception Transaction processing.	
BOS-36	The Back Office will provide the ability for an Authorized User to approve Exception Transactions before processing, as defined in the configurable Business Rules.	
BOS-37	Contractor shall provide cryptographic and/or other solutions to securely authenticate and process Transactions.	
BOS-38	When a sales adjustment is processed, the Back Office shall generate sales Transactions as necessary to process that adjustment.	
BOS-39	When a usage adjustment is processed, the Back Office shall generate use Transactions as necessary to process that adjustment.	
BOS-40	The Back Office shall associate all Transactions received or generated to the correct Customer account and/or sub-account to which that Transaction applies. All transactions should at least be tagged with a geo location, as applicable, and timestamp.	
BOS-40.1	a. All transactions shall include transaction type, time, date, route ID, stop or station ID, device or validator ID, vehicle ID (as applicable) and other information necessary for investigating the location where a	

REQ. ID	REQUIREMENT	NOTES
	transaction occurred to address a customer service question or complaint.	
BOS-41	The Back Office shall categorize and consolidate all sales Transactions to the correct Transit Operator accounts as stipulated by the agreed sales allocation rules.	
BOS-42	The Back Office shall categorize and consolidate all fare payment Transactions to the correct Transit Operator accounts as stipulated by the agreed fare payment allocation rules.	
BOS-43	The Back Office shall retain data in accordance with California State Law, and for no longer than the timeframe specified in California Streets and Highway Code Section 31490.	
BOS-44	MTC and the Transit Operators have not yet determined whether or not open payment will be permitted in C2. Contractor shall be required to provide open payment capabilities, however the core system shall be based on account based, closed system operation where MTC is the fare media issuer and acquirer. Any decision to implement or active open payment functionality shall be at MTC's sole discretion.	

A - 1.11 (3) Fraud Management

REQ. ID	REQUIREMENT	NOTES
BOS-45	The Back Office shall include tools and processes to prevent the fraudulent purchase and use of fare media as identified in the Financial Management and Operations Plan (CDRL-O&M-011).	
BOS-46	The Back Office shall prevent the use of lost or stolen fare media.	
BOS-47	The Back Office shall prevent the use of fraudulently purchased fare media, including, but not limited to, the following:	
BOS-47.1	a. Fare media purchased and subsequently disputed in charge backs;	
BOS-47.2	b. Fare media use with passes or account updates denied by payment source;	
BOS-47.3	c. Fare media use exceeding value purchased;	

REQ. ID	REQUIREMENT	NOTES
BOS-47.4	d. Fare media use at multiple locations within a configurable time span; and	
BOS-47.5	e. Fare media used that has not been issued in the system.	
BOS-48	The Back Office shall utilize Negative and Positive lists to mitigate fraudulent purchase and use of fare media, including, but not limited to, the following:	
BOS-48.1	a. Negative list shall have configurable actions to be taken on fare media on the list;	
BOS-48.2	b. Local negative and positive lists shall be utilized by all devices when offline; and	
BOS-48.3	c. Local negative and positive lists shall be dynamically updated when updates are done to the list.	
BOS-49	The Back Office shall dynamically maintain the status of Fare Media on negative and positive lists including, but not limited to, the following:	
BOS-49.1	a. Actions taken on Fare Media as a result of use for a fare transaction when on the list;	
BOS-49.2	b. Aging of Fare Media on the list using configurable aging parameters; and	
BOS-49.3	c. Changes to status of Fare Media in aging status when subsequently used for a fare transaction by the Customer.	
BOS-50	The Back Office fraud management tools shall provide configurability to enable each Transit Operator to establish its own unique fraud management business rules.	
BOS-51	The Back Office shall detect and prevent fraudulent purchase and use of fare media.	
BOS-52	The Back Office shall provide analytics to detect fraudulent purchase and use of discount fare media.	
BOS-53	The Back Office shall provide analytics to detect, prevent and report on fare evasion.	
BOS-54	The Back Office shall report on fraudulent purchase and use of fare media including actions taken to prevent use.	

A - 1.11 (4) Funds Processing

REQ. ID	REQUIREMENT	NOTES
BOS-55	The Back Office shall process Settlements as identified in the Financial Management and Operations Plan (CDRL-O&M-011).	
BOS-56	The Back Office shall establish net Settlement positions for all Transit Operators in the C2 program for all sales revenue and use Transactions.	
BOS-56.1	a. The Settlement positions shall be governed by configurable Business Rules.	
BOS-57	The Back Office shall be configurable to net settle on a daily, weekly or monthly basis as directed by MTC.	
BOS-58	The Back Office shall generate appropriate Settlement instructions for each Transit Operator bank.	

A - 1.11 (5) Apportionment, Settlement, and Reconciliation

REQ ID	REQUIREMENT	NOTES
BOS-59	The Back Office shall apportion revenue, costs and fees as identified in the Financial Management and Operations Plan (CDRL-O&M-011).	
BOS-60	The Back Office shall enable an Authorized User to review and approve the proposed revenue apportionment before any corresponding Settlement is performed.	
BOS-61	The Back Office shall enable an Authorized User to review the proposed cost apportionment before any corresponding cost apportionment is performed.	
BOS-62	The Back Office shall apportion and reconcile all sales and use Transactions.	
BOS-63	The Back Office shall apportion and reconcile all adjustment Transactions.	
BOS-64	The Back Office shall apportion and reconcile all program fees.	

A - 1.11 (6) Accounting

REQ ID	REQUIREMENT	NOTES
BOS-65	Contractor shall provide an Accounting system to support and operate the System.	
BOS-66	Contractor shall develop and manage a Regional Chart of Accounts (CDRL-PM-010) that supports effective reporting, tracking of funds, liabilities and timing related cash flow positions to support operator and Regional financial accounting needs.	
BOS-67	The Back Office shall provide accounts receivables functionality.	
BOS-68	The Back Office shall provide an accounts payable functionality and records.	
BOS-69	The Back Office shall provide chart of accounts management functionality.	
BOS-70	The Back Office shall provide general ledger functionality.	
BOS-71	The Back Office shall provide a cash management functionality.	
BOS-72	When instructed by an Authorized User, the Back Office shall issue and manage C2 invoices.	
BOS-73	Contractor shall provide physical and logical Interface between their accounting system and MTC and Transit Operator accounting systems.	
BOS-74	Contractor shall perform data mapping as needed to transfer data between their accounting system and MTC and Transit Operator accounting systems.	

A - 1.11 (7) Customer Relationship Management System

REQ. ID	REQUIREMENT	NOTES
BOS-75	Contractor shall provide a Customer relationship management (CRM) system for use by Contractor, Customer Services Center Contractor, and Transit Operator personnel operating walk-in centers.	
BOS-76	Contractor shall provide the recommended design of the CRM system, including software development, design, and Back Office integration in the Customer Relationship Management	

REQ. ID	REQUIREMENT	NOTES
	System Design Document (CDRL-DD-006) and implement the Approved design.	
BOS-77	The CRM system shall provide configurable access roles and permissions for use in establishing Authorized Users from the Contractor, Customer Service Center Contractor, and Transit Operator personnel.	
BOS-78	The CRM system shall enable a Customer or Authorized User on behalf of the Customer to manage their account through all available Customer service channels.	
BOS-79	The CRM system shall provide the ability to manage customer accounts as described in Section A-1.12.	
BOS-80	The CRM system shall enable an authorized user to generate and distribute notifications to customers who have opted into receiving various types of notifications.	
BOS-81	Contractor shall provide all functionality for the Customer Service Center to provide Customer service for Customers through internet, online chat, phone, email, social media, and helpdesk support.	
BOS-82	The CRM shall provide workflow management functionality for Authorized Users to capture information related to customer requests and interactions, and efficiently and effectively manage and address customer requests received through internet, online chat, phone, email, social media, and helpdesk support.	

A - 1.11 (8) Interactive Voice Response System (IVR)

REQ NO.	REQUIREMENT	NOTES
BOS-83	Contractor shall provide an Interactive Voice Response (IVR) system to be used to provide Customer service and general program information.	
BOS-84	Contractor shall evaluate the IVR system performance on an annual basis, at a minimum, and recommend improvements.	
BOS-85	Contractor shall implement approved changes to the IVR system on an annual basis.	
BOS-86	Contractor shall provide the recommended design of the IVR system, including messages, menu design, and prompts in the Interactive Voice Response System Supplemental Design	

REQ NO.	REQUIREMENT	NOTES
	Document (CDRL-DD-006a) and implement the Approved design.	
BOS-87	The IVR system shall provide services in multiple languages including at a minimum English, Spanish, and Mandarin Chinese.	
BOS-88	The IVR system shall be integrated with the customer relationship management (CRM) system to:	
BOS-88.1	a. Obtain basic account information from the Customer and verify Customer identity; and	
BOS-88.2	b. Provide information to the Customer regarding card status, balance, Transactions, and other card and account details.	
BOS-89	The IVR shall automatically handle each inbound call, prior to routing calls to the Customer Service Center upon request by a Customer or upon presentation of a Customer issue that the IVR is not equipped to address.	
BOS-90	The IVR shall allow a Customer to select a service option, request menu options to be repeated, and speak directly to a Customer Service Representative.	
BOS-91	The IVR system shall notify Customers of their estimated wait time or position in queue.	
BOS-92	The IVR system shall include an option for the customer to request a callback if the wait times exceed a configurable number of minutes.	
BOS-93	The IVR system shall provide good speech quality that is easy to understand and is a consistent volume.	
BOS-94	If voice recognition technology is used, callers shall be connected to a live Customer service representative after a configurable number of failed voice recognition attempts.	
BOS-95	The IVR system shall allow Customers to enter data while a voice command is being spoken.	
BOS-96	The IVR system and network architecture shall be scalable to allow for the addition of phone lines as call volume increases.	
BOS-97	The IVR system shall provide the capability for Customers to leave a message after hours, and the ability for the Customer to review their recorded message prior to submitting it.	

REQ NO.	REQUIREMENT	NOTES
BOS-98	The IVR system shall provide functionality for Authorized Users to efficiently and effectively manage and address customer requests received through the IVR.	
BOS-99	The IVR system shall create call detail records for each Customer call processed by the IVR, and shall include all information to describe the IVR Transaction.	
BOS-100	The IVR system shall generate reports on system performance, including calls completed by IVR versus transferred to a Customer service representative, average call length, and call abandonment rates for each menu option.	

A - 1.12 ACCOUNT MANAGEMENT

REQ NO.	REQUIREMENT	NOTES
AM-1	Contractor shall provide an Account Management system to be used to provide Account information.	
AM-2	Account Management shall facilitate interaction between Back Office, and customer-facing system components for accurate representation, management and reporting of fare value and/or products in Customer accounts.	
AM-3	When the Back Office receives a valid account management instruction from the CRM, the Back Office shall apply that Account Management instruction to the relevant account and/or Fare Media.	
AM-4	If an account management instruction is invalid, the Back Office shall notify the appropriate system components and provide a reason for rejecting the instruction.	
AM-5	The Account Management system shall have the ability to interface with third party account management systems such as parking systems and toll systems to for payments for those accounts using C2 Fare Media. The interface shall support bi-directional data exchange. The interface can be accomplished by using API available from those third party systems or the Account Management system shall provide an API that can be used by third party systems.	
AM-6	Customer accounts shall be managed as prepaid or postpaid accounts. For prepaid accounts such as period passes and stored value cards, the system shall immediately approve fare	

REQ NO.	REQUIREMENT	NOTES
	payment transaction if passes are still valid. For postpaid accounts, charge/invoice customers for the rides.	
AM-7	Through CRM system, the Account Management system shall at a minimum enable a Customer or Authorized User on behalf of the Customer to:	
AM-7.1	a. Create a master account of Customer information;	
AM-7.2	b. Create multiple sub-accounts associated with different Fare Media;	
AM-7.3	c. Create multiple sub-accounts associated with dependent Users (e.g. children);	
AM-7.4	d. Validate Customer identity with login credentials and security questions;	
AM-7.5	e. Automatically request and obtain assistance with forgotten login credentials;	
AM-7.6	f. Associate sub-accounts with the master account;	
AM-7.7	g. Disassociate sub-accounts with the master account;	
AM-7.8	h. Associate Fare Media with a master account;	
AM-7.9	i. Associate Fare Products with a master account;	
AM-7.10	j. Disassociate Fare Media from a master account;	
AM-7.11	k. Associate Fare Media with a sub-account;	
AM-7.12	l. Associate Fare Products with a sub-account;	
AM-7.13	m. Disassociate Fare Media from a sub-account;	
AM-7.14	n. Add, delete or update information in a master account;	
AM-7.15	o. Add, delete or update information in a sub-account;	
AM-7.16	p. Close a master account and associated sub-accounts;	
AM-7.17	q. Close a sub-account;	
AM-7.18	r. Add, delete or update a primary payment method with the master account and/or sub-account;	
AM-7.19	s. Add, delete or update a secondary payment method with the master account and/or sub-account;	

REQ NO.	REQUIREMENT	NOTES
AM-7.20	t. View Transit Benefits allocated to an account or Fare Media, including original and remaining balances;	
AM-7.21	u. View order history;	
AM-7.22	v. View product delivery history; and	
AM-7.23	w. View and manage general account information.	
AM-8	Through CRM system, the Account Management system shall automatically replenish the account or media when the associated Fare Products are at or near the end of their validity.	
AM-9	The System shall allow customers to replenish a Fare Media such as smartcard anonymously without logging into their accounts using just the card serial number.	
AM-10	The System shall perform replenishment and other automated payment transactions through a tokenized transaction by interacting with Transit Operator Payment Gateway since payment methods linked to be customer accounts will be stored in CRM database as a unique token issued by the Payment Gateway during payment card authorization for that customer.	
AM-11	Through CRM system, the Account Management System shall, at a minimum, allow a Customer or Authorized User on behalf of the Customer to:	
AM-11.1	a. Enroll in Auto-load;	
AM-11.2	b. Temporarily suspend Auto-load;	
AM-11.3	c. Modify Auto-load parameters;	
AM-11.4	d. Withdraw from Auto-load;	
AM-11.5	e. Identify primary and secondary payment method for Auto-load;	
AM-11.6	f. Utilize Transit Benefits as a payment method for Auto-load; and	
AM-11.7	g. Split payments between payment methods.	
AM-12	Through CRM system, the Account Management System shall enable a Customer or Authorized User on behalf of the	

REQ NO.	REQUIREMENT	NOTES
	Customer to manage Fare Products on their master and sub-accounts including, but not limited to:	
AM-12.1	a. Adding Fare Products to their account;	
AM-12.2	b. Deleting Fare Products in their account;	
AM-12.3	c. Reloading Fare Products in their account;	
AM-12.4	d. Identifying primary and secondary method for purchase;	
AM-12.5	e. Utilizing Transit Benefits as a payment method for purchase; and	
AM-12.6	f. Splitting payment between payment methods.	
AM-13	Through CRM system, the Account Management System shall allow a Customer or Authorized User on behalf of the Customer to temporarily suspend a fare medium.	
AM-14	Through CRM system, the Account Management System shall allow a Customer or Authorized User on behalf of the Customer to report a fare medium as lost, stolen damaged or defective, and:	
AM-14.1	a. Request a replacement fare medium;	
AM-14.2	b. Register the replacement fare medium to the Customer's account; and	
AM-14.3	c. Transfer balance to a new or existing fare medium.	
AM-15	If reported lost, stolen, damaged or defective, the Account Management system shall block the fare medium.	
AM-16	Through CRM system, the Account Management System shall enable a Customer or Authorized User on behalf of the Customer to request a refund, according to configurable Business Rules for agencies and Fare Products, for refunds such as, but not limited to:	
AM-16.1	a. Incorrect fare charges;	
AM-16.2	b. Refunds of purchases online and at other reload venues; and	
AM-16.3	c. Refunds due to account closure.	
AM-17	Through CRM system, the Account Management System shall notify the Customer immediately when an account	

REQ NO.	REQUIREMENT	NOTES
	management action or update has been applied successfully to their account.	
AM-17.1	a. The Customer shall be able to choose the method of receiving notifications, via email, text or other option.	
AM-18	Through CRM system, the Account Management System shall notify the customer immediately if the request has not been applied successfully to their account.	
AM-19	The Account Management system shall maintain an Action List of Fare Media linked to customer accounts. The action list shall contain the following recommendation for on-board media readers to complete fare payment transactions.	
AM-19.1	a. Cancel and reject the fare transaction; and	
AM-19.2	b. Complete the fare transaction and track all usage.	

A - 1.13 DATA MANAGEMENT

REQ. ID	REQUIREMENT	NOTES
DM-1	Contractor shall design, develop, operate, and maintain the C2 Back Office, Data Store, and associated data systems according to best practices and industry standards for data management.	
DM-2	Contractor shall develop, maintain and update all documentation regarding the system architecture, data management practices, data dictionary, and data configuration management in accordance with the Back Office System Design Document (CDRL-DD-002) and System Configuration Management Plan (CDRL-O&M-015b).	
DM-3	Contractor shall design, build, operate, and maintain a Data Store in accordance with the Data Store Design Document (CDRL-DD-007).	
DM-4	Contractor shall define the complete set of data and records that can be created, replaced, updated or deleted by an Authorized User in the Data Store Design Document.	
DM-5	Contractor shall define the complete set of data accessible through the Data Store in the Data Store Design Document.	

REQ. ID	REQUIREMENT	NOTES
DM-6	The Back Office shall enable an Authorized User to access data, including at a minimum the following types:	
DM-6.1	a. Customer account information;	
DM-6.2	b. Customer Transaction history;	
DM-6.3	c. Customer discounts;	
DM-6.4	d. Customer card orders;	
DM-6.5	e. Institution program information;	
DM-6.6	f. Discount program information;	
DM-6.7	g. Physical media order information;	
DM-6.8	h. Retail program information;	
DM-6.9	i. Transaction information, including at a minimum sales and reload Transactions, use (fare payment) Transactions, and adjustments;	
DM-6.10	j. Fund processing information;	
DM-6.11	k. Apportionment information;	
DM-6.12	l. Settlement information;	
DM-6.13	m. Reconciliation information;	
DM-6.14	n. Accounting information;	
DM-6.15	o. Performance data;	
DM-6.16	p. Maintenance information; and	
DM-6.17	q. Asset Information.	
DM-7	The Back Office shall store a mirror of aggregate level data in the Data Store.	
DM-8	The Back Office shall store a mirror of transaction level data in the Data Store.	
DM-9	The Back Office shall restrict all Authorized User access to data to that held in the Data Store.	
DM-10	The Back Office shall limit access to private information to Authorized Users only.	

REQ. ID	REQUIREMENT	NOTES
DM-11	The Back Office shall enable Authorized Users to use an authorized third-party reporting tool to view or retrieve all data in the Data Store.	
DM-12	When requested by an Authorized User, the Back Office shall import selected data from an authorized external data source into the Data Store.	
DM-13	The Back Office shall enable an Authorized User to export data that has not yet been processed or integrated with other data in the Data Store.	
DM-14	The Back Office shall enable an Authorized User to export data that has been integrated with other data in the Data Store.	
DM-15	The Back Office shall enable an Authorized User to export only anonymized data from the Data Store, with an Exception made for data associated with C2 Customers who have authorized such usage of their data.	
DM-16	The Back Office shall restrict the data available for export by an Authorized User according to their data and security permissions.	

A - 1.13 (1) Event Logging

REQ. ID	REQUIREMENT	NOTES
DM-17	The Back Office shall include an event logging system.	
DM-18	Contractor shall define Loggable Events in the System Monitoring and Control Management Plan (CDRL-O&M-021), which shall include as a minimum:	
DM-18.1	a. Customer account activity;	
DM-18.2	b. Customer transactions;	
DM-18.3	c. Financial Transactions;	
DM-18.4	d. Security events;	
DM-18.5	e. System configuration updates;	
DM-18.6	f. Access permissions updates;	
DM-18.7	g. Field device faults and performance data;	
DM-18.8	h. Operational status history (service status, logons).	

REQ. ID	REQUIREMENT	NOTES
DM-18.9	i. Maintenance history;	
DM-18.10	j. Asset information; and	
DM-18.11	k. Access to C2 systems, including the file system, operating system, and Back Office Data Store.	
DM-19	The event logging system shall include features for Authorized Users to prioritize and filter events based on criticality or impact on the System.	
DM-20	When a Loggable Event occurs, the Back Office shall log the occurrence in the Data Store.	
DM-21	The Back Office shall enable an Authorized User to view the Loggable Events.	
DM-22	The Back Office shall enable an Authorized User to view individual logs.	
DM-23	The Back Office shall enable an Authorized User to view summary logs	
DM-24	Contractor shall retain the event log for a duration as defined per federal, state and local regulatory requirements, and a minimum of at least one (1) year.	

A - 1.13 (2) Reports

REQ. ID	REQUIREMENT	NOTES
DM-25	Contractor shall provide pre-configured reports from the Data Store, including at a minimum:	
DM-25.1	a. Transaction and ridership reports;	
DM-25.2	b. Financial management reports;	
DM-25.3	c. Device status reports;	
DM-25.4	d. System performance reports;	
DM-25.5	e. Asset Information reports; and	
DM-25.6	f. Loggable event reports.	
DM-26	The Back Office shall enable an Authorized User to, at a minimum:	

REQ. ID	REQUIREMENT	NOTES
DM-26.1	a. Retrieve a pre-existing report template;	
DM-26.2	b. Create a custom report;	
DM-26.3	c. Select filtering parameters;	
DM-26.4	d. Run a report and populate with data;	
DM-26.5	e. Save a report;	
DM-26.6	f. Save a report template;	
DM-26.7	g. Replace a report template;	
DM-26.8	h. Share a report template with other Authorized Users;	
DM-26.9	i. Modify a report template; and	
DM-26.10	j. Close a report.	
DM-27	The Back Office shall enable data to be exported in the following formats at a minimum:	
DM-27.1	a. ASCII format;	
DM-27.2	b. PDF format;	
DM-27.3	c. Comma separated value (CSV) format;	
DM-27.4	d. Microsoft Excel format; and	
DM-27.5	e. Database archive.	
DM-28	When creating a report, the Back Office shall enable an Authorized User to select the data to be displayed in the report.	
DM-29	When creating a report, the Back Office shall enable an Authorized User to select the format and organization of the data to be displayed in the report.	
DM-30	The Back Office shall enable an Authorized User to define who should have access to the report.	
DM-31	The Back Office shall enable an Authorized User to configure reports, including specified report filter parameters, for one-time or recurring deliveries to a list of email addresses.	

A - 1.13 (3) Business Intelligence Tool

REQ. ID	REQUIREMENT	NOTES
DM-32	Contractor shall provide a Business Intelligence (BI) tool that will retrieve data from the Data Warehouse for the purposes of data manipulation, analysis, reporting, and inquiry.	
DM-33	Contractor shall develop a Business Intelligence/Reporting System Design Document (CDRL-DD-003) including data architecture, report building software, example Dashboards and other User Views, and example exported reports.	
DM-34	The BI tool shall provide a customizable set of real-time graphical reports.	
DM-35	The BI tool shall generate a set of dashboards for displaying real-time operational data and analytical data at configurable time intervals.	
DM-36	Contractor shall provide an initial set of Dashboard views.	
DM-37	The BI tool shall enable an Authorized User to create a Dashboard built upon any data stored, subject to privacy policies.	
DM-38	The Operational Dashboard shall display real-time or near real-time equipment status:	
DM-38.1	a. The Operational Equipment Status Dashboard shall be configurable by agency and mode;	
DM-38.2	b. The Operational Equipment Status Dashboard shall be configurable by status events relevant to the user; and	
DM-38.3	c. The Operational Equipment Status Dashboard shall allow users to filter by specific event.	
DM-39	The Operational Dashboard shall display real-time or near real-time ridership:	
DM-39.1	a. The Operational Ridership Dashboard shall be configurable by agency and mode; and	
DM-39.2	b. The Operational Ridership Dashboard shall allow users to filter by attributes of device at a minimum garage or location, line, route, geographical location.	
DM-40	The Analytical Dashboard(s) shall display data generated by the BI tool at a user-configurable frequency and time resolution, limited only by available data:	

REQ. ID	REQUIREMENT	NOTES
DM-40.1	a. The Analytical Dashboard(s) shall be configurable by agency and mode; and	
DM-40.2	b. The Analytical Dashboard(s) shall be configurable by data relevant to the user.	
DM-41	The BI tool shall support the creation of Authorized User groups to limit Transit Operator access to only the data generated by their service.	
DM-42	The BI tool shall allow an Authorized User to define data types that should be accessible to all Transit Operators, according to configurable business rules.	
DM-43	The BI tool shall have administrator functions that limit access and permissions for the tool at the user category level.	
DM-44	The BI tool shall enable access and permissions categories to be defined at the Transit Operator level, unique to each Transit Operator.	
DM-45	The BI tool shall allow users to import inquiries into external data analysis packages, including spreadsheet programs and personal databases.	
DM-46	The BI tool shall allow users to import both unprocessed data and aggregate data.	
DM-47	The BI tool shall allow users to import data by category, region, time scale, fare type, and Transit Operator, as User permissions allow.	
DM-48	The BI tool shall allow users to view and update information using a custom form and export using standard spreadsheet, database, or reporting tools.	
DM-49	The BI tool shall allow Users to retrieve and manipulate information in real time for interactive update of dashboards and reports.	
DM-50	The BI tool shall allow Users to create and develop batch updates that can be stored or scheduled for processing at a future time.	
DM-51	The BI tool shall support the ability for Users to create and maintain custom Dashboards that will be saved for future use by User or for use by MTC, Transit Operator, or globally.	

REQ. ID	REQUIREMENT	NOTES
DM-52	The BI tool shall recall saved dashboards for use by a User on their next session.	
DM-53	When creating a Dashboard, the Back Office shall enable an Authorized User to select the data to be displayed in the Dashboard from the available modules and User Views.	
DM-54	When creating a Dashboard, the Back Office shall enable an Authorized User to select the format of the data to be displayed in the Dashboard.	
DM-55	The Back Office shall enable an Authorized User to define who should have access to the Dashboard.	
DM-56	Authorized Users may include management and other staff from MTC and the Transit Operators.	
DM-57	The Back Office shall enable an Authorized User to, at a minimum:	
DM-57.1	a. Modify a Dashboard;	
DM-57.2	b. Delete a Dashboard;	
DM-57.3	c. Save a Dashboard;	
DM-57.4	d. Retrieve a previously defined Dashboard;	
DM-57.5	e. Share a Dashboard with other Authorized Users; and	
DM-57.6	f. Print a Dashboard in a printer-friendly format.	
DM-58	The BI tool shall support time or geographical based analyses of data.	
DM-59	The BI tool shall create models to support what-if outcomes, future trends, and scenario evaluation using configurable logic.	
DM-60	The BI tool shall support goal seeking via a goal seeking algorithm:	
DM-60.1	a. This goal seeking algorithm shall make future projections of goal realization, and track progress towards each goal; and	
DM-60.2	b. The BI tool shall support saving and later recall of these goals by User, Transit Operator, or globally as User permissions allow.	

REQ. ID	REQUIREMENT	NOTES
DM-61	The BI tool shall support regression analysis to analyze how different variables affect an outcome, use that data to predict outcomes for other data series, and perform sensitivity analyses on future projections.	
DM-62	The BI tool shall have built-in statistical and financial functions including, but not limited to, the following:	
DM-62.1	a. Skew;	
DM-62.2	b. Variance;	
DM-62.3	c. Internal Rate of Return (IRR); and	
DM-62.4	d. Net Present Value (NPV).	
DM-63	The BI tool shall permit Users to define groups of data based on programmable criteria, and re-use these groups for future analysis.	
DM-64	The BI tool shall report data in graphical, and tabular formats, support cross-tabulation of data, and aggregate data into totals.	
DM-65	The BI tool shall compute complex calculations from queried data, including comparing derived metrics from different data groups.	
DM-66	The BI tool shall allow the user to view information first at a high-level, and drill down to more specific information through a selected value.	
DM-67	The BI tool shall support mixed text and graphics in reports, and allow the user to control fonts, colours, graphics, and layout.	
DM-68	The BI tool shall allow Users to publish database information driven by report data (e.g. list of fare types, list of service days, mode of travel, linked travel, etc.).	
DM-69	The BI tool shall allow Users to publish reports based on exception reporting.	
DM-70	The BI tool shall include a set of standard calculations to standardize reporting between Transit Operators.	
DM-71	The BI tool shall permit the creation of reports that prompt for content and constraints.	

REQ. ID	REQUIREMENT	NOTES
DM-72	The BI tool shall limit access to the database to a configurable set of Authorized Users.	
DM-73	The BI tool shall limit access to tables and fields to a configurable set of Authorized User categories and Transit Operator personnel.	
DM-74	The BI tool shall provide an automation tool to automate frequently used functions, program complex functions, and schedule events.	
DM-75	The BI tool shall provide remote access to BI functions.	
DM-76	The BI tool shall permit the offline use of BI tools for previously-retrieved data sets.	
DM-77	The BI tool shall permit the sharing of BI reports with persons inside and outside the company and provide suitable protection on these reports to prevent changes.	
DM-78	The BI tool shall permit the sharing of BI tools and data sets for the limited manipulation by external users. These users shall have access to non-destructive tools only and shall be prevented from making changes to the data.	

A - 1.13 (4) Alerts

REQ. ID	REQUIREMENT	NOTES
DM-79	The Back Office shall enable an Authorized User to create an alert.	
DM-80	The Back Office shall enable an Authorized User to establish the criticality, priority and distribution of an alert.	
DM-81	Contractor shall provide an initial set of alerts and intended recipients.	
DM-82	When creating an alert, the Back Office shall enable an Authorized User to, at a minimum:	
DM-82.1	a. Select the alertable condition that triggers the alert;	
DM-82.2	b. Define the criticality of an alertable condition;	
DM-82.3	c. Configure the alert message that gets sent as part of the alert;	

REQ. ID	REQUIREMENT	NOTES
DM-82.4	d. Select the frequency with which the Alert should be sent;	
DM-82.5	e. Select the alert channel through which the Alert should be sent; and	
DM-82.6	f. Define who should receive the Alert.	

A - 1.14 ASSET MANAGEMENT

REQ. ID	REQUIREMENT	NOTES
ASSM-1	Contractor shall provide an Asset inventory management system. The Asset Management system data acquisition, performance measurement and reporting shall be compliant with applicable guidelines in ISO 55000/1 and the recent rule on Transit Asset Management published , effective October 2016, by the FTA under 49 CFR Parts 625 and 630.	
ASSM-2	The Asset inventory management system shall collect, process, assign and hold Asset Information on all C2 Assets (including spares) to the device, server and workstation level including, but not limited to:	
ASSM-2.1	a. Asset quantity;	
ASSM-2.2	b. Location;	
ASSM-2.3	c. Lifecycle stage;	
ASSM-2.4	d. Age;	
ASSM-2.5	e. Current status;	
ASSM-2.6	f. Usage history;	
ASSM-2.7	g. Fault history;	
ASSM-2.8	h. Maintenance history;	
ASSM-2.9	i. Asset refresh history; and	
ASSM-2.10	j. Warranty validity periods.	
ASSM-3	Contractor shall manage, maintain and report on Asset lifecycle.	
ASSM-4	Contractor shall manage, maintain and report on Asset status.	

REQ. ID	REQUIREMENT	NOTES
ASSM-5	Contractor shall manage, maintain and report on Asset usage history.	
ASSM-6	Contractor shall manage, maintain and report on preventative maintenance schedule and history.	
ASSM-7	Contractor shall collect and report on mean time between failures (MTBF), mean cycles between failures (MCBF), and warranty periods.	
ASSM-8	Contractor shall manage, maintain and report on Asset refresh history.	
ASSM-9	Contractor shall manage, maintain and report on Asset warranty information.	
ASSM-10	Contractor shall manage, maintain and report on spare Assets.	
ASSM-11	Contractor shall plan Asset requirements for fleet expansion.	
ASSM-12	Contractor shall plan for and replace ageing and unsupported Assets.	
ASSM-13	The Asset inventory management system shall maintain the accuracy of the Asset Information.	
ASSM-14	The Asset inventory management system shall enable an Authorized User to view Asset Information, individually and in batch.	
ASSM-15	The Asset inventory management system shall enable an Authorized User to create Asset Information, individually and in batch.	
ASSM-16	The Asset inventory management system shall enable an Authorized User to update Asset Information, individually and in batch.	
ASSM-17	The Asset inventory management system shall enable an Authorized User to delete Asset Information, individually and in batch.	
ASSM-18	The Asset inventory management system shall enable Authorized Users to locate Asset Information through a search capacity.	
ASSM-19	The Asset inventory management system shall include a standardized, bi-directional Interface to support a direct Interface between the C2 Asset inventory management system and Transit Operator Asset management systems.	

REQ. ID	REQUIREMENT	NOTES
ASSM-20	Where an Interface between the C2 Asset inventory management system and a Transit Operator Asset management system has been implemented, the System shall:	
ASSM-20.1	a. Update the Transit Operator Asset management information whenever there is a change to the C2 Asset inventory management system; and	
ASSM-20.2	b. Update the C2 Asset inventory management system whenever there is a change to the Transit Operator inventory or management status of a C2 device, server, or workstation.	

A - 1.15 SYSTEM INTERFACES

REQ. ID	REQUIREMENT	NOTES
SI-1	Contractor shall develop system Interfaces and Interface control document (ICD)(s) (CDRL-DD-011) detailing data, data definitions, data formats, communications protocols for all internal and external systems Interfaces.	
SI-2	Where such Interfaces are between Contractor and a third party Contractor or entity, MTC or a Transit Operator, Contractor shall have the lead responsibility to coordinate the development, documentation, management, updating and revisions to the Interface and Interface documentation.	
SI-3	Interfaces shall include at a minimum:	
SI-3.1	a. All communications network Interfaces;	
SI-3.2	b. All Interfaces between C2 Back Office systems and fare equipment. Examples including between Fare Media and Validators, to and between Contractor-supplied field devices;	
SI-3.3	c. All Interfaces to legacy fare collection devices;	
SI-3.4	d. All Interfaces to the Data Store and User Views;	
SI-3.5	e. All Interfaces to MTC and Transit Operator data management systems;	
SI-3.6	f. All Interfaces to MTC and Transit Operator accounting and financial systems;	

REQ. ID	REQUIREMENT	NOTES
SI-3.7	g. All Interfaces to the Fare Media supplier;	
SI-3.8	h. All Interfaces to retail devices, networks or services;	
SI-3.9	i. All Interfaces to Transit Operator inventory and Asset management systems;	
SI-3.10	j. All Interfaces to third party systems or services outside of C2; and	
SI-3.11	k. All Interfaces to C1 systems and devices.	
SI-4	The Back Office shall exchange data through Open Standards compliant data formats and data transmission methods.	
SI-5	The Back Office shall validate all data received from interfacing systems.	
SI-6	If the data received from an authorized interfacing system is invalid and if the system can accept a notification, the Back Office shall notify the system.	
SI-7	If the data received from an authorized interfacing system is invalid and if the system cannot accept a notification, the Back Office shall notify an Authorized User.	
SI-8	The Back Office shall synchronize data to all C2 field devices.	
SI-9	The Back Office shall maintain a synchronized time, based on a standard timeserver, across all interfacing systems for which Contractor has responsibility.	
SI-10	The Back Office shall enable time synchronization with all interfacing systems for which Contractor does not have responsibility.	
SI-11	The Back Office shall be extensible to support future integration with enterprise systems external to the Clipper® program, including, but not limited to bike share, tolling, parking, and ride share.	

A - 1.15 (1) Application Programming Interfaces

REQ. ID	REQUIREMENT	NOTES
SI-12	Contractor shall develop system application programming interfaces ('APIs'), and Interface control document(s) for all major functional internal and external systems Interfaces.	

REQ. ID	REQUIREMENT	NOTES
	These interfaces shall enable major systems and subsystems to exchange data through standardized and documented methods and formats.	
SI-13	Contractor shall work cooperatively with MTC and partner agencies to develop the APIs. Contractor has the lead responsibility to coordinate the development, documentation, management, updating and revisions to the APIs and ICDs.	
SI-14	Contractor shall develop an API management tool to allow authorized users to manage APIs.	
SI-15	The API management tool shall enable the following functionality:	
SI-15.1	a. API configuration and documentation management;	
SI-15.2	b. API key and user/system management;	
SI-15.3	c. API access privilege management by API key/user/system;	
SI-15.4	d. API usage monitoring by API key/user/system; and	
SI-15.5	e. API Security management.	
SI-16	APIs shall be developed to allow functional sub-systems to exchange data, and allow users restricted access to system data through API calls. APIs shall be developed for at least the following:	
SI-16.1	a. All Interfaces between the Back Office and physical and virtual Fare Media;	
SI-16.2	b. All Interfaces between the Back Office and Validators;	
SI-16.3	c. All Interfaces to and between Contractor-supplied field devices;	
SI-16.4	d. All Interfaces to the Data Store and User Views;	
SI-16.5	e. All Interfaces between C2 and partner Transit Operator data management systems;	
SI-16.6	f. All Interfaces to third party reporting and business intelligence tools;	
SI-16.7	g. All Interfaces to the Customer Service Center;	

REQ. ID	REQUIREMENT	NOTES
SI-16.8	h. All website, web portal and mobile application Interfaces;	
SI-16.9	i. All Interfaces to retail devices or services; and	
SI-16.10	j. All Interfaces to third party systems or services outside of C2.	

A - 1.16 COMMUNICATIONS NETWORK AND TRANSIT OPERATOR INTEGRATION

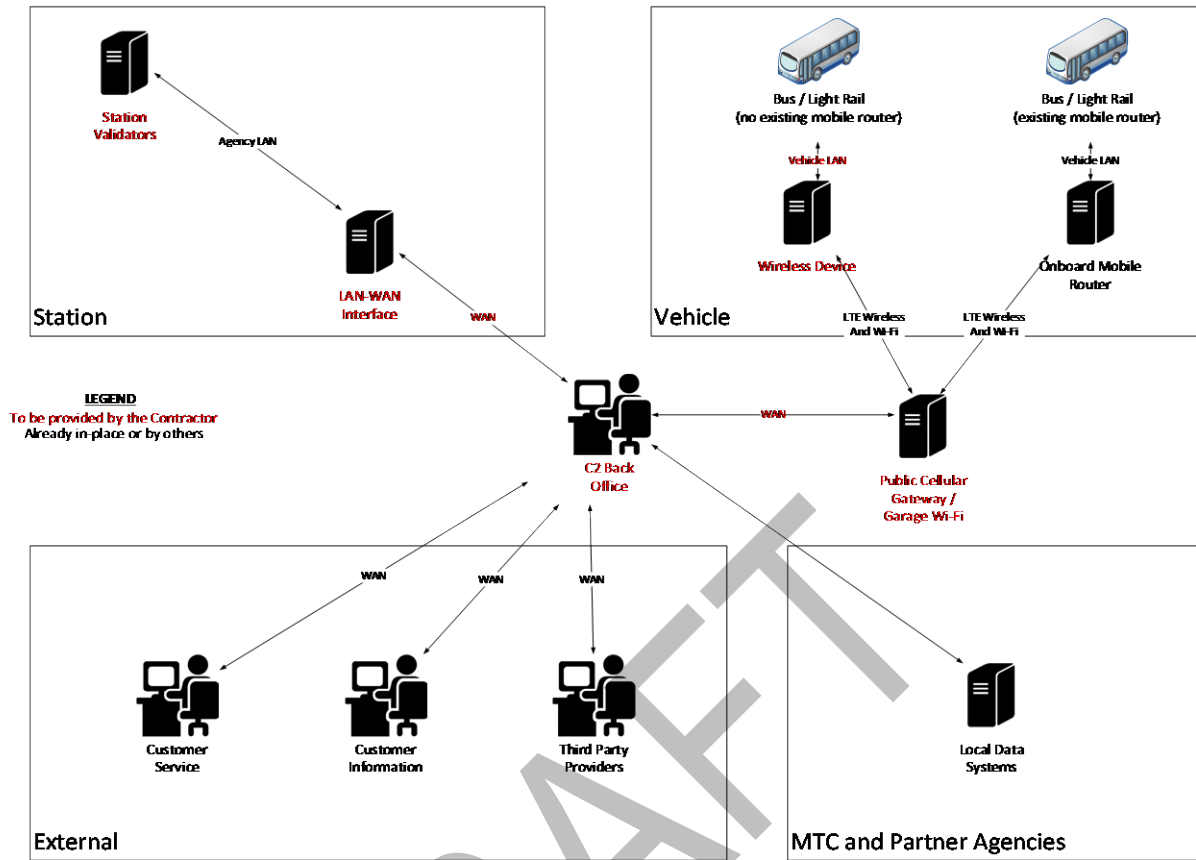
Contractor shall provide, operate and maintain a communications network to facilitate data transfer between vehicles, stations, agencies, third-party systems and the Back Office. Contractor shall also be responsible for integrating C2 devices, systems and networks with Partner Operator systems and networks and for maintaining system operation and performance on an end-to-end basis.

A - 1.16 (1) General Requirements

Contractor shall be responsible for the provision of all required communications connections and networks to provide a fully functional C2 System. Where there is existing Partner Operator communications infrastructure and service in place, Contractor shall utilize that infrastructure and service to the extent possible. Where there are communications network gaps, Contractor will be responsible for identifying gaps and establishing the network needed to facilitate the successful implementation of the C2 System.

The C2 System shall not, however, be dependent upon online communications at all times and shall include provisions to maintain operation when devices and systems are offline.

A generalized view of the expected communications network is as follows. This is provided as information only.



REQ. ID	REQUIREMENT	NOTES
CN-1	Contractor shall provide a fully functional, reliable, secure, and seamlessly integrated communications network to facilitate data transmission between all C2 Systems and devices.	
CN-2	Contractor and Transit Operators network responsibilities shall be as follows:	
CN-2.1	a. Contractor shall be responsible for any wide-area networks required to connect to Partner Operator networks and facilities, the Customer Service Center, payment gateways, and all services and facilities provided by or managed by Contractor;	
CN-2.2	b. Contractor shall be responsible for providing and managing a wide-area wireless data network to provide communications to mobile, portable and other devices not otherwise connected through a network provided by others;	

REQ. ID	REQUIREMENT	NOTES
CN-2.3	c. Devices at rail and ferry stations and platforms will be connected to a communications network provided by the associated Transit Operator, with a communications link to the C2 System Back Office provided by Contractor; and	
CN-2.4	d. For some Transit Operators, communications to C2 System mobile Validator will be provided through an existing, shared cellular communications network operated and managed by the Transit Operator, with a communications link to the C2 System Back Office provided by Contractor.	
CN-3	Contractor shall be responsible for monitoring all networks and network devices carrying C2 traffic installed and configured under this contract.	
CN-4	In the case of Transit Operator networks, Contractor shall monitor networks and network devices as permitted by the Transit Operator.	
CN-5	Communications networks shall meet industry best practice for secure transmission of data, including but not limited to Payment Card Industry requirements for the transmission of credit and debit card data.	
6	Contractor shall provide all components and services necessary to provide and maintain network security.	
CN-7	All Transit Operator networks shall be considered untrusted, and all data transmitted over such networks shall be encrypted.	
CN-8	The network shall include redundant or secondary communications pathways as needed to maintain the availability and performance of the system.	
CN-9	Where feasible, wide area networks shall utilize the Internet and standard connections to an internet service provider.	
CN-10	Where not otherwise provided by a Transit Operator, Contractor shall provide a Wi-Fi network that facilitates the swift and reliable bulk data transfer between vehicles and the Back Office. This Wi-Fi network shall permit use by other onboard devices.	

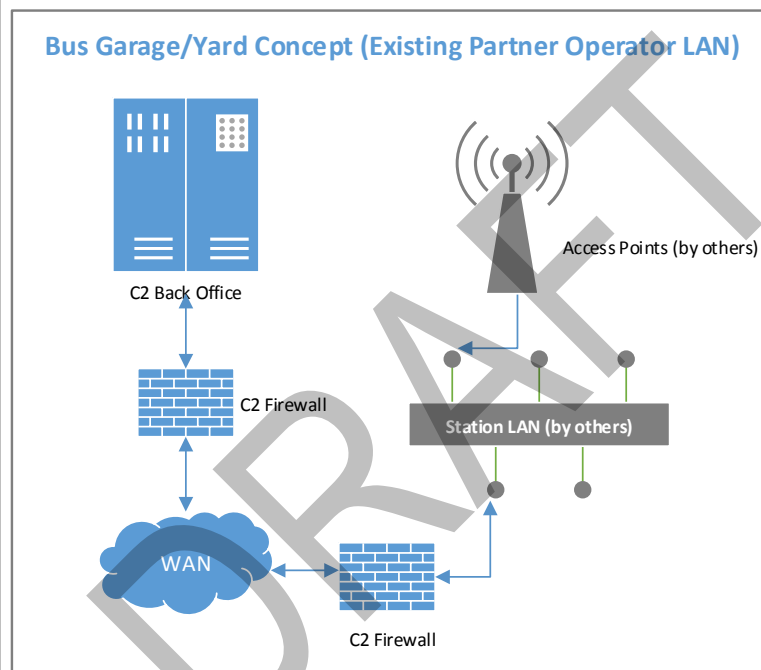
REQ. ID	REQUIREMENT	NOTES
CN-11	Where not otherwise provided by a Transit Operator, Contractor shall provide a cellular network to provide real-time or near real-time communications to field devices.	
CN-12	Where not otherwise provided by a Transit Operator, Contractor shall provide wired network connections to stationary devices to provide real-time or near real-time communications.	
CN-13	The communications network shall comply with all appropriate state, federal, and professional codes and guidelines.	
CN-14	For each Transit Operator, Contractor shall provide a network, Interface, integration and IP addressing Communications Network Design Document (CDRL-DD-005).	
CN-15	Contractor shall be responsible for identifying Transit Operator owned communication network segments and configurations and integrating them into the communications network.	
CN-16	Contractor shall be responsible for identifying any Interfaces required to utilize Transit Operator-owned segments of the communications network.	
CN-17	Where existing networks are used, Contractor shall evaluate the capacity, security and performance of the existing networks and network devices.	
CN-18	Where improvements to a Transit Operator network are required, Contractor shall identify those improvements and provide the information to the Transit Operator.	
CN-19	Where Contractor is providing a wireless network, Contractor shall be responsible for identifying known areas of weakness or unreliability of the chosen cellular network.	
CN-20	Where a Transit Operator is providing the wireless network, Contractor shall configure the system to send data over that Transit Operator's network.	
CN-21	Contractor shall provide a tool and process to monitor the real-time availability of all network elements and devices.	
CN-22	Contractor shall provide a mechanism to restrict access to the network to authorized devices and Authorized Users.	

REQ. ID	REQUIREMENT	NOTES
CN-23	Where utilizing existing communications systems is not feasible, Contractor shall provide communications networks to MTC and Transit Operator headquarters or data center locations for Back Office system access and data transfer.	

A - 1.16 (2) Transit Operator Integration – Bus and Mobile Devices

REQ. ID	REQUIREMENT	NOTES
CN-24	Contractor shall provide cellular communications to all bus and mobile devices, including all necessary communications devices, wiring, cabling and antennas.	
CN-25	Contractor shall provide cellular communications through one of two options at the direction and sole discretion of each individual Transit Operator:	
CN-25.1	a. Provision by Contractor of a dedicated C2 cellular connection to C2 bus devices, with all traffic routed directly to the C2 Back Office; or	
CN-25.2	b. Integration of C2 bus devices through a shared cellular connection provided by the Partner Operator through an existing onboard mobile router, with all traffic routed to a public or Partner Operator Access Point Name (APN) and from there through a Back Office connection to C2.	
CN-26	Cellular communications to all non-bus mobile devices (e.g. handheld inspection or payment devices) shall be provided through a dedicated cellular connection with all traffic routed directly to the C2 Back Office.	
CN-27	C2 bus devices shall include a standard XML-based onboard Interface, defined by Contractor, to accept login, block change, trip change, and operator ID information and automatically update C2 devices as may be provided by third party automatic vehicle location or other systems.	
CN-28	All bus and mobile devices shall be equipped with 802.11-based WiFi communications to provide bulk data transfer and act as a backup communications method to the cellular network.	
CN-29	Contractor shall provide 802.11 WiFi communications to each bus garage or yard through one of two options at the	

REQ. ID	REQUIREMENT	NOTES
	direction and sole discretion of each individual Transit Operator:	
CN-29.1	a. Provision by Contractor of a dedicated 802.11 network at the garage or yard, with sufficient coverage to cover the entire garage or yard, with all traffic routed directly to the C2 Back Office; or	
CN-29.2	b. Connection to an existing garage or yard LAN as shown in the diagram below.	



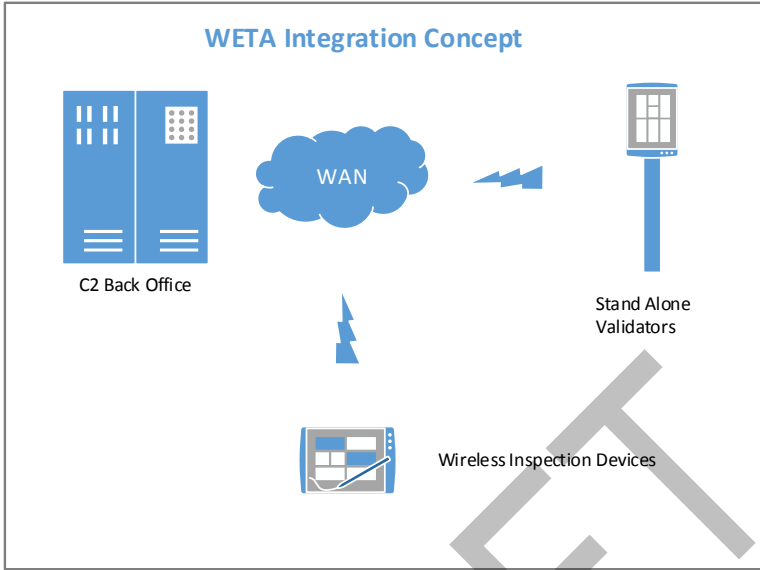
A - 1.16 (3) Transit Operator Integration – Caltrain

REQ. ID	REQUIREMENT	NOTES
CN-30	Stand-alone Validators at Caltrain stations shall be connected via the shared Caltrain local area network at each station.	
CN-31	Unless otherwise directed by Caltrain, Contractor shall be responsible for establishing a direct communications link to each individual Caltrain station as shown in the diagram below.	

REQ. ID	REQUIREMENT	NOTES
	Caltrain Integration Concept <pre> graph TD C2BO[C2 Back Office] <--> C2FW1[C2 Firewall] C2FW1 <--> WAN((WAN)) WAN <--> C2FW2[C2 Firewall] C2FW2 <--> SLAN[Station LAN by others] SLAN <--> SAVAL[Stand Alone Validators] SLAN <--> WID[Wireless Inspection Devices] WID <--> WAN </pre> The diagram illustrates the Caltrain Integration Concept. It shows a network architecture where the C2 Back Office is connected to a C2 Firewall, which in turn connects to a Wide Area Network (WAN). The WAN connects to another C2 Firewall, which is connected to the Station LAN (by others). The Station LAN is connected to Stand Alone Validators and Wireless Inspection Devices. The Wireless Inspection Devices are also connected to the WAN.	
CN-32	Contractor shall be responsible for providing all network device, firewalls and communications connections between the station local area network and the C2 Back Office.	

A - 1.16 (4) Transit Operator Integration – WETA

REQ. ID	REQUIREMENT	NOTES
CN-33	Contractor shall be responsible for providing all necessary networking and communications infrastructure at WETA ferry terminals to connect stand alone and mobile devices directly to the C2 Back Office.	
CN-34	Wireless (cellular and 802.11) communications shall be provided to all inspection devices. Wired or wireless communications may be used for Stand-alone Validator communications.	

REQ. ID	REQUIREMENT	NOTES
	 The diagram, titled "WETA Integration Concept", illustrates the network architecture. On the left, a server rack icon is labeled "C2 Back Office". In the center is a cloud icon labeled "WAN". On the right, a validator icon is labeled "Stand Alone Validators". At the bottom center, a handheld device icon is labeled "Wireless Inspection Devices". Blue lightning bolt icons indicate network connections between the C2 Back Office and the WAN, between the WAN and the Stand Alone Validators, and between the WAN and the Wireless Inspection Devices.	
CN-35	Contractor shall be responsible for providing all network device, firewalls and communications connections between any local area networks and the C2 Back Office.	

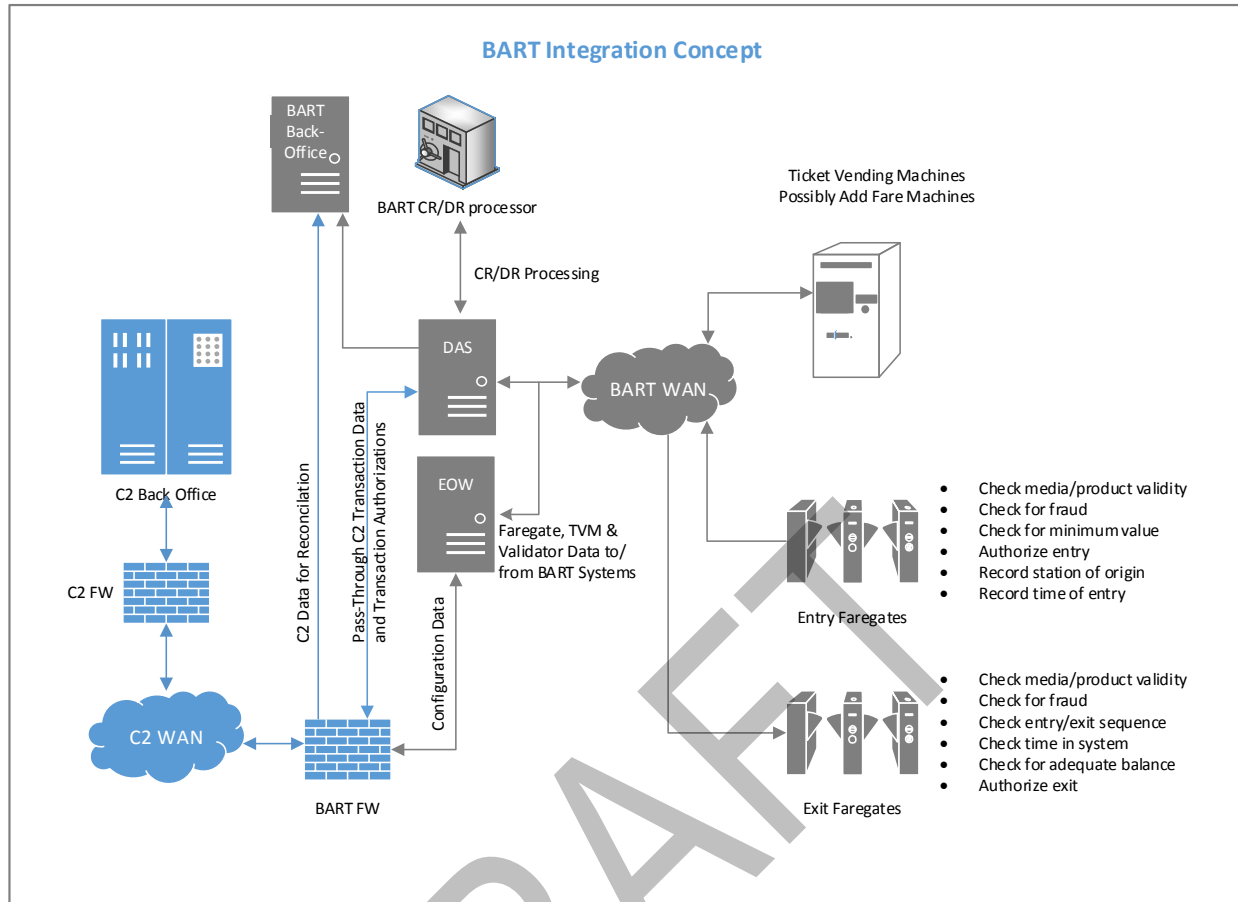
A - 1.16 (5) Transit Operator Integration – SF Muni, SMART, and Golden Gate Ferry

REQ. ID	REQUIREMENT	NOTES
CN-36	Standalone Validators, faregate Validators, and ticket vending machine Validators installed in SF Muni stations, at Golden Gate ferry terminals, and at Sonoma-Marina Area Rail Transit (SMART) ticket vending machine locations shall be connected via a shared local area network connection at each location.	
CN-37	Unless otherwise directed by the Transit Operator, Contractor shall be responsible for establishing a direct communications link to each individual station, ferry terminal or ticket vending machine location as shown in the diagram below.	

REQ. ID	REQUIREMENT	NOTES
	The diagram illustrates the network architecture for Muni, Golden Gate, and SMART Concept. It shows a C2 Back Office connected to two C2 Firewalls. One firewall connects to a WAN, and the other connects to a Station/Terminal LAN (by others). The Station/Terminal LAN connects to Validators in TVMs, Stand Alone Validators (Golden Gate), and Faregates (Muni and Golden Gate). C2 Validator Traffic Only is shown connecting to the Station/Terminal LAN and the Validators in TVMs. Mobile Inspection and Fare Payment Devices (Muni and Golden Gate) are also connected to the Station/Terminal LAN.	
CN-38	Contractor shall be responsible for providing all network device, firewalls and communications connections between the station local area network and the C2 Back Office.	

A - 1.16 (6) Transit Operator Integration – BART

REQ. ID	REQUIREMENT	NOTES
CN-39	All C2 devices installed at BART stations shall be controlled and managed by BART's DAS (Data Acquisition System) and EOW (Engineering Office Workstation) as illustrated in the BART Integration Concept diagram below.	
CN-40	As part of the Communications Network Design Document prepared for BART, Contractor shall document the distribution of processing, data flows, and timing for all Transactions and data movements between BART and the C2 Back Office.	



REQ. ID	REQUIREMENT	NOTES
CN-41	Validator devices installed in BART ticket vending machines and faregates shall be operated and managed by DAS as illustrated in the integration diagram.	
CN-42	Validator devices shall integrate with the vending machines and faregates through the existing single board computer, which in turn will control all internal vending machine and faregate functions required for C2 operation.	
CN-43	All C2 configuration data shall be packaged and transmitted in a manner that it can be unpacked and read by the EOW for the purpose of validation prior to distribution to validator devices.	
CN-44	All fare purchase and payment authorizations, Approvals and Transactions shall be routed through DAS, with records of all Transactions recorded by DAS for reporting to the BART Back Office system.	
CN-45	All configuration data changes including fare table changes, operating parameter changes, Positive Lists, Negative Lists,	

REQ. ID	REQUIREMENT	NOTES
	etc. shall be processed through the EOW, with the Interface to the C2 Back Office through the EOW.	
CN-46	All credit and debit Transactions originating at ticket vending machines, add-fare machines (subject to the functionality being available), and faregates (open payment Transactions) shall be processed by the BART payment gateway.	
CN-47	All ridership and revenue reporting and reconciliation data shall be provided through an Interface from the C2 Back Office to the BART Back Office.	
CN-48	C2 transaction details shall be reported to DAS and separately passed through DAS to the C2 back office for C2 data processing and reporting.	
CN-49	Upon entry at a station, the System shall:	
CN-49.1	a. Verify the validity of the Fare Media and product presented;	
CN-49.2	b. Verify that the account has sufficient minimum value to enter the system;	
CN-49.3	c. Authorize entry and activate the faregate;	
CN-49.4	d. Check the fare media has been correctly entry coded, and allow entry only if entry coded or if there is an override of the validity date and time; and	
CN-49.5	e. Record the station of origin and time of entry for exit validity checks.	
CN-50	Upon exit at a station, the System shall:	
CN-50.1	a. Verify the validity of the Fare Media and product presented;	
CN-50.2	b. Verify that the entry/exit sequence is valid;	
CN-50.3	c. Verify that there is sufficient value or privileges to exit;	
CN-50.4	d. Verify that allowable time in the BART system has not been exceed, or if exceeded check for a time/date override;	
CN-50.5	e. Calculate fares based on the station of origin and station of exit;	

REQ. ID	REQUIREMENT	NOTES
CN-50.6	f. Authorize and activate the faregate; and	
CN-50.7	g. Record the station of exit and time of exit.	
CN-51	The C2 System shall include the ability for a BART representative to override time/date validity and other information to allow a customer to enter or exit the BART system.	

A - 1.17 WEBSITES, WEB PORTALS AND MOBILE APPLICATION

Contractor shall provide websites and mobile applications for Customers to access and manage their C2 System accounts, receive Customer service and purchase C2 System Fare Products. An Institutional web portal shall be provided to allow Institutions, Transit Operator staff, and other Authorized Users to manage employer, campus and other programs. A discount management portal shall be provided to allow Contractor, Transit Operator staff, and other Authorized Users to manage discount programs and eligibility verification. A Transit Benefit web portal shall be provided to allow Authorized Users to manage benefits programs. Additionally, a maintenance web portal shall be provided to allow Transit Operator staff to manage and track maintenance activities.

Functional Architecture views in Appendix 4 related to websites, web portals and mobile applications include:

- FA-005 Institutional Account Management
- FA-006 Discount Management
- FA-019 System Maintenance
- FA-016 User Interface

A - 1.17 (1) Websites, Web Portals, and Mobile Application General Requirements

REQ. ID	REQUIREMENT	NOTES
WWMA-1	Contractor shall provide at a minimum the following websites and web portals (collectively “websites”):	
WWMA-1.1	a. Customer Website;	
WWMA-1.2	b. Institutional web portal;	
WWMA-1.3	c. Discount management web portal;	
WWMA-1.4	d. Maintenance web portal; and	
WWMA-1.5	e. Clipper cardholder license agreement.	

REQ. ID	REQUIREMENT	NOTES
WWMA-2	Contractor shall provide a Website, Web Portal, and Mobile Application Development Plan (CDRL-DD-014) that will include, at a minimum, the following	
WWMA-2.1	a. Interface Design;	
WWMA-2.2	b. Data Integration;	
WWMA-2.3	c. Security;	
WWMA-2.4	d. System Architecture Diagram; and	
WWMA-2.5	e. MTC, Transit Operator and User participation in design, testing and approval.	
WWMA-3	The Website, Web Portal, and Mobile Application Development Plan (CDRL-DD-014) shall include supplemental design documentation for the following:	
WWMA-3.1	a. Customer website development;	
WWMA-3.2	b. Institutional program web portal development;	
WWMA-3.3	c. Discount program web portal development;	
WWMA-3.4	d. Maintenance web portal; and	
WWMA-3.5	e. Customer mobile application development.	
WWMA-4	All websites and web portals shall provide secure access and transmission of information and data.	
WWMA-5	Contractor shall develop a Customer mobile application to provide a mobile-optimized alternative to using the Customer Websites.	
WWMA-6	Websites and mobile applications shall adhere to industry best practices and guidelines for websites for appearance, usability, and accessibility, including but not limited to applicable elements of:	
WWMA-6.1	a. World Wide Web Consortium's (W3C) Web Content Accessibility Guidelines (https://www.w3.org/TR/WCAG20/);	
WWMA-6.2	b. W3C's Mobile Web Best Practices (https://www.w3.org/TR/mobile-bp/);	

REQ. ID	REQUIREMENT	NOTES
WWMA-6.3	c. W3C's Mobile Web Application Best Practices (https://www.w3.org/TR/mwabp/);	
WWMA-6.4	d. U.S. Department of Health & Human Services' Website Usability Guidelines (http://webstandards.hhs.gov/guidelines/);	
WWMA-6.5	e. The latest Access Board's Section 508 guidelines (36 CFR Part 1194) (https://www.section508.gov/summary-section508-standards); and	
WWMA-6.6	f. C2 Brand Style Guide.	
WWMA-7	Testing of the websites and mobile applications shall demonstrate that they are intuitive and easy to use.	
WWMA-8	Websites and mobile applications shall enable Users to navigate with minimal "clicks" or prompts.	
WWMA-9	Websites and mobile applications shall provide Users with context-sensitive help information.	
WWMA-10	Websites shall include a content management system to enable an Authorized User to easily replace graphics and edit text without website developer support.	
WWMA-11	Websites and mobile applications shall be expandable to easily include additional Users, Transit Operators, Fare Products, and services.	
WWMA-12	Websites and mobile applications shall provide multiple payment options to Customers for online purchases.	
WWMA-13	Websites and mobile applications shall ensure that discount programs, institutional programs, and transit benefits are applied only to eligible accounts and/or sub-accounts and/or fare media as defined in the business rules for each program and administered by authorized users.	
WWMA-14	Websites shall provide links to Transit Operator websites where appropriate.	
WWMA-15	Websites shall be responsive, and shall automatically and dynamically resize text- and graphics-based content to be optimized for the size and type of display it is being displayed on.	

REQ. ID	REQUIREMENT	NOTES
WWMA-16	Websites shall be compatible with, and optimized for the top five most commonly used web browsers, based upon mutually-agreed current usage statistics.	
WWMA-17	Websites and mobile apps shall adhere to MTC's policies on website access and content, and contain the Clipper program's policy on privacy and protection of PII.	
WWMA-18	Contractor shall provide tools to enable analysis of a website User's path through the website's pages.	

A - 1.17 (2) Customer Website

REQ. ID	REQUIREMENT	NOTES
WWMA-19	Contractor shall provide a Customer Website for Customer account management.	
WWMA-20	The Customer Website shall provide the Customer with full access to the CRM system functions and capabilities related to, at a minimum:	
WWMA-20.1	a. Account management;	
WWMA-20.2	b. Fare Media management;	
WWMA-20.3	c. Fare Product management; and	
WWMA-20.4	d. Financial management and payment.	
WWMA-21	The Customer Website shall enable a Customer to at a minimum:	
WWMA-21.1	a. Access general C2 information;	
WWMA-21.2	b. Purchase, activate, display and reload Fare Products;	
WWMA-21.3	c. Interact with the Customer Service Center;	
WWMA-21.4	d. Establish accounts;	

REQ. ID	REQUIREMENT	NOTES
WWMA-21.5	e. Manage accounts;	
WWMA-21.6	f. Manage Auto-loads;	
WWMA-21.7	g. Search for account activity;	
WWMA-21.8	h. Access account history;	
WWMA-21.9	i. Verify travel history;	
WWMA-21.10	j. Verify payment history;	
WWMA-21.11	k. Generate and print Customer-related reports and receipts downloadable as .CSV and PDF.	
WWMA-21.12	l. Manage C1 Fare Media associated with the account;	
WWMA-21.13	m. Report an issue with their card or account;	
WWMA-21.14	n. Manage subscriptions to program communications, including selecting a preferred communications channel	
WWMA-21.15	o. Manage fare media;	
WWMA-21.16	p. Manage payment methods;	
WWMA-21.17	q. View Transit benefits; and	
WWMA-21.18	r. Obtain automated help with login credentials/password reset.	
WWMA-22	The Customer Website shall be designed with a consistent “look and feel” with mobile applications, utilizing similar text, graphics, and User experience and Interface elements.	
WWMA-23	The Customer Website shall incorporate e-commerce best practices to make checkout easy to complete in minimal steps.	

REQ. ID	REQUIREMENT	NOTES
WWMA-24	The Customer Website shall provide shopping cart functionality that retains the cart contents, specific to each associated fare media or account, if the Customer chooses to continue shopping before completing check-out.	
WWMA-25	The Customer Website shall enable the Customer to go back to previous pages of multi-stage data entry functions without losing any progress.	
WWMA-26	The Customer Website shall display an order progress bar for all purchase transactions.	
WWMA-27	The Customer Website shall support automated translation to at least three languages, including at a minimum, English, Spanish, and Mandarin Chinese.	
WWMA-28	Contractor will be responsible for any language translations, to be Approved by MTC.	
WWMA-29	The Customer Website shall be easily modifiable by an Authorized User without assistance from Contractor.	
WWMA-30	The Customer Website shall be secure and shall meet all applicable Payment Card Industry requirements.	
WWMA-31	The Customer Website shall provide a means of collecting Customer feedback, such as a configurable pop-up survey.	
WWMA-32	The Customer Website shall allow for the configuration and use of authorized coupon codes.	
WWMA-33	The Customer Website shall maximize use of graphics and icons to simplify presentation of information to customers.	

A - 1.17 (3) Institutional Program Web Portal

REQ. ID	REQUIREMENT	NOTES
WWMA-34	Contractor shall provide an Institutional account web portal.	
WWMA-35	The Institutional account web portal shall provide Institutions, MTC and other Authorized Users full access to all associated Customer Relationship Management System (CRM) functions and capabilities.	
WWMA-36	The Institutional account web portal shall enable an Authorized User to access Customer relationship management system functions for a specific institutional	

REQ. ID	REQUIREMENT	NOTES
	program or for all institutional programs related to the following at a minimum:	
WWMA-36.1	a. Account management;	
WWMA-36.2	b. Fare Media management;	
WWMA-36.3	c. Updating Positive Lists, Negative Lists, and other Fare Media action lists.	
WWMA-36.4	d. Fare Product management;	
WWMA-36.5	e. Financial management and funding;	
WWMA-36.6	f. Invoicing and payment processing; and	
WWMA-36.7	g. Requests for refunds of unused Fare Products.	
WWMA-37	The Institutional account web portal shall enable an Authorized User to view Institutional program information, including at a minimum:	
WWMA-37.1	a. Currently Registered Institutions;	
WWMA-37.2	b. Previously Registered Institutions;	
WWMA-37.3	c. Account management actions performed by each Institution (create, update etc.);	
WWMA-37.4	d. Fare Products sale requests performed by each Institution;	
WWMA-37.5	e. Fare Product use for each Institution;	
WWMA-37.6	f. Fare Media distributed by each Institution;	
WWMA-37.7	g. Technical support requests for each Institution; and	
WWMA-37.8	h. Financial reports for each Institution.	

REQ. ID	REQUIREMENT	NOTES
WWMA-38	For each Institutional account, the Institutional web portal shall provide at a minimum the following information related to the Institutions account:	
WWMA-38.1	a. Administrative and administrator information;	
WWMA-38.2	b. Authorized Fare Media and accounts;	
WWMA-38.3	c. Status of all Fare Media issued;	
WWMA-38.4	d. Status of all active Fare Products;	
WWMA-38.5	e. Transaction information in aggregate form;	
WWMA-38.6	f. Transaction information by Fare Media upon request;	
WWMA-38.7	g. Account parameters associated with each Fare Media;	
WWMA-38.8	h. Financial activity and information; and	
WWMA-38.9	i. Aggregate Travel data reports.	
WWMA-39	The Institutional web portal shall allow an Authorized user to define roles and permissions for managing an Institutional program through the portal.	
WWMA-40	The Institutional web portal shall allow an Authorized User to define additional Authorized Users in various roles associated with the Institutional program.	
WWMA-41	The Institutional web portal shall enable the creation of a master account associated with the Institution at a corporate or major campus level.	
WWMA-42	The Institutional web portal shall enable the creation of sub-accounts associated with a facility or other sub-location of the Institution.	
WWMA-43	The Institutional web portal shall enable an Authorized User to temporarily block an account or sub-account.	

REQ. ID	REQUIREMENT	NOTES
WWMA-44	The Institutional web portal shall enable an Authorized User to remove a temporary block from an account or sub-account.	
WWMA-45	The Institutional web portal shall enable an Authorized User to permanently block an account or, sub-account.	
WWMA-46	The Institutional web portal shall enable an Authorized User to record the reason for change in status of their account or sub-account.	
WWMA-47	The Institutional web portal shall record the date and time of change in status of an account or sub-account.	
WWMA-48	If the Account Management request has not been applied successfully to their account, the Institutional web portal shall notify the Authorized User.	

A - 1.17 (4) Transit Benefit Web Portal

REQ. ID	REQUIREMENT	NOTES
WWMA-49	Contractor shall provide a Transit Benefit web portal.	
WWMA-50	Transit Benefit web portal shall maintain compliance with Internal Revenue Service tax code (Section 132 [f]).	
WWMA-50	The Transit Benefit web portal shall enable participating employers and authorized users to administer the Transit Benefit program for their employees and program participants.	
WWMA-51	The Transit Benefit web portal shall provide a configurable workflow application to enable employers to, at a minimum:	
WWMA-51.1	a. Submit an application to enroll in the Transit Benefit Program;	
WWMA-51.2	b. Trigger notifications;	
WWMA-51.3	c. Assign tasks; and	
WWMA-51.4	d. Send alerts to individuals or groups required to complete next steps to enroll.	

REQ. ID	REQUIREMENT	NOTES
WWMA-52	The Transit Benefit web portal shall provide the employer with agency approved electronic forms for signature and payment information upon successful enrollment in the program.	
WWMA-53	The Transit Benefit web portal shall enable employers and authorized users to administer the transit benefits to, at a minimum:	
WWMA-53.1	a. Define benefit categories;	
WWMA-53.2	b. Define benefit amounts;	
WWMA-53.3	c. Define benefit type – Transit rollover and non-rollover, parking rollover and non-rollover, vanpool roll over and non-rollover, transit pass rollover and non-rollover, and other types as needed;	
WWMA-53.4	d. Transit benefits shall be available for use as fare payment, purchase of passes or allocation to a van pool, commuter bus or commuter train;	
WWMA-53.5	e. Define benefit products, such as stored value, monthly pass, and other products; and	
WWMA-53.6	f. Reassign benefits for lost fare media.	
WWMA-54	The Transit Benefit web portal shall enable employers and authorized users to, at a minimum:	
WWMA-54.1	a. Add employees;	
WWMA-54.2	b. Add a user defined key for employee i.e.: Accounting Dept.;	
WWMA-54.3	c. Remove employees;	
WWMA-54.4	d. Suspend employees;	
WWMA-54.5	e. Set kickoff date; and	

REQ. ID	REQUIREMENT	NOTES
WWMA-54.6	f. Select benefit categories for employee.	
WWMA-55	The Transit Benefit web portal shall enable employers and authorized users at a minimum;	
WWMA-55.1	a. View a list of employees and information related to employees;	
WWMA-55.2	b. Sort list;	
WWMA-55.3	c. Select employee from list;	
WWMA-55.4	d. Update enrollment information;	
WWMA-55.5	e. Remove employee;	
WWMA-55.6	f. Suspend employee; and	
WWMA-55.7	g. View benefits assigned, benefits claimed and benefits reassigned.	
WWMA-56	The Transit Benefit web portal shall enable authorized users to perform account administration at a minimum;	
WWMA-56.1	a. Configure authorized users and roles;	
WWMA-56.2	b. View, add, remove or modify users; and	
WWMA-56.3	c. Reset user passwords.	
WWMA-57	The Transit Benefit web portal shall enable authorized users to place orders for benefits assigned within configurable time limit.	
WWMA-58	The Transit Benefit web portal shall provide reports to users at a minimum;	
WWMA-58.1	a. View order history;	
WWMA-58.2	b. View benefits authorized;	

REQ. ID	REQUIREMENT	NOTES
WWMA-58.3	c. View benefits claimed/ unclaimed;	
WWMA-58.4	d. Facilitate financial management and funds collection for Transit Benefit programs; and	
WWMA-58.5	e. Download all reports in PDF or CVS format.	

A - 1.17 (5) Discount Management Web Portal

REQ. ID	REQUIREMENT	NOTES
WWMA-59	Contractor shall provide a discount management web portal.	
WWMA-60	The discount management web portal shall enable an Authorized User to view discount program information.	
WWMA-61	The discount management web portal shall provide anonymized statistics on Discount Applications in Transit Operator service areas by specific discount program.	
WWMA-62	The discount management web Portal shall limit access to information based on privacy policies to be provided by MTC.	
WWMA-63	The discount management web Portal shall allow the configuration of Authorized Users to view data for specific discount programs.	
WWMA-64	The discount management web portal shall provide configurable Business Rules to enable the creation of discount programs, rider classes, Fare Products and promotional statuses that are applicable to a single Transit Operator, multiple Transit Operators, or the entire Region.	
WWMA-65	The discount management web portal shall provide the ability for an Authorized User to create, replace, update and delete discount programs.	
WWMA-66	The discount management web portal shall provide configurable User roles to define Authorized Users allowed to submit applications, approve applications, establish start/end date, and manage parameters for a specific discount program.	

REQ. ID	REQUIREMENT	NOTES
WWMA-67	The discount management web portal (potentially through the Customer Website) shall enable the configuration of open, unrestricted Customer role to submit applications for a specific discount program.	
WWMA-68	The discount management web portal shall enable the configuration of multiple, unique Authorized Users for each role in a specific discount program.	
WWMA-69	The discount management web portal shall enable applications to be submitted and Approved for at a minimum:	
WWMA-69.1	a. Youth discounts;	
WWMA-69.2	b. Senior discounts;	
WWMA-69.3	c. Disabled persons discounts;	
WWMA-69.4	d. Low income discounts;	
WWMA-69.5	e. Volume discounts by Transit Operator; and	
WWMA-69.6	f. Other discount programs as may be defined by MTC.	
WWMA-70	The discount management web portal shall enable the submission of a replacement or updated discount application.	
WWMA-71	The discount management web portal shall confirm receipt of an application to the requestor.	
WWMA-72	The System shall check for an existing discount for any applicant and notify the requestor if one found.	
WWMA-73	When a discount application requires Approval from another party, the discount management web portal shall notify an Authorized User of the Approval required.	
WWMA-74	When a discount application requires Approval from another party, the discount management web portal shall notify the party and provide the ability to approve.	

REQ. ID	REQUIREMENT	NOTES
WWMA-75	The discount management web portal shall enable, at a minimum an Authorized User to:	
WWMA-75.1	a. View discount applications requiring their approval;	
WWMA-75.2	b. Approve a discount application;	
WWMA-75.3	c. Reject a discount application;	
WWMA-75.4	d. Place a discount application in pending status to allow for additional information to be collected;	
WWMA-75.5	e. Attach an electronic document of supplemental information to the application;	
WWMA-75.6	f. Electronically request additional information from a Customer;	
WWMA-75.7	g. Record application status; and	
WWMA-75.8	h. Electronically provide personalization information and photos (if applicable) to the entity fulfilling a discount Fare Media request.	
WWMA-76	The discount management portal shall allow an authorized user to establish and manage enhanced discount features for incentives and reward programs, such as:	
WWMA-76.1	a. Non-fare related rewards by Transit Operators; and	
WWMA-76.2	b. Discount codes for ridesharing applications	
WWMA-77	The discount management shall protect all information, including supplemental documentation for eligibility, from unauthorized access.	
WWMA-78	When a discount application is Approved, the Back Office shall apply the discount eligibility designation as needed such that the discount is correctly applied for purchases and use.	
WWMA-79	When a discount application is Approved, Contractor shall issue a corresponding Fare Media order to the physical media supplier or other entity fulfilling the order.	

REQ. ID	REQUIREMENT	NOTES
WWMA-80	The discount management web portal shall provide notifications to Authorized Users regarding expiration of customer eligibility for specific discount programs.	
WWMA-81	The discount management web portal shall facilitate the process for customers to change from one discount program to another, with proper eligibility and authorization.	
WWMA-82	When a Customer is no longer eligible for a discount, the system shall notify the customer of the upcoming transition to a new discount or full fare class.	
WWMA-83	When instructed by an Authorized User, the Back Office shall transition a Customer who is no longer eligible for a discount to a new discount or full fare class.	
WWMA-84	When instructed by an Authorized User, The Back Office shall remove the discount from the Customer's account.	

A - 1.17 (6) Maintenance Web Portal

REQ. ID	REQUIREMENT	NOTES
WWMA-85	Contractor shall provide a maintenance web portal that provides maintenance support to Authorized Users.	
WWMA-86	The maintenance web portal shall enable an Authorized User to manage and track maintenance requests and activities.	
WWMA-87	The maintenance web portal shall enable an Authorized User to, at a minimum:	
WWMA-87.1	a. Create a maintenance Work Ticket;	
WWMA-87.2	b. Update a maintenance Work Ticket;	
WWMA-87.3	c. Close a maintenance Work Ticket;	
WWMA-87.4	d. Receive a status update on a maintenance Work Ticket;	
WWMA-87.5	e. Receive email alerts for updates on selected or all maintenance Work Tickets;	

REQ. ID	REQUIREMENT	NOTES
WWMA-87.6	f. Receive text message alerts for updates on selected or all maintenance Work Tickets;	
WWMA-87.7	g. Assign prioritization levels to a maintenance Work Ticket;	
WWMA-87.8	h. Assign Work Ticket to a responsible individual, department or Transit Operator;	
WWMA-87.9	i. Manage maintenance workflow; and	
WWMA-87.10	j. View reports on maintenance activities.	
WWMA-88	The maintenance web portal shall enable an Authorized User to view all maintenance tickets allocated to their Transit Operator.	
WWMA-89	The maintenance web portal shall enable an Authorized User to view field device maintenance procedures and manuals.	
WWMA-90	The maintenance web portal shall enable Authorized User with a web-enabled mobile device to access all functions through a mobile-optimized view.	
WWMA-91	When maintenance is required for a field device, the Back Office shall create a maintenance Work Ticket.	
WWMA-92	If the maintenance is performed by a Transit Operator that uses their own computerized maintenance management system (CMMS) to manage its maintenance tickets, the Back Office shall allocate the maintenance Work Ticket to the Transit Operator CMMS.	
WWMA-93	If the maintenance is performed by a Transit Operator that does not use a Transit Operator CMMS to manage its maintenance tickets, the Back Office shall allocate the maintenance Work Ticket to an Authorized User.	
WWMA-94	If the maintenance is performed by Contractor, the Back Office shall allocate the maintenance Work Ticket to Contractor.	
WWMA-95	When maintenance is performed, the Back Office shall update the maintenance Work Ticket.	
WWMA-96	When a maintenance ticket that has been allocated to a Transit Operator CMMS is updated in that CMMS, the Back	

REQ. ID	REQUIREMENT	NOTES
	Office shall update the corresponding information in the maintenance Work Ticket it raised.	
WWMA-97	When a maintenance ticket has been allocated to a Transit Operator without a CMMS, the Back Office shall enable an Authorized User to update the information on the maintenance Work Ticket.	
WWMA-98	When Contractor performs the maintenance, the Back Office shall update the information on the Work Ticket.	

A - 1.17 (7) Customer Mobile Application

REQ. ID	REQUIREMENT	NOTES
WWMA-99	Contractor shall provide a mobile application ("mobile app") to allow Customers to manage their accounts.	
WWMA-100	The mobile app shall provide the Customer with full access to the Customer relationship management system functions and capabilities related to, at a minimum:	
WWMA-100.1	a. Account management;	
WWMA-100.2	b. Fare Media management;	
WWMA-100.3	c. Fare Product management; and	
WWMA-100.4	d. Financial management and payment.	
WWMA-101	The mobile app shall enable a Customer to:	
WWMA-101.1	a. Access general C2 information;	
WWMA-101.2	b. Purchase, activate, display and reload Fare Products;	
WWMA-101.3	c. Establish accounts;	
WWMA-101.4	d. Manage accounts;	

REQ. ID	REQUIREMENT	NOTES
WWMA-101.5	e. Manage Auto-loads;	
WWMA-101.6	f. Search for account activity;	
WWMA-101.7	g. Access account history;	
WWMA-101.8	h. Verify travel history;	
WWMA-101.9	i. Verify payment history;	
WWMA-101.10	j. Generate and print Customer-related reports and receipts downloadable as .CSV and PDF;	
WWMA-101.11	k. Manage C1 Fare Media associated with the account;	
WWMA-101.12	l. Report an issue with their card or account;	
WWMA-101.13	m. Manage subscriptions to program communications, including selecting a preferred communications channel;	
WWMA-101.14	n. Manage fare media;	
WWMA-101.15	o. Manage payment methods;	
WWMA-101.16	p. View Transit benefits; and	
WWMA-101.17	q. Obtain automated help with login credentials/password reset.	
WWMA-102	The mobile app shall include a link to “rate this app” and method of providing Customer feedback on the app.	
WWMA-103	The mobile app shall be a native applications operating on Android and iOS.	
WWMA-104	The mobile app shall be backwards compatible with the current previous two (2) generations of full Android and iOS versions.	

REQ. ID	REQUIREMENT	NOTES
WWMA-105	Contractor shall provide on-going support and regular support patches and updates for the mobile applications to maintain compatibility with new mobile operating system releases, ensure system security on notification of any operating system security flaws, and employ new features and functionality.	
WWMA-106	The mobile app updates shall not affect Customers' purchased Fare Products, account information, and other associated data.	
WWMA-107	The mobile app shall enable Customers to activate purchased Fare Products and display activated Fare Products while online or offline.	
WWMA-108	All activated Fare Products on the mobile app shall incorporate various features to enable secure and easy verification visually and electronically, and prevent fraudulent use.	
WWMA-109	All expired Fare Products on the mobile app shall no longer be usable by the Customer, though the associated Transactional/usage history shall remain available for access.	
WWMA-110	The mobile app shall notify the Customer when an account management request has been applied successfully to their account.	
WWMA-111	The mobile app shall notify the Customer when an account management request has not been applied successfully to their account.	

A - 1.18 WALK-IN CENTER CUSTOMER SERVICE SOLUTION

Contractor shall provide a secure Internet-enabled application or website to allow designated C2 and Transit Operator Customer service locations to issue Fare Media, establish accounts, sell value and Fare Products, and (subject to privacy considerations) access Customer Transaction records for Customer service purposes.

The walk-in Customer service solution shall be designed for both attended and unattended operation.

A - 1.18 (1) Walk-In Center Customer Service Solution for Transit Operator Attended Sites

REQ. ID	REQUIREMENT	NOTES
WIC-1	Contractor shall provide a walk-in center Customer service solution that provides Customer service functionality.	
WIC-2	The walk-in Customer service solution shall enable a Transit Operator representative to provide Customer service on behalf of the Customer.	
WIC-3	The walk-in Customer service solution shall enable a Transit Operator representative to, at a minimum:	
WIC-3.1	a. Sell and reload all C2 Fare Media and Fare Products, based on configurable product Business Rules;	
WIC-3.2	b. Issue sales receipts;	
WIC-3.3	c. Provide program information;	
WIC-3.4	d. Process refunds, adjustments, value transfers, Fare Media replacements, based on configurable Business Rules;	
WIC-3.5	e. Review Customer account information;	
WIC-3.6	f. Approve discount program eligibility;	
WIC-3.7	g. Review Customer Transaction history;	
WIC-3.8	h. Update Customer account data (may be limited);	
WIC-3.9	i. Reconcile cash and non-cash receipts; and	
WIC-3.10	j. Provide local reports.	

A - 1.18 (2) Walk-In Center Customer Service Solution for Unattended Sites

REQ. ID	REQUIREMENT	NOTES
WIC-4	The walk-in Customer service solution shall enable a Customer to obtain Customer service through self-service terminals.	
WIC-5	Self-service terminals shall provide the ability for a Customer to purchase or reload C2 fares, based on configurable product Business Rules.	

REQ. ID	REQUIREMENT	NOTES
WIC-6	Self-service terminals shall provide Customer service and Customer account management functionality, similar to the Customer service website.	
WIC-7	Self-service terminal screens shall be similar to those of the Customer service website.	

A - 1.19 FARE MEDIA MANAGEMENT SYSTEM

Contractor shall operate and maintain a Fare Media management system to allow Customers, Transit Operators, retailers, Institutions, and others to order and purchase both physical and virtual (mobile application) Fare Media. The Fare Media Contractor will be responsible for personalizing cards and fulfilling card orders received through the Fare Media management system.

Functional Architecture views in Appendix 4 related to Fare Media management include:

- FA-007 Physical Media Distribution

A - 1.19 (1) Physical Media Management

REQ. ID	REQUIREMENT	NOTES
FMMS-1	As part of the Fare Media Management System, Contractor shall provide functionality to manage all physical Fare Media in the System.	
FMMS-2	The Back Office shall initiate and track all Fare Media orders.	
FMMS-3	The Back Office shall maintain an inventory of all physical fare media until such time as it has been issued or provided to a Fare Media distributor (e.g. a Transit Operator or retailer).	
FMMS-4	The Back Office shall enable an Authorized User to view card inventory information including at a minimum the following:	
FMMS-4.1	a. Order number;	
FMMS-4.2	b. Order status;	
FMMS-4.3	c. Fare Media batch identification;	
FMMS-4.4	d. Individual Fare Media identification;	
FMMS-4.5	e. Fare Media issuance status;	

REQ. ID	REQUIREMENT	NOTES
FMMS-4.6	f. Inventory location; and	
FMMS-4.7	g. Negative List status.	
FMMS-5	The Back Office shall enable a Customer to order Fare Media through at a minimum:	
FMMS-5.1	a. The Customer Website;	
FMMS-5.2	b. The mobile application; and	
FMMS-5.3	c. Customer Service Center.	
FMMS-6	The Back Office shall enable a Customer to purchase and obtain Fare Media through at a minimum:	
FMMS-6.1	a. Staffed walk-in centers;	
FMMS-6.2	b. Self-service devices at walk-in centers. Specific Fare Media issued may be restricted to media that does not require eligibility verification;	
FMMS-6.3	c. Self-service devices at other locations Specific Fare Media issued may be restricted to media that does not require eligibility verification;	
FMMS-6.4	d. Retailers;	
FMMS-6.5	e. Institutional Programs;	
FMMS-6.6	f. Discount programs;	
FMMS-6.7	g. Transit Benefit programs; and	
FMMS-6.8	h. Integrated transit agency vending machines.	
FMMS-7	The Back Office shall include functionality to limit the maximum number of Fare Media that can be purchased in a single order by a Customer by individual sales channel.	
FMMS-8	The Back Office shall limit Fare Media orders for Clipper-branded limited use tickets to authorized partners.	
FMMS-9	When the Back Office receives a valid Fare Media order, it shall pass the Fare Media order to the physical media supplier for fulfillment.	
FMMS-10	The Back Office shall enable a Fare Media orderer to view information on the status of their Fare Media orders.	
FMMS-11	The Back Office shall enable an Authorized User to view information on all Fare Media orders.	

REQ. ID	REQUIREMENT	NOTES
FMMS-12	The Back Office shall enable an Authorized User to provide personalization instructions for a Fare Media order.	
FMMS-13	When the Back Office receives personalization instructions from an Authorized User, the Back Office shall pass the personalization Instruction to the physical media supplier.	
FMMS-14	The Back Office shall enable an Authorized User to view information on all personalization instructions and information.	
FMMS-15	The Back Office shall enable an Authorized User to view information on Fare Media distributors including at a minimum the following:	
FMMS-15.1	a. Name of Fare Media distributor;	
FMMS-15.2	b. Distribution channel type;	
FMMS-15.3	c. Location of Fare Media distributor;	
FMMS-15.4	d. Previous order history; and	
FMMS-15.5	e. Account status.	
FMMS-16	The Back Office shall enable a Customer to return faulty Fare Media via the Customer Service Center or a Transit Operator approved walk-in center.	
FMMS-17	The Back Office shall enable a Fare Media distributor to return faulty Fare Media via mail directly to Contractor.	
FMMS-18	When Contractor receives faulty Fare Media, Contractor shall pass the faulty media to the Fare Media Contractor for diagnosis and replacement.	
FMMS-19	The Back Office shall enable an Authorized User to view information on faulty Fare Media including at a minimum the following:	
FMMS-19.1	a. Fare Media identification;	
FMMS-19.2	b. Batch associated with;	

REQ. ID	REQUIREMENT	NOTES
FMMS-19.3	c. Reason for return; and	
FMMS-19.4	d. Statistics on return rates.	
FMMS-20	Contractor shall provide Application Specification to Card Manufacturers (CDRL-DD-001) for all media types.	

A - 1.19 (2) Virtual Media Management

REQ. ID	REQUIREMENT	NOTES
FMMS-21	Contractor shall manage and maintain virtual Fare Media designed for use on mobile devices.	
FMMS-22	Contractor shall track and maintain records of all active and inactive virtual Fare Media in use.	
FMMS-23	Virtual Fare Media shall emulate the capabilities of physical Fare Media, allowing a Customer to pay for fares and travel with a mobile device.	
FMMS-24	Virtual Fare Media shall be secure and shall include protections from unauthorized access, duplication, modification, cloning, or "re-imaging".	
FMMS-25	Virtual Fare Media shall be designed for use on various form factor mobile devices including phones, watches and fobs.	
FMMS-26	Virtual media design shall meet the applicable requirements of the C2 Customer mobile app.	
FMMS-27	Contractor shall provide a Virtual Fare Media Development and Management Plan (CDRL-O&M-025).	
FMMS-28	Virtual Fare Media shall be useable at any Validator in the System.	
FMMS-29	Virtual media shall be readable by Fare Enforcement Mobile Solution devices.	
FMMS-30	Contractor shall provide a system to manage all virtual Fare Media in the System.	
FMMS-31	The virtual Fare Media management system shall enable an Authorized User to create and manage Fare Products, and configure their associated parameters.	

REQ. ID	REQUIREMENT	NOTES
FMMS-32	The virtual Fare Media management system shall enable an Authorized User to remotely suspend and reinstate virtual Fare Media accounts.	

A - 1.20 RETAIL SALES AND DISTRIBUTION NETWORK

Contractor shall provide a robust, geographically diverse retail network where walk-in Customers throughout the San Francisco Bay Area can obtain C2 Fare Media and load Fare Products.

Functional Architecture views in Appendix 4 related to Fare Media management include:

- FA-008 Retail Program

REQ. ID	REQUIREMENT	NOTES
RSDN-1	Contractor shall provide a comprehensive Regional retail program to allow Customers to purchase Fare Media and products.	
RSDN-2	The retail program may be based on, at a minimum:	
RSDN-2.1	a. Provision of a secure retail application that can be installed on a retailer provided, Internet enabled device such as a tablet;	
RSDN-2.2	b. Use of the retailers existing point of sale system; or	
RSDN-2.3	c. A combination of these two approaches.	
RSDN-3	The retail program shall utilize the existing equipment and communications networks of the retailer.	
RSDN-4	The retail program shall provide the ability for a Customer to purchase Fare Media, products and value and have it available for immediate use.	
RSDN-5	The retail program shall provide the ability to sell and reload all full fare C2 Fare Products. MTC, at its sole discretion, may elect to not sell certain products for policy or other reasons, but the system shall be capable of selling those products should MTC so choose.	
RSDN-6	The retail program shall provide the ability for a Customer who qualifies for a discount fare to purchase or reload all	

REQ. ID	REQUIREMENT	NOTES
	applicable discount products at retail locations authorized to sell discounted products.	
RSDN-7	The Back Office shall maintain a record of all Customers who qualify for a discount fare.	
RSDN-8	The Back Office shall identify and address problems with retail network operation as part of ongoing monitoring activities.	
RSDN-9	The Back Office shall capture, manage and address e technical support requests related to the retail network.	
RSDN-10	The Back Office shall categorize and prioritize technical support requests related to the retail network.	
RSDN-11	The Back Office shall report on technical support request status and resolution related to the retail network.	

A - 1.21 PROGRAM MANAGEMENT REQUIREMENTS

Contractor shall be responsible for providing program management and program management support services including:

- Program management services related to the design, implementation and operation of the System;
- Support to MTC and the Transit Operators for the marketing of C2;
- Support for Organizational Change Management by MTC and the Transit Operators to accommodate business process and other changes resulting from System implementation and operation;
- Quality assurance and quality control;
- Safety management;
- System audit and audit support;
- Risk management;
- Change management; and
- Maintenance of business continuity in the event of a disruption.

Functional Architecture views in Appendix 4 related to program and Contract management support include:

- FA-024 Program Management
- FA-025 Marketing Support
- FA-026 Organizational Change and Business Process Management

- FA-027 Compliance and Audit
- FA-028 Risk Management

A - 1.21 (1) Program Management General Requirements

REQ. ID	REQUIREMENT	NOTES
PMR-1	Contractor shall develop and submit a Program Management Plan (CDRL-PM-008) for Approval.	
PMR-2	The Program Management Plan shall include an organization chart including qualifications, responsibilities, and authority of all individuals on Contractor team.	
PMR-3	The Program Management Plan shall include definition of Contractor mechanisms that will be utilized to control program elements.	
PMR-4	Contractor shall develop and maintain a Requirements Traceability Matrix (CDRL-PM-011) identifying and tracking compliance for all requirements set out in the Contract and including any new requirements as a result of Approved Changes.	
PMR-5	Contractor shall operate in accordance with the latest Approved Program Management Master Plan.	
PMR-6	Contractor shall develop and maintain a web-based project correspondence registry. The registry will facilitate retrieval of data from all project correspondence.	
PMR-7	Contractor shall develop and maintain a web-based action item registry. The registry will facilitate the management of all active and closed actions.	
PMR-8	No action items shall be assigned to the action item registry without the acceptance of the assignee.	
PMR-9	Contractor shall identify program risks in a risk register (CDRL-PM-012). Each risk shall be categorized by severity, impact, and likelihood of occurrence.	
PMR-10	Contractor shall participate in recurring program management meetings with MTC during all phases of the Contract, the frequency of which will be determined based on the needs at each phase in order to effectively manage the project.	
PMR-11	Contractor shall report its performance against individual Contract performance measures as defined in the Service Level Agreements (CDRL-PM-006).	

REQ. ID	REQUIREMENT	NOTES
PMR-12	Contractor shall report on project correspondence registry items assigned to itself.	
PMR-13	Contractor shall report on progress and anticipated closure dates for all action items.	
PMR-14	Contractor shall report on risk register items assigned to itself.	
PMR-15	Contractor shall report on progress in terms of Days ahead or behind the specific target date for each Work item, including percentage complete.	
PMR-16	Contractor shall develop a CDRL Management Plan (CDRL-PM-003) that defines how all CDRLs for which it is responsible will be developed and maintained through the duration of the Contract.	
PMR-17	Contractor shall operate in accordance with the Approved CDRL Management Plan.	

A - 1.21 (2) Project Schedule Requirements

REQ. ID	REQUIREMENT	NOTES
PMR-18	Contractor shall develop a GANTT-format Project Schedule (CDRL-PM-009) in Primavera, MS Project, or other industry standard scheduling program.	
PMR-19	Contractor shall provide the project schedule in both PDF and working electronic source files.	
PMR-20	Project Schedule shall include, at a minimum, the following:	
PMR-20.1	a. Resource loading, including projected hours and staffing level;	
PMR-20.2	b. A roll-up summary view;	
PMR-20.3	c. A detailed view breaking down to the weekly level;	
PMR-20.4	d. Project phases showing the planning, design, development, testing, installation, and transition stages of the project and interdependencies;	
PMR-20.5	e. Major activities within each project phase at a level of detail sufficient to communicate the	

REQ. ID	REQUIREMENT	NOTES
	anticipated progression of work (e.g. design iteration 1, design iteration 2; factory acceptance testing, integration testing; etc.);	
PMR-20.6	f. Critical Milestones;	
PMR-20.7	g. Relationships and dependencies between milestones, phases and activities;	
PMR-20.8	h. Anticipated critical path; and	
PMR-20.9	i. MTC approval timeframes and other MTC obligations.	
PMR-21	The Project Schedule shall include an accompanying narrative describing any key assumptions, dependencies on third parties, dependencies on MTC and the Transit Operators, opportunities to accelerate the schedule, and major risks that could materially disrupt the schedule.	
PMR-22	Any task longer than six (6) to eight (8) weeks in duration shall be broken down into smaller sub-tasks to more clearly demonstrate the progression of work.	

A - 1.21 (3) Marketing Support Requirements

REQ. ID	REQUIREMENT	NOTES
PMR-23	When instructed by MTC, Contractor shall provide all necessary information from the System to support MTC-managed development of C2 Customer education and marketing material.	
PMR-24	Customer education and marketing material may include, but not be limited to: social media content, web-based content, email notifications, audio content, video content, brochures, pamphlets, booklets, customer agreement, decals, stickers, vehicle signage, logos, collateral materials, or memes.	
PMR-25	When instructed by MTC, Contractor shall distribute C2 Customer education and marketing material.	
PMR-26	Contractor shall store undistributed Customer education and marketing material in a secure manner.	

REQ. ID	REQUIREMENT	NOTES
PMR-27	When instructed by MTC, Contractor shall collect, summarize and report Customer feedback.	
PMR-28	Contractor shall assist MTC to identify data needs, survey design, and construction of the survey, as well as the approach to data collection, data processing, and data analysis, and presentation of conclusions.	

A - 1.21 (4) Organizational Change and Business Process Support Requirements

REQ. ID	REQUIREMENT	NOTES
PMR-29	Contractor shall develop an Organizational Change Management Program Plan (CDRL-PM-007).	
PMR-30	Contractor shall develop, submit, and distribute internal (MTC, Transit Operators and designated third parties) communications to keep stakeholders engaged.	
PMR-31	Internal communications may include, but not be limited to: newsletters, program updates, blog postings, podcasts, infographics, or videos.	
PMR-32	The Organizational Change Management Plan shall identify all C2-related business processes.	
PMR-33	The Organizational Change Management Plan shall identify which C2-related business processes are entirely within Contractor's scope and control.	
PMR-34	The Organizational Change Management Plan shall identify which C2-related business processes directly utilize functionality provided by Contractor, interact with, or Interface to Contractor's scope, but are within the control of entities other than Contractor.	
PMR-35	The Organizational Change Management Plan shall identify the owner of each C2-related business process, such as the System Integrator, Customer Service Contractor, MTC, Transit Operator, or other entities.	
PMR-36	The Organizational Change Management Plan shall document all C2-related business processes using an Approved business process modeling notation (e.g. BPMN – Business Process Model and Notation).	

REQ. ID	REQUIREMENT	NOTES
PMR-37	Contractor shall implement C2-related business processes that are entirely within Contractor's scope and control.	
PMR-38	Contractor shall support the implementation of C2-related business processes that directly utilize functionality provided by Contractor, interact with or Interface to Contractor's scope, but are within the control of entities other than Contractor.	
PMR-39	Contractor shall develop recommendations to improve processes and overcome any inefficiencies identified with C2-related business processes every X months.	
PMR-40	Contractor shall implement Approved C2-related business processes improvement recommendations every X months.	
PMR-41	Contractor shall implement Approved C2-related business processes improvement recommendations every X months, for processes that are entirely within Contractor's scope and control.	
PMR-42	Contractor shall support the implementation of C2-related business process improvement recommendations every X months, for C2-related business processes that directly utilize functionality provided by Contractor, interact with or Interface to Contractor's scope, but are within the control of entities other than Contractor.	
PMR-43	Contractor shall provide C2 Business Process Reports (CDRL-PM-002), which shall:	
PMR-43.1	a. Identify and describe current business processes using the agreed modeling notation;	
PMR-43.2	b. Describe the methodology used to review processes for efficiency;	
PMR-43.3	c. Provide evidence gathered from performing the efficiency review; and	
PMR-43.4	d. Provide recommendations on process improvements.	
PMR-44	Contractor shall update C2-related business process documentation to reflect process improvements.	

A - 1.21 (5) Quality Control

REQ. ID	REQUIREMENT	NOTES
PMR-45	Contractor shall develop and submit a Quality Assurance Program Plan (CDRL-O&M-015) that addresses control of Contractor's design, systems, equipment, installation, testing and operation.	
PMR-46	Contractor shall use and abide by the Quality Assurance Program Plan to execute the Work for the Contract.	
PMR-47	The Quality Assurance Program Plan shall clearly define all responsibilities of quality assurance personnel.	
PMR-48	Contractor quality assurance functions shall include, but not be limited to: Contract review, document control, procurement, fabrication, installation, assembly, inspection, testing, packaging and shipping, non-conformance management, corrective actions, Training, and system controls.	
PMR-49	Contractor shall develop and submit a Reliability Assessment Program Plan (CDRL-O&M-016) documenting measurement and reporting of all reliability and availability measures.	
PMR-50	Contractor shall develop and submit a System Configuration Management Plan (CDRL-O&M-015b) defining procedures for change control and version management for both Software and Hardware, including fixes, updates, enhancements, modifications, and upgrades.	
PMR-51	Contractor shall develop and submit a Software Development Quality Assurance Program Plan (CDRL-O&M-015a) that is consistent with applicable Institute of Electrical and Electronics Engineers (IEEE) or equivalent International Standards Organization (ISO) standards. This Plan shall include, but not be limited to: testing and functionality, validity of use cases and data sets, regression testing, and validation of updates.	

A - 1.21 (6) Safety Management

REQ. ID	REQUIREMENT	NOTES
PMR-52	Contractor shall develop a Safety Management Plan (CDRL-O&M-018) detailing how adequate safety will be achieved and maintained throughout the operational lifecycle of C2, roles and responsibilities, and safety risk mitigation.	

REQ. ID	REQUIREMENT	NOTES
PMR-53	Contractor shall implement the Safety Management Plan for all aspects of C2 for which it has responsibility.	
PMR-54	Contractor shall monitor the ongoing safety of all aspects of C2 for which it has responsibility against the Safety Management Plan.	
PMR-55	If a potential or actual safety hazard is identified, Contractor shall notify an Authorized User(s).	

A - 1.21 (7) Compliance and System Audit

REQ. ID	REQUIREMENT	NOTES
PMR-56	Contractor shall provide a System Audit Plan (CDRL-O&M-020) documenting processes, timing and procedures for internal and external audits of C2.	
PMR-57	Contractor shall provide data, personnel and other services necessary to support audits performed by MTC and Transit Operators.	
PMR-58	Contractor shall provide data, personnel and other services necessary to support audits performed by an external auditor.	
PMR-59	Contractor shall provide a report on its compliance with external regulatory requirements (CDRL-PM-004).	
PMR-60	Contractor is responsible for providing all data, personnel and other services necessary to achieve compliance with external regulatory requirements.	
PMR-60.1	a. If fines for non-compliance are imposed by the regulatory organization, Contractor is responsible for payment of the fines.	
PMR-61	Contractor shall demonstrate its compliance with external regulatory requirements as frequently as required by the regulatory organization. If no frequency is specified by the regulatory organization, Contractor shall demonstrate compliance annually.	
PMR-62	When external regulatory requirements change Contractor shall demonstrate its compliance with the resulting requirements within the timeframe specified by the regulatory organization. If no timeframe is specified by the	

REQ. ID	REQUIREMENT	NOTES
	regulatory organization, Contractor shall demonstrate compliance within 12 months of those requirements changing.	
PMR-63	If Contractor no longer complies with external regulatory requirements, Contractor shall take all steps necessary to achieve compliance within the timeframe specified by the regulatory organization. If no timeframe is specified by the regulatory organization, Contractor shall achieve compliance within 12 months.	
PMR-64	Contractor shall operate in accordance with the latest Approved System Audit Plan.	

A - 1.21 (8) Risk Management

REQ. ID	REQUIREMENT	NOTES
PMR-65	Contractor shall develop and submit a Risk Management Plan (CDRL-O&M-017) and Risk Register (CDRL-PM-012), which shall identify, record and track the following, types of risk at a minimum.	
PMR-65.1	a. Technical risks, such as cyber-risk, data privacy, identification and safeguarding of personally identifiable information, insurance including indemnification and hold-harmless provisions;	
PMR-65.2	b. Schedule risks, for all project phases;	
PMR-65.3	c. Operational risks; and	
PMR-65.4	d. Cost risks.	
PMR-66	Contractor shall operate the System in accordance with the latest Approved Risk Management Plan.	
PMR-67	The Risk Register shall include a detailed program management status and strategy to address technical, schedule, operational, and cost risks.	
PMR-68	The Risk Management Plan and Risk Register shall detail the structure, tools and procedures for planning, identification, assessment, analysis, rating, prioritization, control options, handling plans, and monitoring of all program risks.	
PMR-69	Contractor may utilize industry-standard tools to facilitate the risk management process.	

REQ. ID	REQUIREMENT	NOTES
PMR-70	When any Party identifies a risk, Contractor shall perform a risk assessment in accordance with the Risk Management Plan and record the risk in the Risk Management Register.	
PMR-71	When an event previously identified as a risk occurs, Contractor shall mitigate the effects in accordance with the Risk Management Plan.	
PMR-72	Contractor shall support external risk investigations conducted by MTC or the Transit Operators in accordance with the Risk Management Plan.	

A - 1.21 (9) Change Management

REQ. ID	REQUIREMENT	NOTES
PMR-73	Contractor shall prepare a Change Management Plan (CDRL-O&M-006) documenting process, procedures and responsibilities for change management and change control.	
PMR-74	Contractor shall be responsible for creating, organizing and managing a Change Control Board made up of Contractor, MTC and designated Transit Operator participants.	
PMR-75	Contractor shall be responsible for scheduling, assembling, leading and publishing notes for the Change Control Board which shall meet no less frequently than monthly.	
PMR-76	All Change Requests from any Party shall be to the Change Control Board.	
PMR-77	Contractor shall participate in the Change Control Board-led evaluation of Change Requests; however, any Change Approvals and prioritization shall be as mutually agreed between the Parties.	
PMR-78	Contractor shall at all times maintain a current Approved Changes Register (CDRL-PM-001) and status including at a minimum:	
PMR-78.1	a. Party requesting the change;	
PMR-78.2	b. Change Request, review and Approval dates;	
PMR-78.3	c. Implementation schedule including development, testing and implementation;	

REQ. ID	REQUIREMENT	NOTES
PMR-78.4	d. Programmed Software release for any Software or firmware changes;	
PMR-78.5	e. Current status; and	
PMR-78.6	f. Issues and risks.	
PMR-79	Contractor shall update the Approved Changes Register based on the result of the Change Request evaluation.	
PMR-80	Contractor shall implement Approved Changes in accordance with the System Configuration Management Plan (CDRL-O&M-015b).	

A - 1.21 (10) Business Continuity

REQ. ID	REQUIREMENT	NOTES
PMR-81	Contractor shall develop a Business Continuity Plan (CDRL-O&M-003) for all business operations under its responsibility.	
PMR-82	The Business Continuity Plan shall be comprehensive and shall be based on a generally accepted standard for IT business continuity such as ISO 22301:2012 (or later).	
PMR-83	The Business Continuity Plan shall include at a minimum:	
PMR-83.1	a. Business impact analysis;	
PMR-83.2	b. Threat and risk analysis;	
PMR-83.3	c. Impact scenarios;	
PMR-83.4	d. Recovery strategies,	
PMR-83.5	e. Testing methodologies;	
PMR-83.6	f. Maintenance requirements to ensure business continuity;	
PMR-83.7	g. Identification of specific critical personnel, facilities, systems and equipment; and	
PMR-83.8	h. Statements of expected downtimes.	
PMR-84	Contractor shall operate in accordance with the latest Approved Business Continuity Plan.	

REQ. ID	REQUIREMENT	NOTES
PMR-85	Contractor shall monitor for conditions that could risk business continuity.	
PMR-86	When Business Continuity trigger conditions arise, Contractor shall implement the Business Continuity Plan.	
PMR-87	Contractor shall periodically verify its ability to implement the Business Continuity Plan.	
PMR-88	When Business Continuity trigger conditions no longer apply, Contractor shall be responsible for returning business operations to normal.	

A - 2: OPERATIONS AND MAINTENANCE OF C1

This section describes Contractor's responsibilities and obligations to operate and maintain the current Clipper® system (C1) until the end of transition including:

- Hosting and operating all C1 central system servers, databases, applications and related Hardware and Software;
- Providing C1 central system operations services;
- Providing systems administration of all C1 Hardware, Software and communications networks;
- Maintaining all C1 field devices and Hardware;
- Maintaining the retail network; and
- Implementing changes and enhancements to C1 systems and Software.

The current number of devices deployed as part of the C1 System are as follows:

Device	Total
Add-Value Machine	25
Ticket Office Terminal	53
Driver Console	3,447
Validator (Card Interface Device) Patron Device	5,105
CID 2a – Stand-alone Validator	336
TransLink Data Servers (TDS)	82
Auxiliary Display Unit	16
Data Warehouse	1
Handheld Card Reader and Cradles	688
Faregate Validators	122
Ticket Vending Machines	53

Device	Total
Agent Control Terminal	15
Onboard Zone Determination System	251

The following is a list of vehicles types:

Vehicle Type	total
Bus	3138
Heavy Rail	823
Locomotive	6
Light Rail	256
Ferry	18
Trolley	301
Cable Car	40
Historical Streetcars	50

A - 2.01 OPERATIONS AND HOSTING GENERAL REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
C1OH-1	Contractor shall prepare a C1 Operations Plan (CDRL-O&M-004) describing the personnel, procedures and functions required to operate C1.	
C1OH-2	Contractor shall provide a C1 Cutover Plan (CDRL-DD-004) describing the steps, responsibilities, schedules and processes required to transfer C1 infrastructure and operations to Contractor.	
C1OH-3	Contractor shall provide the physical space, personnel, infrastructure and networks to host and operate all C1 central systems.	
C1OH-4	Physical space and personnel providing direct operational support for C1 for customers, MTC and Transit Operators shall located within the USA.	
C1OH-5	Physical space, personnel, infrastructures and networks to host and operate C1 systems shall be in place a minimum nine (9) months prior to the termination of the current C1 Contract (currently November 30, 2019).	
C1OH-6	The transfer of all operations, infrastructure and systems required to operate C1, along with any Training, shall be completed no later than two (2) months prior to the termination of the current C1 Contract.	

REQ. ID	REQUIREMENT	NOTES
C1OH-7	Contractor shall be responsible for the operation of C1 until:	
C1OH-7.1	a. C2 is fully deployed, operational and available to all Users;	
C1OH-7.2	b. All Customers and Customer accounts have transitioned from C1 to C2;	
C1OH-7.3	c. All Transit Operators have transitioned from C1 to C2;	
C1OH-7.4	d. The C2 retail network is in place and C1 retail network has been decommissioned;	
C1OH-7.5	e. All C1 financial accounts have been settled and reconciled;	
C1OH-7.6	f. All Customer data has been archived or transferred, and purged from C1 devices and servers;	
C1OH-7.7	g. All other C1 data has been archived or transferred to designated C2 or MTC Data warehouse servers;	
C1OH-7.8	h. All C1 records have been assembled and archived; and	
C1OH-7.9	i. All C1-specific infrastructure, networks and equipment has been decommissioned and salvaged or disposed of per MTC direction.	
C1OH-8	Contractor shall at all times maintain and protect the security of the C1 system.	

A - 2.02 CENTRAL SYSTEM OPERATIONS REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
C1CS-1	Contractor shall be responsible for C1 Transaction and card account management including:	
C1CS-1.1	a. Daily collection and processing of all C1 Transactions;	
C1CS-1.2	b. Computing and verifying daily revenue Settlement and apportionment based on Transaction data;	
C1CS-1.3	c. Managing all data upload and download activities;	

REQ. ID	REQUIREMENT	NOTES
C1CS-1.4	d. Managing and maintaining all card accounts and status (e.g. active, inactive, blocked, etc.);	
C1CS-1.5	e. Maintaining and managing the distribution of all card updates (e.g. blocking a lost or stolen card);	
C1CS-1.6	f. Managing all Auto-load activity;	
C1CS-1.7	g. Managing all Institutional Programs and associated cards;	
C1CS-1.8	h. Generating and distributing all scheduled reports; and	
C1CS-1.9	i. Reconciliation of transactions.	
C1CS-2	Contractor shall be responsible for C1 financial management including:	
C1CS-2.1	a. Review and authorization of pending funds Settlement;	
C1CS-2.2	b. Management of funds collection from sales channels operated by Contractor;	
C1CS-2.3	c. Settlement of funds collection from the Transit Operators and third parties;	
C1CS-2.4	d. Management and verification of all Automated Clearing House (ACH) Transactions and funds transfers to and from designated accounts;	
C1CS-2.5	e. Management of chargebacks, payment disputes and manual adjustments;	
C1CS-2.6	f. Management and protection of Cardholder information;	
C1CS-2.7	g. Fraud detection and management;	
C1CS-2.8	h. Generating and providing financial reports; and	
C1CS-2.9	i. Reconciliation of financial transactions.	
C1CS-3	Contractor shall be responsible for card procurement and distribution including:	
C1CS-3.1	a. Bulk ordering of C1 card stock including Mifare DESFire EV1 plastic cards and Mifare Ultralight limited use cards;	

REQ. ID	REQUIREMENT	NOTES
C1CS-3.2	b. Testing, verification and inventory management of all card stock orders;	
C1CS-3.3	c. Maintaining of sufficient stock on hand to accommodate projected demands for a minimum six (6) month period;	
C1CS-3.4	d. Tracking of all cards and Failure rates;	
C1CS-3.5	e. Card initialization, issuance and (as applicable) personalization;	
C1CS-3.6	f. Acceptance, processing and fulfillment of individual card orders;	
C1CS-3.7	g. Acceptance, processing and fulfillment of bulk card orders;	
C1CS-3.8	h. Acceptance, processing and fulfillment of card orders for retailers;	
C1CS-3.9	i. Managing the replacement of defective cards; and	
C1CS-3.10	j. Managing all operator cards and status.	
C1CS-4	Contractor shall be responsible for all Customer service systems, operations and channels including:	
C1CS-4.1	a. Providing Customer services, and receiving and responding to Customer inquiries;	
C1CS-4.2	b. Operating and maintaining the Customer relationship management system;	
C1CS-4.3	c. Operating and maintaining telephone, email, social media and interactive voice response systems;	
C1CS-4.4	d. Operating and maintaining the Clipper Customer Website;	
C1CS-4.5	e. Maintaining website compatibility with current browsers and accessibility guidelines;	
C1CS-4.6	f. Managing website content; and	
C1CS-4.7	g. Managing all Customer accounts and (as applicable) payment methods.	

A - 2.03 SYSTEMS ADMINISTRATION

REQ. ID	REQUIREMENT	NOTES
C1SA-1	Contractor shall be responsible for maintaining and administering all C1 systems, networks and devices including:	
C1SA-1.1	a. Providing, monitoring and maintaining all C1 communications networks and network Interfaces;	
C1SA-1.2	b. Monitoring all network devices, applications and systems services;	
C1SA-1.3	c. Providing data backup, archive and off-site storage;	
C1SA-1.4	d. Implementation of disaster recovery and business continuity in the event of a system disruption;	
C1SA-1.5	e. Database management, administration and performance optimization;	
C1SA-1.6	f. Maintaining capabilities for data retrieval and reporting by MTC and Transit Operators;	
C1SA-1.7	g. Maintaining Software licenses and renewals;	
C1SA-1.8	h. Detecting Software faults;	
C1SA-1.9	i. Applying all required Software updates and patches; and	
C1SA-1.10	j. Maintaining the performance of all databases and primary applications.	
C1SA-2	Contractor shall be responsible for maintaining the security of C1 including:	
C1SA-2.1	a. Maintaining all Software on secure platforms;	
C1SA-2.2	b. Monitoring and managing of all firewalls;	
C1SA-2.3	c. Identifying and monitoring of potential security threats;	
C1SA-2.4	d. Maintaining Payment Card Industry (PCI) compliance at all times;	
C1SA-2.5	e. Monitoring for, detecting, mitigating and responding to internal and external attempts to	

REQ. ID	REQUIREMENT	NOTES
	breach security, penetrate the system, or deny service; and	
C1SA-2.6	f. Implementing security-related Software patches in a timely manner.	
C1SA-3	Contractor shall be responsible for providing C1 technical support including:	
C1SA-3.1	a. Staffing and operating a help desk;	
C1SA-3.2	b. Operating and maintaining a trouble ticket management system;	
C1SA-3.3	c. Responding to all MTC and Transit Operator assistance requests;	
C1SA-3.4	d. Tracking, monitoring and resolving issues and requests; and	
C1SA-3.5	e. Maintaining a knowledge base of issues.	

A - 2.04 DEVICE AND HARDWARE MAINTENANCE

REQ. ID	REQUIREMENT	NOTES
C1DH-1	Except for first line maintenance, Contractor shall be responsible for all troubleshooting, repair and replacement of C1 field devices and Hardware including:	
C1DH-1.1	a. Monitoring and maintenance of all C1 Hardware or devices installed in Contractor or Transit Operator facilities;	
C1DH-1.2	b. Repair or replacement of all defective or malfunctioning field devices or Hardware;	
C1DH-1.3	c. Site surveys and other Work required for new device installations;	
C1DH-1.4	d. Installation and commissioning of all new or replacement devices or Hardware;	
C1DH-1.5	e. Providing and maintaining a C1 Asset Register (CDRL-O&M-013a-1) of all C1 devices, whether in use or in inventory; and	

REQ. ID	REQUIREMENT	NOTES
C1DH-1.6	f. Testing of all replacement devices prior to distribution to the field or inventory.	

A - 2.05 RETAIL NETWORK MANAGEMENT AND MAINTENANCE

REQ. ID	REQUIREMENT	NOTES
C1RN-1	Contractor shall be responsible for maintaining the operation of the C1 retail network until such time as all Transit Operators are equipped to accept C2 media and the C2 retail network has been deployed.	
C1RN-2	Contractor shall provide the following retail network operations services:	
C1RN-2.1	a. Daily data upload and download to retail devices;	
C1RN-2.2	b. Maintaining all communications networks and connections to retail devices;	
C1RN-2.3	c. Providing Training, C1 program information, technical support and reports to retailers;	
C1RN-2.4	d. Managing and administering all retailer Contracts and agreements;	
C1RN-2.5	e. Collecting and managing all receipts from the sale of C1 products; and	
C1RN-2.6	f. Providing on-site maintenance and replacement of retail devices.	

A - 2.06 SYSTEM UPGRADES AND ENHANCEMENTS

REQ. ID	REQUIREMENT	NOTES
C1SU-1	Contractor shall be responsible for developing, implementing and testing upgrades, enhancements to C1 including:	
C1SU-1.1	a. Fixing Software bugs or defects;	
C1SU-1.2	b. Developing and implementing security-related Software updates and modifications;	

REQ. ID	REQUIREMENT	NOTES
C1SU-1.3	c. Implementing new Transit Operator fare and Business Rules;	
C1SU-1.4	d. Implementing changes to existing fare and Business Rules;	
C1SU-1.5	e. Modifying existing Software and Software modules to provide revised or modified functionality;	
C1SU-1.6	f. Developing new Software or modules to provide additional functionality; and	
C1SU-1.7	g. Programming and managing Software releases and schedules.	
C1SU-2	Contractor shall be responsible for developing, testing and implementing the addition of new Transit Operators to C1.	
C1SU-3	Contractor shall be responsible for maintaining C1 on supported Hardware and Software platforms including:	
C1SU-3.1	a. Maintaining all Software on OEM supported platforms and Software versions;	
C1SU-3.2	b. Migrating Software to new and supported Hardware; and	
C1SU-3.3	c. Conducting testing and certification of any Software or Hardware migration.	

A - 3: DESIGN, IMPLEMENTATION, AND TESTING OF C2 SYSTEM

This section describes the processes that Contractor shall follow in order to design, develop, test, and implement the C2 System including:

- An interactive design process that includes both written documentation and extensive use of prototypes to demonstrate Contractor's intended design;
- Development of all functionality, Hardware, Software and systems;
- Development of websites, web portals and mobile applications;
- Equipment and system installation requirements;
- Testing requirements;
- Training requirements; and
- Operations and maintenance of C2.

A - 3.01 DESIGN PHASE REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
DP-1	Contractor shall conduct interactive design reviews to present and demonstrate the design of all C2 System Hardware, Software, functionality, and services.	
DP-2	Contractor shall provide a Design Review Plan (CDRL-DD-008), detailing the iterative design process for each design phase, which includes the following, at a minimum:	
DP-2.1	a. Approach for iterative design and stakeholder interaction, goals and content for each design phase;	
DP-2.2	b. Logical grouping of Subsystems, functionality, and equipment for a staggered design review process that aligns with Contractor's development schedule and balances the level of effort for Contractor and Transit Operator participation in design reviews; and	
DP-2.3	c. Initial schedule for each design phase, reflecting the logical grouping of Subsystems, functionality, and equipment.	
DP-3	The Design Review shall be conducted in three major phases of Conceptual Design Review (CDRL-DD-008a), Preliminary Design Review (CDRL-DD-008b), and Final Design Review (CDRL-DD-008c).	
DP-4	For the Conceptual Design Review, Contractor shall describe key elements necessary to describe and demonstrate how the proposed system and services meet C2 requirements. The CDR shall include at a minimum:	
DP-4.1	a. All Business Rules and fare rules to be implemented in the System;	
DP-4.2	b. Drafts of all Plans;	
DP-4.3	c. A draft traceability matrix showing where each requirement of the Contract will be addressed;	
DP-4.4	d. An overall system description, and architecture;	
DP-4.5	e. A listing of all Interfaces and application programming Interfaces to be provided;	
DP-4.6	f. Technical descriptions and sample units of all proposed devices, with test or other Software	

REQ. ID	REQUIREMENT	NOTES
	installed on those devices to demonstrate basic functionality and operation;	
DP-4.7	g. System capacity calculations and Transaction time estimates;	
DP-4.8	h. Approaches for maintaining operation when devices are offline;	
DP-4.9	i. Website structures and initial wireframes; and	
DP-4.10	j. Software functional descriptions and inter-relationships.	
DP-5	The Preliminary Design Review shall demonstrate how the features of Contractors' existing systems, equipment and services meet the C2 requirements, identify final requirements and determine gaps to be filled during the development phase:	
DP-5.1	a. The PDR will be an interactive and iterative process to include significant involvement by stakeholders and Contractor, to discuss, demonstrate, and agree on system design;	
DP-5.2	b. Contractor shall demonstrate the existing Back Office/central system functionality, and validate the design against the C2 requirements document and stakeholder needs;	
DP-5.3	c. Contractor shall demonstrate existing equipment and Interfaces, present standard engineering and design documentation, and operations and maintenance procedures;	
DP-5.4	d. Contractor shall demonstrate configurable Business Rules and parameters;	
DP-5.5	e. Contractor shall describe operational processes and services to be provided for C2;	
DP-5.6	f. Contractor shall provide the updated plan for transition from C1 to C2;	
DP-5.7	g. Contractor shall present a plan (CDRL-DD-008b) that describes the necessary customization and configuration for C2, including an initial list of design gaps and configurable parameters, and recommended descriptions, drawings, flow charts, wire screens, draft manuals, to fill the gaps;	

REQ. ID	REQUIREMENT	NOTES
DP-5.8	h. Contractor shall identify cost-drivers and areas for cost-savings, for discussion during PDR, along with a proposed alternative design or approach and a rough order of magnitude cost savings for each Change; and	
DP-5.9	i. Contractor shall update pricing following PDR, based on decisions from PDR.	
DP-6	The Final Design Review shall demonstrate C2-specific functionality, features, configuration, installation, Training, transition, and implementation:	
DP-6.1	a. Contractor shall provide plans and documents as identified in Section 5-01., prior to FDR, including updating the Preliminary Design and Review Plan as necessary to reflect all updates for the Final Design and Review Plan (CDRL-DD-008c);	
DP-6.2	b. Additional input to FDR shall include PDR documentation, interim versions of Software for demonstration;	
DP-6.3	c. The FDR will be an interactive and iterative process to include significant involvement by stakeholders and Contractor to discuss, demonstrate, and agree on all aspects of the C2 System, equipment, operations, and services;	
DP-6.4	d. Contractor will present multiple iterations of Subsystem design, interim Software releases, configuration, system changes, and service approaches to facilitate the collaborative design process; and	
DP-6.5	e. Contractor will present a final C2 demonstration showing agreed-upon C2 functionality has been completed and outstanding issues resolved, prior to completion of FDR.	
DP-7	Contractor shall deliver a schedule for the activities and meetings within each design review phase in advance of the design review cycle for review and Approval by MTC.	
DP-8	Contractor shall lead and facilitate all design review sessions.	
DP-9	Contractor shall produce summaries of each design review meeting.	

REQ. ID	REQUIREMENT	NOTES
DP-10	The design review meeting summary shall include a list of decisions and changes agreed-upon during the design meeting, to be incorporated into the system design and documentation.	
DP-11	The design review meeting summary shall include a list of issues, categorized to indicate whether each issue is at a minimum:	
DP-11.1	a. A design deficiency (system did not meet functional requirements);	
DP-11.2	b. Additional scope to be considered;	
DP-11.3	c. Scope to be considered for deletion;	
DP-11.4	d. A change to the way the system addresses the functional requirements;	
DP-11.5	e. Open decisions to be made by MTC; and/or	
DP-11.6	f. Other categories useful for issue management and resolution.	
DP-12	Contractor shall develop a design document (CDRL-DD-013-[X]) for each Transit Operator that addresses unique needs and requirements of that Transit Operator.	
DP-13	Contractor shall develop and maintain a Cost Adjustment Register (CDRL-PM-005) documenting on an ongoing basis the impact on Target Price of the design decisions made during each design and design review phase including at a minimum:	
DP-13.1	a. Description of changes or impacts to the System as a result of the design decision;	
DP-13.2	b. Labor hours by staff category required to design, test and implement the design decision; and	
DP-13.3	c. Cost impacts broken down by materials, labor and outside costs.	
DP-14	All design decisions shall be subject to Approval by MTC.	

A - 3.02 WEBSITES, WEB PORTALS, AND MOBILE APPLICATION DEVELOPMENT

REQ. ID	REQUIREMENT	NOTES
WWMAD-1	Contractor shall develop all websites and mobile applications interactively with MTC and Transit Operator personnel.	
WWMAD-2	Contractor shall provide a Website, Web Portal, and Mobile Application Development Plan (CDRL-DD-014) describing, at a minimum:	
WWMAD-2.1	a. the approach to development, prototyping, and review of websites;	
WWMAD-2.2	b. the approach to development, prototyping, and review of the mobile app; and	
WWMAD-2.3	c. the approach to updating websites, web portals and mobile application every six (6) months throughout the operation of C2 to incorporate enhancements.	
WWMAD-3	The Website, Web Portal, and Mobile Application Development Plan shall include at a minimum:	
WWMAD-3.1	a. Design workshops with representatives from MTC and the Transit Operators to determine required website and mobile application elements and flow;	
WWMAD-3.2	b. Approach for including customer focus group input to design and testing process;	
WWMAD-3.3	c. Wireframe documents illustrating content and general flow;	
WWMAD-3.4	d. Interactive prototypes demonstrating flow and functionality; and	
WWMAD-3.5	e. Interim releases of websites and the mobile application in the test environment for review, testing and approval by MTC and Transit Operator personnel.	
WWMAD-4	Contractor shall develop all websites in accordance with the Website, Web Portal, and Mobile Application Development Plan (CDRL-DD-014).	
WWMAD-5	Contractor shall develop all mobile applications in accordance with the Website, Web Portal, and Mobile Application Development Plan (CDRL-DD-014).	

REQ. ID	REQUIREMENT	NOTES
WWMAD-6	Contractor shall update all websites, web portals and mobile applications every six (6) months throughout the operation of C2.	
WWMAD-7	Contractor shall provide a formal Website Usability Test Plan (CDRL-TEST-020).	
WWMAD-8	Contractor shall provide a formal Mobile Application Usability Test Plan (CDRL-TEST-013).	
WWMAD-9	Usability testing shall include participation by MTC and the Transit Operators.	
WWMAD-10	Contractor shall update all websites and mobile applications based on findings of usability testing.	

A - 3.03 EQUIPMENT AND SYSTEMS INSTALLATION REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
ESI-1	Contractor shall install and test all equipment, systems, Subsystems and networks supplied or integrated with.	
ESI-2	Contractor shall manage the supply and all installation activities including at a minimum:	
ESI-2.1	a. Installation plans with checklists;	
ESI-2.2	b. Site preparation;	
ESI-2.3	c. Contractor installed on-board signal & power cabling route and attachments;	
ESI-2.4	d. Hardware and Software delivery and inventory; and	
ESI-2.5	e. Installation test, results, issues, and resolutions.	
ESI-3	Contractor shall perform an audit of all Transit Operator bus fleets to determine the current onboard bus systems, their functions, and any planned changes to those onboard systems.	
ESI-4	Contractor shall perform an audit of all Transit Operator rail fleets to determine the current rail fare collection systems, both at the stations and platforms, and onboard the rail vehicles, their functions, and any planned changes to those systems.	

REQ. ID	REQUIREMENT	NOTES
ESI-5	Contractor shall perform an audit of all Transit Operator ferry fleets to determine the current ferry fare collection systems at the terminals, their functions, and any planned changes to those systems.	
ESI-6	Contractor shall be responsible for determining mounting locations for all onboard equipment, optimized for each vehicle type and Transit Operator.	
ESI-7	All mounting locations shall be Approved by the Transit Operator on whose vehicles the equipment is to be installed.	
ESI-8	Contractor shall provide an Installation Plan (CDRL-O&M-023-[X]) for each Transit Operator and/or Site. Each Installation Plan shall include at a minimum:	
ESI-8.1	a. A listing of all Hardware and devices to be supplied;	
ESI-8.2	b. A listing of all Software, applications and databases to be supplied;	
ESI-8.3	c. Identification of all communications networks and devices to be supplied;	
ESI-8.4	d. Contractor installed on-board signal and power cabling route and attachments;	
ESI-8.5	e. Installation management approach;	
ESI-8.6	f. Installation schedule for all locations;	
ESI-8.7	g. Installation Site specific Work plan for all locations;	
ESI-8.8	h. Site-specific safety plan;	
ESI-8.9	i. Installation drawings for all locations;	
ESI-8.10	j. Demolition and construction plans for all locations if needed;	
ESI-8.11	k. Installation procedures for all locations;	
ESI-8.12	l. Installation test procedures;	
ESI-8.13	m. Components, communication, or other infrastructure required to be provided by other entities;	
ESI-8.14	n. Roles and responsibilities for Contractor, MTC, Transit Operators and other entities;	

REQ. ID	REQUIREMENT	NOTES
ESI-8.15	o. Transit Operator-specific installation requirements, such as Contractor insurance certificate and mandatory safety Training for Contractor on-Site personnel; and	
ESI-8.16	p. Pre-installation preparation tasks, schedule and responsibilities.	
ESI-9	Contractor shall avoid or minimize disruption of Transit Operator service and operations during installation.	
ESI-10	Contractor shall obtain prior Approval from the Transit Operator for each installation Site prior to start of Work at each Site.	
ESI-11	Contractor shall avoid restriction of public rights-of-way during Installation.	
ESI-12	Contractor shall provide an Installation Testing Report (CDRL-TEST-011) for each installed system, Subsystem or device.	
ESI-13	Contractor shall provide a list of Contractor staff engaged in installation activities, their duties and installation program manager.	
ESI-14	Contractor shall detail any installation escort requirements of Transit Operator at each location.	
ESI-15	Contractor shall detail any installation support requirements of Transit Operator at each location.	
ESI-16	Contractor shall obtain and display appropriate identification while on Transit Operator property.	
ESI-17	Contractor shall ensure that all on-Site personnel undergo Transit Operator safety Training prior to access to Transit Operator facilities and adhere to all Transit Operator access and safety rules and regulations.	
ESI-18	Contractor shall protect all utilities, Transit Operator equipment, property, streets, and private property, and shall repair any damage at Contractor's expense.	
ESI-19	The Contract shall provide a detailed description and breakdown of practices and procedures that shall be undertaken and enforced by Contractor in compliance with at a minimum:	
ESI-19.1	a. Applicable OSHA Regulations and Standards;	

REQ. ID	REQUIREMENT	NOTES
ESI-19.2	b. Transit Operator-specific Work Site safety and access requirements; and	
ESI-19.3	c. All other local, Regional, State and Federal governmental agencies and certification bodies having jurisdiction over the Work.	
ESI-20	Contractor shall supply all of the labor, supervision and materials required for the proper and complete removal of the existing fare collection equipment that the equipment to be furnished under this Contract will replace.	
ESI-21	Contractor shall supply all labor, supervision, and materials required for installation, commissioning and operation of all new C2 equipment including, but not limited to:	
ESI-21.1	a. Installation of all C2 equipment at all locations;	
ESI-21.2	b. Installation of communications networks and devices; and	
ESI-21.3	c. Provision of power connections.	
ESI-22	Contractor shall place any removed fare collection equipment at a Contractor-provided local storage location and shall, at a minimum:	
ESI-22.1	a. Contractor shall provide a detailed inventory of all equipment removed and place in storage;	
ESI-22.2	a. After system acceptance and sign-off Transit Operators will determine the disposition of removed equipment; and	
ESI-22.3	b. Transit Operators reserve the right to retain removed equipment after reviewing inventory.	
ESI-23	Any equipment not retained by the Transit Operators shall be Contractor's responsibility for removal and disposition.	
ESI-24	Contractor shall ensure that installed C2 equipment is compliant with the latest accessibility requirements.	
ESI-25	Contractor shall ensure that installed C2 equipment is positioned for maximum ease of passenger movement and vehicle operator operation.	
ESI-26	Contractor shall ensure on-board cabling repair does not allow splicing of wires.	

REQ. ID	REQUIREMENT	NOTES
ESI-27	Contractor shall ensure on-board cabling incorporates appropriate service loops to allow repair without splicing in typical Failure locations.	

A - 3.04 TESTING REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
TEST-1	Contractor shall be responsible for conducting all testing, and supplying all equipment, facilities, personnel, documentation, and other materials needed to conduct testing.	
TEST-2	Contractor shall be responsible for recording and reporting all test results.	
TEST-3	MTC and the Transit Operators shall have the right to attend, witness, and participate in any and all testing at their sole discretion.	
TEST-4	No stage of testing may commence unless all prior testing stages have been completed and accepted, except as otherwise permitted by MTC in writing.	
TEST-5	Contractor shall provide comprehensive Test Plans (CDRL-TEST-001) that document test procedures, test scripts and pass/fail requirements.	
TEST-6	Test Plans shall include at a minimum:	
TEST-6.1	a. Entry and exit conditions;	
TEST-6.2	b. Test environment and setup description;	
TEST-6.3	c. Requirements traceability matrix mapping each individual Contract requirements to a specific test case or test procedure;	
TEST-6.4	d. Step by step test procedures;	
TEST-6.5	e. Data validation;	
TEST-6.6	f. Pass/fail criteria;	
TEST-6.7	g. Expected results; and	
TEST-6.8	h. Recording and note taking forms.	

REQ. ID	REQUIREMENT	NOTES
TEST-7	Contractor shall provide all test plans to MTC and the Transit Operators in advance of testing.	
TEST-8	Testing and Test Plans shall include at a minimum:	
TEST-8.1	a. Prototype testing;	
TEST-8.2	b. First article testing;	
TEST-8.3	c. Unit or device Hardware testing;	
TEST-8.4	d. Unit or device Software testing;	
TEST-8.5	e. Subsystem testing;	
TEST-8.6	f. Installation testing;	
TEST-8.7	g. Integration testing;	
TEST-8.8	h. End-to-end functionality testing;	
TEST-8.9	i. Use case Operations Testing; and	
TEST-8.10	j. System Acceptance Testing.	
TEST-9	Testing and Test Plan shall demonstrate Contractor can meet or exceed all performance requirements.	
TEST-10	Testing activities shall include at a minimum:	
TEST-10.1	a. Test preparation;	
TEST-10.2	b. "Dry run" testing prior to the start of formal testing;	
TEST-10.3	c. Scheduled testing;	
TEST-10.4	d. Regression testing;	
TEST-10.5	e. Test results documentation; and	
TEST-10.6	f. A verification and validation assessment describing testing outcomes and corrective actions to be taken.	
TEST-11	In the event of an error in testing or encountering of a defect, testing shall proceed, halt, or be suspended based on the severity of the error or defect as follows:	
TEST-11.1	a. Severity Level 1 – Functionality fails or an error occurs that invalidates testing. Testing halts and restarts once the error or defect is corrected;	

REQ. ID	REQUIREMENT	NOTES
TEST-11.2	b. Severity Level 2 – An element of a test fails that does not impact other elements of the test. Testing may continue, with the failed element retested at a future date;	
TEST-11.3	c. Severity Level 3 – Behavior is not exactly as described in the test procedures but reflects the expected behavior. Testing may proceed with test notes indicating the variance from the scripted behavior; and	
TEST-11.4	d. Severity Level 4 – Minor cosmetic or other issue. Testing may proceed with the issue to be resolved prior to the component being placed into production.	
TEST-12	Test procedures shall include use of a mixture of the full range of Fare Media accepted proposed by Contractor.	
TEST-13	Test procedures shall demonstrate the use of invalid media.	
TEST-14	Test Plans shall include a mixture of all devices proposed by Contractor.	
TEST-15	Test Plans shall demonstrate all Transit Operator fare policies including promotional fares.	
TEST-16	Test Plans shall include procedures for analysis, verification, root cause analysis and corrective action.	
TEST-17	Contractor shall provide a comprehensive Back Office Test Plan (CDRL-TEST-002) demonstrating all Back Office functions and operations.	
TEST-18	Contractor shall provide a Business Intelligence/Reporting System Test Plan (CDRL-TEST-003) including at a minimum the following:	
TEST-18.1	a. Reporting system;	
TEST-18.2	b. Data views;	
TEST-18.3	c. Data export; and	
TEST-18.4	d. Dashboard reporting.	
TEST-19	Contractor shall provide a Customer Services System Test Plan (CDRL-TEST-006) including at a minimum:	
TEST-119.1	a. Customer relationship management system;	

REQ. ID	REQUIREMENT	NOTES
TEST-19.2	b. All websites and web portals;	
TEST-19.3	c. Walk-in center solution (staffed and self-serve); and	
TEST-19.4	d. All mobile applications.	
TEST-20	Contractor shall provide an Institutional and Discount Program System Test Plan (CDRL-TEST-021) including at a minimum:	
TEST-20.1	a. Approving, establishing and cancelling accounts;	
TEST-20.2	b. Account access and management;	
TEST-20.3	c. User management;	
TEST-20.4	d. Revenue management;	
TEST-20.5	e. Financial management; and	
TEST-20.6	f. Reporting.	
TEST-21	Contractor shall provide a Retail Sales and Distribution Program System Test Plan (CDRL-TEST-022) including at a minimum:	
TEST-21.1	a. Approving, establishing and canceling accounts;	
TEST-21.2	b. Account access and management;	
TEST-21.3	c. User management;	
TEST-21.4	d. Reload network and devices;	
TEST-21.5	e. Revenue management;	
TEST-21.6	f. Financial management;	
TEST-21.7	g. Monitoring operation of Retail Network; and	
TEST-21.8	h. Reporting.	
TEST-22	Contractor shall provide a Financial Management System Test Plan (CDRL-TEST-010) including at a minimum:	
TEST-22.1	a. Financial and Transaction processing;	
TEST-22.2	b. Apportionment and Settlement;	
TEST-22.3	c. Reconciliation;	
TEST-22.4	d. Chargeback and debt processing;	
TEST-22.5	e. Fraud management; and	

REQ. ID	REQUIREMENT	NOTES
TEST-22.6	f. Accounting.	
TEST-23	Contractor shall provide a System Monitoring and Control Test Plan (CDRL-TEST-016) including at a minimum:	
TEST-23.1	a. Monitor field devices;	
TEST-23.2	b. Control field devices;	
TEST-23.3	c. Monitor Back Office;	
TEST-23.4	d. Reconciliation with Transit Operator specific data collection systems such as BART's DAS;	
TEST-23.5	e. Log Access to devices;	
TEST-23.6	f. Configuration Management of operating parameters, including download and activation	
TEST-23.7	g. Management of list, Business Rules and key distribution	
TEST-23.8	h. Configurable system parameters	
TEST-23.9	i. Send notification of faults; and	
TEST-23.10	j. Monitor Social Media.	
TEST-24	Contractor shall provide a Communications System Test Plan (CDRL-TEST-004) including at a minimum:	
TEST-24.1	a. Network connectivity;	
TEST-24.2	b. Typical and maximum data volume communication transfer requirements have been met at all locations;	
TEST-24.3	c. Network performance; and	
TEST-24.4	d. Operation of all wireless networks.	
TEST-25	Contractor shall provide Unit/Device Test Plan (CDRL-TEST-017) including at a minimum:	
TEST-25.1	a. Demonstration that all Hardware requirements have been met;	
TEST-25.2	b. Demonstrate Unit/Device and on-board system boot time requirements have been met;	
TEST-25.3	c. Demonstration that all functionality is provided; and	

REQ. ID	REQUIREMENT	NOTES
TEST-25.4	d. Demonstration that all User Interfaces are functional.	
TEST-26	As a subset of the Unit/Device Test Plan, Contractor shall provide a Validator Test Plan (CDRL-TEST-019) including at a minimum:	
TEST-26.1	a. Demonstration of all validation functionality;	
TEST-26.2	b. Transaction times and throughput;	
TEST-26.3	c. Inspection device operation;	
TEST-26.4	d. Integration and operation of legacy fare collection equipment;	
TEST-26.5	e. Communications;	
TEST-26.6	f. Compliance with Payment Card Industry standards; and	
TEST-26.7	g. Compliance with payment brand requirements for open payment.	
TEST-27	Contractor shall provide an Environmental Test Plan (CDRL-TEST-007) documenting at a minimum:	
TEST-27.1	a. Environmental requirements;	
TEST-27.2	b. Shock and vibration requirements;	
TEST-27.3	c. Measurement of actual Transit Operator vehicle electrical/mechanical operating environment	
TEST-27.4	d. Comparison of actual environment to specified system susceptibility capabilities	
TEST-27.5	e. Compliance with all applicable regulatory requirements; and	
TEST-27.6	f. Emission and electromagnetic compliance.	
TEST-28	Contractor shall provide an Integrated Credit/Debit Gateway System Test Plan (CDRL-TEST-005) for all devices and systems including at a minimum:	
TEST-28.1	a. Demonstration that Primary Account Numbers (PAN) are tokenized and processed in a way that is transparent to Customers;	
TEST-28.2	b. Demonstration that credit and debit transactions at the devices, the web and mobile apps are	

REQ. ID	REQUIREMENT	NOTES
	processed within specified Transaction time requirements;	
TEST-28.3	c. Demonstration of recurring payments including refunds;	
TEST-28.4	d. Demonstration that the credit and debit gateway is complaint with applicable Payment Card Industry standards;	
TEST-28.5	e. Demonstrate credit/debit transaction authorizations provide specific response codes for all credit/debit transactions; and	
TEST-28.6	f. Demonstrate ability to map authorization requests to all use and sale transactions related to the request.	
TEST-29	Contractor shall provide a Security System Test Plan (CDRL-TEST-014) including at a minimum:	
TEST-29.1	a. Standards compliance;	
TEST-29.2	b. User access controls;	
TEST-29.3	c. Data integrity;	
TEST-29.4	d. Network security;	
TEST-29.5	e. Payment Card Industry compliance;	
TEST-29.6	f. Internal penetration testing;	
TEST-29.7	g. External penetration testing; and	
TEST-29.8	h. Vulnerability scans.	
TEST-30	Contractor shall provide a Factory Acceptance Test Plan (CDRL-TEST-008) including at a minimum:	
TEST-2430.1	a. That devices, systems and Subsystems provide all functions, features and requirements as specified in a factory or lab environment;	
TEST-30.2	b. That all performance measures have been met;	
TEST-30.3	c. That all material Software defects have been rectified, including at a minimum:	
TEST-30.3.1	1. Impacting Customer experience;	
TEST-30.3.2	2. Financial Settlement and reconciliation;	

REQ. ID	REQUIREMENT	NOTES
TEST-30.3.3	3. Equipment status;	
TEST-30.3.4	4. Data accuracy;	
TEST-30.3.5	5. Reporting systems; and	
TEST-30.4	d. That all Hardware defects have been rectified.	
TEST-31	Contractor shall provide a Maintainability Test Plan (CDRL-TEST-012) documenting that all devices and Subsystems meet maintainability requirements and procedures.	
TEST-32	Contractor shall provide System Integration Test Plan (CDRL-TEST-015) including at a minimum:	
TEST-32.1	a. All end-to-end functionality;	
TEST-32.2	b. Operation of all Interfaces;	
TEST-32.3	c. Operation of all Customer service channels;	
TEST-32.4	d. Operation of all Business Rules;	
TEST-32.5	e. Correct and accurate Transaction processing; and	
TEST-32.6	f. Correct and accurate revenue management and apportionment.	
TEST-33	Contractor shall provide a User Acceptance Test Plan (CDRL-TEST-018) including at a minimum:	
TEST-33.1	a. Test Cases;	
TEST-33.2	b. Selection of test team consisting of MTC and Transit Operator personnel;	
TEST-33.3	c. User random test cases period;	
TEST-33.4	d. Log of Failures and corresponding severity; and	
TEST-33.5	e. A verification and validation assessment describing testing outcomes and corrective actions to be taken.	
TEST-34	Contractor shall provide a Final System Acceptance Test Plan (CDRL-TEST-009) including at a minimum:	
TEST-34.1	a. Demonstration that all Contract requirements have been met;	
TEST-34.2	b. Demonstration that all installation Work, documentation, and Training has been completed;	

REQ. ID	REQUIREMENT	NOTES
TEST-34.3	c. Demonstration that a fully-functional system has been in stable operation for a minimum six (6) months; and	
TEST-34.4	d. Demonstration that all material Software and Hardware defects have been resolved and Approved by MTC.	

A - 3.05 PILOT TEST

REQ. ID	REQUIREMENT	NOTES
PILOT-1	Contractor shall perform a Pilot Test after successful completion of C2 System Integration Test.	
PILOT-2	Contractor shall submit a Pilot Test Plan (CDRL-TEST-023) for approval.	
PILOT-3	The Pilot Test shall be performed with a predetermined population of production devices provided by the contract.	
PILOT-4	The Pilot Test will be performed in full revenue service at agreed upon locations for a period of six consecutive weeks.	
PILOT-5	The Pilot Test will achieve an agreed upon number of transactions.	
PILOT-6	The Pilot Test transactions will be performed by an agreed upon combination of volunteer Agency employees and customers.	
PILOT-7	Prior to commencement of the Pilot Test a Failure Review Board (FRB) shall be established consisting of two members appointed by MTC and one member appointed by Contractor.	
PILOT-7.1	a. The FRB shall be chaired by a member of MTC Contracts Office and shall be a non-voting member;	
PILOT-7.2	b. The FRB shall meet weekly following the first week of the Pilot Test;	
PILOT-7.3	c. THE FRB shall determine the disposition of failures and determine corrective actions to be taken;	
PILOT-7.4	d. Incidents that cannot be agreed on will be discussed and submitted to a vote of the FRB;	

REQ. ID	REQUIREMENT	NOTES
PILOT-7.5	e. Results of each meeting shall be documented and approved by MTC and Contractor; and	
PILOT-7.6	f. At the end of the Pilot Test the FRB shall make a recommendation to accept or reject the system or to extend the Pilot Test as necessary.	
PILOT-8	Contractor shall perform all maintenance.	
PILOT-9	The Pilot Test results and data collected shall be reviewed weekly with Contractor and MTC staff.	
PILOT-10	The Pilot Test shall demonstrate the full system delivered under the contract performs in an accurate and reliable manner and meets all requirements in a revenue service environment.	
PILOT-11	The first week of the pilot will be considered a settling in period documented to demonstrate the system operates in an accurate and reliable manner.	
PILOT-12	After successful completion of the settling in period the Pilot will commence for 5 consecutive weeks with an agreed upon combination of employee and customer participants.	
PILOT-13	The Pilot shall demonstrate the system meets all Accuracy and Reliability requirements in sections A-8 for five consecutive weeks.	
PILOT-14	Contractor shall document all incidents and develop a corrective action report for all incident failures.	
PILOT-15	Contractor shall develop a dashboard to document Accuracy and Reliability performance and update weekly and submit to the FRB.	
PILOT-16	If the Accuracy and Reliability requirements are not met, MTC has the right to suspend the Pilot Test.	
PILOT-17	Contractor will have thirty days to submit and implement a corrective action plan before the pilot is restarted.	
PILOT-18	If Contractor fails to pass the pilot the second time, the MTC has the right to cancel the contract.	

A - 3.06 C2 TEST FACILITY

REQ. ID	REQUIREMENT	NOTES
C2TF-1	Contractor shall provide a C2 Test Facility physically located within the service area of MTC.	
C2TF-2	Contractor provided C2 Test Facility shall be established prior to C2 Systems Integration Testing.	
C2TF-3	The C2 Test Facility environment shall duplicate all System functionality, communications, Interfaces and devices of the C2 production environment in a separate C2 test environment.	
C2TF-4	The C2 Test Facility shall duplicate C1 system functionality and interfaces as necessary to conduct testing of the transition approach from C1 to C2.	
C2TF-4.1	a. MTC will supply C1 equipment for the test lab; and	
C2TF-4.2	b. Contractor shall install and maintain C1 equipment in the test lab.	
C2TF-5	The C2 Test Facility shall maintain a sufficient inventory of Spare Parts to maintain the C2 test devices.	
C2TF-6	The C2 Test Facility Shall maintain a sufficient supply of C1 and C2 media to facilitate testing.	
C2TF-7	The C2 Contractor shall be responsible for staffing a minimum of two C2 technicians trained in all aspects of the C1 and C2 System.	
C2TF-8	The C2 Test Facility shall have a minimum of two of each production device, including legacy and Transit Operator owned, capable of being configured as any C2 Transit Operator device.	
C2TF-9	The C2 Test Facility shall support C1 and C2 media.	
C2TF-10	The C2 Test Facility shall utilize a separate test instance of the C2 Payment Gateway for testing and certification.	
C2TF-11	The C2 Test Facility shall have the capability to connect to the C2 Payment Gateway and C2 Merchant Acquirer for testing and certification.	
C2TF-12	The C2 Test Facility shall have all tools and test equipment required for maintaining the production C2 environment.	

REQ. ID	REQUIREMENT	NOTES
C2TF-13	The C2 Test Facility shall be equipped with all simulation Software and Hardware as utilized for testing and delivery of the C2 System.	
C2TF-14	The C2 Test Facility shall include a minimum of two workstations available for use by MTC and Transit Operators.	
C2TF-15	Contractor shall develop a C2 Test Facility Design Document (CDRL-DD-012) describing the design for the testing facility that duplicates all System functionality, communications, interfaces, and devices of the C2 production environment, including physical location and schedule for implementation, as well as inclusion of C1 equipment and functionality.	

A - 3.07 TRAINING REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
TRN-1	Contractor shall develop and submit a comprehensive Training Plan (CDRL-TRN-001) that includes, but is not limited to all personnel responsible for operation, configuration, service, support, and maintenance of any Hardware and Software included in this Contract.	
TRN-2	The Training Plan shall include creation and distribution of materials, knowledge, skills, and information necessary to correctly operate, maintain, and troubleshoot the system.	
TRN-3	The Training Plan shall document Training methodology, curriculum summary, Training needs analysis, development of all Training courses and any necessary modifications identified, instructor qualifications, and Training delivery methodology and materials.	
TRN-4	The Training Plan shall identify the details for each Training course to be conducted, including at a minimum:	
TRN-4.1	a. Types of participants to be included in each Training course;	
TRN-4.2	b. Summary of information included in each course;	
TRN-4.3	c. Anticipated length of course and class size; and	
TRN-4.4	d. Venue, such as classroom, online, or test lab; centralized or on-site at individual Transit Operator location.	

REQ. ID	REQUIREMENT	NOTES
TRN-5	The Training Plan shall include MTC and Transit Operator personnel Training.	
TRN-6	The Training Plan shall include Transit Operator first line-maintenance Training for field devices.	
TRN-7	The Training Plan shall include Institutional program Training.	
TRN-8	The Training Plan shall include retail merchant Training.	
TRN-9	The Training Plan shall include Training for the Customer Service Contractor.	
TRN-10	Contractor shall create and distribute Training Materials that include, but are not limited to: presentations, manuals, guides, printed and electronic material, classroom aids, Training rigs, tests, and online content.	
TRN-11	Contractor shall conduct Training sessions in accordance with the Approved Training Plan and Approved Training Materials (CDRL-TRN-002).	
TRN-12	All Training Materials shall be made available to the Authorized User in electronic format suitable to store and view offline.	
TRN-13	Contractor shall conduct testing to assure the effectiveness of the Training and to verify post-Training proficiency of participants.	
TRN-14	Contractor shall provide testing results to the MTC.	
TRN-15	Contractor shall conduct Training as necessary through all program deployment phases.	
TRN-16	Contractor shall archive all materials electronically and maintain all revisions and updates of all Training Materials.	
TRN-17	Contractor shall design all Training to bring the level of student knowledge to one fully adequate for the course objectives.	

A - 4: Transition of C1 to C2

Contractor shall be responsible for managing the transition from the current C1 system to the C2 System, including migration of all accounts, Customer service functions, and other services using a “single Validator” approach that shall read both existing C1 and future C2 Fare Media.

A - 4.01 TRANSITION REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
TRNS-1	Contractor shall prepare a comprehensive Transition Plan (CDRL-O&M-024 detailing the approach for transitioning all aspects of the current Clipper program to C2, including, but not limited to:	
TRNS-1.1	a. System and equipment;	
TRNS-1.2	b. System generated and archive data;	
TRNS-1.3	c. Customer account data;	
TRNS-1.4	d. Reporting;	
TRNS-1.5	e. Financial Management;	
TRNS-1.6	f. Customer Service;	
TRNS-1.7	g. Website;	
TRNS-1.8	h. Retail Network;	
TRNS-1.9	i. Agencies equipment and	
TRNS-1.10	j. Operations;	
TRNS-1.11	k. Individual Customers, cards, accounts;	
TRNS-1.12	l. Discount programs; and	
TRNS-1.13	m. Institutional Programs, cards, accounts.	
TRNS-2	The Transition Plan shall describe and facilitate the required coordination among Contractor, current Clipper Contractor, the C2 Customer Service Center operator, MTC, Transit Operators, and Clipper Users.	
TRNS-3	The Transition Plan shall describe the sequencing and phased approach of transitioning each aspect of the current Clipper program to C2.	
TRNS-4	The Transition Plan shall include cross-references to the Systems specified in the Context Diagram (figure ID CD-001) included in the appendices to facilitate traceability and	

REQ. ID	REQUIREMENT	NOTES
	ensure that all aspects of the transition from Clipper to C2 are addressed.	
TRNS-5	The Transition Plan shall ensure that sufficient C2 infrastructure and procedures are in place, to support C2 operations, prior to introducing C2 media and operations.	
TRNS-6	Contractor shall manage and implement transition from Clipper to C2 as outlined in the approved Transition Plan and requirements.	
TRNS-7	The Transition Plan shall anticipate and accommodate the mixed operation of Clipper Cards and C2 Fare Media, as well as parallel operation of some or all aspects of the current Clipper program during the transition period.	
TRNS-8	The Transition Plan shall anticipate and facilitate the implementation of identical fare policies in both Clipper and C2.	
TRNS-9	The Transition Plan shall allow for different fare policies to be implemented in Clipper and C2.	
TRNS-10	The Transition approach shall enable a Customer to retrieve both Clipper and C2 information from the Customer Website.	
TRNS-11	The Transition Plan shall ensure that existing Clipper Cards are valid for use in the C2 System.	
TRNS-12	The Transition Plan shall identify any opportunities to reuse existing Clipper devices or services.	
TRNS-13	The Transition Plan shall utilize a single Validator solution at all Customer-facing fare collection devices, with one Validator that is capable of recognizing, accepting and securely processing both current Clipper Cards and new C2 Fare Media during the transition period.	
TRNS-14	The Transition Plan shall ensure that existing Clipper Cards can be used on all Validators during the Transition Period.	
TRNS-15	The Transition Plan shall provide a logically staged implementation to validate the C2 System, prepare agencies and stakeholders, and manage Customer transition on a small scale, prior to full launch at all agencies.	
TRNS-16	The Transition Plan shall enable the existing Clipper retailers to offer C2 Fare Media and value Loading in addition to their	

REQ. ID	REQUIREMENT	NOTES
	current Clipper Fare Media and value Loading during the transition period.	
TRNS-17	The Transition Plan shall prioritize and plan for a smooth Customer transition, minimizing Customer action, simplifying Customer messaging, and minimizing negative impacts on Customer experience with Clipper and C2 fare payment throughout the Region.	
TRNS-18	The Transition Plan shall enable retrieval of data and the production of reports, by MTC and Transit Operators, that provide Clipper and C2 ridership and revenue information.	
TRNS-19	The Transition Plan shall include the development of customer messaging and communication approach to facilitate transition.	
TRNS-20	Transaction-level data shall be distinguishable between Clipper and C2.	
TRNS-21	The Transition approach shall fully transition all systems, processes, agencies and Customers from C1 to C2 in no more than 24 months .	To be discussed.
TRNS-22	The Transition approach shall detail the process and schedule for reusing and repurposing C1 equipment for C2 system, where possible.	
TRNS-23	The Transition approach shall detail the process and schedule for fully retiring and decommissioning the Clipper system, including removing and salvaging the C1 equipment, following the successful implementation of C2.	
TRNS-24	Contractor shall operate in accordance with the approved Transition Plan.	
TRNS-25	Contractor is responsible for all activities related to retiring and decommissioning the Clipper C1 system.	

A - 5: Operations and Maintenance of C2

Contractor shall be responsible for the operations and maintenance of the C2 System for the duration of the Contract. Operations and maintenance services to be provided include:

- General operations and maintenances services across the C2 System;
- Transaction processing, financial management and account management services;
- Administration of Customer service systems;
- Operation and management of Institutional and discount programs;
- Management of virtual media and physical Fare Media supplied by others;
- Management of the retail sales and distribution network;
- System monitoring and control;
- Communications network monitoring and management;
- Configuration Management;
- Management of third party certifications;
- System Maintenance;
- Security and safety management; and
- Compliance with PCI DSS requirements.

Contractor is also responsible for operations of the following:

- Asset management (as described in Section A-1.14);
- Compliance and system audit [as described in Section A-1.21 (7)];
- Risk management [as described in Section A-1.21 (8)] ;
- Organizational change and business process support [as described in Section A-1.21 (4)];
- Change Management [as described in Section A-1.21 (9)]; and
- Maintaining business continuity [as described in Section A-1.21 (10)].

The anticipated number of devices required as part of the C2 System are as follows:

Device	Total
Add-Value Machine	
Ticket Office Terminal	
Driver Console	
Validator (Card Interface Device) Patron Device	
CID 2a – Stand-alone Validator	
TransLink Data Servers (TDS)	
Auxiliary Display Unit	
Data Warehouse	
Handheld Card Reader and Cradles	
Faregate Validators	

Ticket Vending Machines	
Agent Control Terminal	
Onboard Zone Determination System	

The following is a list of current vehicles types:

Vehicle Type	total
Bus	3138
Heavy Rail	823
Locomotive	6
Light Rail	256
Ferry	18
Trolley	301
Cable Car	40
Historical Streetcars	50

Functional Architecture views in Appendix 4 related to operations and maintenance include:

- FA-012 Data Exchange
- FA-013 Certification Management
- FA-017 System Configuration
- FA-018 System Monitoring and Control
- FA-019 System Maintenance
- FA-020 Configuration Management
- FA-022 Asset Information Management
- FA-023 Business Continuity
- FA-025 Safety and Security Management
- FA-027 Compliance and Audit
- FA-028 Risk Management

See Attachment A, Appendix 3 for a complete listing of required CDRLs including a brief description and required update frequency.

A - 5.01 OPERATIONS REQUIREMENTS

REQ. ID	REQUIREMENT	NOTES
C2OR-1	Contractor shall develop and submit an Operations Plan (CDRL-O&M-001), describing all aspects of C2 operation.	
C2OR-2	The Operations Plan shall be an overarching document, including:	

REQ. ID	REQUIREMENT	NOTES
C2OR-2.1	a. Summary of and correlation among all other plans related to Operations and Maintenance Services;	
C2OR-2.2	b. Procedures and processes for operations and maintenance, or a cross-reference to information in plans for specific operations and maintenance services;	
C2OR-2.3	c. Roles, responsibilities, and coordination among all parties involved in Operations and Maintenance Services;	
C2OR-2.4	d. Staffing plan, showing positions, types and quantities of staff required to fulfill operations and maintenance requirements;	
C2OR-2.5	e. Systems and tools used for managing operations and maintenance services; and	
C2OR-2.6	f. Reporting for operations and maintenance.	
C2OR-3	Contractor shall provide services in conjunction with the operation of the System following deployment. These services shall be provided in compliance with the Contract, including all performance and service level requirements.	
C2OR-4	Contractor shall be responsible for operation of the C2 back-office.	
C2OR-5	Contractor shall be responsible for Transaction processing and account management.	
C2OR-6	Contractor shall be responsible for financial management, including funds processing; apportionment, Settlement, and reconciliation; Back Office processing and Settlement of Transit Operator claims and adjustments; accounting; and back-office processing and Settlement of Customer claims and refunds.	
C2OR-7	Contractor shall provide operational and technical support and system administration for the Customer service functions, systems, services and channels supplied by Contractor.	
C2OR-8	Contractor shall be responsible for operating and maintaining website-based Customer service applications.	
C2OR-9	Contractor shall be responsible for operating and managing all Institutional, Transit Benefit, and discount programs.	

REQ. ID	REQUIREMENT	NOTES
C2OR-10	Contractor shall be responsible for collection of revenue from retail network operations, Institutional Programs, and Transit Benefit programs.	
C2OR-11	Contractor shall be responsible for the management, distribution, and order fulfillment for all virtual and physical Fare Media orders, either directly or through fulfillment by the physical Fare Media supplier.	
C2OR-12	Contractor shall be responsible for managing and monitoring restock requirements at Fare Media distribution points.	
C2OR-13	Contractor shall be responsible for operating and managing the retail sales and distribution network.	
C2OR-14	Contractor shall be responsible for providing remote system monitoring of operational status of all C2 System Hardware and Software elements.	
C2OR-15	Contractor shall be responsible for monitoring and managing the communications network.	
C2OR-16	Contractor shall be responsible for operating and managing all configuration aspects of the system.	
C2OR-17	Contractor shall be responsible for managing all third party certifications.	
C2OR-18	Contractor shall be responsible for maintenance of the System, including all system devices, Hardware, and Software, including central/back-office system maintenance; preventive and corrective Software maintenance; and Interface management.	
C2OR-19	Contractor shall be responsible for providing second line preventive and corrective maintenance on all devices and components installed as part of the system.	
C2OR-20	Contractor shall be responsible for managing and monitoring all maintenance activities regardless of the entity providing the maintenance.	
C2OR-21	For maintenance activities outside of Contractor's direct control, Contractor will identify deficiencies and issues to be corrected by others and monitor resolution.	
C2OR-22	Contractor shall be responsible for providing a detailed Spare Parts list, and for supplying Spare Parts and the proper provisioning of such Spare Parts as required for Contractor to	

REQ. ID	REQUIREMENT	NOTES
	meet performance requirements for preventative and corrective maintenance.	
C2OR-23	Contractor shall be responsible for providing inventory management services for all Spare Parts, materials, and consumables that are required for the continued operation of the system and its devices, for the services it provides.	
C2OR-24	Contractor shall be responsible for managing Asset Information.	
C2OR-25	Contractor shall be responsible for providing scheduled Asset refreshes to replace system Hardware and Software in a manner that is consistent with best industry practices for the update of such equipment and as documented in the Asset Refreshes Plan (CDRL-O&M-013a).	
C2OR-26	Contractor shall be responsible for providing System Manuals (CDRL-SM-001), including at a minimum:	
C2OR-26.1	a. Operations manuals;	
C2OR-26.2	b. Repair and maintenance manuals;	
C2OR-26.3	c. Software manuals;	
C2OR-26.4	d. Maintenance procedures; and	
C2OR-26.5	e. Operations Procedures.	
C2OR-27	Contractor is responsible for security and safety management for all aspects of the system.	
C2OR-28	Contractor is responsible for supporting system audits and managing project risks.	
C2OR-29	Contractor shall be responsible for implementing and supporting Organizational Change Management.	
C2OR-30	Contractor shall be responsible for managing system changes.	
C2OR-31	Contractor shall be responsible for ensuring business continuity throughout the operation of C2.	

A - 5.01 (1) PCI DSS and PA DSS Compliance

REQ. ID	REQUIREMENT	NOTES
C2OR-32	Contractor, as a part of the services provided, shall comply with the Payment Card Industry Data Security Standards (PCI	

REQ. ID	REQUIREMENT	NOTES
	DSS) and any amendments or restatements of the PCI DSS during the Term of this Agreement.	
C2OR-33	Contractor will achieve and maintain PCI DSS compliance against the current version of PCI DSS published on the PCI Security Standards Council (PCI SSC) website for all the systems, processes, network segments, wireless access points, security controls, and dataflow used to receive, transmit, store and secure Customer's cardholder data.	
C2OR-34	Contractor accepts responsibility for the security of customer credit card data in its possession.	
C2OR-35	Contractor warrants that all software and hardware supplied meets Payment Application Data Security Standard (PA DSS) requirements, and will be able to deploy and maintain the Software per PCI DSS requirements during the term of this contract.	
C2OR-36	If security vulnerabilities are identified in the hardware or software, Contractor will promptly notify MTC.	
C2OR-36.1	a. Contractor notification to MTC shall include instructions to mitigate risk of that vulnerability being exploited.	
C2OR-37	Contractor shall supply documentation at Preliminary, Critical, and Final Design Review that all aspects of the C2 System comply with the PCI DSS.	
C2OR-38	Contractor shall provide a patch release or security update within thirty (30) days of a security vulnerability being discovered.	
C2OR-38.1	a. Contractor shall provide support as necessary to properly deploy the patch or security update.	
C2OR-39	Contractor shall periodically demonstrate compliance with PCI DSS.	
C2OR-39.1	a. The compliance process requires Contractor to undergo an assessment that includes all the system components used to process, store or transmit cardholder data, and any other component that resides on the same network segment as those system components.	
C2OR-40	Contractor shall create and maintain reasonable, detailed, complete, and accurate documentation describing the	

REQ. ID	REQUIREMENT	NOTES
	systems, processes, network segments, security controls, and dataflow used to receive, transmit, store and secure Customer's cardholder data.	
C2OR-41	Contractor shall maintain an up-to-date list of all devices including physical location, serial numbers, make/model in scope of PCI DSS.	
C2OR-42	Contractor shall, upon written request by MTC, make such documentation and the individuals responsible for implementing, maintaining and monitoring those system components and processes available.	
C2OR-43	Contractor shall maintain a list of all PCI requirements their service currently meets and is required to meet.	
C2OR-44	Contractor shall maintain logs to track and monitor all access to network resources and cardholder data.	
C2OR-45	Contractor shall examine the logs on a regular basis either manually or utilizing automated applications.	
C2OR-46	Contractor will provide when requested, a current attestation of compliance signed by a PCI Qualified Security Assessor.	

A - 5.01 (2) Transaction Processing

REQ. ID	REQUIREMENT	NOTES
C2OR-47	Contractor shall provide a Transaction Processing Management and Operations Plan (CDRL-O&M-022) that describes:	
C2OR-47.1	a. Transaction processing, management, and storage in the system;	
C2OR-47.2	b. Adjustment/Exception identification, monitoring and resolution;	
C2OR-47.3	c. Roles and responsibilities for operation; and	
C2OR-47.4	d. Access management.	
C2OR-48	Contractor shall operate the System in accordance with the latest Approved Transactions Processing Management and Operations Plan.	

A - 5.01 (3) Financial Management

REQ. ID	REQUIREMENT	NOTES
C2OR-49	Contractor shall provide a Financial Management and Operations Plan (CDRL-O&M-011) documenting its financial management systems, processes, procedures and compliance with regulatory requirements.	
C2OR-50	The Financial Management and Operations Plan shall be developed in coordination with MTC and the Transit Operators, and shall include:	
C2OR-50.1	a. Capital and operating cost management;	
C2OR-50.2	b. MTC and Transit Operator revenue management Business Rules;	
C2OR-50.3	c. Funds processing and management;	
C2OR-50.4	d. Revenue collection, allocation and Settlement processes;	
C2OR-50.5	e. Chargeback and bad debt processing and management;	
C2OR-50.6	f. Fraud management;	
C2OR-50.7	g. Reconciliation procedures;	
C2OR-50.8	h. Reporting;	
C2OR-50.9	i. Accounting procedures;	
C2OR-50.10	j. Addressing and resolving chargebacks;	
C2OR-50.11	k. Audit;	
C2OR-50.12	l. Roles and responsibilities for operation;	
C2OR-50.13	m. Access management; and	

REQ. ID	REQUIREMENT	NOTES
C2OR-50.14	n. Controls.	
C2OR-51	The Financial Management and Operations Plan shall comply with all applicable Generally Accepted Accounting Principles (GAAP), Statement on Standards for Attestation Engagements (SSAE) 16, ISAE 3402 and all current federal, state and local regulatory requirements.	
C2OR-52	Contractor shall operate the System in accordance with the latest Approved Financial Management and Operations Plan.	
C2OR-53	Contractor shall operate the Accounting system in accordance with the Financial Management and Operations Plan.	

A - 5.01 (4) Account Management

REQ NO.	REQUIREMENT	NOTES
C2OR-54	Contractor shall provide an Account Management and Operations Plan (CDRL-O&M-002).	
C2OR-55	The Account Management and Operations Plan shall describe at a minimum:	
C2OR-55.1	a. Account management functionality and parameters, both for Registered and anonymous accounts;	
C2OR-55.2	b. Customer access and management capabilities;	
C2OR-55.3	c. Contractor and Transit Operator account access and management capabilities;	
C2OR-55.4	d. Issue reporting and resolution mechanisms;	
C2OR-55.5	e. Security and privacy protection measures;	
C2OR-55.6	f. Roles and responsibilities for operation; and	
C2OR-55.7	g. Access management.	

A - 5.01 (5) Customer Service

REQ. ID	REQUIREMENT	NOTES
C2OR-56	Contractor shall provide a Customer Services Management Plan (CDRL-O&M-007) for all Customer service functions, systems, services and Customer service channels for which it is responsible for delivering and administering.	
C2OR-57	The Customer Services Management Plan shall detail all aspects of the Customer service functionality including but not limited to:	
C2OR-57.1	a. Customer service systems and functionality to be provided by Contractor;	
C2OR-57.2	b. Additional systems and equipment necessary for Customer service, to be provided by others;	
C2OR-57.3	c. Customer service operational, technical and system administration processes to be used by Contractor;	
C2OR-57.4	d. Customer service operational procedures to be used by others;	
C2OR-57.5	e. Roles, responsibilities, hand-offs, and escalation procedures for all personnel operating Customer service functionality, including Contractor, Customer Service Contractor, Transit Operators, Walk-in Center Personnel, and others;	
C2OR-57.6	f. Location of project support team;	
C2OR-57.7	g. Policies, processes, refund procedures, fare information, and reference documents for C1 and C2 program and participating Transit Operators;	
C2OR-57.8	h. Issue identification, communications and resolution;	
C2OR-57.9	i. Escalation procedures for technical issues identified through Customer service channels, to be addressed by Contractor;	
C2OR-57.10	j. Documentation and Training to be provided to all personnel operating Customer Service Functionality; and	
C2OR-57.11	k. Access management.	

REQ. ID	REQUIREMENT	NOTES
C2OR-58	Contractor shall operate in accordance with the latest Approved Customer Services Management Plan.	

A - 5.01 (6) Transit Benefits Program

REQ. ID	REQUIREMENT	NOTES
C2OR-59	Contractor shall manage the Transit Benefit Program.	
C2OR-60	Contractor shall provide a Transit Benefit Program Management and Operations Plan (CDRL-O&M-026) describing at a minimum:	
C2OR-60.1	a. Process for approving Transit Benefit program applications;	
C2OR-60.2	b. Roles and responsibilities for account access and management;	
C2OR-60.3	c. User management;	
C2OR-60.4	d. Configuration management;	
C2OR-60.5	e. Revenue management;	
C2OR-60.6	f. Financial management;	
C2OR-60.7	g. Education and Training;	
C2OR-60.8	h. Support procedures, including prioritization and resolution of issues; and	
C2OR-60.9	i. Reporting;	
C2OR-61	Contractor shall operate in accordance with the latest Approved Transit Benefit Program Management and Operations Plan.	
C2OR-62	Contractor shall enable Transit Benefit Participants, MTC or Transit Operator representatives to submit technical support requests.	
C2OR-63	When Contractor receives a technical support request, Contractor shall take actions to resolve the request to the satisfaction of the requester.	
C2OR-64	Contractor shall enable Transit Benefit technical support requests to be submitted by at a minimum:	

REQ. ID	REQUIREMENT	NOTES
C2OR-64.1	a. Telephone;	
C2OR-64.2	b. Email; and	
C2OR-64.3	c. Through the Institutional web portal.	
C2OR-65	Contractor shall capture and manage Transit Benefit technical support requests.	
C2OR-66	Contractor shall enable Transit Benefit technical support requests to be categorized and prioritized.	
C2OR-67	Contractor shall enable reporting on Transit Benefit technical support request status and resolution.	

A - 5.01 (7) Institutional Programs

REQ. ID	REQUIREMENT	NOTES
C2OR-68	Contractor shall take over all existing Clipper Institutional accounts, currently managed by the Contracting Agency unless otherwise directed by MTC.	
C2OR-68.1	a. Contractor shall Work with Transit Operators to identify Contractor support requirements for Institutional accounts managed by individual Transit Operators.	
C2OR-69	Contractor shall establish Contracts with self-managed Institutions.	
C2OR-70	Contractor shall manage Contracts with self-managed Institutions.	
C2OR-71	When instructed by an Authorized User, Contractor shall cancel Contracts with a self-managed Institution.	
C2OR-72	Contractor shall provide an Institutional Program Management and Operations Plan (CDRL-O&M-012), describing at a minimum:	
C2OR-72.1	a. Approach for assuming management of existing Clipper accounts;	
C2OR-72.2	b. Process for approving and establishing Institutional accounts;	

REQ. ID	REQUIREMENT	NOTES
C2OR-72.3	c. Roles and responsibilities for account access and management;	
C2OR-72.4	d. User management;	
C2OR-72.5	e. Revenue management;	
C2OR-72.6	f. Financial management;	
72.7	g. Education and Training;	
C2OR-72.8	h. Support procedures, including prioritization and resolution of issues; and	
C2OR-72.9	i. Reporting.	
C2OR-73	Contractor shall operate in accordance with the latest Approved Institutional Program Management and Operations Plan.	
C2OR-74	Contractor shall enable Institutions, MTC or Transit Operator representatives to submit technical support requests.	
C2OR-75	When Contractor receives an Institution technical support request, Contractor shall take actions to resolve the request to the satisfaction of the requester.	
C2OR-76	Contractor shall enable Institution technical support requests to be submitted by at a minimum:	
C2OR-76.1	a. Telephone;	
C2OR-76.2	b. Email; and	
C2OR-76.3	c. Through the Institutional web portal.	
C2OR-77	Contractor shall capture and manage Institutional technical support requests.	
C2OR-78	Contractor shall enable Institutional technical support requests to be categorized and prioritized.	

REQ. ID	REQUIREMENT	NOTES
C2OR-79	Contractor shall enable reporting on Institutional technical support request status and resolution.	

A - 5.01 (8) Discount Management Programs

REQ. ID	REQUIREMENT	NOTES
C2OR-80	Contractor shall provide a Discount Program Management and Operations Plan (CDRL-O&M-008) documenting at a minimum:	
C2OR-80.1	a. Business Rules for discount programs;	
C2OR-80.2	b. Roles and responsibilities for discount programs;	
C2OR-80.3	c. Processes and timeframes for discount application submittals, Approvals and fulfillment;	
C2OR-80.4	d. Access management; and	
C2OR-80.5	e. All other aspects of managing discount programs.	
C2OR-81	Contractor shall manage all discount programs, unless otherwise instructed by MTC.	
C2OR-81.1	a. Contractor shall Work with MTC and Transit Operators to identify Contractor support requirements for Institutional accounts managed by individual Transit Operators or another party.	
C2OR-82	Contractor shall make a downloadable PDF version of the discount application form publically available on the discount management web portal or Customer Website.	
C2OR-83	When Contractor receives a discount application, Contractor shall verify the eligibility of the applicant for the discount unless the responsibility for verifying the eligibility of that applicant lies with another party.	
C2OR-84	Contractor shall check against the primary eligibility criterion for any applications it processes.	
C2OR-85	Contractor shall generate a Fare Media order if required to complete the discount application process.	

REQ. ID	REQUIREMENT	NOTES
C2OR-86	Contractor shall include any personalization instructions and information in the Fare Media order.	
C2OR-87	Contractor shall accept discount applications through the following channels at a minimum:	
C2OR-87.1	a. Email with attachments;	
C2OR-87.2	b. Facsimile;	
C2OR-87.3	c. Mail;	
C2OR-87.4	d. Courier; and	
C2OR-87.5	e. Website – by directly entering information and uploading supporting documents; and	
C2OR-87.6	f. Mobile App – by directly entering information and uploading supporting documents.	
C2OR-88	When the configuration of the Discount Program changes, Contractor shall update the discount management web portal and associated business processes to support the new configuration.	
C2OR-89	Contractor shall operate in accordance with the latest Approved Discount Program Management and Operations Plan.	
C2OR-90	Contractor shall properly dispose of paper-based discount applications to protect Customer information.	

A - 5.01 (9) Physical and Virtual Media Management

REQ. ID	REQUIREMENT	NOTES
C2OR-91	Contractor shall provide a Fare Media Management Plan (CDRL-O&M-009) describing the processes, systems, and personnel involved in Fare Media management for both physical and virtual media.	
C2OR-92	Contractor shall operate in accordance with the latest Approved Fare Media Management Plan.	

REQ. ID	REQUIREMENT	NOTES
C2OR-93	As part of the Fare Media Management Plan, Contractor shall describe the physical Fare Media management plan including:	
C2OR-93.1	a. Media testing and quality assurance;	
C2OR-93.2	b. Inventory thresholds and reordering;	
C2OR-93.3	c. Physical storage and security; and	
C2OR-93.4	d. Order fulfillment procedures.	
C2OR-94	As part of the Fare Media Management Plan, Contractor shall describe the virtual Fare Media management plan including:	
C2OR-94.1	a. Media testing and quality assurance;	
C2OR-94.2	b. Security and controls; and	
C2OR-94.3	c. Order fulfillment procedures.	
C2OR-95	Contractor shall be responsible for providing Fare Media supply and testing requirements to all physical Fare Media suppliers, including limited use tickets.	
C2OR-96	Contractor shall be responsible for testing and certifying Fare Media.	
C2OR-97	Contractor shall be responsible for identifying and coordinating any changes to the Fare Media to achieve certification directly with the physical Fare Media supplier.	

A - 5.01 (10) Retail Sales and Distribution Network

REQ. ID	REQUIREMENT	NOTES
C2OR-98	Contractor shall establish Contracts with retailers.	
C2OR-99	Contractor shall manage Contracts with retailers.	
C2OR-100	When instructed by MTC, Contractor shall cancel Contracts with a retailer.	
C2OR-101	Contractor shall collect and remit to designated C2 accounts revenue from retailers on a recurring basis.	

REQ. ID	REQUIREMENT	NOTES
C2OR-102	Contractor shall be responsible for all financial management with retailers.	
C2OR-103	Contractor shall be responsible for all information exchange with and distribution to retailers.	
C2OR-104	Contractor shall be responsible for all dispute resolution with retailers.	
C2OR-105	Contractor shall take over all existing Clipper retailer Contracts unless otherwise directed by MTC.	
C2OR-106	Contractor shall provide a Retail Program Management and Operations Plan (CDRL-O&M-014).	
C2OR-107	The Retail Program Management and Operations Plan shall describe the approach to, at a minimum:	
C2OR-107.1	a. Assuming management of existing Clipper retail Contracts;	
C2OR-107.2	b. Managing retail Contracts;	
C2OR-107.3	c. Identifying new retail locations;	
C2OR-107.4	d. Ensuring sufficient retail location availability throughout the Region for specific Customer groups or geographic areas identified by the C2 Program;	
C2OR-107.5	e. Implementing and Training new retailer locations;	
C2OR-107.6	f. Distributing C2 Fare Media and C2 marketing materials including signage indicating participation and information on fares and products updated as needed to retail locations;	
C2OR-107.7	g. Notifying retailers of program changes;	
C2OR-107.8	h. Promoting retail locations;	
C2OR-107.9	i. Reporting on retail program;	

REQ. ID	REQUIREMENT	NOTES
C2OR-107.10	j. Calculating revenue from and compensation or commissions due to retailers;	
C2OR-107.11	k. Collecting revenue from retailers every (XX time period);	
C2OR-107.12	l. Monitoring operation of the retail network;	
C2OR-107.13	m. Providing technical support to retailers;	
C2OR-107.14	n. Configuring and managing access to the retail application and reporting; and	
C2OR-107.15	o. Establishing Customer-facing functionality to be offered at different retail locations.	
C2OR-108	Contractor shall establish and operate the retail program in accordance with the latest Approved Retail Program Management and Operations Plan.	
C2OR-109	Contractor shall enable retailers to submit technical support requests to a retailer helpdesk through the following means at a minimum:	
C2OR-109.1	a. Telephone; and	
C2OR-109.2	b. Email.	
C2OR-110	When Contractor receives a retailer technical support request, Contractor shall take actions to resolve the request to the satisfaction of the retailer.	
C2OR-111	Contractor shall resolve Retailer technical support requests in the required timeframe based on priority of the request.	

A - 5.01 (11) System Monitoring and Control

REQ. ID	REQUIREMENT	NOTES
C2OR-112	Contractor shall develop a System Monitoring and Control Management Plan (CDRL-O&M-021).	
C2OR-113	The System Monitoring and Control Management Plan shall describe at a minimum the approach to:	

REQ. ID	REQUIREMENT	NOTES
C2OR-113.1	a. Performance monitoring and reporting;	
C2OR-113.2	b. Fault monitoring and reporting;	
C2OR-113.3	c. Remote monitoring and control;	
C2OR-113.4	d. Email and text message alerts;	
C2OR-113.5	e. Diagnostic utilities;	
C2OR-113.6	f. Control and log access to devices;	
C2OR-113.7	g. Card and reader key distribution, rotation and management;	
C2OR-113.8	h. Cryptographic algorithm distribution and management; and	
C2OR-113.9	i. Management and monitoring of all systems Interfaces.	
C2OR-114	The Back Office shall enable Authorized Users to remotely manage and control field devices.	
C2OR-115	Contractor shall manage and monitor remotely configured field devices including at a minimum:	
C2OR-115.1	a. List distribution and management;	
C2OR-115.2	b. Business Rule distribution management;	
C2OR-115.3	c. Card and reader key distribution, rotation and management; and	
C2OR-115.4	d. Cryptographic algorithm distribution and management.	
C2OR-116	Contractor shall manage and monitor configurable systems parameters including at a minimum:	
C2OR-116.1	a. Administrator and User permissions;	

REQ. ID	REQUIREMENT	NOTES
C2OR-116.2	b. Data storage settings; and	
C2OR-116.3	c. APIs/ Interfaces.	
C2OR-117	Contractor shall manage and monitor system and device alerts at a minimum:	
C2OR-117.1	a. Back Office system monitoring and alerts;	
C2OR-117.2	b. Device monitoring and alerts;	
C2OR-117.3	c. Network monitoring and alerts; and	
C2OR-117.4	d. Widespread or systematic alerts.	
C2OR-118	Contractor shall manage and monitor access to C2 Systems and devices at a minimum:	
C2OR-118.1	a. Device access;	
C2OR-118.2	b. System access; and	
C2OR-118.3	c. Driver logon.	

A - 5.01 (12) Configuration Management

REQ. ID	REQUIREMENT	NOTES
C2OR-119	Contractor shall develop a System Configuration Management Plan (CDRL-O&M-015b).	
C2OR-120	The System Configuration Management Plan shall include, at a minimum:	
C2OR-120.1	a. Planning of C2's configuration changes;	
C2OR-120.2	b. Recording C2's configuration changes;	

REQ. ID	REQUIREMENT	NOTES
C2OR-120.3	c. Testing the configuration changes;	
C2OR-120.4	d. Implementing the configuration changes; and	
C2OR-120.5	e. Reverting to previous configuration.	
C2OR-121	Contractor shall operate in accordance with the latest Approved System Configuration Management Plan.	
C2OR-122	Contractor shall document an initial Baseline System Configuration.	
C2OR-123	Contractor shall implement Approved configuration changes.	
C2OR-124	Contractor shall accommodate, document and manage C2 configuration changes performed by Transit Operators.	
C2OR-125	When the configuration of the system changes, Contractor shall document a new Baseline System Configuration.	
C2OR-126	When requested by an Authorized User, Contractor shall provide a report of the Baseline System Configuration.	
C2OR-127	Configurable parameters shall include at a minimum:	
C2OR-127.1	a. System Users and roles;	
C2OR-127.2	b. System Users and roles;	
C2OR-127.3	c. User access permissions;	
C2OR-127.4	d. Fare Product name, operational characteristics, sale locations, acceptance rules and prices;	
C2OR-127.5	e. Fare-related Business Rules;	
C2OR-127.6	f. C2 System operational parameters;	
C2OR-127.7	g. Transit Operator operational parameters;	
C2OR-127.8	h. Revenue and cost allocation rules;	

REQ. ID	REQUIREMENT	NOTES
C2OR-127.9	i. Loggable Events;	
C2OR-127.10	j. Alertable events;	
C2OR-127.11	k. Data storage parameters;	
C2OR-127.12	l. Network parameters;	
C2OR-127.13	m. Interface parameters; and	
C2OR-127.14	n. User Interface parameters.	
C2OR-128	When a configurable parameter is changed, Contractor shall perform applicable tests in accordance with Test Plans (CDRL-TEST-001) before that change is pushed to the production environment.	
C2OR-129	When requested by an Authorized User, Contractor shall revert the system's configuration to a previous configuration.	

A - 5.01 (13) Certification Management

REQ. ID	REQUIREMENT	NOTES
C2OR-130	Contractor shall be responsible for testing and certifying all Fare Media, devices, systems, Subsystems, components, applications, networks, and Interfaces that are provided, connect to, or interact with the System.	
C2OR-131	Contractor shall be responsible to obtain certifications from external organizations as required for legal and regulatory compliance.	
C2OR-132	Contractor shall develop a Certification Management Plan (CDRL-O&M-005) documenting all certification activities and requirements.	
C2OR-133	The Certification Management Plan shall include at a minimum:	

REQ. ID	REQUIREMENT	NOTES
C2OR-133.1	a. Processes and procedures to certify and maintain certification of Fare Media, devices, systems, Subsystems, applications, networks and Interfaces supplied initially under the Contract;	
C2OR-133.2	b. Processes and procedures to certify and maintain certification of Fare Media, devices, systems, Subsystems, applications, networks and Interfaces as may be supplied in future by Contractor;	
C2OR-133.3	c. Processes and procedures to certify and maintain certification of Fare Media, devices, systems, Subsystems, applications, networks and Interfaces as may be supplied in future by third parties at the direction of MTC;	
C2OR-133.4	d. A listing of all Fare Media, devices, systems, Subsystems, applications, networks and Interfaces requiring certification;	
C2OR-133.5	e. A register of certification requirements;	
C2OR-133.6	f. Certification requirements for C2 Software;	
C2OR-133.7	g. Certification requirements for Interfaces and interfacing systems or applications;	
C2OR-133.8	h. Certification requirements for C2 Hardware; and	
C2OR-133.9	i. Certification requirements for Fare Media.	
C2OR-134	Contractor shall provide certification requirements to suppliers seeking certification without undue restriction.	
C2OR-135	Contractor shall accept certification requests from suppliers seeking certification.	
C2OR-136	Contractor shall accept certification requests from third-parties submitting on behalf of suppliers seeking certification.	
C2OR-137	When a certification request is received, Contractor shall review the submitted item(s) against the certification requirements in order to assess whether it will be certified.	

REQ. ID	REQUIREMENT	NOTES
C2OR-139	Contractor shall notify the submitter on the outcome of the certification review, including the specifics of the elements that failed and the results recorded.	
C2OR-139	Contractor shall be responsible for any testing required to provide certification.	
C2OR-140	Contractor shall maintain a Certification Register of certified suppliers, Fare Media, devices, systems, Subsystems, applications, networks and interfaces.	
C2OR-141	When requested by an Authorized User, Contractor shall provide the Certification Register.	
C2OR-142	Contractor shall monitor the ongoing adherence of items on the Certification Register to the certification requirements.	
C2OR-143	If a certified item fails to remain compliant to certification requirements, Contractor shall remove the item from the certified register and notify the item's supplier.	
C2OR-144	If a Certified item fails to remain compliant to certification requirements directly as a result of a Software or firmware update, it shall be possible to restore operating configuration back to the last known good / certified configuration.	

A - 5.02 MAINTENANCE MANAGEMENT REQUIREMENTS

A - 5.02 (1) Maintenance Management Plan

REQ. ID	REQUIREMENT	NOTES
MMR-1	Contractor shall develop a Maintenance Management Plan (CDRL-O&M-013).	
MMR-2	The Maintenance Management Plan shall include at a minimum:	
MMR-2.1	a. Field device maintenance procedures;	
MMR-2.2	b. Remote maintenance procedures;	
MMR-2.3	c. Network maintenance procedures;	
MMR-2.4	d. Software maintenance procedures;	
MMR-2.5	e. Interface maintenance procedures;	

REQ. ID	REQUIREMENT	NOTES
MMR-2.6	f. Maintenance help desk and support procedures;	
MMR-2.7	g. Maintenance web portal procedures; and	
MMR-2.8	h. Preventative maintenance procedures.	
MMR-3	Contractor shall operate in accordance with the latest Approved Maintenance Management Plan.	
MMR-4	Contractor shall develop Field Device Maintenance Procedures (CDRL-O&M-013c).	
MMR-5	Contractor shall provide the most current Field Device Maintenance Procedures to Authorized Users.	
MMR-6	Transit Operators will be responsible for providing first line maintenance in accordance with the Field Device Maintenance Procedures unless they elect to contract with the systems integrator to perform this role.	
MMR-7	Contractor shall provide first line maintenance in accordance with Field Device Maintenance Procedures, for Transit Operators that require this level of support on a per-location or agency-wide basis.	
MMR-8	Contractor shall be responsible for providing all other levels of device maintenance through its Depot Maintenance Program.	
MMR-9	Contractor shall be responsible for providing all server, workstation and application maintenance.	
MMR-10	Contractor shall perform maintenance upon receipt of a maintenance Work Ticket.	
MMR-11	Contractor shall first attempt to perform remote maintenance service before providing on-site maintenance service.	
MMR-12	When the Transit Operator performs the First-line Maintenance, Contractor shall provide the Transit Operator with adequate spares from a Regional spares pool for critical components.	
MMR-13	Contractor shall conduct second line maintenance with little to no disruption to Transit Operator operations.	
MMR-14	Contractor shall maintain all networks it delivers under the Contract.	

REQ. ID	REQUIREMENT	NOTES
MMR-15	All Hardware shall be maintained on platforms supported by the original equipment manufacturer.	
MMR-16	All Software versions shall be current.	
MMR-17	All firmware versions shall be current.	
MMR-18	Contractor shall provide and maintain a C2 Asset Register (CDRL-O&M-013a-2) of all C2 devices, whether in use or in inventory.	

A - 5.02 (2) Maintenance Help Desk

REQ. ID	REQUIREMENT	NOTES
MMR-19	Contractor shall provide a Maintenance Help Desk Plan (CDRL-O&M-013e).	
MMR-20	The Maintenance Help Desk Plan shall include at a minimum:	
MMR-20.1	a. Maintenance help desk and support procedures;	
MMR-20.2	b. Maintenance web portal procedures;	
MMR-20.3	c. Preventative maintenance procedures;	
MMR-20.4	d. CMMS procedures including reporting and alerts; and	
MMR-20.5	e. Prioritization procedures.	
MMR-21	Contractor shall provide a maintenance help desk that provides maintenance support to Authorized Users; and	
MMR-22	Contractor shall operate in accordance with the latest Approved Maintenance Help Desk Plan.	
MMR-23	The maintenance help desk shall enable an Authorized User to, at a minimum:	
MMR-23.1	a. Create a maintenance Work Ticket;	

MMR-23.2	b. Update a maintenance Work Ticket;	
MMR-23.3	c. Close a maintenance Work Ticket;	
MMR-23.4	d. Receive a status update on a maintenance Work Ticket;	
MMR-23.5	e. Receive email alerts for updates on selected or all maintenance Work Tickets;	
MMR-23.6	f. Receive text message alerts for updates on selected or all maintenance Work Tickets;	
MMR-23.7	g. Assign a maintenance Work Ticket to the responsible party; and	
MMR-23.8	h. Assign prioritization levels to a maintenance Work Ticket.	
MMR-24	The maintenance helpdesk shall enable an Authorized User to receive technical support for maintenance they are performing themselves.	
MMR-25	The maintenance helpdesk shall enable an Authorized User to be alerted of outstanding or overdue maintenance actions.	

A - 5.02 (3) Field Device Depot Maintenance

REQ. ID	REQUIREMENT	NOTES
MMR-26	Contractor shall provide a Maintenance Depot Management Plan (CDRL-O&M-013d) for all devices supplied by Contractor.	
MMR-27	The Maintenance Depot Management Plan shall include at a minimum:	
MMR-27.1	a. A listing and inventory of all devices maintained by Contractor;	
MMR-27.2	b. Central spares bank and reporting procedures;	
MMR-27.3	c. Faulty device returns and report procedures;	
MMR-27.4	d. Field device replacement and reporting procedures; and	

REQ. ID	REQUIREMENT	NOTES
MMR-27.5	e. Repair or replace and reporting procedures.	
MMR-28	Contractor shall operate a maintenance depot in accordance with the latest Approved Maintenance Depot Management Plan.	
MMR-29	The maintenance depot shall maintain a central spares bank for all field devices.	
MMR-30	The maintenance depot shall hold sufficient spares for each field device to meet Contractors anticipated maintenance cycle and response times.	
MMR-31	Contractor shall enable an Authorized User to return faulty field device to the maintenance depot.	
MMR-32	When an Authorized User returns a faulty field device to the maintenance depot, Contractor shall provide the Authorized User with a working replacement field device from the central spares bank.	
MMR-33	The Back Office shall log the receipt of the faulty device.	
MMR-34	The Back Office shall log the dispatch of the working device.	
MMR-35	When an Authorized User returns a faulty field device to the maintenance depot, Contractor shall repair or replace the faulty device for recirculation into the central spares bank.	
MMR-35.1	a. Contractor shall repair any visible damage to the device, in addition to the root problem for which the device was taken out of service, before returning the device to the central spares bank; and	
MMR-35.2	b. Contractor shall prepare the repaired/replaced device with current Software, standard configuration, and C2 decals before returning the device to the central spares bank.	
MMR-36	The Back Office shall log the receipt of the repaired or replaced device.	

A - 5.02 (4) Security and Safety Management

REQ. ID	REQUIREMENT	NOTES
MMR-37	Contractor shall implement and manage the Safety Management Plan (CDRL-O&M-018).	
MMR-38	Contractor shall operate in accordance with the latest Approved Safety Management Plan.	
MMR-39	Contractor shall develop a Security Management Plan (CDRL-O&M-019) detailing how adequate security for systems, business processes, documents, data and physical areas, and key management will be achieved and maintained throughout the operational lifecycle of C2.	
MMR-40	The Security Management Plan shall be in compliance with all applicable regulations.	
MMR-41	Contractor shall implement and manage the Security Management Plan.	
MMR-42	Contractor shall operate in accordance with the latest Approved Security Management Plan.	
MMR-43	Contractor shall define in the Security Management Plan the Authorized Users of C2, along with the access Authorized Users will have to specific aspects of C2.	
MMR-44	Contractor shall define in the Security Management plan the roles and responsibilities for administering and maintaining system security, including any roles and responsibilities for the MTC and Transit Operator staff.	
MMR-45	Contractor shall ensure that the data and integrity of computing Assets, including Back Office and Data Store are protected from all security threats, viruses, malware, and other unauthorized methods to access or impact the functioning of the system, integrity, or privacy of data.	
MMR-46	Contractor shall ensure the development and implementation of regular and timely updates to any identified security threats to the system.	
MMR-47	Contractor shall maintain logs of all attempted access, including attacks, on any computing Asset or data, including Back Office and Data Store and the resulting threat prevention and mitigation measures taken.	
MMR-48	Contractor shall restrict access to all aspects of C2 for which it has responsibility to Authorized Users in accordance with the Security Management Plan.	

REQ. ID	REQUIREMENT	NOTES
MMR-49	Contractor shall monitor the ongoing security of all aspects of C2 as set forth in the Security Management Plan.	
MMR-50	If a potential or actual security breach is identified, Contractor shall notify designated Authorized Users.	
MMR-51	The C2 Security Management Plan should anticipate the possibility of a security breach and define corrective action required to report and correct the current incident and prevent future incidents to the extent possible through the use of mitigation strategies.	

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A - 6: Upgrades and Enhancements to the C2 System

REQ. ID	REQUIREMENT	NOTES
UEC2-1	Contractor shall develop a C2 System Refresh Plan (CDRL-O&M-013b) to define:	
UEC2-1.1	a. Roadmap for planned upgrades and enhancements for system components and functions, including Software, systems, field equipment, services, and support Contracts, that will be provided by Contractor;	
UEC2-1.2	b. Assessment of current and future state of the industry for Fare Payment Systems and technologies;	
UEC2-1.3	c. Recommendations for optional C2 changes to be considered in the next 1 year, 2 years and 5 year time horizons;	
UEC2-1.4	d. Projected costs and schedule for implementation of each recommended optional C2 change;	
UEC2-1.5	e. Cost-benefit analysis of recommended optional C2 changes;	
UEC2-1.6	f. Risk analysis and migration strategy for recommended optional C2 changes; and	
UEC2-1.7	g. Approach for reviewing plan with C2 Contracting Authority to reach Approval for implementation for recommended optional changes.	
UEC2-2	Contractor shall implement the C2 System Refresh Changes Approved by the C2 Contracting Authority.	
UEC2-3	Contractor shall develop a C2 System Expansion Plan (CDRL-O&M-001a) to define:	
UEC2-3.1	a. Approach, representative schedule, and costs for expanding the quantity of C2 equipment at an existing C2 Transit Operator;	
UEC2-3.2	b. Approach, representative schedule, and costs for adding new Transit Operators to C2 System; and	
UEC2-3.3	c. Approach and representative schedule for integrating additional services such as Paratransit,	

REQ. ID	REQUIREMENT	NOTES
	parking, Regional tolling, and bike share into the C2 System.	
UEC2-4	When requested by the C2 Contracting Authority, Contractor shall Work with stakeholders to define requirements, schedule and costs for a specific C2 System expansion.	
UEC2-5	Contractor shall implement the C2 System expansion changes Approved by the C2 Contracting Authority.	

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A - 7: End of Term Transition

A - 7.01 Assumption of C2 by a New Operator

MTC at its sole discretion may elect to maintain the operation of C2 after the end of the Contract or upon Notice of Termination. In that event, MTC at its sole discretion may elect to transfer C2 to a new operator. This section describes the requirements and obligations of Contractor to support such transition to MTC, its consultants, or a third party in the future.

REQ. ID	REQUIREMENT	NOTES
C2NO-1	Beginning no later than twelve (12) months prior to the end of the Contract, Contractor shall provide the systems, services, Assets, documentation, Software, licenses, supplier agreements and intellectual property required to effect an orderly transition of C2 to MTC, its consultants, or a third party for the purpose of operating, maintaining and creating derivative works for C2 on an ongoing basis ("Transition Services").	
C2NO-2	As part of its Transition Services, Contractor shall provide skilled and qualified C2 personnel to train successor entity personnel and assist with transition, including but not limited to all Key Personnel and senior staff responsible for C2 operation.	
C2NO-3	Contractor shall prepare an End of Term Transition Plan (CDRL-O&M-024a) describing Transition Services responsibilities, processes and procedures, including anticipated responsibilities and expectations of MTC and the successor operator.	
C2NO-4	The End of Term Transition Plan shall describe all Software, Hardware, systems, licenses, supplier agreements, Subcontractor agreements, manuals, documentation, and intellectual property required for MTC, its consultants, or a third party Contractor to independently:	
C2NO-4.1	a. Assume full operation and maintenance of the C2 System and C2 System Integrator responsibilities on an ongoing basis in accordance with Section A-5 and overall requirements of this Contract;	
C2NO-4.2	b. Maintain all Hardware and devices;	
C2NO-4.3	c. Maintain all wired and wireless networks;	

REQ. ID	REQUIREMENT	NOTES
C2NO-4.4	d. Order and supply replacement and expansion Hardware, devices, consumables and other materials supplied under the Contract;	
C2NO-4.5	e. Maintain all Software and licenses, including the application of updates and patches, diagnosis and implementation of defect and bug fixes, and maintaining all systems on supported platforms;	
C2NO-4.6	f. Maintain and modify third party Interfaces;	
C2NO-4.7	g. Develop new third party Interfaces: and	
C2NO-4.8	h. Create enhancements or derivative works for any and all C2 System elements.	
C2NO-5	The End of Term Transition Plan shall provide, or shall provide reference to a listing of, all Contractor, Commercial and other Software required to operate, maintain and create derivative works for C2 including the production environment, back-up environment, development environment, and test environment.	
C2NO-6	The End of Term Transition Plan shall describe the specific activities, roles and responsibilities for transition including but not limited to:	
C2NO-6.1	a. Transfer of security key and security key management systems;	
C2NO-6.2	b. Identification, inventory and transfer of all C2 Assets and intellectual property, whether owned, managed or administered by Contractor;	
C2NO-6.3	c. Identification, collection and transfer of all required information to operate, maintain and create derivative works for C2;	
C2NO-6.4	d. Supply of all Contractor Software in in both source code and executable formats, along with all instructions, tools, processes and procedures to modify code, compile code, install, configure and test Software, and make all Software fully functional in the development, test, production, and back-up environments;	
C2NO-6.5	e. Supply of all Commercial and Open Source Software;	

REQ. ID	REQUIREMENT	NOTES
C2NO-6.6	f. Transfer or acquisition of all required Software and Hardware licenses;	
C2NO-6.7	g. Transfer of all third party agreements and subcontracts;	
C2NO-6.8	h. Resources necessary to operate and maintain C2;	
C2NO-6.9	i. Resources and materials needed to train a successor entity;	
C2NO-6.10	j. Transition completion criteria; and	
C2NO-6.11	k. Any post transition services required.	
C2NO-7	No later than twelve (12) months prior to the end of the Contract, Contractor shall provide a complete listing of all Assets that comprise the C2 System, Software and Hardware versions, and their condition as known by Contractor. The listing shall verify and document that all Hardware and Software versions or platforms are supported by the OEM supplier.	
C2NO-8	All Assets must be in serviceable condition with a minimum three (3) year expected service life including documented OEM support post Contract termination.	

A - 7.02 End of Operations Transition Support for a New (Replacement) System

In addition to the requirements of the previous section, Contractor will be required to support the transition of C2 to a new system.

REQ. ID	REQUIREMENT	NOTES
EOTS-1	As part of its Transition Services, Contractor shall supply the personnel, systems, intellectual property, and other information required to effect an orderly migration of C2 accounts, media, Customer applications, systems and data to a new system.	
EOTS-2	As part of its Transition Services, Contractor shall provide Training of staff associated with the new system covering Day-to-Day operations, interactions with Transit Operators, and interactions with third parties.	

REQ. ID	REQUIREMENT	NOTES
EOTS-3	Contractor's approach to supporting transition to a new or successor system shall be described in the End of Operations Transition Plan, and shall include at a minimum:	
EOTS-3.1	a. Provision of Fare Media file structures, data structures and definitions, and security keys to allow a third party to read, write and update C2 Fare Media and virtual Fare Media applications;	
EOTS-3.2	b. Provision of all business and operating rules, practices and procedures, including any internal (to Contractor) documents;	
EOTS-3.3	c. Provision of a data and Interface definitions for all external Interfaces;	
EOTS-3.4	d. Transfer of all websites, web portals and mobile applications;	
EOTS-3.5	e. Transfer of retail networks and services;	
EOTS-3.6	f. Transfer of management of Institutional, Transit Benefit and discount programs;	
EOTS-3.7	g. Migration, export and transition of Customer account and historical data;	
EOTS-3.8	h. Migration, export and transition of all Transaction and financial data (current and historical);	
EOTS-3.9	i. Cutover planning and services;	
EOTS-3.10	j. Transfer of any required third party agreements; and	
EOTS-3.11	k. Training and support services.	
EOTS-4	As part of its Transition Services, Contractor shall provide a help desk for access by MTC and the new system provider to obtain technical and operational support on an as-needed basis during the Transition Period.	
EOTS-5	As part of its Transition Services, Contractor shall provide and maintain a document repository of all relevant documents for access by MTC and Contractor responsible for the new system.	
EOTS-6	As part of its Transition Services, Contractor shall provide skilled and qualified personnel to provide technical and	

REQ. ID	REQUIREMENT	NOTES
	operational support related to the planning and execution of the transition.	

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A - 8: Service Level Agreements

A - 8.01 SERVICE LEVEL AGREEMENT GENERAL REQUIREMENTS

A - 8.01 (1) Overview

MTC considers the implementation of the C2 System as one of its most important initiatives to date. The Project will have an impact on each of the Transit Operators, will touch the vast majority of their Customers, and will provide the necessary data to guide future planning and operational changes.

MTC expects the C2 System to provide high levels of reliability, availability and maintainability so that the potential for service and other disruptions are both predictable and minimized. MTC also expects all performance measures to be based on data that is collected and report using automated tools with little or no manual intervention.

This Service Level Agreement sets forth certain quantitative service levels and related criteria ("Service Levels") against which Contractor's performance of operations and maintenance services will be measured. Contractor shall at all times meet the performance measures described in this document on an ongoing monthly basis once the System is in operation.

Each service level includes a level of priority indicative of the relative importance of each criteria to the operation of C2 and achievement of the fundamental goals of the program. Levels of priority and importance include:

1. Critical Service Level
2. High Importance Service Level
3. Important Service Level
4. Desired Service Level

The calculation and application of any payment incentives or disincentives as provided for in Article 3.6.3 of the Contract will consider, in part, the relative importance of each Service Level.

Definitions for capitalized words or phrases used in Attachment A-8 are set forth in A-8.02.

A - 8.01 (2) Reporting

Unless otherwise specified in Attachment A-8, each Service Level shall be reported by Contractor on a monthly basis. Along with each monthly O/M invoice, Contractor shall provide to MTC a set of reports to verify Contractor's performance and compliance with the Service Levels during the preceding calendar month.

Contractor shall also provide detailed supporting information (including all applicable raw data) for each report to MTC in machine-readable form to support independent calculation and verification of Service Levels.

Contractor will identify root causes for, correct problems leading to, and minimize recurrences of, all missed Service Levels. Contractor will also promptly investigate and correct Failures to meet the Service Levels by:

- Promptly initiating problem investigations, including root cause analysis conducted in accordance with the Contract;
- Promptly reporting any problems to MTC in accordance with the escalation process set forth in the Contract;

- Implementing any near term corrective actions or workarounds required to maintain service;
- Correcting any problems and beginning to restore Service Levels;
- Advising MTC of the root cause of problems and the status of remedial efforts being undertaken with respect to such problems;
- Providing documentary evidence to MTC that the causes of such problems have been or will be corrected; and
- Making written recommendations to MTC for improvement in procedures related to Service Levels and correcting Service Level problems.

A - 8.01 (3) Service Level Measurement Period

Unless otherwise specified in this Attachment A-8, the Service Levels shall apply to Contractor's performance upon commencement of the O/M Term, as defined in Article 8.4 of the Contract. Service Levels shall be maintained for the duration of the Contract.

A - 8.01 (4) Revisions to Service Levels

MTC shall at all times have the right to (i) add new Service Levels consistent with applicable industry practices or standards; and (ii) increase Service Levels to meet current industry practices or standards. In the event MTC wishes to add or increase a Service Level, MTC and Contractor shall negotiate in good faith the metrics and measurements associated with such new Service Levels and additional costs (if any) associated with the incremental effort to implement such new Service Levels and such changes shall be added to the Contract by Change Order (see Article 15 of the Contract).

A - 8.02 DEFINITIONS

Availability: The proportion of the Operating Period that the device is functioning without Failures and able to be in Revenue Service.

Critical Application: Any Software or firmware application required for running and administering C2 Day to Day operations and activities.

Device Population: The population of like devices to be used in calculating Service Levels. Service Levels shall be applied, measured and reported on for each Device Population based only on quantities of devices that are members of that Device Population.

Excluded Failures: Failures due to vandalism, Force Majeure Events, power Failures, and acts of MTC or the Transit Operators. Service Level computation shall exclude Excluded Failures, however all Excluded Failures shall be reported as part of Service Level Reports.

Failure: Inability of a device, system, or service to perform its function in Revenue Service.

Maintainability: The ability for a Failure to be remedied and required functions to be restored.

Mean Time Between Failures: The average rate of Failures across a Device Population for a specified Measurement Period.

Mean Cycles Between Failures: The average rate of Failures across a Device Population for a specified Measurement Period for cycles.

Measurement Period: The period of time that a Service Level is to be measured for the purpose of calculations and reporting.

Operating Period: The period of time a device or service is deemed to be in operation for measurement purposes.

Out of Service: Device, Subsystem, or service is not available for full use.

Out of Service Time: Time between when a device, Subsystem, or service has experienced a Failure or Partial Failure, and the time the device, Subsystem or service is replaced or repaired and service restored. For calculation purposes, Out of Service Time for partial Failures shall be calculated at 50% of actual Out of Service Time

Partial Failure: Failure of a minor nature that does not prevent the device, system, or service to perform its function in Revenue Service but that may require a temporary workaround or result in minor inconvenience to Customers, MTC or Transit Operator staff.

Reliability: The observed rate of Failure of a device, component, service or process, less any Excluded Failures.

Revenue Service: The operation of a device, system or function in Day-to-Day transit operations during the Service Days of all Transit Operators.

Service Day: The period of time between the start and end of the provision of public transit service as defined by the Business Rules and policies of each Transit Operator. Service Days may span multiple calendar Days and the duration may change based on Day of the week.

Service Levels: Contractor's obligations to maintain reliability, availability and maintainability of the System.

Service Level Reports (CDRL-PM-006): Reports of actual Service Levels generated and provided to MTC.

A - 8.03 PROGRAM SERVICE LEVELS

The following outlines service levels related to the fundamental goals of the C2 System as measures of its overall success and acceptance.

A - 8.03 (1) Provide an intuitive, efficient and familiar experience

SLA Reference and Title	SLA MOU 1.1 – Availability of Mobile C2 Products
Priority	4
Description	All products available on card-based fare media are available on C2 mobile fare media.
Calculation	MOU 1.1 = Number of Products on Each Mobile Application – Number of Products available on C2 cards
Performance Criteria	Number of products available on each mobile application that are above or below the number of products available on card-based media
Measurement Period	Quarterly
Reporting Period	Quarterly
Supplemental Notes	

SLA Reference and Title	SLA MOU 1.2 – Consistency of Branding
Priority	4
Description	C2 branding is consistent across all C2 sales channels, media, websites and mobile websites.
Calculation	MOU 1.2 = Focus group feedback on consistency and recognition of branding
Performance Criteria	Focus group comments and rating of branding consistency and recognition
Measurement Period	Periodically upon change or introduction of new C2 element to the public
Reporting Period	Periodically upon change or introduction of new C2 element to the public
Supplemental Notes	

SLA Reference and Title	SLA MOU 1.3 – Customer Conversion from C1 to C2
Priority	2
Description	C2 provides an equal to or better experience than C1 encouraging customers to transition from C1 to C2 more quickly than anticipated.
Calculation	MOU 1.3 = Time earlier or later than scheduled for completion of customer transition from C1 to C2 per Article 7.3.a of the Contract.
Performance Criteria	Number of day earlier or later than scheduled completion of customer transition.
Measurement Period	Weekly and monthly
Reporting Period	Monthly
Supplemental Notes	Based on C1 and C2 cards in use during transition period (active customers)

SLA Reference and Title	SLA MOU 1.4 – Market Penetration of C2 Fare Media
Priority	2
Description	Market penetration of C2 is higher than C1 when measured over comparable measurement periods throughout the life of the contract.
Calculation	MOU 1.4 = Total C2 transactions over period ÷ Total C1 transactions over the same period in the last 12 months of C1 operation prior to the start of transition
Performance Criteria	Percent change in C2 fare media usage versus C1 over similar measurement period
Measurement Period	Three month rolling average
Reporting Period	Monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 1.5 – Total Market Share of C2 Transactions
Priority	4
Description	The proportion of C2 transactions versus cash and paper transactions.
Calculation	

	MOU 1.5 = Total C2 transactions over period ÷ Total transactions across all Transit Operators
Performance Criteria	Percent change in C2 market share relative to total transactions
Measurement Period	Monthly after transition has been completed
Reporting Period	Monthly
Supplemental Notes	Contractor will need to obtain information from the Transit Operators on cash and non-C2 transaction volumes.

SLA Reference and Title	SLA MOU 1.6 – Market Share of C2 Mobile Fare Media
Priority	4
Description	The proportion of C2 transactions using mobile fare media versus card-based media over time.
Calculation	MOU 1.6 = Total C2 mobile transactions over period ÷ Total C2 transactions
Performance Criteria	Percent change in C2 mobile fare media market share relative to all C2 transactions
Measurement Period	Monthly
Reporting Period	Monthly
Supplemental Notes	

A - 8.03 (2) Provide excellent, proactive customer service

SLA Reference and Title	SLA MOU 2.1 – Website Customer Satisfaction
Priority	2
Description	Customer satisfaction levels are measured and tracked using quantitative and qualitative data analytics. Customer satisfaction is recorded and measured for all customer and institutional websites through analytics and website customer feedback links or forms.
Calculation	MOU 2.1 = Percent change in website customer satisfaction
Performance Criteria	Percent change in C2 website customer satisfaction over measurement period.
Measurement Period	Quarterly
Reporting Period	Quarterly
Supplemental Notes	Separate reports will be required for each website.

SLA Reference and Title	SLA MOU 2.2 – Mobile Application Customer Satisfaction
Priority	2

Description	Customer satisfaction levels are measured and tracked using quantitative and qualitative data analytics. Customer satisfaction is recorded and measured for all mobile applications through analytics and mobile device customer feedback links or forms.
Calculation	MOU 2.2 = Percent change in mobile application customer satisfaction
Performance Criteria	Percent change in C2 mobile application customer satisfaction over measurement period.
Measurement Period	Quarterly
Reporting Period	Quarterly
Supplemental Notes	Separate reports will be required for each mobile application.

SLA Reference and Title	SLA MOU 2.3 – Customer Issues and Complaints
Priority	4
Description	Customer satisfaction levels with the operation of C2 are measured and tracked using quantitative and qualitative data analytics. Customer satisfaction is recorded and measured based on customer service contacts and issues provided by the Customer Service Center.
Calculation	MOU 2.3 = Decrease or increase in customer complaints and issues as reported by the Customer Service Center
Performance Criteria	Percent change in customer complaints and issues related to C2 operation as reported to the Customer Service Center
Measurement Periods	Monthly
Reporting Period	Monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 2.4 – Retail Network Geographic Availability
Priority	2
Description	Availability of retail locations for customers to procure and add value or products to fare media.
Calculation	MOU 2.4 = Bay Area land area within 0.5 miles of a C2 retail location ÷ total Bay Area developed land
Performance Criteria	Percent change in proportion of developed land within 1 mile of a C2 retail location
Measurement Periods	Quarterly
Reporting Period	Quarterly
Supplemental Notes	

SLA Reference and Title	SLA MOU 2.5 – Customer Self Service Effectiveness

Priority	2
Description	Decrease of customer service issues handled by the C2 Customer Service Center as a result of effective self serve options.
Calculation	$\text{MOU 2.5} = \frac{\text{Number of customer service issues handled through self-serve options per 1,000 active C2 users}}{\text{Number of customer service issues handled by the C2 customer service center per 1,000 active C2 users}}$
Performance Criteria	Percent change in issues handled by self serve options per 1,000 active users.
Measurement Periods	Monthly
Reporting Period	Monthly
Supplemental Notes	The CSC will report statistics of customer issues handled. Websites, mobile applications and other self service options will need to record issues handled.

SLA Reference and Title	SLA MOU 2.6 – Availability of Fare Products from Vending Machine Purchases
Priority	3
Description	Customers purchasing products or value from vending machines at rail stations, ferry terminals, and other locations are able to immediately use the value or products for travel
Calculation	$\text{MOU 2.6} = \text{Vending machine purchases available for use} \leq 15 \text{ seconds}$
Performance Criteria	100% of vending machine transactions available for use within 15 seconds
Measurement Periods	Daily
Reporting Period	Weekly, monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 2.7 – Availability of Fare Products from Website and Mobile Application Purchases
Priority	2
Description	Customers purchasing products or value from websites and mobile applications are able to travel shortly after purchase.
Calculation	$\text{MOU 2.6} = \text{Website and mobile devices purchases available for use} \leq 60 \text{ seconds}$
Performance Criteria	95% of website and mobile device purchase available for use within 60 seconds after purchase completion.
Measurement Periods	Daily
Reporting Period	Weekly, monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 2.8 – Availability of Fare Products from Retail Purchases
Priority	2

Description	Customers purchasing products or value from retail locations are able to travel within the time required to walk from a retailer to a transit stop.
Calculation	MOU 2.7 = Retail purchases available for use $\leq$ 180 seconds
Performance Criteria	95% of retail purchases available for use within 180 seconds after purchase completion.
Measurement Periods	Daily
Reporting Period	Weekly, monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 2.9 – Value or Fare Product Adjustments
Priority	2
Description	Accounts are updated to reflect adjustments of value or fare products made through self-service options of the Customer Service Center in a timely manner.
Calculation	MOU 2.9 = Accounts adjusted and available for use $\leq$ 180 seconds after the adjustment is approved by the system or a Customer Service Center operator.
Performance Criteria	95% of adjustments within 180 seconds after approval.
Measurement Periods	Weekly
Reporting Period	Weekly, monthly
Supplemental Notes	

A - 8.03 (3) Create a transparent, consistent, inclusive, and timely decision-making process

SLA Reference and Title	SLA MOU 3.1 – Timeliness of C2 Work Plan Updates
Priority	4
Description	Updates to C2 work plans and software release plans and schedules are made within a reasonable time of any new update being approved.
Calculation	MOU 3.1 = Number of days from when an update is approved to when the work plan and schedule is revised.
Performance Criteria	100% of work plan updates within 20 days after approval.
Measurement Periods	Quarterly
Reporting Period	Quarterly
Supplemental Notes	This would also include any scheduled work plan updates for system enhancements, bug fixes, etc.

SLA Reference and Title	SLA MOU 3.2 – Implementation of Price Changes
Priority	2

Description	Changes to prices for existing fare products are implemented within a reasonable timeframe from when they are identified.
Calculation	MOU 3.2 = Number of days from when a change in fare prices has been initiated by an operator to the time where it has been implemented, tested and scheduled for release.
Performance Criteria	100% of all price changes within 60 days after initiation by a Transit Operator.
Measurement Periods	Quarterly
Reporting Period	Quarterly
Supplemental Notes	This would also include any scheduled work plan updates for system enhancements, bug fixes, etc.

SLA Reference and Title	SLA MOU 3.3 – Processing of Change Order Requests
Priority	2
Description	Time taken for Contractor to submit a complete, fully detailed and budgeted change order proposal with schedule upon request of a change from an authorized party
Calculation	MOU 3.3 = Number of days from when a change request has been issued by an authorized party and a full change proposal received from Contractor.
Performance Criteria	100% of all change proposals within 20 days of a request.
Measurement Periods	Quarterly
Reporting Period	Quarterly
Supplemental Notes	Highly complex changes or ones that involve the addition of significant new functionality may be permitted extra time as agreed by MTC. Any request for extra time must be provided within five days of the initial change request.

SLA Reference and Title	SLA MOU 3.4 – Timeliness of Device Orders
Priority	2
Description	Time required to deliver an MTC or Transit Operator order for additional equipment.
Calculation	MOU 3.4 = Number of days from when an equipment order has been issued by an authorized party to when that equipment is delivered.
Performance Criteria	100% of all devices delivered within 90 days of receipt of an order
Measurement Periods	Quarterly
Reporting Period	Quarterly
Supplemental Notes	Applies to orders of additional quantities of an existing equipment type.

A - 8.03 (4) Govern the program efficiently and cost effectively

SLA Reference and Title	SLA MOU 4.1 – Accuracy of Invoices
Priority	3
Description	Accuracy and completeness of invoices submitted.
Calculation	MOU 4.1 = Acceptance by MTC of invoices on first submission.
Performance Criteria	100% of all invoices accurate and complete on submission.
Measurement Periods	Monthly
Reporting Period	Monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 4.2 – Help Desk Responsiveness
Priority	4
Description	Timeliness of help desk response to MTC or Transit Operator identification.
Calculation	MOU 4.2 = Number of times allowable response times exceeded
Performance Criteria	Response time to acknowledge issue to requestor and enter into issue tracking system: 1. ≤ 5 minutes for emergency issue 2. ≤ 20 minutes for non-emergency issue Response time to provide requestor with a plan for resolution: 1. ≤ 1 hour for emergency issue 2. ≤ 1 business day for routine issue
Measurement Periods	Monthly
Reporting Period	Monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 4.3 – Effectiveness of Automation
Priority	1
Description	Use of automation to reduce operating costs.
Calculation	MOU 4.3 = $\sum$ Changes in operating costs enabled through automation.
Performance Criteria	Changes in monthly operating and maintenance costs
Measurement Periods	Monthly
Reporting Period	Monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 4.4 – Timeliness of PCI Findings Remediation
Priority	2
Description	Time required to remediate a PCI finding and provide a written report verifying remediation and compliance.
Calculation	MOU 4.4 = $\sum$ days exceeded per remediation item
Performance Criteria	90% of all remediation within 30 days 100% of all remediation within 60 days
Measurement Periods	Quarterly
Reporting Period	Quarterly
Supplemental Notes	

A - 8.03 (5) Ensure program flexibility and responsiveness

SLA Reference and Title	SLA MOU 5.1 – Expansion and Usability of Transit-Related C2 Uses
Priority	4
Description	Change in usage of C2 media for approved transit related programs such as parking payment, bikeshare, and other applications where transactions directly post to the customers C2 account.
Calculation	MOU 5.1 = Change in transactions for transit-related programs
Performance Criteria	Increase or decrease in total transit-related C2 transactions compared to previous period
Measurement Periods	Quarterly
Reporting Period	Quarterly
Supplemental Notes	Reports required for each individual transit-related program.

SLA Reference and Title	SLA MOU 5.2 – Adoption of Standards and Best Practices
Priority	2
Description	Level of adoption of industry standards and best practices related to the design and operation of C2.
Calculation	MOU 5.2 = Level of adoption of standards
Performance Criteria	1. Level of adoption of IT standards as measured by industry accepted capability maturity models 2. Compliance with accounting and financial management standards. 3. Compliance with security standards
Measurement Periods	Quarterly

Reporting Period	Quarterly
Supplemental Notes	Reports required for each individual transit-related program.

SLA Reference and Title	SLA MOU 5.3 – Provision of Open Interfaces
Priority	3
Description	Provision of open interfaces and published application programming interfaces to allow third party interaction with C2.
Calculation	MOU 5.3 = Number of published open interfaces and API's
Performance Criteria	Increase or decrease in number of published open interfaces and API's.
Measurement Periods	Quarterly
Reporting Period	Quarterly
Supplemental Notes	

SLA Reference and Title	SLA MOU 5.4 – Utilization of Third Party Interfaces
Priority	4
Description	Number of third parties interfacing with C2.
Calculation	MOU 5.4 = Number of third parties actively using third party C2 interfaces
Performance Criteria	Increase or decrease in number of third parties interfacing with C2.
Measurement Periods	Quarterly
Reporting Period	Quarterly
Supplemental Notes	Interface must be in active use during the measurement period.

A - 8.03 (6) Ensure that accurate and complete data is available to support decision making at every level

SLA Reference and Title	SLA MOU 6.1 – Timeliness of Reports
Priority	3
Description	Delivery of reports by the scheduled delivery day.
Calculation	MOU 6.1 = $\sum$ delivery days exceeded per report
Performance Criteria	90% of all reports delivered within two business days of scheduled delivery. 100% of all reports delivered within five business days of scheduled delivery.
Measurement Periods	Monthly
Reporting Period	Monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 6.2 – Utilization of Dashboards
Priority	3
Description	Utilization of reporting dashboards by MTC and Transit Operator personnel.
Calculation	MOU 6.2 = Change in number of dashboard sessions
Performance Criteria	Increase or decrease in number of dashboard sessions by MTC and Transit Operator personnel
Measurement Periods	Monthly
Reporting Period	Monthly
Supplemental Notes	

SLA Reference and Title	SLA MOU 6.3 – Timeliness of Data Transfer to Agency Reporting Systems and Databases
Priority	4
Description	Timeliness of transfer of data to MTC and Transit Operator reporting systems and databases
Calculation	MOU 6.3 = $\sum$ days exceeded per interface
Performance Criteria	90% of all data transfer completed within 4 hours of close of a processing cycle 100% of all data transfer completed within 24 hours of close of a processing cycle
Measurement Periods	Monthly
Reporting Period	Monthly
Supplemental Notes	

A - 8.03 (7) Ensure operational efficiency and reliability.

Refer to Sections 8.04 through 8.09.

A - 8.04 FIELD DEVICE SERVICE LEVELS

A - 8.04 (1) Operations

SLA Reference and Title	SLA 1.3.1.1 – Average Validator Transaction Time (AVTT1)
Priority	1
Description	For each Device Population, the average time to recognize, authorize, and complete the processing of pass, Stored Value and ride Transactions at a Validator using C2 Fare Media, as determined by the period between the initiation of communications between the Validator and C2 Fare Media, through to the completion of the

	validation process, display of the validation result to the Customer, and activation (as applicable) of faregate or barrier access.
Measurement Calculation over Measurement Period	$AVTT1 = \sum \text{Individual Transaction times} \div \text{Total number of Transactions}$
Applicable Device Populations	1. In-vehicle bus and rail Validators 2. Faregate Validators 3. Stand-alone platform or station Validators
Operating Period	All Revenue Service hours of operation
Performance Criteria	1. ≤ 400 ms as measured on a daily basis 2. ≤ 350 ms as measured on a weekly and monthly basis
Measurement Periods	Daily, weekly and monthly
Reporting Period	Daily, weekly, and monthly
Supplemental Notes	Criteria applies to a single fare payment Transaction with a valid C2 fare medium. It excludes compound fare Transactions and open payment Transactions.

SLA Reference and Title	SLA 1.3.1.2 – Maximum Validator Transaction Time (MVT)
Priority	1
Description	For each Device Population, the 99 th percentile time to recognize, authorize, and complete the processing of pass, Stored Value and ride Transactions at a Validator using C2 Fare Media, as determined by the period between the initiation of communications between the Validator and C2 Fare Media, through to the completion of the validation process, display of the validation result to the Customer, and activation (as applicable) of faregate or barrier access.
Measurement Calculation over Measurement Period	Statistical analysis of all fare payment Transactions to determine the 99 th percentile Transaction time.
Applicable Device Populations	1. In-vehicle bus and rail Validators 2. Faregate Validators 3. Stand-alone platform or station Validators
Operating Period	All Revenue Service hours of operation
Performance Criteria	1. ≤ 500 ms as measured on a daily basis 2. ≤ 450 ms as measured on a weekly and monthly basis
Measurement Period	Daily, weekly and monthly
Reporting Period	Daily, weekly, and monthly
Supplemental Notes	Criteria applies to a single fare payment Transaction with a valid C2 fare medium. It excludes compound fare Transactions and open payment Transactions.

SLA Reference and Title	SLA 1.3.1.3 – Open Payment Average Validator Transaction Time (AVTT2)
Priority	1
Description	For each Device Population the average time to recognize, authorize, and complete the processing of an open payment Transaction, as determined by the period

	between the initiation of communications between the Validator and open payment Fare Media, through to the completion of the validation process and issuance of commands to activate the Customer display and (as applicable) activate a faregate or other barrier control device.
Measurement Calculation over Measurement Period	$AVTT2 = \sum \text{Open payment Transaction times} \div \text{Total number of open payment Transactions}$
Applicable Device Populations	1. In-vehicle bus and rail Validators 2. Faregate Validators 3. Stand-alone platform or station Validators
Operating Period	All Revenue Service hours of operation
Performance Criteria	1. ≤ 600 ms as measured on a daily basis 2. ≤ 500 ms as measured on a weekly and monthly basis
Measurement Period	Daily, weekly, and monthly
Reporting Period	Daily, weekly and monthly
Supplemental Notes	Criteria applies to a single fare payment Transaction with a valid open payment card or mobile application accepted in C2.

SLA Reference and Title	SLA 1.3.1.4 – Validator Tap Error Rate (VTER)
Priority	1
Description	The rate of errors, misreads or incomplete fare payment Transactions regardless of whether caused by system or human error or activity.
Measurement Calculation over Measurement Period	$VTER = \text{Total number of Transaction errors} \div \text{Total number of Transactions}$
Applicable Device Populations	1. In-vehicle bus and rail Validators 2. Faregate Validators 3. Stand-alone platform or station Validators
Operating Period	All Revenue Service hours of operation
Performance Criteria	1. $\leq 3.5\%$ as measured on a daily basis 2. $\leq 3.0\%$ as measured on a weekly and monthly basis
Measurement Period	Daily, weekly and monthly
Reporting Period	Daily, weekly, and monthly
Supplemental Notes	Includes both C2 and open payment Fare Media Transactions.

SLA Reference and Title	SLA 1.3.1.5 – C2 Fare Media Fare Enforcement Transaction Processing Time (FETPT1)
Priority	2

Description	The average time for the Fare Enforcement Mobile Solution to verify that a valid fare has been paid when presented with C2 Fare Media, as determined by the period between the initiation of communications between the Fare Enforcement Mobile Solution and C2 Fare Media, and the return of a valid/not valid indication to the fare inspector (completion of display).
Measurement Calculation over Measurement Period	$\text{FETPT1} = \sum \text{C2 Fare Media inspection times} \div \text{Total number of C2 Fare Media inspections}$
Applicable Device Populations	Fare enforcement mobile application installed on Contractor recommended Hardware
Operating Period	All Revenue Service hours of operation
Performance Criteria	1. ≤ 600 ms as measured on a daily basis 2. ≤ 500 ms as measured on a weekly and monthly basis
Measurement Period	Daily, weekly and monthly
Reporting Period	Daily, weekly, and monthly
Supplemental Notes	N/A

SLA Reference and Title	SLA 1.3.1.6 – Open Payment Fare Enforcement Transaction Processing Time (FETPT2)
Priority	2
Description	The average time for the Fare Enforcement Mobile Solution to verify that a valid fare has been paid when presented with bank or third party issued open payment Fare Media, as determined by the period between the initiation of communications between the Fare Enforcement Mobile Solution and open payment Fare Media, and the return of a valid/not valid indication to the fare inspector (completion of display).
Measurement Calculation over Measurement Period	$\text{FETPT2} = \sum \text{Open payment inspection times} \div \text{Total number of open payment inspections}$
Applicable Device Populations	Fare enforcement mobile application installed on Contractor recommended Hardware
Operating Period	All Revenue Service hours of operation
Performance Criteria	1. ≤ 800 ms as measured on a daily basis 2. ≤ 750 ms as measured on a weekly and monthly basis
Measurement Period	Daily, weekly and monthly
Reporting Period	Daily, weekly, and monthly
Supplemental Notes	N/A

SLA Reference and Title	SLA 1.3.1.7 – C2 Fare Media Mobile Fare Payment Transaction Processing Time (MFTPT1)
Priority	2
Description	The average time for the mobile payment solution to recognize, authorize, and complete the processing of pass, Stored Value and ride Transactions when using C2

	Fare Media, as determined by the period between the initiation of communications between the mobile fare payment solution and C2 Fare Media, and the return of payment confirmation and display on the screen.
Measurement Calculation over Measurement Period	$MFTPT1 = \sum \text{Payment processing times} \div \text{Total number of payments}$
Applicable Device Populations	Mobile fare payment application installed on Contractor recommended Hardware
Operating Period	All Revenue Service hours of operation
Performance Criteria	1. ≤ 600 ms as measured on a daily basis 2. ≤ 500 ms as measured on a weekly and monthly basis
Measurement Period	Daily, weekly and monthly
Reporting Period	Daily, weekly, and monthly
Supplemental Notes	N/A

SLA Reference and Title	SLA 1.3.1.8 – Open Payment Mobile Fare Payment Transaction Processing Time (MFTPT2)
Priority	2
Description	The average time for the mobile payment solution to recognize, authorize, and complete the processing of open payment Fare Media, as determined by the period between the initiation of communications between the mobile fare payment solution and open payment Fare Media, and the return of payment confirmation and display on the screen.
Measurement Calculation over Measurement Period	$MFTPT2 = \sum \text{Payment processing times} \div \text{Total number of payments}$
Applicable Device Populations	Mobile fare payment application installed on Contractor recommended Hardware
Operating Period	All Revenue Service hours of operation
Performance Criteria	1. ≤ 800 ms as measured on a daily basis 2. ≤ 750 ms as measured on a weekly and monthly basis
Measurement Period	Daily, weekly and monthly
Reporting Period	Daily, weekly, and monthly
Supplemental Notes	N/A

A - 8.04 (2) Availability and Reliability

SLA Reference and Title	SLA 1.3.2.1 – High Volume Device Availability (HVDA)
Priority	1
Description	For each Device Population, availability of devices installed in vehicles, at platforms, and at terminals where there is a large number of devices in active use across C2.
Measurement Calculation over Measurement Period	$HVDA = ((\text{Total number of devices} \times \text{measurement period}) - (\sum \text{Device Out of Service Time})) \div (\text{Total number of devices} \times \text{measurement period}) \times 100\%$

Applicable Device Populations	1. In-vehicle bus and rail Validators 2. In-vehicle operator control units 3. In-vehicle communications devices (if applicable) 4. In-vehicle networking devices (if applicable) 5. Faregate Validators 6. Stand-alone platform or station Validators
Operating Period	For calculation purposes, devices shall be assumed to be in operation 24 hours a Day, 7 Days a week, 365 Days a year.
Performance Criteria	1. ≥ 99.6% as measured on a daily basis 2. ≥ 99.8% as measured on a weekly and monthly basis
Measurement Period	Daily, weekly and monthly
Reporting Period	Daily, weekly and monthly
Supplemental Notes	

SLA Reference and Title	SLA 1.3.2.2 – Low Volume Device Reliability (LVDR)
Priority	1
Description	For each Device Population, reliability (Mean Time Between Failure) of devices or mobile applications where there is a relatively small number of devices in use (under 200 of a Device Population).
Measurement Calculation over Measurement Period	$LVDA = (\text{Total number of devices} \times \text{measurement period}) \div \text{Total number of Failures}$
Applicable Device Populations	1. Mobile fare enforcement devices (Software application only) 2. Mobile fare payment devices (Software application only) 3. Ferry terminal displays
Operating Period	For calculation purposes, devices shall be assumed to be in operation 24 hours a Day, 7 Days a week, 365 Days a year.
Performance Criteria	≥ 22,000 hours (equivalent to approximately 3 years between Failures on average)
Measurement Period	Weekly and monthly
Reporting Period	Weekly and monthly
Supplemental Notes	Partial Failures shall be equivalent to 50% of a Failure for calculation purposes.

A - 8.05 BACK OFFICE

A - 8.05 (1) Transaction and Funds Processing

SLA Reference and Title	SLA 1.4.1.1 – Fare Transaction Processing Accuracy (FTPA)
Priority	1

Description	Percentage of fare sales, fare payment, adjustment and other fare-related Transactions that are accurately and correctly processed by the Back Office as determined by comparing correctly processed Transactions with total Transactions.
Measurement Calculation	$\text{FTPA} = \frac{\text{Total number of Transactions correctly processed}}{\text{Total number of Transactions}} \times 100\%$
Operating Period	For calculation purposes, this service shall be assumed to be in operation 24 hours a Day, 7 Days a week, 365 Days a year.
Performance Criteria	100% accuracy
Measurement Period	Daily
Reporting Period	Daily, weekly and monthly
Supplemental Notes	In the event of late arriving Transactions that miss a calculation cut-off time, Contractor is permitted to update the accuracy computation once those Transactions are received.

SLA Reference and Title	SLA 1.4.1.2 – Revenue Processing Accuracy (RPA)
Priority	1
Description	Percentage of revenue from sales that are accurately and correctly processed by the Back Office as determined by comparing processed revenue with revenue reported through sales channels.
Measurement Calculation	$\text{RPA} = \frac{\text{Total revenue correctly processed}}{(\sum \text{Revenue reported from all sales devices} \pm \text{Adjustments})} \times 100\%$
Operating Period	For calculation purposes, this service shall be assumed to be in operation 24 hours a Day, 7 Days a week, 365 Days a year.
Performance Criteria	100% accuracy
Measurement Period	Daily
Reporting Period	Daily, weekly and monthly
Supplemental Notes	It is understood that periodically adjustments to sales revenue will be required. Accuracy calculations should account for that.

SLA Reference and Title	SLA 1.4.1.3 – Settlement Timelines (ST)
Priority	2
Description	Percentage of time that funds are settled to designated accounts at or before the required time.
Measurement Calculation	$\text{ST} = \frac{\text{Number of Days Settlement is made before the required time}}{\text{Total number of Days}} \times 100\%$
Operating Period	Business Days
Performance Criteria	≥ 99% (equivalent to two missed Days a year)
Measurement Period	Monthly
Reporting Period	Monthly and annually

Supplemental Notes	N/A

SLA Reference and Title	SLA 1.4.1.4 – Settlement Accuracy (SA)
Priority	1
Description	Percentage of time that funds are accurately and correctly settled to designated accounts.
Measurement Calculation	$SA = \text{Total funds correctly settled to designated accounts} \div \text{Total funds settled} \times 100\%$
Operating Period	Settlement Days
Performance Criteria	100%
Measurement Period	Daily
Reporting Period	Daily, weekly and monthly
Supplemental Notes	Calculations may include adjustments processed during the next Settlement period.

A - 8.05 (2) Critical Applications Availability

SLA Reference and Title	SLA 1.4.2.1 – Critical Applications Availability (CAA)
Priority	1
Description	Percentage of time that a Critical Application is operational and available to Users or associated system processes, calculated and reported on an application by application basis.
Measurement Calculation	$CAA = (\text{Measurement period} - \text{Critical Application Out of Service Time}) \div \text{Measurement Period} \times 100\%$
Operating Period	24 hours a Day, 7 Days a week, 365 Days a year
Performance Criteria	$\geq 99.9\%$
Measurement Period	Daily
Reporting Period	Daily, weekly and monthly
Supplemental Notes	There are no Exceptions for scheduled or planned maintenance; all outages or disruptions shall be included in the calculations.

A - 8.05 (3) Customer Relationship Management System

SLA Reference and Title	SLA 1.4.3.1 – Customer Relationship Management System Availability (CRMA)
Priority	1
Description	Percentage of time that the Customer relationship management system is operational and available for full use by Contractor, Call Center service provider, Customers, MTC, and Transit Operator staff.
Measurement Calculation	$CRMA = \text{Total time the CRM is available for use} \div \text{Measurement period} \times 100\%$

Operating Period	24 hours a Day, 7 Days a week, 365 Days a year
Performance Criteria	1. $\geq 99.85\%$ on a weekly basis (equivalent to approximately 15 minutes of outage a week) 2. ≤ 5 minutes per outage
Measurement Period	Weekly
Reporting Period	Weekly and monthly
Supplemental Notes	There are no Exceptions for scheduled or planned maintenance; all outages or disruptions shall be included in the calculations.

A - 8.05 (4) Data Management

SLA Reference and Title	SLA 1.4.4.1 – Data Store Update (DSU)
Priority	2
Description	Percentage of time that the Data Store is updated within the allowable update time based on the time between when Transactions are received or processed by the Back Office and the Data Store is updated.
Measurement Calculation	$DSU = \text{Number of updates occurring within the required time} \div \text{Total number of expected updates} \times 100\%$
Operating Period	24 hours a Day, 7 Days a week, 365 Days a year
Performance Criteria	1. $\geq 99\%$ 2. Data Store update interval shall be ≤ 30 minutes
Measurement Period	Weekly
Reporting Period	Weekly and monthly
Supplemental Notes	There are no Exceptions for scheduled or planned maintenance; all interruptions shall be included in the calculations.

A - 8.05 (5) Reports

SLA Reference and Title	SLA 1.4.5.1 – Report Accuracy (RA)
Priority	1
Description	Percentage of reports that correctly report all data whether in its atomic, summarized or calculated format.
Measurement Calculation	$DSU = \text{Number of correct reports} \div \text{Total number of reports} \times 100\%$
Operating Period	Business Day
Performance Criteria	100%
Measurement Period	Weekly
Reporting Period	Weekly and monthly
Supplemental Notes	N/A

A - 8.06 COMMUNICATIONS NETWORK

A - 8.06 (1) Network Availability

SLA Reference and Title	SLA 1.5.1.1 – Communications Network Availability (CNA)
Priority	1
Description	Percent of time Contractor-provided or managed networks provide connectivity to all C2 devices, systems or services connected to those networks.
Measurement Calculation	$\text{CNA} = (\text{Measurement period} - (\sum \text{Communications interruptions} \times \text{duration})) \div \text{Measurement period} \times 100\%$
Operating Period	24 hours a Day, 7 Days a week, 365 Days a year
Performance Criteria	1. $\geq 99\%$ per Day for field devices and retail locations 2. $\geq 99.9\%$ per Day for all MTC and Transit Operator connections 3. ≤ 5 minutes per communications interruption before service restored
Measurement Period	Daily
Reporting Period	Weekly and monthly
Supplemental Notes	Excludes communications interruptions due to wireless communications coverage issues and interruptions resulting from networks provided by the Transit Operators. There are no Exceptions for scheduled or planned maintenance; all interruptions shall be included in the calculations.

A - 8.07 WEBSITES, WEB PORTALS AND WALK-IN CUSTOMER SERVICE APPLICATIONS

A - 8.07 (1) Fare Product and Media Sales

SLA Reference and Title	SLA 1.6.1.1 – Fare Product and Media Sales Availability (FPMSA)
Priority	1
Description	Availability of web-based sales channels for Customers and sales agents to successfully purchase a Fare Product or fare medium using any of the payment methods accepted at that sales channel. A sales channel is consider Out of Service if a Customer or sales agent cannot purchase the desired Fare Product, cannot purchase a fare medium, or cannot utilize one of the accepted methods of payment.
Measurement Calculation	$\text{FPMSA} = (\text{Measurement period} - \sum \text{Sales channel Out of Service Time}) \div \text{Measurement period} \times 100\%$
Operating Period	24 hours a Day, 7 Days a week, 365 Days a year
Performance Criteria	$\geq 99.9\%$
Measurement Period	Daily
Reporting Period	Daily, weekly and monthly
Supplemental Notes	There are no Exceptions for scheduled or planned maintenance; all Out of Service Time shall be included in the calculations.

SLA Reference and Title	SLA 1.6.1.2 – Fare Product and Media Sales Response Time (FPMSR)
Priority	2
Description	Average time required for the sales channel to authorize and complete a Fare Product or Fare Media request initiated by a Customer or sales agent, as measured from the time the purchase is confirmed by the Customer or sales agent through to the time that the sale is authorized and Approved, including any credit or debit authorization.
Measurement Calculation	$FPMSR = \sum \text{Purchase times} \div \text{Total number of purchases}$
Operating Period	24 hours a Day, 7 Days a week, 365 Days a year
Performance Criteria	≤ 10 seconds
Measurement Period	Monthly
Reporting Period	Monthly
Supplemental Notes	Does not include time required to issue card once the purchase is Approved.

A - 8.07 (2) Account Management

SLA Reference and Title	SLA 1.6.1.3 – Account Management Availability (AMA)
Priority	1
Description	Availability of web-based channels for Customers and sales agents to establish, access or modify a C2 Customer account.
Measurement Calculation	$AMA = (\text{Measurement period} - \sum \text{Account management Out of Service Time}) \div \text{Measurement period} \times 100\%$
Operating Period	24 hours a Day, 7 Days a week, 365 Days a year
Performance Criteria	$\geq 99.9\%$
Measurement Period	Daily
Reporting Period	Daily, weekly and monthly
Supplemental Notes	There are no Exceptions for scheduled or planned maintenance; all Out of Service Time shall be included in the calculations.

SLA Reference and Title	SLA 1.6.1.4 – Account Management Response Time (AMRT)
Priority	2
Description	Average time between when a Customer or sales agent submits required information to open or update an account, and the time to return and display a response that the information has been accepted and updated, or not accepted with the reasons why.
Measurement Calculation	$FPMSR = \sum \text{Account management times} \div \text{Total number of account management events}$
Operating Period	24 hours a Day, 7 Days a week, 365 Days a year

Performance Criteria	≤ 3 seconds
Measurement Period	Monthly
Reporting Period	Monthly
Supplemental Notes	N/A

A - 8.08 RETAIL SALES

A - 8.08 (1) Retail Network and Devices

SLA Reference and Title	SLA 1.7.1.1 – Retail Network Availability (RNA)
Priority	3
Description	Availability of retail network sites to sell C2 products and services to Customers.
Measurement Calculation	$RNA = ((\text{Total number of sites} \times \text{measurement period}) - (\sum \text{Retail Site} \times \text{Out of Service Time})) \div (\text{Total number of sites} \times \text{measurement period}) \times 100\%$
Operating Period	24 hours a Day, 7 Days a week, 365 Days a year
Performance Criteria	≥ 98%
Measurement Period	Daily
Reporting Period	Daily, weekly and monthly
Supplemental Notes	There are no Exceptions for scheduled or planned maintenance; all Out of Service Time shall be included in the calculations.

A - 8.09 MAINTAINABILITY

A - 8.09 (1) Help Desk

SLA Reference and Title	SLA 1.8.1.1 – Help Desk Problem Resolution (HDPR)
Priority	4
Description	The percentage of reported issues or problems that are correctly resolved by the help desk.
Measurement Calculation	$HDPR = \text{Issues correctly resolved} \div \text{Issues reported} \times 100\%$
Operating Period	Help desk hours of operations
Performance Criteria	1. ≥ 90% resolved at initial call or report 2. ≥ 100% of any issues requiring follow-up resolved with one follow-up
Measurement Period	Weekly
Reporting Period	Weekly and monthly
Supplemental Notes	N/A

SLA Reference and Title	SLA 1.8.1.2 – Help Desk Call Average Answering Time (HDCAAT)
Priority	4
Description	Average wait times for calls to be answered as measured from the time the call is connected to a phone tree or designated number, to the time help desk personnel accept the call. Also applies to help desk contacts made through any online chat access to the help desk.
Measurement Calculation	$\text{HDCAAT} = \sum \text{Call wait times} \div \text{Total number of calls}$
Operating Period	Help desk hours of operations
Performance Criteria	≤ 45 seconds
Measurement Period	Weekly
Reporting Period	Weekly and monthly
Supplemental Notes	N/A

SLA Reference and Title	SLA 1.8.1.3 – Help Desk Call Maximum Answering Time (HDCMAT)
Priority	4
Description	Maximum wait times for calls to be answered as measured from the time the call is connected to a phone tree or designated number, to the time help desk personnel accept the call. Also applies to help desk contacts made through any online chat access to the help desk.
Measurement Calculation	Statistical analysis of the 99 th percentile of all help desk calls received.
Operating Period	Help desk hours of operations
Performance Criteria	99% of all calls ≤ 2 minutes
Measurement Period	Weekly
Reporting Period	Weekly and monthly
Supplemental Notes	N/A

SLA Reference and Title	SLA 1.8.1.4 – Email and Text Message Average Response Time (EMART)
Priority	4
Description	Average times for the help desk to provide a response to an email or text-reported issue, or contact the requestor by telephone to resolve the issue, as measured from the time the request was received to the time a response was issued to the requestor or a telephone call made to the requestor.
Measurement Calculation	$\text{EMART} = \sum \text{Response times} \div \text{Total number of requests}$
Operating Period	Help desk hours of operations
Performance Criteria	≤ 2 minutes
Measurement Period	Weekly
Reporting Period	Weekly and monthly
Supplemental Notes	N/A

A - 8.09 (2) Field Device Maintenance

SLA Reference and Title	SLA 1.8.2.1 – Validator Swap Out (VSO)
Priority	2
Description	For each Device Population, the average time for Maintenance personnel that have received C2 maintenance Training to swap out a field device as measured from the time a malfunctioning device is removed to the time a new device is installed, configured and made operational.
Measurement Calculation over Measurement Period	$VSO = \sum \text{Swap out times} \div \text{Total number of replacements}$
Applicable Device Populations	1. In-vehicle bus and rail Validators and operator control units 2. Faregate Validators 3. Stand-alone platform or station Validators
Operating Period	All Revenue Service hours of operation
Performance Criteria	1. In-vehicle Validators and operator control units: ≤ 5 minutes 2. Faregate Validators: ≤ 20 minutes 3. Stand-alone platform or station Validators: ≤ 10 minutes
Measurement Periods	Weekly
Reporting Period	weekly, and monthly
Supplemental Notes	N/A

A - 8.09 (3) Issue Resolution

SLA Reference and Title	SLA 1.8.3.1 – Critical Failure Issue Resolution Time (CFIRT)
Priority	1
Description	Average times to resolve a Failure that impacts C2 operations, either by making required repairs or by providing a temporary workaround that restores service based on three levels of priorities, as measured from the time the issue is reported to the time that the repair is made or workaround implemented: Level 1 – Failure impacts the ability of Customers to purchase fares or pay fares Level 2 – Failure impacts the ability for MTC or Transit Operators to access system functions Level 3 – Failure impacts Day to Day operations but does not directly impact Customers or Users
Measurement Calculation	For each level: $CAIRT = \sum \text{Resolution times} \div \text{Total number of issues}$
Operating Period	24 hours a Day, 7 Days a week, 365 Days a year
Performance Criteria	Level 1: ≤ 30 minutes Level 2: ≤ 2 hours

	Level 3: ≤ 1 business Day
Measurement Period	Monthly
Reporting Period	Monthly
Supplemental Notes	This criteria does not apply to single device Failures.

DRAFT

A - 9: Task Order Process and Form

Detailed Task Order Process:

Task Orders will be numbered sequentially. The period of performance shall be as set forth in the individual Task Order. The process for developing, signing and tracking task orders is summarized as follows:

Step 1 – The MTC Project Manager (“MTC PM”) prepares a draft Task Order to issue to Contractor. The MTC PM may solicit feedback from Contractor to facilitate drafting the Task Order.

Step 2* – Contractor prepares a proposal in response to the draft Task Order. A draft Task Order, as included herein this Contract as Attachment A-9, Task Order Form, attached hereto and incorporated herein by this reference, shall be provided to Contractor for review and comment.

Step 3* – The MTC PM reviews Contractor’s proposal to determine if it meets the objectives of the draft Task Order and if CONSULTANT’s proposed costs are reasonable. The MTC PM may solicit early feedback from the MTC **Electronic Payment Section Director** at this time, if necessary. Any changes to the draft Task Order deemed appropriate by MTC shall be incorporated in a draft Final Task Order.

Step 4* – The MTC PM forwards the draft Final Task Order to the MTC Contract Administrator for review and approval. Once approved, the MTC PM forwards two copies of the Task Order to the MTC **Electronic Payment Section Director**, for review and approval. The MTC **Electronic Payment Section Director** signs both copies of a Final Task Order to signify approval and returns them to the MTC PM.

Step 5 – The MTC PM sends both copies of the signed Final Task Order to Contractor, who signs both copies and returns one to the MTC PM.

Step 6 – The MTC PM sends one copy of the fully executed Task Order to the MTC or MTC Task Lead who initiates work, and sends another copy to MTC Finance to encumber funds against the Task Order. The MTC PM keeps the original fully-executed Task Order for the official project record.

Step 7 – Any services added to the Contract by a Task Order shall be subject to all applicable conditions of the Contract. Revisions to Task Orders shall require written approval by both the MTC **Electronic Payment Section Director** and Contractor. Revisions to Task Orders shall require written approval by both the MTC **Electronic Payment Section Director** and Contractor.

Step 8 – The MTC PM is responsible for overseeing the successful conclusion of the Task Order, and will manage the progress of the work, track invoices against the Task Order budget, and track milestone completion against the Task Order schedule.

Step 9 – Once the MTC PM determines the Task Order is complete, the MTC PM will send written notification to Contractor that the Task Order is complete and that all associated invoices are due to MTC within 30 days. Any balance of budget is made available to spend on future task orders at the MTC PM's discretion.

Step 10 – The MTC PM will annually assess the need for a Contract audit.

**The MTC Project Manager may revise the Task Order and/or Contractor may be asked to revise the proposal based on feedback received during Steps 2 through 4.*

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Task Order Form

1. Task Order No. (include FY)	
2. Title of Task:	A - 9.01
3. MTC Task Lead (if different from MTC Project Manager):	
4. Description of work:	<i>Summarize key task expectations. For more information, see attached Task Order Budget and Schedule and Detailed Description of Work (attached).</i>
5. Original Maximum Payment:	A - 9.01 (1)
6. Amended Maximum Payment:	<i>Include each amendment to maximum payment, by amendment number, for particular fiscal year.</i>
7. Completion Date:	Date Schedule attached.
8. Payment terms:	<i>Check the one that applies (see below for more information):</i> ☐ ☐ Deliverables ☐ Time and Materials

9. Payment Terms [complete A for Task Orders including one or more deliverables-based payments or B for Time and Materials Task Orders.]

A. Deliverables-based.

	<u>Deliverable</u>	a. Total Cost*
1.		\$1
2.		\$1
3.		\$1
4.		\$1

5.		\$1
6.		\$1
7.		\$1
	Total:	\$7.00

*Due upon satisfactory completion as determined by the MTC Project Manager.

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B. Time and Materials*Specify hourly rate for applicable personnel and include estimate of expenses.*

	<u>Personnel/Expense</u>	<u>Duties</u>	<u>Rate</u>	<u>Est. Hours</u>	<u>Total Cost</u>
1.			\$		\$1
2.			\$		\$1
3.			\$		\$1
4.	A - 9.02		\$		\$1
5.			\$		\$1
Total:					\$5.00

<u>Activity</u>	<u>Lead</u>	<u>Estimated Amount</u> <u>Budgeted</u>
		\$1
		\$1
		\$1
		\$1
		\$1
		\$1
TOTAL MAXIMUM PAYMENT		\$6.00

METROPOLITAN TRANSPORTATION COMMISSION

CONSULTANT

 Insert name and title of section director

Date:

 Insert name and title of authorized individual

Date:

J/Contract/MTC pathname

Task Order Schedule

<u>Deliverable/Milestone</u>		<u>Due Date</u>
		Date

Detailed Description of Work

Task Order #: Title

- 1. Description of subtask 1.
Deliverable – deliverable name
- 2. Description of subtask 2.
Deliverable – deliverable name
- 3. Description of subtask 3.
Deliverable – deliverable name
- 4. Etc.

Appendix 1: Glossary of Technical Terms

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Appendix 1 – Glossary of Technical Terms

Term	Definition
Account Holder	Individual or entity that has a Clipper account.
Account Management	A provision in the system that facilitates interaction among Back Office, Customer Service and customer-facing system components for accurate representation and reporting of fare value and/or products in Customer accounts.
Action List	Identification of Fare Media that is acceptable or not acceptable for travel.
Asset	A system component that has potential or actual value to an organization.
Asset Information	Meaningful data relating to assets and asset management, including, but not limited to, asset quantity, location, lifecycle stage, age, status, fault/repair history, upcoming/historical refresh/swap-outs, performance, and warranty validity periods
Asset Management	A collection of business process and tools used to operate, monitor and maintain an asset throughout its life cycle to assist an organization with resource allocation and utilization through informed decision making.
Authorized User	A user who is authorized to interact with a specific aspect of the System.
Auto-load	Process where cash value or fare product is added to or removed from a customer Account automatically, based on their preferences, when the account balance reaches a certain threshold or at a specified time interval via some Field Devices.
Baseline System Configuration	An agreed description of the attributes of a system and its components between the Contractor and the deploying organization at a point in time that serves as a basis for defining future changes.
Business Rules	The rules and guidelines that govern the agreement between the Contractor and MTC and that define how the System will enforce the Transit Operator fare policies.
Business Intelligence	Refers to systems and services that provide the ability to process, analyze and report on real-time and archived system data.
Back Office	The collection of systems and services provided by Contractor, see also Clipper Central System CSS
Certification Register	A list of hardware and software that is certified to be compatible with Clipper.
Certification Request	Submission from a prospective supplier seeking qualification of hardware and/or software for use in C2.

Term	Definition
Certification Requirements	A description of what is required in order for hardware or software to be compatible with Clipper.
Change Request	A document, or some other form of written communication, that describes a request for a change to the system's configuration and/or functionalities.
Change Request Register	A record of all Change Requests that have been submitted for approval to the Change Control Board including requests currently under review and historical requests, retaining record of requests that were rejected.
Configuration Management	Administrative and technical actions taken to identify and document the functional characteristics and physical layout of a system.
Customer	System end users who use Clipper to pay for qualifying Clipper Services or to complete Account Management activities.
Customer Website	Public-facing C2 website for account management accessible to Authorized Users.
Dashboard	A representation of information in graphical summary format. Dashboards typically provide a customizable real-time display of metrics and key performance indicators in a single window.
Data Store	A historical database used to replicate and store data from the live Clipper database, used to actually operate the system. The Clipper Data Store is architecturally separate from the live database to avoid any adverse impact on system performance and is used to run all reports.
Fare Media	Physical or virtual carrier of a Fare Product and/or value.
Fare Payment and Enforcement	Measures to control access and perform and enforce fare payment.
Fare Policy	Organizational policy guidelines for establishing and restructuring fares that are used by the senior management for fare adjustments. A typical fare policy addresses the following: 1) fare structure; 2) fare levels (e.g., full fare, reduced fare); 3) transfer policy; and 4) Title VI fare equity provisions.
Fare Product	The Cash Value, Stored Ride or Period Pass loaded into a Sub-Account or carried by Fare Media and used for travel payment
Field Device	Refers to electronic devices and system components installed on-board and at wayside locations (e.g., stops and stations) or carried by field staff.

Term	Definition
First-line Maintenance	Basic corrective and preventive maintenance activities, such as routine equipment checks; resolution of minor operational problems, such as dollar bill jams and card dispensing jams; external equipment cleaning; internal component cleaning and lubrication; running diagnostics tests; removal and replacement of depot maintenance devices and modules; labor for scheduled replacement of devices and modules; and verification of physical network connections and verification of power connection (BART Faregate Network equipment only)
Fit for Purpose	C2 system that meets user and customer needs for a new automated fare collection system as addressed in the system requirements
Marketing Support	Activities that include 1) branding, customer education, promotion of C2; and 2) collection, summarizing and reporting on customer feedback with respect to C2.
Mobile Fare Payment	Includes systems and services enabling fare payment via customer devices
Negative List	Identification of Fare Media not accepted for travel
Loggable Event	An event that triggers a log being stored of that event occurring.
Operator Control Unit	A physical device that provides the User Interface for drivers to interact with C2 system.
Organizational Change Management	A discipline that guides an organization on how to prepare and support individuals to successfully adopt change in order to drive organizational outcomes.
Paratransit	Transportation service that services qualifying customers.
Positive List	Register of Fare Media explicitly accepted for travel.
Primary Account Number (PAN)	The account number used to access a bank-administered credit or debit account. This number is embossed on the front of the customer's bank card, and is usually the number transmitted when a contactless bank card is used for payment.
Registered	1) A Customer or Account Holder who has provided personally identifiable information (PII) to the C2 Customer Service Contractor or Systems Integrator; 2) Clipper Fare Media linked to a Registered Customer or Account Holder
Retail Sales and Distribution Network	A collection of participating retailers throughout San Francisco Bay Area that partner with MTC and Transit Operators for selling and reloading Fare Media.

Term	Definition
Training	The action of teaching a user business processes, features and skills required to operate and maintain a system.
Train-the-Trainer	Program where Training is delivered to a limited number of staff within an organization, who subsequently train other staff
Transaction	Electronic record of a Fare Product sale or use
Transit Operator	A transit service provider, participating in Clipper [®] Program
User	Includes customers, internal staff and external/contracted staff of an organization, authorized to operate and maintain C2 system and its components.
User Interface	The collection of User Views that enable an Authorized User to interact with the system
User View Library	The collection of saved User Views
User Views	A collection of one or more specific graphical user interfaces (GUIs) selected and arranged by the User on a display screen. In some cases, non-graphical views may be used by maintenance and support staff.
User-Configurable Parameters	Parts of the system that users can configure without requiring the support of the C2 Systems Integrator
Validator, Faregate	The target connected to faregates where a customer presents the fare payment media.
Validator, Onboard	Electronic device installed onboard a transit vehicle that includes an embedded media reader and processor to read and exchange information with a presented fare payment media.
Validator, Standalone	Device at a platform, rail station, or bus rapid transit station that includes a media reader and processor to read and exchange information with a presented fare payment media.
Work Ticket	A request for a maintenance intervention that provides relevant information regarding required preventive or ad-hoc maintenance of a system component.

Appendix 2: Glossary of Acronyms

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Appendix 2 – Glossary of Acronyms

Acronym	Term	Definition
ACH	Automated Clearing House	An electronic network for financial transactions in the United States
ADA	Americans with Disabilities Act	A civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public
ADAAG	ADA Accessibility Guidelines	This document contains scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities under the Americans with Disabilities Act (ADA) of 1990
AMBER	AMBER Alert	Once law enforcement determines that a child has been abducted and the abduction meets AMBER Alert criteria, law enforcement issues an AMBER Alert and notifies broadcasters and state transportation officials. AMBER Alerts interrupt regular programming and are broadcast on radio and television and on highway signs. AMBER Alerts can also be issued on lottery tickets, wireless devices such as mobile phones, and over the Internet. (source: US DOJ)
APN	Access Point Name	A gateway between a GSM, GPRS, 3G, or 4G mobile network and another computer network.
BART	Bay Area Rapid Transit	A partner transit agency in the Clipper program that provides regional rail service in the San Francisco Bay Area.
CCCTA	The County Connection	A partner transit agency in the Clipper program providing fixed-route and paratransit bus service throughout the communities of Concord, Pleasant Hill, Martinez, Walnut Creek, Clayton, Lafayette, Orinda, Moraga, Danville, San Ramon, as well as unincorporated communities in Central Contra Costa County.
CDRL	Contract Data Requirements List	A list of authorized data requirements for a specific procurement that forms part of a contract.
CMMS	Computerized Maintenance Management Systems	A software-based system to maintain a computer database of information about an organization's maintenance operations.
CRM	Customer Relationship Management	A process/product that allows organizations to manage interactions with existing and potential customers through various communication channels

Acronym	Term	Definition
		for business needs, primarily in the area of sales, marketing and customer service.
CSV	Comma Separated Value	File type that allows data to be saved in a structured tabular format.
DAS	Data Acquisition System	BART's real-time data collection and monitoring system for fare collection equipment.
EMI	Electromagnetic Interference	A disturbance degenerated by an external source affecting an electrical circuit by electromagnetic induction, electrostatic coupling, or conduction.
FAST	Fairfield and Suisun Transit	A partner transit agency in the Clipper program providing general public fixed route service through nine local and four intercity/commuter routes.
GAAP	Generally Accepted Accounting Principles	A common set of accounting principles, standards, and procedures to be followed when compiling financial statements.
GAAS	Generally Accepted Auditing Standards	Sets of standards against which quality audits are performed and may be evaluated.
GPS	Global Positioning System	A global navigation satellite system providing location and time information in all weather conditions operating independently of any telephonic or internet reception.
ICD	Interface Control Document	Document describing the interface(s) between subsystems and/or between a system and subsystems.
IEEE	Institute of Electrical and Electronics Engineers	Professional organization that defines standards for electrical and electronics engineering.
IEC	International Electrotechnical Commission	The international standards and conformity assessment body for all fields of electrotechnology.
IFRS	International Financial Reporting Standards	A single set of accounting standards, developed and maintained by the International Accounting Standards Board intended to provide a global standard for accounting.
IP	Ingress/International Protection	Established by IEC as IEC 60529, IP codes defines and rates protection against intrusion, dust, accidental contact and water by mechanical and electrical enclosures.
ISO	International Standards Organization	An independent, non-governmental, international organization with a membership comprised of various national standards bodies that promotes worldwide proprietary, industrial, and commercial standards.
IVR	Interactive Voice Recognition	An automated telephone system that allows customers to receive information and initiate actions through the use of voice commands or touchtone input.

Acronym	Term	Definition
MCBF	Mean Cycles Between Failures	An expression of reliability similar to Mean Time Between Failures (MTBF) for electromechanical relays where failure predictions are based on the number of cycles.
MTBF	Mean Time Between Failures	An expression of reliability based on the predicted elapsed time between inherent failures of a system during operation.
MTC	Metropolitan Transportation Commission	Regional transportation planning, financing and coordinating agency for the nine-county San Francisco Bay Area; Clipper® Program manager.
NEMA	National Electrical Manufacturers Association	A professional association and standards developing organization for electrical equipment manufacturers in the United States
OCU	Operator Control Unit	A physical device that provides the User Interface for drivers to interact with C2 system
OEM	Original Equipment Manufacturer	Manufacturer that produces products sold by another company, usually under that company's brand or model. It is common for the manufacture to provide warranty support for the product.
PA-DSS	Payment Application Data Security Standard	A global security standard, formerly referred to as the Payment Application Best Practices (PABP) created by the Payment Card Industry Security Standards Council (PCI SSC) implemented in an effort to provide the definitive data standard for software vendors developing payment applications aimed at preventing developed payment applications for third parties from storing prohibited secure data including magnetic stripe, Card Security Codes (CSCs), or Personal Identification Numbers (PINs).
PAN	Primary Account Number	The number that is embossed and/or encoded on a plastic card that identifies the issuer and the particular cardholder account.
PCI-DSS	Payment Card Industry-Data Security Standard	Standard that defines security requirements for vendors accepting bank cards for payment.
RFID	Radio Frequency Identification	A communications protocol utilizing electromagnetic fields to automatically identify and track tags attached to objects.
SFMTA	San Francisco Municipal Transportation Agency	A partner transit agency in the Clipper program responsible for oversight of transit, streets and taxis in the city of San Francisco, California.
SMART	Sonoma-Marina Area Rail Transit	A partner transit agency in the Clipper program providing a passenger train and bicycle & pedestrian pathway project located in San Francisco's North Bay.

Acronym	Term	Definition
SAE	Society of Automobile Engineers, now called SAE International	A professional association and standards developing organizational for engineering professionals in transportation industry.
SSAE	Statement on Standards for Attestation Engagements	Issued by senior technical bodies of the American Institute of Certified Public Accountants (AICPA) designated to issue pronouncements on attestation matters. Attestation interpretations are recommendations on the application of SSAEs in specific circumstances, including engagements for entities in specialized industries, issued under the authority of AICPA senior technical bodies.
VTA	Valley Transportation Authority	A partner transit agency in the Clipper program is an independent special district that provides bus, light rail, and paratransit services.
W3C	Worldwide Web Consortium	An international community and standards developing organization for the web.

Appendix 3: CDRLs Table

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Appendix 3 – Required CDRLs

The following table provides an overview of the required design documents, operations and maintenance plans, test plans, and project management document defined in these technical requirements. The table identifies update frequency and provides notes with supplemental information regarding update frequency. .

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
DESIGN DOCUMENTS										
CDRL-DD-001	Application specification to Card Manufacturers	Design document of specifications for fare media to be provided to third-party fare media suppliers	A-1.19 (1)						●	As needed.
CDRL-DD-002	Back Office System Design Document	Design document detailing the Back Office system design, including specifications, system architecture diagram, software concept and design, communications design and data flow diagram, hardware integration/installation diagram, interface design, and maintenance information	A-1.11 (1)	●						

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-DD-003	Business Intelligence/Reporting System Design Document	Describing the Business Intelligence and Reporting system, including data architecture, report building software, example Dashboards and other User Views, and example exported reports	A-1.13 (4)						●	
CDRL-DD-004	C1 Cutover Plan	Plan detailing the steps, responsibilities, schedules, and processes required to transfer C1 infrastructure and operations to Contractor	A-2.01						●	
CDRL-DD-005	Communications Network Design Document	Network, interface and IP-addressing design for each Transit Operator, including Communications Network Specifications, System Architecture Diagram, Software Concept and Design, Communications Design and Data Flow Diagram, Hardware Integration Design/Installation Diagram, Interface Design, Maintenance	A-1.16 (1)	●					●	Annually at a minimum, and upon request from MTC

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-DD-006	Customer Relationship Management (CRM) System Design Document	Enables customers to manage accounts through all available customer service channels, including, but not limited to, managing a master account and sub-accounts to associate and disassociate accounts, media, product and etc. with an account.	A-1.11 (7)	●					●	As needed - to meet design review requirements and to reflect changes, submitted annually at a minimum
CDRL-DD-006a	Interactive Voice Response (IVR) System Supplemental Design Document	A supplemental Customer services solution design document describing the design for the IVR system to be used to provide C2 customer service and general program information	A-1.11 (8)	●					●	As needed - to meet design review requirements and to reflect changes, submitted annually at a minimum
CDRL-DD-007	Data Store Design Document	define the complete set of data and records that can be created, replaced, updated or deleted by an Authorized User, along with all data available through the data store	A-1.13	●					●	As needed - to meet design review requirements and to reflect changes, submitted annually at a minimum

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-DD-008	Design Review Plan	Describes in detail the iterative design process for each design phase	A-3.01	●					●	As needed - 60 days prior to each design phase, annually at a minimum
CDRL-DD-008a	Conceptual Design and Review Plan	Describe key elements necessary to describe and demonstrate how the proposed system and services meet C2 requirements	A-3.01						●	As needed - 60 days prior to Conceptual Design Review
CDRL-DD-008b	Preliminary Design and Review Plan	describes the necessary customization and configuration for C2, including an initial list of design gaps and configurable parameters, and recommended descriptions, drawings, flow charts, wire screens, draft manuals, to fill the gaps	A-3.01						●	As needed - 60 days prior to Preliminary Design Review
CDRL-DD-008c	Final Design and Review Plan	Updates to the Preliminary Design and Review Plan.	A-3.01						●	As needed - 60 days prior to Final Design Review
CDRL-DD-009	Environmental Design Specifications Document	Defining specifications for all field devices, including Transit Operator-specific specifications.	A-1.08	●					●	As needed - to meet design review requirements and to reflect changes, submitted annually at a minimum

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-DD-010	Field Devices Design Document	Design document for field devices that includes Device Specifications, System Architecture Diagram, Software Concept and Design, Communications Design and Data Flow Diagram, Hardware Integration Design / Installation Diagram, Interface Design, and Maintenance	A-1.02	●					●	As needed - to meet design review requirements and to reflect changes, submitted annually at a minimum
CDRL-DD-010a	Fare Validator Supplemental Design Document	Fare Validator device-specific supplemental design documentation as described for CDRL-DD-010	A-1.03	●					●	As needed - to meet design review requirements and to reflect changes, submitted annually at a minimum
CDRL-DD-010b	Faregate Validator Supplemental Design Document	Faregate Validator device-specific supplemental design documentation as described for CDRL-DD-010	A-1.06						●	
CDRL-DD-010c	Onboard Equipment Supplemental Design Document	Onboard equipment-specific supplemental design documentation as described for CDRL-DD-010	A-1.04						●	As needed - to meet design review requirements and upon MTC request

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-DD-010d	Paratransit Equipment Supplemental Design Document	Paratransit-specific supplemental design documentation as described for CDRL-DD-010	A-1.05						●	
CDRL-DD-010e	Stand-alone Validators Supplemental Design Document	Stand-alone Validator- specific supplemental design documentation as described for CDRL-DD-010	A-1.07						●	As needed - to meet design review requirements and to reflect changes, submitted annually at a minimum
CDRL-DD-011	Interface Control Documents	Detailing data, data definitions, data formats, communications protocols for all internal and external systems interfaces	A-1.15		●					Submitted twice yearly and upon request from MTC
CDRL-DD-012	Test Facility Design Document	Describes the design for the testing facility physically located within the service area of MTC, established prior to C2 Systems Integration Testing; duplicating all System functionality, communications, interfaces, and devices of the C2 production environment	A-3.05						●	

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-DD-013-[X]	Transit Operator-specific Integration Design Documents	Design document for each Transit Operator for bus, rail, ferry collection systems between those systems and existing systems.	A-3.03	●					●	As needed - to meet design review requirements and to reflect changes, submitted annually at a minimum

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-DD-014	Website, Web Portal, and Mobile Application Development Plan	Describes the approach to development, prototyping, and review of websites, web portals, and mobile applications, including interface design, data integration, security, and system architecture diagram. Includes customer mobile application supplemental materials covering development of the Secure internet-enabled mobile application(s) that provides the customer with full access to the customer relationship management system functions and capabilities related; the secure websites for customer service and to access the CRM in order for customers to manage their C2 Accounts; secure web portal for discount program management; secure web portal for Institutional program management; and secure web portal for maintenance management.	A-1.17 (1) A-3.02	●					●	As necessary to reflect changes, including outcomes of the usability testing; confirm current at a minimum annually

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
TEST PLANS										
CDRL-TEST-001	Test Plans	Comprehensive; including test procedures, test scripts, and pass/fail requirements, including prototype testing, first article testing, unit/device hardware testing, unit/device software testing, installation testing, integration testing, end-to-end functionality testing, use case operations testing, and system acceptance testing.	A-3.04 A-5.01 (10)						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-002	Back Office Test Plan	Demonstrating all back office functions and operations	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-003	Business Intelligence/Reporting System Test Plan	Including reporting system, data views, data export, and dashboard reporting	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-TEST-004	Communications System Test Plan	Including network connectivity, typical and maximum data volume, network performance, and operation of all wireless networks	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-005	Credit/Debit Gateway System Test Plan	Including demonstration that Primary Account Numbers (PAN) tokenization, specified time requirements for transactions are met, recurring payments, and compliance with Payment Card Industry standards	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-006	Customer Services System Test Plan	Including customer relationship management system, all websites and web portals, walk-in center solution, and mobile applications	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-TEST-007	Environmental Test Plan	Documenting environmental and shock and vibration requirements have been met, providing measurement of actual Transit Operator vehicle electrical/mechanical operating environment, comparison of actual environment to specified, compliance with applicable regulatory requirements, and emission and electromagnetic compliance	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-008	Factory Acceptance Test Plan	Demonstrating that devices, systems, and sub-systems provide all functions, features, and requirements as specified in a factory or lab environment; that all performance measures have been met; that all material software defects have been rectified; and that all hardware defects have been rectified	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-TEST-009	Final System Acceptance Test Plan	Demonstration that all Contract requirements have been met; that all installation work, documentation, and training has been completed; that a fully-functional system has been in stable operation for a minimum of six (6) months; and that all material software and hardware defects have been resolved and approved by MTC.	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-010	Financial Management System Test Plan	Including financial and transaction processing, apportionment and settlement, reconciliation, chargeback and debt processing, fraud management, and accounting	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-011	Installation Testing Report	For ach installed system, subsystem, or device	A-3.03						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-TEST-012	Maintainability Test Plan	Documenting all devices and subsystems meet maintainability requirements and procedures	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-013	Mobile Application Usability Testing Plan	Includes participation from MTC and Transit Operators	A-3.02						●	30 days prior to testing.
CDRL-TEST-014	Security System Test Plan	Demonstrating standards compliance, user access controls, data integrity, network security, Payment Card Industry compliance, internal penetration testing, external penetration testing, and vulnerability scans.	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-015	System Integration Test Plan	Demonstrating all end-to-end functionality, operation of all interfaces, operation of all customer service channels, operation of all business rules, correct and accurate transaction processing, and correct and accurate revenue management and apportionment	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-TEST-016	System Monitoring and Control Test Plan	Including monitoring of field devices; control of field devices; monitoring of back office; reconciliation with Transit Operator-specific data; log access to devices; configuration management of operating parameters; management of lists, business rules, and key distribution; configurable system parameters; sending notification of faults; and monitoring of social media	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-017	Unit/Device Test Plan	Including demonstration that all hardware and on-board system boot time requirements have been met, functionality is provided, and user interfaces are functional	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-TEST-018	User Acceptance Test Plan	Including test cases, selection of test team consisting of MTC and Transit Operator personnel, user random test cases period, log of failures and corresponding severity, and a verification and validation assessment describing testing outcomes and corrective actions to be taken	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-019	Validator Test Plan	Demonstration of all validation functionality, including transaction times and throughput, inspection device operations, integration and operation of legacy fare equipment, communications, compliance with Payment Card Industry standards, and compliance with payment brand requirements for open payment	A-3.04						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests
CDRL-TEST-020	Website Usability Test Plan	Including participation from MTC and Transit Operators	A-3.02						●	30 days prior to testing and as necessary to reflect changes, including outcomes of other tests

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
OPERATIONS AND MANAGEMENT PLANS AND DOCUMENTS										
CDRL-O&M-001	Operations Plan	Describes all aspects of C2 operation providing a summary of and correlation among all other plans related to Operations and Maintenance Services; procedures and processes for operations and maintenance, or a reference to information in plans for specific services; roles, responsibilities, and coordination among all parties involved in operations and maintenance services; staffing plan showing positions, types, and quantities of staff required to fulfill operations and maintenance requirements; systems and tools used for managing operations and maintenance services; and reporting for operations and maintenance	A-5.01	●						Annually at a minimum, and upon request from MTC

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-001a	C2 System Expansion Plan	Approach, representative schedule, and costs for expanding equipment, adding/increasing participating Transit Operators, integration of additional services	A-6	●						Annually at a minimum, and upon request from MTC
CDRL-O&M-002	Account Management and Operations Plan	Describes, at a minimum, account management functionality and parameters; customer, Contractor, and Transit Operator access and management capabilities; issue reporting and resolution mechanisms; security and privacy protection measures; and roles and responsibilities for operation	A-5.01 (3)	●						
CDRL-O&M-003	Business Continuity Plan	Comprehensive plan for business continuity for all business operations under Contractor's control	A-1.21(9)	●						
CDRL-O&M-004	C1 Operations Plan	Comprehensive plan for ongoing operations of C1 through the transition period.	A-2.01	●						

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-005	Certification Management Plan	Documenting all certification activities and requirements	A-5.01 (11)	●					●	When there is any change in requirements but no less frequently than annually
CDRL-O&M-006	Change Management Plan	documenting process, procedures and responsibilities for change management and change control	A-1.21(8)		●				●	As necessary to reflect changes; minimum of twice yearly
CDRL-O&M-007	Customer Services Management Plan	Details customer services systems and functionality to be provided by Contractor; additional systems and equipment to be provided by others; roles and responsibilities; operational procedures; policies, fare information, and reference documents; issue identification, communication, and resolution; escalation procedures; and documentation and training	A-5.01 (4)	●					●	With each change in customer service systems or operations; annually at a minimum

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-008	Discount Program Management and Operations Plan	Documents business rules for discount programs; roles and responsibilities; process and timeframes for discount application submittals, approvals, and fulfillment; and all other aspects of managing discount programs	A-5.01 (6)		●				●	As needed - to meet design review requirements and to reflect changes, submitted twice yearly at a minimum
CDRL-O&M-009	Fare Media Management Plan	Describes the processes, personnel, and systems involved in fare media management to allow Customers , Transit Operators, retailers, institutions, and others to order and purchase both physical and virtual (mobile application) fare media.	A-5.07	●						
CDRL-O&M-010	Fare Payment and Enforcement Management Plan	The O&M plan For validating fare media, granting or denying access, managing authorization, and providing fare enforcement	A-1.07	●						

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-011	Financial Management and Operations Plan	Describes capital and operating cost management; MTC and Transit Operator revenue management business rules, funds processing and management; revenue collection, allocation, and settlement processes; chargeback and bad debt processing and management; fraud management; reconciliation procedures; reporting; accounting procedures; addressing and resolving chargebacks; audit; roles and responsibilities for operation; access management; and controls	A-1.11 (5) A-5.01 (2)	●						

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-012	Institutional Program Management and Operations Plan	Describes the approach to assuming management of all existing Clipper accounts, process for approving and establishing institutional accounts, roles and responsibilities for account access and management, user management, revenue management, financial management, education and training, support procedures, and reporting	A-5.01 (5)	●						
CDRL-O&M-013	Maintenance Management Plan	Including field device, remote, network, software, interface, maintenance help desk and support, maintenance web portal, and preventative maintenance procedures	A-5.02 (1)	●						
CDRL-O&M-013a	Asset Refreshes Plan	Scheduled asset refreshes to replace system hardware and software	A-5.01	●						Per agreed upon schedule(s); annually at a minimum
CDRL-O&M-013a-1	C1 Asset Register	Of all field devices and hardware, whether in use or in inventory	A-2.04				●			Update based on changes in asset status

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-013a-2	C2 Asset Register	Of all field devices and hardware, whether in use or in inventory	A-5.02 (1)				●			
CDRL-O&M-013b	C2 System Refresh Plan	Provide a roadmap for planned upgrades and enhancements; Assessment of current and future state of the industry for fare payment systems and technologies; Recommendations for optional C2 changes to be considered in the next 1 year, 2 years and 5 year time horizons; project costs; cost benefit analysis; risk analysis; approach for reviewing plan with the Contracting Authority	A-6	●						
CDRL-O&M-013c	Field Devices Maintenance Procedures	Procedures for Transit Operator personnel to provide first line maintenance.	A-5.02 (1)						●	

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-013d	Maintenance Depot Management Plan	Includes a listing and inventory of all devices maintained by Contractor, central spares bank and reporting procedures, faulty device returns and report procedures, field device replacement and reporting procedures, and repair or replace and reporting procedures	A-5.02 (3)	●					●	
CDRL-O&M-013e	Maintenance Help Desk Plan	Including help desk and support, web portal, preventative maintenance, and CMMS and prioritization procedures	A-5.02 (2)						●	

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-014	Retail Program Management and Operations Plan	Describe the approach to assuming management of existing Clipper retail contracts, managing retail contracts, identifying new retail locations, ensuring sufficient retail location availability, implementing and training new retail locations, distributing C2 fare media and marketing materials as needed to retail locations, notifying retailers of program changes, promoting retail locations, reporting on retail program, collecting revenue from retailers, monitoring operation of the retail network, providing technical support to retailers, configuring and managing access to the retail application and reporting, and establishing customer-facing functionality to be offered at retail locations	A-5.01 (8)	●					●	Upon any changes to the program; confirm content is current annually

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-015	Quality Assurance Program Plan	Address control of the design, system, installation, testing, and operations; defined roles and responsibilities	A-1.19 (4)						●	As necessary to reflect changes; confirm current a minimum of twice yearly
CDRL-O&M-015a	Software Development Quality Assurance Program Plan	Including, but not limited to, testing and functionality, validity of use cases and data sets, regression testing, and validation of updates	A-1.19 (4)						●	Upon change to plans or procedures; confirm content is current annually
CDRL-O&M-015b	System Configuration Management Plan	define the user-configurable parameters and modules of the system; planning and recording of C2's configuration changes; testing and implementing the changes; and reverting to previous configuration	A-1.09 (1) A-1.19 (4) A-5.01 (10)						●	
CDRL-O&M-016	Reliability Assessment Program Plan	Document measurement and reporting of all reliability and availability measures	A-1.19 (4)						●	As necessary to reflect changes; confirm current a minimum of twice yearly

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-017	Risk Management Plan	detailed program management status and strategy to address technical, schedule, operational, and cost risks; detail the structure, tools and procedures for planning, identification, assessment, analysis, rating, prioritization, control options, handling plans, and monitoring of all program risks	A-1.19 (7)	●					●	
CDRL-O&M-018	Safety Management Plan	Details how adequate safety will be achieved and maintained throughout the operational lifecycle of C2	A-1.19 (5) A-5.02 (4)	●					●	Upon change to plans or procedures; confirm content is current annually
CDRL-O&M-019	Security Management Plan	detailing how adequate security for systems, business processes, documents, data and physical areas, and key management will be achieved and maintained throughout the operational lifecycle of C2	A-5.02 (4)	●					●	Upon change to plans or procedures; confirm content is current annually

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-020	System Audit Plan	documents processes, timing, and procedures for internal and external audits of C2, including the data, personnel, and other services necessary to support audits	A-1.21 (6)	●					●	Upon change to plans or procedures; confirm content is current annually
CDRL-O&M-021	System Monitoring and Control Management Plan	Describe performance monitoring and reporting; fault monitoring and reporting; remote monitoring and control; email and text message alerts; diagnostic utilities; control and log access to devices; card and reader key distribution, rotating, and management; cryptographic algorithm distribution and management; and management and monitoring of all system interfaces	A-1.11 (1) A-1.13 (1) A-1.13 (5) A-5.01 (9)	●					●	Submitted as needed to fulfill design phase requirements and a minimum of bi-annually/twice yearly
CDRL-O&M-022	Transaction Processing Management and Operations Plan	describes transaction processing, management, and storage in the system; adjustment/exception monitoring and resolution; roles and responsibilities; and access management	A-5.01 (1)	●					●	Submitted as needed to fulfill design phase requirements and a minimum of annually

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-O&M-023-[X]	Transit Operator-specific Installation Plan	Describes the installation plan for each Transit Operator, including all equipment, networks, hardware, attachments, cabling and etc. to be supplied; all site-specific information such as scheduling and safety plans; management approach including roles and responsibilities; and documentation such as drawings and procedures	A-3.03						●	Upon change to plans or procedures; confirm content is current annually
CDRL-O&M-24	Transition Plan	Detailing the approach for transitioning all aspects of the current Clipper program to C2	A-4.01						●	
CDRL-O&M-24a	End of Term Transition Plan	Describes Transition Services responsibilities, processes and procedures, including anticipated responsibilities and expectations of MTC and the successor operator	A-7						●	

					UPDATE FREQUENCY					
NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	NOTES
CDRL-O&M-25	Virtual Fare Media Development and Management Plan	Documents media testing and quality assurance procedures, inventory threshold and reordering, physical storage, and order fulfillment procedures	A-1.19 (2) A-5.01 (7)						●	Upon any changes in process, procedures, or entities involved
TRAINING PLANS AND MATERIALS										
CDRL-TRN-001	Training Plan	Comprehensive plan that includes, for example, all personnel responsible for C2 systems and services, documentation of training methodology, curriculum summary, instructor qualifications, details regarding each training course	A-3.06						●	Upon change to plans or procedures; confirm content is current annually
CDRL-TRN-002	Training Materials	Including, but not limited to, presentations, manuals, guides, printed and electronic material, classroom aids, training rigs, tests, and online content	A-3.06						●	As needed for training; confirm content is current annually
SYSTEM MANUALS										

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-SM-001	System Manuals	Including operations manuals, repair and maintenance manuals, software manuals, maintenance procedures, and operations procedures	A-5.01						●	Upon change to plans or procedures; confirm content is current annually
PROGRAM MANAGEMENT AND REPORTING										
CDRL-PM-001	Approved Changes Register	Approved changes tracking register including identifying party requesting the change; change request, review, and approval dates; implementation schedule; programmed software release; current status; and issues and risks	A-1.21(8)				●			Update based on change request submission and status
CDRL-PM-002	C2 Business Process Reports	Identify and describe current business processes utilizing the agreed modeling notation, describe the methodology used to review process for efficiency, provide evidence gathered from performing the efficiency review, and provide recommendations on process improvements.	A-1.21(3)			●				

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-PM-003	CDRL Management Plan	Defines how all CDRLs for which Contractor is responsible will be developed and maintained through the duration of the contract.	A-1.21 (1)	●						
CDRL-PM-004	Compliance Reporting	report on compliance with external regulatory requirements, including data, personnel, and other services necessary to achieve compliance as needed	A-1.21 (6)	●					●*	
CDRL-PM-005	Cost Adjustment Register	documenting on an ongoing basis the impact on Target Price of the design decisions made during each design and design review phase	A-3.01						●	Ongoing updates
CDRL-PM-006	Service Level Reports	Reports of actual Service Levels generated and provided to MTC on a monthly basis	A-8.02				●			
CDRL-PM-007	Organizational Change Management Program Plan	Identify what is within Contractor's scope and control; identify what is within the Contactor's scope but outside its control; identify C2-business process owners; document C2-related business processes	A-1.21 (3)			●				

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-PM-008	Program Management Master Plan	includes organization chart and responsibilities of all individuals on Contractor team, definition of mechanisms utilized to control program elements	A-1.21 (1)		●					
CDRL-PM-009	Project Schedule	In MS Project format, including high level roll up and detailed views. The detailed view will include predecessor dependencies, staff resourcing, and other relevant details down to the weekly activity view.	A-1.21 (1)				●			
CDRL-PM-010	Regional Chart of Accounts	Supports effective reporting, tracking of funds, liabilities and timing related cash flow positions to support operator and regional financial accounting needs	A-1.11 (5)						●	Ongoing
CDRL-PM-011	Requirements Traceability Matrix	Identifying all requirements set out in the Contract and including any new requirements as a result of Approved Status	A-1.21 (1)						●	As necessary, annually at a minimum

NO.	TITLE	BRIEF DESCRIPTION	SECT. REF	UPDATE FREQUENCY						NOTES
				ANNUALLY	BI-ANNUALLY	QUARTERLY	MONTHLY	WEEKLY	WHEN THERE ARE CHANGES	
CDRL-PM-012	Risk Register	Record and track, at a minimum: technical, schedule, operational, and cost risks	A-1.21 (1) A-1.21 (7)	●					●	As necessary, annually at a minimum

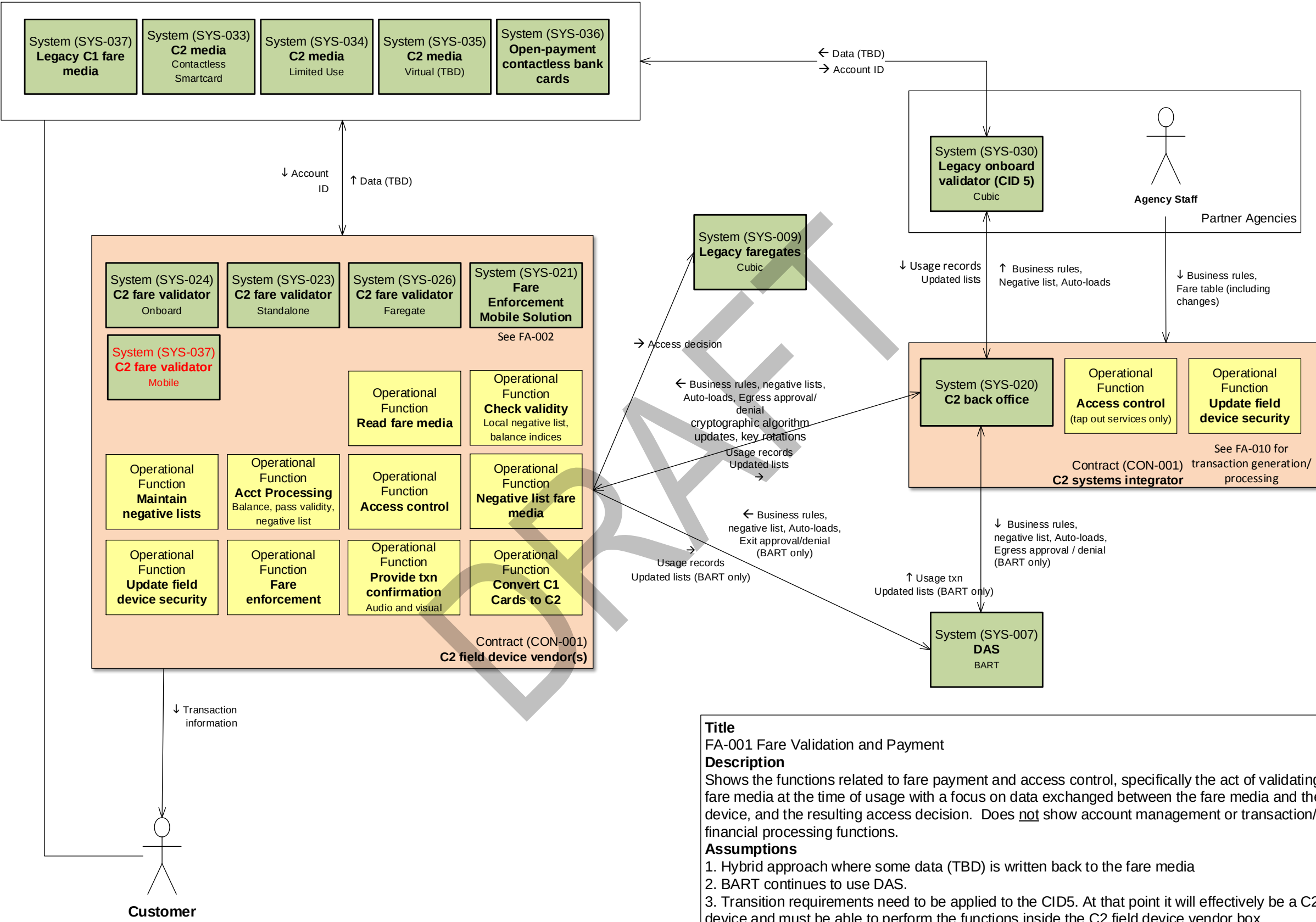
* As frequently as required by regulatory requirements and annually if no frequency is required

Appendix 4: Functional Architecture Views

DRAFT

Section A-1.01 Functional Architectures

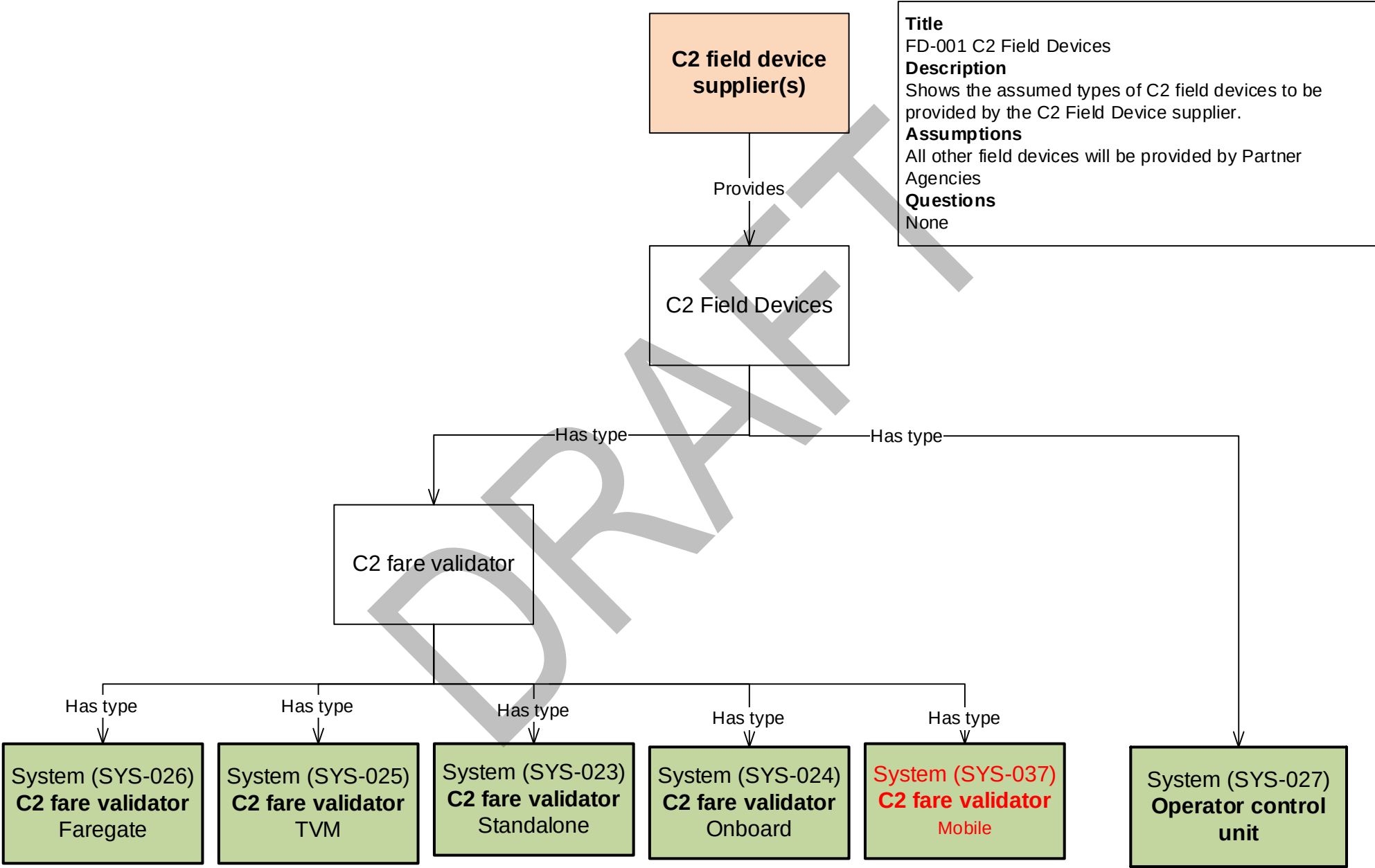
- FA-001 Fare Validation and Payment
- FD-001 C2 Field Devices
- FA-014 Onboard Devices
- FA-002 Manual Fare Enforcement
- FA-010 Financial Management

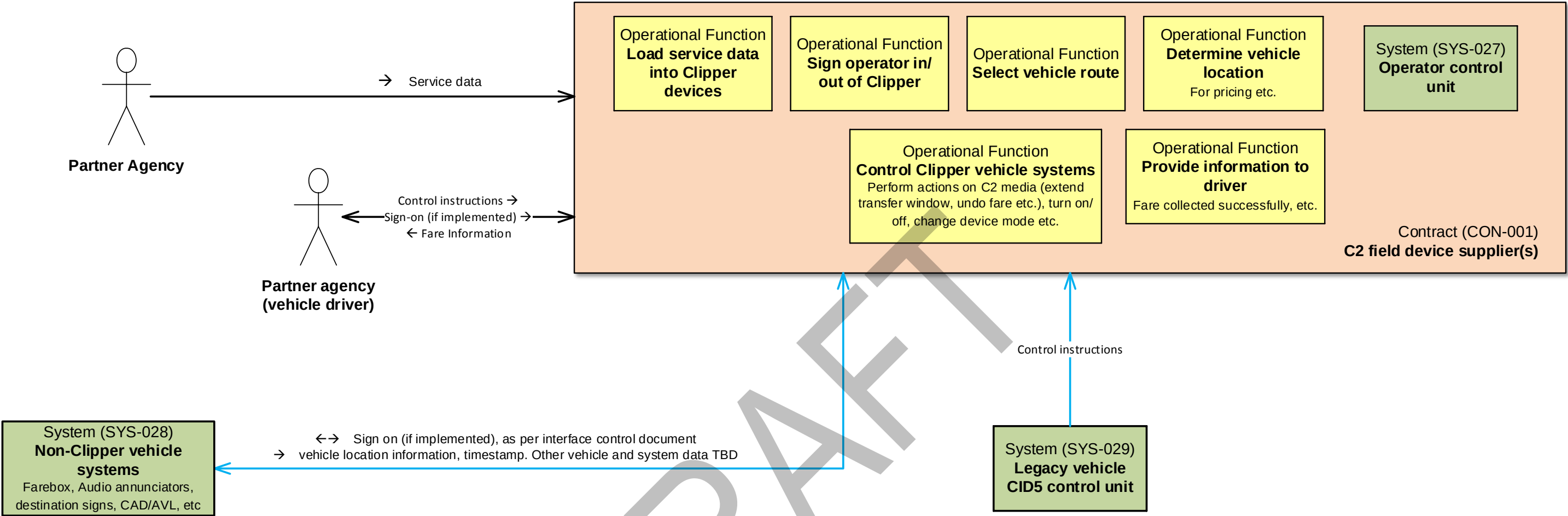


Title
FA-001 Fare Validation and Payment

Description
Shows the functions related to fare payment and access control, specifically the act of validating fare media at the time of usage with a focus on data exchanged between the fare media and the device, and the resulting access decision. Does not show account management or transaction/financial processing functions.

Assumptions
1. Hybrid approach where some data (TBD) is written back to the fare media
2. BART continues to use DAS.
3. Transition requirements need to be applied to the CID5. At that point it will effectively be a C2 device and must be able to perform the functions inside the C2 field device vendor box.





Title
FA-014 Onboard Devices

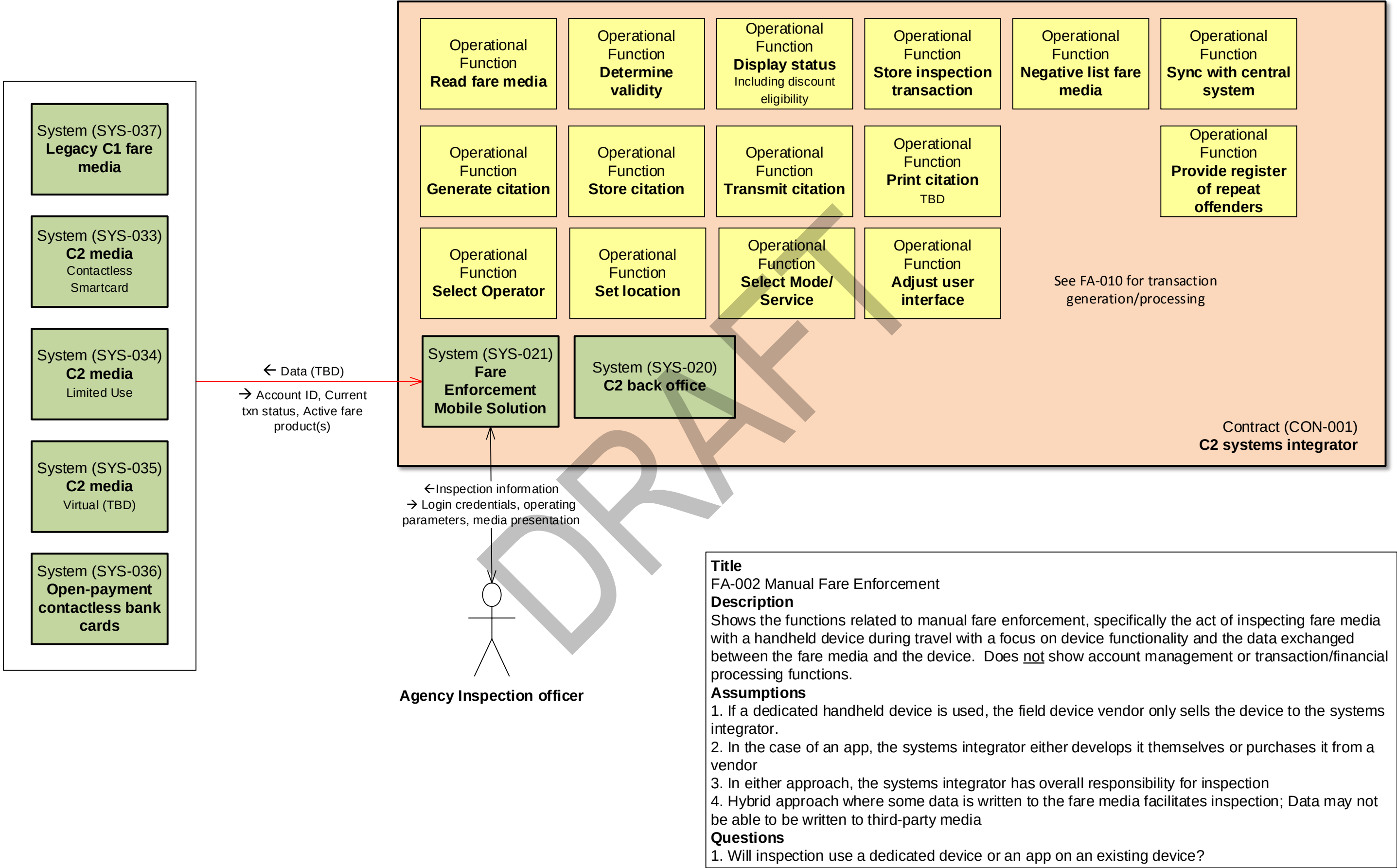
Description
Shows the functions related to the integration of C2 vehicle operations with other systems that may be present on partner agency vehicles.

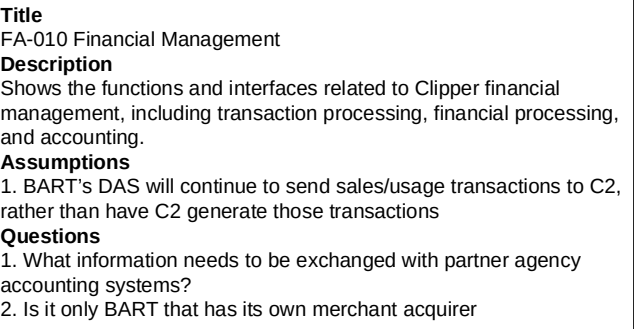
Assumptions

1. Not all of these systems are present on all partner agency vehicles
1. C2 should support single sign-on to vehicle systems wherever possible
2. "Sign-on" (if implemented) means the information required to log the user onto the system and determine the route/run

Questions

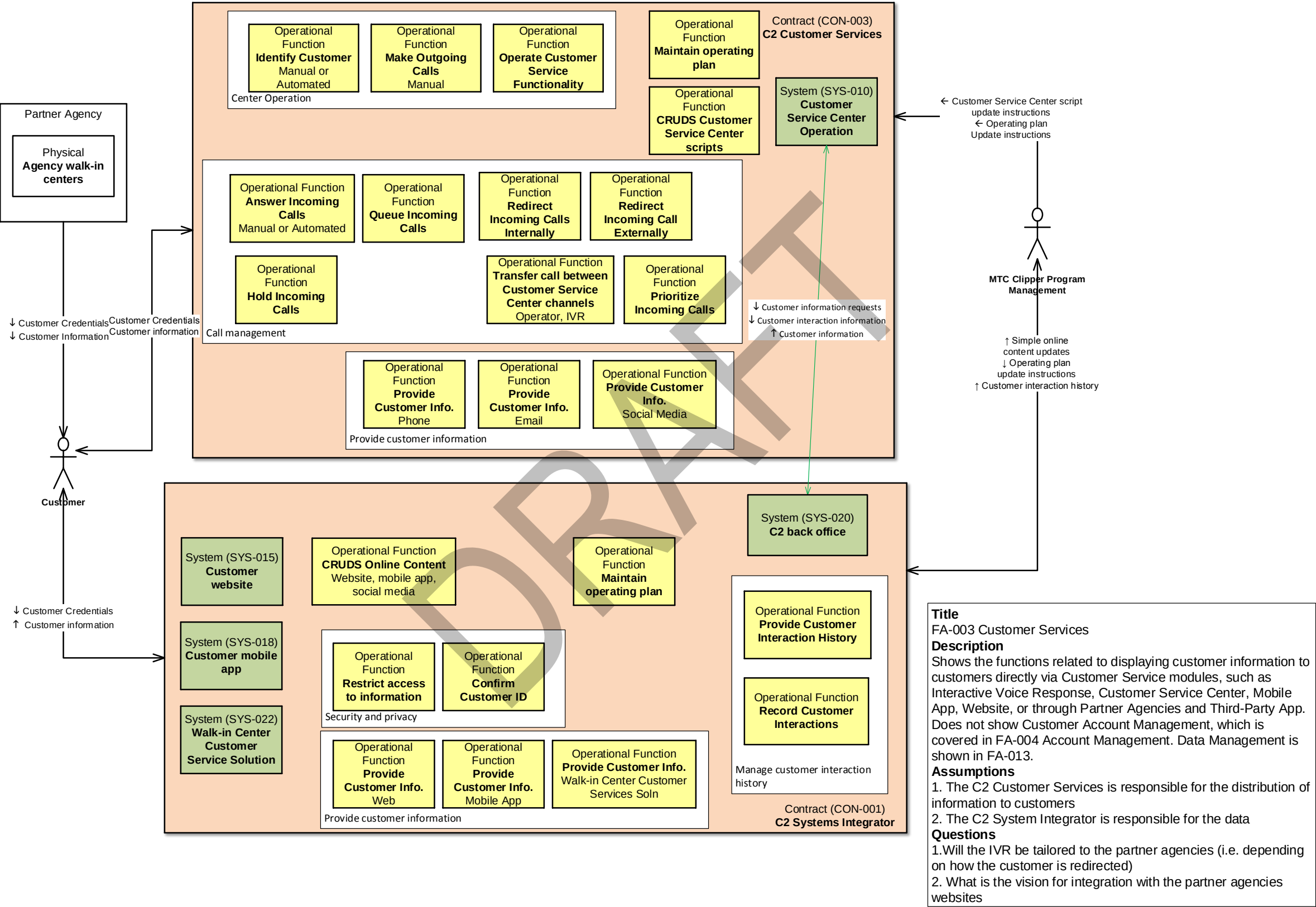
1. To what extent should C2 and other vehicle systems be integrated?
2. What are the required functions to support "single sign-on"?
3. What are the required functions to enable a driver to control C2 vehicle equipment?

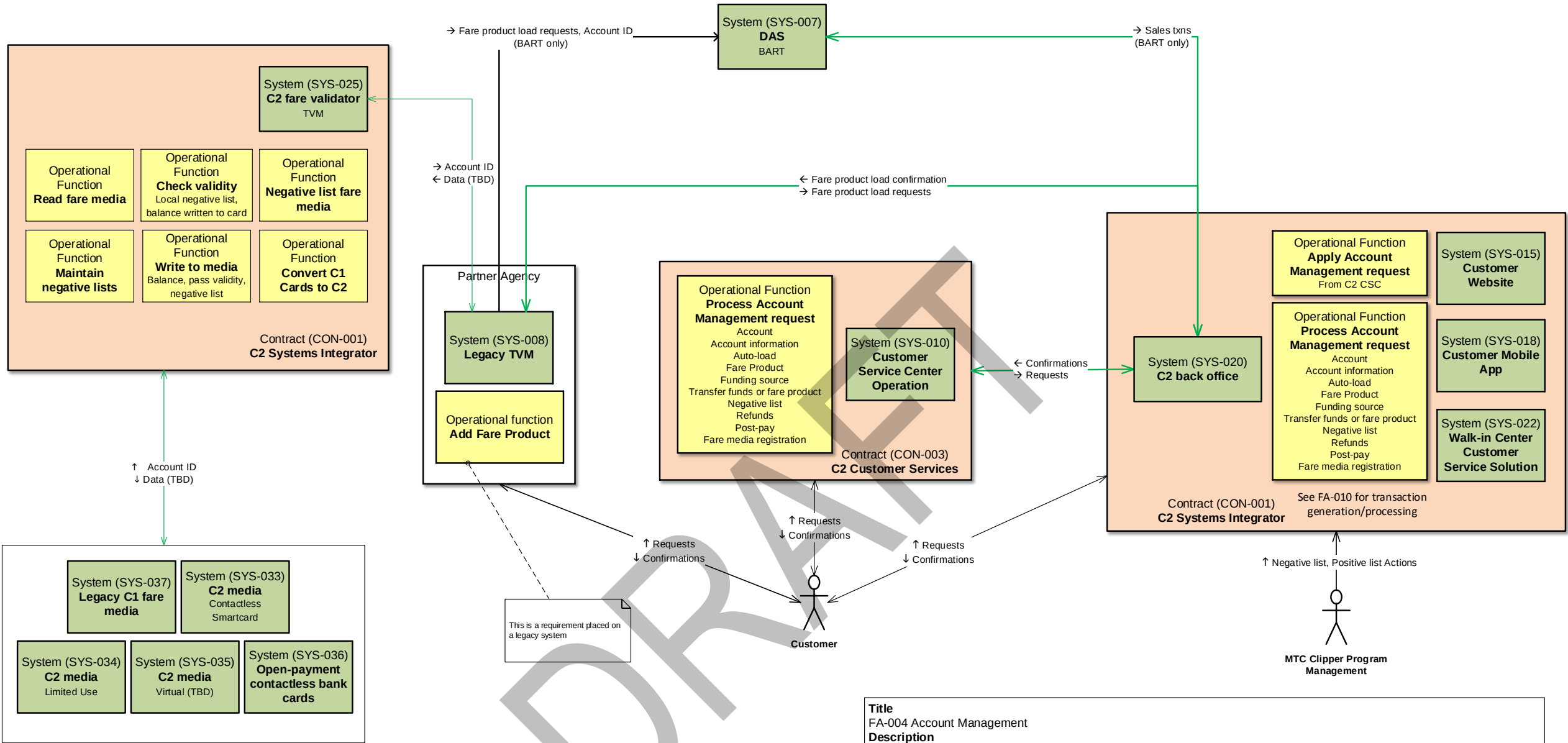




Section A-1.11 to A-1.15 Functional Architectures

- FA-003 Customer Services
- FA-004 Account Management
- FA-011 Data Management and Reporting
- FA-012 Data Exchange
- FA-022 Asset Information Management



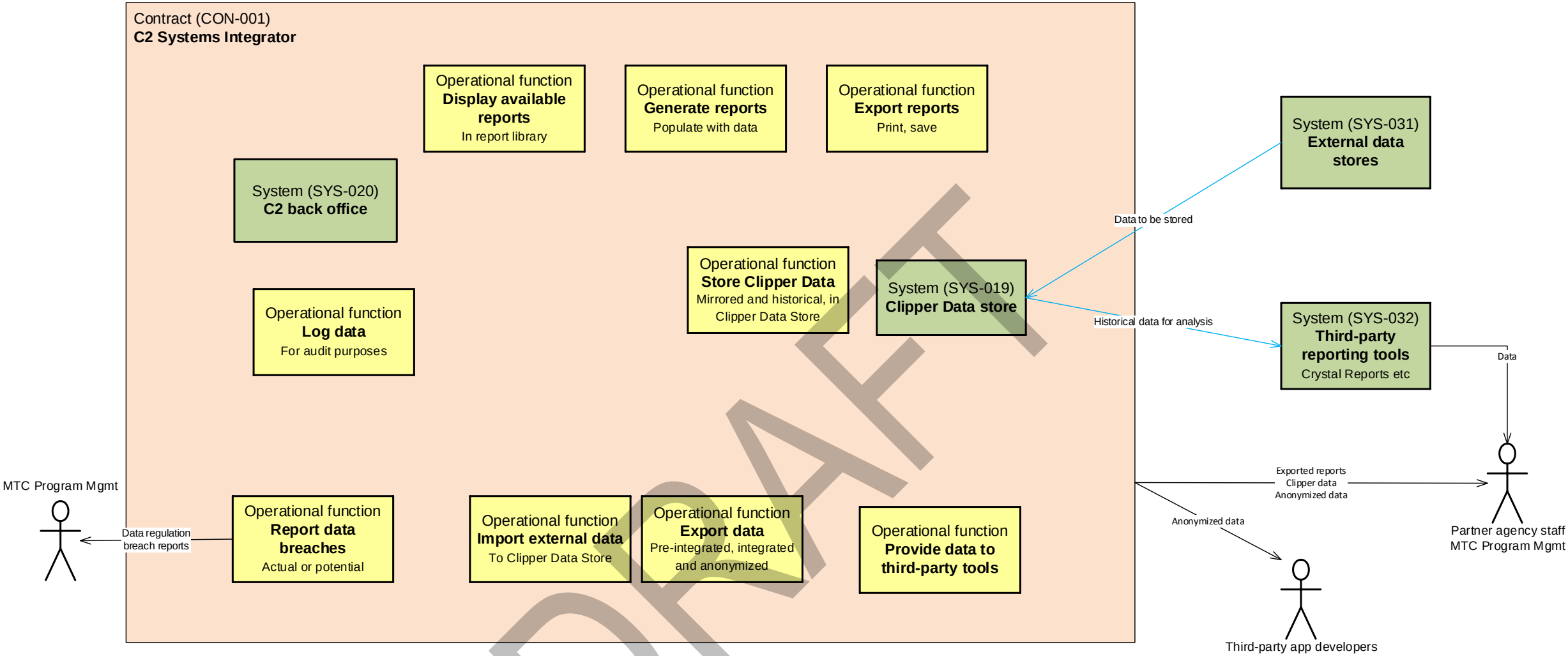


Title
FA-004 Account Management

Description
Shows the functions related to managing a customers' account by the customer or through third-parties (e.g. Partner Agency staff or Customer Service Center staff). For Partner Agency or MTC Clipper Program Staff (i.e. users with greater access), functions such as negative list, positive list, transfer of funds, or allowing refunds are available. This architecture drawing does not show how Customer Information is distributed, which is covered in FA-003 Customer Information.

Assumptions
1. The C2 Customer Services is responsible for the distribution of information to customers (see FA-003 Customer Information)
2. The C2 System Integrator is the one responsible for the data
3. The MTC Clipper Program Management Staff is responsible for the hotlist and positive list
4. Partner agencies staff will have to approve certain user actions, such as refunds and transfer of funds

Questions
1. Who will be responsible for managing the negative list and positive list? The MTC Clipper Program Management Staff? Or individual Partner Agencies.

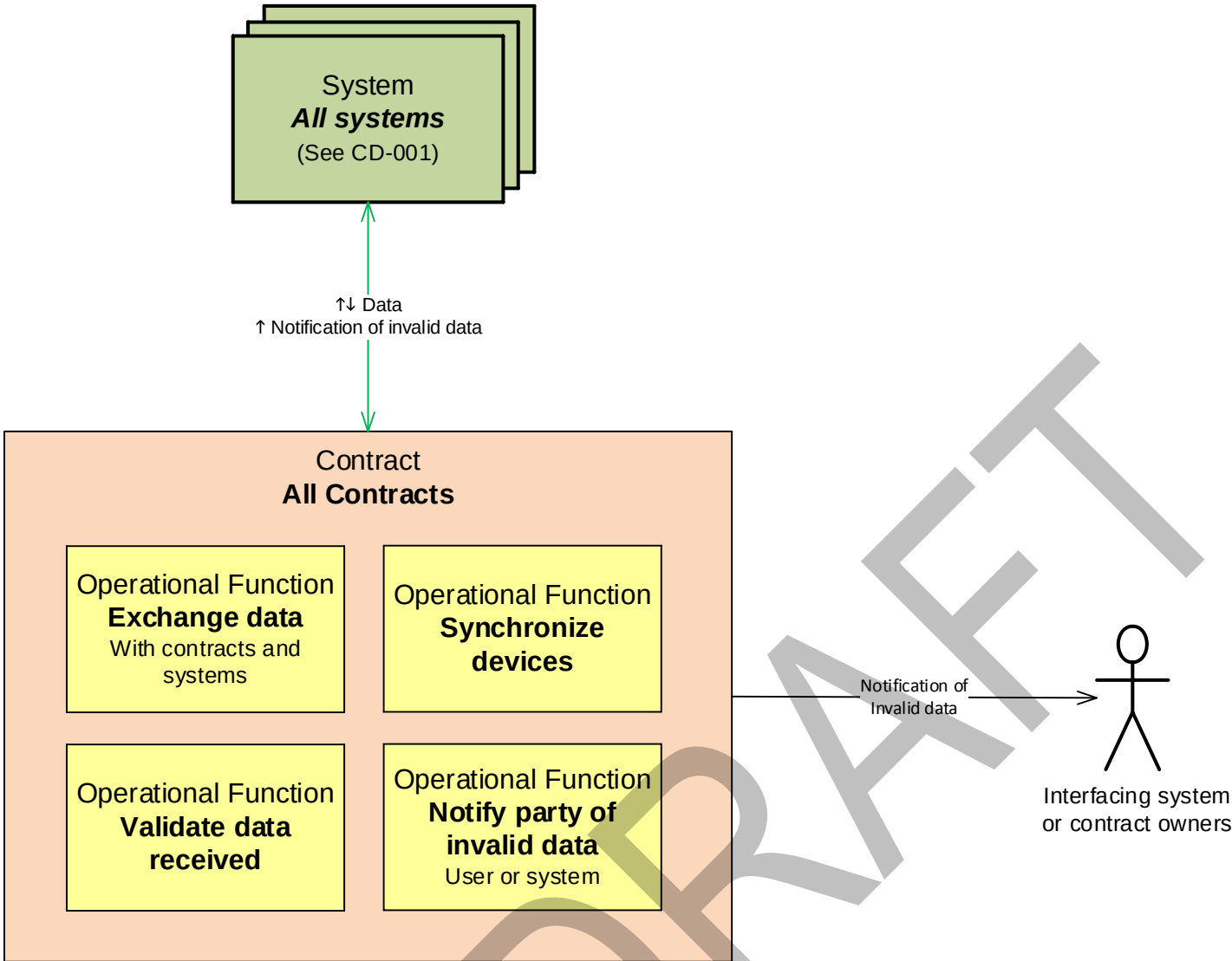


Title
FA-011 Data Management and Reporting

Description
Shows the functions related to managing Clipper data and reports. The core concept is of a separate data store that holds historical data separately from the core system, allowing reporting without comprising the performance of the core system.

Assumptions
1. Clipper Data Store is provided by Systems Integrator
2. Clipper Data Store is a specific system, architecturally separate from any 'core' system
3. Responsibility for storing all data resides with Systems Integrator, so customer services doesn't need to log data CRUD actions

Questions
1. Which is system of record?
2. Should 3rd party app developers have access to (suitably anonymized) current or historical data?



Title

FA-012 Data Exchange

Description

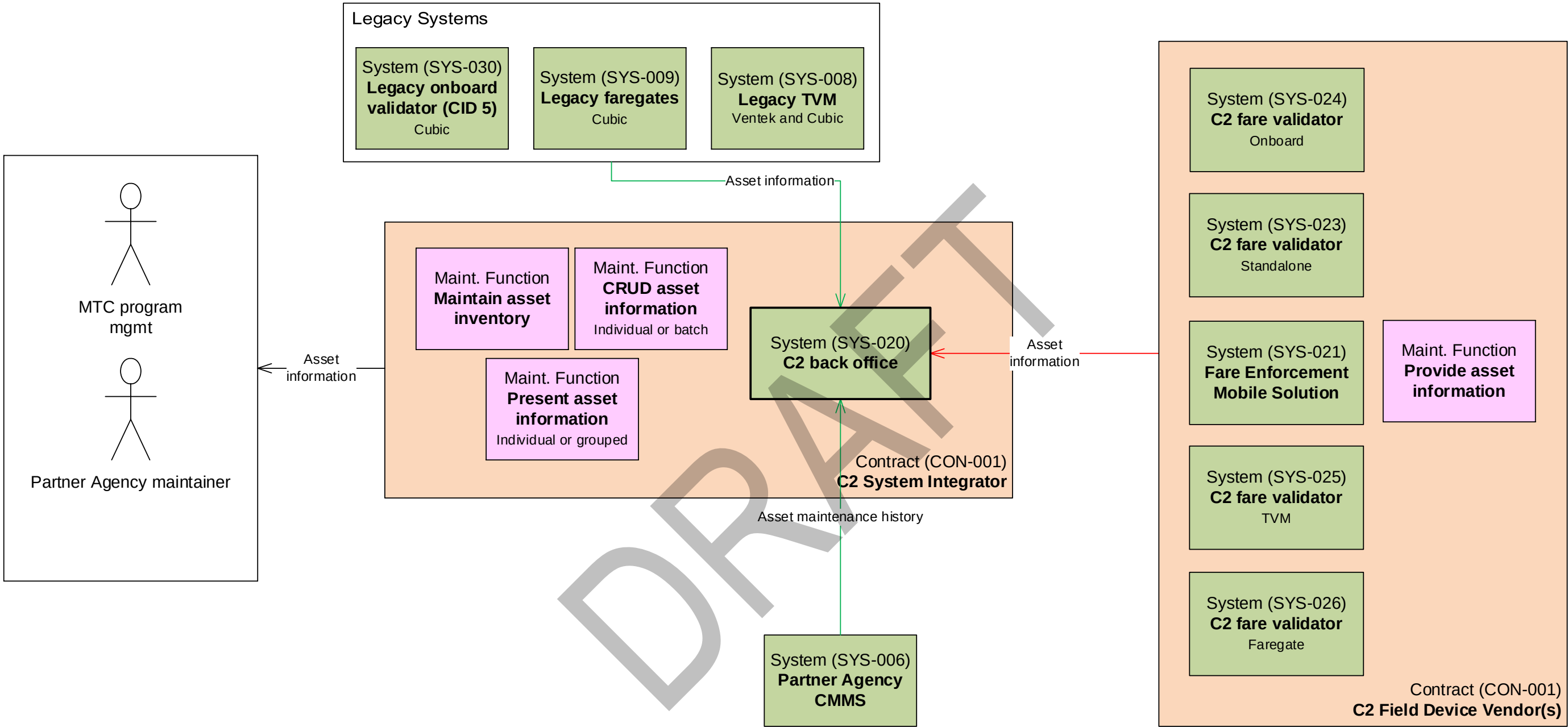
Shows the functions related to exchanging data with external systems for which the Systems Integrator has a shared responsibility for interface. No data exchange functions with systems or contracts solely within the Systems Integrator’s responsibility are shown. This simple architecture exists to allow us to develop requirements that point to Interface Control Documents.

Assumptions

1.

Questions

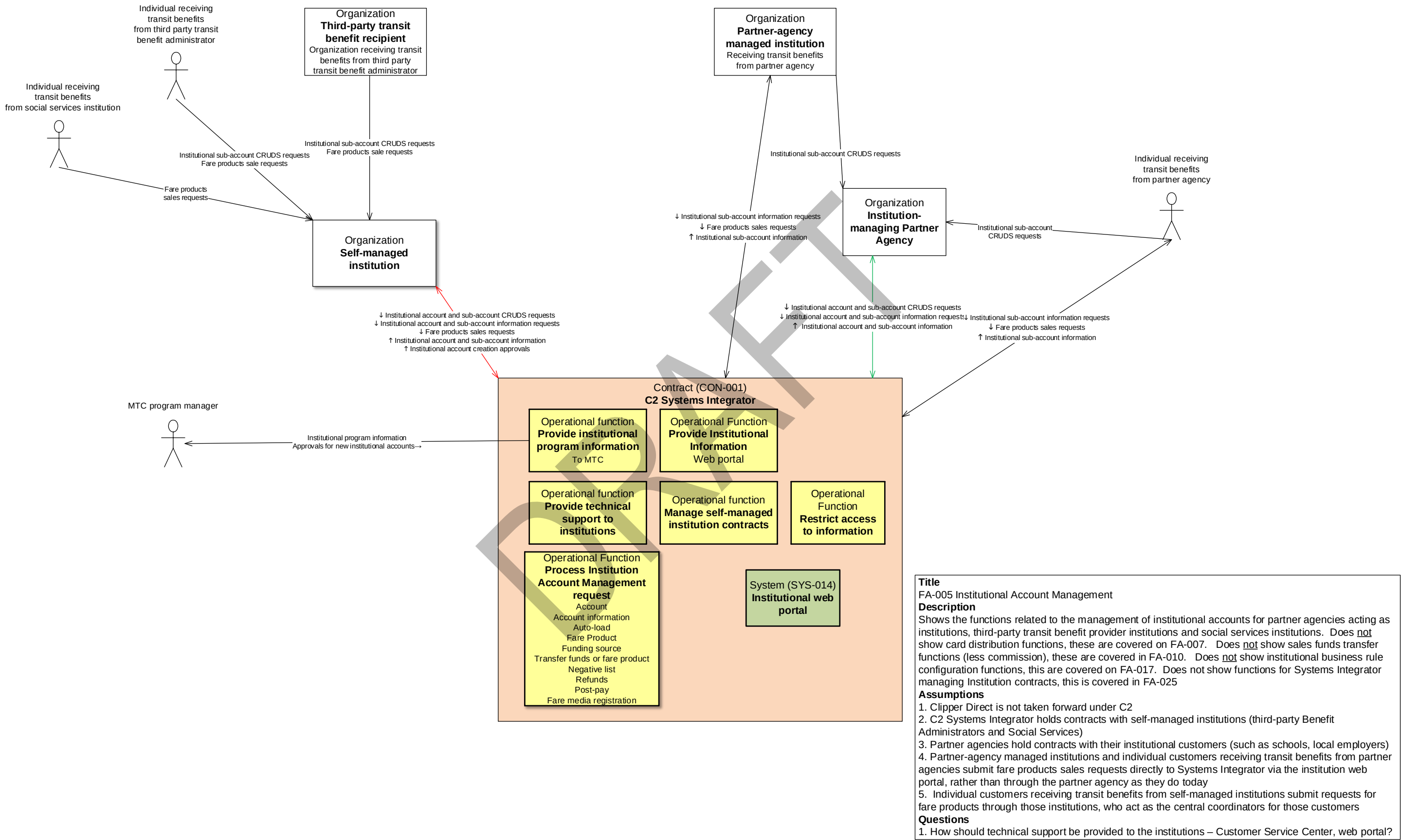
1. Which is system of record?

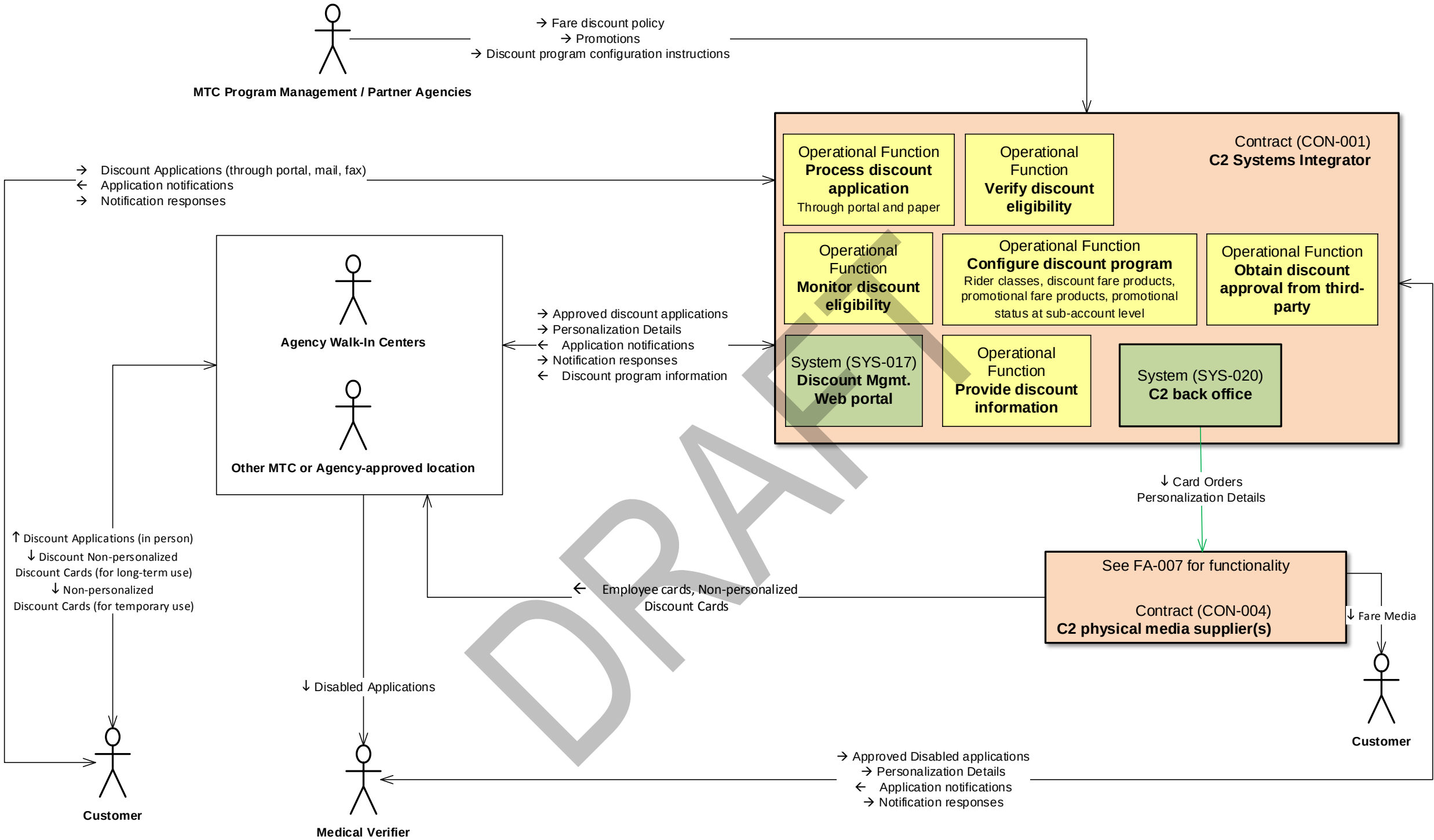


Title: FA-022 Asset Information Management
Description
Identifies the primary maintenance functions needed to manage information from all systems that interface with C2.
Assumptions
None
Questions
None

Section A-1.17 Functional Architectures

- FA-005 Institutional Account Management
- FA-006 Discount Management
- FA-019 System Maintenance
- FA-016 User Interface



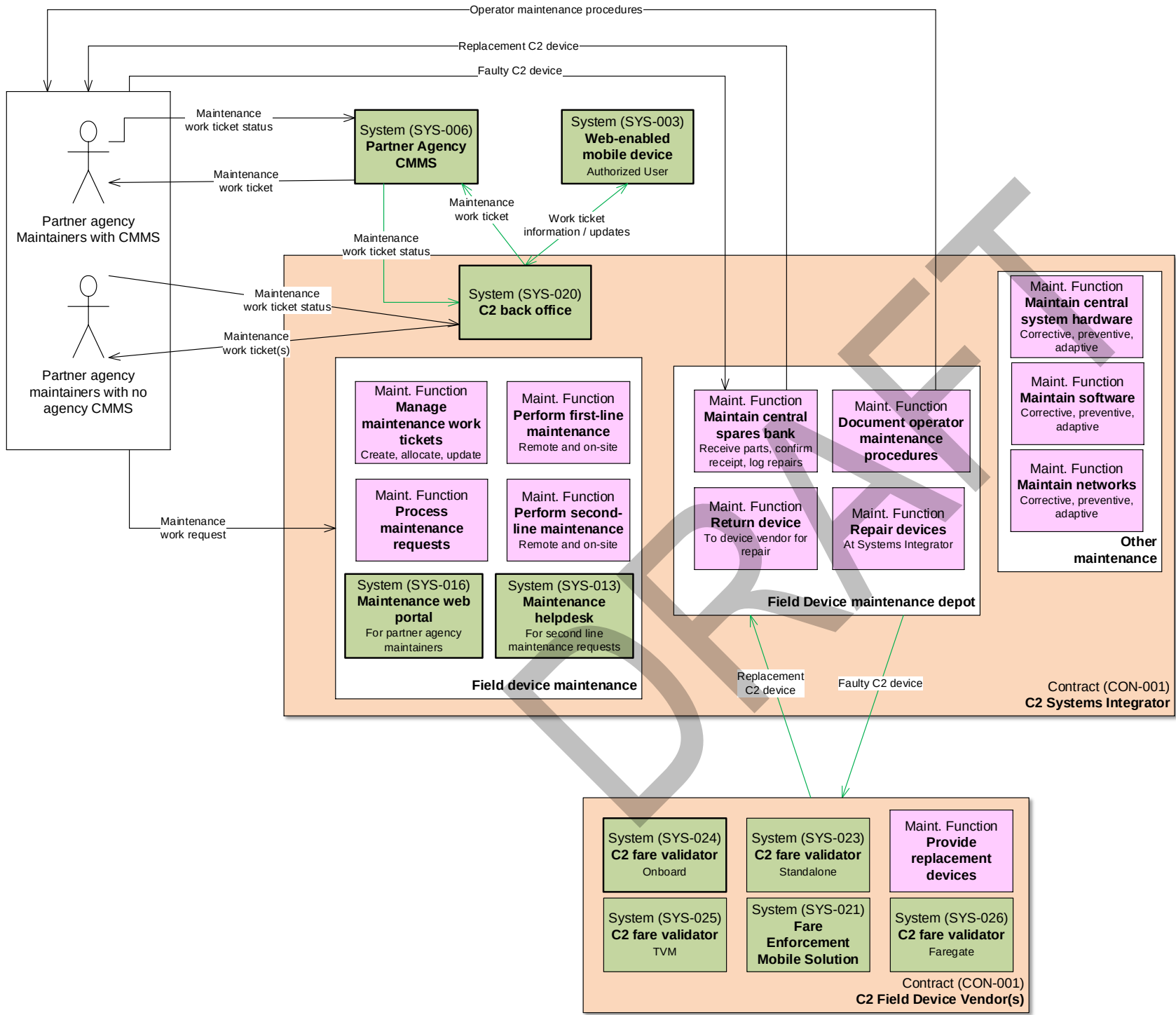


Title
FA-006 Discount Management

Description
Shows the functions related to discount management, meaning in this case all fare products and rider classes not full-fare adult. Shows interfaces with agency pass sales offices, RTC Central processor and customers.

Assumptions
1. Discount program continues largely the same as under C1
2. SI to create web portal for new “self-serve” discount applications and processing. Customer submits application through portal (or prints form for in-person submission). Portal notifies customer and agency/medical verifier (as required) of application status

Questions
1.

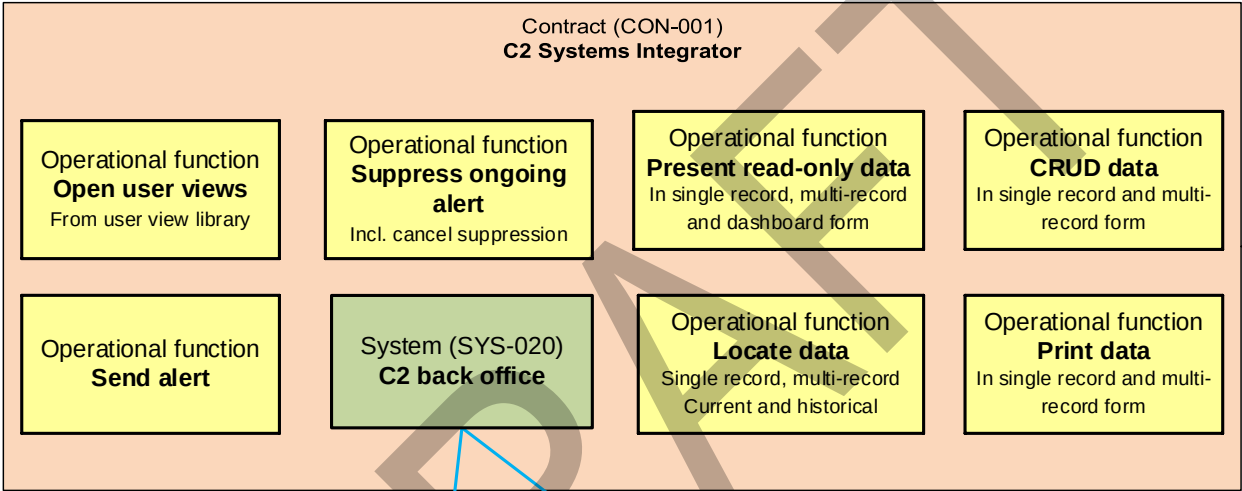


Title: FA-019 System Maintenance

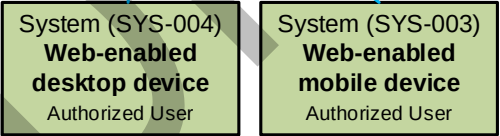
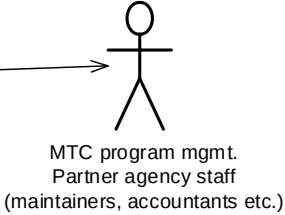
Description
Identifies the primary maintenance functions under the System Maintenance capability and sub-capabilities, that Partner Agency maintainers will perform. For first-line maintenance such functions will be different depending on whether the Agency has its own CMMS. The diagram also shows the interfaces with C2 field devices and other systems.

Assumptions
BART will perform its own second-line maintenance, all other agencies will rely on C2 device vendors.

Questions
1. Will SI be responsible for maintenance activities of C1 devices that remain operational during C2 transition and operational phase?
2. Is portable test equipment required to support first/second line maintenance in the field? If so, what functions should they perform?



← UI instructions
System information →
Alerts →
Printed material →



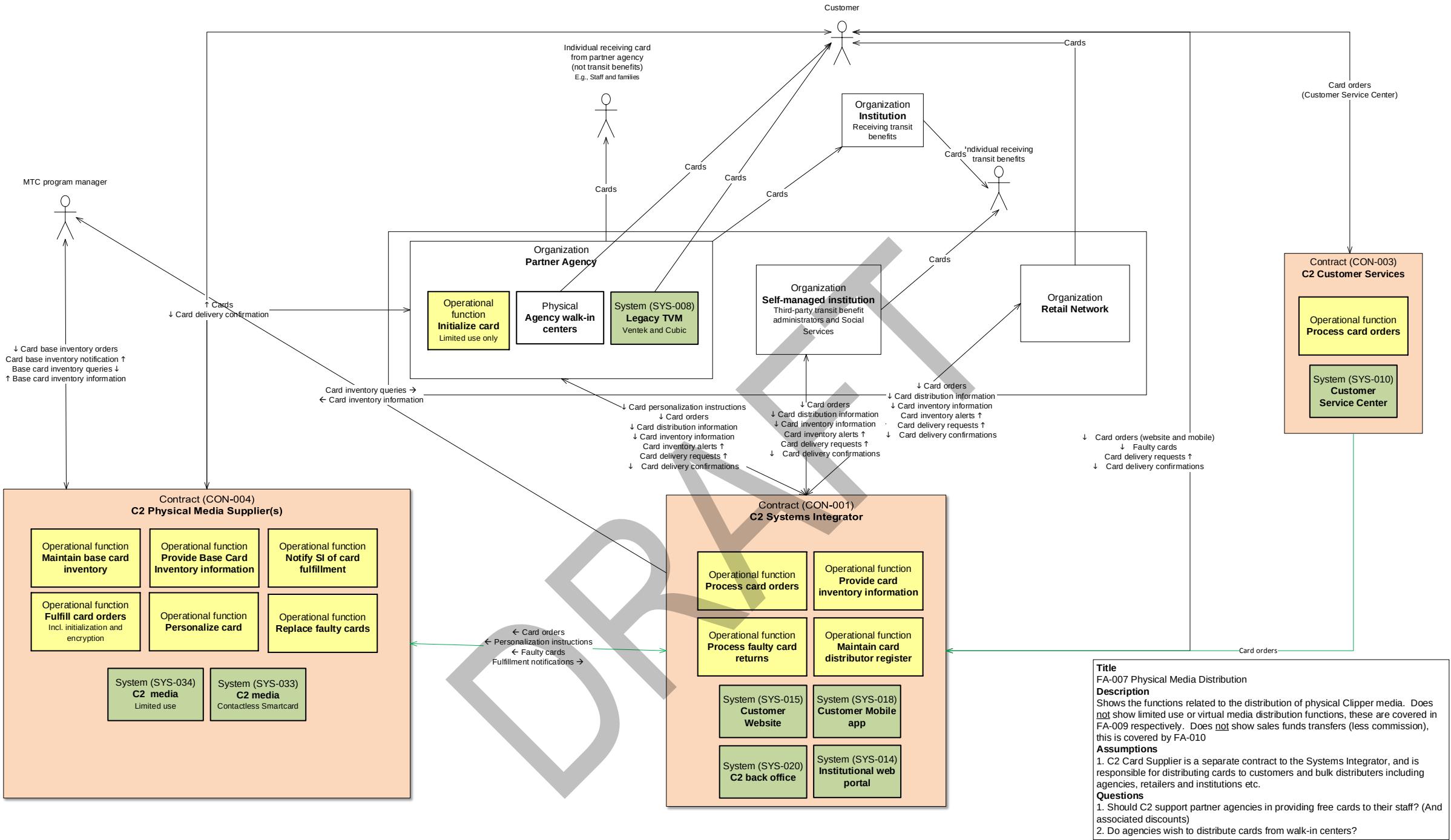
Title
FA-016 User interface

Description
Functions that allow an authorized user to interface with the system. Does not include reports, dashboard, import and export which are covered in FA-011 (data management and reporting)

Assumptions
1. User will have access to the system through a user interface provided by the Systems Integrator

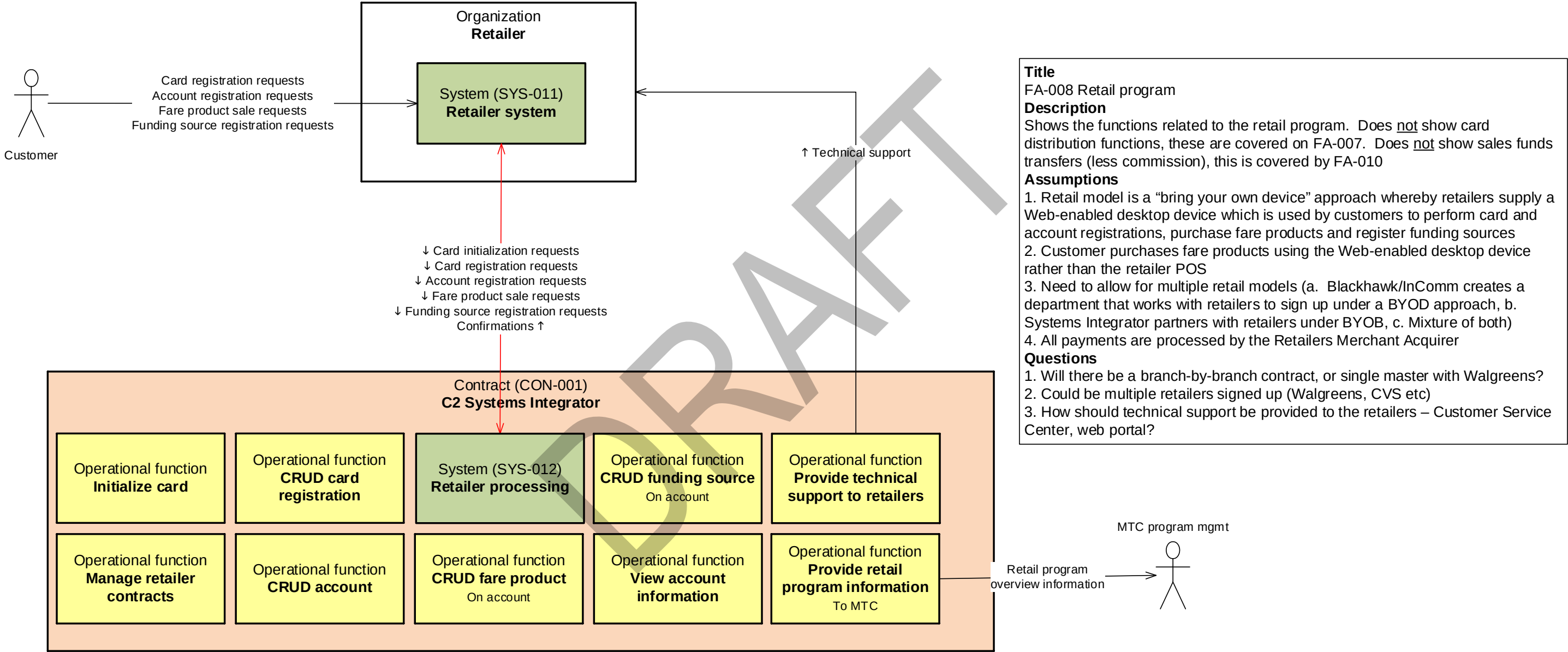
Questions
1. Which functional areas of the system should these functions apply to?

Section A-1.19 Functional Architectures
FA-007 Physical Media Distribution



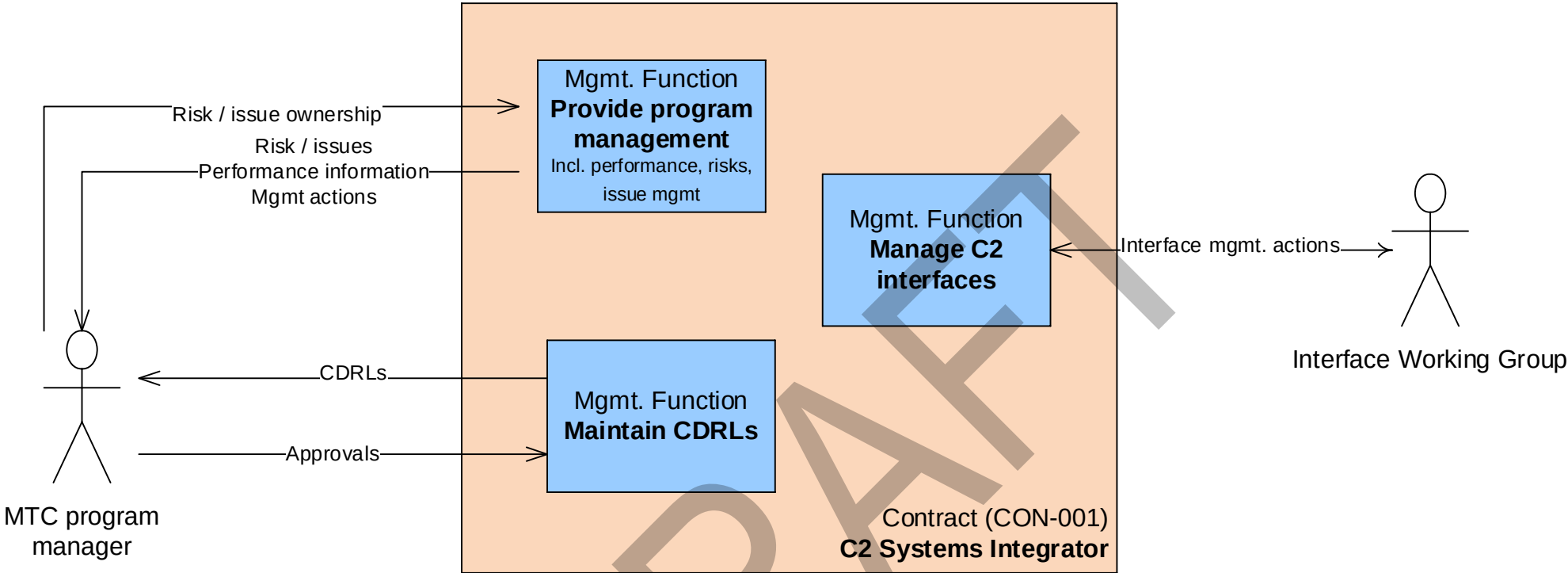
Section A-1.20 Functional Architectures

FA-008 Retail Program

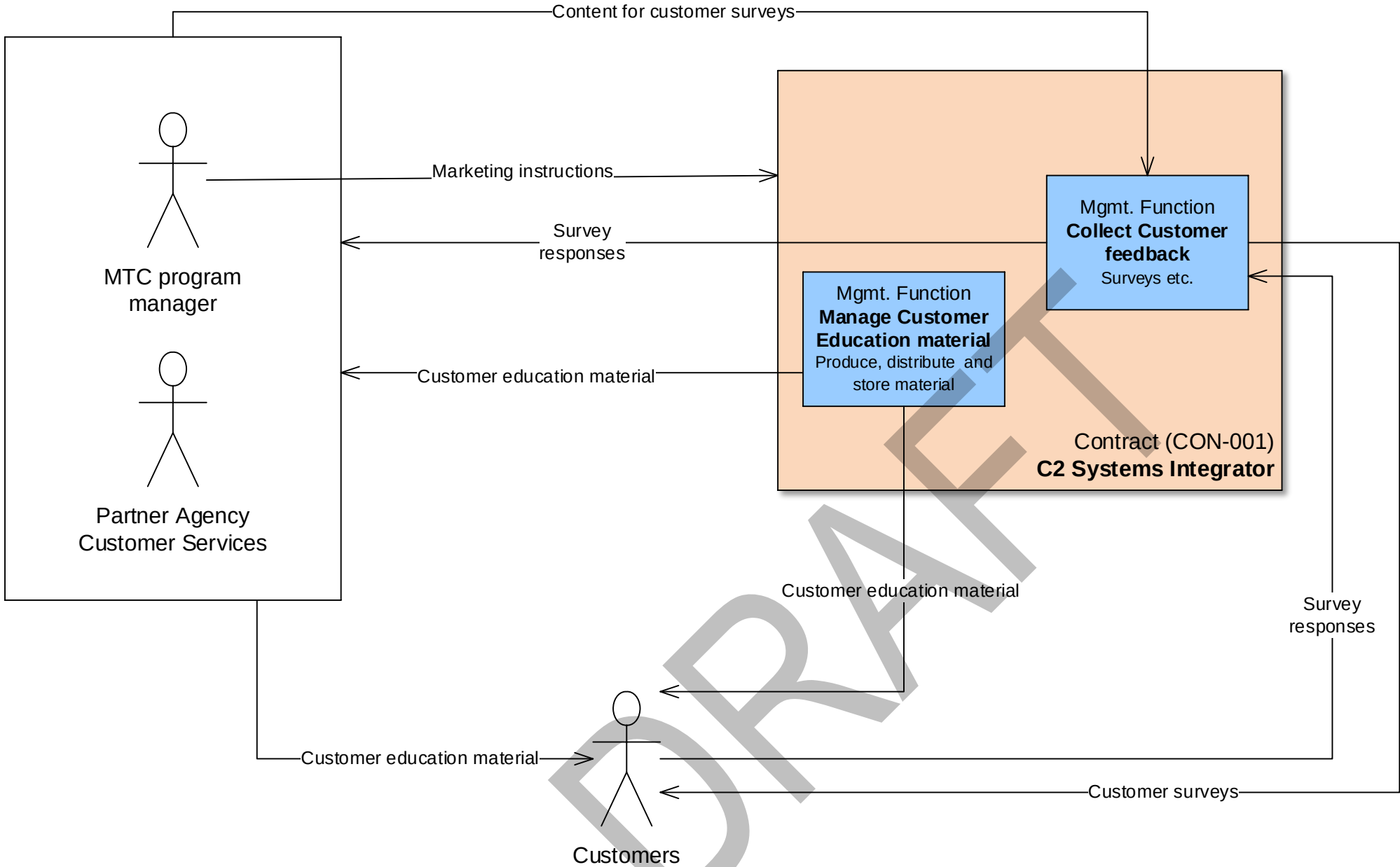


Section A-1.21 Functional Architectures

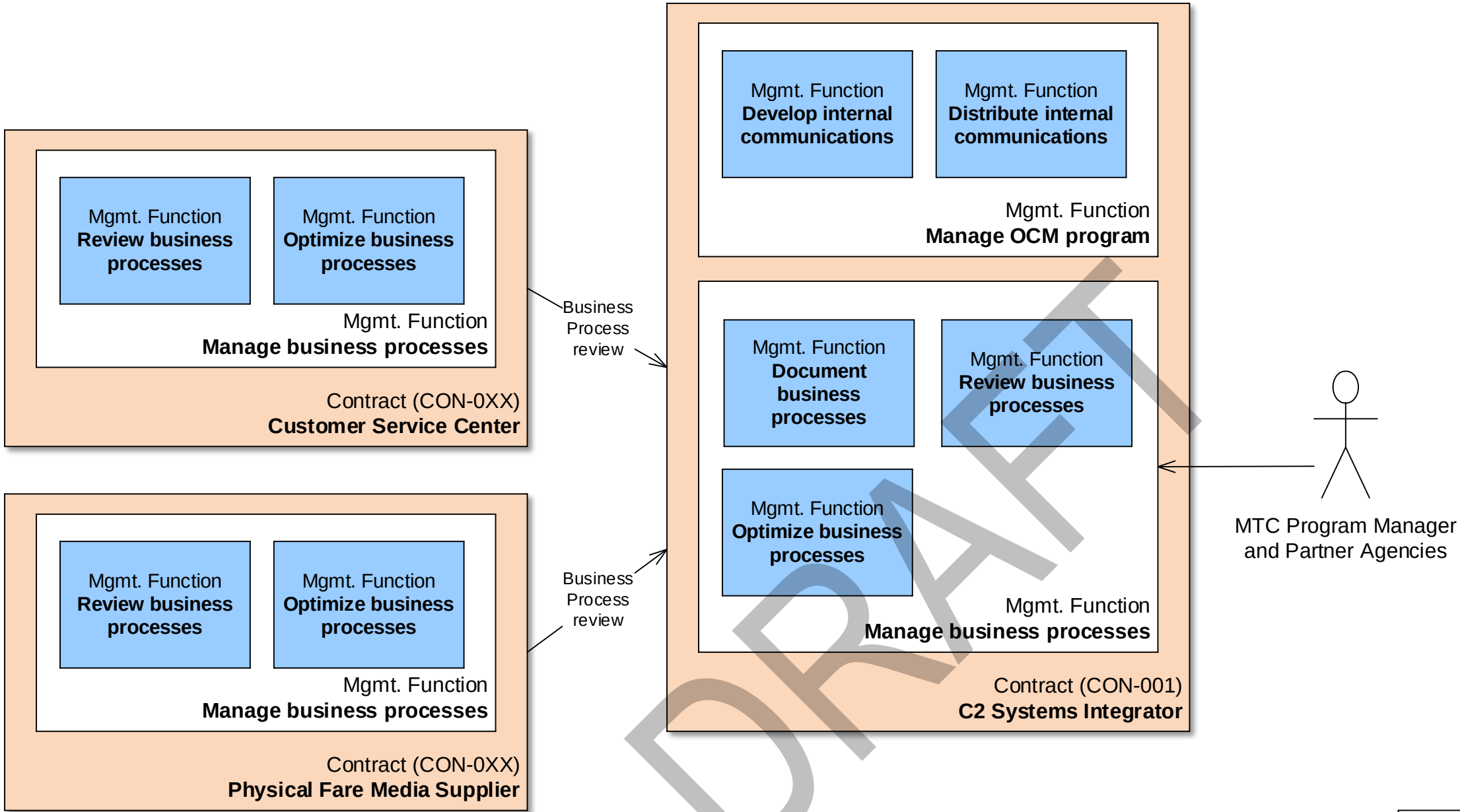
- FA-024 Program Management
- FA-025 Marketing Support
- FA-026 Organizational Change and Business Process Management
- FA-027 Compliance and Audit
- FA-028 Risk Management



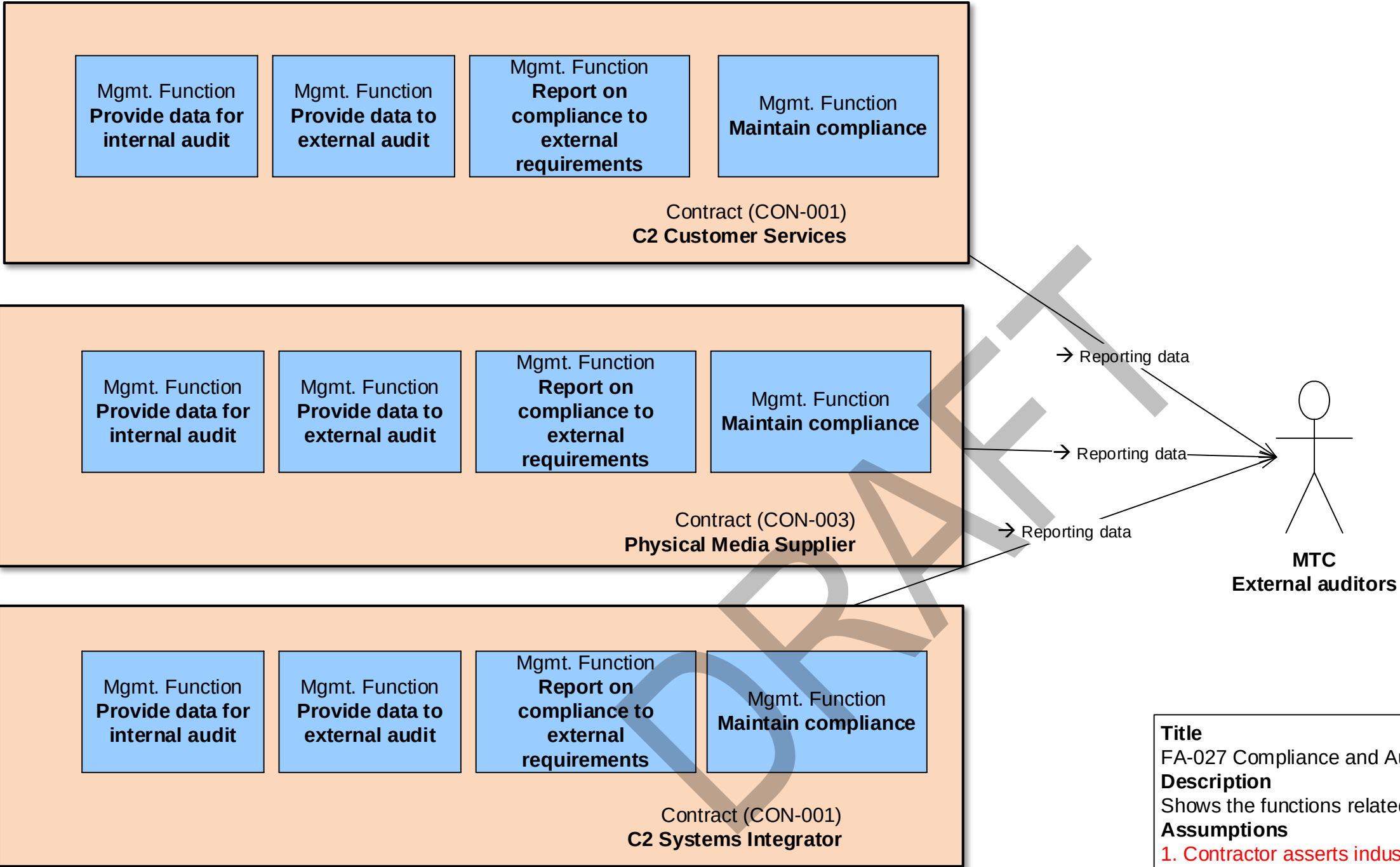
Title: FA-024 Program Management
Description
Identifies the primary management Functions, functions, users and interfaces of the Program Management Continuity capability.
Assumptions
None
Questions
None



Title: FA-025 Marketing
Description
Shows the primary management functions and users of the Marketing capability.
Assumptions
MTC defines and executes advertisement campaigns
Questions
None



Title: FA-026 Organizational change and business process management
Description
Identifies the primary management functions and users of the Organization Change and Business Process Management capability
Assumptions
None
Questions
None

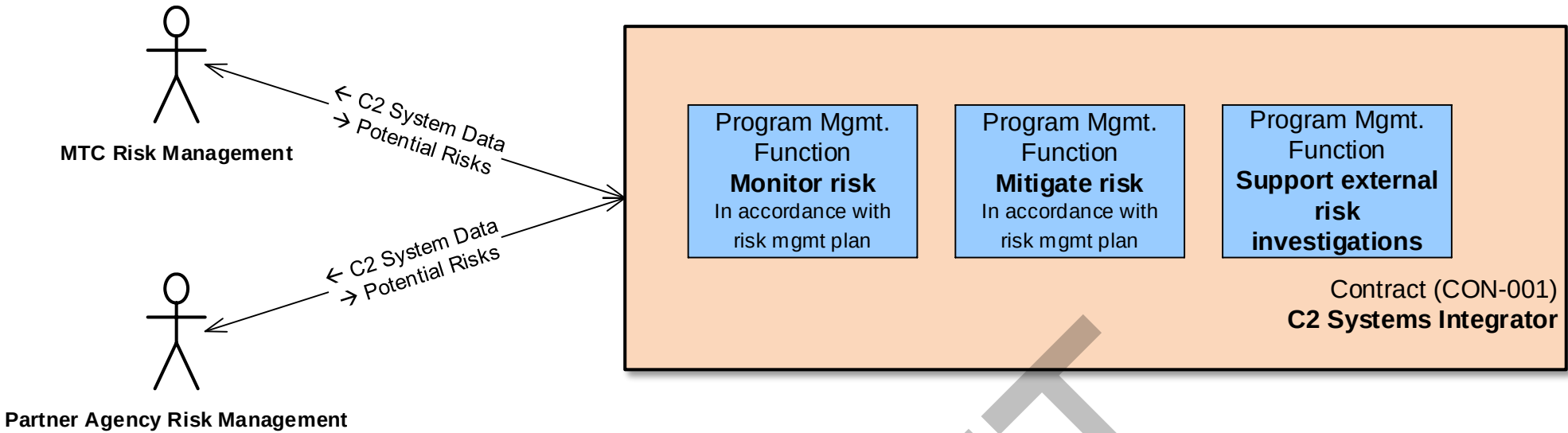


Title
FA-027 Compliance and Audit

Description
Shows the functions related to providing data to support C2 audit

Assumptions

- 1. Contractor asserts industry standards (e.g. audit, management practices) to which their service complies in contract.
- 2. Contractor provides process and management controls documentation as a requirement of the Contract and performs recurring internal and external audits with respect to the controls.
- 3. Reports include results of management testing of internal controls on a periodic basis.
- 4. Contract holder and operators reserve the right to receive reports and evidence of management controls and audit performance of contractor costs and other service delivery elements that have financial impacts at no incremental cost to the program.



Title
FA-028 Risk Management

Description
Shows the functions related to C2 management of risk. Risk Management supports the prevention, education, and investigation of incidents that could result in financial or other risk to Clipper®, primarily, but not exclusively related to fraud, crime and other illegal activity.

Assumptions
1. C2 SI is responsible for overall vendor risk, including those of the other contracted providers
2.

Questions
1.

Section A-5 Functional Architectures

FA-012 Data Exchange

FA-013 Certification Management

FA-017 System Configuration

FA-018 System Monitoring and Control

FA-019 System Maintenance

FA-020 Configuration Management

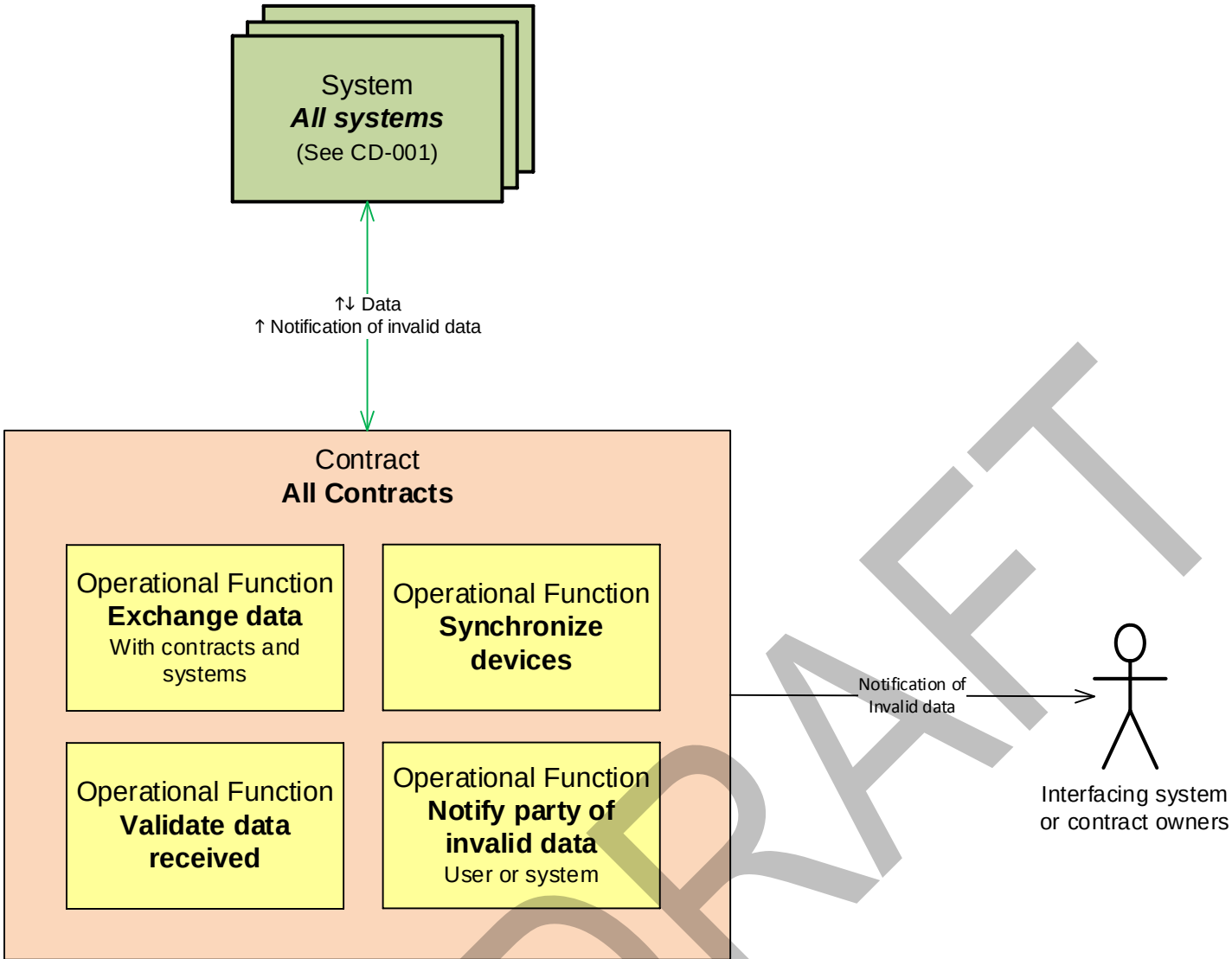
FA-022 Asset Information Management

FA-023 Business Continuity

FA-015 Safety and Security Management

FA-027 Compliance and Audit

FA-028 Risk Management



Title

FA-012 Data Exchange

Description

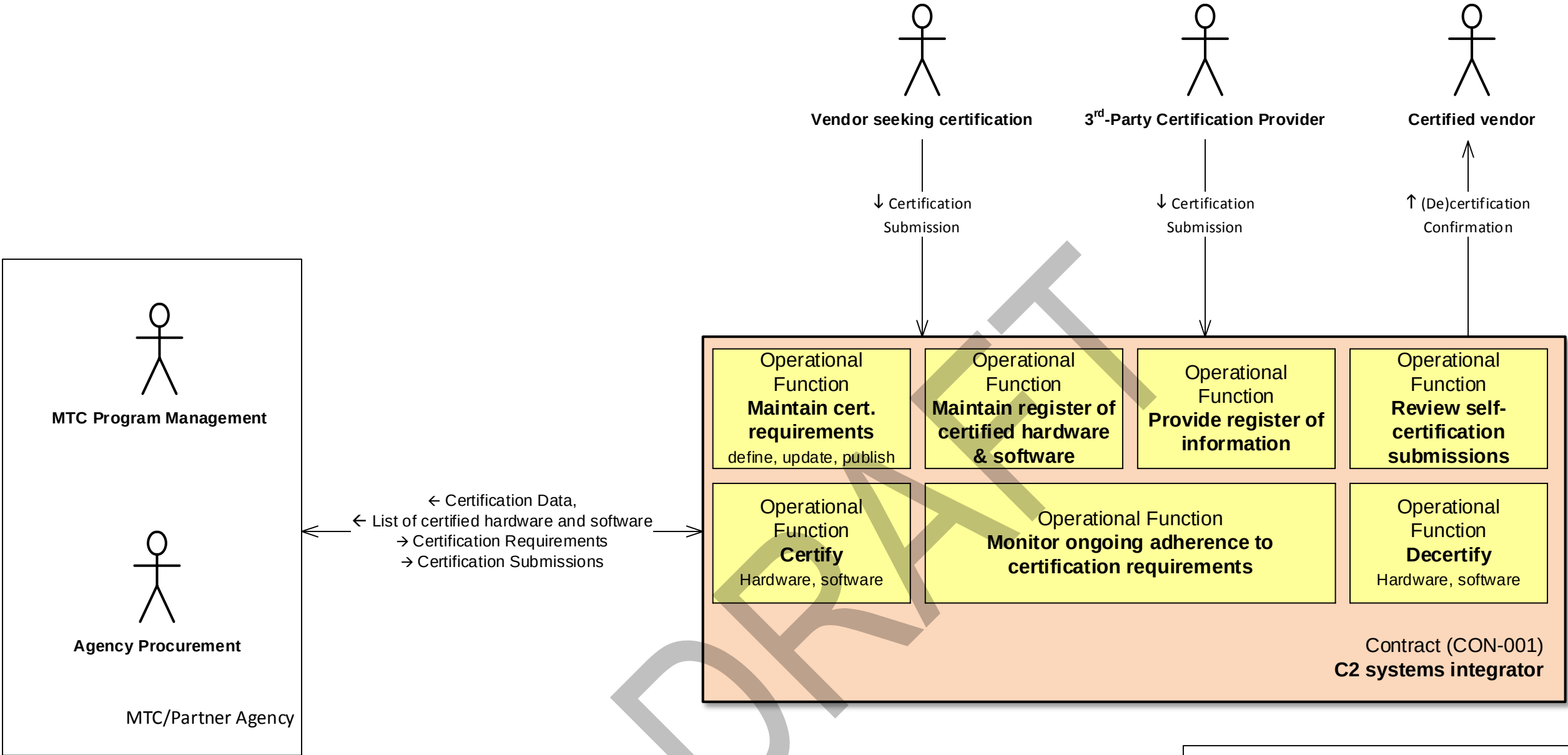
Shows the functions related to exchanging data with external systems for which the Systems Integrator has a shared responsibility for interface. No data exchange functions with systems or contracts solely within the Systems Integrator’s responsibility are shown. This simple architecture exists to allow us to develop requirements that point to Interface Control Documents.

Assumptions

1.

Questions

1. Which is system of record?

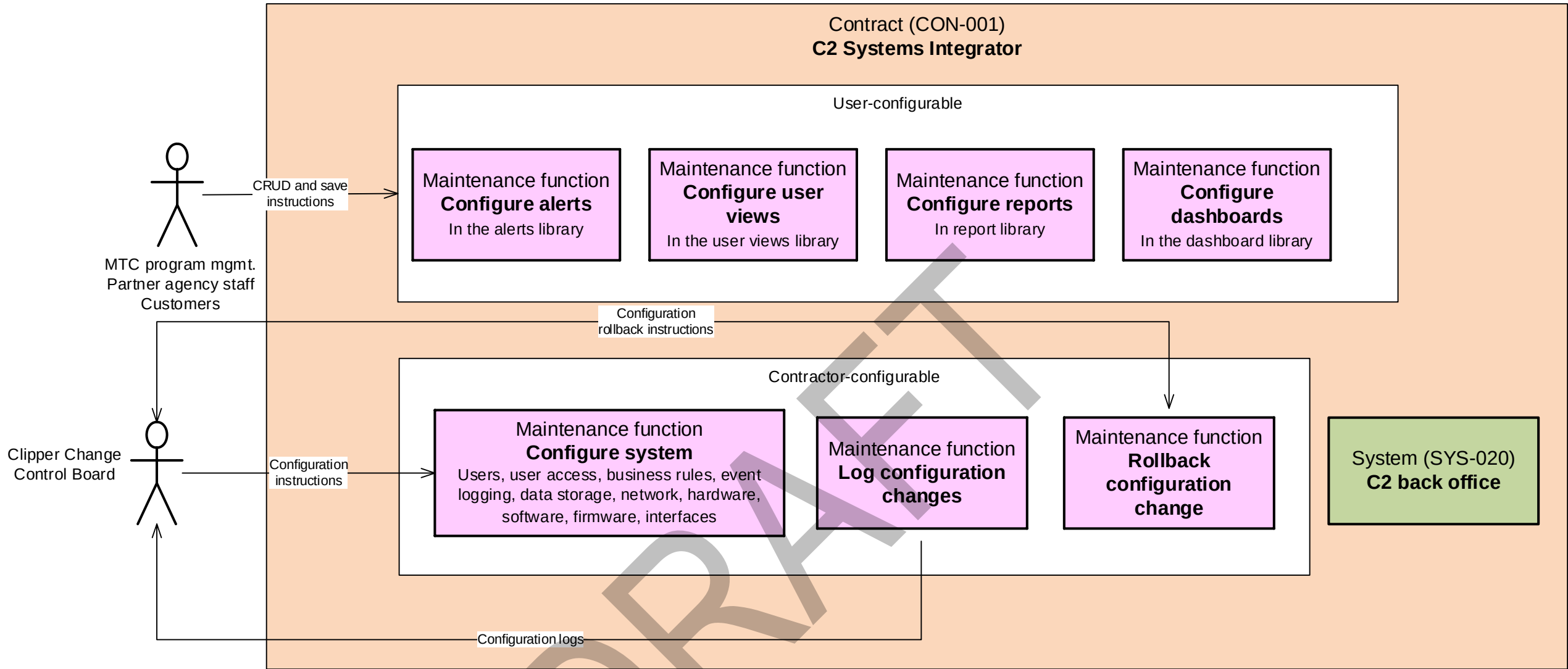


Title
FA-013 Certification Management

Description
Shows the functions related to systems integrator management of hardware and software vendors seeking and attaining status as a certified C2 vendor.

Assumptions
1. Prospective vendors can self-certify or obtain the services of a third party
2. MTC and partner agencies will have access to a register of certified vendors

Questions
1.



Title

FA-017 System configuration

Description

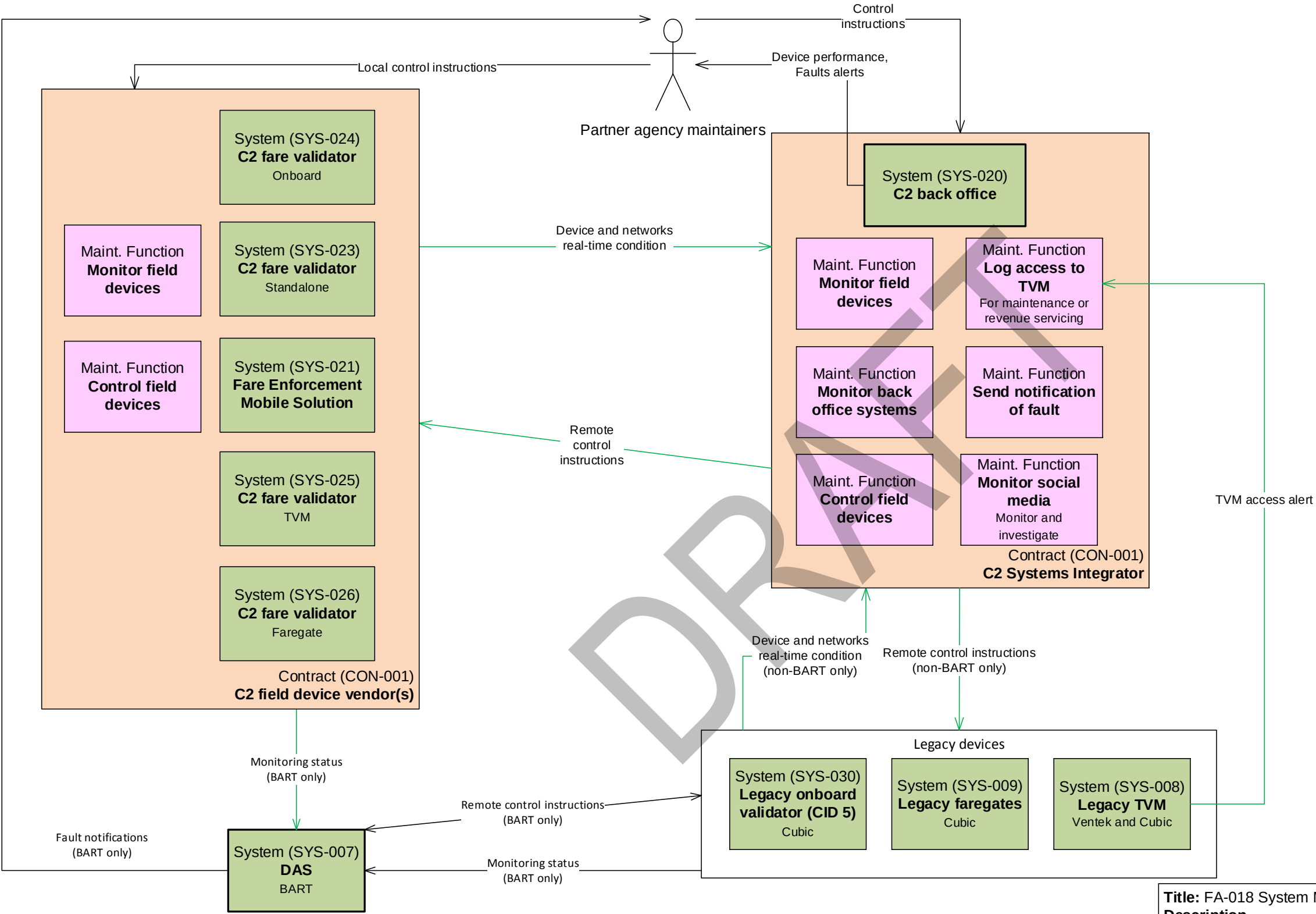
Functions that allow the system to be configured by an authorized user and the Systems Integrator in order to minimize the need for system development change orders. Systems Integrator performed configuration changes will be subject to the configuration control process and approval/instructions will come from the Clipper Change Control Board.

Assumptions

1. The Systems Integrator cannot make configuration changes without prior approval from the Clipper Change Control Board

Questions

1. What other aspects of the system should configurable by the Systems Integrator without development or change order?
2. What other aspects of the system should users be able to configure?

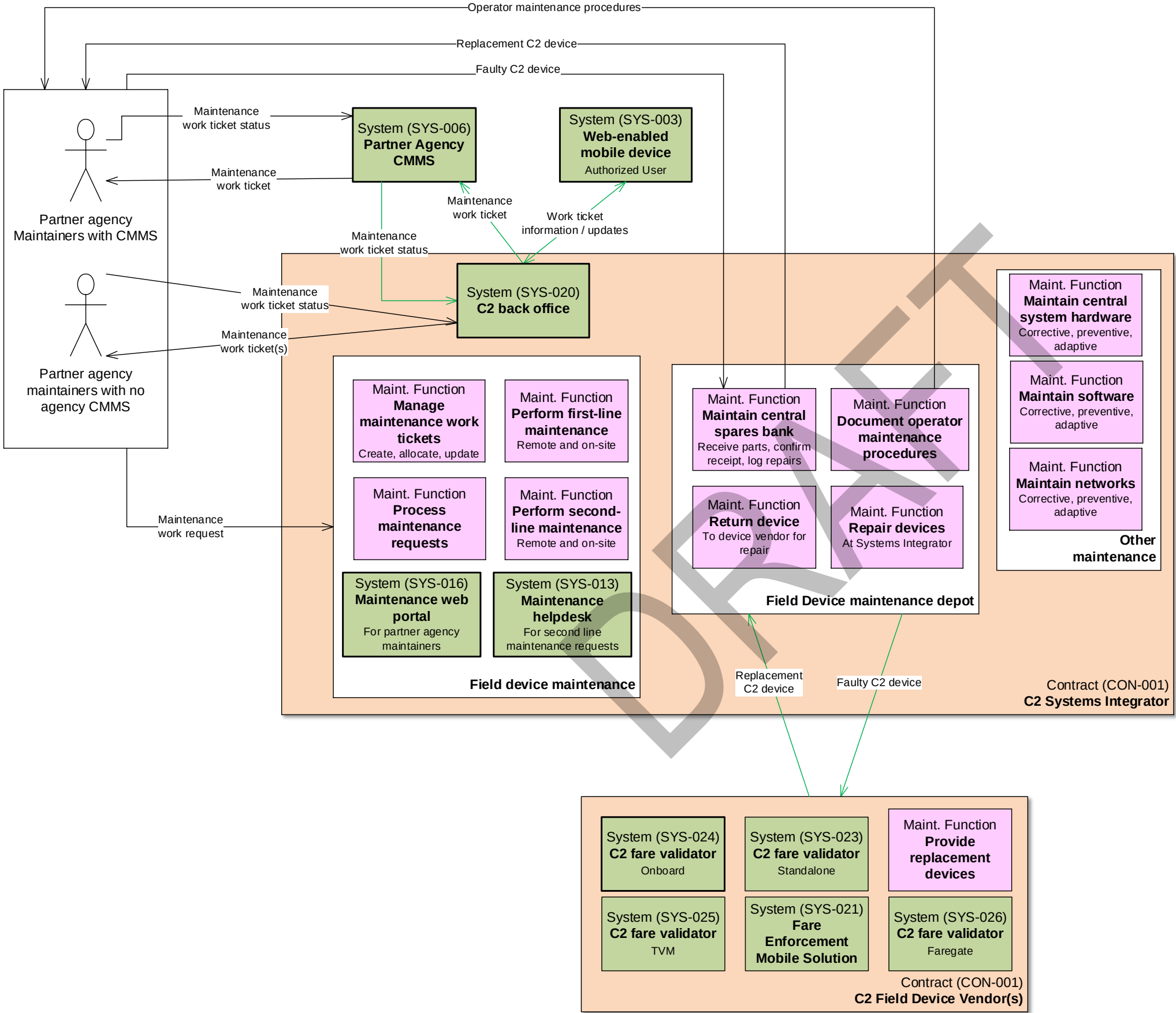


Title: FA-018 System Monitoring and Control

Description
Identifies the primary maintenance functions, users and interfaces of the System Monitoring and Control Sub-Capability.

Assumptions
1. Assumes SI will have access to data from the Legacy TVM

Questions
1. Which C2 field devices and legacy devices should the SI monitor and have control of?
2. Should C2 record TVM access?

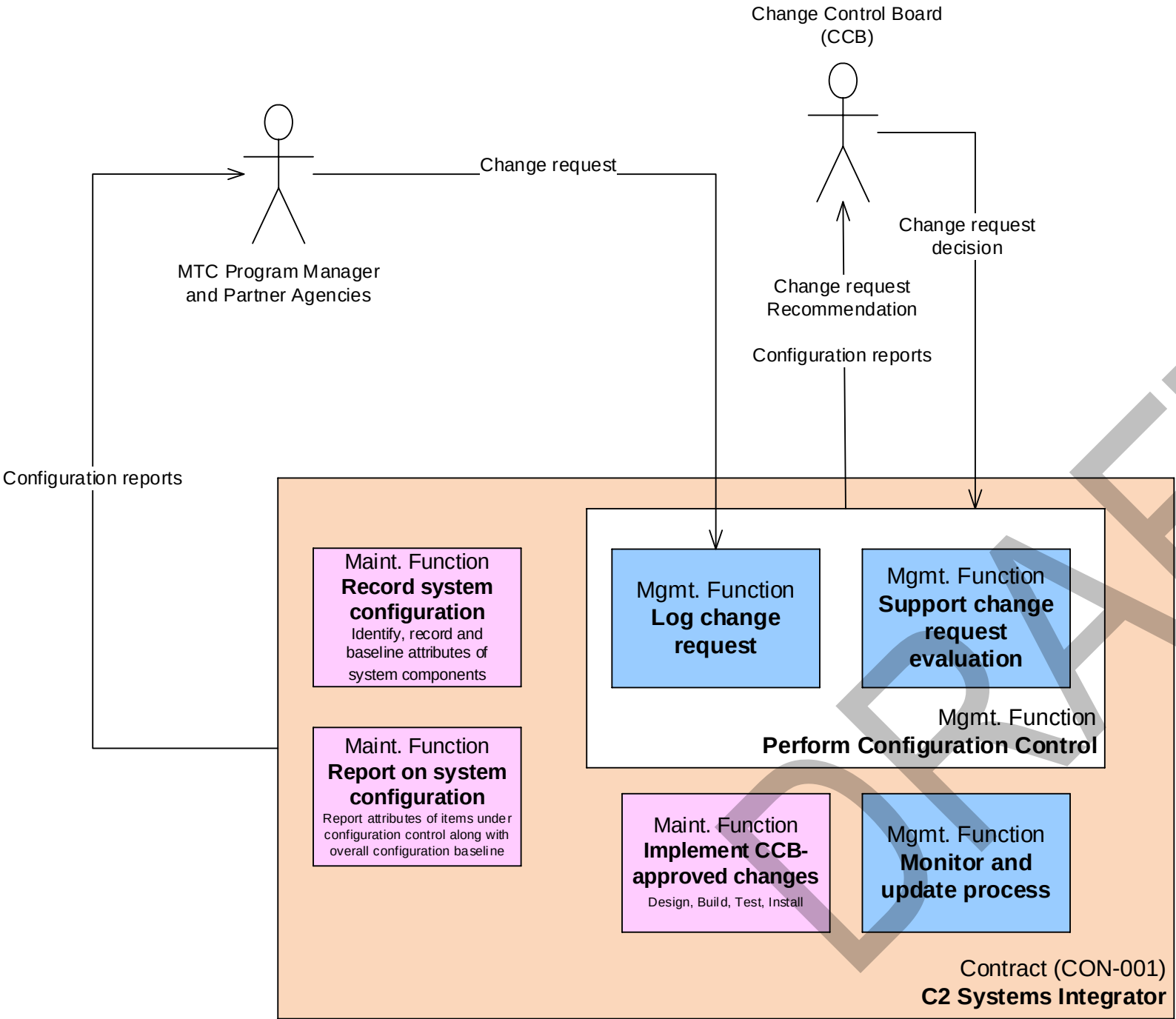


Title: FA-019 System Maintenance

Description
Identifies the primary maintenance functions under the System Maintenance capability and sub-capabilities, that Partner Agency maintainers will perform. For first-line maintenance such functions will be different depending on whether the Agency has its own CMMS. The diagram also shows the interfaces with C2 field devices and other systems.

Assumptions
BART will perform its own second-line maintenance, all other agencies will rely on C2 device vendors.

Questions
1. Will SI be responsible for maintenance activities of C1 devices that remain operational during C2 transition and operational phase?
2. Is portable test equipment required to support first/second line maintenance in the field? If so, what functions should they perform?



Title: FA-020 Configuration Management

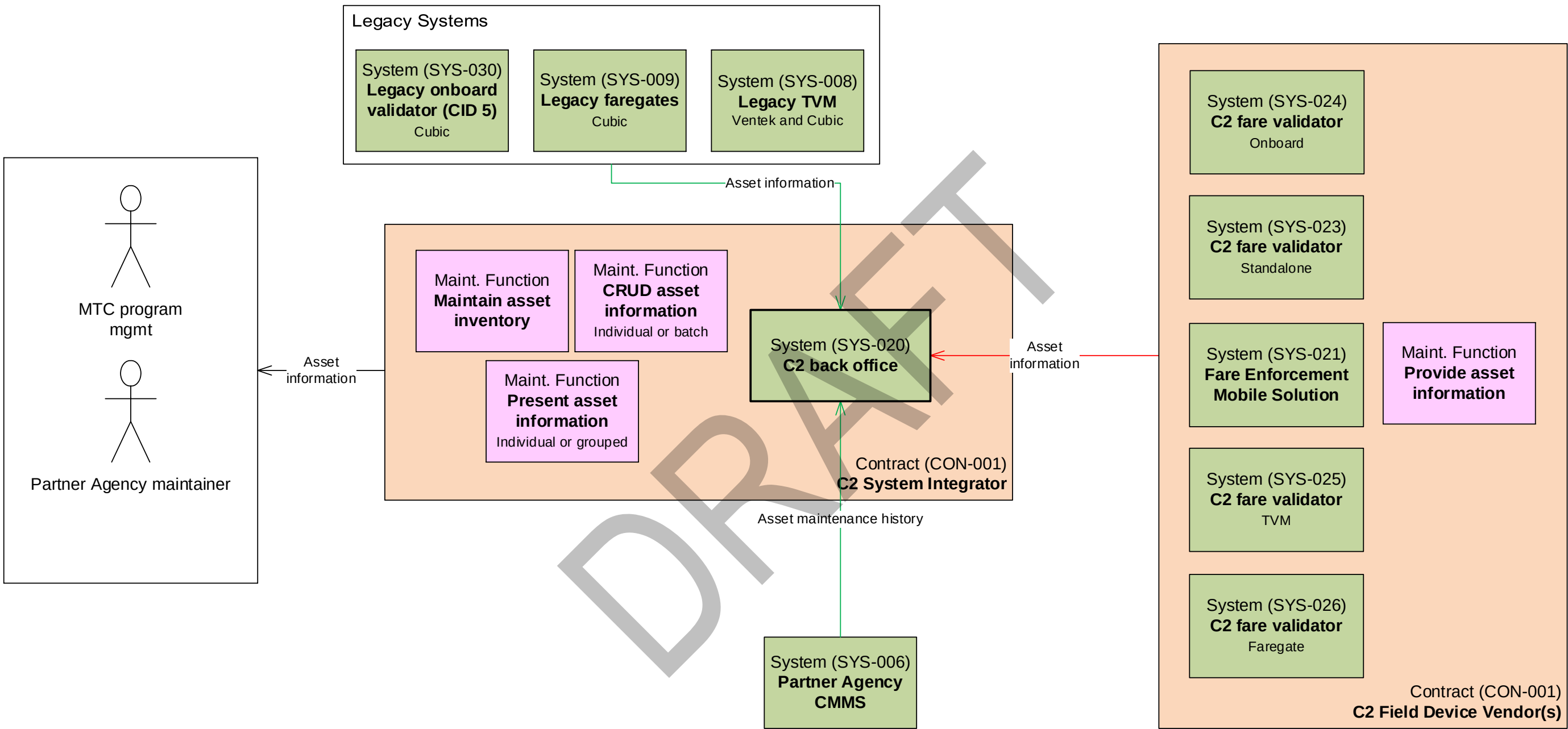
Description
Identifies the primary maintenance and management functions and sub-functions of the Configuration Management capability. The Change Control Board (CCB) is responsible for approving system configuration changes reported by the MTC and Partner Agencies through the SI.

Assumptions

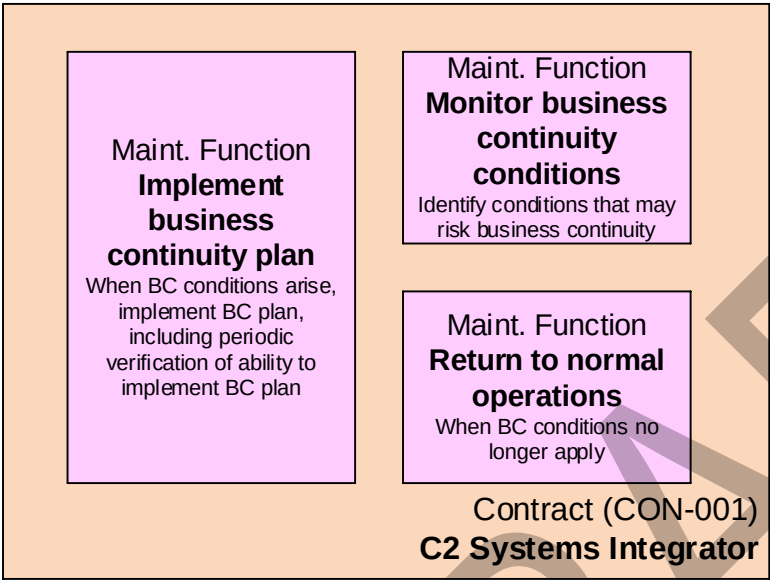
- 1. The Systems Integrator administers the CCB
- 2. The CCB is comprised of participants from the Systems Integrator, MTC and maybe Partner Agencies.
- 3. All configuration changes are subject to CCB approval (including agency business rules)

Questions

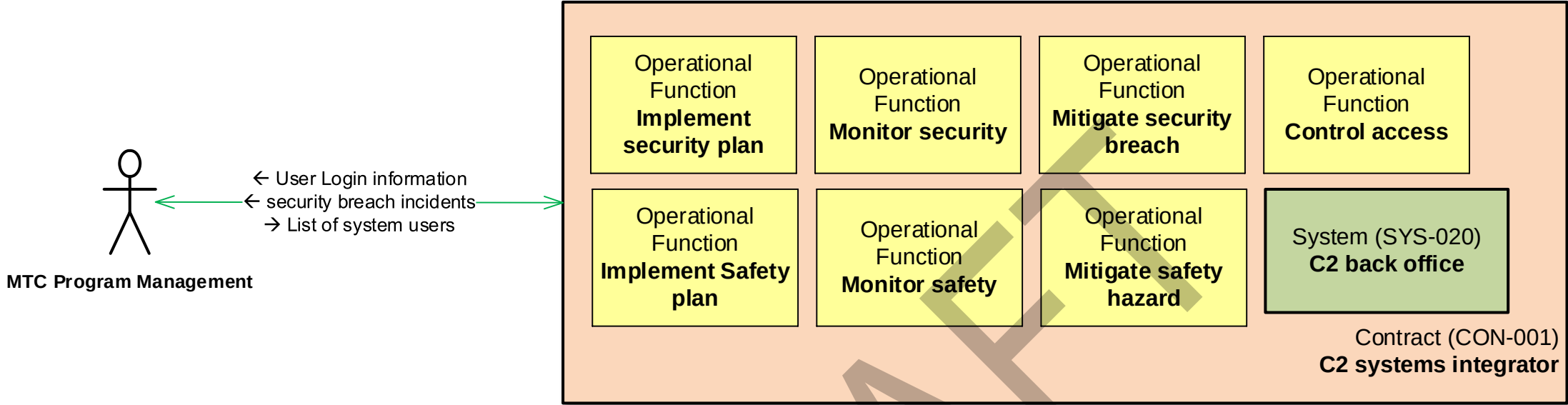
- 1. Should agencies be able to make any configuration changes themselves, if so what?



Title: FA-022 Asset Information Management
Description
Identifies the primary maintenance functions needed to manage information from all systems that interface with C2.
Assumptions
None
Questions
None



Title: FA-023 Business Continuity
Description Shows the primary maintenance functions of the Business Continuity capability going from development of a business continuity plan to returning to normal operations in the case the plan needs to be executed.
Assumptions None
Questions None



Title
FA-015 Safety and Security Management

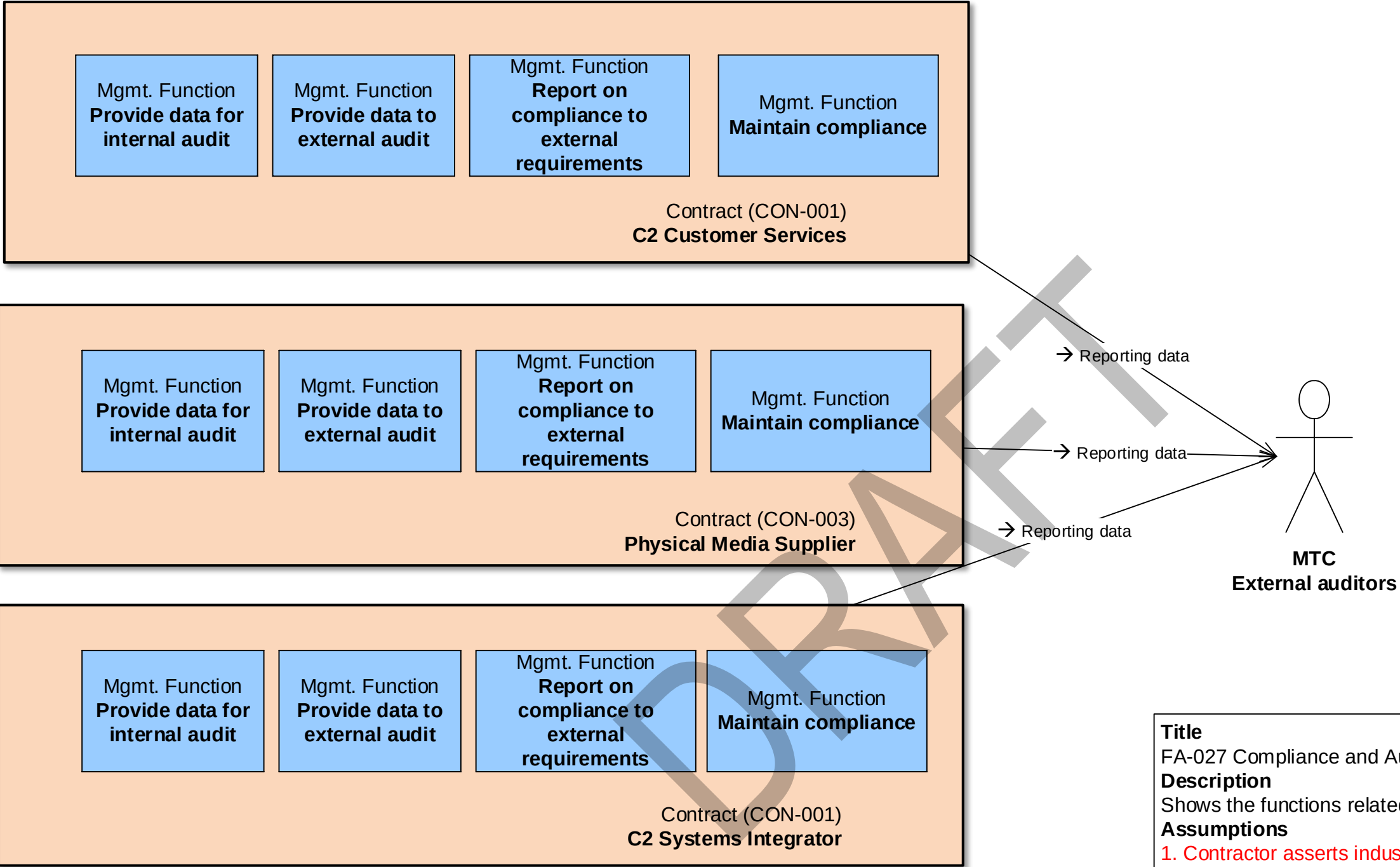
Description
Shows the functions related to C2 management of safety and security. The C2 systems integrator, MTC and partner agencies will variously be responsible for ensuring the security of aspects of the C2 system – including data security, system security and some physical security.

Assumptions

- Responses to security breaches are defined in other architectures (e.g. maintenance)
- Much of the security standards will be defined in the non-functional requirements

Questions

-

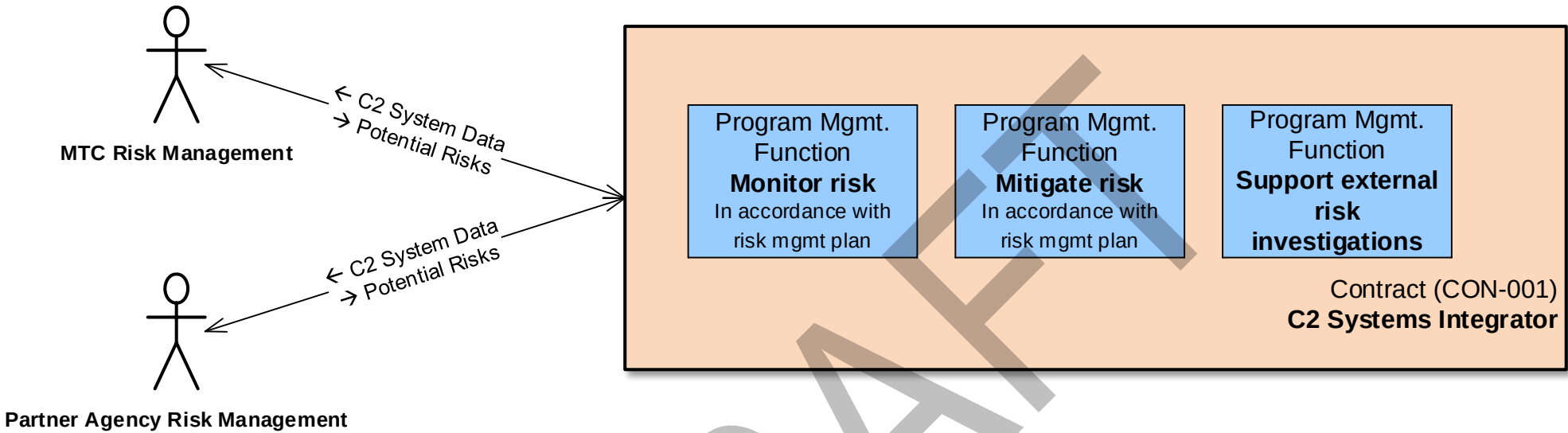


Title
FA-027 Compliance and Audit

Description
Shows the functions related to providing data to support C2 audit

Assumptions

- 1. Contractor asserts industry standards (e.g. audit, management practices) to which their service complies in contract.
- 2. Contractor provides process and management controls documentation as a requirement of the Contract and performs recurring internal and external audits with respect to the controls.
- 3. Reports include results of management testing of internal controls on a periodic basis.
- 4. Contract holder and operators reserve the right to receive reports and evidence of management controls and audit performance of contractor costs and other service delivery elements that have financial impacts at no incremental cost to the program.



Title
FA-028 Risk Management

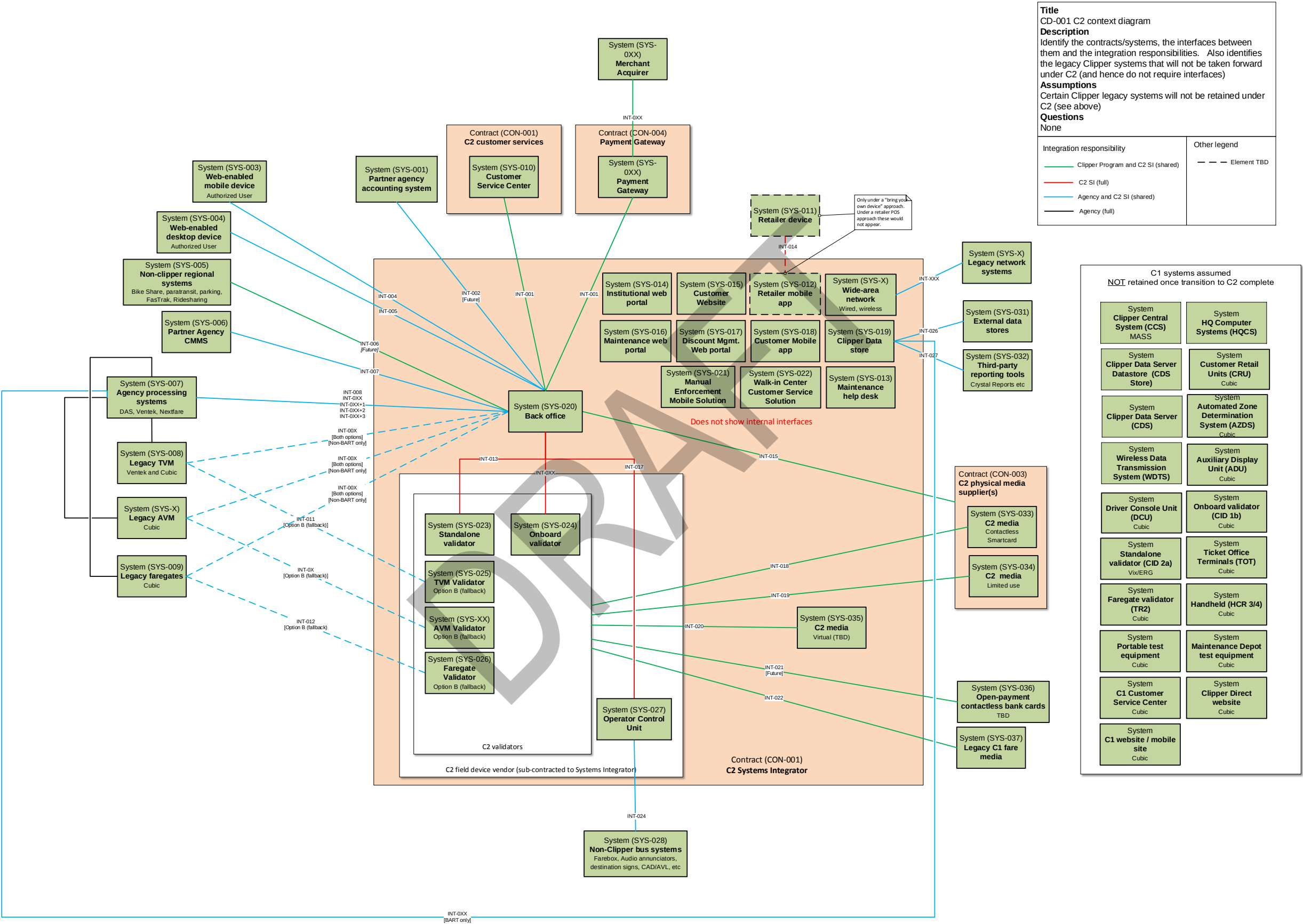
Description
Shows the functions related to C2 management of risk. Risk Management supports the prevention, education, and investigation of incidents that could result in financial or other risk to Clipper®, primarily, but not exclusively related to fraud, crime and other illegal activity.

Assumptions
1. C2 SI is responsible for overall vendor risk, including those of the other contracted providers
2.

Questions
1.

Appendix 5: Context Diagram

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ATTACHMENT B, CRITICAL MILESTONES AND GUARANTEED COMPLETION DATES

Milestone	Precursor Dependencies	Contract Reference	Rating
DESIGN			
Submission and Acceptance of Schedule	Project NTP	Contract Article 2.5 Att. A-1.21(1)	1
Drafts of All Plans	Conceptual Design	Att. A-3.01	2 (Note 1)
Acceptance of Final Design	Acceptance of Conceptual Design Acceptance of Preliminary Design Completion of Design Process	Att. A-3.01	1
TESTING			
Implementation of C2 Test Facility	Acceptance of Preliminary Design	Att. A-3.05	2 (Note 4)
Acceptance of Device Hardware and Software Testing	Acceptance of Final Design Acceptance of preceding test phases	Att. A-3.04	1 (Note 2)
Acceptance of Integration Testing, End-to-End Functionality Testing, and Use Case Operations Testing	Completion of all hardware and software development Acceptance of preceding test phases	Att. A-3.04	1 (Note 3)
IMPLEMENTATION			
Completion of first 50% Bus fleet Installation and Installation Acceptance Testing	Completion of all hardware and software development Acceptance of End-to-End Testing Completion of Integration	Att. A-3.03 Att. A-1.16(2)	1 (Note 5)
Completion of second 50% Bus fleet Installation and Installation Acceptance Testing	Completion of all hardware and software development Acceptance of preceding test phases	Att. A-3.03 Att. A-1.16(2)	1 (Note 5)
Completion of Rail Installation and Installation Acceptance Testing	Completion of all hardware and software development Acceptance of preceding test phases	Att. A-3.03 Att. A-1.16(3) Att. A-1.16(5) Att. A-1.16(6)	1
Completion of Ferry Installation and Installation Acceptance Testing	Completion of all hardware and software development Acceptance of preceding test phases	Att. A-3.03 Att. A-1.16(4)	2 (Note 6)
Achievement of Revenue Ready Status	All testing and documentation activities as noted in the Contract	Contract Article 6.8	1 (Note 8)
Acceptance of Pilot Testing	Installation on Pilot Test agency facilities All systems operational O&M Services in place	TBD – we are making some updates in Att. A to more clearly cover pilot testing	1 (Note 9)

TRANSITION AND C1 OPERATIONS			
Assumption of C1 Operations	All elements described in A-2	Att. A-2	1
Acceptance of Final C1-C2 Transition Plan	NTP	Att. A-4.01	2 (Note 10)
Completion of Retail Network Installation and Testing	Completion of all Retail Network Development Availability of Fare Media	Att. A-1.20	2 (Note 7)
Start of Transition	All O&M services available All fare media available Retail network operational	Contractors Transition Plan	1
End of Transition	Substantial completion of customer and agency transition	Contractors Transition Plan	1

Notes:

1. The Conceptual Design currently includes as a sub-requirement “drafts of all plans”. To emphasize the importance of this sub-item am suggesting it as a possible distinct milestone.
2. Of the various testing stages, this is the one that demonstrates that all of the individual components work which is a proxy for the development work largely being completed.
3. This is where we see the entire system in a state of operation as a key precursor to revenue-ready status.
4. They will probably do this quickly anyway, but it’s a tangible work product so relatively easy to ascribe to a milestone.
5. Given the size of the bus fleets, this provides an interim measure of progress, but these two could be combined.
6. Ferry could be combined with rail in the preceding item.
7. If possible, would like to include this in the critical milestones so MTC has some control over foot dragging by the Contractor regarding the retail network. Probably does not need to be in place until the start of transition.
8. Revenue ready status must be achieved prior to starting pilot testing.
9. At this point we do not know exactly what the pilot testing will look like and are in the process of making updates to Attachment A to clarify this.
10. Although submission of all plans is required under conceptual design, it is probably worth breaking this one out separately as it is a critical document that we want to incentivize delivery of.

Note that one difference between C1 and C2 is that there is no specific priority at the moment with respect to transit operator installations and this will probably will not be fully determined until post-award. I have therefore not attempted to list specific transit operator installations as milestones.

ATTACHMENT C, PRICE FORMS

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**ATTACHMENT C-1
PRICE FORM INSTRUCTIONS****Instructions for all Price Forms:**

Please refer to these individual Price Form instructions below for filling out each of the Price Forms.
Formulas are <u>not</u> provided in any of the forms; Proposers are required to insert formulas, specifically for total amounts.
The cost proposal files must be submitted in Excel (no .pdf) as part of the proposal submitted in this RFP.
To ensure consistency with the overview, work plan, and organization charts, all positions mentioned in those documents must also be listed in C-9 and all other applicable Price Forms.
Proposers are required to use consistent terms throughout the Price Forms to describe the same roles/titles both in the Proposal and in each of the Price Forms.
Proposer should ensure that the hourly (straight and overtime) rates listed in C-9 are used as the basis for the hourly rates listed on C-2, C-3, C-4, C-5, C-5-1, C-6, and C-7.
Proposer should ensure that the hourly (straight and overtime) rates listed in C-9 reflect prevailing wage rate requirements, as appropriate.
Proposers certify that all costs included in Attachments C-2, C-3, C-4, C-5, C-5-1, C-7, C-8, C-9, and C-10 are for all requirements included in Attachment A through A-8.
Proposer must identify all key personnel by name, non-key personnel may be listed by name or by classification/title.
Detail all Non-Labor (pass through costs, direct material and equipment (quantities, cost, mark-up, etc.), subcontractor, etc.) listed in each of the Price Forms for each FY in Attachment C-11.
Add additional rows for staff, or other non-labor costs, if required.
Annual total amounts included in individual Price Forms must reconcile against the total costs included in the C-8 Price Form.
Use consistent terms to describe the same roles/titles/rates both in the Proposal and in each of the Price Forms.

Instructions for Price Form C-2-Operations and Maintenance of C1:

Please refer to notes Attachment C-1 for guidance in filling out this Price Form.
Indicate FTE or PTE where applicable in column B for assigned employees.
Input "x" where applicable in column C for employees part of Overhead expense
Proposers should include all costs required to work with Cubic, Inc. for the nine (9) month transition period in this Price Form.

Instructions for Price Form C-3-Design, Implementation, and Testing of C2 System:

Please refer to notes Attachment C-3 for guidance in filling out this Price Form.
Indicate FTE or PTE where applicable in column B for assigned employees.
Input "x" where applicable in column C for employees part of Overhead expense

Instructions for Price Form C-4-Transition of C1 to C2:

Indicate FTE or PTE where applicable in column B for assigned employees.
Input "x" where applicable in column C for employees part of Overhead expense
Provide all costs necessary for the transition from C2 to the Next System.
Indicate the Period of Performance (list time frame and associated FY).
If the deliverable time frame is less than one FY or crosses FY's, indicate that in the FY column for that deliverable.

Instructions for Price Form C-5-C2 Operations and Maintenance For Initial Contract Term:

Indicate FTE or PTE where applicable in column B for assigned employees.
Input "x" where applicable in column C for employees part of Overhead expense

Instructions for Priced Form C-5-1-C2 Operations and Maintenance Extension Pricing:

Indicate FTE or PTE where applicable in column B for assigned employees.
Input "x" where applicable in column C for employees part of Overhead expense

**ATTACHMENT C-1
PRICE FORM INSTRUCTIONS****Instructions for Price Form C-6-Not Used**

This Price Form left intentionally blank.

Instructions for Price Form C-7-End of Term Transition:

Indicate FTE or PTE where applicable in column B for assigned employees.

Input "x" where applicable in column C for employees part of Overhead expense

Provide all costs necessary for the transition from C2 to the Next System.

Indicate the Period of Performance (list time frame and associated FY).

If the deliverable time frame is less than one FY or crosses FY's, indicate that in the FY column for that deliverable.

Instructions for Price Form C-8-Total Costs:

Use this Price Form to list the total for all labor and non labor costs listed on Price Forms C-2, C-3, C-4, C-5, C-5-1, and C-7 using rates identified in C-9 and C-10.

Indicate Not-To-Exceed (NTE) escalation percentages for future years beyond the optional extension period (show escalation as percentages for each year).

Prices for work included in C-2 included in this form will be not evaluated as per Section VIII, Evaluation, of the RFP. The price for this work will be the basis for the compensation to the Proposer for C1 operations and maintenance in the contract.

Instructions for Price Form C-9-Hourly Rates:

This form provides the overall hourly rates for all services and for all positions included in the Proposal and all price forms. Costs includes in price forms C-2, C-3, C-4, C-5, C-5-1, and C-7 must match the rates included in this form.

Where the template shows "Person #1" etc., please update with either the specific name of proposed staff, or classification/title of proposed staff,

Where the template shows "General & Admin (G&A)/Part-Time Employee (PTE)", please update with the specific classification/title of proposed staff.

Include hourly rate for all staff, including subcontractor staff. Rates in this form should match all costs listed in C-2, C-3, C-4, C-5, C-7, and C-8.

For all key personnel listed on the Proposer's Organization Chart, list the name and corresponding job classification. For all other employees (i.e. support staff/non-professional, and subcontractors) Proposers may list only the job classification. Teams members subject to FLSA are not eligible for overtime.

For named employees enter the actual hourly rate. For classifications only, list the average hourly rate for that classification.

Note any employees/classifications that are subject to prevailing wage requirements with an asterisk (*).

Rates on this form will be used as a basis for negotiating any contract extensions beyond the initial contract period.

Escalation may be tied to index with cap, or may be updated to remove years and just ask for escalation for each subsequent year.

Instructions for Price Form C-10-Equipment Rates for Proposed Equipment:

Provide tiered pricing for proposed C2 system equipment.

Indicate make and model number of proposed equipment.

Instructions for Price Form C-11-Detailed Non-Labor Information:

Detail all Non-Labor Costs for costs for each FY listed in each Price Form included as Attachment C-2, C-3, C-4, C-5, C-5-1, and C-7 on this Price Form.

Copy Price Form as needed.

ATTACHMENT C-2
Operations and Maintenance (O&M) of C1

[illegible]

Note:
Costs included in this form will be not evaluated as per Section VIII, Evaluation, of the RFP.
These costs will be the basis for the compensation to the Proposer for C1 operations and maintenance in the Contract.

Proposers are required to copy and submit this form for each milestone associated with design, implementation, and testing. The total target price submitted for each milestone represents the target price for that milestone. The target price represents the total price the Proposer will be required to adhere to for the associated milestone required for design, implementation, and testing.

Total Minimum Price	% savings shared	Target Price	% overage shared	Total Maximum Price
\$ _____	75%	\$ _____	75%	\$ _____

Total Minimum Price	% savings shared	Target Price	% overage shared	Total Maximum Price
\$200.00	75%	\$1,000.00	75%	\$5,000.00

MTC will the target price for each milestone upon its **satisfactory** completion and receipt of an acceptable invoice and actual milestone cost information. Upon receipt of the final milestone, MTC will determine the % of total saving or overage to be shared with the Contractor. If there is a total % savings, the Contractor will be paid the appropriate amount. If there is a total % overage, MTC will withhold the appropriate from the Contractors final invoice for C2 Design, Implementation, and Testing.

Note: Complete and submit this form for the 1) minimum price, 2) target price, and 3) maximum price, for each milestone required for design, implementation, and testing.
*Include all equipment, ancillary components and devices required for the installation and operation of the unit of equipment.

ATTACHMENT C-4

Transition of C1 to C2

			Period of Performance (list time frame and associated FY's): _____													
			Proposed Deliverable #1				Proposed Deliverable #2				Proposed Deliverable #3				Total	
Staff (identify all key personnel by name, non-key personnel may be listed by name or by classification/title). Add additional rows if needed.	FTE/PTE	Overhead/ G&A	Hourly Rate	FY	Proposed Deliverable #1 Hours	Proposed Deliverable #1 Total Price	Hourly Rate	FY	Proposed Deliverable #2 Hours	Proposed Deliverable #2 Total Price	Hourly Rate	FY	Proposed Deliverable #3 Hours	Proposed Deliverable #2 Total Price	For All Proposed Deliverable s	Total Price For All Proposed Deliverables
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Note:
Add additional columns as needed for additional deliverables.
See RFP, Attachment A-4 and Article 3.5 of the Contract.

ATTACHMENT C-5
Operations and Maintenance (O&M) of C2 For Initial Contract Term

			1FY 20-21			2FY 21-22			3FY 22-23			4FY 23-24			5FY 24-25			6FY 25-26			7FY 26-27			8FY 27-28			9FY 28-29			10FY 29-30			Total All FY'S	
Staff (identify all key personnel by name, non-key personnel may be listed by name or by classification/title). Add additional rows if needed.	FTE/ PTE	Overhead/ G&A	Hourly Rate	Annual Hours	FY 20-21 Annual Price	Hourly Rate	Annual Hours	FY 21-22 Annual Price	Hourly Rate	Annual Hours	FY 22-23 Annual Price	Hourly Rate	Annual Hours	FY 23-24 Annual Price	Hourly Rate	Annual Hours	FY 24-25 Annual Price	Hourly Rate	Annual Hours	F 25-26 Annual Price	Hourly Rate	Annual Hours	FY 26-27 Annual Price	Hourly Rate	Annual Hours	FY 27-28 Annual Price	Hourly Rate	Annual Hours	FY 28-29 Annual Price	Hourly Rate	Annual Hours	FY 29-30 Annual Price	Total Project Hours	Total Annual Price
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ATTACHMENT C-5-1
Operations and Maintenance (O&M) of C2 Extension Pricing

			1	FY 30-31		2	FY 31-32		3	FY 32-33		4	FY 33-34		5	FY 34-35		6	FY 35-36		Total All Extension FY'S	
Staff (identify all key personnel by name, non-key personnel may be listed by name or by classification/title). Add additional rows if needed.	FTE/ PTE	Overhead/G &A	Hourly Rate	Annual Hours	Annual Price	Hourly Rate	Annual Hours	Annual Price	Hourly Rate	Annual Hours	Annual Price	Hourly Rate	Annual Hours	Annual Price	Hourly Rate	Annual Hours	Annual Price	Hourly Rate	Annual Hours	Annual Price	Total Project Hours	Total Annual Price
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Note:
These costs will be used for the optional extension period detailed in the RFP.

ATTACHMENT C-6
Not Used

This Price Form left intentionally blank.

DRAFT

ATTACHMENT C-7

End of Term Transition

[illegible]

Note:
Add additional columns as needed for additional deliverables.
See RFP, Attachment A-7.

ATTACHMENT C-8
TOTAL COST ALLOCATION AND PRICING SUMMARY

	FY 18-19		FY 19-20		FY 20-21		FY 21-22		FY 22-23		FY 23-24		FY 24-25		FY 25-26		FY 26-27		FY 27-28		FY 28-29		FY 29-30		FY 30-31		FY 31-32		FY 32-33		FY 33-34		FY 34-35		FY 35-36		All FY's	
	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Hours All FY's	Total Price All FY's		
A. C1 Operations and Maintenance																																						
Total Price from Price Form C-2: C1 Operations and Maintenance Price																																						
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Note: Costs for C1 Operations and Maintenance included above will be not evaluated as per Section VIII, Evaluation, of the RFP. These costs will be the basis for the compensation to the Proposer for C1 operations and maintenance in the Contract.

B. C2 Operations and Maintenance for Initial Contract Term																																					
FY 18-19		FY 19-20		FY 20-21		FY 21-22		FY 22-23		FY 23-24		FY 24-25		FY 25-26		FY 26-27		FY 27-28		FY 28-29		FY 29-30		FY 30-31		FY 31-32		FY 32-33		FY 33-34		FY 34-35		FY 35-36			
Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Hours All FY's	Total Price All FY's
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C-3 C2 Design, Implementation, and Testing (list target price and associated hours)		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
C-4 Transition from C1 to C2		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
C-7 C2 to Next System		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Total C2 Milestone and Deliverable Price's from Price Forms C-3, C-4 and C-7:		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -

C2 Operations and Maintenance Extension Price																																								
	FY 18-19		FY 19-20		FY 20-21		FY 21-22		FY 22-23		FY 23-24		FY 24-25		FY 25-26		FY 26-27		FY 27-28		FY 28-29		FY 29-30		FY 30-31		FY 31-32		FY 32-33		FY 33-34		FY 34-35		FY 35-36		All FY's			
	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Annual Hours	Total Annual Price	Total Hours All FY's	Total Price All FY's				
Total Price from Price Form C-5-1: C2 Operation and Maintenance Extension																																								
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	Total Hours All FY's	Total Price All FY's and All Milestones & Deliverables
Insert the total hours and price for both B. C2 Operations and Maintenance for Initial Contract Term and C. C2 Milestone and Deliverable Price*:		

*This price will be used for evaluation purposes.

	Total Hours All FY's	Total Price All FY's and All Milestones & Deliverables
Insert the total hours and price for A. C1 Operations and Maintenance, B. C2 Operations and Maintenance for Initial Contract Term, and C. C2 Milestone and Deliverable Price:		

Not-to-Exceed escalation percentage for the C-2 O&M prices listed in Attachmt C-5-1, and hourly rates listed in Attachment C-9 for future optional years beyond the extension allowed for in the REP and Contract.	
Fiscal Year	Percentage
FY 36-37	%
FY 37-38	%
FY 38-39	%
FY 39-40	%

ATTACHMENT C-9
RATE BREAKDOWN

Staff (identify all key personnel by name, non-key personnel may be listed by name or by classification/title). Add additional	Contract Year	Actual Hourly Rate and/or Average Hourly Rate	Fringe Benefit/ Labor Overhead %	G&A %	Fee Profit %	Fully Burdened Rate	Fully Burdened Overtime Rate	Effective Dates		of Hourly Rate	Escalation Increase %* (applied to subsequent year)
								From:	To:		
Person #1	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -				0%
Person #2	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -				0%
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	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -				0%
Person #3	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -				0%
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	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -				0%
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	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -				0%

ATTACHMENT C-9
RATE BREAKDOWN

Staff (identify all key personnel by name, non-key personnel may be listed by name or by classification/title). Add additional	Contract Year	Actual Hourly Rate and/or Average Hourly Rate	Fringe Benefit/ Labor Overhead %	G&A %	Fee Profit %	Fully Burdened Rate	Fully Burdened Overtime Rate	Effective Dates		of Hourly Rate	Escalation Increase %* (applied to subsequent year)
								From:	To:		
Person #4	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -				0%
Person #5	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -				0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -				0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -				0%

ATTACHMENT C-9
RATE BREAKDOWN

Name/ Classifications of Non-Key Personnel or Unnamed Classifications	Contract Year	Actual Hourly Rate and/or Average Hourly Rate	Fringe Benefit/Labo r Overhead %	G&A %	Fee Profit %	Fully Burdened Rate	Fully Burdened Overtime Rate	Effective Dates	of Hourly Rate	Escalation Increase % (applied to subsequent year)
								From:	To:	
Classification #1	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -			0%
Classification #2	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -			0%
Classification #3	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -			0%

ATTACHMENT C-9
RATE BREAKDOWN

Name/ Classifications of Non-Key Personnel or Unnamed Classifications	Contract Year	Actual Hourly Rate and/or Average Hourly Rate	Fringe Benefit/Labo r Overhead %	G&A %	Fee Profit %	Fully Burdened Rate	Fully Burdened Overtime Rate	Effective Dates	of Hourly Rate	Escalation Increase % (applied to subsequent year)
								From:	To:	
Classification #4	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -			0%
Classification #5	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -			0%

ATTACHMENT C-9
RATE BREAKDOWN

Name/ Classifications of Key Personnel, Named and Unnamed Classifications of Subcontractor Staff	Contract Year	Actual Hourly Rate and/or Average Hourly Rate	Fringe Benefit/Labo r Overhead %	G&A %	Fee Profit %	Fully Burdened Rate	Fully Burdened Overtime Rate	Mark-Up %	Effective Dates	of Hourly Rate	Escalation Increase % (applied to subsequent year)
								From:	To:		
Subcontractor Staff #1	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Subcontractor Staff #2	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Subcontractor Staff #3	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%

ATTACHMENT C-9
RATE BREAKDOWN

Name/ Classifications of Key Personnel, Named and Unnamed Classifications of Subcontractor Staff	Contract Year	Actual Hourly Rate and/or Average Hourly Rate	Fringe Benefit/Labo r Overhead %	G&A %	Fee Profit %	Fully Burdened Rate	Fully Burdened Overtime Rate	Mark-Up %	Effective Dates	of Hourly Rate	Escalation Increase % (applied to subsequent year)
								From:	To:		
Subcontractor Staff #4	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Subcontractor Staff #5	Year 1 -FY 18-19	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 2- FY 19-20	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 3 -FY 20-21	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 4 -FY 21-22	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 5 -FY 22-23	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 6- FY 23-24	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 7 - FY 24-25	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 8 -FY 25-26	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 9 -FY 26-27	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 10 - FY 27-28	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 11- FY 28-29	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
	Year 12- FY 29-30	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 13- FY 30-31	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 14- FY 32-33	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 15- FY 33-34	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 16 - FY 34-35	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%
Optional Extension Year	Year 17 - FY 35-36	\$ -	0%	0%	0%	\$ -	\$ -	0%			0%

Note:
Note any employees/classifications that are subject to prevailing wage requirements with an asterisk (*).
Escalation of staff rates is permitted, up to a maximum NTE of __% per year, for the first XX (XX) years of the contract.

ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 18-19 Per Unit Base Price	FY 18-19 Per Unit Markup %	FY 18-19 Total Per Unit Price	Quantity	Total FY 18-19 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.
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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 19-20 Per Unit Base Price	FY 19-20 Per Unit Markup %	FY 19-20 Total Per Unit Price	Quantity	Total FY 19-20 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.

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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 20-21 Per Unit Base Price	FY 20-21 Per Unit Markup %	FY 20-21 Total Per Unit Price	Quantity	Total FY 20- 21 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.
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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 21-22 Per Unit Base Price	FY 21-22 Per Unit Markup %	FY 21-22 Total Per Unit Price	Quantity	Total FY 21- 22 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.
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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 22-23 Per Unit Base Price	FY 22-23 Per Unit Markup %	FY 22-23 Total Per Unit Price	Quantity	Total FY 22- 23 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.
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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 23-24 Per Unit Base Price	FY 23-24 Per Unit Markup %	FY 23-24 Total Per Unit Price	Quantity	Total FY 23-24 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.

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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 24-25 Per Unit Base Price	FY 24-25 Per Unit Markup %	FY 24-25 Total Per Unit Price	Quantity	Total FY 24- 25 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.
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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 25-26 Per Unit Base Price	FY 25-26 Per Unit Markup %	FY 25-26 Total Per Unit Price	Quantity	Total FY 25-26 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.

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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 26-27 Per Unit Base Price	FY 26-27 Per Unit Markup %	FY 26-27 Total Per Unit Price	Quantity	Total FY 26- 27 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.
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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 27-28 Per Unit Base Price	FY 27-28 Per Unit Markup %	FY 27-28 Total Per Unit Price	Quantity	Total FY 27- 28 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.

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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 28-29 Per Unit Base Price	FY 28-29 Per Unit Markup %	FY 28-29 Total Per Unit Price	Quantity	Total FY 28-29 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.
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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 29-30 Per Unit Base Price	FY 29-30 Per Unit Markup %	FY 29-30 Total Per Unit Price	Quantity	Total FY 29-30 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 30-31 Per Unit Base Price	FY 30-31 Per Unit Markup %	FY 30-31 Total Per Unit Price	Quantity	Total FY 30-31 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 31-32 Per Unit Base Price	FY 31-32 Per Unit Markup %	FY 31-32 Total Per Unit Price	Quantity	Total FY 31-32 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.

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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 32-33 Per Unit Base Price	FY 32-33 Per Unit Markup %	FY 32-33 Total Per Unit Price	Quantity	Total FY 32-33 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
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			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
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			\$ -	%	\$ -	150-200	\$ -
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			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
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			\$ -	%	\$ -	50-100	\$ -
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			\$ -	%	\$ -	150-200	\$ -
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			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

See RFP, Section IX, Article M, Cooperative Use.
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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 33-34 Per Unit Base Price	FY 33-34 Per Unit Markup %	FY 33-34 Total Per Unit Price	Quantity	Total FY 33-34 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
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			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
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			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
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			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	200-250	\$ -

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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 34-35 Per Unit Base Price	FY 34-35 Per Unit Markup %	FY 34-35 Total Per Unit Price	Quantity	Total FY 34-35 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
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			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
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			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	200-250	\$ -

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ATTACHMENT C-10
EQUIPMENT RATES FOR PROPOSED

Equipment	Make	Model #	FY 35-36 Per Unit Base Price	FY 35-36 Per Unit Markup %	FY 35-36 Total Per Unit Price	Quantity	Total FY 35-36 Extension Price
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	250 +	\$ -
			\$ -	%	\$ -	0-50	\$ -
			\$ -	%	\$ -	50-100	\$ -
			\$ -	%	\$ -	100-150	\$ -
			\$ -	%	\$ -	150-200	\$ -
			\$ -	%	\$ -	200-250	\$ -
			\$ -	%	\$ -	250+	\$ -
			\$ -	%	\$ -	0 to 50	\$ -
			\$ -	%	\$ -	50 to 100	\$ -
			\$ -	%	\$ -	100 to 150	\$ -
			\$ -	%	\$ -	150 to 200	\$ -
			\$ -	%	\$ -	200 to 250	\$ -
			\$ -	%	\$ -	200-250	\$ -

Note:

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ATTACHMENT D, CALIFORNIA LEVINE ACT STATEMENT

California Government Code § 84308, commonly referred to as the “Levine Act,” precludes an officer of a local government agency from participating in the award of a contract if he or she receives any political contributions totaling more than \$250 in the 12 months preceding the pendency of the contract award, and for three months following the final decision, from the person or company awarded the contract. This prohibition applies to contributions to the officer, or received by the officer on behalf of any other officer, or on behalf of any candidate for office or on behalf of any committee.

MTC’s commissioners include:

Alicia C. Aguirre
Tom Azumbrado
Jeannie Bruins
Damon Connolly
Dave Cortese
Dorene M. Giacomini
Federal D. Glover

Scott Haggerty
Anne W. Halsted
Nick Josefowitz
Sam Liccardo
Jake Mackenzie
Julie Pierce
Amy Rein Worth

Bijan Sartipi
Libby Schaaf
Warren Slocum
James P. Spering

1. Have you or your company, or any agent on behalf of you or your company, made any political contributions of more than \$250 to any MTC commissioner in the 12 months preceding the date of the issuance of this request for qualifications?

☐ YES ☐ NO

If yes, please identify the commissioner: _____

2. Do you or your company, or any agency on behalf of you or your company, anticipate or plan to make any political contributions of more than \$250 to any MTC commissioners in the three months following the award of the contract?

☐ YES ☐ NO

If yes, please identify the commissioner: _____

Answering yes to either of the two questions above does not preclude MTC from awarding a contract to your firm. It does, however, preclude the identified commissioner(s) from participating in the contract award process for this contract.

DATE

(SIGNATURE OF AUTHORIZED OFFICIAL)

(TYPE OR WRITE APPROPRIATE NAME, TITLE)

(TYPE OR WRITE NAME OF COMPANY)

ATTACHMENT E, MTC C2 SYSTEM INTEGRATOR CONTRACT

DRAFT

CONTRACT

between the

METROPOLITAN TRANSPORTATION COMMISSION

and

for

NEXT GENERATION CLIPPER® (C2) REGIONAL TRANSIT FARE PAYMENT
SYSTEM INTEGRATOR

Bay Area Metro Center
375 Beale Street
San Francisco, California 94105

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GLOSSARY OF TERMS, ARTICLES 1-20

Approved/ Approval:	Written approval by the MTC Project Manager unless the Contract specifically states otherwise.
Approved Project Schedule:	The Critical Path Method schedule described in Article 2.5, revised as provided therein. The first Approved Project Schedule is included in the Contract as Attachment B-2.
Best and Final Offer:	The Contractor's revised Proposal that represents its offer to enter into a Contract in accordance with the terms and conditions of the Request for BAFO.
Business Rules:	The rules and guidelines that govern the Contract and that define how the C2 System will support the Transit Operator fare policies.
C1:	Operation and maintenance of the Clipper fare payment system utilizing the C1 System.
C1 System:	The current Clipper® fare payment system.
C1 Contractor:	Cubic Transportation Systems, Inc.
C2:	The design, development, testing, integration, operation and maintenance of the Clipper fare payment system utilizing the C2 System and services provided under Other C2 Contracts.
C2 System (also Project):	The next generation Clipper® fare payment system to be designed, implemented, tested, operated, maintained, and repaired, replaced, modified or refreshed by the Contractor pursuant to the Contract.
C2 System Software:	As defined in Article 4.1(b).
Cardholder:	A customer who has Clipper® fare media.
Change Notice:	A written notice issued to the Contractor by the Project Manager specifying a proposed change to the Contract. Unless otherwise expressly stated in the Change Notice, a Change Notice is a request for Contractor's Proposal which may result in a Change Order.
Change Order:	A written change to the Contract, developed and issued in accordance with Article 15 of the Contract.
Clipper®:	Registered trademark of the regional transit payment system in the San Francisco Bay Area.

Clipper® Card:	A form of physical Fare Media (plastic or paper card) based on smart card technology that allows customers to pay for and access transit services for the Transit Operators participating in Clipper.
Contract:	The signed agreement between MTC and the Contractor to design, develop, install, test, integrate, operate, maintain and refresh the C2 System, as defined in Article 1.1.1.
Contract Document Requirements List (CDRL):	A listing of documents such as drawings, catalogs, reports, notices, and samples, required to be submitted by the Contractor for approval, and which shows the submittal times, resubmittal requirements, and frequency requirements for the submittals.
Contractor:	[name of Contractor]
Contractor Project Manager:	The Contractor's duly designated representative for management of the Work.
Critical Milestones:	Contractor completion dates for specified C2 System deliverables or milestones with Guaranteed Completion Dates, as further defined in Article 2.3 and Attachment B-1, Critical Milestones and Guaranteed Completion Dates.
Critical Path:	One or more continuous chains of zero or negative float activities running from the Notice to Proceed to a Critical Milestone in Attachment B-1.
Day:	Calendar day, as further defined in Article 2.4.
Effective Date:	The date on which the Contract Term begins: _____
Equipment:	Collectively, the physical components of C2, including, but not limited to, fare validation devices, user interface devices, communications networks and devices, and any other electronic device that is supplied under the Contract and that is part of or interacts with the C2 System.
Force Majeure Event:	As defined in Article 13.1.
Guaranteed Completion Date:	The date by which delivery of a Critical Milestone delivery must be completed (including receipt of approval by MTC) by the Contractor, as described in Article 2.3 and Attachment B-1, Critical Milestones and Guaranteed Completion Dates.
Intellectual Property Definitions:	The Contract definitions of terms used to describe the parties' rights in intellectual property, including Software and Work Products, as set forth in Article 4.1.
Letter of Credit (LOC):	The financial guaranty to be provided by Contractor, as described in Attachment F.

Liquidated Damages:	The amount to be deducted from payments due Contractor as a result of late completion of a Critical Milestone, as further defined in Article 3.4.4.
Materials:	Materials, supplies, and Contractor Equipment Provided to MTC under the Contract.
Metropolitan Transportation Commission or MTC:	The Metropolitan Planning Organization for the nine county San Francisco Bay Area. MTC is responsible for planning the transportation network for the Region and for coordination among the Transit Operators in the Region. MTC is the C2 contracting agency on behalf of the Transit Operators.
MTC-Caused Delays:	As defined in Article 13.2.
MTC Data:	As defined in Article 4.1(h).
MTC Project Manager:	MTC's duly designated representative for management of the Work.
Notice of Termination:	Written notice from MTC to the Contractor to stop work under, and to terminate, the Contract on the date and to the extent specified, pursuant to Article 18 of the Contract.
NTP or Notice to Proceed:	Written notice from MTC to the Contractor to proceed with the Work specified in the Notice to Proceed.
O/M:	The operations and maintenance Work to be provide by Contractor pursuant to the requirements of the Contract, including without limitation Article 8 and Attachments A-2 and A-5.
O/M Commencement Date:	The O/M Commencement Date shall occur as defined in Article 8.2.
O/M Term:	The term during which the Contractor will provide O/M for the C2 System as defined in Article 8.4 and 8.5.
Operating Rules:	The agreed-upon operating parameters and procedures for the consistent and efficient operation of the Clipper® fare payment system, agreed to by the Transit Operators and adopted and maintained by MTC in MTC Resolution No. 3983, as revised (http://www.mtc.ca.gov/planning/tcip/).
PII:	Personally Identifiable Information, as further defined in Article 4.4.
Performance and Payment Bonds:	As defined in Attachment F to the Contract.

Payment Forms:	That portion of the Contract that specifies the payments Contractor is entitled for receive from MTC for Work performed under the Contract, subject to revision in accordance with the terms of the Contract, included in the Contract as Attachment C, as initialed on each page by the parties.
Project:	The C2 System.
Proposal:	The proposal submitted by Contractor to perform the Work as set forth in the RFP.
Provide:	Develop, procure, install, furnish, test, integrate.
Recovery Plan:	The plan as set forth in Article 2.6.2 and Attachment A-___.
Request for Best and Final Offer (BAFO):	The last addendum to the RFP that includes the final Scope of Work, System Design Requirements, Contract terms, and other requirements of the RFP.
Request for Proposal or RFP:	The proposal solicitation issued on _____, 2017, and revised by Addendum #1, dated _____, 2017; Addendum #2, dated _____, 2017; etc. and Addendum #X, the Request for Best and Final Offer (BAFO), dated _____, 2017.
Revenue Ready Status:	As defined in Article 6.8.
Service Level:	The acceptable quantitative standard against which Contractor's performance of O/M responsibilities will be measured, as identified in Attachment A-8, Service Level Agreements.
Service Level Agreement (SLA):	A written agreement between MTC and Contractor defining the rights and obligations of each party with respect to established Service Levels, as set forth in Attachment A-8 of the Contract.
Site:	The physical locations where the Work will be performed, and all locations where C2 equipment shall be installed, operated or maintained.
Scope of Work:	The goods and scope of services Contractor is required to Provide under the Contract, as particularly described in Attachment A, including A-1 through A-8.
Software:	As defined in Article 4.1(n).
Software List:	The list of C2 System Software, as further defined in Article 4.1(p) and 4.2.9.
Subcontractor:	A person or persons, firm, partnership, corporation, or combination thereof that has entered into a contract with Contractor, or another Subcontractor of any tier to provide labor or materials in connection with the Work. References to Work to be performed by Contractor refer also to Subcontractors, as applicable.
System Completion:	As defined in Article 6.9.

System Improvements: C2 System features or functions added after System Completion that change, improve or add functionality to the way the C2 System delivers its existing service to better meet user needs or improve back-end processes. System Improvements include Optimizations and Enhancements, as defined in Articles 9.2 and 9.3.

Transit Operator: Transit Operators – the transit agencies operating within the San Francisco Bay Area participating in the Clipper Program under a Memorandum of Understanding with the other Transit Operators and MTC, including: Alameda-Contra Costa Transit District (“AC Transit”); Golden Gate Bridge Highway and Transportation District (“GGBHTD”); the San Francisco Bay Area Rapid Transit District (“BART”); the City and County of San Francisco, acting by and through its Municipal Transportation Agency (“SFMTA”); the San Mateo County Transit District (“SamTrans”); the Santa Clara Valley Transportation Authority (“VTA”); the Peninsula Corridor Joint Powers Board (“Caltrain”); Central Contra Costa Transit Authority; City of Fairfield, as the operator of Fairfield and Suisun Transit; City of Petaluma; Eastern Contra Costa Transit Authority; Livermore/Amador Valley Transit Authority; Marin County Transit District; Napa County Transportation and Planning Agency; Solano County Transit; Sonoma County Transit; Sonoma-Marin Area Rail Transit; Vacaville City Coach; Western Contra Costa Transit Authority; San Francisco Bay Area Water Emergency Transportation Authority; City of Santa Rosa; and City of Union City; and any other transit operators that implement the Clipper® Program by joining in the MOU.

Work: All of Contractor’s efforts necessary to complete all of its obligations under the Contract, including without limitation all devices, equipment, materials, software, facilities and services, whether physical or conceptual in nature, involved in performing the functions required by the Contract.

Work Product: As defined in Article 4.1(v).

CONTRACT**Between METROPOLITAN TRANSPORTATION COMMISSION****And INSERT NAME OF CONTRACTOR****For NEXT GENERATION CLIPPER® (C2) REGIONAL TRANSIT FARE PAYMENT****SYSTEM INTEGRATOR**

THIS CONTRACT ("Contract") is made and entered into as of the xx day of Month, 20____, by and between the Metropolitan Transportation Commission (herein called "MTC"), a regional transportation planning agency established pursuant to California Government Code § 66500, and INSERT NAME OF CONTRACTOR, (herein called "Contractor"), a PICK ONE OF THE FOLLOWING: partnership, _____ [state of incorporation] corporation/ joint venture/limited partnership organized under the laws of the State of _____.

RECITALS

A. MTC issued a Request for Proposal for a Contractor to design, develop, furnish, fabricate, install, integrate, test, operate and maintain a fully functioning next generation Clipper® Fare Payment System for MTC and the Transit Operators (herein called "C2 System or the Project"); and

B. The services required for the C2 System cannot be performed satisfactorily by the officers and employees of MTC; and

C. MTC has obtained federal funds from the United States Department of Transportation ("U.S. DOT") to assist in financing the Project, and the federally-required clauses in Attachment H, Federally-Required Clauses, attached hereto and incorporated herein, apply to the Project;

D. MTC has authority to enter into contracts pursuant to California Government Code § 66506.

E. MTC and Contractor intend for the Contract to significantly limit the opportunity for claims by Contractor for price increases or schedule extensions and to provide for Contractor to bear certain risks and responsibilities, as provided hereunder. Contractor has agreed in the Contract to assume such responsibilities and risks and has reflected the assumption of such risks and responsibilities in the agreed-upon Payment Forms.

F. MTC and Contractor both intend for Contractor to assume primary responsibility with respect to design, implementation, operation and maintenance of the Work described herein. The Contract seeks to describe fully the roles and responsibilities of MTC and Contractor. Should such roles and responsibilities require further definition or revision, the parties intend to negotiate in good faith, consistent with their respective roles and responsibilities, to provide such definition, and;

G. The parties hereto now wish to enter into an agreement pursuant to which Contractor will render professional services in connection with the Project as hereinafter provided.

NOW, THEREFORE, the parties hereto agree as follows:

1. SCOPE OF SERVICES

1.1 Agreement

1.1.1 Documents Comprising Contract

The Contract consists of the following signed documents, in order of precedence:

- a. Change Orders;
- b. Approved Design Documents and Approved Project Schedules;
- c. Terms and conditions of MTC's signed Contract with Contractor, including Articles 1- 20 and Attachments A through ____, including without limitation the agreed-upon Scope of Work (A, with attachments), System Requirements (A-1), Critical Milestones and Guaranteed Completion Dates (B-1), the Critical Path Method Project Schedule (B-2), and Payment Forms (C-__ through C-__);
- d. Contractor's Proposal;
- e. MTC's Request for Proposal.

If the above order of precedence does not resolve a conflict, the MTC Project Manager shall make a determination of the appropriate interpretation, which Contractor agrees to implement, subject to the claims procedure in Article 16.3. In the event of a conflict between one or more provisions within one of the contract documents listed above, the more stringent provision with respect to Contractor's duties and responsibilities shall prevail.

1.1.2 Contract Interpretation

The documents comprising the Contract are intended to be complementary, and to fully describe and provide for a complete Project. The parties agree that an interpretation that supports such intent shall be given precedence over one that does not. If the ambiguity allows more than one possible interpretation supporting the intent of a complete product and the references above do not resolve the ambiguity, the MTC Project Manager shall make a reasonable determination of the appropriate interpretation.

Where appropriate: references to statutes or regulations include all statutory or regulatory provisions consolidating, amending or replacing the statute or regulation referred to; the words "including," "includes," and "include" shall be deemed to be followed by the words "without limitation," unless otherwise indicated; references to articles or tasks are to this Contract and include all sub-articles or subtasks under the article or section referenced; words not otherwise defined that have well-known technical or industry meanings are used in accordance with such recognized meanings; references to "persons" include their respective permitted successors and assigns and, in the case of "governmental persons," persons succeeding to their respective functions and capacities; and words of any gender used herein shall include the other gender where appropriate. Unless

otherwise specified, lists contained in the Contract describing or defining the Work shall not be deemed all-inclusive.

1.1.3 Omission of Details

Omission of details of the Work from the Contract or the misdescription of details generally acknowledged to be customary and/or necessary to carry out the Work or which Contractor knew or reasonably should have known and should have included in its Proposal shall not relieve Contractor from performing such omitted or misdescribed Work, and it shall be performed as if fully and correctly set forth and described in the Contract, without entitlement to a Change Order hereunder.

1.1.4 Waiver of Requirements

Any waiver of a default or of a requirement of the Contract must be explicit and in writing. Such a waiver by MTC shall not constitute a waiver of any default or of such requirement in any other situation or circumstance.

1.1.5 Contractor's Obligations

Contractor shall perform all services, provide all personnel, materials, equipment, and software, and undertake all efforts necessary or appropriate (excluding only those efforts that the Contract specifies will be provided or undertaken by MTC or other persons) to design, develop, furnish, fabricate, install, integrate, test, operate and maintain the C2 System to achieve the full extent of function required by the Contract, in accordance with the terms and conditions set forth in the Contract. Contractor's responsibilities are specifically set forth in the following documents:

- a. Attachment A, Scope of Work
- b. Attachment A-1, System Requirements
- c. Attachment A-2, Operations and Maintenance of C1;
- d. Attachment A-3, Design, Implementation and Testing of C2 System
- e. Attachment A-4, Transition of C1 to C2
- f. Attachment A-5, Operations & Maintenance of C2
- g. Attachment A-6, Upgrades and Enhancements to the C2 System
- h. Attachment A-7, End of Term Transition
- i. Attachment A-8, Service Level Agreements
- j. Attachment B-1, Critical Milestones and Guaranteed Completion Dates
- k. Attachment B-2, Critical Path Method Project Schedule

1.1.6 Contractor's Project Manager

Contractor has designated a Contractor Project Manager, identified in Attachment D, Key Personnel, who is authorized to manage the Work and communicate with MTC on a day-to-day basis and who will act as the

primary point of contact in all matters on behalf of the Contractor. The Contractor Project Manager will assign other individuals as contacts with regard to specific functional areas of the Work, subject to the approval of MTC.

1.1.7 Key Personnel

The key personnel to be assigned to this work by Contractor are set forth in Attachment D, Key Personnel, attached hereto and incorporated herein by this reference. Substitution of any of the personnel named in Attachment D requires the prior written approval of the MTC Project Manager or a designee. Contractor shall maintain records documenting compliance with this Article, which shall be subject to the audit requirements of Article 17.4. MTC reserves the right to direct removal of any individual, including key personnel, assigned to this work.

1.1.8 Occupational Safety and Health

Contractor and any Subcontractor shall not require any personnel involved in performance of the Contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health as defined by applicable safety and health standards.

1.1.9 Maintenance of Records

Contractor shall accurately maintain all Contract information in accordance with best industry practices and generally accepted accounting principles, subject to the special requirements for retention of personally-identifiable information set forth in Attachment F to the Contract, and in accordance with the federal retention requirements in Article 17.3.

1.1.10 Contractor Management of Funds

In performing this Contract, Contractor recognizes and acknowledges that it will be responsible for managing the funds of others, for documenting financial transactions and for maintaining the integrity of financial records. Contractor shall exercise such responsibilities prudently and shall institute all appropriate mechanisms for the custody and management of C2 funds and records and shall reasonably cooperate with auditors, in accordance with Article 17.4.

1.1.11 Permits and Licenses

Except as may be otherwise indicated in any Attachment to the Contract, Contractor shall procure all necessary permits and licenses, pay all charges and fees, comply with all permit conditions and give all notices necessary and incident to the due and lawful prosecution of the Work.

1.2 MTC Authority

1.2.1 MTC Obligations

MTC will require Transit Operators to make their facilities and staff available for implementation and operation of the C2 System, as required for the performance of Contractor's obligations under this Contract. MTC

will be responsible for Transit Operators' compliance with the Operating Rules approved by MTC and the Transit Operators. MTC will promptly review all submittals requiring its approval, and provide approval or rejection on a timely basis, as required hereunder.

1.2.2 MTC's Right to Site Access

MTC shall have the right to full access to the Sites at all times during the performance of the Contract and any extensions thereof. MTC agrees that any personnel so granted access shall comply with applicable safety and security procedures for the Sites and shall not unduly interfere with the performance of the Work undertaken at such Site. To the extent possible, reasonable advance notice shall be given of intended entry to a Site by MTC during non-business hours.

1.2.3 Authority of Project Manager

The MTC Project Manager has the responsibility, under authority from MTC, to administer this Contract so that its performance and completion is accomplished in accordance with contractual requirements. Should the performance of the Contractor or the quality of Contractor's work or materials furnished not meet the requirements specified in the Contract and the reasonable standard of care for similar Work for an experienced contractor in the electronic fare collection system industry, the MTC Project Manager has the authority to take any action or require any measures, on behalf of MTC, that are available to MTC under this Contract to ensure compliance with contractual requirements, unless the Contract specifically requires such action or measures to be taken by another individual. MTC's Project Manager is Jason Weinstein. MTC may change its Project Manager by written notice to Contractor.

1.2.4 MTC Directed Changes

MTC reserves the right to make alterations to, and permit deviations from, the Contract and to require such changes in the extent or manner of performance of the Work as are determined by MTC to be necessary, subject to the provisions of Article 15 with respect to Change Orders.

1.2.5 MTC and Transit Operator Control over Transit Policy and Service Pricing

Control of transit policy and service pricing (including all discount eligibility) and fare payment Business Rules shall remain the exclusive right of MTC, Transit Operators and their respective policy boards. Under no circumstances shall any provision of the Contract be interpreted as providing Contractor any rights, privileges or control in transit policy and service pricing.

1.2.6 Publicity and Public Presentations

MTC must approve all MTC or C2-related copy in writing prior to publication by Contractor or its subcontractors. Contractor shall not allow MTC or C2-related copy to be published in Contractor's or its subcontractors' advertisements or public relations programs without prior written approval from the MTC Project

Manager; except that Contractor and its subcontractors may include, without MTC prior approval, descriptions of C2, their respective roles in the Project, and related contact information in resumes, proposals, qualification packages, project data sheets, and similar items used within the industry to propose and qualify for similar work. Contractor agrees that published information on MTC or C2 shall be factual only and in no way imply that MTC endorses Contractor's firm, service, or product.

In addition, during the term of the Contract, MTC must approve in advance and in writing any public presentations made by Contractor or its subcontractors on the Project, including in connection with conferences, trade fairs, and studies.

1.3 Contractor's Representations

1.3.1 Authority to Contract

Contractor represents, warrants and covenants for the benefit of MTC that Contractor is duly organized with all requisite power to own its properties and assets and to carry on its business as now conducted or proposed to be conducted. Contractor further represents, warrants and covenants for the benefit of MTC that the execution, delivery and performance of this Contract has been duly authorized by all necessary actions of Contractor and of Contractor's directors, shareholders, officers, and/or members and will not result in a breach of or a default under Contractor's organizational documents or any indenture or loan or credit agreement or other material agreement or instrument to which Contractor or any director, shareholder, officer, or member, as applicable, of Contractor is a party or by which Contractor's properties and assets may be bound or affected. This Contract constitutes the legal, valid and binding obligation of Contractor, enforceable in accordance with its terms.

The individual(s) with the authority to enter into Contract Change Orders on behalf of Contractor is (are) _____. Any change to this designation must be made by written notice to MTC, including the individual's title and role in Contractor's organization.

1.3.2 Contractor's Review of Contract and Work Conditions

By submitting a Proposal and BAFO for the Project and by executing the Contract, Contractor represents that it has carefully reviewed and understands all of the requirements of the Contract, and has determined that it is fully able to conduct, perform and complete the requirements of the Contract within the times required and on the terms and conditions stated in the Contract.

Contractor has, in conjunction with its review of the documentation provided by MTC, inspected and examined a reasonable number of applicable Transit Operator locations, and undertaken other appropriate activities sufficient in its professional judgment to familiarize itself with the conditions and circumstances that will be involved in performing its obligations under the Contract. As a result of such review, inspection,

examination and other activities, Contractor represents by its execution of this Contract that it is familiar with and accepts all physical and other requirements of the Work, as described in the Contract.

Contractor acknowledges and agrees that prior to execution of the Contract, it was afforded the opportunity to review the information provided in the Contract, to request clarification and further information and to conduct such other inspections or reviews as it deemed appropriate. Contractor further acknowledges and agrees that Contractor shall not be entitled to any increase in payments provided under this Contract, except as specifically provided in a Payment Form or as implemented pursuant to Article 15.

1.3.3 Capabilities and Qualifications of Contractor and Contractor Personnel

Contractor has, and throughout the term of the Contract shall maintain, all required authority, professional ability, skills, capacity, financial resources, and has available or will obtain the necessary equipment, materials, tools and facilities, to perform its obligations hereunder in accordance with the requirements contained in the Contract. All personnel performing work under the Contract will have the necessary credentials and expertise and shall otherwise be fully qualified to perform the Work to which they are assigned.

1.4 Government Rules and Approvals

Contractor acknowledges and agrees that it is responsible for familiarizing itself with the requirements of any and all applicable governmental rules and regulations pertaining to its performance of Work under the Contract and any changes to such government rules and regulations and for complying with the foregoing at its sole cost and expense and without any increases in the lump sum or unit prices in Attachment C, Payment Forms, or any extensions of the Guaranteed Completion Dates in Attachment B-1, Critical Milestones and Guaranteed Completion Dates, on account of such compliance (other than those implemented through the Change Order procedure described in Article 15), regardless of whether such compliance would require additional time for performance or additional labor, equipment and/or materials not expressly provided for in the Contract.

2. TIME PROVISIONS

2.1 Contract Term

Contractor's services hereunder shall commence on or after the Effective Date, and shall be completed at the conclusion of the O/M Term defined in Article 8.4 (ten years from the O/M Start Date), unless extended by duly executed amendment or earlier terminated, as hereinafter provided. The Contract may be extended, in MTC's sole discretion, for one five (5)-year increment, at the prices specified in the Payment Forms, Attachments C-___ through C-_____.

2.2 Notices to Proceed

When indicated in Attachment B-1, Critical Milestones and Guaranteed Completion Dates, Contractor shall begin work only upon MTC's issuance of a Notice to Proceed (NTP).

2.3 Critical Milestones and Guaranteed Completion Dates

Critical Milestones are identified in Attachment B-1 with Guaranteed Completion Dates. Time is of the essence with respect to the Guaranteed Completion Dates indicated for Critical Milestones. Changes to Critical Milestones and Guaranteed Completion Dates requires a Change Order.

2.4 Computation of Periods

Unless otherwise specified, references in the Contract to due dates, including in the Approved Project Schedule, are to "Days", defined in the Glossary as calendar days. If the Day on which any act or deliverables is due under the Contract (including the last date for performance or provision of notice "within" a specified time period) does not fall on a Business Day, which means a Day on which MTC is officially open for business, such act or notice may be timely performed on the next succeeding Day that is also a Business Day. Notwithstanding the foregoing, requirements contained in the Contract for which it is clear that performance is intended to occur on a non-Business Day, shall be performed as specified, even though the date in question may fall on a non-Business Day.

2.5 Project Schedule

Contractor's obligations pursuant to the Contract shall be performed according to the Approved Project Schedule in Attachment B-2, Critical Path Method (CPM) Project Schedule, and subsequent Approved Project Schedules, Approved in accordance with Article 2.5. Within sixty (60) days of receipt of an NTP, Contractor, in consultation with MTC, shall develop and submit, in both pdf and native program (MS Project, Primavera) files, a CPM project schedule intended to enable proper control and monitoring of the Work, which includes the Critical Milestones described in Attachment B-1. The CPM project schedule shall be fully resource-loaded and shall show, for each submittal, the intended time for starting and completing each activity or submittal; Contractor resource loading; the duration of each activity or submittal; draft and final submittal dates; MTC and Transit

Operator Approval review periods and other MTC and Transit Operator obligations such as MTC or Transit Operator meetings or workshops, duration of Contractor review; response to MTC comments and update of submittal; final submittal date; delivery of Materials, Contractor Equipment and C2 System Software; testing; installation; transition; and other significant items related to the progress of the Work. When Approved by MTC, such CPM project schedule shall take the place of Attachment B-2 as the Approved Project Schedule, except that changes to the Guaranteed Completion Dates in Attachment B-1 shall require a Change Order, in accordance with Article 15. The implementation of the Project shall be governed by the Approved Project Schedule.

Contractor shall furnish sufficient resources and shall coordinate the activities of all Subcontractors to ensure the performance of the Work in accordance with the most recent Approved Project Schedule. Contractor shall be responsible for identifying any MTC activities or information needs that might impact its schedule, and include them in the schedule, and shall manage to those timeframes including providing notice to MTC to provide information or complete those activities in a timely fashion. If Contractor falls behind in the performance of the Work as indicated in the Approved Project Schedule, Contractor shall take such steps as may be necessary to improve its progress, as further addressed in Article 2.6, Delays.

2.5.1 Schedule Revision Process, General

Contractor shall submit updated CPM project schedules, also in both pdf and native program (MS Project, Primavera) files, on a monthly basis for MTC consideration and Approval. MTC anticipates a period of no longer than ten (10) Business Days to review and either furnish comments or indicate its Approval of such updated schedule Contractor shall respond to any MTC comments within five (5) Business Days of receipt. Updates Approved by MTC that do not change a Guaranteed Completion Date shall become the new Approved Project Schedule. If MTC and Contractor cannot reach agreement on an update to the Approved Project Schedule, they shall follow the dispute resolution procedures set forth in Article 16.3.

Any changes to the Guaranteed Completion Dates in Attachment B-1 are subject to the Change Order procedures in Article 15. Approval of an update to the Project Schedule that includes changes to Guaranteed Completion Dates does not modify the Contract, but Contractor shall be entitled to rely on MTC's Approval of such update in advance of preparation of a formal change order pursuant to Article 15, if MTC's Approval explicitly notes the changes in the Guaranteed Completion Dates and directs the Contractor to proceed on the basis of the update.

2.5.2 Progression of Work

Contractor shall at all times schedule and direct the Work to provide an orderly progression thereof, to achieve completion within the specified time for completion and in accordance with the Approved Project Schedule.

2.6 Delays

2.6.1 *Mitigation of Damages and Delay*

Contractor agrees to take all reasonable and appropriate actions to mitigate damages and delay in all circumstances, including re-sequencing, reallocating or redeploying Contractor's resources and seeking alternative sources of supply, as appropriate.

2.6.2 *Excusable Delay*

In the event that Contractor anticipates failing to complete any activity by a Guaranteed Completion Date in the most recent Approved Project Schedule and believes that the delay constitutes an Excusable Delay, as defined herein, Contractor may petition MTC to agree to an Excusable Delay by giving written notice to MTC within fifteen (15) Days after Contractor knows or should have known of any cause or condition which might, under reasonably foreseeable circumstances, result in an Excusable Delay. Written notice of delay shall include: identification and cause of the delayed activity; a Recovery Plan, as set forth in Attachment A- ____ that includes a revised Project Schedule, including an estimate of delay (number of days) to be mitigated by the Recovery Plan; impacts to other scheduled Contractor activities and Critical Milestones; and a description of a plan for corrective action to mitigate the delay. Failure to give such written notice shall result in a waiver of the right to a time extension related to the cause or condition. In order to preserve the right to a time extension to a Guaranteed Completion Date of a Critical Milestone specified in Attachment B, Project Schedule and Milestones, written notice must be given no later than thirty (30) Days prior to the Approved Guaranteed Completion Date of such Milestone. At MTC's sole discretion, a delay impacting a Guaranteed Completion Date may be deemed an Excusable Delay resulting in a permissible revision to Attachment B-1, Critical Milestones and Guaranteed Completion Dates.

MTC may determine that a delay to a Guaranteed Completion Date constitutes an Excusable Delay if the act(s) or events(s) giving rise to the delay:

(A) has (or will have) a material impact on Critical Milestones identified in Attachment B-1 and has caused, or will result in, an identifiable and measurable disruption of the Work and extend the Work beyond the applicable Completion Guaranteed Date; and

(B) was an MTC-Caused Delay, as defined in Article 13.2; or (i) was a Force Majeure Event as defined in this Contract in Article 13.1 or was otherwise beyond the control of Contractor; (ii) was not due to the fault, negligence, failure to act, or willful misconduct on the part of Contractor or any Subcontractor; and (iii) did not arise out of the Contractor's failure to perform or meet the requirements of this Contract; and

(C) was unforeseeable and could not reasonably have been avoided by Contractor by using all reasonable and appropriate means and efforts, including re-sequencing the Work, seeking alternative sources of supply, or re-allocating or re-deploying its forces to other portions of the Work.

Contractor shall have the burden of proving that the delay satisfies each of the required elements of an Excusable Delay as described in the paragraph above; the delay could not be fully mitigated; and Contractor has taken reasonable precautions to prevent further delays arising out of such event. Contractor shall also have the burden of establishing the length of time of the Excusable Delay.

Upon adequate proof of an Excusable Delay, MTC may grant Contractor an extension of time, by execution of a Change Order. Contractor will not be assessed Liquidated Damages for any days of delay within the excused period. In the event of an extension to a Guaranteed Completion Date due to an Excusable Delay, that revised Guaranteed Completion Date shall be used to determine whether Contractor is obligated to pay Liquidated Damages under Article 3.4.4 hereof. MTC's granting of an extension of time for a Guaranteed Completion Date due to Excusable Delay shall not constitute a waiver of any of MTC's rights under the Agreement other than those specifically provided for in the extension.

2.6.3 Schedule Slippage

Contractor shall provide a revised Project Schedule if at any time Contractor fails or anticipates failing to start or complete any activity by the completion date in the Approved Project Schedule. Revised Project Schedules do not release the Contractor from liability for delayed Project delivery and are subject to Approval by MTC and shall identify to MTC all dates and activity schedules that have changed from the Approved Project Schedule. Failure by the Contractor to

If Contractor fails or refuses to implement measures sufficient to bring its Work back into conformity with the Approved Project Schedule, its right to proceed with any or all portions of the Work may be terminated under the provisions of the Contract. However, in the event MTC, in its sole determination, should permit Contractor to proceed, MTC's permission shall in no way operate as a waiver of its rights nor shall it deprive MTC of its rights under any other provisions of the Contract.

Under no circumstances is MTC responsible for any delay (or resulting damages) caused by or arising from the actions of Contractor, its employees, agents, officers, or Subcontractors.

2.6.4 Temporary Suspension of Work

MTC, in its sole discretion, reserves the right to stop or suspend all or any portion of the Work for such period as MTC may deem necessary. Contractor shall comply immediately with the written order of MTC to suspend the Work wholly or in part. The suspended work shall be resumed when Contractor is provided with written direction from MTC to resume the Work.

- a. To the extent the suspension is due to Contractor's failure to perform Work or carry out its responsibilities in accordance with this Contract, or other action or omission on the part of the Contractor, costs of the delay shall be solely Contractor's responsibility, and the Contractor shall not be entitled to schedule extensions for such suspensions.
- b. In the event of a partial suspension of the Work, the Contractor shall not be relieved of its other responsibilities under the Contract, except to the extent that such other obligations cannot be performed as a result of the partial suspension.
- c. If the suspension is not a result of reasons set forth in (a) above, or is an Excusable Delay, suspension of all or any portion of the Work under this Article shall entitle the Contractor to compensation and/or schedule extensions subject to the requirements of Article 15.

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3. PAYMENT

3.1 General

Payments to Contractor will be as indicated in Attachment C, Payment Forms (C-1 through C-___), subject to any adjustments described below in Article 3.6.2, Service Level Agreements and Payment Adjustments and 3.6.3, Payment Incentives and Disincentives. All Work performed by Contractor in meeting the requirements of the Contract shall be paid under one of the payment methods in this Article 3, and such payment shall constitute full compensation for the Work, including, without limitation, all applicable surcharges such as taxes, insurance, bond premiums, and fringe benefits, as well as indirect costs, overhead and profit allowance, subcontractor costs, travel, materials, supplies, the cost of obtaining all government approvals and compliance with and maintenance of such governmental approvals, and all risk of inflation, currency risk, interest and other costs of funds associated with the payment schedule for the Work.

3.2 Maximum Payment

Subject to duly executed amendments, it is expressly understood and agreed that in no event will the total compensation to be paid Contractor under the Contract (including all payments set forth in the Payment Forms in Attachment C) exceed the sum of _____ dollars (\$_____) (“Maximum Payment”), subject to the availability of funds and annual budget authorization by MTC. Should MTC terminate the Contract before the expiration of the Contract Term due to the unavailability of funds or lack of annual budget authorization, the conditions of Article 18.2, Termination for the Convenience of MTC, shall apply.

3.3 Payment for Operation and Maintenance Of C1 System [Optional]

Contractor shall be paid for Work performed under Attachment A-2, Operations and Maintenance of C1 System, in lump sum amounts on a monthly basis, based on Attachment C-___, Operations and Maintenance of C1 System Payment Form.

3.4 Payment for Design, Implementation and Testing

3.4.1 General

Contractor shall be paid for Work performed under Attachment A-3, Design, Implementation and Testing of C2 System, on a fixed price plus incentive fee basis, as indicated in Attachment C, Payment Form C-___, Design, Implementation and Testing Payments, based on satisfactory completion of the specified payment milestones. “Completion” as used herein includes achievement of applicable approvals by MTC, in compliance with the submission and review process outlined in section _____ of Attachment A-3, Design, and Implementation and Testing Requirements. Payment milestones shall be paid based on the Target Payments in C-___ through Revenue Ready.

3.4.2 Variable Fee for Design

Notice to Vendors: The following regulation will be adapted to this Contract after comments are received on the Industry Review Draft

e-CFR data is current as of December 31, 2016

Title 48 -> Chapter 1 -> Subchapter H -> Part 52 -> Subpart 52.2 -

> § 52.216-16 Title 48: Federal Acquisition Regulations System
PART 52-SOLICITATION PROVISIONS AND CONTRACT CLAUSES
Subpart 52.2-Text of Provisions and Clauses

52.216-16 Incentive Price Revision-Firm Target.

As prescribed in 16.406(a), insert the following clause:

INCENTIVE PRICE REVISION-FIRM TARGET (OCT 1997)

(a) *General.* The supplies or services identified in the Schedule as Items _ [*Contracting Officer insert Schedule line item numbers*] are subject to price revision in accordance with this clause; provided, that in no event shall the total final price of these items exceed the ceiling price of _ dollars (\$). Any supplies or services that are to be (1) ordered separately under, or otherwise added to, this contract and (2) subject to price revision in accordance with the terms of this clause shall be identified as such in a modification to this contract.

(b) *Definition.* Costs, as used in this clause, means allowable costs in accordance with part 31 of the Federal Acquisition Regulation (FAR) in effect on the date of this contract.

(c) *Data submission.* (1) Within _ [*Contracting Officer insert number of days*] days after the end of the month in which the Contractor has delivered the last unit of supplies and completed the services specified by item number in paragraph (a) of this clause, the Contractor shall submit in the format of Table 15-2, FAR 15.408, or in any other form on which the parties agree-

(i) A detailed statement of all costs incurred up to the end of that month in performing all work under the items;

(ii) An estimate of costs of further performance, if any, that may be necessary to complete performance of all work under the items;

(iii) A list of all residual inventory and an estimate of its value; and

(iv) Any other relevant data that the Contracting Officer may reasonably require.

(2) If the Contractor fails to submit the data required by subparagraph (1) above within the time specified and it is later determined that the Government has overpaid the Contractor, the Contractor shall repay the excess to the Government immediately. Unless repaid within 30 days after the end of the

data submittal period, the amount of the excess shall bear interest, computed from the date the data were due to the date of repayment, at the rate established in accordance with the Interest clause.

(d) *Price revision.* Upon the Contracting Officer's receipt of the data required by paragraph (c) above, the Contracting Officer and the Contractor shall promptly establish the total final price of the items specified in (a) above by applying to final negotiated cost an adjustment for profit or loss, as follows:

(1) On the basis of the information required by paragraph (c) above, together with any other pertinent information, the parties shall negotiate the total final cost incurred or to be incurred for supplies delivered (or services performed) and accepted by the Government and which are subject to price revision under this clause.

(2) The total final price shall be established by applying to the total final negotiated cost an adjustment for profit or loss, as follows:

(i) If the total final negotiated cost is equal to the total target cost, the adjustment is the total target profit.

(ii) If the total final negotiated cost is greater than the total target cost, the adjustment is the total target profit, less _ [Contracting Officer insert percent] percent of the amount by which the total final negotiated cost exceeds the total target cost.

(iii) If the final negotiated cost is less than the total target cost, the adjustment is the total target profit plus _ [Contracting Officer insert percent] percent of the amount by which the total final negotiated cost is less than the total target cost.

(e) *Contract modification.* The total final price of the items specified in paragraph (a) above shall be evidenced by a modification to this contract, signed by the Contractor and the Contracting Officer. This price shall not be subject to revision, notwithstanding any changes in the cost of performing the contract, except to the extent that-

(1) The parties may agree in writing, before the determination of total final price, to exclude specific elements of cost from this price and to a procedure for subsequent disposition of those elements; and

(2) Adjustments or credits are explicitly permitted or required by this or any other clause in this contract.

(f) *Adjusting billing prices.* (1) Pending execution of the contract modification (see paragraph (e) above), the Contractor shall submit invoices or vouchers in accordance with billing prices as provided in this paragraph. The billing prices shall be the target prices shown in this contract.

(2) If at any time it appears from information provided by the contractor under subparagraph (g)(2) below that the then-current billing prices will be substantially greater than the estimated final prices, the parties shall negotiate a reduction in the billing prices. Similarly, the parties may negotiate an increase in billing prices by any or all of the difference between the target prices and the ceiling price, upon the Contractor's submission of factual data showing that final cost under this contract will be substantially greater than the target cost.

(3) Any billing price adjustment shall be reflected in a contract modification and shall not affect the determination of the total final price under paragraph (d) above. After the contract modification establishing the total final price is executed, the total amount paid or to be paid on all invoices or vouchers shall be adjusted to reflect the total final price, and any resulting additional payments, refunds, or credits shall be made promptly.

(g) *Quarterly limitation on payments statement.* This paragraph (g) shall apply until final price revision under this contract has been completed.

(1) Within 45 days after the end of each quarter of the Contractor's fiscal year in which a delivery is first made (or services are first performed) and accepted by the Government under this contract, and for each quarter thereafter, the Contractor shall submit to the contract administration office (with a copy to the contracting office and the cognizant contract auditor) a statement, cumulative from the beginning of the contract, showing-

(i) The total contract price of all supplies delivered (or services performed) and accepted by the Government and for which final prices have been established;

(ii) The total costs (estimated to the extent necessary) reasonably incurred for, and properly allocable solely to, the supplies delivered (or services performed) and accepted by the Government and for which final prices have not been established;

(iii) The portion of the total target profit (used in establishing the initial contract price or agreed to for the purpose of this paragraph (g)) that is in direct proportion to the supplies delivered (or services performed) and accepted by the Government and for which final prices have not been established-increased or decreased in accordance with subparagraph (d)(2) above, when the amount stated under subdivision (ii), immediately above, differs from the aggregate target costs of the supplies or services; and

(iv) The total amount of all invoices or vouchers for supplies delivered (or services performed) and accepted by the Government (including amounts applied or to be applied to liquidate progress payments).

(2) Notwithstanding any provision of this contract authorizing greater payments, if on any quarterly statement the amount under subdivision (1)(iv) above exceeds the sum due the Contractor, as computed in accordance with subdivisions (1)(i), (ii), and (iii) above, the Contractor shall immediately refund or credit to the Government the amount of this excess. The Contractor may, when appropriate, reduce this refund or credit by the amount of any applicable tax credits due the Contractor under 26 U.S.C. 1481 and by the amount of previous refunds or credits effected under this clause. If any portion of the excess has been applied to the liquidation of progress payments, then that portion may, instead of being refunded, be added to the unliquidated progress payment account consistent with the Progress Payments clause. The Contractor shall provide complete details to support any claimed reductions in refunds.

(3) If the Contractor fails to submit the quarterly statement within 45 days after the end of each quarter and it is later determined that the Government has overpaid the Contractor, the Contractor shall repay the excess to the Government immediately. Unless repaid within 30 days after the end of the statement submittal period, the amount of the excess shall bear interest, computed from the date the

quarterly statement was due to the date of repayment, at the rate established in accordance with the Interest clause.

(h) *Subcontracts.* No subcontract placed under this contract may provide for payment on a cost-plus-a-percentage-of-cost basis.

(i) *Disagreements.* If the Contractor and the Contracting Officer fail to agree upon the total final price within 60 days (or within such other period as the Contracting Officer may specify) after the date on which the data required by paragraph (c) above are to be submitted, the Contracting Officer shall promptly issue a decision in accordance with the Disputes clause.

(j) *Termination.* If this contract is terminated before the total final price is established, prices of supplies or services subject to price revision shall be established in accordance with this clause for (1) completed supplies and services accepted by the Government and (2) those supplies and services not terminated under a partial termination. All other elements of the termination shall be resolved in accordance with other applicable clauses of this contract.

(k) *Equitable adjustment under other clauses.* If an equitable adjustment in the contract price is made under any other clause of this contract before the total final price is established, the adjustment shall be made in the total target cost and may be made in the maximum dollar limit on the total final price, the total target profit, or both. If the adjustment is made after the total final price is established, only the total final price shall be adjusted.

(l) *Exclusion from target price and total final price.* If any clause of this contract provides that the contract price does not or will not include an amount for a specific purpose, then neither any target price nor the total final price includes or will include any amount for that purpose.

(m) *Separate reimbursement.* If any clause of this contract expressly provides that the cost of performance of an obligation shall be at Government expense, that expense shall not be included in any target price or in the total final price, but shall be reimbursed separately.

(n) *Taxes.* As used in the Federal, State, and Local Taxes clause or in any other clause that provides for certain taxes or duties to be included in, or excluded from, the contract price, the term contract price includes the total target price or, if it has been established, the total final price. When any of these clauses requires that the contract price be increased or decreased as a result of changes in the obligation of the Contractor to pay or bear the burden of certain taxes or duties, the increase or decrease shall be made in the total target price or, if it has been established, in the total final price, so that it will not affect the Contractor's profit or loss on this contract.

Alternate I (APR 1984). As prescribed in 16.406(a), add the following paragraph (o) to the basic clause:

(o) *Provisioning and options.* Parts, other supplies, or services that are to be furnished under this contract on the basis of a provisioning document or Government option shall be subject to price revision in accordance with this clause. Any prices established for these parts, other supplies, or services under a provisioning document or Government option shall be treated as target prices. Target cost and profit covering these parts, other supplies, or services may be established separately, in the aggregate, or in any combination, as the parties may agree.

[48 FR 42478, Sept. 19, 1983, as amended at 61 FR 67426, Dec. 20, 1996; 62 FR 12696, Mar. 17, 1997; 62 FR 51265, Sept. 30, 1997]

3.4.3 *Payment for Equipment Provided During Implementation*

Payment for equipment will be at the unit prices identified in Attachment C-____, Equipment Payment Forms. Upon completion of a payment milestone shown in Attachment C-2-____ that includes the installation of equipment as defined herein, Contractor may invoice MTC for the amount due for such equipment. MTC is not responsible for paying for equipment ordered by Contractor unless MTC has issued an NTP for Final Design or a specific NTP authorizing such order.

3.4.4 *Liquidated Damages for Late Completion of Critical Milestones*

It is mutually understood and agreed by and between the parties that time is of the essence with respect to completion of each of the Critical Milestones and that in case of any failure on the part of Contractor to complete the Critical Milestones within the Guaranteed Completion Dates, MTC will be damaged thereby. The amount of said damages being difficult if not impossible of definite ascertainment and proof, it is agreed that the amount of such Liquidated Damages due MTC for Contractor's failure to perform the Critical Milestones in a timely manner shall be due at the rate of \$60,000 per Day.

Contractor hereby agrees to pay the stated amount as fixed and agreed Liquidated Damages, and not by way of penalty, to MTC and further authorizes MTC to deduct and offset the amount of such charges from moneys due Contractor under the Contract. If the monies due Contractor are insufficient or no monies are due Contractor, Contractor shall pay MTC the difference or the entire amount, whichever may be the case, within thirty (30) days after receipt of a written demand by MTC. The parties agree that the Liquidated Damages are the sole damages payable to MTC in connection with Contractor's failure to timely complete a Critical Milestone, but MTC reserves the right to exercise any other right or remedy conferred in the Contract (including this Article) or by law or in equity including the assessment of damages in connection with a Termination for Cause and all of such rights and remedies are cumulative of every other such right or remedy and may be exercised concurrently or separately from time-to-time.

Prior to or concurrent with its assessment of Liquidated Damages and deduction of such Liquidated Damages from a Contractor invoice, MTC shall notify Contractor in writing of its intention to assess Liquidated Damages and of the information upon which its assessment is based. MTC may in its sole discretion, proceed to deduct such Liquidated Damages from such Contractor invoice. However, if Contractor does not agree with such assessment, Contractor shall inform MTC in writing along with all pertinent information and documentation to support Contractor's position within seven (7) Days of MTC's notice. After review of any documentation

submitted by Contractor, MTC, in its sole discretion, shall determine whether to sustain its deduction or refund the Liquidated Damages, in whole or in part, and shall notify Contractor of its decision in writing. If Contractor does not agree with MTC's decision regarding Liquidated Damages, Contractor may follow the dispute resolution provisions set forth in Article 16.3.

3.5 Payment for Transition from C1 System to C2 System

Contractor shall be paid for Work performed under Attachment A-4, Transition from C1 System to C2 System, on a lump sum, fixed price basis, as indicated in Attachment C -_____, Transition from C1 System to C2 System Payment Form, based on satisfactory completion of the specified payment milestones. "Completion" as used herein includes achievement of applicable approvals by MTC, in compliance with the submission and review process outlined in section _____ of Attachment A-4.

3.6 Payment for Operations and Maintenance of C2 System

3.6.1 General

Contractor shall be paid for Work performed under Attachment A-5, Operations and Maintenance of C2 System Payment, in lump sum amounts on a monthly basis, based on Attachment C-____, Operations and Maintenance of C2 System Payment Form.

Contractor shall provide information with each monthly invoice supporting its achievement or nonachievement of the Service Level Measures in Attachment A-8, along with the payment adjustments described in subarticles 3.6.2 and 3.6.3, if applicable. MTC shall have the authority to determine the amount of any adjustment, using any reasonable means and methods it determines are appropriate, as provided in subarticles 3.6.2 and 3.6.3 below.

3.6.2 Service Level Agreements and Payment Adjustments

Contractor's failure to meet the performance requirements for O/M provided in Attachment A-8, Service Level Agreements, or exceeding such requirements by the measures described therein, shall result in payment adjustments as described in Article 3.6.3 below. Standard reports shall be used to measure whether Service Levels in Attachment A-8, Service Level Agreements, have been met or exceeded. Standard reports, shall be generated by Contractor and provided to MTC on a monthly basis with its monthly invoice. The reports shall be in a format approved by MTC. Where performance measures are not met or are exceeded, accompanying supporting raw data and a correction plan as further described in Attachment A-8 shall be attached to Contractor's monthly invoice.

Attachment A-8's Service Level Agreements may be waived due to extraordinary or unforeseen events or an Excusable Delay, as defined in subarticle 2.6.2, as determined in the sole discretion of the MTC Project Manager. The total amount of assessed payment adjustments shall be deducted from or added to O/M payments

due and payable to Contractor in the next monthly invoice, as provided in Article 3.6.3. Issues that prevent the restoration of any service to the Service Level shown in Attachment A-8, Service Level Agreements, shall be brought to MTC's attention immediately and shall not relieve Contractor of its responsibilities for payment adjustments.

If MTC elects not to impose payment disincentive adjustments in a particular instance, said decision shall not be construed as a waiver of the right to pursue future assessments for payment adjustments for failure to meet Service Level Agreements; nor construed to limit any additional remedies available to MTC as provided in the Contract.

In addition to the payment incentives and disincentives, failure by the Contractor for three consecutive months to reach a Service Level Agreement shall be a material default. Contractor shall provide a Recovery Plan in accordance with Attachment A-_____ and revised Project Schedule in accordance with subarticle 2.6.2, if required, within fifteen (15) Days of the end of the third month.

3.6.3 Payment Incentives and Disincentives.

In order to incentivize Contractor's performance of O/M, the parties have agreed to assess incentive and disincentive payment adjustments on Contractor's monthly O/M fee. MTC agrees to increase the monthly lump sum payment due Contractor for O/M by up to five percent (5%), of Contractor's monthly O/M fee for each Service Level Agreements in Attachment A-8 exceeded by Contractor, unless any one of the Service Level Agreements measures at a level under twenty percent (20%). Contractor agrees that MTC may deduct an amount equal to twenty-five percent (25%) of Contractor's monthly O/M fee, if it fails to meet any of the Service Level Agreements set forth in Attachment A-8.

In the event of a failure to meet performance requirements, Contractor may provide with its invoice written justification of its failure to meet such requirements, asserting that it made all reasonable efforts to comply with its contractual obligations and that its failure to comply was due to circumstances beyond the control of the Contractor, or any person (or entity) for whom (or which) Contractor is legally or contractually responsible. On the basis of the Contractor's demonstration under this subarticle, MTC may reduce or waive the disincentive assessment at issue. However, MTC's right to deduct the disincentive fees from each monthly invoice based solely on the reported Service Level Measures is immediate, notwithstanding Contractor's submission of justification for its failure to meet such requirements.

Notwithstanding the audit term set forth in Article 17.4, MTC may audit the performance reports submitted by Contractor for a period of up to one year. The dispute provisions of Article 16 apply to this provision.

3.7 Payments for End of Term Transition

Contractor shall be paid for Work performed under Attachment A-5, End of Term Transition, lump sum, deliverables-based payments, as indicated in Attachment C - _____, End of Term Transition Payment Form, based on satisfactory completion of the specified deliverables. "Completion" as used herein includes achievement of applicable approvals by MTC, in compliance with the submission and review process outlined in section _____ of Attachment A-5.

3.8 Payments for Upgrades and Enhancements

Payment for Work implemented under Attachment A-6, Upgrades and Enhancements to the C2 System, shall be as described in the Change Order or Task Order authorizing the Upgrade or Enhancement.

3.9 Payment for Task-Order Based Work

3.9.1 General

The parties may agree to implement Work included in specific Change Orders by means of Task Orders. Contractor shall be compensated for Task-Order based Work as specified in signed Task Orders. All Task Orders shall be developed according to the process established in Attachment A-9, Task Order Process, attached hereto and incorporated herein, and should include, at a minimum, a completed form as shown in Attachment A-9, Task Order Form. All payments under Task Orders shall be consistent with Attachment C-____, Payment Forms.

Payment terms may be based on acceptance of agreed-upon deliverables or upon time and materials reimbursement, depending on the requirements of each Task Order. For time and materials-based payment of Task Orders at the rates in Attachment C-____, Hourly Labor Rates, shall apply. The hourly rates in Attachment C-____ include all applicable surcharges such as taxes, insurance and fringe benefits as well as indirect costs, overhead and profit allowance, equipment, materials and supplies. Said hourly rates shall remain in effect for the term of the Contract, unless MTC prior written authorization is obtained for any changes. For time and materials Task Orders, MTC will reimburse Contractor for all expenses deemed reasonable and necessary by MTC incurred by Contractor in the performance of this Contract. Such reimbursement shall include travel and personal expenses incurred by employees or agents of Contractor or any subcontractors in accordance with 48 Code of Federal Regulations Part 31 or Office of Management and Budget Circular A-122, as applicable.

3.9.2 Task Order Invoices

Contractor shall submit invoices for services rendered under Task Orders no more frequently than on a monthly basis. Invoices shall identify work for which payment is requested by Task Order number (including fiscal year). All invoices will be dated, numbered in serial order, and signed by Contractor. If applicable, Contractor's final invoice must include the certification that all PII has been destroyed in accordance with Article 4.4 and Attachment G.

For Task Orders authorizing payment on the basis of satisfactory deliverables, Contractor shall specify each deliverable for which payment is requested, the amount requested, and the total amount paid to date under the Task Order.

For Task Orders authorizing time and materials payment, Contractor shall specify the work performed, hours worked, and amount due (by personnel), authorized expenses (with receipts for such expenses), the total amount claimed under the invoice and the amount paid to date under the Task Order, which shall be supported by monthly progress reports.

3.10 Invoices

3.10.1 General

All invoices shall be submitted electronically via email to MTC at acctpays@mtc.ca.gov or in writing to:

Attention: Accounting Section

Bay Area Metro Center

375 Beale Street

San Francisco, CA 94105

Payment will be made by MTC within thirty (30) days of receipt of an acceptable invoice, approved by the Project Manager or a designated representative, subject to the additional requirements in this Article 3. Contractor shall provide any appropriate supporting documentation relating to Contractor's invoice reasonably requested by MTC, within 14 days of receipt of MTC's written request for such information. MTC may delay payment, with no interest accruing during the delay, for any invoiced payment milestone or item if, in MTC's sole opinion, sufficient supporting documentation relating to that payment milestone or item is not provided within the allowed time. If MTC and Contractor disagree about the Work completed or quantities of equipment delivered or installed as reflected in an invoice, MTC shall make payment based on the Work or quantities of equipment it believes have been completed, delivered or installed, and specify in writing the reason for the withheld amounts. Contractor may initiate the dispute resolution procedures set forth in Article 16 following MTC's written disapproval of any invoiced amount.

Prior to the first payment by MTC pursuant to this Contract, Contractor shall provide to MTC a properly completed U.S. Internal Revenue Service Form W-9, Request for Taxpayer Identification Number and Certification.

Contractor's final invoice must include the certification that all Personally Identifiable Information (PII) has been destroyed in accordance with Article 4.4 and Attachment F, Special Conditions Relating to Personally Identifiable Information.

3.10.2 Invoices for Lump Sum Amounts

Invoices for lump sum payments specified in Attachment C, Payment Forms (C-__ through C-__) and lump sum payments authorized under signed Task Orders shall be supported by MTC's written Approval of all required deliverables or milestones described in the Approved Project Schedule.

MTC will withhold as a retainage five percent (5%) of the value of each lump sum payment due under Attachment C-____, Design, Implementation and Testing Milestone Payments, and Attachment C-____, Transition from C1 System to C2 System until System Completion as defined in Article 6.9. Final payment of any balance due to Contractor, including any amounts withheld, will be made promptly upon written notification by MTC of System Completion and after receipt and written acceptance by MTC of the System Completion-related reports and working papers that are required to be furnished under the Contract.

3.10.3 Invoices for Extra Equipment

Contractor's invoices for equipment Provided after C2 System design, implementation and testing shall list all delivered equipment priced in accordance with Attachment C- ____ or the applicable Change Order.

MTC shall have the authority to verify the quantities of equipment delivered for payment purposes, using any means and methods it determines are appropriate to confirm that the quantities of equipment shown in Contractor's invoice accurately reflect the quantities of equipment delivered.

3.10.4 Invoices for Design, Implementation and Testing

[To be added in Final RFP, based on federal guidance as set forth in subarticle 3.4.2 and industry comment]

3.10.5 Invoices for Operations and Maintenance

Invoices for O/M shall be based on the lump sum monthly payments in Attachments C-__, Operations and Maintenance of C1 System and C-__, Operations and Maintenance of C2 System Payment Form. In addition to meeting the requirements for lump sum submitted by Contractor, Contractor shall submit monthly invoices before or on the 15th of each subsequent month. Invoices shall be accompanied by monthly reports that reflect the measures of each performance requirement for the billing month in each invoice. Retainage will not be withheld on O/M payments.

4. RIGHTS IN DATA

4.1 Definitions

As used in this Contract, the following capitalized terms have the following meanings:

- a. **“C1 System Materials”** means any Software, Software Documentation, Source and Object Code, documents, business processes, manuals, training materials, development tools and other intellectual property used to operate, maintain, and create derivative works within the C1 System.
- b. **“C2 System Software”** means any Software, Software Documentation, Source Code, Source Code Documentation, Object Code, computer databases and any associated HTML and graphics files provided or used by Contractor under the Contract, together with all enhancements, improvements, upgrades, updates, and modifications to the foregoing, to satisfy MTC’s specifications or requirements for the C2 System, including Contractor Software, Third Party Software, and MTC Software.
- c. **“Commercial Software”** means any Third Party Software used in the performance of the Project, that is commercial and offered for sale in substantial quantities in the commercial marketplace, and that can be procured or utilized by MTC or Transit Operators in the same precise form (including model and version number) as available to the general public, all of which software must be identified in Attachment E, Software List.
- d. **“Contractor Equipment”** means any mechanical electrical or electromechanical part and any piece of mechanical, electrical, electromechanical and/or digital or analog equipment that Contractor Provides, including from Subcontractors or other third parties, or modifies for the C2 System, including, without limitation, validation devices, operator control units, retail devices, communications devices, and all other devices, parts, components and equipment necessary to build, operate, maintain, repair, modify and/or refresh the C2 System.
- e. **“Contractor Equipment Documentation”** means the documents that contain the written instructions and all other information necessary to build, operate, maintain, repair, modify and refresh the C2 System and to have the Contractor Equipment (and any modifications, improvements, or enhancements to the Contractor Equipment) manufactured and supplied to MTC, including, without limitation, the manufacturing drawings, data and specifications of the equipment and spare parts and of their tools, dies, and fixtures, including art work necessary to fabricate circuit boards; license(s) to all applicable Intellectual Property, if any; all drawings from top level equipment outline, interface and mounting, through assembly, sub-assembly, and fabricated piece parts drawings necessary to manufacture the equipment; all schematics and wiring

diagrams and cable harness drawings; all installation, configuration, and layout drawings; all block diagrams and family trees; all assembly instructions and drawings; all test specifications for top-level equipment and for all assemblies to the lowest testable level of assembly; all test procedures for all tests; all maintenance manuals and procedures; all operator manuals; all flow charts relevant to the manufacture, assembly, programming and operation of the equipment; part lists containing sufficient information to procure all parts and material required to manufacture the equipment from its primary source, except software products available commercially; documentation for the Source Code if not provided otherwise; all password security codes and security keys and any other information and documents necessary to manufacture and maintain the Contractor Equipment. Notwithstanding the foregoing, the foregoing Contractor Equipment documentation does not have to include the information necessary to manufacture any Contractor Equipment part that is generally commercially available from at least two suppliers.

- f. **“Contractor Software”** means any Software, Software Documentation, Source and Object Code, materials or data provided or required to be provided by Contractor under the Contract or otherwise used by Contractor in the performance of the Project, including without limitation any modifications, upgrades, updates, refreshes, fixes, utilities and libraries provided or required to be provided by Contractor under this Contract, but excluding (a) Third Party Software, including Commercial Software; (b) the C1 System Materials; (c) Open Source Software/Freeware; and (d) MTC Software. All Contractor Software must be identified in Attachment E, Software List.
- g. **“Intellectual Property”** and **“Intellectual Property Rights”** means all of the following anywhere in the world and all legal rights, title or interest in, under or in respect of the following, whether or not filed, perfected, registered or recorded and whether now or later existing, filed, issued or acquired, including all renewals: (a) all patents and applications for patents and all related reissues, reexaminations, divisions, renewals, extensions, provisionals, continuations and continuations in part; (b) all copyrights, copyright registrations and copyright applications, copyrightable works and all other corresponding rights; (c) all mask works, mask work registrations and mask work applications and all other corresponding rights; (d) all trade dress and trade names, logos, Internet addresses and domain names, trademarks and service marks and related registrations and applications, including any intent to use applications, supplemental registrations and any renewals or extensions, all other indicia of commercial source or origin and all goodwill associated with any of the foregoing; (e) all inventions (whether patentable or unpatentable and whether or not reduced to practice), know how, technology, technical data, trade secrets, confidential business

information, manufacturing and production processes and techniques, research and development information, financial, marketing and business data, pricing and cost information, business and marketing plans, advertising and promotional materials, customer, distributor, reseller and supplier lists and information, correspondence, records, and other documentation, and other proprietary information of every kind; (f) all computer software (including Source and Object code), firmware, development tools, algorithms, files, records, technical drawings and related documentation, data and manuals; (g) all databases and data collections; (h) all other proprietary rights; and (i) all copies and tangible embodiments of any of the foregoing (in whatever form or medium).

- h. **“MTC Data”** means all data, reports, surveys, studies, drawings, Software, Software Documentation, Source or Object Code, electronic databases, and any other System Data made available by MTC to the Contractor for use by Contractor in the performance of its services under the Contract. MTC Data includes without limitation the C1 System Materials, the Business Rules, and System Data provided by the Transit Operators for the design, operation and maintenance of the C2 System.
- i. **“MTC Software”** means Software owned by MTC under the Contract.
- j. **“New Work Products”** means Work Products that are first produced in performance of the Contract by Contractor, or its Subcontractors or suppliers.
- k. **“Object Code”** means the machine readable code version of Software, which is substantially or entirely in binary form and is intended to be executable by a computer after suitable processing or linking but without intervening steps of compilation or assembly; and (ii) the written instructions and tools necessary or appropriate for MTC to install and use the Object Code form of the Software for the Project.
- l. **“Open Source Software/Freeware”** means software for which the Source Code is made freely available for use, modification, and redistribution.
- m. **“Pre-Existing Contractor Work Products”** means all Work Products that are in existence and owned by Contractor or a Subcontractor or supplier and that were developed prior to commencing the Work performed under the Contract that are utilized for, incorporated in or otherwise required in connection with the Work performed under the Contract.
- n. **“Software”** means any Source Code, Object Code, computer databases and any associated HTML and graphics files (other than Third Party Software that is separately licensed by MTC) that are supplied to MTC by Contractor under the Contract, together with all enhancements, improvements

and modifications to the foregoing to satisfy MTC's specifications or requirements under the Contract, including any interfaces required to any third party systems.

- o. **"Software Documentation"** means the Source Code on industry standard media and Source Code listing in human readable form of all Software including logic equations for programmable array logic integrated circuits (as well as the compiler or assembler and associated software tools for the Source Code); all design documents, specifications, flow charts, data flow diagrams, data definitions, data schema, and other materials or documents which explain the performance, function or operation of individual software programs and the interaction of programs within the C2 System; license(s) to all applicable Intellectual Property, if any; all control files and scripts used to compile, link, load, and/or make the applications and systems, test scripts, test plans and test data; all password security codes and keys, and any other information and documents reasonably necessary or desirable to operate, maintain, and create derivative works from the Software.
- p. **"Software List"** means the list of all C2 System Software to be included in the Contract as Attachment E, identified based on the following categories: Contractor Software, identified as a New Work Product or Pre-Existing Contractor Work Product; Commercial Software; and MTC Software.
- q. **"Source Code"** means the computer programming code (other than binary code) of Software and any procedural code such as job control language, which may be printed out or displayed in human readable form.
- r. **"Source Code Compilation Documentation"** means all documentation reasonably necessary or desirable to allow for compiling and testing of the Source Code, including without limitation a list of applicable proprietary software development tools (i.e., all software required to edit/alter the source code and successfully recompile and operate the software, including operating systems, libraries, tools and utilities, data base structures, code and compilers, as well as any other items not readily available to MTC in the commercial marketplace), license(s) to all applicable Intellectual Property, detail on any permitted third party commercially available software used in conjunction with the system (including name, version, sub-version number and release date), documentation on how any permitted third party commercially available software is linked to the system software, and documentation showing the identities of and most current available contact information for one or more qualified programmers who had or have responsibility for the creation

of the Source Code at issue and the methodology such that they can explain the Source Code and the methodology and otherwise be used as system references.

- s. **“System Data”** means all information collected, maintained, stored, accessed, transmitted, generated, processes, disclosed or otherwise used by and reported on through the C2 System.
- t. **“Third Party Intellectual Property”** means Intellectual Property not owned by Contractor or MTC that is used in or necessary for the proper functioning of the C2 System or other requirements of the Contract, including operation and maintenance of C1.
- u. **“Third Party Software”** means Software not owned by Contractor or MTC that is used in or necessary for the proper functioning of the C2 System or other requirements of the Contract, including operation and maintenance of C1.
- v. **“Work Product”** means any and all works of authorship or other deliverables prepared, developed, or assembled by Contractor under the Contract or otherwise resulting from Work performed by Contractor under the Contract, including without limitation any plans, specifications, Business Rules, drawings, designs, plans, manuals, reports, studies, surveys, models, Software, Software Documentation, Contractor Equipment Documentation, quantities, proposals, sketches, diagrams, calculations, charts, tables, Business Rules, system requirements, concepts, processes, algorithms, configuration parameters, transaction processing rules, operational procedures, and logic, whether or not such items are required to be delivered to MTC under any provision of the Contract, and including without limitation any such items required for completing, operating, maintaining, repairing, refreshing, or upgrading the materials or completed Work under the Contract.

4.2 Intellectual Property and Work Product Ownership Rights

4.2.1 MTC Data

As between Contractor and MTC, Contractor acknowledges and agrees that MTC exclusively owns all right, title and interest in and to all MTC Data and Contractor assigns to MTC, and shall be deemed to assign to MTC, any right that it may now have, or may hereafter acquire, in and to any and all MTC Data. MTC Data in the possession of Contractor shall be returned to MTC at the completion or termination of the Contract. No license to such MTC Data, outside of the requirements of the Contract, is conferred or implied by Contractor's use or possession of such MTC Data. Any updates, upgrades, revisions, modifications, derivative works, additions or enhancements to such MTC Data made by Contractor shall be the property of MTC and subject to the provisions of Article 4.2.4.

4.2.2 Restrictions on Use of MTC Data

Neither Contractor nor its subcontractors will be permitted to use or disseminate any MTC Data outside of the context of the C2 System, without the prior written approval of MTC. All Approved uses of MTC Data by Contractor outside of the context of the C2 System shall include a copyright notice on behalf of MTC.

MTC Data includes C1 System Materials, which contain the Confidential Information of MTC or the C1 Contractor. Contractor and any permitted Subcontractors will be required to sign a non-disclosure agreement with MTC and/or the C1 Contractor agreeing to maintain the confidentiality of such MTC Data prior to receiving any MTC Data deemed Confidential Information by MTC.

4.2.3 System Data

As between Contractor and MTC, Contractor acknowledges and agrees that MTC exclusively owns all right, title and interest in and to all System Data and Contractor assigns to MTC, and shall be deemed to assign to MTC, any right that it may now have, or may hereafter acquire, in and to any and all System Data. System Data in the possession of Contractor shall be returned to MTC at the completion or termination of the Contract. No license to such System Data, outside of the Scope of Work of the Contract, is conferred or implied by Contractor's use or possession of such System Data. Any updates, upgrades, revisions, modifications, derivative works, additions or enhancements to such System Data made by Contractor shall be the property of MTC and subject to the provisions of Article 4.2.4.

Any and all collection, maintenance, storage, access, transmission, generation, processing, use and disclosure of System Data shall be undertaken in compliance with any (a) applicable laws and other applicable standards governing MTC's collection, maintenance, storage, access, transmission, generation, processing, use and disclosure thereof, and (b) any policies of MTC, including and by way of example, any privacy policies of MTC applicable to System Data collected through the Clipper website. Without limiting any other obligation of Contractor contained in the Contract, Contractor (i) shall not collect, maintain, store, access, transmit, generate, process, disclose or otherwise use any System Data other than in the course of operating and maintaining the C2 System for the sole benefit of MTC, and (ii) shall collect only the minimum amount of PII (defined in Article 4.4) necessary for Contractor to perform the Project for MTC hereunder, unless otherwise directed by MTC in writing.

Contractor agrees that it will not collect, maintain, store, access, transmit, generate, process, disclose or use any System Data, outside of the Contractor facilities located in the United States.

4.2.4 New Work Products

New Work Products shall be and are the property of MTC. MTC shall be entitled to copies of and access to New Work Products during the progress of the Work. Any New Work Products remaining in the hands of the Contractor or in the hands of any subcontractor upon completion or termination of the Work shall be immediately

delivered to MTC. Contractor hereby assigns to MTC ownership of any and all rights, title and interest in and to such New Work Products, including ownership of any Intellectual Property Rights in such New Work Products. Contractor also agrees to execute all papers necessary for MTC to record or perfect its ownership of any such rights in New Work Product.

Notwithstanding the above, and subject to the restriction described below, New Work Products are not intended nor shall they be construed to include Pre-Existing Contractor Work Products. Contractor shall retain all right, title and interest in any Pre-Existing Contractor Work Products.

Contractor shall be responsible for the preservation of any and all such New Work Products prior to transmittal to MTC, and Contractor shall replace any such New Work Products that are lost, destroyed, or damaged while in its possession without additional cost to MTC.

Contractor represents and warrants that all New Work Products are original or developed from materials in the public domain (or both), unless otherwise identified in writing, and that all materials prepared under and services provided under the Contract do not infringe or violate any copyright, trademark, patent, trade secret, or other Intellectual Property Right of any third party.

4.2.5 C2 System Software, General

Contractor shall at times during the Term be solely responsible for ensuring that the C2 System Software is appropriate to operate the C2 System in accordance with the applicable System Requirements and to perform all Work in accordance with the applicable Service Levels. Contractor shall perform any update, upgrade, modification, refresh, replacement, and/or other change to any component of the C2 System Software required during the Term or provide additional Software required in order to comply with changes in government rules and regulations and as necessary to be compatible with other C2 System components and to operate and maintain a fully functioning C2 System in accordance with the System Requirements and as otherwise required under the Contract, including as required by a court or any applicable regulatory entity (including changes in Payment Card Industry (PCI) standards applicable to merchant or application providers). Without limiting any other Contractor obligation under the Contract, all C2 System Software that is replaced in accordance with this subarticle shall be replaced with Software that is (a) fully compatible with the then-current C2 System, (b) meets all representations, warranties and covenants contained in the Contract, and (c) is the then-current updated (as to, among other things, quality and technological advancement) version of the Software consistent with best industry practice. Contractor's obligations under this subarticle shall be undertaken at Contractor's cost and at no cost to MTC.

4.2.6 Contractor Software

Contractor or its Subcontractors and/or third party licensors of Software shall retain ownership of the copyright and other Intellectual Property Rights to Contractor Software. For all Contractor Software, Contractor

hereby grants, and shall require any applicable Subcontractor also to grant, to MTC a royalty-free, irrevocable, perpetual, worldwide, assignable license to use, copy, modify, reproduce, create derivative works based on, publish, display (“Use”), and to permit others to Use Contractor Software (including without limitation Source Code and Source Code Documentation for such Software) for the benefit and operation of the C2 System. MTC may exercise its license through a sublicense to a third party, without the approval of Contractor or its subcontractors, subject to Article 4.2.10, Escrow Agreement and Release.

Through the Term of the Contract, Contractor shall provide to MTC all bug fixes, patches, updates, revisions, refreshes, upgrades, or the like relating to Contractor Software.

Contractor shall not at any time during the Term, (a) “sunset” or “end of life” the Contractor Software, or any part thereof, or (b) announce the “sunset” or “end of life” of the Contractor Software, or any part thereof.

4.2.7 Commercial Software

All Commercial Software used by Contractor in connection with the C2 System, including Commercial Software provided by third-party suppliers or Subcontractors, shall be assignable to MTC without any requirement of third party consent or shall be commercially available and supported at all times during the Term. Commercial Software that is part of the C2 System Software is listed in the Software List.

Contractor shall secure and administer all licenses or sublicenses for Commercial Software used for the C2 System and shall provide to MTC copies of such licenses, along with any documentation provided by the third party suppliers. Contractor shall not be required to furnish to MTC the Source Code to such Commercial Software, the right to make copies (other than back-up, archival, or other disaster-recovery copies), or the right to modify the Commercial Software. If any vendor of any Commercial Software (a) “sunset” or “end of life” such applicable Commercial Software, or any part thereof, (b) announces the “sunset” or “end of life” of such Commercial Software, or any part thereof, and/or (c) replaces, develops or acquires any new product intended to replace, such Commercial Software, in each instance at any time during the term of the Contract, Contractor shall timely replace such Commercial Software with other Software that meets the requirements of this Agreement and implement such new Commercial Software in the C2 System.

Licenses or sublicenses shall name MTC as licensee, where possible and consistent with Contractor’s obligations under the Contract. Otherwise, Contractor shall be named as licensee. In that case, at least six months prior to the end of the Contract term, Contractor shall begin efforts either to assign such licenses or sublicenses to MTC or MTC’s designee or, if such assignments are not practicable, to provide MTC with sufficient information to enable it to secure the licenses or sublicenses necessary for the continued operation of the C2 System.

4.2.8 Open Source Software/Freeware

Contractor represents and warrants the following: (a) that the licenses for any Open Source Software/Freeware used in the C2 System allow the use of such Open Source Software/Freeware as used in the C2 System by, for, and on behalf of MTC; (b) there are no charges connected to any licenses for any Open Source Software/Freeware used in the C2 System or that it has fully covered any such charges; and (c) the use of Open Source Software/Freeware will not conflict with or otherwise impair MTC's Intellectual Property Rights and Work Product ownership rights set forth under this Article 4. Without limiting the generality of the foregoing, Contractor represents and warrants that the Open Source Software/Freeware used in the C2 System does not include any Software that requires as a condition of its use, modification and/or distribution that it or other Software or product combined and/or distributed with it be (i) disclosed or distributed in Source Code form, (ii) licensed for the purpose of making derivative works, (iii) redistributable and/or licensed at no charge, or (iv) redistributable and/or licensed under terms that would impair MTC's rights in the C2 System or Intellectual Property Rights therein.

4.2.9 Software List

An initial list of C2 System Software to be Provided by Contractor is included in the Contract as Attachment F, Software List. Within sixty (60 days) of issuance of NTP for Work performed under Attachment A-2, Design, Implementation and Testing, and thereafter within thirty (30) days of any material change in the Software or annually, whichever comes first, Contractor shall update the Software List.

4.2.10 Escrow Agreement and Release

All Source Code to Contractor Software and Source Code Documentation to such Contractor Software, including Source Code to modifications, updates, upgrades, refreshes, revisions, fixes, utilities, listings, and libraries, shall be deposited in escrow, at Contractor's cost, along with Source Code Compilation Documentation, prior to the MTC's granting Revenue Ready Status. At the time such Source Code is deposited into escrow, it shall undergo at Contractor's expense a third-party verification process to ensure the deposited Source Code can be compiled and functions in accordance with its intended purpose without any additional source code, libraries or materials. Every twelve (12) months for the duration of the O/M Term and within thirty (30) days following a major C2 System Software change, the latest version of the Source Code, Source Code Documentation, and Source Code Compilation Documentation shall be deposited in escrow, and the deposited Source Code shall undergo at Contractor's expense the verification process described in the immediately preceding sentence.

Additionally, MTC may request additional escrow deposits at MTC's cost. If MTC requests such a deposit, Contractor shall complete the deposit within thirty (30) days of request by MTC. MTC shall have the

right to retain the services of a reputable expert, at Contractor's cost, to compile and test the Source Code and review the Source Code Documentation deposited in the escrow account to determine that they are sufficient to permit MTC to exercise its rights to access such Source Code and Source Code Documentation, at MTC's cost, subject to such expert's signing a nondisclosure agreement with the Contractor or subcontractor owning the software. Should assistance be required of Contractor during this process, Contractor will be given a Change Order in accordance with the terms of this Contract to provide such services on a time and materials basis. Other than those costs associated with additional escrow deposits made at MTC's request, Contractor is responsible for all costs associated with maintaining the escrow account. Such amounts are included in Attachment C, Payment Forms.

Within thirty (30) days of the execution of the Contract, Contractor will further enter into a separate three-party written escrow agreement with MTC and the escrow agent. The escrow agreement will authorize release of the escrowed materials upon MTC's request.

4.2.11 Bankruptcy

Contractor hereby agrees and consents that, in the event an order for relief under the United States Bankruptcy Code has been entered with respect to Contractor, MTC shall be permitted to assume the Contract and all licenses to it from Contractor set forth in the Contract (the "License") pursuant to 11 U.S.C. § 365, notwithstanding any right Contractor may have pursuant to 11 U.S.C. § 365(c)(1) to object to such assumption. This consent shall constitute an irrevocable consent pursuant to 11 U.S.C. § 365(c)(1)(B), but only consent with respect to MTC's assumption of the License and not consent to any assignment of the License. In addition, Contractor and MTC each acknowledge that this Contract provides for multiple licenses of intellectual property for purposes of 11 U.S.C. § 365(n) such that if this Contract is "rejected" in any bankruptcy proceeding in which Contractor is the debtor, MTC may elect to retain the rights to the items licensed hereunder and any other Intellectual Property Rights provided for under this Contract (and any supplementary agreement hereto) in accordance with the provisions of 11 U.S.C. § 356(n).

4.3 Confidential Information

4.3.1 Nondisclosure of Confidential Information

a. **General.** During the performance of the Work under the Contract, it may be necessary for one party to this Contract to disclose or make certain confidential, non-public or proprietary information ("Confidential Information") available to the other party for purposes of carrying out the Project. The term "Confidential Information" means, subject to the further provisions of this Article, any and all nonpublic information, in any form or medium, tangible or intangible and whether communicated in writing, orally, or through visual observation by or on behalf of one Party (each a "Disclosing Party") to the other Party (each a

“Receiving Party”) (i) in the case of MTC, that is designated “confidential”; and (ii) in the case of Contractor (x) is proprietary to Contractor and meets the requirements of Article 4.3.3 herein, (y) if disclosed in writing, is conspicuously marked “confidential” and is disclosed separately from (and not a part of) any other information disclosed or otherwise delivered to MTC, and (z) if disclosed orally, is followed by a written notice describing such oral disclosure given to MTC within 24 hours after the applicable disclosure. As between MTC and Contractor, Confidential Information shall remain the sole and exclusive property of the Disclosing Party, and except as otherwise provided in the Contract, no license or other rights to Confidential Information or any works deriving from Confidential Information is granted or implied hereby.

b. Confidential Information does not include information that: (i) is or subsequently becomes generally known or available by publication, commercial use or otherwise without the Receiving Party’s breach of any obligation owed to the Disclosing Party, (ii) is known to the Receiving Party prior to the Disclosing Party’s disclosure of such information to the Receiving Party without any restriction on the Receiving Party’s further use or disclosure, (iii) becomes known to the Receiving Party from a source other than the Disclosing Party without any restriction on the Receiving Party’s further use or disclosure and other than by the breach of an obligation of confidentiality owed to the Disclosing Party, and/or (iv) is independently developed by the Receiving Party without use of or access to the Disclosing Party’s Confidential Information; or (v) is required to be disclosed by law or in accordance with a judicial or other governmental order compliance with which order by the Receiving Party is mandated by applicable law, provided that the Receiving Party either (a) if permitted by law, gives the Disclosing Party as much notice as is reasonably practicable prior to such disclosure (so that the Disclosing Party can seek a protective order or equivalent), or (b) if the notice contemplated by clause (a) above is not permitted by law, takes all reasonable steps to implement appropriate measures providing the Confidential Information the highest level of protection afforded under applicable law or regulation.

c. The Receiving Party agrees to take all necessary and reasonable precautions to maintain the confidentiality of Confidential Information and agrees not to use, copy, distribute or disclose such Confidential Information except for the business purpose underlying this Contract, or except as otherwise authorized in writing by the Disclosing Party. The Receiving Party further agrees to disclose Confidential Information only to Receiving Party’s directors, commissioners, officers, employees, independent contractors, and Subcontractors (subject to the provisions in (d) below) who need to know such information, and who have agreed to be bound by the terms and conditions of this Article 4.3.1. Promptly upon the request of the Disclosing Party, at any time and for any reason, the Receiving Party shall destroy or return to the Disclosing Party, all documents, computer files and other tangible materials that contain the Disclosing Party’s Confidential Information. These obligations survive the termination of the Contract, unless otherwise agreed in writing.

d. Subject to the further provisions of this Article 4.3.1, a Receiving Party may disclose the Confidential Information of the Disclosing Party to the Receiving Party's independent contractors (including with respect to Contractor, its Subcontractors, advisors, consultants, lenders, and potential lenders) to the extent that such disclosure is reasonably necessary for the applicable independent contractor to perform its obligations to the Receiving Party; provided, however, that (a) such independent contractor is first informed of the confidential nature of the Confidential Information, and (b) such independent contractor is first bound by written confidentiality obligations with respect to such Confidential Information that are consistent with (and no less restrictive than) those contained in the Contract. Any act, error or omission of any independent contractor of Contractor (including its Subcontractors) that would constitute a breach of this Article 4.3.1 or 4.4 if such act, error or omission was performed (or not performed) by Contractor shall constitute a breach of the Contract by Contractor, and, in such event, Contractor shall be directly and primarily liable to MTC for any damages resulting therefrom. Further, each Receiving Party shall use commercially reasonable efforts to enforce, for the benefit of the Disclosing Party, all confidentiality obligations against all of its independent contractors and employees.

The parties reserve the right to require any agents or third parties to whom Confidential Information must be disclosed to execute a nondisclosure agreement that incorporates the substantive requirements of this Article 4.3.

Each Receiving Party agrees to notify the Disclosing Party promptly upon discovery of any actual or reasonably suspected compromise, unauthorized use and/or disclosure of the Confidential Information of the Disclosing Party and will reasonably cooperate with the Disclosing Party to regain the control, possession and/or confidentiality, as applicable, of the applicable Confidential Information.

4.3.2 MTC Confidential Information

The C1 System Materials shall be considered and treated as Confidential Information of MTC. Contractor shall be required to sign a separate non-disclosure agreement acceptable to MTC prior to receiving such Confidential Information. Otherwise, the requirements contained in Article 4.3.1 protecting Confidential Information apply. In addition, System Data shall be considered and treated as MTC's Confidential Information and, for the avoidance of doubt, MTC shall be considered the "Disclosing Party" with respect to System Data and Contractor shall be considered a "Receiving Party".

Further, and without limiting the generality of its other obligations in the Contract, Contractor shall comply with the confidentiality and other restrictions included in any agreements MTC has entered into with respect to any Software and equipment relating to the C1 System. Copies of such agreements will be made available to Contractor upon request. The obligations set forth in this subarticle shall continue throughout the Term and, to the maximum extent permitted by applicable law, forever thereafter; provided, however, that, for

the avoidance of doubt, such obligations shall cease with respect to Confidential Information that no longer constitutes Confidential Information because it falls within one of the exceptions (to the extent applicable) set forth in Article 4.3.1.b.

4.3.3 Contractor Designation of Confidential Information

MTC's rights and responsibilities with respect to disclosure of any printed or electronic document or writing are subject to the California Public Records Act ("the Act" in this Article) (California Government Code § 6250 *et seq.*). The Contract and any material required to be submitted under the Contract are subject to public inspection under the Act, unless exempt by law. To the extent that Contractor considers any writing, as defined in Government Code § 6252(e), to be a trade secret or otherwise confidential or proprietary the disclosure of which would cause substantial injury to Contractor's competitive position, Contractor shall mark such document or record "Confidential" and request MTC to withhold such materials from disclosure. In the event properly marked data is requested pursuant to the California Public Records Act, Contractor will be advised of the request. If Contractor requests that MTC withhold such data from disclosure and MTC complies with Contractor's request, Contractor shall assume all responsibility for redacting Confidential Information from the requested documents; defending any challenges resulting from the non-disclosure; indemnifying, defending MTC and holding MTC harmless from and against all claims, legal proceedings, and resulting damages and costs (including but not limited to attorneys' fees that may be awarded to the party requesting such information); and paying any and all costs and expenses relating to the withholding of the information. Contractor agrees that MTC's sole involvement in any litigation resulting from MTC's withholding of records shall be to retain the records until otherwise ordered by a court.

If Contractor does not follow all of the requirements in this Article 4.3.3 for withholding proprietary information as exempt from disclosure under the Act, MTC shall have no obligation to withhold the information from disclosure, and Contractor shall not have a right to make a claim or maintain any legal action against MTC or its commissioners, officers, employees or agents in connection with such disclosure.

4.4 Personally Identifiable Information

Contractor will have access to personally identifiable information ("PII") in connection with the performance of the Contract. PII is any information that is collected or maintained by MTC or Contractor that identifies or describes a person or can be directly linked to a specific individual, including that individual's account. Examples of PII include, but are not limited to, a person's name, mailing address, business name, alternate contact information (if given), email address, fax numbers, Clipper® fare media serial number, C2 System account number, telephone number, email address, bank account information, credit card number, security code and expiration date, photograph and travel pattern data. Contractor agrees to comply with the special

provisions related to the access and protection of personally identifiable information set forth in Attachment G, Special Conditions Regarding Personally Identifiable Information, attached hereto and incorporated herein by this reference.

4.5 Data Security

4.5.1 General

Contractor is responsible for ensuring the security and protection of the C2 System and all System Data collected, maintained, stored, accessed, transmitted, generated, processed, disclosed or otherwise used through the C2 System. In furtherance of the foregoing but without limiting the generality thereof, Contractor shall create and maintain a written program with respect to the C2 System which (a) covers the security and protection of customer PII in all forms and details Contractor's methods of electronic and physical security of that data, (b) complies with the terms and conditions of the Contract, and (c) is based on accepted security standards for the electronic payment and data processing industry as may be published by entities such as the Payment Card Industry, NIST, ISO/IEC, and others. Contractor shall also include in that written program a description of appropriate responses which would mitigate data security breaches, identifies the specific persons (including appropriate MTC personnel) and procedures to be followed in the event of a suspected or confirmed data security breach, defines a plan for making a formal determination with MTC that a breach has or has not occurred and identifies which external parties should be notified, and details a plan to regularly review, test and update the program ("Data Security Breach Prevention Program"). Contractor shall (x) provide MTC with a copy of its Data Security Breach Prevention Program prior to its implementation, (y) submit to MTC any proposed changes to the Data Security Breach Prevention Program, and (z) provide MTC with a copy of its current Data Security Breach Prevention Program at least annually (along with a certificate stating that such Data Security Breach Prevention Program is current and has not been revised except as described therein). MTC shall have no obligation to review any Data Security Breach Prevention Program for compliance with the terms and conditions of the Contract, and Contractor shall be estopped from defending any claim against Contractor on the basis of MTC's review (or lack of review) of any Data Security Breach Prevention Program. Without limiting any other obligation of Contractor contained in this Agreement, Contractor represents and warrants that all System Data collected, maintained, stored, accessed, transmitted, generated, processed, disclosed or otherwise used through the C2 System will at all times be secure and will not be accessed, acquired, or disclosed to or by any unauthorized party, including without limitation, accessed, acquired, or disclosed in a manner compromising the security, confidentiality or integrity of such System Data or that may be considered a "breach of security" or a "data breach" under any then-current state or federal law.

4.5.2 Standards

Contractor will maintain all appropriate administrative, technical and physical safeguards and industry best practices with respect to the collection, maintenance, storage, access, transmission, generation, processing and use and disclosure of System Data, that (a) prevent and safeguard against the unauthorized access to, or acquisition or disclosure of, System Data (both from internal and external sources) that may compromise the security, confidentiality or integrity of such System Data or may be considered a “breach of security” or a “data breach” under any then-current state or federal law, and (b) are at least equivalent to (i) the highest level of security and integrity that Contractor uses for any of its customers, (ii) the level of security that is customary for a leading provider of transit fare collection systems at the applicable time, (iii) security standards as published in the current version of the Payment Card Industry Data Security Standard (PCI-DSS), and (iv) the security requirements set forth in any other provision of the Contract, whichever provides the highest level of security; provided, however, that Contractor shall at all times be in compliance with any then applicable laws governing MTC’s maintenance, storage, access, transmitting, generation, processing disclosure and use thereof. Contractor shall ensure that all PII stored by or sent through the C2 System is encrypted, using at least then-current best industry practices (or encryption methods mandated by law, whichever provides higher level of encryption), beginning at the time that any such PII is captured by any electronic device. Further, and without limiting the generality of the foregoing, Contractor shall (x) store, maintain and transmit PII only in encrypted form, using at least then-current best industry practice encryption methods, or encryption methods mandated by law, whichever provides higher level of encryption, (y) at all times maintain electronic and physical content monitoring systems to continuously identify security threats and classify information through real-time inspection (including monitoring information that may be sent out of the applicable system, whether electronically or otherwise), and (z) limit access to System Data by employees and contractors to only the specific System Data record, or portion thereof, necessary for such employee and/or contractor to perform the applicable task and establish access controls to continuously monitor such access. At no time shall Contractor provide decryption keys to a third-party other than MTC’s Approved merchant payment acquirer without the prior written consent of MTC. Contractor shall avoid the unnecessary storage, retrieval, copying and/or transmission of any PII and, where determined to be necessary, only in full compliance with the payment card regulations, Payment Card Industry Data Security Standards (PCI DSS), and all other applicable laws, regulations and standards.

4.5.3 Identify Theft Prevention

Without limiting any other obligation to Contractor contained in this Agreement, Contractor shall, pursuant to the “Red Flags and Address Discrepancy Rules” which implement sections of the Fair and Accurate Credit Transactions Act of 2003, create and maintain a written program with respect to the C2 System which

(a) identifies and serves to detect the warning signs of identity theft, describes appropriate responses which would mitigate the crime in accordance with applicable law, and (b) details a plan to regularly update the program (“Identity Theft Prevention Program”). Contractor shall (a) provide the MTC with a copy of the Identity Theft Prevention Program not less than 60 days prior to the Revenue Ready Date, (b) submit any proposed changes to the Identity Theft Prevention Program to MTC, and (c) provide the MTC with a copy of its current Identity Theft Prevention Program at least annually along with a certificate stating that such Identity Theft Prevention Program is current and has not been revised except as described therein. MTC shall have no obligation to review any Identity Theft Prevention Program for compliance with the terms and conditions of the Contract or otherwise, and Contractor shall be estopped from defending any claim against Contractor on the basis of MTC’s review (or lack of review) of any Identity Theft Prevention Program.

4.5.4 Breach of Security

(i) **Notice to MTC.** In the event of any breach of security or detection or notice of breach of security of the C2 System including in the event that Contractor becomes aware of (a) an actual or reasonably suspected unauthorized access to, or acquisition or disclosure of, System Data, and/or (b) other incident which may be considered a breach of security under any then-current state or federal law (each a “Security Incident”), Contractor shall immediately notify MTC by sending MTC a notice thereof in accordance with Article 20.3 and also sending MTC an email notice thereof at to the email addresses provided, from time to time, by MTC Project Manager to Contractor Project Manager and with a subject line of “Security Events Notification.” Such notice shall contain any and all details regarding the Security Incident that Contractor knows of at the time such notice is given including (a) a brief description of the incident, including the date of the incident, the date of the discovery of the incident and, if applicable, identification of each individual whose personally identifiable information has been, or is reasonably believed by Contractor to have been, improperly accessed, acquired, used or disclosed, (b) a description of the types of System Data involved in the incident, (c) if the incident involves any personally identifiable information, any steps the affected individuals should take to protect himself or herself from harm resulting from the incident, (d) a brief description of what Contractor is doing to investigate the incident, to mitigate the harm to any individuals affected (if applicable) and to protect against future occurrences, (e) such information as may be required under applicable state or federal data breach laws, and (f) any other relevant information. Contractor shall update the details in such notice by giving further notices thereof to MTC in accordance with this Article promptly after Contractor becomes aware of such further details and immediately upon the request of MTC from time to time.

(ii) **Remedial Measures.** Immediately upon the occurrence of any Security Incident, Contractor shall (a) take all appropriate measures to re-secure the applicable systems and the affected System Data immediately,

and (b) take any and all remedial actions necessary to promptly mitigate any harmful effects known to Contractor to result from an unauthorized use of access to or disclosure of any personally identifiable information of an individual.

(iii) **Investigation of Security Incident.** Immediately upon the occurrence of any Security Incident, Contractor shall investigate the circumstances surrounding the incident to determine the details of all factors surrounding the Security Incident including (a) the date and time that the Security Incident first occurred, (b) the duration of the Security Incident, (c) the date and time the Security Incident was first discovered by Contractor, (d) details regarding the specific System Data involved in the incident including whether such Data involves any personally identifiable information of any individual, (e) the origin of the Security Incident including all technical details surrounding the Security Incident, (f) all measures taken to re-secure the applicable systems and the affected System Data, and (g) all other information regarding the Security Incident that MTC may request. Further, Contractor shall immediately conduct an appropriate analysis to determine whether the Security Incident resulted in a “data breach” or “security breach” under applicable state or federal data breach law and, if requested by MTC, fully cooperate with MTC in its own such analysis. To the extent directed by MTC, Contractor shall engage, at Contractor’s sole expense, technical experts Approved by MTC to investigate and analyze the impact of the Security Incident and to provide the report of results and conclusions of such investigation to MTC.

(iv) **Compliance.** If it is determined by MTC that a Security Incident resulted in (a) an actual or reasonably suspected unauthorized access to, or acquisition or disclosure of, System Data, and/or (b) other incident which constitutes or is likely to be considered a breach of security under any then-current state or federal data breach or data security law, Contractor shall provide all reasonable assistance to MTC with respect to all actions, as requested by MTC, that may be required to comply with any such laws including, without limitation, giving notice of the Security Incident to any affected data subjects and governmental authorities in accordance with the further provisions of this subarticle, providing free credit monitoring to the affected individuals, if required by applicable law or determined by MTC to be an appropriate remedial measure under the circumstances, and taking other actions determined to be appropriate by MTC under the circumstances. Such cooperation shall also include, without limitation and, to the extent requested by MTC, preparing and delivering such notices (the content of which notice must be Approved in advance in writing by MTC), each in accordance with applicable law, on behalf of MTC, and in the name of MTC, or if requested by MTC, the name of Contractor, and at Contractor’s sole cost and expense. Contractor shall promptly pay for or reimburse MTC for all actual costs incurred by MTC in connection with any Security Incident including, without limitation, the cost of providing required notifications, legal costs, technical expert costs and the amount of any monetary fines, damages, and/or penalties imposed on MTC by any court or governmental authority resulting therefrom. Further, Contractor shall

not provide notice of any actual or reasonably suspected unauthorized access to, or disclosure of, System Data to any third party (including, without limitation, any individual that is the subject of the applicable System Data) unless Contractor receives MTC's written consent and direction to do so.

(v) **Indemnification.** Without limiting any other obligation of Contractor contained in this Contract, Contractor shall indemnify and hold harmless MTC, its affiliates, directors, commissioners, officers, employees, independent contractors, and agents against any and all losses, liabilities, judgments, penalties, awards, costs, fees and expenses (including attorneys' fees and expenses for remedial measures) arising out of or related to (a) a breach by Contractor of any provision of this subarticle and/or subarticle 4.4, and (b) any allegation which, if true, would constitute a breach by Contractor of any provision of this subarticle or subarticle 4.4, and (c) a Security Incident.

(vi) **System Data Access Records.** Without limiting any other obligation of Contractor contained in the Contract, Contractor agrees to (a) maintain documentation of all Security Incidents and all matters relating thereto for the Term and for a period of three (3) years thereafter, and (b) cooperate in any regulatory investigation and in any internal investigation by MTC regarding System Data, and in responding to any inquiry by any individual whose data is included in System Data.

(vii) **Privacy and Disclosure Statements.** Contractor will provide all privacy and other disclosure statements to MTC customers or third-parties, if any, as may be required under the Payment Card Industry regulations, MTC or by other applicable local, state and/or federal law. MTC shall have the right to Approve in advance the form of any agreements, policies, terms of use, and/or other similar documents provided to, or agreed to by, actual or prospective customers of the C2 System, and MTC shall have the right to change such form documents in its discretion. Contractor and its Subcontractors shall not use or change the form of any such documents without MTC's prior written consent. Contractor and its Subcontractors shall comply at all times with all terms of any such documents. For the avoidance of doubt, all data and information obtained from, or as a result of, any such documents shall be considered System Data or PII as applicable, for all purposes of this Contract.

5. OPERATIONS AND MAINTENANCE OF C1 SYSTEM BY CONTRACTOR

5.1 Contractor Obligations

Contractor shall operate and maintain the C1 System in accordance with Attachment A, Scope of Work, and Attachment A-2, Operations and Maintenance of C1, from Notice to Proceed through to Completion of Transition to the C2 System. Transition to the C2 System will occur after the C2 System is fully operational and, at MTC's sole discretion, MTC has provided written notice that the C1 System may be shut down.

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6. DESIGN, IMPLEMENTATION AND TESTING OF C2 SYSTEM

6.1 Contractor Obligations

Contractor shall perform all design, implementation and testing Work and complete all corresponding submittals required in Attachment A, Scope of Work and A-3, Design, Implementation and Testing of C2 System, in accordance with the System Design requirements in Attachment A-1, as amended by Change Order, including without limitation, all administrative, design, engineering, software development, procurement, professional, manufacturing, supply, installation, construction, supervision, management, testing, and verification duties and services, and all labor, materials, software, equipment, and documentation required to be furnished and provided by Contractor as required by the Contract, including all efforts necessary or appropriate to achieve System Completion of the C2 System, but specifically excluding those efforts which the Contract specifies will be performed by MTC or other persons.

6.2 Intent of Contract

The intent of the Contract is to describe complete items to be procured. Where the Contract requirements describe items in relation to functionality or performance, but not in complete detail, Contractor shall Provide all required components or elements to provide a complete item in accordance with best industry practices and the goals and objectives of the C2 Program, as defined in Section I.4 of the RFP and the Concept of Operations.

6.3 Submittals

Contractor's submittal requirements shall be as set out in Attachment A-3, Design Implementation, and Testing of the C2 System, for deliverables, as revised by Change Order, in accordance with the Approved Project Schedule. Submittals shall be in accordance with the Approved Project Schedule, identifying for each submittal, the period of production or development, Contractor internal quality control, issuance of draft deliverable to MTC, MTC and Transit Operator review period, MTC and Transit Operator workshops or meetings, Contractor review and response to MTC comments, update of deliverable based on comments, and issuance of final deliverable to MTC.

All submittals shall be supplied with a deliverable review and comment form in MS Excel or MS Word format to collect comments from MTC and the Transit Operators. Contractor shall review and respond to all comments submitted, and in each case identify a recommended course of action to address the comment. All recommendations are subject to approval by MTC.

Within no more than thirty) Days of receipt of a materially complete submittal, MTC will provide comments to Contractor, along with one set each of comments from each Transit Operator that reviewed the deliverable. Submittals judged by MTC to be materially incomplete will be rejected and returned to the Contractor without review. Acceptance of a deliverable will be granted when all comments have been addressed and resolved

to the satisfaction of MTC, and an updated deliverable responding to that resolution has been submitted and verified by MTC. Contractor acknowledges that multiple submittals of a deliverable may be required to achieve acceptance.

6.4 Design Process

The design process is governed by the applicable sections of Attachment A-3, Design, Implementation and Testing of the C2 System, and the terms of signed Change Orders.

As part of its design and design review process, Contractor shall utilize prototypes and interactive demonstration versions of hardware and software to demonstrate how it proposes to satisfy the Contract requirements. Such demonstrations shall be provided to MTC and the Transit Operators in workshops conducted as part of the design process, and Contractor shall capture all workshop comments in a comment recording form for incorporation in the associated submittal comments and responses.

6.5 Approvals

Required Contractor submittals are governed by the applicable sections of Attachment A-3, Design, Implementation and Testing of C2 System, and the terms of subsequent Change Orders. Contractor shall at all times bear responsibility for Contract compliance. Approval of a deliverable by MTC shall not relieve the Contractor of such responsibility.

Submittals inconsistent with any requirements of the Contract shall not constitute a revision of such requirement unless the requirement is revised by Change Order pursuant to Article 15.

6.6 Materials

Contractor shall Provide all Materials required to complete the Work, except for MTC- furnished materials described in Attachment A-2, Operation and Maintenance of C1. All Materials shall be new and unused, except for Materials that have been repaired pursuant to Contractor's maintenance obligations or as otherwise specified elsewhere in the Contract.

Notwithstanding any prior inspection or approval, only Materials conforming to the requirements of the Contract shall be incorporated into the Project. Contractor shall submit to the Project Manager a list of its sources of Materials. The list shall be submitted in sufficient time to allow the MTC Project Manager to provide for inspection and testing of Materials in advance of their use if desired. Contractor shall furnish samples as indicated in Attachment A-3, Design, Implementation and Testing of C2 System. Inspections and tests may be made by MTC as indicated. If inspection or testing is done at any location other than the Material delivery site, such inspection or testing shall in no way be considered as indication of acceptance of any Material that may be delivered later for incorporation in the Work.

Contractor shall inspect all Materials to be used, consumed or incorporated in the Work, and provide records of such in a manner determined by the MTC Project Manager. In addition, Contractor shall conduct a continuous program satisfactory to the MTC Project Manager or designee of construction quality control for all Work performed under this Contract. Contractor shall have the responsibility for inspecting the Work and Materials; no inspection by MTC's Project Manager or designee's reduces such responsibility. Any observation, verification, inspection, or approval of the Work or Materials by MTC shall not relieve Contractor of any of Contractor's obligations to fulfill the Contract as prescribed. Work and Materials not meeting Contract requirements shall be made acceptable, and unsuitable Work or Materials may be rejected, notwithstanding that payment for such Work or Materials may have been previously authorized and included in a progress payment

6.7 Testing and Pilots

Testing shall be conducted in accordance with Attachment A-3, Design, Testing and Implementation, as amended by Change Order. The payments in Attachment C, Payment Forms, include full compensation for any testing performed by Contractor under the Contract. All costs incurred to remedy items found not to be compliant with the specifications shall be borne by Contractor.

A pilot demonstration of the approved Design shall be implemented by Contractor pursuant to Attachment A-4, Transition from C1 to C2.

6.8 Revenue Ready Status

In general, Revenue Ready Status is considered the point where the C2 System is available for use on all Transit Operators' transit systems by the general public. Revenue Ready Status shall be achieved when MTC determines that Contractor has complied with the System Requirements set forth in the Contract, in the areas identified below:

- a. All equipment has been installed for all Transit Operators, all initially-required spare parts have been delivered to MTC, and all Work Sites have been cleared of Contractor's supplies, equipment, waste materials, rubbish, and temporary facilities related to completion of the Work;
- b. All Back Office functions and networks are in place and operational, including a sufficient portion of the retail network to enable equitable access by patrons;
- c. All Design, Implementation and Testing, as required under Attachment A-3, has been completed, including all Training as required by Attachment A-3, Section 3.06, and MTC has Approved any design documents required under Attachment A-3 requiring its Approval prior to Revenue Ready Status;
- d. All Contractor Software, Software Documentation, Source Code, and Source Code Compilation Documentation have been placed in escrow, as required under Article 4.2.10;

- e. All functionality, as required under Attachment A-1, is fully operational with no material defects or “bugs”;
- f. All O/M Services, as required under Attachment A-5, are in operation and available;
- g. All required hiring and training of personnel designated for the operations and maintenance of the C2 System has been completed;
- h. Any pilot testing provided for in the Contract has been satisfactorily completed, according to the standards for such testing in the Approved design;
- i. A punch list of incomplete Work required under Attachment A-3 has been completed and communicated to Contractor, for completion by Contractor within ninety (90) days or as specified in the punch list;
- j. There are no material defects that would impede beneficial use of the System by all Transit Operators and by the general public; and
- k. There are no material issues impacting the ability of a customer to utilize a C1 card on all Transit Operators or to utilize C2 fare media on all Transit Operators.

Contractor shall provide written notice to the MTC Project Manager at least ninety (90) days in advance of the date on which Contractor anticipates the foregoing activities to be completed in full. MTC and Contractor shall then review the required pre-conditions for Revenue Ready Status. If the review of such Revenue Ready Status determines that any of the pre-conditions have not been met, MTC will advise Contractor of the particular deficiencies to be remedied or completed. Upon Contractor’s belief that the deficiencies have been remedied, Contractor shall provide written notification to MTC and another review of Revenue Ready Status shall be conducted. This procedure shall be repeated until MTC finds that all pre-conditions for Revenue Ready Status have been met or substantially met and any incomplete Work has been added to the punch list.

At any point during this review process, MTC may initiate partial payment for O/M Services. The amount and conditions of such partial payment shall be set forth in writing by MTC and shall in no case exceed the amounts in Attachment C-____, the C2 System Operations & Maintenance Payment Form. Any and all payments for O/M Services prior to the issuance of the Certificate of Revenue Ready Status can be discontinued by MTC by providing written notification to Contractor, based on its determination that Contractor is not taking all steps necessary to enable completion of the review process. Partial payments for O/M Services shall not grant Contractor any rights or payments due to it under the Certificate of Revenue Ready Status.

MTC shall issue a Certificate of Revenue Ready Status at such time as all Revenue Ready Status conditions and remedial work has been accepted. The date of such certification shall be the Revenue Ready Date.

Promptly after achieving Revenue Ready Status, Contractor shall perform all Work, if any, that was deferred for purposes of the determination of Revenue Ready Status and placed on the punch list.

6.9 System Completion

System Completion is the point at which Contractor is entitled to release of retentions owing to Contractor and will occur when MTC determines that Revenue Ready Status has been achieved and all of the following have occurred:

- a. The Revenue Ready Status punch list has been completed, in compliance with the Contract, or specific items have for the purpose of System Completion been waived by MTC;
- b. Contractor has delivered to MTC the following documents with regard to the Project:
 1. All requests for Change Orders, disputes of change notices/orders, and claims under Articles 15 and 16 with respect to Work provided under Attachment A-3; and
 2. An Affidavit of Payment of Debts and Claims with respect to such Work , specifying that to Contractor's knowledge, there are no outstanding debts or claims to or by third parties related to such Work; and
 2. A statement that all requests for change orders or protests of change notices/orders under Article 15 and any and all claims affecting such Work of which Contractor knows or has reason to know have been submitted and to the best of its knowledge, no additional requests for change order, protests or claims will be made.
 3. Notice of Completion has been issued to Contractor by MTC.

Notice of Completion shall not relieve Contractor of any of its continuing obligations hereunder.

MTC shall not be precluded or estopped, by any measurement, estimate or certificate made either before or after Notice of Completion and payment therefore, from showing that any such measurement, estimate or certificate is incorrectly made or untrue, or from showing the true amount and character of the Work performed and materials furnished by Contractor, or from showing that the work or materials do not conform in fact to the requirements of the Contract. Notwithstanding any such measurement, estimate or certificate, or payment made in accordance therewith, MTC shall not be precluded or estopped from recovering from Contractor and its Surety(ies), under the terms of the Contract, such damages as MTC may sustain by reason of Contractor's failure to comply or to have complied with the terms of the Contract.

6.10 Asset Refreshes

- a. **Scheduled Refreshes.** Contractor represents that the Asset Refresh Plan for replacement of the Equipment set forth in its Proposal (___) represents a schedule for replacement of the Equipment that is consistent with best industry practice for the updating of such Equipment using appropriate

leading technology standards and considering, among other things, the type of Equipment and the intended use of the Equipment. As part of Final Design, Contractor shall update the Asset Refresh Plan, as provided in Attachment A-____. Contractor shall replace the Equipment in accordance with the schedule set forth in the Final Asset Refresh Plan and the requirements of subsection (d) below.

- b. **As Necessary to Be Compatible with C2 System Components.** If an update, modification, replacement, and/or other change to any component of the C2 System (including, without limitation, any Software or Equipment) requires that any Equipment be updated, Contractor shall, without limiting its obligations under subarticle (a) above, replace such Equipment with new Equipment that meets the requirements of subarticle (d) below.
- c. **Meet Specifications and Service Levels.** Nothing in this Article 6.10 shall be interpreted to limit Contractor's obligation to replace any Equipment (a) pursuant to any other provision of the Contract, or (b) as necessary to operate the C2 System in accordance with the applicable System Requirements and to otherwise meet the applicable Service Level Agreements in respect of all Work throughout the Term. Thus, Contractor shall at times during the Term be solely responsible for ensuring that the Equipment used in connection with the C2 System is appropriate for Contractor to operate the C2 System in accordance with the applicable System Requirements and to perform all Services in accordance with the applicable Service Level Agreements. Accordingly, Contractor shall timely (a) replace any Equipment that needs to be replaced, and (b) provide additional Equipment that is required, in each case, in order that the C2 System is at all times operated in accordance with the applicable System Requirements and all Work is at all times performed at least in accordance with the applicable Service Level Agreements.
- d. **Standards for Replaced Equipment.** Without limiting any other obligation of Contractor contained in the Contract, all Equipment that is replaced in accordance with this Article shall be replaced with new Equipment that is (a) fully compatible with the then-current C2 System, (b) meets all representations, warranties and covenants contained in the Contract, and (c) the then-current updated (as to, among other things, quality and technological advancement) version of the Equipment consistent with best industry practice.
- e. **At Contractor's Cost.** Contractor's obligations under this Article shall be undertaken at Contractor's cost and at no cost to MTC.

7. TRANSITION FROM C1 TO C2 SYSTEM

7.1 Obligations

Contractor shall be responsible for the orderly transition of all then existing customers, accounts and data from C1 to C2, as set forth in Attachment A-4, Transition from the C1 System to C2 System.

7.2 Commencement of Transition

Commencement of Transition may proceed, following receipt by Contractor of an NTP, at any time after Revenue Ready Status has been achieved and the O/M Term has begun.

7.3 Shut Down of C1

After System Completion has been granted, MTC shall direct Contractor when to shut down C1 services and operations, which Contractor shall accomplish in an orderly manner. Contractor shall be responsible for decommissioning all C1 equipment and systems and salvaging or disposing of all equipment and systems at MTC's direction.

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8. OPERATION AND MAINTENANCE OF C2 SYSTEM

8.1 Obligations

Contractor's responsibilities for operating and maintaining the C2 System are set forth in this Article 8 and Attachment A-5, Operations and Maintenance of C2.

8.2 Commencement

The date for commencement of O/M (the "O/M Commencement Date") shall be established as follows: Contractor shall notify MTC at least 90 days in advance of the date on which Contractor anticipates Revenue Ready Status will be achieved, for the purpose of allowing Contractor and MTC to meet to discuss possible dates for commencement of service. MTC shall be responsible for determining a tentative service commencement date. Each party shall promptly notify the other of any reasons necessitating a change in the tentative service commencement date. Concurrently with achievement of Revenue Ready Status, MTC shall set the actual O/M Commencement Date (which shall occur as soon as reasonably practicable following achievement of Revenue Ready Status), and the Certificate of Revenue Ready Status shall set forth the actual date.

8.3 Operating Policies and Business Rules

All policy decisions regarding the Project's operations shall rest with MTC and the Transit Operators. Contractor agrees that the Operations and Maintenance Work shall be conducted in accordance with the Clipper® Operating Rules [link] and Business Rules [link], as may be revised and updated by MTC and the Transit Operators as part of the C2 System Design.

8.4 Term

The O&M Term shall begin on the O/M Commencement Date and continue for ten (10) years thereafter.

8.5 Extended O/M Term

The O/M Term may be extended for one additional five (5)-year period, at the sole discretion of MTC and at the prices specified in the Contract.

8.6 Ownership of Project Equipment and Supplies

Subject to Article 4, Rights in Data, MTC shall own all Materials Provided under the Contract upon payment therefore.

8.7 Prohibition Against Tampering

Contractor is prohibited from employing any electronic or other means of altering the performance data measurement. Tampering with, falsely reporting or artificially enhancing performance data is a material breach of the Contract, subjecting Contractor to termination for default pursuant to Article 18.3.

9. UPGRADES AND ENHANCEMENTS

9.1 System Improvement

The first 160 hours/month of System Improvements shall be considered part of the monthly O/M payment at no additional cost to MTC. After the 160-hour/month threshold is reached, System Improvements will be executed through Change Orders, pursuant to Article 15. System Improvements are further broken into two sub-categories: Optimizations and Enhancements.

9.2 Optimizations

Optimizations are System Improvements that are relatively uncomplicated and generally require fewer hours to complete than Enhancements. One blanket Change Order (“Optimizations Change Order”) will be written to address potential optimizations during the course of the Contract. This Optimizations Change Order will establish a maximum dollar amount to be allocated for optimization work. Specific optimization tasks shall be authorized by means of the Task Order process described in Article 3.8.

9.3 Enhancements

Enhancements are System Improvements that are complex and will require specific planning to allow MTC and Contractor to manage their potential impacts on core services and their potential risks. As a guideline, System Improvements estimated to require 500 person hours or more are likely to be Enhancements. Each Enhancement shall be authorized by an individual Change Order.

10. END-OF-TERM TRANSITION

10.1 Transition Plan

Prior to the end of Term, Contractor shall provide End of Term Transition Services as described in Attachment A-7.

At least one year prior to the End of Term, Contractor shall Provide MTC with a transition plan, as described in Attachment A-7, Section ____ ____, describing all steps required to assist in effecting a complete and seamless transition. Contractor shall accomplish a complete transition of the Project from Contractor to MTC, or to any replacement provider designated by MTC as set forth in Attachment A-7, Section A-7.01, and shall provide support for a replacement system as set forth in Attachment A-7, Section A-7.02. Contractor shall not, through any act or omission, cause any interruption of or adverse impact to any component of the Project, any other work provided by MTC or MTC-designated third parties, or MTC's Customers.

10.2 Condition of Assets

By the end of the Term, all C2 System assets shall be in a state of good repair, subject to MTC's sole discretion in the determination of normal wear and tear and the remaining useful life of the Project assets.

10.3 Subcontractor Agreements

At least one year prior to End of Term, Contractor shall provide MTC with a copy of each instrument evidencing any agreement of Contractor with any Subcontractor still Providing services under the Contract, or with continuing obligations under the Contract, which instruments shall comply with Article 2.2.

10.4 Failure to Comply

The Parties acknowledge and understand that Contractor's failure to comply with the terms and conditions as stated in this Article 10 may adversely affect MTC and result in monetary loss to MTC. MTC shall assess, audit, and certify to the Contractor monetary losses resulting from the Contractor's failure to comply with Contract provisions. MTC's reasonable determination as to the amount of the monetary loss suffered shall be conclusive and Contractor shall compensate MTC for such loss within thirty (30) Days of such a determination by MTC, subject to the dispute provisions in Article 16.

11. WARRANTIES

11.1 Warranty Term

Contractor's warranties under Articles 11.2 and 11.5 shall begin on the Effective Date and remain in effect throughout the Term. Contractor's warranties under Articles 11.3 and Article 11.4 shall commence on the Effective Date and shall be perpetual.

11.2 Contractor Warranties

Contractor warrants that all Materials provided by the Contractor for the C2 System (a) shall meet the applicable requirements of Attachment A, (b) shall be new at the time furnished, and (c) shall be free of all liens, encumbrances and other rights and interests of third parties. Contractor, at its option, will, at no charge, either repair any warranted product not meeting these requirements with new or reconditioned parts, or replace it with the same or an equivalent product. Such repair or replacement is subject to the notice provisions set forth herein. Repaired or replaced Equipment are warranted for the balance of the original applicable warranty period. All removed parts shall become the property of Contractor.

Contractor warrants that C2 System Software will be free from defects that materially vary from the functional requirements and specifications in the Contract.

MTC shall notify Contractor in writing, including by e-mail, or by telephone confirmed in writing, after discovery of a discrepancy or defect covered by the warranties set forth herein. Contractor's warranty responsibilities hereunder shall be contingent upon MTC providing such notice within the Contract's warranty period, except that if such discrepancy or defect is one of which Contractor knew or should have known, as a result of its maintenance responsibilities under the Contract, such notice shall be deemed given. As soon as practicable, and in any event within ten (10) Days after receiving MTC's notice, Contractor shall propose a recommended method of correcting the discrepancy or defect that meets all requirements of the Contract and involves the least loss of operating time.

If MTC determines that it would be inefficient or impractical for Contractor to perform the corrective work, or that Contractor is unwilling or unable, for whatever reason, to perform the corrective work in the manner or within the time required by the Contract, MTC reserves the right to perform the corrective work itself, or to select another firm or entity to perform the corrective work. If such corrective work by MTC or another firm or entity occurs because Contractor is unwilling or unable to perform the work in accordance with the Contract, such corrective work shall be at Contractor's expense, provided that Contractor is kept informed as to the details and costs of any such corrective work. The party performing such corrective work shall warrant the corrective work performed directly to MTC.

Unless otherwise required by MTC, Contractor shall perform the corrective work required to satisfy this warranty as rapidly as practicable, and in any event within sixty (60) days from the date such corrective work commenced, unless the extent of the corrective work reasonably requires a longer period of performance. Contractor shall perform the corrective work and shall procure required materials using the fastest means available in order to minimize MTC's loss of operating time.

11.3 Patent and Copyright Warranty

Contractor represents and warrants that it will have all necessary patent, copyright, and any other necessary intellectual property rights to Work Products, software, and other deliverables furnished by Contractor under the Contract (referred to in this Article 11.3 as "Such Deliverables").

In case any of Such Deliverables or its use under the Contract is held to constitute an infringement of the patent rights or copyrights of a third party and its use is enjoined, the Contractor, at the Contractor's sole cost and expense, shall promptly and in consultation with MTC: (a) secure for MTC the right to continue using Such Deliverables by suspension of the injunction or by procuring a royalty-free, perpetual, and transferable license(s); (b) replace Such Deliverables with a non-infringing substitute that meets the requirements of the Contract; or (c) modify Such Deliverables so that they become non-infringing, consistent with the requirements of the Contract. If the amount of time necessary to proceed with one of these options is deemed excessive by MTC, MTC may direct the Contractor to select another option or risk default. Nothing in this Article shall be deemed to limit or condition MTC's rights under Article 13.3.2.

11.4 Title Warranty

Contractor warrants that it owns or will own, and has or will have, good and marketable title to all goods, materials, equipment, tools, supplies, systems or equipment furnished or to be furnished, by it and its subcontractors that become part of the C2 System or are purchased for MTC for the operation, maintenance or repair thereof, free and clear of all encumbrances.

Contractor warrants that the title conveyed under the terms of the Contract shall be good and that all goods, materials, equipment, tools, supplies, systems and equipment shall be delivered to the Site free from all security interests or other liens or encumbrances. Contractor also agrees to defend the title against all persons claiming the whole or part of any goods, materials, equipment, tools, supplies, systems or equipment.

11.5 Warranty of Services

In the performance of its services under the Contract, Contractor represents and warrants that it has and will exercise the degree of professional care, skill, efficiency, and judgment of contractors with special expertise in providing such services, and that it carries and will maintain all applicable licenses, certificates, and

registrations needed for the work in current and good standing. In addition, Contractor shall provide such specific warranties as may be set forth in specific Task Orders as agreed upon by the parties.

In the event that any services provided by Contractor hereunder are deficient because of Contractor's or subcontractors failure to perform said services in accordance with the warranty standards set forth above, MTC shall report such deficiencies in writing to Contractor within a reasonable time. MTC thereafter shall have:

- A. The right to have Contractor re-perform such services at Contractor's expense; or
- B. The right to have such services done by others and the costs thereof charged to and collected from or deducted from amounts due Contractor if within thirty (30) Days after written notice to Contractor requiring such re-performance, Contractor fails to give satisfactory evidence to the MTC that it has undertaken said re-performance; or
- C. The right to terminate the Contract for default. Contractor shall be responsible for all errors and omissions and is expected to pay for all deficient work as a result of errors and omissions.

12. SUBCONTRACTORS

12.1 General

12.1.1 Responsibility for Work Performed by Subcontractors

Nothing in the Contract or otherwise shall create any contractual relationship between MTC and any Subcontractor, and no subcontract shall relieve Contractor of its responsibilities and obligations hereunder. Contractor agrees that it is as fully responsible to MTC for the acts and omissions of its Subcontractors and of persons either directly or indirectly employed by them as it is for the acts and omissions of persons directly employed by Contractor. Contractor's obligation to pay its Subcontractors is an independent obligation from MTC's obligation to make payments to Contractor.

12.1.2 Approved Subcontractors

Subcontractors Approved by MTC for subcontract work under this Contract are listed in Attachment H, Subcontractor List, attached hereto and incorporated herein by this reference.

Subcontractors may not be replaced without prior written consent of MTC, which consent shall not be unreasonably withheld. Substitution of Subcontractors shall be in accordance with California Public Contract Code § 4100, as applicable.

12.1.3 Subcontractor Agreements

All Subcontractors must be engaged under a written contract with Contractor with provisions requiring the Subcontractor to comply with all applicable requirements of the Contract, including without limitation Article 4, Rights in Data. Each such subcontract shall include certain mandatory terms as specified herein, including without limitation the applicable requirements of Attachment H, Federally Required Clauses, and Attachment I, State Required Clauses. In addition, Contractor shall include in each subcontract terms and conditions sufficient to ensure compliance by the Subcontractor with all applicable Contract Requirements.

Failure of a Subcontractor to provide insurance in accordance with Article 14, Insurance Requirements, shall be at the risk of Contractor.

Applicable provisions of this Contract shall be included in any subcontractor agreement in excess of \$25,000 entered into under the Contract. Contractor shall ensure that, when prevailing wage rates are applicable to work performed under the Contract, they shall apply to labor performed under subcontracts or by assignment.

12.1.4 Subcontractors' Claims

Any claim by Contractor based on a Subcontractor's claim, , including for additional compensation or schedule extension, shall be passed on to MTC for review only after an independent review and determination by Contractor that such Subcontractor's claim has merit under the terms and conditions of the Contract.

12.2 Assignment of Subcontracts To MTC

Each instrument evidencing any agreement of Contractor with any Subcontractor shall include terms that (a) the rights of Contractor under such instrument may be assigned to MTC contingent only upon written request from MTC or its successor or assignee following Contract termination or expiration; and (b) all warranties (express and implied) of such subcontractor shall inure to the benefit of MTC. For any Commercial Software licenses not assignable to MTC, the terms of subarticle 4.2.7 apply.

12.3 Subcontract Records

Contractor shall allow MTC access to all subcontracts and records regarding subcontracts, consistent with Article 17.4, Audits, and shall deliver to MTC, within thirty (30) Days after execution, true and complete copies of all subcontracts.

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13. RISK ALLOCATION

13.1 Force Majeure

Contractor shall not be responsible for any delays in performance resulting from a “Force Majeure” event (“Force Majeure Event”), i.e., any event beyond the control of Contractor and not due to an act or omission of Contractor that materially and adversely affects Contractor’s obligations hereunder and which event (or the effects of which event) could not have been avoided by due diligence and use of reasonable efforts by Contractor, including the following:

1. Any earthquake, hurricane, flood or other natural disaster;
2. Any epidemic, blockade, rebellion, war, riot, act of sabotage or civil commotion, disastrous or extensive fire or explosion, act of terrorism, or strike;
3. Any change in a governmental rule or regulation, or change in the judicial or administrative interpretation of a governmental rule or regulation, or adoption of any new governmental rule or regulation that imposes significant additional costs or delays on Contractor and that was not reasonably foreseeable at the Proposal Date; or
4. A court order restraining, enjoining, or delaying construction of the Project or the granting or renewal of any governmental approval that is necessary to the Project.

At MTC’s sole discretion, Contractor shall be granted an extension of time to compensate for the delay in the completion of its Work caused by a Force Majeure Event, provided that Contractor establishes that the Work would have been completed in a timely manner but for the Force Majeure Event, that Contractor has taken reasonable precautions to prevent delays due to such event, and provided that Contractor has complied with the notice and other provisions of Article 15.2.3, Contractor-Initiated Change Orders. The above-indicated causes for which extensions of time have been granted hereunder shall not in and of themselves entitle Contractor to additional compensation.

13.2 MTC-Caused Delays

MTC-Caused Delays are delays that affect a Critical Path, arising from the following matters and no others: (a) a suspension order pursuant to Article 2.6.4 not caused by the actions or inactions of the Contractor; (b) failure or inability of MTC to obtain the permits for which it is responsible under the Contract to obtain; (c) failure of a Transit Operator to make facilities or equipment available or to perform other Transit Operator responsibilities affecting Contractor’s performance, as described in the Contract, according to the Approved Project Schedule for such availability or performance; (d) failure of MTC to act upon complete, timely Contractor submittals in accordance with the review schedules set forth in the Contract; and (e) failure of MTC to provide Contractor in a timely manner with all changes to Operating Rules or Business Rules affecting Contractor’s

performance for each Transit Operator and for the interoperability between Operators according to the Approved Project Schedule.

Any court order to suspend Work shall not be considered an MTC-Caused Delay (although it may qualify as a Force Majeure Event) despite the fact that MTC may specifically direct Contractor to comply with the court order.

Subject to Contractor's compliance with the applicable requirements of Article 15, MTC agrees to provide Contractor with extensions to Guaranteed Completion Dates and additional compensation, to the extent MTC-Caused Delays are the sole cause of delays in Contractor's Approved Project Schedule and result in increased costs to Contractor.

13.3 Indemnification

13.3.1 General

To the maximum extent permitted by law, Contractor shall indemnify, keep and hold harmless MTC, all Transit Operators, and those entities (if any) identified as additional insureds in Attachment F and their commissioners, directors, officers, agents, and employees ("MTC Indemnified Parties") against any and all demands, claims, suits or actions arising out of any injury or death to persons or property or pecuniary, financial or economic losses that may occur, or that may be alleged to have occurred, arising from, caused by or contributed to, in whole or in part, by any act or failure to act of Contractor or any of its officers, agents, directors, employees, or Subcontractors in connection with the performance of this Contract by Contractor.

Contractor further agrees to defend and hold harmless the MTC Indemnified Parties from any and all such claims, actions, suits or other legal proceedings and pay all reasonable charges of attorneys and all other costs and expenses of defenses as they are incurred. If any judgment is rendered against any of the MTC Indemnified Parties, Contractor shall, at its expense, satisfy and discharge the same.

The foregoing indemnification obligation shall not apply to liability arising from and caused by the adjudicated or admitted negligence or willful misconduct of MTC, a Transit Operator, their commissioners, directors, officers, agents, employees or independent contractors. If the adjudicated or admitted negligence or willful misconduct of MTC, a Transit Operator, or one or more of their commissioners, directors, officers, agents, employees or independent contractors has contributed to a loss, Contractor shall not be obligated to indemnify such party for the proportionate share of such claims, loss, damage, charge or expense caused by such negligence or willful misconduct.

The provisions set forth in this Article are intended to be applied to the fullest extent allowed under the law and, if any portion of it is found to be void or unenforceable, the remainder is to be severable and enforceable.

Notwithstanding any other provision to the contrary, the parties agree to submit to mediation pursuant to Article 16.3.2, Controversies Subject to Alternative Dispute Resolution, in the event they cannot come to an agreement concerning their respective obligations to defend claims, etc. under this Article 13.3.1 because of a causation dispute.

13.3.2 Patent and Copyright Infringement

Contractor shall indemnify, defend and hold harmless MTC Indemnified Parties, and any or all of their commissioners, officers, and employees, including temporary MTC employees, from and against any and all claims, liabilities, losses, damages or expenses (including reasonable attorneys' fees and related costs, whether or not litigation has commenced) arising out of, relating to, or based on the allegation that Work performed or delivered by Contractor for the C2 System or any portion thereof, or that any portion of the C2 System that was performed or delivered by Contractor, infringes the proprietary and intellectual property rights of any third party in or to any invention, patent, copyright or any other rights, provided that (a) MTC notifies Contractor in writing promptly but not more than thirty (30) Days after MTC has actual notice of the claim; and (b) MTC gives Contractor information and reasonable assistance for the defense. If Contractor fails or refuses to defend any such claim, MTC may assume control of the defense, and Contractor shall indemnify and hold MTC harmless for all fees, costs and expenses associated with or arising from such defense.

The provisions set forth in this Article are intended to be applied to the fullest extent allowed under the law and, if any portion of it is found to be void or unenforceable, the remainder is to be severable and enforceable. This indemnification shall survive termination or expiration of the Contract.

13.4 Risk of Damage and Loss

13.4.1 Risk of Loss of Fare Revenue

At all times throughout the term of the Contract or any extension thereof, Contractor shall bear all risk of loss to fare revenue due to any failure by the C2 System to properly process data, except for loss caused by the sole negligence or wrong-doing of MTC or a Transit Operator or solely caused by an MTC-Caused Delay or Force Majeure. Contractor's liability under this Article 13.4.1 shall not exceed ten million dollars (\$10,000,000) annually.

Contractor shall give written notice to MTC within one (1) Day after Contractor knows or should have known of any cause or condition which might, under reasonably foreseeable circumstances, result in loss of fare revenue. Contractor shall produce an analysis of the estimated loss of gross fare revenue as soon as possible but in no event later than fourteen (14) Days from such written notice. The analysis shall be based on a mutually agreed upon formula based on historical data maintained by MTC. In the event an agreement cannot be made, MTC's Project Manager will make the final determination of lost gross fare revenue. If Contractor contests the

MTC Project Manager's decision, the Contractor may initiate the dispute resolution procedures set forth in Article 16.3, Dispute Resolution. To collect the lost revenue, MTC may use any options at hand, including deductions from Contractor's payments.

13.4.2 Risk of Damage and Loss to C2 System

Throughout the Term, Contractor shall bear all risk of damage or loss to the C2 System, including all Materials Provided for the implementation of the Project, including any Equipment located off-site for repair or any other reason, except for damage and loss MTC agrees was caused by the sole negligence or wrong-doing of MTC or a Transit Operator. In the case of damage or loss that MTC agrees was caused by the sole negligence or wrong-doing of MTC or a Transit Operator, Contractor must promptly replace the damaged or lost portions of the C2 System at Contractor's cost, plus a ___% administrative markup fee, and submit the amount(s) thus expended to MTC for reimbursement as a clearly identified, separate item on its next invoice to MTC.

13.4.3 Foreseeable Circumstances

Except as otherwise provided in this Contract all loss or damage arising from any obstruction or difficulties reasonably foreseeable by Contractor, whether natural or artificial, which may be encountered in the prosecution of the Work, or the furnishing of the supplies, materials or equipment, or from Force Majeure prior to the end of the Term, or from any act or omission not authorized by the Contract on the part of the Contractor or any agent or person employed by it shall be the responsibility of and be borne by Contractor.

13.5 Passage of Title

Title to all Materials purchased under this Contract and still useful in the operation of the C2 System shall pass to MTC at the earlier of (i) System Completion, as defined in Article 6.9, (ii) when installed and paid for; or (iii) or upon early termination pursuant to Article 18, whichever comes first. Contractor, at its own expense, shall take any and all actions necessary to perfect MTC's ownership of hardware and supplies. Title to Work Products and Contractor Data is governed by the provisions of Article 4.2.

14. INSURANCE REQUIREMENTS

CONTRACTOR shall, at its own expense, obtain and maintain in effect at all times for the duration of this Contract the types of insurance and financial security listed in Attachment F, Insurance and Financial Security (Bond) Provisions, attached hereto and incorporated herein, against claims, damages and losses due to injuries to persons or damage to property or other losses that may arise in connection with the performance of work under this Contract. All policies will be issued by insurers acceptable to MTC, generally with a Best's Rating of A- or better with a Financial Size Category of VIII or better.

Contractor's responsibilities under this Article 14 shall apply to all additional insureds listed in _____.

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15. CHANGES TO THE WORK

15.1 General

MTC reserves the right to make alterations to and permit deviations from the Contract and to require such changes in the extent or manner of performance of the Work as are determined by MTC to be necessary, subject to the provisions of this Article 15. All changes to the Contract shall be incorporated in a written Change Order, which shall specify the changes in work performed and any adjustments to compensation and schedule, signed by the MTC Executive Director or a designated representative and Contractor. The MTC Project Manager is not a designated representative for the purposes of approving a change order.

15.2 Change Orders

15.2.1 MTC-Initiated Change Notice

Each proposed change to the Contract initiated by MTC pursuant to Article 15.2 will be initiated by means of a written Change Notice issued by MTC. The Change Notice will include a description of the scope of the proposed change and a request for Contractor to submit a proposal for performance of the changed work, including all compensation and/or schedule impacts, if any, as described in Article 15.2.2, Contractor's Change Notice Proposal.

Contractor shall have fourteen (14) Days to review and respond to the Change Notice, unless MTC has specified a longer period. If Contractor fails to respond to the Change Notice within the specified period, MTC may issue a Change Order, pursuant to Article 15.2.5, subject to Contractor's right to protest under Article 16.2, Protest.

15.2.2 Contractor's Change Notice Proposal

Contractor shall provide to MTC a Change Notice Proposal for providing the changed work within the time specified in the Change Notice.

The costs of preparing Change Notice Proposals shall be borne by Contractor, except that Contractor's costs for preparation of individual Change Notice Proposals in excess of ten (10) percent of the total Design Implementation and Testing payment amount indicated in Attachment C-____, the Design, Implementation & Testing Payment Form, or of the total annual O/M payments indicated in Attachment C-____, the C2 System Operation & Maintenance Payment Form, Proposals) will be reimbursed by MTC.

If Contractor believes the changed work will have a schedule impact, the Change Notice Proposal must include changes to the Approved Project Schedule.

The Change Notice Proposal shall contain cost or price information sufficient to allow MTC to make a determination that any increase in compensation to Contractor is fair and reasonable. Contractor shall use the rates stated in Attachments C-____, Unit Prices and C-____, Hourly Labor Rates, in preparing its Change Notice

Proposal, unless otherwise agreed by the MTC Project Manager. If cost reasonableness cannot be established on the basis of a catalogue or market price of a commercial product sold in substantial quantities, or on the basis of prices set by law or regulation, Contractor is required to submit detailed cost breakdowns, including information on labor and materials costs, overhead and other indirect costs.

MTC will review the Change Notice Proposal, and the parties shall negotiate in good faith to determine the final terms and conditions of the Change Order and equitable adjustments to Attachment C, Price Forms, and/or Approved Project Schedule. If MTC determines that the parties cannot agree on terms, MTC may issue a Change Order. Upon issuance of such Change Order, Contractor shall immediately commence implementation of the Work identified in such Change Order, subject to Contractor's right to protest under Article 16.2.

15.2.3 Contractor-Initiated Change Orders

Should circumstances arise which, in the opinion of the Contractor, justify additional compensation or time or require changes in the Work specified by the Contract, Contractor may initiate a Change Order by written request, including sufficient information regarding cost and schedule to provide a basis for negotiation with MTC, as provided in Article 15.2.2, Contractor's Change Notice Proposal, including references to applicable provisions of the Contract; the factual reasons for which Contractor believes a revision to the Specifications, additional compensation, or a schedule extension is called for; and an estimate of any cost increase or schedule extension.

Contractor shall meet with the MTC Project Manager or any other designated representative of MTC involved in evaluating the Contractor's request for a Change Order. Following such discussion(s), MTC will either: (i) issue a Change Order for Contractor's signature under Article 15.2.5; (ii) issue a written denial of Contractor's request for a Change Order; or (iii) accept the request in part and deny it in part. If Contractor agrees with the terms and conditions of a Change Order, Contractor shall sign a copy of the Change Order and return it to the MTC Project Manager, and Contractor shall promptly proceed with the work as indicated therein. If Contractor disagrees with MTC's action, it may file a protest under Article 16.2. If the Contractor fails to protest in accordance with the applicable procedures, Contractor shall not be entitled to file a claim for additional compensation or schedule extension or other remedy under Article __. Notwithstanding any request for a Change Order, Contractor's duty to complete the Work in accordance with the provisions of the Contract shall not be postponed or abated.

15.2.4 Extensions for Certain Delays

Contractor may request a Change Order under Article 15.2.3 above to the extent that Contractor has been delayed by an Excusable Delay, as defined in Article 2.6.2. In such event, MTC may grant an extension of the appropriate Payment Milestone or Guaranteed Completion Date commensurate with the delay thus caused, provided that Contractor has complied with the notice and other procedures set forth herein.

15.2.5 Change Order Issuance

Change Orders shall be issued by MTC as soon as practicable after their initiation by either party.

MTC may issue a Change Order if it does not receive a Contractor response to a Change Notice or if it agrees in part and disagrees in part to a Contractor-initiated Change Notice. If Contractor disagrees with the terms and/or conditions of such Change Order, Contractor may file a protest under Article 16.2.

MTC shall issue a Change Order if the terms of the Change Order have been agreed to by Contractor or if Contractor's protest of a Change Order has been denied. If Contractor agrees with the terms and conditions of such Change Order, Contractor shall sign the Change Order and return it to the MTC Project Manager.

If Contractor fails to protest a Change Order in accordance with the procedures in Article 15.2.6, Contractor shall not be entitled to any claim for additional compensation or schedule extension arising out of or relating to any change in the Work other than that specified in the Change Order, and payment will be made as set forth in the Change Order. Such payment shall constitute full compensation and schedule adjustment for any Work required therein, or all events giving rise to a Contractor requested Change Order. Contractor will be deemed to have consented to the terms and conditions set forth in any Change Order that Contractor does not dispute within ten (10) Days or such other reasonable time period stated in the Preliminary Change Order for protest.

The following constitute amendments of the Contract: (a) a Change Order signed by both parties; (b) a Change Order issued by MTC based on a Change Order that was not protested by Contractor in accordance with Article 16.2 or, if protested, was decided against Contractor; and (c) a revised Change Order signed by the parties as a result of a claim filed pursuant to Article 16 decided in favor of Contractor. When the Change Order becomes effective for any of these reasons, Contractor shall promptly proceed with the Work as indicated in the Change Order. All documentation related to or impacted by a Change Order shall be updated and submitted for review and approval by MTC in accordance with Attachment A, Scope of Work.

15.2.6 Protest of Change Order Actions

Contractor shall have ten (10) Days from receipt of a MTC denial of a Contractor-Initiated Change Notice or a Preliminary Change Order from MTC to protest any of its terms to the MTC Executive Director in accordance with Article 16.2. MTC and Contractor agree to negotiate in good faith to resolve disputed Change Orders.

Any disputed Change Order for which Contractor's protest is denied, shall be considered as part of the Contract, and is subject to the claims provisions in Article 16.

15.2.7 Change Order Records

For cost data submitted in connection with Change Orders, unless such data is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the public,

or prices set by law or regulation, MTC and its representatives have the right to examine all books, records, documents and other data of Contractor related to the negotiation of or performance of Work under such Change Orders, for the purpose of evaluating the accuracy, completeness and currency of the cost or pricing data submitted. The right of examination shall extend to all documents deemed necessary by MTC to permit adequate evaluation of the cost or pricing data submitted, along with the computations and projections used therein.

15.2.8 Exclusive Remedies

The procedures specified in this Article 15 and Article 16.2 (Protests) are Contractor's remedy of first resort for compensation for actual or constructive changes or delays. Claims resulting from actual or constructive changes or delay not first made through the procedures specified in this Articles 15 and 16.2 and subarticle 2.6.1, Mitigation of Damages and Delay, are not permitted and are hereby waived by Contractor. No course of conduct or dealings between the parties, no express or implied acceptance of changes or alterations to the Work, and no claim that MTC has been unjustly enriched by an alteration or change to the Work, shall be the basis of any other claim for an increase in compensation or extension in the time for completion of the Work.

16. CONFLICT RESOLUTION AND CLAIMS

16.1 Contractor's Obligations

Failure by MTC to pay any amount in dispute shall not alleviate, diminish or modify in any respect Contractor's obligation to perform under the Contract, including Contractor's obligation to achieve System Completion and to complete all Work in accordance with the Contract, and Contractor shall not cease or alter its performance under the Contract on account of any such amount.

16.2 Protests

Contractor may protest MTC denial of a Contractor-Initiated Change Order, a Preliminary Change Order issued by MTC, MTC's denial of an Approval request, or other discretionary decisions made by MTC under the Contract, by writing to the MTC Executive Director. Thereafter, Contractor shall have up to ten (10) additional Days to supplement its protest with additional information or documentation in support of its protest. The MTC Executive Director shall appoint a review officer to review the protest, and shall respond within twenty (20) Days to Contractor. MTC and Contractor agree to negotiate in good faith to resolve disputed Change Orders.

MTC denial of a protest is subject to the claims provisions in Article 16.3.

16.3 Claims and Disputes

Contractor shall be solely responsible for providing timely written notice to MTC of any claims in accordance with the provisions of the Contract. It is MTC's intent to investigate and attempt to resolve any Contractor claims before Contractor has performed any disputed Work. Therefore, Contractor's failure to provide timely notice shall constitute a waiver of Contractor's claims.

Contractor shall not be entitled to the payment of any additional compensation or time extension for any cause, including any act, or failure to act, by MTC, or the failure or refusal to issue a modification, or the happening of any event, thing, or occurrence, unless it has given MTC due written notice of a potential claim, as provided herein. In addition, Contractor must follow the notification procedures specified in Article 15, Changes to the Work and Article 2.6.2, Excusable Delay. The potential claim shall set forth the reasons for which Contractor believes additional compensation or time may be due, the nature of the costs involved, the amount of the potential claim, and the impact, if any, to the schedule. Notice of claim shall be given to MTC no later than thirty (30) Days following either the occurrence of the event on which such claim is based or the date on which the Contractor knew or should have known of the event, or where Contractor disputes the result of a protest under Article 16.2 no later than twenty (20) Days from its receipt of MTC's response to the protest. In no event shall a claim be made after Contractor has started performance of the Work giving rise to the potential claim.

If there is a dispute over any claim, Contractor shall continue to work during the dispute resolution process in a diligent and timely manner as directed by MTC, and shall be governed by all applicable provisions of the Contract. Contractor shall maintain cost records of all Work that is the basis of any dispute.

If an agreement can be reached which resolves Contractor's claim, the parties will execute a Contract modification to document the resolution of the claim. If the parties cannot reach an agreement with respect to the Contractor claim, they may choose to pursue dispute resolution pursuant to Article 16.4, Dispute Resolution, or MTC may terminate the Contract.

16.3.1 Final Invoice

Within sixty (60) Days after the end of the Term Contractor shall prepare and present to the MTC Project Manager a proposed final invoice ("Proposed Final Invoice"), showing the proposed total amount of compensation previously paid and remaining to be paid under the Contract including all amounts retained.

All prior invoices and payments shall be subject to correction in the Proposed Final Invoice. MTC will review Contractor's Proposed Final Invoice and respond with a written request for additional information or documentation, changes or corrections within thirty (30) Days of its receipt or, in the case of a Final Invoice accompanied by one or more claims, within sixty (60) Days.

Based on MTC's response, Contractor shall submit a revised Final Invoice incorporating any changes or corrections made by MTC, together with any additional requested information or documentation. If MTC agrees with all requests for compensation in the revised Final Invoice, MTC will pay the entire sum found due within thirty (30) Days of its receipt and will provide Contractor with a copy of an approved revised Final Invoice. If MTC does not agree with any amounts claimed as compensation, MTC shall respond in writing, within such thirty (30) Day period, identifying those items in the revised Final Invoice that MTC is refusing to pay, along with a written explanation of the basis for the rejection. If MTC fails or refuses to act on a Final Invoice within the required time period, the claim shall be deemed to have been rejected by MTC on the last day of the period within which MTC was required to respond. Upon final determination of all Contractors claims for payment in the Final Invoice, MTC shall pay the entire sum MTC finds due without prejudice to the rights of either MTC or Contractor in connection with such disputed sums.

16.4 Dispute Resolution

16.4.1 Informal Resolution of Disputes

Contractor and MTC shall use good faith efforts to resolve all disputes informally at the project manager level. In the event such efforts are unsuccessful, either party may request that MTC provide a written determination as to the proposed resolution of the dispute. Within twenty-one (21) Days of the request, MTC's Project Manager shall provide a written determination as to the dispute, which shall include the basis for its

decision. Upon Contractor's written acceptance of MTC's Project Manager's determination, the Contract may be modified and the determination implemented or, failing agreement, MTC may in its sole discretion pay such amounts and/or revise the time for performance in accordance with MTC's Project Manager's determination.

If MTC's Project Manager's determination is not accepted by Contractor, the matter shall promptly be referred to senior executives of the parties having designated authority to settle the dispute. The senior executives will exchange memoranda stating the issues in dispute and their respective positions and then meet for negotiations at a mutually agreed time and place. If the matter has not been resolved within thirty (30) Days of commencement of senior management negotiations, the parties may mutually agree to try to settle the dispute by means of alternate dispute resolution methodologies, as set forth below.

16.4.2 Controversies Subject to Alternative Dispute Resolution

Any claim or controversy concerning the interpretation, application, or implementation of this Contract between MTC and Contractor which cannot be resolved through the informal efforts described above, may, by specific agreement of the parties, be submitted to alternative dispute resolution, specifically mediation.

16.4.3 Other Remedies

If a dispute is not resolved through discussion or the parties do not agree to alternative dispute resolution, either party may pursue available legal remedies in the Superior Court of California located in the County in which MTC's office is located at the time of filing or the Federal District Court for the Northern District of California. Nothing herein shall alter the requirements of Government Code Section 910 et seq. with respect to initiating a civil action against MTC.

16.4.4 Pending Resolution

The Contractor shall continue to work during the dispute resolution process in a diligent and timely manner as directed by MTC, and shall be governed by all applicable provisions of the Contract. Likewise, MTC will continue to make non-disputed payments on non-disputed work during the dispute resolution process.

16.4.5 Cost of Alternative Dispute Resolution Proceedings

Each party shall bear the costs and expenses incurred by it in connection with such alternative dispute resolution processes. The cost of any mediator or independent decision maker shall be shared equally between the parties.

16.4.6 Survival of this Article

This Article shall survive completion or terminations of this Contract, but under no circumstances shall either party call for an alternative dispute resolution of any claim or dispute arising out of this Contract after such period of time as would normally bar the initiation of legal proceedings to litigate such claim or dispute under the laws of the State of California.

17. ADMINISTRATIVE AND STATUTORY REQUIREMENTS

17.1 Laws and Regulations

Contractor shall comply with any and all applicable laws, statutes, ordinances, rules, regulations, and procedural requirements of any national, state, or local government, and of any agency of such government, including but not limited to MTC, that relate to or in any manner affect the performance of the Contract. Those laws, statutes, ordinances, rules, regulations and procedural requirements which are imposed on MTC as a recipient of federal or state funds are hereby in turn imposed on Contractor. Attachment H, Federally Required Clauses, and its parts, and Attachment I, State Required Clauses, and its parts, are attached hereto and incorporated herein by this reference.

17.2 State of California Requirements

17.2.1 Antitrust Claims

Contractor's attention is directed to California Government Code § 4552, which shall be applicable to the Contractor and its subcontractors: "In submitting a proposal to a public purchasing body, the Proposer offers and agrees that if the proposal is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. § 15) or under the Cartwright Act (Chapter 2 (commencing with § 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchasing body pursuant to the proposal. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the Proposer."

17.2.2 Fair Employment Practices: California Fair Employment And Housing Act

In the performance of the Contract, Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, sexual orientation or age in any manner prohibited by law. Contractor shall take affirmative action to ensure that applicants are hired and that employees are treated during employment in accordance with this non-discrimination obligation. Such action shall include, but not be limited to, employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this article.

17.3 Records

Contractor agrees to establish and maintain an accounting system conforming to Generally Accepted Accounting Principles (GAAP) that is adequate to accumulate and segregate reasonable, allowable, and allocable project costs. Contractor further agrees to keep all records pertaining to the project being funded for audit

purposes for a minimum of three (3) years from submission of the final expenditure report or four (4) years following the fiscal year of last expenditure under the Contract; or until completion of any litigation, claim or audit, whichever is longer. Any conflicting language regarding retention of records contained in Attachment H, Federally-Required Clauses, shall supersede this Article.

17.4 Audits

Contractor shall permit MTC and its authorized representatives to have access to Contractor's books, records, accounts, and any and all Work Products, materials, and other data relevant to this Contract, for the purpose of making an audit, examination, excerpt and transcription during the term of this Contract and for the period specified in Article 17.3, Records. Contractor shall in no event dispose of, destroy, alter, or mutilate said books, records, accounts, Work Products, materials and data for that period of time.

Contractor further agrees to include in all its subcontracts hereunder exceeding \$25,000 a provision to the effect that the subcontractor agrees that MTC, or any of its duly authorized representatives, shall have access to and the right to examine any directly pertinent books, documents, papers, and records of such subcontractor for the term specified above. Any conflicting language regarding audits contained in Attachment H, Federally-Required Clauses, shall supersede this Article.

17.5 Solicitation of Contract

Contractor warrants that it has not employed or retained any company or persons, other than a bona fide employee working solely for Contractor, to solicit or secure this Contract, and that it has not paid or agreed to pay any company or person other than bona fide employees working solely for Contractor, any fee, commission, percentage, brokerage fee, gift, or any other consideration contingent upon or resulting from the award or making of the Contract. For breach or violation of this warranty, MTC shall have the right to terminate the Contract without liability or, at its discretion, the right to deduct from Contractor's maximum payment the full amount of such fee, commission, percentage, brokerage fee, gift or contingent consideration.

17.6 Prohibited Interests

Contractor covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree or have the potential of conflicting with the performance of services required under the Contract or the impartial rendering of assistance or advice to MTC. Contractor further covenants that in the performance of the Contract no person having any such interest shall be employed.

No member, officer, employee or agent of MTC, during his/her tenure shall have any prohibited interest as defined by California Government Code Sections 1090, et seq. and 87100 et seq., direct or indirect, in the Contract or the proceeds thereof. Prohibited interests include interests of immediate family members, domestic partners, and their employers or prospective employers. Accordingly, Contractor further covenants that it has

made a complete disclosure to MTC of all facts of which it is aware upon due inquiry bearing upon any possible interest, direct or indirect, which it believes any member, officer, agent or employee of MTC (or an immediate family member, domestic partner or employer or prospective employer of such member, officer, agent or employee) presently has, or will have in the Contract, or in the performance thereof, or in any portion of the profits thereunder. Willful failure to make such disclosure, if any, shall constitute grounds for cancellation and termination hereof by MTC.

17.7 Organizational Conflicts of Interest

Contractor shall take all reasonable measures to preclude the existence or development of an organizational conflict of interest in connection with work performed under this Contract. An organizational conflict of interest occurs when, due to other activities, relationships, or contracts, a firm or person is unable, or potentially unable, to render impartial assistance or advice to MTC; a firm or person's objectivity in performing the Work is or might be impaired; or a firm or person has an unfair competitive advantage in proposing for award of a contract as a result of information gained in performance of this or some other Contract.

Contractor shall not engage the services of any subcontractor or independent contractor on any work related to this Contract if the subcontractor or independent contractor, or any employee of the subcontractor or independent contractor, has an actual or apparent organizational conflict of interest related to work or services contemplated under this Contract.

If at any time during the term of this Contract Contractor becomes aware of an organizational conflict of interest in connection with the work performed hereunder, Contractor shall immediately provide MTC with written notice of the facts and circumstances giving rise to this organizational conflict of interest. Contractor's written notice will also propose alternatives for addressing or eliminating the organizational conflict of interest. If at any time during the period of performance of this Contract, MTC becomes aware of an organizational conflict of interest in connection with Contractor's performance of the work hereunder, MTC shall similarly notify Contractor. In the event a conflict is presented, whether disclosed by Contractor or discovered by MTC, MTC will consider the conflict presented and any alternatives proposed and meet with Contractor to determine an appropriate course of action. MTC's determination as to the manner in which to address the conflict shall be final.

Failure to comply with this subarticle may subject the Contractor to damages incurred by the MTC in addressing organizational conflicts that arise out of work performed by Contractor, or to termination of this Contract for breach.

17.8 Public Works Provisions

17.8.1 Applicability

The provisions contained in this Article 17.8 are applicable to any public works components of the Project. Public Work has the same meaning as defined in California Public Contract Code § 1101 and California Labor Code § 1720, as applicable.

17.8.2 General

Contractor shall inspect all materials, supplies and equipment that are to be used, consumed or incorporated in the Work, and provide records of such in a manner determined by the MTC Project Manager. In addition, Contractor shall conduct a continuous program satisfactory to the MTC Project Manager or designee of construction quality control for all Work performed under this Contract. Contractor shall have the primary responsibility for inspecting the Work and materials; the Project Manager or designee's inspection is conducted to verify that Contractor has performed its inspections. Any observation, verification, inspection, or approval of the Work or materials by MTC shall not relieve the Contractor of any of Contractor's obligations to fulfill the Contract as prescribed. Work and materials not meeting Contract requirements shall be made acceptable, and unsuitable work or materials may be rejected, notwithstanding that payment for such Work or materials may have been previously authorized and included in a progress payment.

17.8.3 Prevailing Wage Rates, Apprenticeships, and Payroll Records

Contractor shall comply with applicable sections of the California Labor Code and regulations promulgated thereunder (including without limitation, Sections 1720 *et seq.* and Title 8 of the California Code of Regulations Sections 16000 *et seq.*) governing the payment of prevailing wages, as determined by the Director of the California Department of Industrial Relations, in regards to **[MODIFY AS APPROPRIATE: all work]** performed under this Contract. In particular, Contractor's attention is drawn to Labor Code Sections 1771 (payment of prevailing wage rate), 1775 (penalty for non-payment), 1776 (payroll records), and 1777.5 (use of apprentices). Attachment J, Wage Determination, is attached hereto and incorporated herein by this reference. Contractor and all Subcontractors, to the extent the work of such Subcontractors under this Contract is subject to California Labor Code Section 1720 *et seq.*, shall be registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 and shall furnish electronic certified payroll records directly to the Labor Commissioner through the internet portal of the Division of Labor Standards Enforcement. The Additional Federal Clauses Applicable to Public Works included in Attachment J-1, attached hereto and incorporated herein by this reference, and the Davis-Bacon prevailing wages apply to **[MODIFY AS APPROPRIATE: all work]** performed under this Contract. Contractor agrees that the higher of (i) the applicable wage set forth in Attachment J-3, Federal Wage Determination, and (ii) the California prevailing rate, shall apply. Certified payroll records in

the form set forth in Attachment J-2, Public Works Payroll Reporting Form, shall be submitted on a weekly basis to the Project Manager. MTC may withhold payment if the certified payrolls to be submitted by Contractor pursuant to this Article 17.8.1, Prevailing Wage Rates, Apprenticeships, and Payroll Records, are not current.

17.8.4 State Labor Code

Contractor shall comply with California State Labor Code §§ 1774 and 1775. In accordance with said § 1775, Contractor shall forfeit as a penalty to MTC not more than \$200 for each calendar day or portion thereof for each worker paid less than the prevailing wage rates determined by the Director of Industrial Relations for such work or craft in which such worker is employed for any Work done under the Contract by Contractor or by any subcontractor under the Contract in violation of the provisions of the California State Labor Code and, in particular, State Labor Code §§ 1770 to 1780, inclusive. The amount of forfeiture shall be determined by the Labor Commissioner based on specified factors pursuant to said § 1775. In addition to said penalty and pursuant to said § 1775, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor. The Contract shall be binding upon and inure to the benefit of MTC and Contractor and their permitted successors, assigns and legal representatives.

17.8.5 Payroll Records

Contractor shall comply with the provisions of State Labor Code §§ 1776 and 1812, and shall be responsible for compliance by its subcontractors. The penalties specified in the Labor Code for noncompliance may be deducted from any monies due which may become due to the Contractor Inspection.

18. BREACH, TERMINATION, DEFAULT

18.1 Remedies for Breach

In the event Contractor fails to comply with the requirements of the Contract in any way, MTC reserves the right to implement administrative remedies which may include, but are not limited to, withholding of progress payments and contract retentions, and termination of the Contract in whole or in part.

The duties and obligations imposed by the Contract and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by MTC or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

18.2 Termination for the Convenience Of MTC

MTC may terminate this Contract, in whole or in part, at any time by written notice to Contractor. Upon receipt of notice of termination, Contractor shall stop work under this Contract immediately, to the extent provided in the notice of termination, and shall promptly submit its termination claim to MTC. Contractor shall be reimbursed for costs incurred for incomplete Work, limited to only that Work authorized by a MTC NTP, conducted up to the time of termination; a reasonable profit not to exceed 5%; and reasonable termination costs, not to exceed the amount payable under the Contract for such Work. Termination costs include losses that have been or will be reasonably and properly incurred by Contractor as a direct result of the termination of the Contract, but only to the extent that the losses are incurred in connection with the Project and in respect of the provision of the Work where MTC has provided NTPs including: (i) any materials or goods ordered and/or subcontracts, rental or leasing contracts and/or insurance arrangements (including fees or penalties payable for early termination) placed that cannot be cancelled without such losses being incurred; (ii) any other expenditure and/or liability incurred in anticipation of the provision of the Work in the future that cannot be canceled or avoided; and/or (iii) the reasonable and justified costs of demobilization used in connection with the Work; provided that (a) the losses incurred under any such arrangements or agreements are consistent with terms that have been entered into in the ordinary course of business and on reasonable commercial terms; and (b) the Contractor has reasonably mitigated such losses.

Subject to Article 4, any equipment, materials, Work Product and supplies paid for by MTC shall become, on payment, the property of MTC. If Contractor has any property in its possession belonging to MTC, Contractor will account for the same, and dispose of it in the manner MTC directs. Except as provided above, MTC shall not in any manner be liable for Contractor's actual or projected lost profits had Contractor completed the services required by this Contract.

18.3 Termination for Contractor's Default

18.3.1 Default Defined

Default by Contractor shall include (a) breach of a material provision of the Contract, and failure to correct such breach within the cure period provided below under the notice of default described in Article 18.3.2; or (b) a "Default Event", which includes any of the following occurrences:

1. Contractor ceases to function as a going concern;
2. Contractor makes an assignment for the benefit of creditors;
3. Contractor becomes the subject of any proceeding under any application for bankruptcy, receivership, insolvency or similar laws, which proceeding is not dismissed within thirty (30) Days after it is instituted; or
4. Contractor liquidates or dissolves substantially all of its assets.

The contractual remedy of termination for default is not available to Contractor; Contractor's sole remedies against MTC are under Article 15 and 16.

18.3.2 Termination for Default

If Contractor does not deliver the Work specified in this Contract in accordance with the delivery schedule or fails to perform in the manner called for in the Contract, or if Contractor fails to comply with any other material provision of the Contract, MTC may terminate this Contract for default. Termination shall be effected by serving a fifteen (15) Day (or other reasonable period to be determined by MTC) advance written notice of termination on Contractor, setting forth the manner in which Contractor is in default. If the Contractor does not cure the breach or describe to MTC's satisfaction a plan for curing the breach within the fifteen (15) Day period, (or other period specified by MTC), MTC may terminate the Contract for default. In the event of such termination for default, Contractor will be entitled to be reimbursed for Work performed in full compliance with the contract requirements as follows: Contractor shall be reimbursed for costs incurred for incomplete Work up to the time of termination, not to exceed the amount payable under the Contract for such Work. Such reimbursement will be offset by any extra costs incurred by MTC to complete Work required under the Contract. In no event shall MTC be required to reimburse Contractor for any costs incurred for work causing or contributing to the default. If Contractor has any property in its possession belonging to MTC, Contractor will account for the same, and dispose of it in the manner MTC directs. MTC shall not in any manner be liable for the Contractor's actual or projected lost profits had the Contractor completed the services required by this Contract.

If it is determined by MTC that Contractor's failure to perform resulted from unforeseeable causes beyond the control of Contractor, such as a strike, fire, flood, earthquake or other event that is not the fault of, or is beyond

the control of Contractor, MTC, after setting up a new delivery or performance schedule, may allow Contractor to continue work, or treat the termination as a termination for convenience.

18.4 MTC Operation Following Notice of Termination

MTC, in its sole discretion, may choose to take over or assign operation of the Project or any part of the Work following issuance of a notice of termination under Articles 18.2 and 18.3.

18.5 Actions Taken Following Termination

Immediately upon receipt of a notice of termination, the Contractor shall: (a) stop work under the Contract on the date and to the extent specified in said notice; (b) terminate, unless otherwise directed by the MTC Project Manager, all orders and subcontracts to the extent that they relate to the performance of work terminated and place no further orders or subcontracts for materials, services or facilities, except as may be necessary for the completion of such portion of the work under the Contract as is not terminated; (c) if directed by the MTC Project Manager, assign to MTC all of the right, title and interest of the Contractor under any orders and subcontracts; (d) if directed by the MTC Project Manager, transfer title and deliver to MTC (i) work in progress, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the Work terminated by the Notice of Termination; and (ii) the completed or partially completed plans, drawings, manuals, information and other property which, if the Work had been completed, would have been required to be furnished to MTC; (e) complete performance of such part of the Work as shall not have been terminated by said notice; (f) if termination was effected pursuant to Article 18.2, submit any claim for termination costs; and (g) follow any other directions directed by the MTC Project Manager.

19. MISCELLANEOUS PROVISIONS

19.1 Independent Contractor

Contractor is an independent contractor and not an employee or agent of MTC and has no authority to contract or enter into any agreement in the name of MTC. Contractor has, and hereby retains, full control over the employment, direction, compensation and discharge of all persons employed by Contractor who are assisting in the performance of services under this Contract. Contractor shall be fully responsible for all matters relating to the payment of its employees, including compliance with social security, withholding tax and all other laws and regulations governing such matters. Contractor shall be responsible for its own acts and those of its agents and employees during the term of this Contract.

19.2 Representatives

MTC and Contractor shall each designate an individual or individuals who shall be authorized to make decisions and bind the parties on matters relating to the Contract. Either party may change its designated individual by a subsequent writing delivered to the other party.

19.3 Notices

Except for invoices submitted by Contractor pursuant to Article 3, Payment, all notices or other communications to either party by the other shall be deemed given when made in writing and delivered, mailed, emailed, or faxed to the individuals listed below:

[Add individuals]

These individuals may be changed by subsequent writing delivered to the other party.

Address, fax, or email changes may be made by either party by written notice, without the need for a Change Order.

19.4 Survival

All provisions that by their inherent character should survive termination of this Contract shall survive the termination of this Contract. These provisions include, without limitation, all those terms and conditions contained in Article 4, Rights in Data, Article 11, Warranties, Article 13.3, Indemnification, and Article 13.5, Passage of Title.

19.5 Assignment

19.5.1 By Contractor

Contractor shall not assign this Contract, or any part thereof, without prior express written consent of the MTC Project Manager or a designated representative, and any attempt thereat shall be void and unenforceable.

19.5.2 By MTC

MTC may, in its sole discretion, assign the Contract, in whole or in part, to any Transit Operator who accepts MTC's rights and responsibilities and duties and the terms and conditions of the Contract, without the prior approval of Contractor.

19.6 Language

All specifications, manuals and other documents to be prepared under the Contract shall be written in the English language.

19.7 Choice of Law

All questions pertaining to the validity and interpretation of the Contract shall be determined in accordance with the laws of California applicable to agreements made and to be performed within the State. Formal legal action brought as a result of this Contract shall be venued as appropriate in either the Superior Court of California located in the County in which MTC's office is located at the time of the filing or the Northern District of California.

19.8 Attorneys' Fees

If any legal proceeding should be instituted by either of the parties to enforce the terms of this Contract or to determine the rights of the parties under this Contract, the prevailing party in said proceeding shall recover reasonable attorneys' fees, in addition to all court costs.

19.9 Partial Invalidity

If any term or condition of the Contract is found to be illegal or unenforceable, such term or condition shall be deemed stricken and the remaining terms and conditions shall remain valid and in full force and effect.

19.10 Benefit of Contract

The Contract shall bind and benefit the parties hereto and their heirs, successors and permitted assigns.

19.11 Section Headings

Section headings in this Contract are not intended to have any substantive meaning and shall not be considered relevant to the interpretation of the terms and conditions of the Contract.

19.12 Entire Contract; Modification

The Contract, including any attachments, constitutes the complete Contract between the parties and supersedes any prior written or oral communications. Contractor represents that in entering into the Contract it has not relied on any previous representations, inducements, or understandings of any kind or nature. The Contract may be modified or amended only by written instrument signed by both the Contractor and MTC. In the event of a conflict between the terms and conditions of this Contract and the attachments, the terms of the Contract will prevail.

IN WITNESS WHEREOF, the Contract has been executed by the parties hereto as of the Effective Date.

METROPOLITAN TRANSPORTATION
COMMISSION

NAME OF CONTRACTOR

Steve Heminger, Executive Director

Insert Appropriate Name, Title

DRAFT

ATTACHMENT A, SCOPE OF WORK

See Attachment A, including A-1 through A-8 of the RFP.

DRAFT

ATTACHMENT B-1

Critical Milestones and Guaranteed Completion Dates

See RFP Attachment B, Critical Milestones and Guaranteed Completion Dates.

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ATTACHMENT B-2
Critical Path Method Project Schedule

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ATTACHMENT C
PAYMENT FORMS

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ATTACHMENT D
Key Personnel Assignments

	<u>Name</u>	<u>Rate/hour</u>	<u>Est. hours</u>	<u>Task Description</u>
1.		\$xx		
2.				
3.				
4.				
5.				
6.				
7.				
8.				

FOR CONTRACTS WITH DELIVERABLES-BASED PAYMENT, INCLUDE NOTE ON RATE/HOUR AS FOLLOWS:

* Applicable to development of payment provisions in amendments only.

COMPLETE AS NECESSARY; IF NO KEY PERSONNEL OR HOURLY RATES, LABEL AS "Not Applicable"

ATTACHMENT E
Software List

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ATTACHMENT F

Insurance and Financial Security (Bond) Provisions

See RFP Section IX, General Conditions, Article J, Attachment E-1, Insurance Requirements and Attachment E-2, Bonding Requirements.

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ATTACHMENT G

Special Conditions Relating to Personally Identifiable Information

See RFP Attachment H, Special Conditions Relating to Personally Identifiable Information.

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ATTACHMENT H**Subcontractor List**

	<u>Name/Address of Subcontractor</u>	<u>Amount of Subcontract</u>	<u>Description of Work</u>
1.			
2.			
3.			
4.			
5.			
6.			

LIST "None" ABOVE IF NO SUBCONTRACTORS ARE BEING USED.

ATTACHMENT I

Federal Requirements

1. EQUAL EMPLOYMENT OPPORTUNITY

In accordance with Title VI of the Civil Rights Act, as amended (42 U.S.C. § 2000d); Section 303 of the Age Discrimination Act of 1975, as amended (42 U.S.C. § 6102); Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. § 12132); and 49 U.S.C. § 5332 for FTA-funded projects CONTRACTOR agrees that it will not, on the grounds of race, religious creed, color, national origin, age, physical disability, sex, discriminate or permit discrimination against any employee or applicant for employment.

2. DISADVANTAGED BUSINESS ENTERPRISE (DBE) POLICY

A. CONTRACTOR or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. CONTRACTOR shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of United States Department of Transportation-assisted contracts. Failure by CONTRACTOR to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy, as MTC deems appropriate.

B. This Contract is subject to 49 CFR, Part 26 entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." Proposers who obtain DBE participation on this contract will assist Caltrans in meeting its federally mandated statewide overall DBE goal.

C. The DBE goal for this Contract is 6 percent (6%) CONTRACTOR must meet the DBE goal by committing DBE participation or document a good faith effort to meet the goal. If a DBE subContractor is unable to perform, CONTRACTOR must make a good faith effort to replace him/her with another DBE subContractor, if the goal is not otherwise met.

D. DBEs and other small businesses, as defined in 49 CFR, Part 26 are encouraged to participate in the performance of agreements financed in whole or in part with federal funds. CONTRACTOR or subContractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. CONTRACTOR shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of US DOT- assisted agreements. Failure by CONTRACTOR to carry out these requirements is a material breach of this Contract that may result in the termination of this Contract or such other remedy as the local agency deems appropriate.

E. Any subcontract entered into as a result of this Contract shall contain all of the provisions of this section.2.1. Performance of DBE Contractor and other DBE SubContractors/Suppliers

A DBE performs a commercially useful function when it is responsible for execution of the work of the Contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible with respect to materials and supplies used on the Contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To

determine whether a DBE is performing a commercially useful function, evaluate the amount of work subcontracted, industry practices; whether the amount the firm is to be paid under the Contract is commensurate with the work it is actually performing; and other relevant factors.

A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, Contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, examine similar transactions, particularly those in which DBEs do not participate.

If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its Contract with its own work force, or the DBE subcontracts a greater portion of the work of the Contract than would be expected on the basis of normal industry practice for the type of work involved, it will be presumed that it is not performing a commercially useful function.

2.2. Prompt Payment of Funds Withheld to Subcontractors

A. In the event that MTC withholds a portion of the payment from CONTRACTOR as retainage, CONTRACTOR, or subcontractor (if applicable), shall return all monies withheld in retention from a subcontractor within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Federal law (49 CFR26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the agency's prior written approval. Any violation of this provision shall subject the violating prime Contractor or subcontractor to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the prime Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subContractor performance, or noncompliance by a subContractor. This provision applies to both DBE and non-DBE prime contractors and subContractors.

B. Any subcontract entered into as a result of this Contract shall contain all of the provisions of this section.

2.3. DBE Records

CONTRACTOR shall maintain records of materials purchased and/or supplied from all subcontracts entered into with certified DBEs. The records shall show the name and business address of each DBE or vendor and the total dollar amount actually paid each DBE or vendor, regardless of tier. The records shall show the date of payment and the total dollar figure paid to all firms. DBE prime CONTRACTORS shall also show the date of work performed by their own forces along with the corresponding dollar value of the work.

B. A report on the Monthly Utilization of Disadvantaged Business Enterprises (DBE) First-Tier Subcontracts in the form set forth in Attachment H-3, attached hereto and incorporated herein, must be included with all invoices. MTC may withhold payment pending receipt of such report.

C. Upon completion of the Contract, a summary of these records shall be prepared and submitted on the form attached as Attachment H-4, "Final Report-Utilization of Disadvantaged Business Enterprise (DBE), First-Tier Subcontractors," CEM-2402F (Exhibit 17-F, Chapter 17, of the LAPM), attached hereto and incorporated herein by this reference, certified correct by CONTRACTOR or CONTRACTOR's authorized representative and shall be furnished to the MTC Project Manager with the final invoice. Failure to provide the summary of DBE payments with the final invoice will result in 25% of the dollar value of the invoice being withheld from payment until the form is submitted. The amount will be returned to CONTRACTOR when a satisfactory "Final Report-Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors" is submitted to the Contract Manager.

2.4. DBE Certification and Decertification Status

If a DBE subcontractor is decertified during the life of the Contract, the decertified subcontractor shall notify CONTRACTOR in writing with the date of decertification. If a subcontractor becomes a certified DBE during the life of the Contract, the subcontractor shall notify CONTRACTOR in writing with the date of certification. Any changes should be reported to the Agency's Contract Manager within 30 days.

3. TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

CONTRACTOR agrees to comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000(d)) and the regulations of the Department of Transportation issued thereunder (49 CFR Part 21).

4. ACCESS REQUIREMENTS FOR INDIVIDUALS WITH DISABILITIES

CONTRACTOR agrees to comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. § 12101 et seq.; Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794; Section 16 of the Federal Transit Act, as amended, 49 U.S.C. § 5310(f); and their implementing regulations.

5. STATE ENERGY CONSERVATION PLAN

CONTRACTOR shall comply with all mandatory standards and policies relating to energy efficiency that are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6321).

6. ALLOWABILITY OF COSTS

CONTRACTOR shall comply with the cost principles (as applicable) in Office of Management and Budget (OMB) Circulars A-87, or A-122, or 48 Code of Federal Regulations Chapter 1 Part 31, or 49 Code of Federal Regulations Part 18, or in 2 Code of Federal Regulations Parts 200 and 1201, as applicable.

7. RELEASE OF FUNDS WITHHELD FROM SUBCONTRACTORS

CONTRACTOR shall pay its subcontractors within ten (10) calendar days from receipt of each payment made to CONTRACTOR by MTC.

8. LICENSE FOR FEDERAL GOVERNMENT PURPOSES

FTA/FHWA reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for federal government purposes: (a) the copyright in any work developed under this Contract; and (b) any rights of copyright to which MTC or CONTRACTOR purchases ownership under this Contract.

9. IDENTIFICATION OF DOCUMENTS

All reports and other documents completed as part of this Contract shall carry the following notation on the front cover or title page:

"The preparation of this report has been financed in part by grants from the Federal Transit Administration and Federal Highway Administration, U.S. Department of Transportation. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation."

10. RECORDS

CONTRACTOR agrees to establish and maintain an accounting system conforming to Generally Accepted Accounting Principles (GAAP) that is adequate to accumulate and segregate reasonable, allowable, and allocable project costs. CONTRACTOR further agrees to keep all records pertaining to the project being funded for audit purposes for a minimum of three (3) years from submission of final expenditure report; four (4) years following the fiscal year of last expenditure under the Contract; or until completion of any litigation, claim or audit, whichever is longer. Copies of CONTRACTOR's audits, if any, performed during the course of Project development and at Project completion shall be forwarded to MTC no later than one hundred eighty (180) days after fiscal year end close.

11. AUDITS

CONTRACTOR further agrees to include in all its subcontracts hereunder a provision to the effect that the subContractor agrees that MTC, or any of its duly authorized representatives shall have access to and the right to examine any directly pertinent books, documents, papers, and records of such subContractor for the term specified above. The term "subcontract" as used in this clause excludes agreements not exceeding \$25,000.

CONTRACTOR agrees to grant MTC, the U.S. DOT, FTA or FHWA, as applicable, the Comptroller General of the United States, the State of California, and their authorized representatives access to CONTRACTOR's books, records, accounts, and any and all work products, materials, and other data relevant to this Contract, for the purpose of making an audit, examination, excerpt and transcription during the term of this Contract and for the period specified in Article 14. CONTRACTOR

shall in no event dispose of, destroy, alter, or mutilate said books, records, accounts, work products, materials and data for that period of time. If, as a result of any audit, it is determined by the auditor that reimbursement of any costs including profit or fee under this Contract was in excess of that represented and relied upon during price negotiations or represented as a basis for payment, CONTRACTOR agrees to reimburse MTC for those costs within sixty (60) days of written notification by MTC.

CONTRACTOR further agrees to include in all its subcontracts hereunder exceeding \$25,000 a provision to the effect that the subContractor agrees that MTC the U.S. DOT, FTA or FHWA, as applicable, the Comptroller General of the United States, the State of California, and their authorized representatives shall have access to and the right to examine any directly pertinent books, documents, papers, and records of such subContractor for the term specified above.

12. FLY AMERICA REQUIREMENTS.

CONTRACTOR agrees to comply with 49 U.S.C. 40118 (the "Fly America Act") in accordance with the General Services Administration's regulations at 41 CFR Part 301 - 10, which provide that recipients and subrecipients of Federal funds and their Contractors are required to use U.S. flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property to the extent such service is available, unless travel by foreign air carrier is a matter of necessity as defined by the Fly America Act. CONTRACTOR shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements, if used. CONTRACTOR agrees to include the requirements of this Section in all subcontracts that may involve international air transportation.

13. ENERGY CONSERVATION.

CONTRACTOR agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Federal Energy Policy and Conservation Act, 49 U.S.C. §§ 6321 et seq.

14. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS.

CONTRACTOR acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 CFR Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, CONTRACTOR certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this Contract work is being performed. In addition to other penalties that may be applicable, CONTRACTOR further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on CONTRACTOR

to the extent the Federal Government deems appropriate.

CONTRACTOR also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on CONTRACTOR, to the extent the Federal Government deems appropriate.

CONTRACTOR agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

15. NO FEDERAL GOVERNMENT OBLIGATION TO THIRD PARTIES

MTC and CONTRACTOR acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of this Contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this Contract and shall not be subject to any obligations or liabilities to MTC, CONTRACTOR or any other party (whether or not a party to this Contract) pertaining to any matter resulting from this Contract.

16. DEBARMENT

CONTRACTOR certifies that neither it, nor any of its participants, principals or subContractors is or has been debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions, as they are defined in 2 CFR Parts 180 and 1200, by any Federal agency or department.

17. CLEAN AIR AND WATER POLLUTION ACTS

CONTRACTOR agrees to comply with the applicable requirements of all standards, orders, or requirements issued under the Clean Air Act (42 U.S.C. § 7501 *et seq.*), the Clean Water Act (33 U.S.C. § 1251 *et seq.*), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).

18. LOBBYING

CONTRACTOR agrees to comply with the restrictions on the use of federal funds for lobbying activities set forth in 31 United States Code §1352 and 49 C.F.R. Part 20.

ATTACHMENT I-1
Exhibit 10-O1 Contractor Proposal DBE Commitment

See RFP Attachment G-3, Exhibit 10-O Contractor Proposal DBE Commitment.

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ATTACHMENT I-2
Exhibit 10-O2 Contractor Contract DBE Commitment

See RFP Attachment G-4, Exhibit 10-O2 Contractor Contract DBE Commitment.

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ATTACHMENT I-3
Monthly Utilization of Disadvantaged Business Enterprises (DBE) First-Tier Subcontracts Form

Project Name			Agency		Contract Term:		NTE Amount:		Federal Aid #:	
C2 Next Generation SI			Metropolitan Transportation Commission						6084(177)	
Prime Contractor	Contract Name	Address	City, State, Zip Code		Email		Phone		Fax	

Item #	Description of Work Performed and Material Provided	Company Name, Business Address, Contact Name and Information	DBE Certification Number	Contract Payments		Date Work Completed	Date of Payment	Year to Date Payments
				Non-DBE	DBE			
				\$1	\$1			\$1
				\$1	\$1			\$1
				\$1	\$1			\$1
				\$1	\$1			\$1
				\$1	\$1			\$1
				\$1	\$1			\$1
				\$1	\$1			\$1
				\$1	\$1			\$1
				\$1	\$1			\$1
Original DBE Commitment			Total: highlight + F9 = math	\$8.00	\$8.00			

BA-Black American
 APA-Asian Pacific American

NA-Native American
 W-Women

ATTACHMENT I-4, Final Report-Utilization of Disadvantaged Business Enterprises (DBE) First-Tier Subcontracts Form
EXHIBIT 17-F FINAL REPORT-UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES (DBE) AND FIRST-TIER SUBCONTRACTORS

1. Local Agency Contract Number		2. Federal-Aid Project Number 6084(177)		3. Local Agency Metropolitan Transportation Commission (MTC)		4. Contract Completion Date	
5. Contractor/Contractor			6. Business Address			7. Final Contract Amount	
8. Contract Item Number	9. Description of Work, Service, or Materials Supplied	10. Company Name and Business Address	11. DBE Certification Number	12. Contract Payments		13. Date Work Completed	14. Date of Final Payment
				Non-DBE	DBE		

15. ORIGINAL DBE COMMITMENT AMOUNT \$ _____

16. TOTAL

List all first-tier subcontractors/subContractors and DBEs regardless of tier whether or not the firms were originally listed for goal credit. If actual DBE utilization (or item of work) was different than that approved at the time of award, provide comments on an additional page. List actual amount paid to each entity. If no subcontractors/subContractors were used on the contract, indicate on the form.

I CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND CORRECT

17. Contractor/Contractor Representative's Signature		18. Contractor/Contractor Representative's Name		19. Phone		20. Date	
I CERTIFY THAT THE CONTRACTING RECORDS AND ON-SITE PERFORMANCE OF THE DBE(S) HAS BEEN MONITORED							
21. Local Agency Representative's Signature		22. Local Agency Representative's Name		23. Phone		24. Date	

DISTRIBUTION: Original – Local Agency, Copy – Caltrans District Local Assistance Engineer. Include with Final Report of Expenditures

ADA NOTICE: For individuals with sensory disabilities, this document is available in alternate formats. For information, call (916) 445-1233, Local Assistance Procedures Manual TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

INSTRUCTIONS – FINAL REPORT-UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES (DBE) AND FIRST-TIER SUBCONTRACTORS

- 1. Local Agency Contract Number** - Enter the Local Agency contract number or identifier.
- 2. Federal-Aid Project Number** - Enter the Federal-Aid Project Number.
- 3. Local Agency** - Enter the name of the local or regional agency that is funding the contract.
- 4. Contract Completion Date** - Enter the date the contract was completed.
- 5. Contractor/Contractor** - Enter the contractor/Contractor's firm name.
- 6. Business Address** - Enter the contractor/Contractor's business address.
- 7. Final Contract Amount** - Enter the total final amount for the contract.
- 8. Contract Item Number** - Enter contract item for work, services, or materials supplied provided. Not applicable for Contractor contracts.
- 9. Description of Work, Services, or Materials Supplied** - Enter description of work, services, or materials provided. Indicate all work to be performed by DBEs including work performed by the prime contractor/Contractor's own forces, if the prime is a DBE. If 100% of the item is not to be performed or furnished by the DBE, describe the exact portion to be performed or furnished by the DBE. See LAPM Chapter 9 to determine how to count the participation of DBE firms.
- 10. Company Name and Business Address** - Enter the name, address, and phone number of all subcontracted contractors/Contractors. Also, enter the prime contractor/Contractor's name and phone number, if the prime is a DBE.
- 11. DBE Certification Number** - Enter the DBE's Certification Identification Number. Leave blank if subcontractor is not a DBE.
- 12. Contract Payments** - Enter the subcontracted dollar amount of the work performed or service provided. Include the prime contractor/Contractor if the prime is a DBE. The Non-DBE column is used to enter the dollar value of work performed by firms that are not certified DBE or for work after a DBE becomes decertified.
- 13. Date Work Completed** - Enter the date the subcontractor/subContractor's item work was completed.
- 14. Date of Final Payment** - Enter the date when the prime contractor/Contractor made the final payment to the subcontractor/subContractor for the portion of work listed as being completed.
- 15. Original DBE Commitment Amount** - Enter the "Total Claimed DBE Participation Dollars" from Exhibits 15-G or 10-O2 for the contract.
- 16. Total** - Enter the sum of the "Contract Payments" Non-DBE and DBE columns.
- 17. Contractor/Contractor Representative's Signature** - The person completing the form on behalf of the contractor/Contractor's firm must sign their name.
- 18. Contractor/Contractor Representative's Name** - Enter the name of the person preparing and signing the form.
- 19. Phone** - Enter the area code and telephone number of the person signing the form.
- 20. Date** - Enter the date the form is signed by the contractor's preparer.
- 21. Local Agency Representative's Signature** - A Local Agency Representative must sign their name to certify that the contracting records and on-site performance of the DBE(s) has been monitored.
- 22. Local Agency Representative's Name** - Enter the name of the Local Agency Representative signing the form.
- 23. Phone** - Enter the area code and telephone number of the person signing the form.
- 24. Date** - Enter the date the form is signed by the Local Agency Representative

ATTACHMENT J
State Required Clauses

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ATTACHMENT J-1
FAIR EMPLOYMENT PRACTICES ADDENDUM

1. In the performance of this Contract, CONTRACTOR shall not discriminate against any employee for employment because of race, color, sex, sexual orientation, religion, ancestry or national origin, physical disability, medical condition, marital status, political affiliation, family and medical care leave, pregnancy leave, or disability leave. CONTRACTOR shall take affirmative action to ensure that employees are treated during employment without regard to their race, sex, sexual orientation, color, religion, ancestry, or national origin, physical disability, medical condition, marital status, political affiliation, family and medical care leave, pregnancy leave, or disability leave. Such action shall include, but not be limited to, the following: employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. CONTRACTOR shall post in conspicuous places, available to employees for employment, notices to be provided by STATE setting forth the provisions of this Fair Employment section.

2. CONTRACTOR, its contractor(s) and all subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 12900 et seq.), and the applicable regulations promulgated thereunder (California code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900(a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this Contract by reference and made a part hereof as if set forth in full. Each of the CONTRACTOR'S contractors and all subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreements as appropriate.

3. CONTRACTOR shall include the nondiscrimination and compliance provisions of this clause in all contracts and subcontracts to perform work under this Contract.

4. CONTRACTOR shall permit access to the records of employment, employment advertisements, application forms, and other pertinent data and records by STATE, the State Fair Employment and Housing Commission, or any other agency of the State of California designated by STATE, for the purposes of investigation to ascertain compliance with the Fair Employment section of this Contract.

5. Remedies for Willful Violation:

(a) STATE may determine a willful violation of the Fair Employment provision to have occurred upon receipt of a final judgment to that effect from a court in an action to which CONTRACTOR was a party, or upon receipt of a written notice from the Fair Employment and Housing Commission that it has investigated and determined that CONTRACTOR has violated the Fair Employment Practices Act and had issued an order under Labor Code Section 1426 which has become final or has obtained an injunction under Labor Code Section 1429.

(b) For willful violation of this Fair Employment Provision, STATE shall have the right to terminate this Contract either in whole or in part, and any loss or damage sustained by STATE in securing the goods or services thereunder shall be borne and paid for by CONTRACTOR and by the surety under the performance bond, if any, and STATE may deduct from any moneys due or thereafter may become due to CONTRACTOR, the difference between the price named in the Contract and the actual cost thereof to STATE to cure CONTRACTOR'S breach of this Contract.

ATTACHMENT J-2
NONDISCRIMINATION ASSURANCES

CONTRACTOR HEREBY AGREES THAT, as a condition to receiving any federal financial assistance from the STATE, acting for the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d-42 U.S.C. 2000d-4 (hereinafter referred to as the ACT), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964" (hereinafter referred to as the REGULATIONS), the Federal-aid Highway Act of 1973, and other pertinent directives, to the end that in accordance with the ACT, REGULATIONS, and other pertinent directives, no person in the United States shall, on the grounds of race, color, sex, national origin, religion, age or disability, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which CONTRACTOR receives federal financial assistance from the Federal Department of Transportation. CONTRACTOR HEREBY GIVES ASSURANCE THAT CONTRACTOR shall promptly take any measures necessary to effectuate this agreement. This assurance is required by subsection 21.7(a) (1) of the REGULATIONS.

More specifically, and without limiting the above general assurance, CONTRACTOR hereby gives the following specific assurances with respect to its federal-aid Program:

1. That CONTRACTOR agrees that each "program" and each "facility" as defined in subsections 21.23 (e) and 21.23 (b) of the REGULATIONS, will be (with regard to a "program") conducted, or will be (with regard to a "facility") operated in compliance with all requirements imposed by, or pursuant to, the REGULATIONS.
2. That CONTRACTOR shall insert the following notification in all solicitations for bids for work or material subject to the REGULATIONS made in connection with the federal-aid Program and, in adapted form, in all proposals for negotiated agreements: CONTRACTOR hereby notifies all bidders that it will affirmatively insure that in any agreement entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, national origin, religion, age, or disability in consideration for an award.
3. That CONTRACTOR shall insert the clauses of Appendix A of this assurance in every agreement subject to the ACT and the REGULATIONS.
4. That the clauses of Appendix B of this Assurance shall be included as a covenant running with the land, in any deed affecting a transfer of real property, structures, or improvements thereon, or interest therein.
5. That where CONTRACTOR receives federal financial assistance to construct a facility, or part of a facility, the Assurance shall extend to the entire facility and facilities operated in connection therewith.
6. That where CONTRACTOR receives federal financial assistance in the form, or for the acquisition, of real property or an interest in real property, the Assurance shall extend to rights to space on, over, or under such property.
7. That CONTRACTOR shall include the appropriate clauses set forth in Appendix C and D of this Assurance, as a covenant running with the land, in any future deeds, leases, permits, licenses, and similar agreements entered into by the CONTRACTOR with other parties:

Appendix C;

(a) for the subsequent transfer of real property acquired or improved under the federal-aid Program; and

Appendix D;

(b) for the construction or use of or access to space on, over, or under real property acquired, or improved under the federal-aid Program.

8. That this assurance obligates CONTRACTOR for the period during which federal financial assistance is extended to the program, except where the federal financial assistance is to provide, or is in the form of, personal property or real property or interest therein, or structures, or improvements thereon, in which case the assurance obligates CONTRACTOR or any transferee for the longer of the following periods:

(a) the period during which the property is used for a purpose for which the federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or

(b) the period during which CONTRACTOR retains ownership or possession of the property.

9. That CONTRACTOR shall provide for such methods of administration for the program as are found by the U.S. Secretary of Transportation, or the official to whom he delegates specific authority, to give reasonable guarantee that CONTRACTOR, other recipients, sub-grantees, applicants, sub-applicants, transferees, successors in interest, and other participants of federal financial assistance under such program will comply with all requirements imposed by, or pursuant to, the ACT, the REGULATIONS, this Assurance and the Contract.

10. That CONTRACTOR agrees that the United States and the State of California have a right to seek judicial enforcement with regard to any matter arising under the ACT, the REGULATIONS, and this Assurance.

11. CONTRACTOR shall not discriminate on the basis of race, religion, age, disability, color, national origin or sex in the award and performance of any STATE assisted contract or in the administration on its DBE Program or the requirements of 49 CFR Part 26. CONTRACTOR shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of STATE assisted contracts. The California Department of Transportation Disadvantaged Business Enterprise Program Implementation Contract for Local Agencies is incorporated by reference in this Contract. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out the Implementation Contract, STATE may impose sanctions as provided for under 49 CFR Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 USC 1001 and/or the Program Fraud Civil Remedies Act of 1985 (31 USC 3801 et seq.)

THESE ASSURANCES are given in consideration of and for the purpose of obtaining any and all federal grants, loans, agreements, property, discounts or other federal financial assistance extended after the date hereof to CONTRACTOR by STATE, acting for the U.S. Department of Transportation, and is binding on CONTRACTOR, other recipients, subgrantees, applicants, sub-applicants, transferees, successors in interest and other participants in the federal-aid Highway Program.

APPENDIX A TO ATTACHMENT J-2

During the performance of this Contract, CONTRACTOR, for itself, its assignees and successors in interest (hereinafter collectively referred to as CONTRACTOR) agrees as follows:

(1) Compliance with Regulations: CONTRACTOR shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the REGULATIONS), which are herein incorporated by reference and made a part of this agreement.

(2) Nondiscrimination: CONTRACTOR, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the REGULATIONS, including employment practices when the agreement covers a program set forth in Appendix B of the REGULATIONS.

(3) Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by CONTRACTOR for work to be performed under a Sub-agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by CONTRACTOR of the CONTRACTOR's obligations under this Contract and the REGULATIONS relative to nondiscrimination on the grounds of race, color, or national origin.

(4) Information and Reports: CONTRACTOR shall provide all information and reports required by the REGULATIONS, or directives issued pursuant thereto, and shall permit access to CONTRACTOR's books, records, accounts, other sources of information, and its facilities as may be determined by STATE or FHWA to be pertinent to ascertain compliance with such REGULATIONS or directives. Where any information required of CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to STATE or the FHWA as appropriate, and shall set forth what efforts CONTRACTOR has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of CONTRACTOR's noncompliance with the nondiscrimination provisions of this agreement, STATE shall impose such agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

(a) withholding of payments to CONTRACTOR under the Contract within a reasonable period of time, not to exceed 90 days; and/or

(b) cancellation, termination or suspension of the Contract, in whole or in part.

(6) Incorporation of Provisions: CONTRACTOR shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the REGULATIONS, or directives issued pursuant thereto.

CONTRACTOR shall take such action with respect to any sub-agreement or procurement as STATE or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a sub-applicant or supplier as a result of such direction, CONTRACTOR may request STATE enter into such litigation to protect the interests of STATE, and, in addition, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

APPENDIX B TO ATTACHMENT J-2

The following clauses shall be included in any and all deeds effecting or recording the transfer of PROJECT real property, structures or improvements thereon, or interest therein from the United States.

(GRANTING CLAUSE)

NOW, THEREFORE, the U.S. Department of Transportation, as authorized by law, and upon the condition that CONTRACTOR shall accept title to the lands and maintain the project constructed thereon, in accordance with Title 23, United States Code, the Regulations for the Administration of federal-aid for Highways and the policies and procedures prescribed by the Federal Highway Administration of the Department of Transportation and, also in accordance with and in compliance with the Regulations pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto CONTRACTOR all the right, title, and interest of the U.S. Department of Transportation in, and to, said lands described in Exhibit "A" attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto CONTRACTOR and its successors forever, subject, however, to the covenant, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and shall be binding on CONTRACTOR, its successors and assigns.

CONTRACTOR, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns,

(1) that no person shall on the grounds of race, color, sex, national origin, religion, age or disability, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed (;) (and) *

(2) that CONTRACTOR shall use the lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in federally-assisted programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended (;) and

(3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the U.S. Department of Transportation shall have a right to re-enter said lands and facilities on said land, and the above-described land and facilities shall thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this deed.*

*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964.

APPENDIX C TO ATTACHMENT J-2

The following clauses shall be included in any and all deeds, licenses, leases, permits, or similar instruments entered into by CONTRACTOR, pursuant to the provisions of Assurance 7(a) of Attachment I-2.

The grantee (licensee, lessee, permittee, etc., as appropriate) for himself, his heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add 'as covenant running with the land") that in the event facilities are constructed, maintained, or otherwise operated on the said property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation program or activity is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.), shall maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of Secretary, Part 21, Nondiscrimination in federally-assisted programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

(Include in licenses, leases, permits, etc.)*

That in the event of breach of any of the above nondiscrimination covenants, CONTRACTOR shall have the right to terminate the (license, lease, permit etc.) and to re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, lease, permit, etc.) had never been made or issued.

(Include in deeds)*

That in the event of breach of any of the above nondiscrimination covenants, CONTRACTOR shall have the right to re-enter said land and facilities thereon, and the above described lands and facilities shall thereupon revert to and vest in and become the absolute property of CONTRACTOR and its assigns.

*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964.

APPENDIX D TO ATTACHMENT J-2

The following shall be included in all deeds, licenses, leases, permits, or similar agreements entered into by CONTRACTOR, pursuant to the provisions of Assurance 7 (b) of Attachment I-2 .

The grantee (licensee, lessee, permittee, etc., as appropriate) for himself, his personal representatives, successors in interest and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds, and leases add “as a covenant running with the land”) that:

- (1) no person on the ground of race, color, sex, national origin, religion, age or disability, shall be excluded from participation in, denied the benefits of, or otherwise subjected to discrimination in the use of said facilities;
- (2) that in the construction of any improvements on, over, or under such land and the furnishing of services thereon, no person on the ground of race, color, sex, national origin, religion, age or disability shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination; and
- (3) that the (grantee, licensee, lessee, permittee, etc.,) shall use the premises in compliance with the Regulations.

(Include in licenses, leases, permits, etc.)*

That in the event of breach of any of the above nondiscrimination covenants, CONTRACTOR shall have the right to terminate the (license, lease, permit, etc.) and to re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, lease, permit, etc.) had never been made or issued.

(Include in deeds)*

That in the event of breach of any of the above nondiscrimination covenants, CONTRACTOR shall have the right to re-enter said land and facilities thereon, and the above described lands and facilities shall thereupon revert to and vest in and become the absolute property of CONTRACTOR, and its assigns.

*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964.

ATTACHMENT J-3, STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS**Caltrans Non – Discrimination**

- A. In the performance of work undertaken pursuant to this Contract, CONTRACTOR shall not, and shall affirmatively require that its contractors shall not, unlawfully discriminate, harass or allow harassment, against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave, and denial of pregnancy disability leave.
- B. CONTRACTOR shall ensure, and shall require that its contractors and all subcontractors and/or subrecipients shall ensure, that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. CONTRACTOR shall comply, and ensure that its contractors and subcontractors and/or subrecipients shall comply, with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990 (af), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations, are incorporated into this Contract by reference and made a part hereof as if set forth in full.
- C. Each of CONTRACTOR's contractors, subcontractors, and/or subrecipients shall give written notice of their obligations under this clause to labor organizations with which they have collective bargaining or other labor agreements. CONTRACTOR shall include the non-discrimination and compliance provisions hereof in all contracts and subcontracts to perform work under this Contract.
- D. CONTRACTOR shall comply with the nondiscrimination program requirements of Title VI of the Civil Rights Act of 1964. Accordingly, 49 CFR Part 21, and 23 CFR Part 200 are made applicable to this Contract by this reference. Wherever the term "Contractor" appears therein, it shall mean CONTRACTOR.
- E. CONTRACTOR shall permit, and shall require that its contractors, subcontractors, and subrecipients will permit, access to all records of employment, employment advertisements, application forms, and other pertinent data and records by the State Fair Employment Practices and Housing Commission or any other agency of the State of California designated by STATE to investigate compliance with these non-discrimination provisions.

ATTACHMENT K
Wage Determination

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ATTACHMENT K-1
ADDITIONAL FEDERAL CLAUSES APPLICABLE TO PUBLIC WORKS

1. Buy America
2. Davis-Bacon Act
3. Contract Work Hours and Safety Standards Act
4. Copeland Anti-Kickback Act
5. Prompt Payment of Funds Withheld to Subcontractors

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1. **Buy America Requirements**

Buy America – Attention is directed to the “Buy America” requirements of the surface Transportation Assistance Act of 1982 (Section 165) and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) Sections 1041(a) and 1048(a), and the regulations adopted pursuant thereto. In conformance with the law and regulations, all manufacturing processes for steel and iron materials furnished for incorporation into the work on this project shall occur in the United States; with the exception that pig iron and processed, pelletized and reduced iron ore manufactured outside of the United States may be used in the domestic manufacturing process for such steel and iron materials. The application of coatings, such as epoxy coating, galvanizing, painting, and other coating that protects or enhances the value of steel or iron materials shall be considered a manufacturing process subject to the “Buy America” requirements. A Certificate of Compliance shall be furnished for steel and iron materials. The certificates shall specifically certify that all manufacturing processes for the materials occurred in the United States, except for the above exceptions.

The requirements imposed by the law and regulations do not prevent a minimal use of foreign steel and iron materials if the total combined cost of the materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. The Contractor shall furnish the Engineer acceptable documentation of the quantity and value of the foreign steel and iron prior to incorporation the materials into the work.

Certification requirement for procurement of steel, iron, or manufactured products.

The bidder or offer or hereby certifies that all manufacturing process for steel and iron materials occurred in the United States, except for the above exceptions.

Signature: _____
Name and Title: _____
Company Name: _____
Date: _____

2. DAVIS-BACON ACT

(a) The Agency head shall cause or require the contracting officer to insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in §5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, *Provided*, That such modifications are first approved by the Department of Labor):

(1) *Minimum wages.* (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) *Withholding.* The MTC SAFE shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or

working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the MTC SAFE may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) *Payrolls and basic records.* (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Highway Administration (FHWA) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the FHWA. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (*e.g.*, the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the FHWA if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the FHWA, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the “Statement of Compliance” required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the FHWA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) *Apprentices and trainees* —(i) *Apprentices*. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not

registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) *Trainees.* Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) *Equal employment opportunity.* The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) *Compliance with Copeland Act requirements.* The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the FHWA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) *Contract termination: debarment.* A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) *Compliance with Davis-Bacon and Related Act requirements.* All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) *Disputes concerning labor standards.* Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) *Certification of eligibility.* (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) *Contract Work Hours and Safety Standards Act.* The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by §5.5(a) or 4.6 of part 4 of this title. As used in this paragraph, the terms *laborers* and *mechanics* include watchmen and guards.

(1) *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) *Withholding for unpaid wages and liquidated damages.* The MTC SAFE shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in §5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

(The information collection, recordkeeping, and reporting requirements contained in the following paragraphs of this section were approved by the Office of Management and Budget:

Paragraph	OMB Control Number
(a)(1)(ii)(B)	1215-0140

(a)(1)(ii)(C)	1215-0140
(a)(1)(iv)	1215-0140
(a)(3)(i)	1215-0140,
	1215-0017
(a)(3)(ii)(A)	1215-0149
(c)	1215-0140,
	1215-0017

[48 FR 19540, Apr. 29, 1983, as amended at 51 FR 12265, Apr. 9, 1986; 55 FR 50150, Dec. 4, 1990; 57 FR 28776, June 26, 1992; 58 FR 58955, Nov. 5, 1993; 61 FR 40716, Aug. 5, 1996; 65 FR 69693, Nov. 20, 2000; 73 FR 77511, Dec. 19, 2008]

Effective Date Note: At 58 FR 58955, Nov. 5, 1993, §5.5 was amended by suspending paragraph (a)(1)(ii) indefinitely.

3. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Contract Work Hours and Safety Standards Act - (i) The Contractor agrees to comply with section 107 of the Contract Work Hours and Safety Standards Act, 40 U.S.C. section 333, and applicable DOL regulations, "Safety and Health Regulations for Construction" 29 C.F.R. Part 1926. Among other things, the Contractor agrees that it will not require any laborer or mechanic to work in unsanitary, hazardous, or dangerous surroundings or working conditions.

(ii) Subcontracts - The Contractor also agrees to include the requirements of this section in each subcontract. The term "subcontract" under this section is considered to refer to a person who agrees to perform any part of the labor or material requirements of a contract for construction, alteration or repair. A person who undertakes to perform a portion of a contract involving the furnishing of supplies or materials will be considered a "subcontractor" under this section if the work in question involves the performance of construction work and is to be performed: (1) directly on or near the construction site, or (2) by the employer for the specific project on a customized basis. Thus, a supplier of materials which will become an integral part of the construction is a "subcontractor" if the supplier fabricates or assembles the goods or materials in question specifically for the construction project and the work involved may be said to be construction activity. If the goods or materials in question are ordinarily sold to other customers from regular inventory, the supplier is not a "subcontractor." The requirements of this section do not apply to contracts or subcontracts for the purchase of supplies or materials or articles normally available on the open market.

4. COPELAND ANTI-KICKBACK ACT

Compliance with Copeland Act requirements - The Contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

5. PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS

The agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the agency of the contract work and pay

retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from a subcontractor within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Federal regulation (49 CFR 26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the agency's prior written approval. Any violation of this provision shall subject the violating prime contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise, available to the prime contractor or subcontractor in the event of a dispute involving late payment, or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor. This provision applies to both DBE and non-DBE prime contractors and subcontractors.

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ATTACHMENT K-2
PUBLIC WORKS PAYROLL REPORTING FORM

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**ATTACHMENT K-3
FEDERAL WAGE DETERMINATION**

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ATTACHMENT E-1, INSURANCE REQUIREMENTS

Minimum Insurance Coverages. CONTRACTOR shall, at its own expense, obtain and maintain in effect at all times the following types of insurance against claims, damages and losses due to injuries to persons or damage to property or other losses that may arise in connection with the performance of work under its Agreement with MTC, placed with insurers Best's Rating of A- or better with a Financial Size Category of VIII or better. The insurance requirements listed below are subject to change from time to time as to coverage and amounts as may be required by MTC.

Yes (√)	Please certify by checking the box below that required coverages will be provided within ten (10) business days of MTC's notice to firm that it wishes to contract with the firm.
—	<u>Workers' Compensation Insurance</u> with Statutory limits, and <u>Employer's Liability Insurance</u> with a limit of not less than \$1,000,000 per employee and \$1,000,000 per accident, and any and all other coverage of CONTRACTOR's employees as may be required by applicable law. Such policy shall contain a Waiver of Subrogation in favor of MTC. Such <u>Workers Compensation & Employer's Liability</u> may be waived, if and only for as long as CONTRACTOR is a sole proprietor or a corporation with stock 100% owned by officers with no employees.
—	<u>Commercial General Liability Insurance</u> for Bodily Injury and Property Damage liability, covering the premises and operations, and products and completed operations of CONTRACTOR and CONTRACTOR's officers, agents, and employees and with limits of liability which shall not be less than \$1,000,000 combined single limit per occurrence with a general aggregate liability of not less than \$2,000,000, a products/completed operations aggregate liability limit of not less than \$2,000,000 and Personal & Advertising Injury liability with a limit of not less than \$1,000,000. Such policy shall contain a Waiver of Subrogation in favor of MTC. Products and completed operations insurance shall be maintained for three (3) years following termination of this Agreement. MTC and Alameda-Contra Costa Transit District ("AC Transit"); Golden Gate Bridge Highway and Transportation District ("GGBHTD"); the San Francisco Bay Area Rapid Transit District ("BART"); the City and County of San Francisco, acting by and through its Municipal Transportation Agency ("SFMTA"); the San Mateo County Transit District ("SamTrans"); the Santa Clara Valley Transportation Authority ("VTA"); the Peninsula Corridor Joint Powers Board ("Caltrain"); Central Contra Costa Transit Authority; City of Fairfield, as the operator of Fairfield and Suisun Transit; City of Petaluma; Eastern Contra Costa Transit Authority; Livermore/Amador Valley Transit Authority; Marin County Transit District; Napa County Transportation and Planning Agency; Solano County Transit; Sonoma County Transit; Sonoma-Marin Area Rail Transit; Vacaville City Coach; Western Contra Costa Transit Authority; San Francisco Bay Area Water Emergency Transportation Authority; City of Santa Rosa; and City of Union City; any other transit operators that implement the Clipper® Program by joining in the MOU and their commissioners, directors, officers, representatives, agents and employees are to be named as additional insureds for ongoing and completed operations. Such insurance shall be primary and non-contributory, and contain a Separation of Insureds Clause as respects any claims, losses or liability arising directly or indirectly from CONTRACTOR's operations.
—	<u>Business Automobile Insurance</u> for all automobiles owned (if any), used or maintained by CONTRACTOR and CONTRACTOR's officers, agents and employees, including but not limited to owned (if any), leased (if any), non-owned and hired automobiles, with limits of liability that shall not be less than \$1,000,000 combined single limit per accident.

—	<u>Umbrella Insurance</u> in the amount of \$5,000,000 providing excess limits over Employer's Liability, Automobile Liability, and Commercial General Liability Insurance. Such umbrella coverage shall be following form to underlying coverage including all endorsements and additional insured requirements.
—	<u>Errors and Omissions Professional Liability Insurance</u> for errors and omissions and the resulting damages, including, but not limited to, economic loss to MTC and having minimum limits of \$20,000,000 per claim. Such policy shall contain cyber risk coverages including network and internet security liability coverage, privacy liability coverage and media coverage. The policy shall provide coverage for all work performed by CONTRACTOR and any work performed or conducted by any subcontractor/consultant working for or performing services on behalf of the CONTRACTOR. No contract or agreement between CONTRACTOR and any subcontractor/consultant shall relieve CONTRACTOR of the responsibility for providing this Errors & Omissions or Professional Liability coverage for all work performed by CONTRACTOR and any subcontractor/consultant working on behalf of CONTRACTOR on the project.
—	<u>Property Insurance.</u> Property Insurance covering CONTRACTOR'S own business personal property and equipment to be used in performance of its Agreement with MTC, materials or property to be purchased and/or installed on behalf of MTC (if any), and builders risk for property in the course of construction (if applicable). Coverage shall be written on a "Special Form" policy that includes theft, but excludes earthquake, with limits at least equal to the replacement cost of the property. Such policy shall contain a Waiver of Subrogation in favor of MTC.
—	<u>Employee Dishonesty/Crime Insurance including 3rd Party Client Property.</u> Crime insurance including Employee Dishonesty, Computer Fraud and Funds Transfer, Wireless Funds Transfer coverage for loss of or damage to money, securities or other property resulting from theft arising out of or in connection with any fraudulent or dishonest acts committed by the employees of the CONTRACTOR, acting alone or in collusion with others. The following limits of liability should apply: (a) Employee Dishonesty - \$5,000,000; and (b) Third Party Client Property Blanket Coverage - \$5,000,000. The policy must contain a Joint Loss Payee endorsement or other Third Party coverage naming MTC as additional loss payee. CONTRACTOR shall reimburse MTC for any and all losses within the deductible, for insured losses, the cost to prove the loss, accountants' fees, defense costs including attorneys' fees and any other fees associated with a claim.
CONTRACTOR's obligation to provide the insurance described herein may be satisfied in whole or in part by adequately funded self-insurance, upon evidence of financial capacity satisfactory to MTC. CONTRACTOR shall be responsible for payment of any deductible or retention on CONTRACTOR's policies without right of contribution from MTC. Deductible and retention provisions shall not contain any restrictions as to how or by whom the deductible or retention is paid. Any deductible or retention provision limiting payment to the Named Insured is unacceptable. In the event that MTC seeks coverage as an additional insured under any CONTRACTOR insurance policy that contains a deductible or self-insured retention, CONTRACTOR shall satisfy such deductible or self-insured retention to the extent of loss covered by such policy, for any lawsuit arising from or connected with any alleged act of CONTRACTOR, subconsultant, subcontractor, or any of their	

employees, officers or directors, even if CONTRACTOR or subconsultant is not a named defendant in the lawsuit.

If any insurance specified above is written on a “Claims-Made” (rather than an “occurrence”) basis, then in addition to the coverage requirements above, CONTRACTOR shall:

1. Ensure that the Retroactive Date is shown on the policy, and such date must be before the date of its Agreement with MTC or the beginning of any work under such Agreement;
2. Maintain and provide evidence of similar insurance for at least three (3) years following project completion, including the requirement of adding all additional insureds; and
3. If insurance is cancelled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the Agreement effective date, CONTRACTOR shall purchase “extended reporting” coverage for a minimum of three (3) years after completion of the work.

All insurance specified above shall remain in force until all work or services to be performed are satisfactorily completed, all of CONTRACTOR’s personnel, subcontractors, and equipment have been removed from MTC’s property, and the work or services have been formally accepted. CONTRACTOR must notify MTC if any of the above required coverages are non-renewed or cancelled. The failure to procure or maintain required insurance and/or an adequately funded self-insurance program will constitute a material breach of its Agreement with MTC.

Prior to commencement of any work hereunder, CONTRACTOR shall deliver to MTC Certificates of Insurance verifying the aforementioned coverages. Such certificates shall make reference to all provisions and endorsements referred to above and shall be signed on behalf of the insurer by an authorized representative thereof.

The foregoing requirements as to the types and limits of insurance coverage to be maintained by CONTRACTOR are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by CONTRACTOR pursuant hereto, including, but not limited to, liability assumed pursuant to the Indemnification section of its Agreement with MTC.

By signing below you acknowledge and agree to provide the required certificate of insurance providing verification of the minimum insurance requirements listed above within ten (10) business days of MTC’s notice to firm that it wishes to contract with the firm.

Representative Name and Title	
Name of Authorizing Official	
Authorized Signature	
Date	

NOTE: If you were unable to check “Yes” for any of the required minimum insurance coverages listed above, a request for exception to the appropriate insurance requirement(s) must be brought to MTC’s attention no later than closing date/time for receipt of requests for modifications/exceptions. If such modifications/exceptions are not brought to MTC’s attention consistent with the provisions of this RFP, compliance with the insurance requirements will be assumed.

ATTACHMENT E-2, BONDING REQUIREMENTS

BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS. That we _____ as PRINCIPAL, and _____ as SURETY, are held and firmly bound unto the Metropolitan Transportation Commission, hereinafter called MTC, in the penal sum of TWENTY PERCENT OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to MTC, for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted the above-mentioned bid to MTC, for certain work and services described as follows, for which bids are to be opened on _____

(insert date of Bid opening)

For _____
(copy here the exact description of the work; including location, as it appears on the Bid)

Principal, if awarded the Contract, and, within the time and manner required under the specifications, enters into a written contract by accepting MTC's signed purchase order, in accordance with the bid, and files the two bonds with MTC, one to guarantee faithful performance and the other to guarantee payment for labor and materials, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect.

In the event suit is brought upon this bond by MTC and judgment is recovered, the surety shall pay all costs incurred by MTC in such suit, including a reasonable attorney's fee to be fixed by the court.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this _____ day of _____, 201__.

Principal

_____(SEAL)

Surety

_____(SEAL)

(Note: Signatures of those executing for the surety must be notarized.)

BONDS TO ACCOMPANY CONTRACT**PERFORMANCE BOND TO ACCOMPANY CONTRACT****KNOW ALL MEN BY THESE PRESENTS**

THAT WHEREAS, the Metropolitan Transportation Commission (MTC) has awarded to

as principal, hereinafter designated as the "Contractor," a contract for the work described as follows: **Provide staff, supplies and service for C2 System Integration**

AND WHEREAS, Contractor is required to furnish a bond in connection with said contract guaranteeing the faithful performance thereof;

NOW, THEREFORE, We, the undersigned Contractor and Surety, are held and firmly bound unto MTC, in the sum of

_____ dollars (\$ _____), to be paid to MTC or its certain attorney, its successors and assigns; for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That if Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the foregoing contract and any alteration thereof made, as therein provided, on his or their part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless MTC, its officers and agents, as therein stipulated, then this obligation shall become and be null and void; otherwise, it shall be and remain in full force and effect.

The performance bond shall be for an initial period of three years, afterward annually renewed, with renewal automatic unless ninety (90) days prior to renewal MTC receives written formal notice by registered mail from the surety of its intent not to renew. Should a replacement bond, or other security acceptable to MTC not be submitted within 30 days of notice contractor, and its surety, shall be in default of the contract. If the default is not cured within thirty days (30) then MTC shall have the right to terminate the contract, and Contractor and its surety shall be liable for all obligations of contractor associated with the contract, including the cost for MTC to secure a replacement contractor, even after termination for those obligations generated during the contract period.

If Contractor has been declared by MTC to be in default under the Contract for failing to perform the contract, Surety shall have a reasonable time to:

1. Upon entering into an acceptable written takeover agreement with Obligee, undertake to perform and complete the Work to be done under the Contract; or
2. Obtain bids or negotiated proposals from qualified contractors for a contract for completion of the Work to be done under the Contract, arrange for a contract to be prepared for execution by Obligee and contractor, to be secured with performance and payment bonds executed by a qualified surety; or
3. Waive its right to perform or complete the Work pursuant to paragraphs 1 and 2 above, and with reasonable promptness under the circumstances: (a) After investigation, determine the amount for which it maybe liable to the Obligee and, as soon as practicable after the amount is determined, tender payment therefore to the Obligee, or (b) Deny liability in whole or in part and notify the Obligee citing reasons therefore.
4. The Contract balance, as defined below, shall be credited against the reasonable costs of completing the Contract. If completed by Obligee pursuant to paragraphs 2 or 3 above, and the reasonable cost exceeds the Contract balance, Surety shall pay to Obligee such excess, but in no event shall the aggregate liability of Surety exceed the amount of this bond. If Surety completes the Contract pursuant to paragraph 1 above, that portion of the Contract balance as may be required to complete the Work to be done under the Contract and to reimburse Surety for its outlays shall be paid to Surety at the times and in the manner as said sums would have been payable to Principal had there been no default under the Contract; provided, however, that to the extent that Surety's outlays exceed the Contract balance paid to Surety by Obligee, Surety shall be entitled to a dollar for dollar reduction of its liability under this bond, and Surety's aggregate liability shall not exceed the penal sum of this bond. The term "Contract balance," as used in this paragraph, shall mean the total amount payable by Obligee under the Contract and any amendments thereto, less the amounts property paid by Obligee to Principal under the Contract.
5. No suit or action shall be commenced hereunder other than in a court of competent jurisdiction in the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated and not elsewhere.

SIGNED, this _____ day of _____ A.D., 201_.

Principal

[Name of Surety]

Attorney in Fact

[SEAL]

PAYMENT BOND TO ACCOMPANY CONTRACT

KNOW ALL MEN BY THESE PRESENTS

THAT WHEREAS, the Metropolitan Transportation Commission has awarded to

as Principal, hereinafter designated as the "Contractor," a contract for the work described as follows:

Provide staff, supplies and service for the C2 System Integration

AND WHEREAS, Contractor is required to furnish a bond in connection with said contract, to secure the payment of claims of laborers, mechanics or material suppliers employed on work under said contract as provided by law;

NOW, THEREFORE, We the undersigned Contractor and Surety are held and firmly bound unto the Metropolitan Transportation Commission in the sum of _____ dollars (\$ _____), said sum being 100% of the estimated amount payable by the said the Metropolitan Transportation Commission under the terms of the contract, for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly and by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal or its subcontractors, heirs, executors, administrators, successors, or assigns, fails to pay any subcontractors, suppliers, amounts due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant, or for any amounts required to be deducted, withheld and paid over to the Employment Development Department from the wages of employees of the Contractor and Subcontractors with respect to the work and labor, the Surety will pay for the same, in an amount not exceeding the sum hereinabove specified, and also, in case suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court.

It is further stipulated and agreed that the Surety on this bond will not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition, alteration or modification in, to, or any contract, plans, or agreement pertaining or relating to any scheme or work of improvement hereinabove described or pertaining to or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement hereinabove described, nor by any rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances will Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between MTC and original Contractor or on the part of any obligee named in such bond, but the sole conditions of recovery will be that claimant has not been paid the full amount of its claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

The payment bond shall be for an initial period of three years, afterward renewed annually, with renewal automatic unless ninety (90) days prior to renewal MTC receives written formal notice by registered mail from the surety of its intent not to renew. Should a replacement bond, or other security acceptable to MTC not be submitted within 30 days of notice contractor, and its surety, shall be in default of the contract. If the default is not cured within thirty days (30) then MTC shall have the right to terminate the contract, and Contractor and its surety shall be liable for all obligations of contractor associated with the contract, including the cost for MTC to secure a replacement contractor, even after termination for those obligations generated during the contract period.

IN WITNESS WHEREOF this instrument has been duly executed by Principal and Surety on this

_____ day of _____, 201_.

PRINCIPAL:

SURETY:

(Company)

(Company)

(Signature)

(Signature)

(Name – Please Print)

(Name – Please print)

(Title)

(Title)

NOTE TO SURETY COMPANY:

The following form of acknowledgement should be used. If any other form of acknowledgement is used, there must be submitted a certified copy of un-revoked resolution of authority for the attorney-in-fact.

SURETY COMPANY ATTORNEY-IN-FACT

State of California _____)
County of _____)

On _____, before me, the undersigned, a Notary Public in and for the State, personally appeared _____, know to me to be the duly authorized Attorney-in-Fact of the corporate Surety named in the within instrument, known to me to be authorized to execute that instrument on behalf of said corporation, known to me to be the person whose name is subscribed to such instrument as the Attorney-in-Fact of said corporation, and acknowledged to me that he (she) subscribed the name of said corporation thereto as Surety, and his (her) own name as Attorney-in-Fact and that said corporation executed the same.

**WITNESS MY HAND
AND OFFICIAL SEAL:**

(SEAL)

Notary Public for the State of California

Acknowledgement by Attorney-in-Fact must be attached.
Corporate seals of Principal and Surety must be attached.

ATTACHMENT F – IRAN CONTRACTING ACT of 2010(Public Contract Code Section 2200 *et seq.*)

Prior to bidding on, submitting a Proposal or executing a contract or renewal for a Metropolitan Transportation Commission (MTC) contract for goods or services of \$1,000,000 or more, a Proposer must either: a) certify it is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services (“DGS”) pursuant to Public Contract Code section 2203(b) and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS; or b) demonstrate it has been exempted from the certification requirement for that solicitation or contract pursuant to Public Contract Code section 2203(c) or (d).

To comply with this requirement, please insert your Proposer or financial institution name and Federal ID Number (if available) and complete one of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (Public Contract Code section 2205.)

OPTION #1 - CERTIFICATION

I, the official named below, certify I am duly authorized to execute this certification on behalf of the vendor/financial institution identified below, and the vendor/financial institution identified below is not on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

<i>Proposer Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in</i>	

OPTION #2 – EXEMPTION

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a Proposer/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a Proposal for, or enters into or renews, a contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

<i>Proposer Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or N/A)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		<i>Date Executed</i>

ATTACHMENT G, FEDERAL REQUIREMENTS

Federally-required contract provisions are listed below and in *Appendix E, MTC C2 System Integrator Contract*, in Attachment H and its subparts. In addition, the federal requirements in this *Appendix F* shall apply to any contract resulting from this RFP.

Effective July, 2012, the California Department of Transportation (Caltrans) requires recipients of DOT grant funds through Caltrans to impose the following DBE utilization requirements on its consultants and contractors. CONTRACTOR's DBE participation on its Agreement with MTC will assist Caltrans in meeting its federally mandated statewide overall DBE goal.

MTC has established Disadvantaged Business Enterprise (DBE) goal of 6% for any contract entered into as a result of this procurement.

1. TERMS AS USED IN THIS DOCUMENT

- The term "Disadvantaged Business Enterprise" or "DBE" means a for-profit small business concern owned and controlled by a socially and economically disadvantaged person(s) as defined in Title 49, Part 26.5, Code of Federal Regulations (CFR).
- The term "Agreement" also means "Contract."
- Agency also means the local entity entering into this contract with the Contractor or Consultant.
- The term "Small Business" or "SB" is as defined in 49 CFR 26.65.

2. AUTHORITY AND RESPONSIBILITY

- A. DBEs and other Small Businesses are strongly encouraged to participate in the performance of Agreements financed in whole or in part with federal funds (See 49 CFR 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs"). The Contractor should ensure that DBEs and other Small Businesses have the opportunity to participate in the performance of the work that is the subject of this solicitation and should take all necessary and reasonable steps for this assurance. The Proposer shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.
- B. Proposers are encouraged to use services offered by financial institutions owned and controlled by DBEs.

3. SUBMISSION OF DBE INFORMATION

If there is a DBE goal on the contract, *Appendix F-3, "Local Agency Consultant DBE Commitment" form* and *Appendix F-4, "Local Agency Consultant DBE Information" form* shall be included in the procurement document. In order for a Proposer to be considered responsible and responsive, the Proposer must make good faith efforts to meet the goal established for the contract. If the goal is not met, the Proposer must document adequate good faith efforts. All DBE

participation will be counted towards the contract goal, and all DBE participation shall be collected and reported.

Appendix F-3, “Local Agency Consultant DBE Commitment” form and Appendix F-4, “Local Agency Consultant DBE Information” form shall be included with the procurement document. The purpose of the forms is to collect data required under 49 CFR 26. These forms collect all DBE participation. Even if no DBE participation will be reported, the successful Proposer must execute and return the forms.

4. DBE PARTICIPATION GENERAL INFORMATION

It is the Proposer’s responsibility to be fully informed regarding the requirements of 49 CFR, Part 26, and the Department’s DBE program developed pursuant to the regulations. Particular attention is directed to the following:

- A. A DBE must be a small business firm defined pursuant to 13 CFR 121 and be certified through the California Unified Certification Program (CUCP).
- B. A certified DBE may participate as a prime contractor, subcontractor, joint venture partner, as a vendor of material or supplies, or as a trucking company.
- C. A DBE Proposer not proposing as a joint venture with a non-DBE, will be required to document one or a combination of the following:
 - 1. The Proposer is a DBE and will meet the goal by performing work with its own forces.
 - 2. The Proposer will meet the goal through work performed by DBE subcontractors, suppliers or trucking companies.
 - 3. The Proposer, prior to proposing, made adequate good faith efforts to meet the goal.
- D. A DBE joint venture partner must be responsible for specific contract items of work or clearly defined portions thereof. Responsibility means actually performing, managing, and supervising the work with its own forces. The DBE joint venture partner must share in the capital contribution, control, management, risks and profits of the joint venture commensurate with its ownership interest.
- E. A DBE must perform a commercially useful function pursuant to 49 CFR 26.55, that is, a DBE firm must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing and supervising the work.
- F. The Proposer shall list only one subcontractor for each portion of work as defined in its Proposal and all DBE subcontractors should be listed in the bid/cost Proposal list of subcontractors.
- G. A prime contractor who is a certified DBE is eligible to claim all of the work in the Agreement toward the DBE participation except that portion of the work to be performed by non-DBE subcontractors.

5. RESOURCES

- A. The CUCP database includes the certified DBEs from all certifying agencies participating in the CUCP. If you believe a firm is certified that cannot be located on the database,

please contact the Caltrans Office of Certification toll free number 1-866-810-6346 for assistance.

- B. Access the CUCP database from the Department of Transportation, Civil Rights, Business Enterprise Program web site at: <http://www.dot.ca.gov/hq/bep/>.
- Click on the link in the left menu titled *Disadvantaged Business Enterprise*
 - Click on *Search for a DBE Firm* link
 - Click on *Access to the DBE Query Form* located on the first line in the center of the page
 - Searches can be performed by one or more criteria
 - Follow instructions on the screen
- C. How to Obtain a List of Certified DBEs without Internet Access: DBE Directory - If you do not have Internet access, Caltrans also publishes a directory of certified DBE firms extracted from the online database. A copy of the directory of certified DBEs may be ordered from the Caltrans Publications Unit at (916) 263-0822, 1900 Royal Oaks Drive, Sacramento, CA 95815-3800.

6. MATERIALS OR SUPPLIES PURCHASED FROM DBES COUNT TOWARDS THE DBE GOAL UNDER THE FOLLOWING CONDITIONS:

- A. If the materials or supplies are obtained from a DBE manufacturer, count 100 percent of the cost of the materials or supplies. A DBE manufacturer is a firm that operates or maintains a factory, or establishment that produces on the premises the materials, supplies, articles, or equipment required under the Agreement and of the general character described by the specifications.
- B. If the materials or supplies purchased from a DBE regular dealer, count 60 percent of the cost of the materials or supplies. A DBE regular dealer is a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the Agreement are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a DBE regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A person may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating or maintaining a place of business provided in this section.
- C. If the person both owns and operates distribution equipment for the products, any supplementing of regular dealers' own distribution equipment shall be, by a long-term lease agreement and not an ad hoc or Agreement-by-Agreement basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not DBE regular dealers within the meaning of this section.
- D. Materials or supplies purchased from a DBE, that is neither a manufacturer nor a regular dealer, will be limited to the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on the job site, provided the fees are reasonable and not excessive as compared with fees charged for similar services.

**ATTACHMENT G-1, CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
AND OTHER RESPONSIBILITY MATTERS**

(Third Party Contracts and Subcontracts over \$25,000)

Instructions for Certification:

1. By signing and submitting this Proposal, the prospective lower tier participant is providing the signed certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, MTC may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to MTC if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms “covered transaction,” “debarred,” “suspended,” “ineligible,” “lower tier covered transaction,” “participant,” “persons,” “lower tier covered transaction,” “principal,” “proposal,” and “voluntarily excluded,” as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549 [49 CFR Part 29 or 2 CFR Part 180, as applicable]. You may contact MTC for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this PROPOSAL that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized in writing by MTC.
6. The prospective lower tier participant further agrees by submitting this PROPOSAL that it will include the clause titled “Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction,” without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List issued by U.S. General Service Administration.

8. Nothing contained in the foregoing shall be construed to require establishment of system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which does a prudent person in the ordinary course of business dealings normally possess.
9. Except for transactions authorized under Paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to all remedies available to the Federal Government, MTC may pursue available remedies including suspension and/or debarment.

DRAFT

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transaction**

(1) The prospective lower tier participant certifies, by submission of this Proposal, that neither it nor its “principals” [as defined at 49 CFR Section 29.105(p) or 2 CFR Section 180.995, as applicable] is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) When the prospective lower tier participant is unable to certify to the statements in this certification, such prospective participant shall attach an explanation to this Proposal.

Date

(signature of authorized official)

(type/print name and title)

ATTACHMENT G-2, CERTIFICATION OF RESTRICTIONS ON LOBBYING

I, _____ hereby certify on behalf of _____ that:
(name and title of grantee official) (name of grantee)

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance is placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Executed this _____ day of _____, 201__.

By:

(signature of authorized official)

(title of authorized official)

ATTACHMENT G-3, LOCAL AGENCY CONSULTANT DBE COMMITMENT**EXHIBIT 10-O1 CONSULTANT PROPOSAL DBE COMMITMENT**

1. Local Agency: <u>Metropolitan Transportation Commission (MTC)</u>	2. Contract DBE Goal: 6%
3. Project Description: <u>Next Generation Clipper® (C2) System Integrator</u>	
4. Project Location: <u>San Francisco Bay Area</u>	
5. Consultant's Name: _____	6. Prime Certified DBE: ☐

7. Description of Work, Service, or Materials Supplied	8. DBE Certification Number	9. DBE Contact Information	10. DBE %
Local Agency to Complete this Section		11. TOTAL CLAIMED DBE PARTICIPATION	%
17. Local Agency Contract Number: _____			
18. Federal-Aid Project Number: 6084(177)			
19. Proposed Contract Execution Date: _____			
Local Agency certifies that all DBE certifications are valid and information on this form is complete and accurate. 20. Local Agency Representative's Signature _____ 21. Date _____ 22. Local Agency Representative's Name: <u>Denise Rodrigues</u> 23. Phone <u>415-778-5297</u> 24. Local Agency Representative's Title: <u>Contract Compliance Manager</u>		IMPORTANT: Identify all DBE firms being claimed for credit, regardless of tier. Written confirmation of each listed DBE is required. 12. Preparer's Signature _____ 13. Date _____ 14. Preparer's Name _____ 15. Phone _____ 16. Preparer's Title _____	

DISTRIBUTION: Original – Included with consultant's proposal to local agency.

ADA Notice: For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654- 3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

INSTRUCTIONS – CONSULTANT PROPOSAL DBE COMMITMENT

CONSULTANT SECTION

1. **Local Agency** - Enter the name of the local or regional agency that is funding the contract.
2. **Contract DBE Goal** - Enter the contract DBE goal percentage as it appears on the project advertisement.
3. **Project Location** - Enter the project location as it appears on the project advertisement.
4. **Project Description** - Enter the project description as it appears on the project advertisement (Bridge Rehab, Seismic Rehab, Overlay, Widening, etc.).
5. **Consultant's Name** - Enter the consultant's firm name.
6. **Prime Certified DBE** - Check box if prime contractor is a certified DBE.
7. **Description of Work, Services, or Materials Supplied** - Enter description of work, services, or materials to be provided. Indicate all work to be performed by DBEs including work performed by the prime consultant's own forces, if the prime is a DBE. If 100% of the item is not to be performed or furnished by the DBE, describe the exact portion to be performed or furnished by the DBE. See LAPM Chapter 9 to determine how to count the participation of DBE firms.
8. **DBE Certification Number** - Enter the DBE's Certification Identification Number. All DBEs must be certified on the date bids are opened.
9. **DBE Contact Information** - Enter the name, address, and phone number of all DBE subcontracted consultants. Also, enter the prime consultant's name and phone number, if the prime is a DBE.
10. **DBE %** - Percent participation of work to be performed or service provided by a DBE. Include the prime consultant if the prime is a DBE. See LAPM Chapter 9 for how to count full/partial participation.
11. **Total Claimed DBE Participation %** - Enter the total DBE participation claimed. If the total % claimed is less than item "Contract DBE Goal," an adequately documented Good Faith Effort (GFE) is required (see Exhibit 15-H DBE Information - Good Faith Efforts of the LAPM).
12. **Preparer's Signature** - The person completing the DBE commitment form on behalf of the consultant's firm must sign their name.
13. **Date** - Enter the date the DBE commitment form is signed by the consultant's preparer.
14. **Preparer's Name** - Enter the name of the person preparing and signing the consultant's DBE commitment form.
15. **Phone** - Enter the area code and phone number of the person signing the consultant's DBE commitment form.
16. **Preparer's Title** - Enter the position/title of the person signing the consultant's DBE commitment form.

LOCAL AGENCY SECTION

17. **Local Agency Contract Number** - Enter the Local Agency contract number or identifier.
 18. **Federal-Aid Project Number** - Enter the Federal-Aid Project Number.
 19. **Proposed Contract Execution Date** - Enter the proposed contract execution date.
 20. **Local Agency Representative's Signature** - The person completing this section of the form for the Local Agency must sign their name to certify that the information in this and the Consultant Section of this form is complete and accurate.
 21. **Date** - Enter the date the DBE commitment form is signed by the Local Agency Representative.
 22. **Local Agency Representative's Name** - Enter the name of the Local Agency Representative certifying the consultant's DBE commitment form.
 23. **Phone** - Enter the area code and phone number of the person signing the consultant's DBE commitment form.
 24. **Local Agency Representative Title** - Enter the position/title of the Local Agency Representative certifying the consultant's DBE commitment form.
-

ATTACHMENT G-4, LOCAL AGENCY CONSULTANT DBE INFORMATION**EXHIBIT 10-O2 CONSULTANT CONTRACT DBE COMMITMENT**

1. Local Agency: Metropolitan Transportation Commission 2. Contract DBE Goal: 6%
3. Project Description: Next Generation Clipper® (C2) System Integrator
4. Project Location: San Francisco Bay Area
5. Consultant's Name: _____ 6. Prime Certified DBE: ☐ 7. Total Contract Award Amount: _____
8. Total Dollar Amount for **ALL** Subconsultants: _____ 9. Total Number of **ALL** Subconsultants: _____

10. Description of Work, Service, or Materials Supplied	11. DBE Certification Number	12. DBE Contact Information	13. DBE Dollar Amount
Local Agency to Complete this Section			
20. Local Agency Contract Number:		14. TOTAL CLAIMED DBE PARTICIPATION	\$
21. Federal-Aid Project Number: 6084(177)			
22. Contract Execution Date:			%
Local Agency certifies that all DBE certifications are valid and information on this form is complete and accurate.		IMPORTANT: Identify all DBE firms being claimed for credit, regardless of tier. Written confirmation of each listed DBE is required. 15. Preparer's Signature _____ 16. Date _____ 17. Preparer's Name _____ 18. Phone _____ 19. Preparer's Title _____	
23. Local Agency Representative's Signature _____			
24. Date _____			
25. Local Agency Representative's Name _____ Denise Rodrigues			
26. Phone _____ 415-778-5297 _____			
27. Local Agency Representative's Title _____ Contract Compliance Manager			

DISTRIBUTION: 1. Original – Local Agency
2. Copy – Caltrans District Local Assistance Engineer (DLAE). Failure to submit to DLAE within 30 days of contract execution may result in de-obligation of federal funds on contract.

ADA Notice: For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654- 3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

INSTRUCTIONS – CONSULTANT CONTRACT DBE COMMITMENT

CONSULTANT SECTION

1. **Local Agency** - Enter the name of the local or regional agency that is funding the contract.
2. **Contract DBE Goal** - Enter the contract DBE goal percentage as it appears on the project advertisement.
3. **Project Location** - Enter the project location as it appears on the project advertisement.
4. **Project Description** - Enter the project description as it appears on the project advertisement (Bridge Rehab, Seismic Rehab, Overlay, Widening, etc).
5. **Consultant's Name** - Enter the consultant's firm name.
6. **Prime Certified DBE** - Check box if prime contractor is a certified DBE.
7. **Total Contract Award Amount** - Enter the total contract award dollar amount for the prime consultant.
8. **Total Dollar Amount for ALL Subconsultants** – Enter the total dollar amount for all subcontracted consultants. SUM = (DBEs + all Non-DBEs). Do not include the prime consultant information in this count.
9. **Total number of ALL subconsultants** – Enter the total number of all subcontracted consultants. SUM = (DBEs + all Non-DBEs). Do not include the prime consultant information in this count.
10. **Description of Work, Services, or Materials Supplied** - Enter description of work, services, or materials to be provided. Indicate all work to be performed by DBEs including work performed by the prime consultant's own forces, if the prime is a DBE. If 100% of the item is not to be performed or furnished by the DBE, describe the exact portion to be performed or furnished by the DBE. See LAPM Chapter 9 to determine how to count the participation of DBE firms.
11. **DBE Certification Number** - Enter the DBE's Certification Identification Number. All DBEs must be certified on the date bids are opened.
12. **DBE Contact Information** - Enter the name, address, and phone number of all DBE subcontracted consultants. Also, enter the prime consultant's name and phone number, if the prime is a DBE.
13. **DBE Dollar Amount** - Enter the subcontracted dollar amount of the work to be performed or service to be provided. Include the prime consultant if the prime is a DBE. See LAPM Chapter 9 for how to count full/partial participation.
14. **Total Claimed DBE Participation** - \$: Enter the total dollar amounts entered in the "DBE Dollar Amount" column. %: Enter the total DBE participation claimed ("Total Participation Dollars Claimed" divided by item "Total Contract Award Amount"). If the total % claimed is less than item "Contract DBE Goal," an adequately documented Good Faith Effort (GFE) is required (see Exhibit 15-H DBE Information - Good Faith Efforts of the LAPM).
15. **Preparer's Signature** - The person completing the DBE commitment form on behalf of the consultant's firm must sign their name.
16. **Date** - Enter the date the DBE commitment form is signed by the consultant's preparer.
17. **Preparer's Name** - Enter the name of the person preparing and signing the consultant's DBE commitment form.
18. **Phone** - Enter the area code and phone number of the person signing the consultant's DBE commitment form.
19. **Preparer's Title** - Enter the position/title of the person signing the consultant's DBE commitment form.

LOCAL AGENCY SECTION

20. **Local Agency Contract Number** - Enter the Local Agency contract number or identifier.
21. **Federal-Aid Project Number** - Enter the Federal-Aid Project Number.
22. **Contract Execution Date** - Enter the date the contract was executed.
23. **Local Agency Representative's Signature** - The person completing this section of the form for the Local Agency must sign their name to certify that the information in this and the Consultant Section of this form is complete and accurate.
24. **Date** - Enter the date the DBE commitment form is signed by the Local Agency Representative.
25. **Local Agency Representative's Name** - Enter the name of the Local Agency Representative certifying the consultant's DBE commitment form.
26. **Phone** - Enter the area code and phone number of the person signing the consultant's DBE commitment form.
27. **Local Agency Representative Title** - Enter the position/title of the Local Agency Representative certifying the consultant's DBE commitment form.

ATTACHMENT G-5, DBE INFORMATION – GOOD FAITH EFFORTS

Federal-aid Project No. 6084(177) Bid Opening Date _____

The Metropolitan Transportation Commission (MTC) established a Disadvantaged Business Enterprise (DBE) goal of 6% for this project. The information provided herein shows that a good faith effort was made.

Lowest, second lowest and third lowest bidders shall submit the following information to document adequate good faith efforts. Bidders should submit the following information even if the “Local Agency Bidder DBE Commitment” form indicates that the bidder has met the DBE goal. This will protect the bidder’s eligibility for award of the contract if the administering agency determines that the bidder failed to meet the goal for various reasons, e.g., a DBE firm was not certified at bid opening, or the bidder made a mathematical error.

Submittal of only the “Local Agency Bidder DBE Commitment” form may not provide sufficient documentation to demonstrate that adequate good faith efforts were made.

The following items are listed in the Section entitled “Submission of DBE Commitment” of the Special Provisions:

- A. The names and dates of each publication in which a request for DBE participation for this project was placed by the bidder (please attach copies of advertisements or proofs of publication):

Publications:

Date of Advertisement:

- B. The names and dates of written notices sent to certified DBEs soliciting bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the DBEs were interested (please attach copies of solicitations, telephone records, fax confirmations, etc.):

Names of DBEs Solicited:

Date of Initial Solicitation:

Follow Up Methods and Dates:

C. The items of work which the bidder made available to DBE firms including, where appropriate, any breaking down of the contract work items (including those items normally performed by the bidder with its own forces) into economically feasible units to facilitate DBE participation. It is the bidder's responsibility to demonstrate that sufficient work to facilitate DBE participation was made available to DBE firms.

Item of Work:	Bidder Normally Performs Item (Y/N):	Breakdown of Items:	Amount (\$):	Percentage of Contract:

D. The names, addresses and phone numbers of rejected DBE firms, the reasons for the bidder's rejection of the DBEs, the firms selected for that work (please attach copies of quotes from the firms involved), and the price difference for each DBE if the selected firm is not a DBE:

Names, addresses and phone numbers of rejected DBEs and the reasons for the bidder's rejection of the DBEs:

Names, addresses and phone numbers of firms selected for the work above:

E. Efforts made to assist interested DBEs in obtaining bonding, lines of credit or insurance, and any technical assistance or information related to the plans, specifications and requirements for the work which was provided to DBEs:

F. Efforts made to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services, excluding supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate:

- G. The names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (please attach copies of requests to agencies and any responses received, i.e., lists, Internet page download, etc.):

Name of Agency/Organization:

Method/Date of Contact:

Results:

- H. Any additional data to support a demonstration of good faith efforts (use additional sheets if necessary):

NOTE: USE ADDITIONAL SHEETS OF PAPER IF NECESSARY.

ATTACHMENT H, SPECIAL CONDITIONS RELATING TO PERSONALLY IDENTIFIABLE INFORMATION

CONTRACTOR will have access to personally identifiable information (“PII”) in connection with the performance of the Contract. PII is any information that is collected or maintained by MTC or Contractor that identifies or describes a person or can be directly linked to a specific individual, including that individual’s account. Examples of PII include, but are not limited to, a person’s name, mailing address, business name, alternate contact information (if given), email address, telephone number, fax numbers, fare media serial number, C2 System account number, bank account information, credit card number, security code and expiration date, photograph and travel pattern data. The following special conditions related to the confidentiality and use of PII apply to this Contract:

1. Right to Audit

CONTRACTOR shall permit MTC and its authorized representatives to audit, inspect or test with automated tools: (i) CONTRACTOR’s facilities where PII is stored or maintained; (ii) any computerized systems, forms or other methods used to manage, process, share, disseminate or otherwise exchange PII with third parties; (iii) CONTRACTOR’s data security standards, management, governance and authorization of individuals handling PII, physical controls over the PII storage facilities, data security practices and procedures, business continuity and recovery facilities, resources, plans and other procedures for protecting PII from unauthorized use; and (iv) network security. The audit and inspection rights hereunder shall be for the purpose of verifying CONTRACTOR’s compliance with this Contract, and all applicable laws.

2. General Confidentiality of Data

All PII made available to or independently obtained by CONTRACTOR in connection with this Contract shall be protected by CONTRACTOR from unauthorized use and disclosure through the observance of the same or more effective procedural requirements as are applicable to MTC. This includes, but is not limited to, the secure transport, transmission and storage of PII used or acquired in the performance of this Contract.

CONTRACTOR agrees to properly secure and maintain any computer systems (hardware and software applications) or electronic media that it will use in the performance of this Contract. This includes ensuring all security patches, upgrades, and anti-virus updates are applied as appropriate to secure PII that may be used, transmitted, or stored on such systems in the performance of this Contract.

Notwithstanding anything to the contrary in Article 14. Records, of this Contract, CONTRACTOR agrees to retain only the PII of a Clipper® customer that is necessary to perform customer account management functions including, but not limited to refunds, billing, and settlement to transit operators. All other information that may be collected and maintained shall be discarded after no more than four years and six months from the date of the collection. CONTRACTOR shall purge all account information, including PII, no later than four years and six months after the date an account is closed or terminated and all outstanding amounts due are paid. At the conclusion of this retention period, CONTRACTOR agrees to discard data, including PII, using industry standard Payment Card Industry (PCI) compliant data purge

methods. Discarded data will be unavailable and unrecoverable following the respective purge exercise on any electronic media including, but not limited to, magnetic disk, optical disk, magnetic tape, and memory chips ("Storage Media"). No backup will be available following the purge. CONTRACTOR agrees to destroy hard-copy documents containing PII by means of a cross-cut shredding machine. Contractor agrees to use Department of Defense ("DoD") approved methods to sanitize any electronic media containing PII, including but not limited to magnetic disks, optical disks, magnetic tape, and memory prior to discarding (a) after useful life has ended or (b) at the conclusion of the Project, whichever comes first. Hard drives and computers shall be reformatted and reimaged in an equivalently secure fashion. CONTRACTOR is prohibited from storing PII on portable hardware including, but not limited to laptops, thumbdrives and so forth.

At the conclusion of the performance period of this Contract, CONTRACTOR shall submit a certification to the MTC Project Manager as follows: "All PII whether in electronic or hard-copy format not required for the continued functioning of the Clipper fare payment program, has been destroyed in accordance with the requirements contained herein Section 2. General Confidentiality of Data of Attachment G, Special Conditions Relating to Personally Identifiable Information." These requirements shall survive termination or expiration of this Contract.

3. Compliance with Statutes and Regulations

Contractor agrees to comply with the information handling and confidentiality requirements outlined in the California Information Practices Act (Civil Code sections 1798 *et seq.*) and in the California Streets and Highways Code Section 31490. In addition, CONTRACTOR warrants and certifies that in the performance of this Contract, it will comply with all applicable statutes, rules, regulations and orders of the United States, the State of California and MTC relating to the handling and confidentiality of PII, including the terms and conditions contained in this Attachment H, Special Conditions Relating to Personally Identifiable Information and agrees to indemnify MTC against any loss, cost, damage or liability by reason of CONTRACTOR's violation of this provision.

4. Subcontractors

MTC's approval in writing is required prior to any disclosure by CONTRACTOR of PII to a subcontractor or prior to any work being done by a subcontractor that entails receipt of PII. Once approved, CONTRACTOR agrees to require such subcontractor to sign an agreement in substantially identical terms as this attachment, binding the subcontractor to comply with its provisions.

5. Contractor Guarantees

CONTRACTOR shall not, except as authorized or required by its duties by law, reveal or divulge to any person or entity any PII that becomes known to it during the term of this Contract.

CONTRACTOR shall keep all PII entrusted to it completely secret and shall not use or attempt to use any such information in any manner that may injure or cause loss, either directly or indirectly, to MTC.

CONTRACTOR shall comply, and shall cause its employees, representatives, agents, subcontractors and subcontractors to comply, with such directions as MTC may make to promote the safeguarding or confidentiality of all its resources.

If requested by MTC, CONTRACTOR shall sign an information security and confidentiality agreement provided by MTC and attest that its employees, representatives, agents, subcontractors and subcontractors involved in the performance of this Contract shall be bound by terms of a confidentiality agreement with CONTRACTOR substantially the same in its terms.

6. Notice of Security Breach

CONTRACTOR shall immediately notify MTC when it discovers that there may have been a breach in security that has or may have resulted in compromise to PII. For purposes of this section, immediately is defined as within two hours of discovery. The MTC contact for such notification is as follows:

Privacy Officer
privacyofficer@mtc.ca.gov
(415) 778-6700

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