



REQUEST FOR PROPOSAL

Number RFP #21-06

Issued: February 22, 2021

Birmingham Bus Rapid Transit (BRT)

FARE COLLECTION SYSTEM

TECHNICAL SPECIFICATIONS AND PERFORMANCE REQUIREMENTS

Deadline for Questions: March 05, 2021 3:00 p.m. CST

Responses to Questions posted March 12, 2021 5:00 p.m. CST

Sealed Proposals Due: March 22, 2021 10:00 a.m. CST

Pre-Proposal Conference: February 26, 2021 10:00 A.M. (Virtual)

Conference invite posted at <https://maxtransit.org/category/announcements/solicitations/>

BJCTA Procurement Contact

Procurement Manager: Darryl Grayson, dgrayson@bjcta.org All questions must be submitted via email

Response to questions will be posted on <https://maxtransit.org/category/announcements/solicitations/>

Parcel Delivery & Hand-Delivery - Physical Address	Mailing Address
<p>ATTN: PROCUREMENT DEPT. Birmingham Jefferson County Transit Authority 1801 Morris Avenue, 2nd Floor Birmingham, AL 35203</p> <p>The lower left corner of the address label should include: RFP # 21-06 BRT FARE COLLECTION SYSTEM</p>	<p>ATTN: PROCUREMENT DEPT. Birmingham Jefferson County Transit Authority 1801 Morris Avenue 2nd Floor Birmingham, AL 35203</p> <p>The lower left corner of the address label should include: RFP # 21-06 BRT FARE COLLECTION SYSTEM</p>

It is important to use the correct address for the delivery of sealed responses to BJCTA solicitations. Proposals delivered to the BJCTA Post Office Box, faxed, emailed, or received after 10:00 a.m. CST, will be considered non-responsive and will be rejected.

Unless written authorization is provided by the BJCTA Procurement Manager, no other official or employee may speak for the BJCTA regarding this solicitation until the award decisions are complete. Any Proposer seeking information, clarification, or interpretations from any other official or employee uses such information at their own risk, and BJCTA is not bound by such information. Following the submittal deadline, and until a contract is fully executed, Proposers shall continue to direct communications to only the BJCTA Procurement Director identified above.

COMPANY NAME: _____ COMPANY PHONE #: _____

ADDRESS: _____ FAX #: _____

CITY/STATE/ZIP CODE: _____ E-MAIL: _____

DUNS# _____

TABLE OF CONTENTS

PART 1 - GENERAL	7
1.1 General System Summary.....	7
1.2 Scope of Work	7
1.3 Public Disclosure	8
1.4 Qualification Requirements	8
1.5 Request for Proposal (RFP).....	9
1.6 RFP Due Date and Submittal Requirements.....	9
PART 2: BJCTA TERMS AND CONDITIONS	9
2.1 Telegraphic/Electronic Proposal Responses	9
2.2 Termination of Contract.....	9
2.3 RFP Award	10
2.4 Additionl Purchases	10
2.5 Payment Terms	10
2.6 Governing Law/Dispute Resolution	10
2.7 Reduction in Cost.....	10
2.8 Conflict of Interest.....	10
2.9 RFP Addenda(s).....	10
2.10 Validity of Proposals	11
2.11 Quantities.....	11
2.12 Ownership and Cost of RFP	11
2.13 Form W-9.....	11
2.14 Business License	11
2.15 Protest Procedures.....	11
2.16 FTA Review.....	11
2.17 Questions Period.....	12
2.18 Identification of Funding Source	12
2.19 RFP’s Responsiveness and Responsibility.....	12
2.20 Evaluation Procedures	12
2.20.1 Evaluation Criteria	14
2.20.2 Technical Evaluation and Scoring	15
2.20.3 Cost Proposal Evaluation.....	15
2.20.4 Final Results and Contract Award.....	15
2.21 Statement of Compliance with Code of Alabama Section 31-13-9.....	15
2.22 Single RFP Submission.....	15
2.23 Negotiations	16
2.24 Prohibition Against Boycotting	16

2.25	Disadvantaged Business Enterprise (DBE).....	16
2.26	Invoicing	16
2.27	Third Party “Remit-To”	16
2.28	Non-Collusion.....	16
2.29	Confidentiality.....	16
2.30	Insurance Requirements	17
PART 3: MATERIALS AND EQUIPMENT		17
3.1	Ticket Vending Machine (TVM).....	17
3.1.1	Communications Features.....	18
3.1.2	Environmental Features:	18
3.1.3	Mechanical Features	19
3.1.4	TVM System Performance Requirements	20
3.1.5	User Functional Features	20
3.1.6	Security and Safety Features.....	21
3.1.7	Fare Media.....	22
3.1.8	Cash Acceptance.....	22
3.1.8.1	Coin Acceptance	22
3.1.8.2.	Note/Bill Acceptance	23
3.1.9	Data Collection	23
3.1.10	TVM Central Data System(CDS) Requirements	23
3.1.11	User GUI Requirements.....	24
3.1.12	Report Generator.....	24
3.1.12.1	Standard Reports	25
3.1.13	Maintenance and Support.....	25
3.1.14	Special Features and Considerations	25
3.2	On-Board Fare Payment Validator.....	25
3.2.1	Power Features	26
3.2.2	Environmental Features.....	26
3.2.3	Communications Features	26
3.2.4	General Mechanical Features	27
3.2.5	Functional Features	27
3.3	Handheld Ticket Inspection Device (HTID)	28
3.3.1	Functional Features(HTID)	28
3.3.2	Inspection Functions	29
3.3.3	Installation.....	29
3.4	Point of Sale (POS) Machine	29
3.4.1	Power Features	29

3.4.2	Functional Features (POS)	30
3.4.3	Communications Features	30
3.5	Mobile Ticketing Application	30
3.5.1	Mobile Fare Payment System Design	30
3.5.2	Mobile Ticket System Features	31
PART 4: SPARE PARTS		31
PART 5: DOCUMENTATION AND TRAINING		32
5.1	Documentation	32
5.2	Training Materials and Instructor(s)	32
PART 6: INSTALLATION		33
6.1	Design Review	33
6.1.1	Acceptance Testing	34
6.1.2	Factory Acceptance Test	35
6.1.3	System Acceptance Test	35
6.1.4	Final Acceptance	35
6.2	Detailed Data Analysis and Report Generation	35
PART 7: TERMS AND CONDITIONS		37
7.1	Contract Structure and Term	37
7.2	Project Management and Quality Assurance	38
7.3	Project Schedule and Major Milestones	38
7.4	Project Plan Execution	38
7.5	Maintenance Period	38
7.6	Warranty Period	39
7.7	Service Levels	39
7.7.1	Equipment Availability	39
7.7.2	The Online Transaction Times	40
7.7.3	Equipment and System Repairs	40
7.7.4	Software Services	40
7.8	Liquidated Damaged for Non-Performance/Compliance	41
7.8.1	Liquidated Damages-Routine and Scheduled Maintenance	41
7.8.2	Liquidated Damages-Non-Performance	42
7.8.3	Priority Service Requests	42
7.8.4	Response Time Measurement	42
7.8.4.1	Resolution Time Measurement Requirements	42
7.8.5	Performance Monitoring	43
7.9	Financial Terms and Payment Structure	43
7.9.1	BJCTA Fare Collection System Milestone Payment Schedule	43

7.9.2	System Price Table	44
PART 8: WARRANTY		45
8.1	Warranty Period.....	45
8.2	Warranty Support/Services	45
PART 9: MAINTENANCE		46
9.1	Maintenance Period	46
9.2	On-Site Maintenance and Support Requirements	46
FEDERAL CLAUSES AND CERTIFICATIONS		49
	Fly America.....	49
	Cargo Preference.....	49
	Energy Conservation.....	49
	Clean Water.....	49
	Lobbying	49
	Access to Records and Reports	50
	Federal Changes	50
	Clean Air	50
	Recycled Products.....	51
	No Government Obligations to Third Parties	51
	Program Fraud and False or Fraudulent Statements or Related Acts.....	51
	Termination.....	51
	Contracts Involving Federal Privacy Act Requirements	53
	Civil Rights Requirements	54
	Breaches and Dispute Resolution.....	57
PATENT AND RIGHTS IN DATA		57
	Patent Rights	57
	Rights in Data and Copyrights	58
	Disadvantaged Business Enterprise Letter of Intent	60
	Disadvantaged Business Enterprise Affidavit.....	61
	Disadvantaged Business Enterprise Unavailable Certification	62
	Disadvantaged Business Enterprise Utilization	63
	Disadvantaged Business Enterprise Good Faith	64
	Disadvantaged Business Enterprise Good Faith Contacts	65
	Prompt Payment	66
	Incorporation of Federal Transit Administration (FTA) Terms	66
	Additional Federal Requirements.....	66
FEDERAL CERTIFICATIONS		69
	Restrictions on Lobbying	69

Government Wide Debarment and Suspension (Non-Procurement)	70
Buy America.	72
Vendor Registration.	73
ACRONYMS & GLOSSARY	74

PART 1 – GENERAL

1.1 GENERAL SYSTEM SUMMARY

City of Birmingham (COB) is designing and constructing The Birmingham Express (BX) a new, regional public transit system to be operated by The Birmingham Jefferson County Transit Authority (BJCTA). The Bus Rapid Transit will serve the communities of Birmingham and surrounding communities. The BX will employ Bus Rapid Transit (BRT) technology to deliver fast, reliable and cost-effective mobility services for its customers. It will connect 25 neighborhoods to opportunities and vital services along its corridor. In addition, it will enable customers to reach employment, educational facilities, historic sites, and cultural and healthcare centers.

COB will implement innovative system designs and technologies to improve travel time, lower costs and enhance service appeal on the BX BRT service. The system will include 32 stations equipped with Ticket Vending Machines (TVMs) and eleven (11) buses equipped with ticket validators. The new fare collection environment will be designed to speed access and facilitate on-time performance. Each of the stations will have at least one TVM to allow for ticket purchases. Tickets will be validated on the bus to reduce queuing and speed access.

1.2 SCOPE OF WORK

BJCTA intends to engage an experienced and qualified Contractor to develop and install a Fare Collection System (FCS) on the new Birmingham Xpress BRT system. Its core objectives are to deploy a next-generation FCS that drives customer adoption, reduces fare collection costs and fare evasion, increases revenue, improves fare collection operations and facilitates a fast and reliable BRT service. The Contractor shall design, manufacture, test, train, install, document, warrant and service the FCS that meets the requirements of this Scope of Work and conforms to the specifications, codes and standards listed below. The approach to the FCS for the Birmingham Xpress BRT is to integrate Ticket Vending Machines (TVMs) with on-bus validation devices to reduce queuing and dwell times with the objective of improving its customer experience and system performance.

At a minimum, the next-generation system shall have the following characteristics:

1. The account based electronic fare collection system will process all transactions generated by the system devices including loading transit accounts upon request from fare distribution devices and performing fare calculation and account balance updates at the time of fare payment. All fare processing and updating of accounts will be performed in real-time.
2. The provided solution will be fully compliant with all Payment Card Industry Data Security Standards (PCI-DSS) published at the time of system installation.
3. Designed and implemented using an open architecture (encompassing all fare media and devices deployed within the system and incorporating all fare media formats, transaction formats, security protocols, and communications necessary to support system functions)
4. Include all fare equipment needed to operate the FCS, including but not limited to:
 - a. Ticket Vending Machines
 - b. Bus Validators with mounting hardware
 - c. Customer Service Terminal/Point of Sale (POS) Devices
 - d. Handheld Ticket Inspection Devices (HTID)
 - e. Fare Media
 - f. Mobile Ticketing Application
5. A Central Data System (CDS) with all common design and system security requirements, for central configuration, monitoring and control of all devices not limited to the TVMs, validators and HTIDs.
6. A CDS which is comprised of a managed cloud-based server and software to perform all the required new functions in real-time access.

7. Data integrity and data confidentiality of all data transmitted between the CDS and all end-point devices.
8. Data sharing with data collection systems (e.g., CAD/AVL) and data feeds (e.g., application programming interfaces (APIs), and General Transit Feed Specification Real Time (GTFS-RT)
9. Include a fare inspection solution that supports the inspection of both closed loop and open payments.

Comply with “Buy America” requirements for all equipment supplied, including TVMs, validators, HTIDs and fare media.

1. Ensure that TVMs and validators comply with the 1990 American with Disabilities Act (ADA), or latest revision.
2. Include a mobile ticketing application that seamlessly interfaces with all devices including the validators and HTIDs, as well as, contactless cards.

1.3 PUBLIC DISCLOSURE

Subject to applicable law or regulations, the content of each proposer’s proposal shall become public information upon the effective date of any resulting contract.

1.4 QUALIFICATION REQUIREMENTS

The following are the requirements for qualifying responsible Proposers. The requirements below should be met and are not listed in order of importance. Any proposal that the Evaluation Committee deems to have not meet the requirements, and cannot be made to meet these requirements, may be determined by the Evaluation Committee not to be responsible and the Proposal rejected. The requirements are as follows:

1. Sufficient financial strength, resources and capacity to finance the work to be performed and to complete the contract in a satisfactory manner, as measured by the following:
 - a. Proposer’s financial statements prepared in accordance with generally accepted accounting principles of the jurisdiction in which the Proposer is located and audited by an independent certified public accountant; oral statement from the Proposer regarding how financial information may be reviewed by BJCTA.
 - b. Proposer’s ability to secure financial guarantees, if required, as evidenced by a letter of commitment from an underwriter, surety or other guarantor confirming that the Proposer can provide the required guarantee.
 - c. Proposer’s ability to obtain required insurance with coverage values that meet minimum requirements, evidenced by a letter from an underwriter confirming that the Proposer can be insured for the required amount.
2. Evidence that the human and physical resources are sufficient to perform the Contract as specified and to ensure delivery of all equipment within the time specified in the Contract, to include the following:
 - a. Engineering, management, and service organizations with sufficient personnel and requisite disciplines, licenses, skills, experience and equipment to complete the Contract as required and to satisfy any engineering or service problems that may arise during the warranty period.
 - b. Adequate manufacturing facilities sufficient to produce and factory-test equipment on schedule.
 - c. A spare parts procurement and distribution system sufficient to support equipment maintenance without delays and a service organization with skills, experience and equipment sufficient to perform all warranty and on-site work.
3. Evidence that Proposer is qualified in accordance with the provisions listed in this document.
4. Evidence of satisfactory performance and integrity on contracts in making deliveries on time, meeting specifications and warranty provisions, parts availability and steps Proposer took to resolve any judgments, liens, Fleet Defects history, or warranty claims. Evidence shall be by client references.

1.5 REQUEST FOR PROPOSAL (RFP)

RFP documents may be obtained from BJCTA, Purchasing Department, 1801 Morris Avenue, Birmingham, AL 35203 or by calling (205) 521-0144 and requesting a copy to be mailed. Documents requested by mail will be packaged and sent postage paid. Electronic copies may also be downloaded from any of the following websites:

- Birmingham-Jefferson County Transit Authority:
<https://maxtransit.org/category/announcements/solicitations/>
- COB of Birmingham: <https://www.birminghamal.gov/work/bidding-opportunities/>

Any addenda will be available on the sites above. Addenda will be mailed to only those vendors who were provided a copy in person or by mail. Proposers are responsible for checking the website for addenda until the Proposal due date.

1.6 RFP DUE DATE AND SUBMITTAL REQUIREMENTS

1. Proposals must be received no later than 10:00 A.M. Central Time on Wednesday, March 22, 2021 and should be addressed as follows:

Darryl Grayson
Contracts & Procurement Manager
1801 Morris Avenue 2nd Floor
Birmingham, Alabama 35203

2. Envelopes or boxes containing Proposals shall be sealed and clearly labeled with BJCTA'S RFP number and the solicitation title:

**RFP #21--06 "FARE COLLECTION SYSTEM"
TECHNICAL SPECIFICATIONS AND PERFORMANCE REQUIREMENTS**

3. Proposers are requested to submit to BJCTA one unbound hard copy marked "Original," five (5) additional bound printed copies, and one electronic PDF copy of the Proposal on a portable jump drive. In case of any discrepancies, the hard copies will be considered by BJCTA in evaluating the Proposal, and the electronic version is provided for BJCTA's administrative convenience only.

A proposal is deemed to be late if it is received by BJCTA after the deadline stated above. Proposals received after the submission deadline will be rejected and kept on file unopened.

PART 2 - BIRMINGHAM-JEFFERSON COUNTY TRANSIT AUTHORITY TERMS AND CONDITIONS

2.1 TELEGRAPHIC/ELECTRONIC PROPOSAL RESPONSES

Proposal responses sent by electronic devices (i.e., facsimile machines and email) are not acceptable and will be rejected upon receipt. Proposers will be expected to allow adequate time for delivery of their proposed responses either by airfreight, postal services, or by other means.

2.2 TERMINATION OF CONTRACT

Failure to adhere to any or all terms, conditions and specifications as set forth in the contract may result in the immediate termination of the contract. Any violation of this agreement shall constitute a breach and default of the contract. Should termination occur, the holder of the contract may be declared a "non-responsible proposer" This declaration may result in the rejection of any future proposals submitted by the proposer, for a period of time, to be determined by BJCTA

Irrespective of any default hereunder, either party may also, at any time in their discretion, terminate this Agreement, in whole or in part, by giving the other party sixty (60) days written notice thereof and, in such event, Proposer shall be entitled

to receive compensation specified herein for all work completed prior to such sixty (60) days' notice of termination or cancellation, delivered or not yet delivered to BJCTA. Proposer shall also be entitled to compensation for all subsequent work requested by BJCTA and delivered by Proposer, after notice of termination. For any work partially completed at the date of termination, such work will be compensated on a prorated basis, as mutually agreed upon.

2.3 RFP AWARD

The award will be made on an all or none basis. Contract will be awarded to the most responsive and responsible proposer who meets all RFP requirements, and has a history of successfully completing similar work and submits the most advantageous or best value proposal.

2.4 ADDITIONAL PURCHASES

BJCTA has attempted to list all goods and services for Fare Collection System, Technical Specifications and Performance Requirements. If mutually agreed upon, additional contracts may be executed, based upon this RFP for the same or additional goods and services.

2.5 PAYMENT TERMS

BJCTA payment term is Net-30 days from acceptance.

2.6 GOVERNING LAW/DISPUTE RESOLUTION

Contract awards to purchase the materials covered in this proposal document shall be construed under and governed by the laws of the State of Alabama and each party hereto irrevocably agrees to be subject to the jurisdictions of the courts of the State of Alabama.

2.7 CONFLICT OF INTEREST

Proposer covenants and declares that it has not, and will not, acquire any interest, directly or indirectly, in any property acquired by BJCTA during the term of this Agreement. Proposer warrants and covenants that it presently has no interest in, nor shall any interest be hereinafter acquired in, any matter that will render the services required under this Agreement a violation of any applicable Federal, State or local law. In the event that any conflict of interest should hereinafter arise, Proposer shall promptly notify BJCTA in writing of the existence of such conflict of interest.

2.8 RFP ADDENDAS

BJCTA reserves the right to amend the RFP at any time in accordance with "Proposed Schedule for the Procurement." -Any amendments to the RFP shall be described in written addenda. Notification of the addenda also will be distributed to all such prospective Proposers officially known to have received the RFP. Failure of any prospective Proposer to receive the notification or addenda shall not relieve the Proposer from any obligation under the RFP therein. All addenda issued shall become an integral part of the RFP. Prospective Proposers shall acknowledge the receipt of each individual addendum in their proposals. Failure to acknowledge in the proposal receipt of addenda may at BJCTA's sole option disqualify the proposal.

If BJCTA determines that the addenda may require significant changes in the preparation of Proposals, the deadline for submitting the Proposals may be postponed no fewer than ten (10) days from the date of issuance of addenda or by the number of days that BJCTA determines will allow Proposers sufficient time to revise their Proposals. Any new Due Date shall be included in the addenda.

2.9 VALIDITY OF PROPOSALS

Proposals and subsequent offers shall be valid for a period of one hundred twenty (120) days from the due date specified above. BJCTA reserves the right to cancel the procurement in whole or in part, at its sole discretion, at any time before the Contract is fully executed and approved on behalf of BJCTA.

2.10 QUANTITIES

This RFP provides specifications for up to thirty-four (34) ticket vending machines, eleven (11) validators, eleven (11) mount poles, six (6) handheld ticket validator units. The BRT branded buses will be distinct from the fixed route buses.

2.11 OWNERSHIP AND COST OF RFP

All proposals will become the property of BJCTA. This RFP does not commit BJCTA to enter into a Contract, to pay any costs incurred in the preparation or presentation of a Proposal, nor to procure or contract for the equipment.

2.12 FORM W-9

Any successful proposer who is not currently set up as a vendor in BJCTA vendor file will be required to submit a completed W-9 tax form prior to any award. The W-9 tax form may be submitted with your proposal or no later than seven (7) business days of receipt of notice of intent to award.

2.13 BUSINESS LICENSE

In the event you receive a notification of intent to award letter, proposer must provide BJCTA a copy of his/her current City of Birmingham business license no later than fourteen (14) business days of receipt. Failure to submit the requested information will result in revocation of the notice of intent to award. A copy of his/her license may be submitted along with the RFP.

2.14 PROTEST PROCEDURES

Below is the link to BJCTA website detailing the BJCTA bid protest policy. FTA Circular 4220.1F will be provided by the Procurement Manager upon proposer request.

FOR COMPLETE PROTEST PROCEDURES:

<https://www.maxtransit.org/protest-of-procurement/>

Copies of BJCTA's protest procedures and the protest provisions of FTA Circular 4220.1F or its successor may be obtained from Darryl Grayson 1801 Morris Avenue, Birmingham, AL 35203. Proposals will be opened, and a Notice of Award will be issued by BJCTA in accordance with BJCTA's protest procedures and the protest provisions of FTA Circular 4220.1F or its successor.

2.15 FTA REVIEW

After such administrative remedies have been exhausted, an interested party may file a protest with the Federal Transit Administration of the U.S. Department of Transportation pursuant to the procedures provided in the FTA C 4220.1F or its successor. FTA review is limited to the alleged failure of BJCTA to have written protest procedures, the alleged failure of BJCTA to follow those procedures, the alleged failure of BJCTA to review a protest or the alleged violation of federal law or regulation.

2.16 QUESTIONS PERIOD

Prospective Proposers are requested to submit written questions via e-mail by 3:00 P.M. Central Time on Friday, March 5, 2021 to the Purchasing Manager identified below.

Darryl Grayson
Procurement Manager
dgrayson@bjcta.org

Responses will be shared with all prospective Proposers at www.maxtransit.org. Prospective Proposers are reminded that any changes to the RFP will be by written addenda only. A copy of any addenda will be mailed to only those vendors who were provided a copy in person or by mail.

2.17 IDENTIFICATION OF FUNDING SOURCE

Financial support of this project is provided through financial assistance from the USDOT FY2015 TIGER Discretionary Grant (FAIN No. 5822-2017-1) on a fifty percent (50%) matched basis. Additional sources of funds are provided by City of Birmingham and/or Birmingham-Jefferson County Transit Authority (BJCTA).

2.18 RFP'S RESPONSIVENESS AND RESPONSIBILITY

Each Proposal will be reviewed to determine if the Proposal is responsive to the submission requirements outlined in this RFP and if the Proposer is responsible.

A responsive Proposal is one that follows the requirements of this RFP, includes all documentation, is submitted in the format outlined in this RFP, is of timely submission, and has the appropriate signatures as required on each document. Failure to comply with these requirements may result in the Proposal being deemed nonresponsive.

A responsible Proposer is one that demonstrates the capability to satisfy the commercial and technical requirements set forth in the Solicitation. A Proposer's failure to demonstrate that it is responsible may result in the Proposal being rejected.

Any Proposal found to be nonresponsive or the Proposer found to be non-responsible will not be considered further for award. Proposals that do not comply with the RFP instructions and requirements or do not include the required information may be rejected as insufficient and may not be further considered. The BJCTA reserves the right to request a Proposer to provide additional information and/or to clarify information. BJCTA's determination regarding the responsiveness of a Proposal and the responsibility of a Proposer shall be final.

2.19 EVALUATION PROCEDURES

Proposals will be analyzed for conformance with the instructions and requirements of the RFP and Contract documents. Proposals that do not comply with these instructions and do not include the required information may be rejected as insufficient or not be considered for the Competitive Range. BJCTA reserves the right to request that a Proposer provide any missing information and make corrections. Proposers are advised that they should pay close attention to and strictly follow all instructions. Submittal of a proposal will signify that the proposer has accepted the whole of the Contract documents, except such conditions, exceptions, reservations or understandings explicitly, fully and separately stated and according to the instructions of the RFP document. Any such conditions, exceptions, reservations or understandings that do not result in the rejection of the Proposal are subject to evaluation under the criteria set forth in the selection process.

An Evaluation Committee, which will include COB staff, BJCTA staff, and one or more outside experts, will be established. The Evaluation Committee will carry out the detailed evaluations of Proposals, that carries the most value to BJCTA from "best" to "lowest", establishing the Competitive Range. The evaluation committee will be making the recommendation for selection of the Proposer, if any that may be awarded the Contract. The Evaluation Committee will report its recommendations and findings to the appropriate BJCTA individual or body responsible for further negotiations and potentially awarding the Contract.

2.20 EVALUATION CRITERIA

Proposals will be evaluated, negotiated, selected and any award made in accordance with the criteria and procedures described below. The approach and procedures are those which are applicable to a competitive negotiated procurement whereby proposals are first evaluated to determine Contractor responsiveness, solutions and responsibility, and then scored for technical merit and overall best value. Price will be evaluated once the technical merits have been evaluated.

Selection is based on Best Value. BJCTA will make the award to the Contractor whose proposal is most advantageous to the BJCTA. Accordingly, the BJCTA may not necessarily make an award to the Contractor with the highest technical ranking nor award to the Contractor with the lowest Price Proposal if doing so would not be in the overall best interest of the BJCTA.

Proposals will not be publicly opened. Each submitted proposal will initially be screened for responsiveness by the BJCTA. The following are the minimum requirements that must be met for a proposal to be considered responsive. (Note: All requirements must be met; therefore, they are not listed by any particular order of importance):

1. The Contractor has followed the proposal requirements, the submittal requirements, and other instructions of this RFP, and included sufficient information and detail such that the proposal can be evaluated. Any deficiencies in this regard must be determined by the BJCTA to be a defect that the BJCTA will waive or the proposal may be disqualified.
2. Cost estimates are reviewed by BJCTA staff to determine if the proposal price exceeds the Engineer's Estimate. Proposals that exceed the Engineer's Estimate may render the procurement financially infeasible unless it can be determined that such proposal price might be reduced during contract negotiations to render the procurement financially feasible. The BJCTA reserves the right to reject a proposal in its entirety if the proposal price exceeds the Engineer's Estimate.

Any proposal that the BJCTA finds cannot meet these requirements and may not be made to meet these requirements within timelines set by the BJCTA, may be determined by the BJCTA to be non-responsive, and will not be considered for further evaluation. Contractors of any proposals that have been determined by the BJCTA to be non-responsive will be notified in writing that they were not short-listed for further consideration.

The BJCTA will establish an Evaluation Committee for this Project and will include representatives from the BJCTA, and when deemed in the BJCTA's best interest, representatives of other public agencies, the general public, or individuals with experience and expertise in the related disciplines, including the BJCTA 's consultants. The BJCTA reserves the right to independently score the proposals.

Responsive proposals will be distributed to the Evaluation Committee. Final determination of a Contractor's responsibility will be made upon the basis of initial information submitted in the proposal, any information submitted upon request by the BJCTA and information resulting from the BJCTA's inquiry of Contractor's references and its own knowledge of the Contractor.

Cost estimates and evaluations related to costs will be kept strictly confidential throughout the evaluation, negotiation and selection process. Only the members of the Evaluation Committee and BJCTA officials, employees and agents having a legitimate interest will be provided access to the cost proposals and cost evaluation results during this period.

BJCTA staff will verify the references supplied by Contractors to determine the Contractor's record of producing a quality product on similar projects, adherence to budget and schedule, overall experience and technical competence in performing work of a similar nature, and quality of key personnel. References will only be verified for responsive (short listed or selected) Contractors.

All responsive Contractors may be invited to participate in an oral interview / product demonstration with the Evaluation Committee to further discuss the content of their proposal, demonstrate their product and respond to questions by BJCTA staff and the Evaluation Committee concerning their proposal. If interviews are not held, the points allotted to —Oral Presentation shall be withheld from the overall Proposal Evaluation Form.

The final ranking of proposals will be determined through a combination of independent examination of proposals, interviews (if utilized), cost effectiveness, and other appropriate evaluation factors (e.g., reference checks).

2.20.1 TECHNICAL EVALUATION AND SCORING

Proposals are evaluated using a point method of award with predetermined criteria for each element. (Note: Some evaluated elements may be weighted higher than others.) A detailed scoring evaluation will be conducted for those proposals that have passed the initial evaluation. The scoring evaluation will be accomplished in a consistent, uniform manner for all proposals. The Evaluation Committee will score each proposal according to the pre-established evaluation criteria and weights for relative importance.

Proposals will be evaluated and scored in accordance with the criteria outlined below:

Qualifications and Experience of Project Team

1. Demonstrated successful performance on similar or related projects
2. Experience, technical competence and role of sub-Contractors, including prior working relationship with prime (if applicable)
3. Relevant experience of the Project Manager and key personnel in example projects
4. Senior staff availability and time commitment of key personnel on this project
5. Organization logic, quality and cost control measures in place
6. Overall financial stability and evidence of corporate resources committed to the Project
7. Other on-going project commitments and priorities

System Functionality / Technical Solution

1. Completeness of Solution – How close does the Contractor meet the requirements as expressed in the Scope of Work
2. Scalability - Ability for expansion, growth and overall functional capabilities of the
3. System Current technology to allow for cost-effective expansion as needs change
4. Host Solution: Hosted, Managed Services, Traditional Model or other
5. Host Architecture - reliability, redundancy, environments, Disaster Recovery, Security, etc.
6. Reporting Capabilities – ability to meet reporting needs as described

Proposed Methodology / Approach to Work

1. Demonstrated knowledge of the work required
2. Approach and proposed methodology to project scope, including training and schedule
3. Technical merit of proposed solution (logic, advantages, proven approach)
4. Use of components and software proven in service on similar projects
5. System flexibility and upgradeability
6. Innovative approaches to service delivery and on-going operational support

Training and Support

1. Work Plan – thoroughness of the training facilitators proposed training plan
2. Acceptable Schedule – evaluate facilitators schedule as it matches BJCTA’s needs
3. Support available
4. Thoroughness of Training Plan

Oral Presentation

1. Demonstrated knowledge of the work required
2. Appropriateness of responses to questions
3. Competence of key team members and evidence of team approach
4. Quality of product and services as seen in the product demonstration

Quality of Written Proposal

1. Completeness of proposal and compliance with RFP instructions
2. Explanation of the project or services required
3. Logic, clarity and specificity of work plan
4. Evidence of willingness to exceed project requirements
5. Nature and extent of exceptions taken to contract terms, conditions or specifications

Cost / Cost Effectiveness

1. Total Implementation Costs
2. Five-year total cost on expected implementation on project
3. Cost effectiveness will be evaluated with the maximum points granted to the lowest priced proposal.

2.20.2 COST PROPOSAL EVALUATION

Cost effectiveness will be evaluated with the maximum points granted to the lowest priced proposal. All proposals will be rated based on their cost relative to the lowest-priced cost proposal. The basis for the ranking of the costs shall be as follows:

Lowest Cost Proposal / Cost Proposal being evaluated

Example:

1. Lowest cost proposal= \$200,000
2. Lowest cost proposal percentage= $\$200,000 / \$200,000=1.0$
3. Lowest cost proposal weighted points= $1.0 \times 25=25$
4. Proposal being evaluated = \$250,000
5. Percentage award for proposal being evaluated= $\$200,000 / \$250,000=.80$
6. Proposal being evaluated weighted points= $.80 \times 25=20$

The proposal selected shall provide a cost-effective approach that meets the BJCTA's stated requirements.

2.20.3 FINAL RESULTS AND CONTRACT AWARD

The scores from the technical evaluation, product demonstration and cost proposal evaluation will be summed, and the proposals will be ranked by final total score. Final contract award will be made after recommendation by the Evaluation Committee. A contract will be awarded to the responsive and responsible Contractor with the highest total number of points. Contract award will be contingent upon receipt of evidence of the Contractor's ability to meet the insurance and bond requirements and the other requirements in this Proposal.

The BJCTA may enter negotiations with one or more Contractors and require each Contractor to submit a Best and Final Offer (BAFO) in order for the BJCTA to arrive at a final determination.

After final negotiation of a proposed Agreement that is deemed fair and reasonable, BJCTA staff will recommend to the BJCTA that they enter into the proposed Agreement. Final authority to approve the Agreement rests with the BJCTA.

2.21 STATEMENT OF COMPLIANCE WITH CODE OF ALABAMA SECTION 31-13-9

Proposer shall participate in the E-Verify program as required under the Beason-Hammon Alabama Taxpayer and Citizen Protection Act. Proposer agrees to comply with all applicable provisions of the Act. As a condition for the award of any contract, Proposer shall provide documentation establishing that the Proposer is enrolled in the E-Verify program, or a signed, written statement that the Proposer does not have a presence (one or more employees) in the State of Alabama. Proposer may submit applicable documentation with his/her proposal or no later than seven (7) business days of receipt of notice of intent to award.

The successful proposer agrees that signing this Contract, the contracting parties affirm, for the duration of the Agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of the provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

2.22 SINGLE RFP SUBMISSION

If only one Proposal is received in response to this RFP and it is found by BJCTA to be acceptable, then a price or cost analysis, or both, possibly including an audit, may be performed by or for BJCTA. The Proposer has agreed to such analysis by submitting a Proposal in response to this RFP. The award will be made to the company offering the lowest negotiated Proposal, provided that all conditions and specifications required by BJCTA are met.

2.23 NEGOTIATIONS

BJCTA reserves the right to enter into contract negotiations with the selected Proposer. If BJCTA and the selected Proposer cannot negotiate a successful contract, BJCTA may terminate negotiations and begin negotiation with the next selected Proposer. This process will continue until a contract has been executed or all proposals have been rejected. No Proposer shall have any rights against BJCTA arising from such negotiations.

2.24 PROHIBITION AGAINST BOYCOTTING

By signing this contract, the Proposer certifies that it is not currently engaged in, and for the duration of this agreement will not engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which this state enjoys open trade.

2.25 DISADVANTAGED BUSINESS ENTERPRISE (DBE)

BJCTA HAS A OVERALL 10.5% DBE GOAL, PROPOSER MUST COMPLETE PAGES 66 THROUGH 71

Proposer acknowledges and agrees that, consistent with federal law and BJCTA's public policy, it will encourage disadvantaged business enterprise (DBE) participation to the extent permitted by law. A "disadvantaged business enterprise" is a for-profit small business concern (i) at least 51% owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51% of the stock is owned by one or more such individuals; and (ii) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it. In accordance with federal law, a "socially and economically disadvantaged individual" includes African Americans, Hispanic Americans, Native Americans, Asian-Americans, women, and any additional groups designated as socially and economically disadvantaged by the federal Small Business Administration.

2.26 INVOICING

If an invoice does not agree with the purchase order, credits or a corrected invoice will be required prior to the processing for payment.

2.27 THIRD-PARTY "REMIT-TO"

If a Proposer has a third-party "remit-to" company, that information must appear on the Proposer's response. BJCTA will send payment to the company designated by the Proposer on its response but will not be responsible for resolving payment issues should the Proposer change payment processing companies after a payment has been mailed or without a 45-day written notification to the Procurement Department and Accounts Payable Division of BJCTA.

2.28 NON-COLLUSION

Proposer covenants and declares that it has not employed any person to solicit or procure this Agreement and that Proposer has not made, and will not make, any payment of any compensation for the procurement of this Agreement. The covenant contained herein shall survive the expiration or earlier termination of this Agreement.

2.29 CONFIDENTIALITY

Proposer agrees that such reports, information, opinions or conclusions shall not be made available to or discussed with any individual or organization, including the news media, without prior written approval of BJCTA. Proposer shall exercise reasonable precautions to prevent the unauthorized disclosure and use of BJCTA information whether deemed confidential or not.

2.30 INSURANCE REQUIREMENTS

Throughout the term of this Agreement, Proposer shall maintain, keep in force and pay premiums on a policy or policies of comprehensive public liability and property insurance relating to all activities of proposer allowed under this Agreement hereunder in limits not less than: **(i)** \$1,000,000.00 for any occurrence resulting in bodily or personal injury to, or death of, one person; **(ii)** \$3,000,000.00 for any occurrence resulting in bodily or personal injury to or death of, more than one person; **(iii)** \$1,000,000.00 for any occurrence resulting in damage to, or destruction of, any property; **(iv)** the Alabama statutory limits for Worker's Compensation; and **(v)** \$3,000,000 per claim and in the aggregate for professional liability insurance for proposer's negligence in the rendering of its professional services, **(vi)** BJCTA's RFP number (20-34) must appear on any/all copies of the certificate of insurance. Proposer shall provide BJCTA with a certificate of insurance evidencing such coverage, if requested, and a copy of the actual insurance policy. With respect to each such policy (except for Worker's Compensation) proposer shall provide at least thirty days (30) notice if the policy is altered or cancelled before the expiration date thereof in advance of such alteration or cancellation. In the event any such policy is canceled or terminated or if the limits are reduced, proposer shall promptly obtain a new policy or policies in the same limits. Such policy shall name BJCTA as an additional insured.

All such insurance shall be provided by a policy or policies issued by a company or companies qualified by law to engage in the insurance business in the State of Alabama with a rating of B+ or better according to the most current edition of Best's Insurance reports. Proposer is to provide written documentation of the company's rating with their proposal.

The Proposer may use umbrella or excess liability insurance to achieve the required coverages, provided that such umbrella or excess insurance results in the same type of coverage as required for the individual policies. These insurance requirements are in addition to and do not affect any indemnification obligation of the Proposer herein.

Birmingham-Jefferson County Transit Authority Additional Named Insured: Except for Worker's Compensation coverage, all coverages shall contain endorsements naming BJCTA, and its officers, employees and agents as additional named insureds with respect to liabilities that arise out of and result from the operations of the Proposer or the performance of its work.

The additional named insureds endorsement shall not limit the scope of coverage to BJCTA to vicarious liability but shall allow coverage for BJCTA to the fullest extent provided by the policies.

Such additional insured coverage shall be at least as broad as Additional Insured endorsement from ISO, CG 2010.1185.

(A) Policies Primary: All insurance policies required herein are to be primary and non-contributory with any insurance or self-insurance program administered by BJCTA.

(B) Waiver of Subrogation: Proposer shall require the carriers of the above-required insurance coverage to waive all rights of subrogation against BJCTA, and its officers, employees, agents, proposers and sub-proposers. Further, Proposer hereby waives any rights of subrogation against BJCTA. All general or automotive liability coverage provided herein shall not prohibit the Proposer or its employees, agents or representatives from waiving the right of subrogation prior to loss or claim.

PART 3 – MATERIALS AND EQUIPMENT

3.1 TICKET VENDING MACHINE (TVM)

The proposed TVM will be nearly identical in design and construction to a model deployed and in revenue services at a minimum of three (3) US transit agencies. The TVM is expected to reduce the capital costs, maintenance activities, and customer complexity associated with traditional transit TVMs. To this end, one fare media type will be issued, and BJCTA would prefer the flexibility to enable and disable features or components of the TVM.

An Anti-virus antibacterial LCD protective film shall be installed on all TVM screens and selection buttons. The film shall be effective against 99.9% of viruses and bacteria on the surface and be certified by the Society of Industrial technology for Antimicrobial Articles (SIAA) for the film's effectiveness against germs.

The TVM will be designed as a simple, low-maintenance, and low complexity machine in a cost-saving design that provides the functionality specified herein and the general requirements below:

The TVM shall be designed to accommodate first-time or occasional users, as well as regular riders who need to reload their accounts. At a minimum, the following functions will be supported:

1. Purchase one or more fare cards
2. Accept U.S. coins and bills
3. Accept authorized magnetic strip, contact, and contactless bank cards, including Apple Pay, Google Pay and Samsung Pay
4. Return deposited cash if a transaction is canceled.
5. Print and issue receipts
6. Display instructions and notices
7. Provide audio output of messages and instructions, configurable by the user at the TVM.
8. Include required intrusion alarm system with audible alarm at TVM locations
9. Communicate over a network to send and receive transaction data in real-time.
10. The TVM shall be equipped with a modular, filtered power supply which shall be connected to the incoming grounded electrical service. The power supply shall be connected to the incoming electrical services (120 V) and deliver all the necessary operating voltages for the machine. Voltages internal to the TVM shall not exceed 125 V.
11. All internal service plugs to be GFC duplex convenience outlet shall be installed within the interior of each cabinet. This outlet shall be protected with separate circuit breaker that removes all power to the TVM.
12. All power and communications connections must be through the bottom mount (preferred) or through the backside lower panel not to be placed higher than 10.0 inches from the backside lower panel.
13. Equipment must include an Uninterruptable Power Systems (UPS) device that shall sustain full operation or a reduced operational mode of the TVM for a period of no less than 15 minutes. This device is to have a replaceable life cycle of no less than five years.
14. Solar powered supplementary power assist is requested as an optional feature but is not a mandatory requirement.

3.1.1 COMMUNICATIONS FEATURES

The TVM shall communicate in real-time with the CDS through a secure communications interface to send and receive data including, but not limited to transactional information, and event (alarm and maintenance) status alerts. The Contractor is responsible for the data integrity and confidentiality of all transmitted data. The network connectivity shall be positioned in a manner that creates the best user experience and platform flow. All communications between the TVM and CDS will be via a hardwired connection. The capability to add a modular cellular modem will be possible if requested by BJCTA at locations that do not have a hardwire network connection.

3.1.2 ENVIRONMENTAL FEATURES

All equipment and hardware to be supplied shall be constructed to meet the MIL 810 Standards for harsh operational conditions found in the transit environment. All Contractor-provided on-board and wayside equipment shall operate properly under these minimum environmental conditions encountered on-board the vehicles including conditions pertaining to temperature, humidity, dust / dirt, power variations, shock, vibration, altitude, and electro-magnetic or radio frequency interference (EMI / RFI). In addition to the climatic conditions, the equipment will also be subjected to harsh environmental factors normally found in the operation of a transit vehicle, transit maintenance yard, transit stop, or route, including, but not limited to car, truck and bus emissions; industrial exhausts; industrial cleaners; gasoline and car lubricants. All equipment housings shall be waterproof and dust-proof. The Contractor is responsible for ensuring that the proposed System works

accurately and reliably in such an environment including providing the necessary equipment and climate controls to ensure proper functioning.

TVM enclosures will be rugged and function under harsh environmental conditions including direct sunlight, moisture, dust/grit/sand, humidity, high winds, electrical storms, exposure to urban environment, and the range of elevations and altitudes in the Birmingham region. The TVM and other related equipment will operate and not suffer any degradation in performance under the following environmental conditions:

1. Ambient operating temperatures of +10° F to +120° F at 95 percent non-condensing humidity
2. Thermal shock up to 30 degrees Fahrenheit in 1-hour, non-condensing
3. Relative humidity: 5 to 95 percent, non-condensing
4. Other operational conditions: water spray, industrial cleaning solvents, and mud on system components from cleaning floors and walls.
5. Water exposure to be directed away from the internal components via water gutters and seals integrated at the door and any other access point.
6. Cold: Internal temperature management is to be assisted by a thermostatically controlled internal heater operational at a threshold turn-on temperature of 35° F with a tolerance of +/- 3.0° F. The heater upon threshold enablement must operate within a temperature band of +/-5.0° F. The heater is not to exceed 1,500 watts.
7. Hot: Internal temperature management is to be assisted by a thermostatically controlled fan which circulates air inside the TVM. The fan shall be programmed to be switched on, should the internal TVM temperature reach above 95° F +/- 3° F.
8. A durable/flexible and vandal-resistant sun shield will be provided that may be placed on or detached by BJCTA staff on the TVM color display (above the display). The shield material should be durable fabric that is water resistant and would cover up to no less than 60% of the display screen, the shield can be retracted when it is not required due to direct sun light exposure.

3.1.3 MECHANICAL FEATURES

The TVM shall be designed in a manner that is suited for a permanent outdoor top- sheltered placement and use environment. The design should support under normal outside use conditions, a minimum 15-year life cycle before replacement. (It is acceptable for individual internal and serviceable components to have a lesser life cycle expectancy). BJCTA desires that all components specified and integrated within the TVM by the Contractor and will be available for the duration of the TVMs expected life cycle of four (4) years, and free of obsolescence for ten (10) years.

1. Cabinet constructed materials shall be made of 11-gauge steel or similar with a vandalism/graffiti resistant surface finish (Power coated with color approval by BJCTA).
2. Cabinet shall be in the range of the following dimensions:
 - a. 70 inches high
 - b. 18 inches wide
 - c. 12 inches in depth
3. Cabinet top will have an anti-trash/trash resistant sloping top design of 10 to 12 degrees of either front to back or back to front.
4. External air ventilation access ports shall be kept to a minimum to prevent vandalism and water and foreign debris penetration.
5. Forced air ventilation flow designed for cooling and optional heater operation in hot and cold weather.
6. Door opening shall trigger reasonable illumination of the interior working components of the machine for easy maintenance and servicing.
7. Multiport front door access locking system highly resistant to vandalism. The controlled locks to implement levels of security to separate maintenance and revenue servicing. High security locks and keys shall be furnished and are subject to the review and approval by BJCTA. The Contractor shall provide ten (10) sets of keys for the TVMs, and all keys shall be uniquely numbered.

8. TVM shall be a self-contained machine complete with its own cabinet and mounting stand or base and shall be designed to be securely bolted to a concrete surface.
9. Integrated LED (Light Emitting Display) top side of the TVM display to display a BJCTA generated user-defined message that shall be triggered by a user-defined event, e.g., “Out of Service”, “In Service”, “Welcome”, etc. to communicate real-time dynamic user information messages. (Sufficient to display no less than 16 characters with scrolling feature).

3.1.4 TVM SYSTEM PERFORMANCE REQUIREMENTS

The TVM is to be Designed/Supplied in line with “State of the Art” vending machine operational performance standards that meet at minimum, the following requirements:

1. The TVM shall be capable of being operated at the specified performance levels, stored, and maintained without impairment resulting from the natural or induced environmental conditions within which area BJCTA shall use or store the equipment.
2. The TVM finish, graphics panels, and all external surfaces, including lettering, maps, and other information displayed on the equipment shall be highly resistant to ultraviolet radiation and airborne contaminants. Airborne particulates shall not affect the operation of the TVM (Installing a serviceable air filter is acceptable and desired to reduce foreign contaminants within the TVM).
3. Ticket vending machines, including coin and bill/note acceptance functions, shall meet either the Mean Cycle Between Failure (MCBF) or Mean Time Between Failure (MTBF) criteria listed below, whichever occurs first:
 - a. MCBF of 6,000 cycles (7,500 to 8,000 MCBF preferred)
 - b. MTBF of one failure per TVM per forty-five (45) days, calculated as an average of all machines in service over a period of ninety (90) days.
 - c. Cycles shall be defined as one complete fare payment transaction (Coin, Note, Trade-in or Bank card). This would include all required actions from fare media selection to the completion of the ticket issuing transaction
 - d. The measures MCBF and MTBF shall be the average for the combined units per equipment type in revenue service.
 - e. If a specific TVM is documented to have failures 20% higher than the remainder of the combined units in operation within the first year of service, it shall be required that such machines be replaced and or completely refurbished by the Contractor to achieve the expected MCBF.
4. In the event a hard or soft reset of a TVM becomes necessary, the TVM shall recover in less than 120 seconds.
5. A user-initiated transaction of any type shall be performed in under 90 seconds.

3.1.5 USER FUNCTIONAL FEATURES

The TVM’s shall be of one type having compliance to the requirements set forth by the Americans with Disabilities Act (ADA) accessibility guidelines for reach, access, signage and Braille and in accordance with the U.S. Access Board’s Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG). All operable controls shall be on the front vertical plane of the equipment and shall meet the requirements of the ADA in effect at contract NTP. The Contractor shall submit for review and approval during the design review process, descriptions and drawings of how the TVM shall achieve ADA compliance with the following:

1. ADA: Each TVM must be within U.S. ADA Standards for Accessible Design compliance per the 2010 revised accessibility or latest. (I.e., each TVM must support audio announcement, brail, color coded access bezels, viewing font size and in full compliance with required machine interface height and general dimensions.
2. Languages: The TVM will have a minimum of two languages supported; (U.S. English and Castilian / Formal Spanish).
3. Display: At least 9" Color " diagonal viewing area, non-glare rated at a minimum illumination sufficient to allow viewing in near-direct sunlight exposure. Display brightness/lumens shall be controlled by a photo-sensor to detect sun exposure and or nighttime reduced ambient light exposure.

4. The ISO/IEC 14443 Reader shall read the smart card presented in the active field by no less than 5.0cm or 2.0 inches in distance from the card's surface to the TVM's reader surface (parallel to each other).
5. The GUI operational interface must have no more than a three-step process to access any of the features/functions of the machine used by the public.
6. The TVM shall include controls on the front panel to toggle the display and the audio message system. The messages and audio are to have select ability between English and Spanish. The TVM screen messages and audio is to default to English. The Contractor shall verify the proper language usage in both the audio and text files. The Contractor shall submit to BJCTA for approval information on the patron messages during the design review.

3.1.6 SECURITY AND SAFETY FEATURES

The TVM shall be equipped with adequate security features to minimize break-ins through features and methods of deterrent, and to assist BJCTA with accurate time/date stamped information in case of an actual TVM unauthorized access event. The TVMs may be assisted by BJCTA provided CCTV and/or security cameras are available and active on the platforms.

The Contractor shall ensure that data confidentiality and integrity is maintained, and that access is controlled to all application programs, data, network, the operating system and its commands, activities and other resources. Access requests shall be validated each time an individual attempt to log on to the system. Access shall be denied if the user does not have authorized access to that requested activity, function, or resource.

The Contractor shall conform to all North American fare collection security standards and guidelines (e.g., APTA). Account lockouts must be maintained in a System log and reported daily. To assure BJCTA security passwords shall be stored and transmitted in encrypted format and shall be stored in non-viewable field and not printed on any reports. Passwords shall have expiration dating so that the FCS can require them to be changed on a regular basis.

The Contractor shall recommend other security features as may be deemed appropriate, based upon system risks and exposures they assess. The security features will include but are not limited to controlling access to databases by major group names as well as user ID and providing time of day limitations by individual user ID. These parameters would be viewable and set only by the System Administrator and would be changeable as required. The System Administrator shall also have the ability to change the security features including, but not limited to, the ability to add, change and delete user IDs, access rules and resource entities, and reset passwords.

The system shall automatically execute all site-specific configuration parameters required to start up and enter the operational mode of the application software upon system initialization. The operational mode of the software environment shall prevent operators from exiting the FCS application software to access the operating system or to any other software not part of the FCS.

The Contractor shall conduct an analysis of security features of the system to be provided and notify BJCTA of any potential exposure in system design. A System Security Plan shall be developed and presented to BJCTA for review and approval at design review. This System Security Plan shall include password systems and administration, communications security measures, operating systems and program security, network security, access controls and data encryption and data integrity methods. The Contractor's System Security Plan shall document its compliance with the following security requirements:

1. The TVM shall be designed to ensure the safe, reliable and simple interface with patrons and maintenance/servicing personnel. The equipment shall provide patrons and service personnel with displays, graphics and signage, controls and mechanisms, which are simple to use, easy to understand, and conveniently located.
2. High decibel alarm sounds when shock or vibration is detected.
3. Real-time alarm notifications to CDS conveyed through the network identifying the unique ID of the machine and type of alarm triggered.
4. Electronic ID tracking access for any removal or ticket replacement, coins and dollar/note modules. Support for any door open access via ID tracking (Unauthorized access without Electronic ID validation will trigger the high decibel alarm).
5. Convenient and secure smart card ID employee access control with four-digit PIN
6. Issuance of a printed receipt upon user's request for Bank Card transactions and Ticket/Card fare value added or Trade-in for security inspection purposes.

7. All data encryption is to be based on the U.S. NIST 197 open standard which implements Advanced Encryption System (AES) at 128 bits. This encryption method will transcend the TVM, validator Mobile Device communications, EMV Bank Cards and all electronic smart card media.
8. The TVM shall be PCI-DSS and EMV compliant.

3.1.7 FARE MEDIA

The fare distribution Application Programming Interface (API) shall support the sale of all available fare media and fare products and shall be utilized by all fare distribution devices and systems. The Contractor shall supply sufficient fare media and supplies to fully stock all TVMs upon final installation and to support the BX service for at least six (6) months after its “Go-live” date per the official BX schedule. Any quantity of cards/tickets or receipt paper used by the Contractor prior to the go-live date for the purposes of testing, sample issuance, system acceptance, etc., are the responsibility of the Contractor and are not to be subtracted from the initial spares quantity.

1. Receipt Paper that fully complies with the TVM supplier’s requirements.
2. Delivery schedule of cards/tickets to be delivered throughout the term of Contract shall be finalized during Design Review.

3.1.8 CASH ACCEPTANCE

The TVM shall have an integrated, easily serviceable coin acceptor/verifier which, includes a coin insertion mechanism and a verifier to accept only the specified, approved Federal Reserve U.S. coins. The coin acceptor/verifier shall identify valid acceptable coins with at least a +99.9% accuracy. The coin acceptor/verifier shall contain a coin escrow to return coins inserted by the customer if the TVM transaction is cancelled before a ticket or card product is dispensed.

The TVM shall also have an integrated easily serviceable bill/note acceptor/verifier which includes a note insertion mechanism and a verifier to accept only the specified approved Federal Reserve U.S. notes. The note acceptor/verifier shall identify valid acceptable notes with at least a +99.9% accuracy. In addition to the above general cash acceptance criteria are the following requirements for coin and note acceptance.

3.1.8.1 COIN ACCEPTANCE

Coins are defined as U.S. Coin currency.

The TVM shall have the following characteristics with respect to coin acceptance:

1. Include a coin vault having sufficient revenue service capacity to require servicing no more than once every 48 hours (Under normal daily use).
2. Use the latest validation technology to accept and validate coins and minimize fraudulent coin acceptance.
3. Include a coin acceptor/validator that shall have a mechanism to return to the customer unacceptable notes.
4. Have separate access to cash and maintenance compartments.
5. Include a double-walled cashbox and an armor-plated safe for resistance to theft.
6. Include a sealed, self-contained and motorized compact coin channel and selector.
7. Enable remote detection of physical attack.
8. Include money storage (coin and note) that shall at a minimum be EN 14450 Level 2 certified.
9. Have ticket and coin return bins that shall be illuminated with LED lights.
10. Include a coin acceptor/verifier that shall be equipped with a coin return capability.
11. Have a coin acceptor/verifier that shall accept the following coin types:
 - a. Nickels
 - b. Dimes
 - c. Quarters
 - d. Sacagawea, Susan B. Anthony (SBA) and the Presidential dollar

12. The coin handler is to return change in the amount not to exceed \$10.00 for coin or note transactions.
13. Coin acceptor/handler and or its controller shall monitor the status of the coin vault/tubes to determine a “nearly full capacity” or “Nearly Low Coin Tube” or Jam indication for an early alert message to the CDS for immediate revenue servicing of the coin handlers and or vault/tubes in advance of a no-coin type indicator, in addition:
14. The quantity of coins remaining in the hopper will be tracked by the TVM software (and sent up to the CDS within 120 seconds of new data) and by the hopper’s low-coin sensor providing sample notification to maintenance personnel as to when refilling is required.
15. The coin and note/bill insertion shutters shall open automatically when vaults are inserted and close automatically when the vaults are removed.
16. The coin and note/bill vaults shall be self-locking and self-sealing, so that when they are removed from the TVM, they cannot be opened locally or re-inserted in a TVM without emptying the contents of the vaults through authorized means.

3.1.8.2 NOTE/BILL ACCEPTANCE

Each TVM shall be equipped with a note processing unit that includes a note validator/verifier, bill escrow, bill vault, and the associated electronic assemblies. The note processing shall have a first insertion bill acceptance of greater than or equal to 95%. The note processing unit shall also meet the following requirements:

1. Accepts and validates notes utilizing the latest validation technology to minimize fraudulent note acceptance.
2. The note acceptor/validator shall have a mechanism to return to the customer unacceptable notes.
3. The bill vault having sufficient revenue service capacity to require servicing no more than once every 48 hours (Under normal daily use).
4. The note acceptor/verifier shall accept the following note denominations:
 - a. \$1
 - b. \$5
 - c. \$10
 - d. \$20
5. Note acceptor/handler and or its controller shall monitor the status of the bill vault to determine a “Nearly Full Capacity” or Jam indicator for an early alert message to the CDS to advise of immediate revenue servicing of the note handler/bill vault.

3.1.9 DATA COLLECTION

The TVMs will generate, store and transmit a discrete data record for each transaction performed. Each transaction record will be unique and will include the following information at a minimum: date and time; device ID; station/location ID; card/account number; transaction type; cards sold; stored value or fare products loaded; fare category; transaction value; payment type and amount; and transaction result.

The TVMs will maintain local data records in non-volatile memory in the event that communications to the CDS is unavailable. The local records will only be removed when verification of database storage of each record is received from the CDS. Any offline transactions will be recorded as such as part of the transaction data, so that transactions can be easily identified and tracked. Once communications are online, all offline transactions and events will be immediately sent to the CDS for processing.

3.1.10 TVM CENTRAL DATA SYSTEM (CDS) REQUIREMENTS

The TVMs will communicate in real-time with a Central Data System (CDS) through a secure communications interface to send and receive data including but not limited to:

1. Monitor and bi-directionally communicate with each individual TVM and validator including, but not limited to sending alerts for any faults or failures of any individual TVM or validator.

2. Allow BJCTA to modify and change operation parameters (fare tables, ticket types, user interface, messages to patrons, etc.).
3. Reset alerts and sensors remotely
4. Provide the capability to download software configuration upgrades.
5. Include clearing functionality for credit card transactions
6. Collect and store transaction data
7. Provide personnel, operational, maintenance, transaction and financial reports needed to efficiently monitor and manage the TVMs; and provide data back-up and recovery.
8. Have the option to support image/video data upload and download in compressed formats such as MPEG and JPEG.

3.1.11 USER GUI REQUIREMENTS

The TVM will provide the following core functions to support customer operations: sell one or more new cards in a single transaction where the associated transit accounts are initialized only (no value) or are loaded with value and load stored value and all available fare products to previously issued cards. For all transactions, the TVM shall display a progression of screens to a customer that will be easy to understand and intuitive.

The CDS interface for the TVM customer interface shall provide the following functions:

- Configuration of screen views
- Colors and operating processes
- Creation of ticket types and ticket layouts
- Import of prices and relational tables
- Configure general BJCTA system maps and user information

The CDS shall be able to perform the following required functions:

1. Obtain status information (cash status, paper supply, card magazine, etc.)
2. Transfer and install fare updates
3. Generate sales information
4. Set up users and assign roles
5. Map and implement role-based actions in accordance with defined hierarchies (e.g., SMS to the service engineer when paper runs out)
6. Perform remote maintenance access
7. Perform software updates
8. Conduct problem analysis
9. Provide on-line access
10. Summarize service removal (status of data queries transferred to the background software); Cash data (cash status of the ticket machine components coin carousel, coin hopper, bill acceptor and coin vault)
 - a. Provide sales data for the TVM(s) within a specified period
 - b. Provide sales data on ticket level
 - c. Summarize device-related events (e.g., alarm messages, paper empty or print problems, etc.).
 - d. All reports shall be able to be issued in various export formats and transferred to commonly used software tools. Data exchange between the CDS server and the TVMs shall be carried out automatically. Recurring events such as service calculations at the end of the month shall be able to be set up once and be carried out automatically.

3.1.12 REPORT GENERATOR

The CDS shall allow the creation of various independent, freely selectable reports (e.g., line analyses, type statistics etc.) with export options to subsystems whereby the statistics requested are provided in full through the CDS software. The reports shall be defined and or pre-approved during the design review by the BJCTA staff.

3.1.12.1 STANDARD REPORTS

The Contractor shall deploy a reporting system interface with other systems as necessary for the generation of canned and custom reports. Canned or predefined reports will include, but are not limited to:

1. Ridership reports
2. Sales reports
3. Customer service reports
4. Maintenance reports
5. Device and system performance (KPI) reports
6. Financial reconciliation reports
7. Financial settlement reports
8. Exception reports
9. Fraud detection reports
10. Inspection reports

3.1.13 MAINTENANCE AND SUPPORT

The TVM shall be designed in a manner that provides for easy access to reloadable components and for easy component failure replacement. The goal set forth is to minimize downtime as a result of a failure reported, to no more than 60 minutes from notification by CDS or BJCTA. General preventative maintenance should not take more than 30 minutes. Ticket and receipt paper reloading and cash retrieval should not exceed 20 minutes once door is open.

1. Low maintenance service and quick site visits to meet BJCTA serviceability time requirements
2. Generates audit tickets/CDS reporting to follow module replacement
3. Easy access to any serviceable air filters

3.1.14 SPECIAL FEATURES AND CONSIDERATIONS

These are features/components/devices/media to be provided by the Contractor:

1. A Wooden or Heavy Canvas covering to protect the TVMs during the initial install period and until the system “Go-live” date. This covering must be non-descriptive and capable of mitigating vandalism and damage to the equipment. It shall have a method to secure it in place preventing easy removal by unauthorized persons.

3.2 ON-BOARD FARE PAYMENT VALIDATOR

The Contractor shall install and test all on-board fare payment validators and associated onboard equipment on each bus such that the reader will be in proximity to the front door and will be positioned so that a customer may easily present fare media for payment upon boarding the bus. The onboard equipment, including bus validators and driver displays will be designed to operate reliably from a vehicle’s direct current power source, which will be either 12 volts or 24 volts of current (VDC). The Contractor shall provide and install all cabling and hardware necessary to properly install and secure the equipment in its planned location. The validator will be designed and mounted so that it can be adjusted for optimal operating and viewing angle, while minimizing sun glare and causing window screen glare impacting safe bus operations. After adjusting, the mounting hardware will not allow the validator to shake or become loose as a result of shock and vibration encountered during normal bus operation. The mounting adjustments will not require special tools. An anti-virus antibacterial LCD protective film shall be installed on all validator screens and selection buttons. The film shall be effective against 99.9% of viruses and bacteria on the surface and be certified by the Society of Industrial technology for Antimicrobial Articles (SIAA) for the film’s effectiveness against germs.

The CAD/AVL integration API will be utilized by the on-board validator to exchange information with the CAD/AVL system and support single sign-on and the capture of geo-location information. The design and mounting will be compliant with all applicable ADA requirements and will be approved by BJCTA. If the on-board fare payment validator is purchased from a third-party, the Contractor shall deliver the latest generation device manufactured by the Original Equipment Manufacturer. If a newer device is released following design review, but prior to device procurement, BJCTA shall have the option to upgrade to the newer device.

3.2.1 POWER FEATURES

The validator will receive 12 or 24 VDC power through a circuit breaker assigned specifically to the validator. The onboard equipment will be protected against damage or data loss and will include adequate filters and components to regulate the bus-supplied voltage and prevent power spikes and noise. Provisions will include elimination of power fluctuations caused by fluorescent lights, coach alternators, air conditioning units, radio communication units, and other system characteristic of a bus environment. External converters or power conditioners may be used with BJCTA approval.

When bus power turned off, the validator will remain powered for a configurable time to allow completion of transmission of any and all data files, transaction records, and fare tables.

3.2.2 ENVIRONMENTAL FEATURES

All equipment and hardware to be supplied shall be constructed to meet the MIL 810 Standards for harsh operational conditions found in the transit environment. All Contractor-provided on-board and wayside equipment shall operate properly under these minimum environmental conditions encountered on-board the vehicles including conditions pertaining to temperature, humidity, dust / dirt, power variations, shock, vibration, altitude, and electro-magnetic or radio frequency interference (EMI / RFI). In addition to the climatic conditions, the equipment will also be subjected to harsh environmental factors normally found in the operation of a transit vehicle, transit maintenance yard, transit stop, or route, including, but not limited to car, truck and bus emissions; industrial exhausts; industrial cleaners; gasoline and car lubricants. All equipment housings shall be waterproof and dust-proof. The Contractor is responsible for ensuring that the proposed System works accurately and reliably in such an environment including providing the necessary equipment and climate controls to ensure proper functioning.

Validator and all onboard equipment shall operate and not suffer any degradation in performance under the following environmental conditions:

1. Storage temperature: -22 degrees to +150 degrees Fahrenheit
2. Operating temperature: -15 degrees to +140 degrees Fahrenheit
3. Thermal shock: Up to 50 degrees Fahrenheit in 1-hour, non-condensing
4. Relative humidity: 5 to 95%, non-condensing
5. Airborne dust: up to 180 micrograms per cubic meter, with iron and salt particles
6. Other operational conditions: water spray, industrial cleaning solvents, and mud on system components from cleaning vehicle floors and walls
7. The onboard equipment will meet the following flammability requirements: UL 94 V-O and UL HB

The validator housing will be resistant to corrosion, abrasion, scratching, impacts, and vandalism, and withstand bus cleaning and disinfectant materials. Validator housing color and finish will be such that it minimizes reflection and is highly resistant to fading, cracking, and peeling. The corners will be rounded, and there will be no exposed bolt heads, nuts, sharp edges or cracks on outside surfaces. The validator display will be flush mounted in the housing. Covers on the validator housing for accessing modules and subassemblies will be secured with mechanical locks and keys that are not readily duplicated nor readily available to the public, and uniquely serialized.

3.2.3 COMMUNICATIONS FEATURES

The validator will communicate with the CDS through the mobile data router. The validator will include an Ethernet port that enables connection to the mobile data router and other devices as necessary. The validator will have an embedded modular cellular modem that supports communication over 3G/4G data networks on all major US carriers. The cellular modem may be used when a mobile data router is not available.

The validator will have an embedded Wi-Fi communications module to enable communication over Wi-Fi networks, including the sharing of data with other onboard systems, and download of larger lists and software updates. The Wi-Fi communications module may be used in instances where a mobile data router is not available. If additional communications components are required to enable reliable communications, all such components will be mounted in a secure and sturdy enclosure, with the location and function approved by BJCTA.

3.2.4 GENERAL MECHANICAL FEATURES

The validator shall be designed in a manner that is suited for a permanent indoor placement and use environment. It should have a minimum 10-year life cycle before replacement (Individual internal components may have a lesser life cycle expectancy). The validator should also have the following general mechanical features:

1. Read/Write and Validation of an ISO/IEC 14443 compliant contactless card
2. Designed to support Near Field Communications (NFC) per the latest ISO/IEC 18092 standard
3. Each validation transaction to be assigned a unique ID number with transaction data and sent to the CDS.
4. The actual validator cabinet to be constructed of high-impact plastic with a protective metal bumper frame.
5. Cabinet dimension shall be in the range of the following dimensions:
 - a. Height: 12.0 inches
 - b. Width: 6.0 inches
 - c. Depth: 5.0 inches
 - d. Weight: less than 60 lbs.
6. Protective bumper frame shall extend no more than 1.0 inches from any edge of the validator cabinet
7. Graphics at the smart card validator active touch area shall be clearly marked with BJCTA provided pre-approved graphics.
8. The active touch area and labeling graphics shall not exceed the ISO-7810-1 "ID1" dimensions by more than 10% nor be any smaller than the dimension of an ID1 card dimension.
9. Each validator shall be pole mounted in the bus and shall be designed in a manner to comply with the U.S. American with Disabilities Act.
10. Each mounting pole shall be constructed of 10-gauge, 304 stainless steel with a surface finish resistant to vandalism/graffiti (powder coated if color is pre-approved by BJCTA).
11. Each mounting pole shall be no less than 6.0 inches in diameter.
12. The validator shall store no less than 500 complete transaction events in case of a communication outage.
13. The validator shall have an LCD display no less than 2 inches by 4 inches and visible with indirect sunlight and nighttime viewing.
14. Having no less than three auditable (adjustable) tunes at a sound level of no less than 65db.

3.2.5 FUNCTIONAL FEATURES

The validators shall be of one type having full ADA compliance and shall satisfy following functional requirements:

1. The validator shall read and write multiple smart cards types per the Fare Media section of this document and perform a validation of each card presented in the active field.
2. Pass back usage shall be supported allowing for the 10 Ride and value-based customers to retouch allowing additional customers (family & friends) to gain system access. Each touch shall deduct one-ride value.
3. The validator shall read the smart card presented in the active field by no less than 5.0 cm or 2.0 inches in distance from the card's surface to the validator's surface (parallel to each other).
4. Card validation shall be performed once a customer brings card into the active field, as follows (Contractor may execute this validation transaction sequence differently):
 - a. Initialization of ISO/IEC 14443 communications protocol (Verify the CID)
 - b. Mutual authentication of the security keys (Does the card belong to the read)
 - c. Issue patron audio signal that card was read.
 - d. Verification Application executed
 - e. Read card Unique ID
 - f. Read card stored date (If stored Value)

- g. Issue patron message (completed or failure) to validator's display with audio tone
- h. Terminate validation transactions
- i. Report transaction to CDS if no other card in the active field activity occurs within 3 seconds of the previous transaction.

3.3 HANDHELD TICKET INSPECTION DEVICE (HTID)

Customers will purchase fares prior to boarding a BX bus and have their fare validated on the BX bus. This procedure is being implemented to improve upon-bus boarding time. Since the BX will be a non-gated, non-farebox system, the card/ticket validation step is for the most part based on the "honor system." To sustain the honor system and BX fare revenue, it is essential to randomly inspect that customers have a valid ticket to ride. Transit police, outsourced police/sheriff, or outsourced security inspectors per BJCTA policy will perform inspections. Each inspector will be equipped with a HTID capable of reading all fare media accepted on BX buses. The fare media shall be visually inspected and scanned to ensure the fare has been paid. The Contractor should specify any additional capabilities of their HTIDs (e.g., issue fines, citations, etc.)

The Contractor is to supply HTIDs, including charge stations operating from 117 VAC, to sufficiently staff the fare enforcement inspectors on the FCS. These units shall only be repaired and or refurbished by the Contractor or its supplier. Therefore, no repairs shall be done in the field outside of replaceable batteries. The Contractor will supply spares (See Spares Part 3).

3.3.1 FUNCTIONAL FEATURES (HTID)

The HTID shall, at a minimum, have the functional features:

1. Constructed from high-impact plastic, resistant to a 36-inch drop onto a concrete surface, and able to protect the device from any form of failure or damage.
2. Have at least an integrated daylight viewable 2-inch diagonal LCD color display.
3. Integrate a keyboard/control pad capable of supporting all inspection features specified.
4. Have replaceable Ni-Cad or standard Lithium-Ion batteries capability.
5. Have Wi-Fi internet and Bluetooth wireless connectivity.
6. Communicate bi-directionally with the validator and or TVM.
7. Have a Wi-Fi connection at the platform stations permitting the downloading and uploading of data, configuration and general image and data information to and from the HTID.
8. Include an integrated color camera of no less than 5 mega pixels.
9. Operate on rechargeable batteries with an operational cycle duration of approximately 12 hours on a full charge
10. Include an off/on power switch, as well as, a card/ticket inspection read enable switch.
11. Provide a minimum of three audible tones to signal that an inspection transaction has occurred, passed or failed.
12. Weigh approximately one pound and will have cabinet/case dimensions of approximately 6 inches in height, 3 inches in width and 1 inch in depth.
13. Include an integrated fully compliant ISO/IEC 14443 reader (PCD) that shall accept and process all fare media.
14. Have Sufficient memory/storage to hold no less than 1,500 inspection transactions before an uploading event is performed to the CDS system.
15. Include 4g or5g cellular mechanism to communicate if Wi-Fi connections are not available.
16. Include an integrated or remote portable wired or Bluetooth connected printer unit.

3.3.2 INSPECTION FUNCTIONS

The HTID will not have the ability to write data to a customer's fare media and therefore, will only read the media to determine if it has sufficient fare and that card/ticket was validated. The HTID shall have at a minimum the following inspection functions:

1. Initialization of ISO authentication of the security keys
2. Issue inspector audio signal that card was read.
3. Verification Application executed.
4. Read card unique identifier
5. Read card stored date (If stored value)
6. Issue inspector message (completed or failure) to HTID's display with audio tone
7. Terminate validation transaction
8. Report transaction activity file to CDS
9. Print a receipt, transfer or one ride/one day paper ticket

3.3.3 INSTALLATION

The Contractor shall install all mobile fare inspection and validation devices at designated locations. BJCTA will provide the necessary power and communications at the device installation locations. The Contractor shall provide and install all required cabling and hardware necessary to properly install and secure the equipment in its planned location.

3.4 POINT OF SALE (POS) MACHINE

The POS will be a modular device and will support multiple configurations. The POS shall enable service agents/operators to issue and upgrade both smart cards and magnetic tickets/cards; print sales receipts and print on magnetic ticket stock the time/date and type of fare product information.

3.4.1 POWER FEATURES

The primary source of AC power will be from Alabama Power whereby; the POS machine must operate within all power tolerances established by Alabama Power.

The general environmental, operational, storage and security requirements:

1. 117 VAC/60 Hz single phase at 15 Amps maximum (1,775 watts) at a VAC tolerance of +/- 5%
2. Storage Temperature: -20° F to +150° F
3. Operating Temperature: 32° F to +120° F
4. Humidity (Operation): 10% to 95% (non-condensing)
5. IP 54 Rated
6. Vibration Testing: 3-axis testing, 24 hours
7. Electromagnetic Interference: FCC, Part 15 A and B
8. Markings: shall meet EN 12414-compliant
9. Money Storage: minimum EN 14450 Level 2 certified
10. Fraud-resistant providing user unique recorded ID login-in
11. Separate access to cash and maintenance/service compartments

3.4.2 FUNCTIONAL FEATURES (POS)

The POS units shall interface into the CDS. A set of reports are to be supported that maintain card type, quantity, encoded value, failed or rejected cards. However, the specific report definition requirement shall be approved at the design review by BJCTA. Other functionality requirements include the following:

1. Allow agents to issue and upgrade smart cards
2. Touchscreen display for ease of use
3. Prints receipts and audits tickets
4. Batch mode for bulk issuance of magnetic and smart cards
5. Color touch screen Printer Encoder Module
6. Customizable with a smart card encoder, limited Use smart card or magnetic dispenser and cash drawer.
7. Supports individual card issuance and batch mode
8. Password-protected login for security
9. Roll-fed printer for receipts and sales reports

3.4.3 COMMUNICATIONS FEATURES

The POS will communicate with the back office via a secure Internet connection to send and receive transaction information, event and status information, clock synchronization information, positive/negative lists, and configuration parameters.

All communication between the back office and the POS will be via a direct Ethernet connection or cellular broadband data modem. For all transaction requiring back office access to a transit account, or establishing a new account, the POS will communicate with the back office in real-time using the Contractor provide APIs.

If the POS missed a scheduled communication with the back office, upon restoration of communications, the POS will automatically initiate communications. Each POS will receive power from a dedicated Uninterruptible Power Supply with sufficient battery capacity to operate all components of the POS for a minimum of 10 minutes.

3.5 MOBILE TICKETING APPLICATION

The mobile ticketing platform must be account-based and deployed as a Software-as-a-Service, cloud-hosted platform that grants BJCTA license to utilize the platform to deploy a turnkey mobile ticketing solution that can expand to serve all ticket sales options across all rider types. The system shall be managed by the Contractor and shall include updates that will be available to BJCTA on a regular basis. The system must be capable of handling both visual and electronic scanning verification methodologies.

The solution shall be extendable to other token types including, but not limited to ISO 14443 smartcards, paper barcodes, and extensible to open payments using contactless c-EMV credit cards. The solution shall also facilitate integrations with mobility services companies. The platform shall guarantee 99.9% uptime and shall be a multi-tenanted platform deployed per BJCTA's brand guidelines and enabling BJCTA to autonomously manage the platform and direct engagement with its customers.

3.5.1 MOBILE FARE PAYMENT SYSTEM DESIGN

The solution shall be cloud-hosted, account-based, and deployable as a Software-as-a-Service platform. It shall be flexible and easily scalable for growth as more customers download the app, as well as for additions of new fare products, group, or individual customer types and profiles.

All Graphic User Interfaces, fare media, and public communications within or concerning the system shall meet the BJCTA brand guidelines. The ability to link with local bike share, scooters, and transportation network companies such as Uber and Lyft are desired.

The website and mobile applications will be built using the latest design and e-commerce best practices, including dynamic design via HTML5, AJAX, and server-side programming languages. The development tools and design for the website will be subject to BJCTA's review and approval during design review. The website will use responsive design optimized for desktops, mobile apps, and tablets.

The customer mobile application will include enhanced functionality, including the ability to create and use electronic or digital fare media from the user's mobile device to pay by interacting with the Contractor's provided validator.

3.5.2 MOBILE TICKET SYSTEM FEATURES

The mobile app shall be available for Android and iOS and support at least the last two major versions of those operating systems. For the duration of the contract, the app shall always be functional on the latest version of the Operation System (OS) for each supported platform. If an update is required to make the app fully functional on a new version of a supported OS, the update shall be available to customers on the day of the OS launch and the Contractor will notify BJCTA of updates so it can inform users.

The app shall be downloadable for free and from the official app store of the supported platforms and will be made available without using BJCTA resources or equipment for the duration of the contract. It shall be possible for the app to link to online content outside of the app and shall meet the ADA accessibility standards. The app shall meet Payment Card Industry Data Security Standards (PCI-DSS).

The mobile app will support password best security practices, including but not limited to minimum password length, required use of letters/numbers/symbols, and forced password reset after configurable time period or on-demand. Final password security requirements will be determined during design review.

The mobile app will support the registration of multiple fare media under a single customer account. Registered customers will be able to assign and edit nicknames within the app, which will be used to differentiate media registered to the same customer.

A customer shall be able to purchase a single-use ticket without requiring account registration and shall be able to register for an individual BJCTA mobile ticketing account in the app or online. Customers shall be able to purchase tickets before creating an account. The app shall support all types of BJCTA fare products and customers shall be able to view the full range of BJCTA tickets available to purchase in the app.

Customers shall be able to view tickets which have not yet been activated and have not expired and shall be able to view tickets which they have activated and are currently active. Device connectivity (either through Wi-Fi or a data plan) shall not be required to view purchased tickets of any status.

Customers shall be able to activate unused tickets stored in their ticket wallet and shall be able to activate multiple tickets at one time from one device. Tickets must be able to be activated while offline (no Wi-Fi or cellular connectivity).

The mobile app will allow registered customers to report a card lost or stolen. This action will immediately result in the associated fare media being blocked from further use. The app will allow registered customers to close a transit account and the operational policies governing the issuance of a refund will be defined during design review.

Registered customers will be able to view no less than 12 months of prior transaction history, showing all sales, usage and adjustment transactions.

The Contractor will supply a ticket validation solution for both visual and electronic validation, and seamlessly interface into all components of the FCS. The ticket validation solution will provide a means of preventing pass type tickets from being reused within a defined period of time and includes measures to prevent fraudulent use.

PART 4 - SPARE PARTS

The Contractor shall deliver with the equipment, all spare parts, special test equipment, and other special devices necessary to troubleshoot and repair the FCS. The Contractor shall provide a separate spare parts list with optional pricing in the System Price Table for individual spare parts identifying with specificity those parts that must be purchased from Contractor and those parts that may be procured from a third party. The Contractor shall supply spares modules for a term of not less than ten (10) years from the program scheduled "Go-live" date. The Contractor shall also provide a second source for manufacture

of all parts and spare equipment. The Contractor shall also furnish a list of other client properties using the installed system where hardware part exchanges may be feasible and should specify which identical hardware the reference properties utilize. The initial spare parts inventory shall be made available to BJCTA 's maintenance staff upon acceptance of the revenue collection system.

A review of the spare parts required to support the FCS shall be held during Design Review. The Contractor and BJCTA shall jointly review the spare parts listed in the contract and reallocate, delete, and add parts as necessary. If resubmittal of all or part of the Design Review package is required, the Contractor shall provide the revised documents within ten (10) days following completion of the formal design review meetings. The Contractor is responsible for maintaining on-site spare parts and supplying all special test equipment. If it becomes necessary during factory testing, field testing or in revenue service during the Warranty Period, the spare part must be replaced by the Contractor with a new part at no additional cost to BJCTA.

PART 5 – DOCUMENTATION AND TRAINING

All documentation must be written in a manner that is concise and to the point for easy comprehension and implementation and include as many illustrations and drawings as necessary to support the training and ongoing maintenance of the system. The documentation shall cover, in detail, the TVM, validators, HTIDs, Fare Media, CDS added transaction reporting events and installation procedures with illustrations. In addition, the training manuals shall be written in a manner that shall quickly and precisely convey the necessary information to both comprehend and implement the operational and maintenance aspects of this FCS fare collection equipment.

5.1 DOCUMENTATION

1. The Contractor shall provide a System Operation Manual and System Maintenance Manual implemented using U.S. English language. The System Operations Manual and System Maintenance Manual shall include Manufacturer's Standard documentation and reference materials, where appropriate.
2. The Draft System Operations Manual and Draft System Maintenance Manual shall be submitted for BJCTA's final review.
3. System documentation shall be provided in the following quantities:
 - a. Ten (10) complete System Operations Manuals printed and properly bound in three-ring binders or another equivalent.
 - b. Ten (10) complete System Maintenance Manuals printed and properly bound in three-ring binders or another equivalent.
 - c. Electronic copies of the System Operations Manual and System Maintenance Manual in PDF format on DVD discs and or on a virus free and file protected read only USB memory stick.

5.2 TRAINING MATERIALS AND INSTRUCTOR(S)

1. The Contractor shall provide an instructor who is experienced and qualified in the troubleshooting and maintenance of the TVM, validator, HTID and CDS hardware equipment and related software.
2. The Contractor's instructor(s) shall instruct BJCTA staff, instructors and technicians who will be responsible for maintenance of the equipment.
3. Maintenance technician training shall commence during the time when equipment is installed in, or at Agency facilities, including bus stations, transit terminals, and BJCTA maintenance facilities, to be coordinated with the BJCTA Program Manager no less than 30 days in advance on final installation.
4. The Contractor shall conduct troubleshooting and repair tests to demonstrate the competency of the training participants in the maintenance of the equipment at the completion of the training.
5. The Contractor shall prepare training materials as specified herein.

- a. Course Outlines. Course outlines with learning objectives shall be provided for each training course. The course outline shall provide a topic outline for each major operating function. Maintenance courses shall include a section devoted to system fault analysis and troubleshooting:
- b. Lesson Plans. A set of lesson plans shall be developed for each topic outline, and shall contain the following information: Lesson title, Lesson objectives, Training aids required, Sequence of Instruction.
- c. Training Aids. Visual aids shall be developed for each topic.
- d. Instructional Material. The primary source of instructional material shall be the applicable equipment operating and maintenance manuals. In addition, the Contractor shall develop, for each course, notebooks containing such additional drawings, descriptive information and procedures necessary to ensure that all learning objectives are met in an orderly and timely manner.
- e. Instructional Equipment. Training shall be conducted utilizing equipment that is identical to field equipment in normal operating condition. All operating equipment, tools, and test equipment needed for the training program shall be furnished by the Contractor.
- f. All System Training documentation (including presentations) shall be provided in the following quantities:
 1. Ten (10) complete System Instructional/Training Material Documentation and or Manuals printed and properly bound in three-ring binders or other equivalent. Inclusive of the following:
 2. Lesson Plans: A set of lesson plans shall be developed for each topic outline, and shall contain the following information: Lesson title, Lesson objectives, Training aids required, Sequence of Instruction.
 3. Electronic copies of the System Instructional/Training Material Documentation and or Manuals in PDF format on DVD discs and or on a virus free and file protected read only USB memory stick.

PART 6 – INSTALLATION

The Contractor shall furnish, install, configure, and connect all hardware and software for processing, displaying, communicating, and printing fare collection equipment data and information for security, maintenance, revenue, accounting, fare collection data analysis, and bank card transaction clearing purposes.

Installation shall include the hardware and software per the BJCTA installation plan. Installation shall be accomplished in a manner that is in conformance with all federal, state and local codes and occupational health and safety rules and regulations and shall be performed by licensed, insured and bonded Contractors.

1. All hardware and software of the FCS and their installation shall comply with the latest federal, state and local seismic requirements and the applicable requirements of the latest Building Officials and Code Administrators (BOCA) National Building Code.

The Contractor shall perform all manufacturers recommended testing on equipment and cables. All available equipment and communications paired tests shall be performed. All equipment configuration, management, and diagnostic functions shall be exercised and demonstrated as operational. Contractor shall supply acceptance testing checklists and documentation for all testing performed.

6.1 DESIGN REVIEW

The Design Review will be conducted to evaluate design progress, as well as the technical, functional, and programmatic adequacy of the design in meeting the requirements in the specifications. Design review meetings will occur in Birmingham with the Contractor project manager, lead engineer, and all relevant technical staff attending in person. The specific location will be identified by BJCTA, and a teleconference phone number will be available for remote participation where permitted. The Contractor shall submit a design review plan 30 days after Notice to Proceed.

At a minimum, the Design Review will include the following:

1. Assembly drawings for all Contractor-supplied devices, down to the Lowest Level Replaceable Unit (LLRU)
2. Electrical schematic drawings for all Contractor-supplied devices
3. Preliminary “as-built” drawings and prototypes for all device mounting configurations

4. Final system architecture drawings
5. Detailed software specifications for all back-office systems with software module descriptions in a narrative format and data flow diagrams to the lowest level of decomposition.
6. Detailed specifications for all Application Programming Interface (APIs) supporting frontend and back-office operations.
7. Detailed specifications for all system transaction formats
8. Detailed descriptions of all message formats and data elements for device and system events and alarms
9. Interface control documentation for all systems and subsystems
10. Complete data dictionary and detailed database design documentation, including all tables, views, and materialized views for all database schemas in the system, in electronic format
11. Complete list of user stories will be provided for any systems that interface with end-users, including internal and external end-users

The Contractor shall submit a Fare Collection System Design Report for BJCTA review and approval during Design Review. The System Design Report shall describe the fare collection system components, subsystems, functions, system interfaces, and user interfaces. This report shall include but be not limited to the following:

1. System Operations and Management
2. Fare Collection Management System
3. Fare Collection System Operations
4. TVM Report Generation
5. Components
6. Functions
7. Communications
8. Validator Report Generation
9. Components
10. Functions
11. Communications

6.1.1 ACCEPTANCE TESTING

All system components and subsystems will be tested individually and in integrated environments to ensure they meet all technical, functional, and performance requirements in these specifications. The Contractor shall provide all labor and materials required for system testing including, but not limited to fare media and bank cards, and all support services and facilities required to stage, inspect and test all hardware and software being supplied.

The Contractor will submit a draft inspection and test plan for City of Birmingham and/or BJCTA review and approval during Design Review and will submit a final inspection and testing plan to be used in connection with all inspections and tests described in this specification no less than 30 calendar days prior to start of any testing. Each inspection and test plan will include a schedule indicating the sequence of each test, where and when each test will take place. Each inspection and test plan will detail the number and range of tests, as well as the criteria for acceptance of each phase of testing. Each inspection and test plan will include performance testing such as load, stress, endurance, and spike testing for applicable devices and software that simulates peak ridership and transaction volumes over various time intervals.

All tests and inspections will be documented by the Contractor and monitored and signed off by City of Birmingham and/or BJCTA, or its representatives, as well as by the Contractor. Any and all hardware and software not passing inspection or test will be replaced, or otherwise corrected by the Contractor and retested. Prior to the start of any formal testing, the Contractor shall conduct “dry-run” testing to identify and resolve any issues that arise before formal testing commences. Successful completion of each phase of testing will be subject to BJCTA approval based upon on approved test criteria.

6.1.2 FACTORY ACCEPTANCE TEST

The Factory Acceptance Test (FAT) shall demonstrate that the system components to be furnished meet the human factors, environmental, and maintainability requirements contained in this specification. In addition, the FAT shall demonstrate that each piece of equipment manufactured or procured by the Contractor is operational and meets the design and quality requirements described in the specifications. In the event that the Contractor has already conducted similar tests on identical or nearly identical equipment, BJCTA may, but is not obligated to, accept the results of those tests as satisfying some or all of the FAT requirements.

6.1.3. SYSTEM ACCEPTANCE TEST

At the completion of installation, the Contractor shall provide an As-Built Document (ABD) to BJCTA. The ABD shall include the following:

1. an inventory of all components supplied including supplier, model number, serial number and installation location
2. an inventory of all spare parts supplied including supplier, model number, serial number and storage location
3. all reference and user manuals for system components supplied by third parties
4. all warranties documentation
5. a diagram indicating all interconnections between components
6. the version number of all software
7. software installation media if solution is not centralized.

The ABD must be approved before BJCTA will grant Final System Acceptance. The System Acceptance Testing (SAT) shall verify that the system and all provided equipment meet the system performance requirements specified in the system specifications. The SAT will be performed in the production environment with all components, subsystems, and networks completely operational, online, and in service. The SAT will be comprised of a consecutive 30-day period in which all system components must meet or exceed all performance requirements. The acceptance test plan will describe in detail how the Contractor will measure and report on each of the performance requirements throughout the SAT. If the performance requirements defined in these specifications are not attained during the 30-day period, SAT will be extended a minimum of 30 days to allow for one consecutive 30-day period in which the requirements are satisfied. The Contractor shall identify and implement remedial action at no cost to BJCTA in the event that a system component does not meet the specified performance requirements during SAT.

6.1.4 FINAL ACCEPTANCE

Final acceptance shall be contingent on satisfying all of the following conditions for each phase of implementation. BJCTA shall grant Final Acceptance only when:

1. SAT has been successfully completed and approved by BJCTA
2. All system devices are delivered, installed and operational
3. All spare parts have been delivered
4. Initial batches of fare media have been delivered and accepted by BJCTA
5. All contract deliverables have been delivered to BJCTA and accepted
6. All required training has been provided and accepted by BJCTA
7. Once all requirements are met, the Contractor shall submit a formal request for Final Acceptance. BJCTA will respond to the request with 10 business days. Final acceptance for each phase of the implementation will represent the formal start of revenue service and start of the warranty term.

6.2 DETAILED DATA ANALYSIS AND REPORT GENERATION

The Contractor shall provide a Central Data System (CDS) for the retention of BJCTA transactional data, summary data, system usage and operational information. This system shall serve as the central system through which BJCTA personnel shall monitor and control all aspects of the BJCTA system.

The CDS shall be the system by which authorized personnel shall monitor and control the BJCTA operation. The system shall provide a unified platform for data formatting and report generation and downloads for software related information. The CDS shall allow users to reconcile recorded revenues against schedules and accurately capture ridership statistics. All application software used by the CDS shall allow users to access all functions and features through a modern GUI (Graphical User Interface).

The CDS shall provide for data analysis and reporting for the new FCS System. Menu driven report generation software shall be provided to allow the user to design, store and edit an unlimited number of report formats to be used for generation of system reports.

The FCS system related devices shall support daily, weekly, monthly, quarterly, and annual data and shall be maintained by the system for printing periodic reports. It shall be possible to designate any report to automatically be generated and printed by the CDS at the CDS following data uploads from the TVMs, validators, or HTID's at any other specified intervals, based upon calendar date and time of day.

The BJCTA Fare Collection System shall provide a suite of preprogrammed reports, which shall provide all the basic information necessary to operate, maintain and analyze the FCS. Where applicable, all reports shall be designed with the option to provide the relevant detail on all records selected by type, machine and in total or by the report requested criteria, with summary statistics for each parameter—or to simply provide the summary statistics without the supporting detail records. The user shall have the option of sending reports to the screen, a downloadable file in database format, or a selection of printers. At a minimum, reports shall be able to track the following items:

1. In service and out of service, and the percentage of the total Machine Availability—showing the total number of pieces of equipment that is in service
2. Transaction Summary—showing the total number of customer and service transactions, by transaction type
3. Transaction Detail—lists all transactions by category, merchant ID, payment method
4. Failure Report—lists all failures by unique identification
5. Service History—lists all failures and service events
6. Employee Activities—all employee interactions with the fare collection system
7. Reconciliation—showing the total sales by machine, expected vault contents, actual counts and variance
8. Sales—total dollar value of ticket sales, etc.
9. Ticket Use Report—showing all transactions for a given ticket serial number, list of serial numbers, or range of serial numbers
10. Fraudulent Ticket Use—lists ticket usage which violates system standards
11. Ridership—total ridership by category
12. Origin/Destination—ticket serial numbers and multiple origins
13. Information should be used to produce origin/destination pairs
14. Link Volumes Report—a summation of origin/destination pairs over a link or set of links between stations which will show the volume traveling over that link for a given time period
15. Entry and Exit Report—showing entrances at a station stop
16. Maintenance Management Reports—showing planned preventative and corrective maintenance work by Maintenance Tracking System
17. Revenue Collection Facility Vault Activity—all transactions into or out of the BJCTA's vaults
18. Access Violation reports
19. User Access listings
20. Audit Logs of user access
21. Transaction usage report by fare media; and
22. Variances - Showing of all shortages and or all overages in the reconciliation process
23. Tracking of fare media inventory by UID and or serial number
24. Tracking and notification of smart card UID number duplication for fraudulent activity monitoring
25. Variances - Showing of all shortages and or all overages in the reconciliation process

26. Tracking of fare media inventory by UID and or serial number
27. Tracking and notification of smart card UID number duplication for fraudulent activity monitoring
28. Transaction Summary—showing the total number of customer and service transactions, by transaction type
29. Transaction Detail—lists all transactions by category, merchant ID, payment method
30. Failure Report—lists all failures by unique identification
31. Service History—lists all failures and service events
32. Employee Activities—all employee interactions with the fare collection system
33. Reconciliation—showing the total sales by machine, expected vault contents, actual counts and variance
34. Sales—total dollar value of ticket sales, etc.
35. Ticket Use Report—showing all transactions for a given ticket serial number, list of serial numbers, or range of serial numbers
36. Fraudulent Ticket Use—lists ticket usage which violates system standards
37. Ridership—total ridership by category
38. Origin/Destination—ticket serial numbers and multiple origins information should be used to produce origin/destination pairs
39. Link Volumes Report—a summation of origin/destination pairs over a link or set of links between stations which will show the volume traveling over that link for a given time period
40. Entry and Exit Report—showing entrances at a station stop
41. Maintenance Management Reports—showing planned preventative and corrective maintenance work by Maintenance Tracking System
42. Revenue Collection Facility Vault Activity—all transactions into or out of the BJCTA’s vaults
43. Access Violation reports User Access listings
44. Audit Logs of user access
45. Transaction usage report by fare media and Variances - Showing of all shortages and or all overages in the reconciliation process
46. Tracking of fare media inventory by UID and or serial number
47. Tracking and notification of smart card UID number duplication for fraudulent activity monitoring
48. Variances - Showing of all shortages and or all overages in the reconciliation process
49. Tracking of fare media inventory by UID and or serial number
50. Tracking and notification of smart card UID number duplication for fraudulent activity monitoring
51. Tracking of fare media inventory by UID and or serial number
52. Tracking and notification of smart card UID number duplication for fraudulent activity monitoring

The reports should be available as a real-time picture of the system’s status, and an historical picture for a user selected time period (including selection of time of day for a given period).

PART 7 –TERMS AND CONDITIONS

BJCTA’s agreement with the Contractor will include following terms and conditions:

7.1 CONTRACT STRUCTURE AND TERM

The Contractor shall be completely responsible for equipment design, construction, implementation, and testing of all devices, equipment and systems, as well as, supporting the maintenance of all systems and equipment associated with the FCS for the duration of the Term. This Contract shall include all systems and activities related to collecting accurate electronic fare transactions, and for all elements necessary to support cash, bank card and BJCTA ticket collection. The Contract Term includes two (2) years of Warranty Period after system acceptance date and an additional three (3) years of Maintenance Period, totaling five (5) years. If the Contractor is incapable of providing on-site or remote maintenance of all systems and equipment associated with the FCS system for the duration of the Term, it shall be permitted with the pre-

approval of BJCTA management that a sub-Contractor to the Contractor be considered for approval to perform these functions.

7.2 PROJECT MANAGEMENT AND QUALITY ASSURANCE

The Contractor shall have a Project Manager who shall be assigned to BJCTA for the life of the project. The Project Manager assigned to the project shall have the authority to make commitments and decisions that are binding on the Contractor. A Quality Assurance Program shall be developed and overseen by this Project Manager. BJCTA shall assign a member of staff to support project management. This staff member shall coordinate activities, provide a single point of contact between BJCTA and the Contractor and shall ensure quality control.

7.3 PROJECT SCHEDULE AND MAJOR MILESTONES

The Contractor shall include in the proposal, a project schedule that commences within two weeks of Notice to Proceed and runs to the completion of all components of the project. The project schedule shall include various approval milestones and City of Birmingham and/or BJCTA shall provide final approval of each milestone at the appropriate steps in the project plan. The project plan shall include training, documentation and support plans.

7.4 PROJECT PLAN EXECUTION

The Contractor shall perform and execute the following work plans as approved by BJCTA during Design Review and as modified by BJCTA through its approved updates:

1. Program Management Plan
2. Quality Assurance/Quality Control Plan
3. Software Development Plan
4. Hardware/Software Configuration Management Plan
5. Performance Assurance and Monitoring Plan
6. Support Services Plan
7. Documentation Updates: Contractor shall be responsible for maintaining and updating the documentation throughout the contract

7.5 MAINTENANCE PERIOD

The Maintenance Contract will be managed and operated directly with BJCTA. The Contractor shall provide all routine and scheduled maintenance, on-call maintenance, and Support Services during a Maintenance Period extending three (3) years following completion of the two (2) year warranty period through final contract completion. During this maintenance period the Contractor shall continue to correct any problems identified during live operations. This phase is time-bound and will consist of three (3) full calendar years of providing maintenance services after the two (2) year warranty period. A full description of maintenance period services is included in Part 9- Maintenance.

Additionally, task-oriented modifications and improvements shall be made to the system as directed by BJCTA and individual tasks may have their own time constraints.

The Contractor shall be completely responsible for the planning, design, construction, implementation, and testing of a comprehensive, end-to-end FCS, as well as, supporting the maintenance of all systems and equipment associated with the FCS for the duration of the Term. Responsibilities are included in a performance-based Contract. This Contract shall include all systems and activities related to collecting accurate electronic fare transactions, and for all elements necessary to support cash fare collection. The Contract Term includes two (2) years of Warranty Period and an additional three (3) years of Maintenance Period, totaling five (5) years.

7.6 WARRANTY PERIOD

The Contractor shall provide all routine and scheduled Warranty related maintenance/repair, on-call maintenance/repair, and associated Support Services as described in Part 8 - Special Specification (SS) Part 8 and elsewhere during the Warranty Period of two (2) calendar years following final System Acceptance.

During the Warranty Period, the Contractor shall provide all equipment and hardware replacement and repair necessary for the FCS equipment/devices to operate as designed and intended. During this period, Contractor shall be responsible for equipment warranty field repair, warranty shop repair, warranty replacement, and software warranty changes and corrections.

During the Warranty Period, the Contractor shall provide all warranty repair and correction services for all software, interfaces, and databases necessary for the FCS to operate accurately and efficiently, and as originally designed and intended. During this period, the Contractor shall continue to correct any problems identified during live operations and provide essential software and or hardware updates.

7.7 SERVICE LEVELS

The BRT-TVM FCS-TVM Fare Collection System (FCS) shall provide 99.9% availability during the scheduled hours of operation as measured over the course of each calendar year. The measurement of availability shall be determined during the Performance Assurance and Monitoring Plan development and approved by BJCTA. Any systems or components dependent upon BJCTA infrastructure shall be negotiated with Contractor during integration and testing.

The Contractor shall respond to all reported problems associated with the FCS in a timely fashion. The Contractor shall further meet the service levels for FCS availability and performance as stated below:

1. The FCS shall be fully and accurately functioning 24 hours per day, 7 days per week. The FCS shall also be available for backups, interfaces with other jobs, FCS maintenance, etc.
2. Contractor shall provide service to equipment within 2 hours of any outage either on site or via online connectivity.
3. Contractor shall provide Service Levels (Performance Assurance and Monitoring) as described below:
 - a. The Contractor shall perform Performance Assurance and Monitoring during the Service Period. Performance Assurance and Monitoring includes the Contractors monitoring of performance, reliability, and maintainability requirements as set forth in the Contract. The purpose is to assure that the furnished equipment and software has a high level of availability and minimum maintenance costs. This goal shall be achieved by designing and manufacturing the equipment and software for dependability maintainability, and quality.
 - b. The Contractor shall implement the Performance Assurance and Monitoring Plan to measure the reliability and maintainability of the equipment during the tests on the production equipment once revenue operation has started. Data should be obtained from as many sources as practical and be processed to produce computer generated reports. The reports shall be submitted during the reliability and maintainability tests on revenue service equipment, in addition:
4. Contractor shall perform the following tasks:
 - a. Assigning individuals responsible for adhering to the purpose of the plan
 - b. Scheduling and performing reliability review
 - c. Resolving performance issues
 - d. Developing, implementing, and managing an Action Reporting System

7.7.1 EQUIPMENT AVAILABILITY

All aspects of the deployed equipment shall at minimum, include:

1. All equipment fully functional and able to record all types of fare transactions accurately.
2. All equipment shall have two-way communication with the primary or secondary CDS and are properly exchanging data.

3. All transactions are posting to the proper accounts at the proper fare rates in accordance with business rules and approved system design.
4. BJCTA has full and unencumbered access to all system interfaces in accordance with the design, and
5. There is no lost revenue or potential for lost revenue due to software, hardware, or equipment malfunction or error in design, implementation, for fault.

7.7.2 THE ONLINE TRANSACTION TIMES

Online transactions are defined as any user or system-initiated activity that causes the FCS to execute an instruction, either at the CDS or the client, and results in an identifiable change in the user's screen.

1. Transaction times shall have an end-to-end transaction response time of 2.5 seconds or less (excluding network time).
2. Contractor shall respond to all incidents reported to Contractor by BJCTA within 4 hours.
3. Response time shall be measured for all client and CDS transactions.
4. If credit/debit services are through BJCTA infrastructure, then online transaction times shall be negotiated with Contractor upon integration and testing.

7.7.3 EQUIPMENT AND SYSTEM REPAIRS

Field Warranty repair and Maintenance repair and or refurbishment shall be per the following:

1. The Contractor shall perform Field Warranty Repairs within the Response and Resolution Time associated with the appropriate Service Request level.
2. All Shop Warranty Repairs or Inventory Replacement as follows;
 - a. Shop Warranty Repairs shall be completed within five (5) business days from the date the faulty part is delivered to the Contractor or removed by the Contractor from the equipment. As a goal, components that require repair by 3rd party Vendors, they shall be repaired and returned within 30 days. These timeframes shall not relieve the Contractor of meeting Routine and Priority Service Request Response Time or Resolution Time requirements discussed above
3. Permanent Software Repairs as follows;
 - a. Routine and Priority Service Requests that require additional time for a permanent fix shall remain the highest priority for the Contractor until permanently resolved. A software correction plan shall be provided within five (5) business days from the date BJCTA gives the Contractor notice of software failure, or the Contractor observes the failure. Software Repairs shall include the planning, development, testing, and deployment of software to resolve the issue. Resolution with a permanent repair or correction shall occur within 60 days of the Routine or Priority Service Request.
 - b. The timeframe requirements for Permanent Software Repair shall not relieve the Contractor of meeting Routine and Priority Service Request Response Time or Resolution Time requirements.
 - c. All components of the application solution provided by the Contractor, both proprietary and third-party components, shall be included in the plan and subject to the performance requirements above.

7.7.4 SOFTWARE SERVICES

1. Security and Operational Patches, and Service packs:
 - a. Contractor shall offer all critical security and operational patches to BJCTA within 2 hours of availability and installed/deployed within 24 hours after approval by BJCTA.
 - b. Contractor shall offer all other patches and service packs to BJCTA within 10 business days of availability and installed/deployed within 10 business days after approval by BJCTA.
2. Software Version Upgrades

- a. Contractor shall perform patch, version maintenance, and version upgrades for all software provided within the Work.
 - b. Contractor shall perform patch, version maintenance, and version upgrades within three (3) months of availability. All deployments shall be at the approval of BJCTA.
 - c. Contractor must have a rollback procedure if the upgrade or patch presents software or hardware unavailable to BJCTA and its passengers.
3. Other Patches and Service Packs
 4. Patches and upgrades presented to BJCTA within 10 business days of availability for install approval.
 5. Installed/Deployed within ten (10) business days of BJCTA approval.
 6. Software Version Upgrades upon presentation to BJCTA and approved;
 - a. Installed/Deployed within three (3) months of availability

7.8 LIQUIDATED DAMAGES FOR NON-PERFORMANCE

Liquidated Damages are structured to be a last resort measure for system deliverables that fail or continue to fail or are defined by BJCTA as being non-compliance to the specifications defined in this document. Any reported equipment failure or non-compliant attribute of this specification after a period of five (5) consecutive days shall be accessed by BJCTA's at their discretion for the damages as listed below and preceded by a declaration of breach, and actual damages arising from the breach suffered by the BJCTA after the declaration of breach, as follows:

1. Five-hundred dollars (\$500.00) maximum penalty per day per defined non-performance system failure or a portion thereof, until the problem is resolved.
2. In the event BJCTA staff or a contracted sub-Contractor is called upon to address or mitigate a system failure not resolved by the Contractor within 24 hours, a rate of two-hundred dollars (\$200) per hour shall be accessed for such downtime.
3. If the such problems continue to be unresolved after thirty (30) days, BJCTA has the option at their discretion to access the Contractors an additional two-hundred and fifty dollars (\$250.00) per day penalty.
4. After sixty (60) days BJCTA reserves the right to terminate the contract based on performance or convenience with substantial penalties to recover system revenue and expended contractual funds

7.8.1 LIQUIDATED DAMAGES – ROUTINE AND SCHEDULED MAINTENANCE

Contractor shall initiate and complete all routine and scheduled maintenance within five (5) business days of the scheduled maintenance event as indicated in the approved Support Services Plan or the following accessed penalties shall be incurred:

1. \$500 per calendar day (24-hour period) over 5 Business Days
2. Unlimited Phone and Remote Support
 - a. Contractor shall provide unlimited phone and remote support between the hours of 8:00AM and 11:59 PM (Eastern Time), Monday through Friday, excluding U.S. Holidays. Contractor shall be available and provide a qualified and knowledgeable representative to answer calls or return a call within one (1) hour.
3. Contractor shall respond to the request within one (1) business day, and complete the repair, restoration, or remediation of equipment, hardware, and software, as necessary to resolve the issue within two (2) business days of being notified by either phone or email. Any remediation or workaround proposed shall be subject to BJCTA 's approval and permanently repaired within 10 days of the original Service Request.
4. Examples of Routine Service Requests include non-critical problems in which revenue loss is not immediately at risk or expected to be at risk within the next 72 hours.
5. During the Warranty period, Routine Service Requests may include Warranty Field Repairs, which also shall be completed within the Routine Service timeframes.

6. If damages are accessed after the two (day) period, a one hundred (\$100.00) per hour or portion thereof until the problem is resolved and Contractor provides a qualified individual to work with BJCTA.

7.8.2 LIQUIDATED DAMAGES – NON-PERFORMANCE

1. 10% of total monthly payment for each month (pro-rata) delayed, per component upgrade.
2. BJCTA shall actively monitor the Contractor's performance and enforce Contracted non-compliance and non-performance clauses by assessing liquidated damages. However, BJCTA shall not assess liquidated damages if non-compliance and non-performance result from events or activities for which the Contractor is not responsible or could not have anticipated.
3. The Contractor shall track, calculate, monitor and report on performance against Service Levels above and shall adjust invoices accordingly.
4. Repeated failures to meet the above Service Levels on the part of the Contractor constitutes a material breach of the Contract Documents and shall be cause for Contractor to be declared in breach of Contract.
5. Documents regardless of the existence of liquidated damages provisions. In the event the Contractor is declared in breach of Contract; BJCTA shall be entitled to collect liquidated damages up to the time of the Liquidated Damages for Non-Performance/Compliance for Software, as follows;
 - a. Two-hundred and fifty dollars (\$250.00) per day or portion thereof until the problem is resolved.
6. Liquidated Damages for Non-Performance of Software, as follows;
 - a. 10% of total monthly payment for maintenance per each 24-hour period, or portion thereof, patch is not installed after initial 48 hours from availability.

7.8.3 PRIORITY SERVICE REQUESTS

1. Contractor shall respond to the Priority Service Request within two (2) hours, and complete the repair, restoration, or remediation of equipment, hardware, and software, as necessary to resolve the issue within eight (8) hours of being notified by either phone, text or email. Any remediation or workaround proposed shall be subject to BJCTA Approval and permanently repair within sixty (60) days of the original Service Request.
2. Examples of Priority Service Requests include:
 - a. Critical problems in which revenue loss has occurred, is imminent, or is reasonably expected to occur if repair, restoration, or remediation is not completed.
 - b. Problems with interfaces between the FCS and external entities for scheduled production or data exchange.
3. During the Warranty period, Priority Service Requests may include Warranty Field Repairs, which also shall be completed within the Priority Service timeframes.

7.8.4 RESPONSE TIME MEASUREMENT

Response time shall be measured from the call, text or email notifying the Contractor Point of Contact of the problem or a potential problem to when a qualified Contractor representative has begun troubleshooting or repair as appropriate, inclusive of travel time. The Contractor shall not be responsible for delays incurred waiting for BJCTA personnel where security keys are required to gain access to the equipment.

7.8.4.1 RESOLUTION TIME MEASUREMENT REQUIREMENTS

1. The Contractor shall provide a phone number and e-mail account for the reporting of all System defects and malfunctions, and system outages, twenty-four (24) hours a day, seven (7) days a week.
2. The Contractor shall respond to reports of system outages within 15 minutes of notification, twenty-four (24) hours a day, seven (7) days a week. A fully qualified service representative will be onsite within two (2) hours after being contacted by BJCTA personnel if it is determined that a physical presence is needed to resolve the identified issue.
3. Critical/Priority Call Required Maximum Response Time of two (2) Hours

4. Routine Service Requests Required Maximum Response Time one (1) Business Day
5. For any standard equipment failure call; the Required Maximum Response Time of four (4) hours
6. For any equipment failure call; the Required Maximum Resolution Time of eight (4) hours
7. Required Maximum Resolution Time in no case shall exceed two (2) Business Days
8. Resolution Time shall be measured from the call or email notifying the Contractor of the problem or a potential problem to when the problem has been resolved.
9. Resolution Time is inclusive of travel, gaining problem understanding, defining problem, troubleshooting, repair/restoration/remediation, testing, and deployment.
10. Resolution is defined as the repair, restoration, or remediation of components of the FCS system so that the FCS returns to full Availability and is accepted by BJCTA. Acceptance by BJCTA does not release the Contractor from obligations to complete permanent repair when a work-around has been implemented.
11. Completion of resolution for repairs must be signed off by BJCTA authorized employee.
12. All resolutions and requests shall be through a help desk ticket or written email confirmation so that each party has an audit trail.

7.8.5 PERFORMANCE MONITORING

The FCS will provide real-time performance and status for monitoring for all devices, CDS, and network nodes using the Contractor provided device management tool. The FCS will store and provide historical performance and status monitoring statistics for all devices, CDS, and network nodes. This data will be available via on-demand reports. Report design and metrics will be determined and approved by BJCTA in design review. The FCS will monitor the operational status and performance of the devices and all components. The FCS will display device attributes, including but not limited to device type, device ID, location, status, events, alarms. Device status reported by the FCS will include operational status (e.g., in service, degraded mode, out of service, or no communications), maintenance alarms associated with individual device modules, and revenue alerts (e.g., vault almost full, low stock). The FCS will monitor and display in real-time the status of all systems, subsystems, applications, databases, and processes. Details of which processes will be monitored will be provided during design review.

7.9 FINANCIAL TERMS AND PAYMENT STRUCTURE

The Contractor shall be compensated through lump sum milestone payments based on final acceptance of each milestone deliverable under this contract. The contract lump-sum prices for of the various pay items shall be full payment for all labor, materials, supplies, equipment, tools and all other items required to completely incorporate the item into the work as though the item were to read "In Place."

7.9.1 BJCTA FARE COLLECTION SYSTEM MILESTONE PAYMENT SCHEDULE

The Contractor must adhere to the following and payments shall be made to the Contractor according to the suggested payment schedule identified below: 1) Must provide a complete invoice, including Contractor’s certification to BJCTA of the completion of the milestone event. 2) Verification by the BJCTA Project Manager that the milestone has been completed as required.

Milestone	Payment	Cumulative
Project Plan and Schedule	5%	5%
Completion of Design Review	15%	20%
Completion of Factory Test	30%	50%
Completion of System Acceptance Test	35%	85%
Completion of Final Acceptance	5%	90%
Start of Warranty Period	5%	95%
End of Warranty Period	5%	100%

Note: “Completion” is defined as BJCTA’s acceptance and approval of related deliverables. Warranty and Ongoing Maintenance fees will be paid monthly, per Contract provisions.

7.9.2 SYSTEM PRICE TABLE

The Contractor shall use the form below for submission of its cost proposal and is required to state the proposed per unit rate and lump sum total price. The Contractor shall detail the incremental and recurring costs for all items (i.e., project components and deliverables).

Even though the method of payment to the Contractor will be a fixed price, a detailed cost breakdown shall be provided. This information will be used to determine the reasonableness of the Contractor's cost estimate and for pre-award audit purposes when appropriate. If necessary, add rows to include other items necessary to fulfill all the requirements of this solicitation.

Proposer Name:			
Item	Quantity	Unit Price	Total
Program and Contract Management			
Project Management (NT to Final Acceptance)	1		
Warranty (2 years)	1		
Subtotal - Program and Contract Management			
System Software and Design			
Software Applications and Licenses	1		
Central Data System	1		
Point of Sale Machines	2		
Subtotal - System Software and Design			
Equipment and Spares			
Ticket Vending Machines	34	\$ -	\$ -
Validators	11	-	-
Mount Poles	11	-	-
Hand Held Ticket Validator Units	6	-	-
Maintenance Spare Parts/Modules, Special Tools, and Consumables			
Subtotal - Equipment and Spares	62	\$ -	\$ -
Testing, Training and Installation			
Design Review	1		\$ -
Factory Testing	1		-
System Acceptance Testing	1		
Training and Manuals	1		
Installation	1		
Subtotal - Testing, Training and Installation			\$ -
Fare Media			
Barcode paper	100,000	\$ -	\$ -
Paper Receipt Stock	100,000	-	-
Contactless Card - Reloadable	20,000	-	-
Subtotal - Fare Media	220,000	\$ -	\$ -
Mobile Ticketing Application			
Development and implementation of app	1		\$ -
Website	1		
Subtotal - Mobile Ticketing Application			
Support (Maximum 5-Year Annual Cost)			
Software Maintenance and Licenses (starting first year after Warranty term)	3	\$ -	\$ -
Hosting	5		
Extended Warranty (starting first year after Warranty term)	3	-	-
Maintenance	5	-	-
Subtotal - Support (Maximum 5-Year Annual Cost)		\$ -	\$ -
Total		\$ -	\$ -

PART 8 - WARRANTY

8.1 WARRANTY PERIOD

Contractor shall provide Warranty Period of two (2) calendar years following final System Acceptance.

8.2 WARRANTY SUPPORT/SERVICES

Contractor Support Services Minimum Requirements:

1. Shall provide Routine, Priority and Scheduled Warranty repairs (inclusive of failed part removal, replacement installation and operative functionality re-testing), for all FCS components (e.g., TVMs, Validators, POS, and HTIDs).
2. Shall provide Routine, Priority and Scheduled Warranty repairs via on-site visits and remotely via phone, internet or video conference services when a remote method is both appropriate and results in a fix (applies to a resolution of a warranty failed component either a Hardware or Software type).
3. Shall provide Bank Card PCI Warranty support which, will most likely have to be addressed once each calendar year or when a required PCI change is necessary/mandatory to prevent penalties placed upon BJCTA or similar party of responsible interest.
4. The two (2) year duration of Warranty applies to all equipment inclusive of software and hardware products, components and applications unless otherwise specified.
5. Shall provide BJCTA with a Point of Contact (PoC) upon the first date of installation (keep updated the PoC) to report all Warranty related problems/failures/questions.
6. BJCTA shall alert the Contractor in a documented writing manner for all warranty repair items, with reasonable problem/failure description while noting the priority type of the problem/failure.
7. Shall respond to the BJCTA warranty alert(s) via a documented written response to the BJCTA assigned PoC via email within twenty-four (24) hours unless otherwise stated below.
8. Shall provide both Software and Hardware warranty coverage for any problem/failure reported by BJCTA that in anyway prohibits BJCTA from operating the FCS as specified in this documented specification, there shall be three levels of warranty incident response:
 - a. Thirty (30) days or less to resolve a Minor bug that does not impact normal system operation or performance in a substantial manner but, requires a fix to resolve for BJCTA to take full advantage of the system
 - b. Seven (7) days or less to resolve a Moderate bug that does impact normal system operation or performance in a substantial manner requiring a fix to resolve, in order for BJCTA to continue to operate in a non-reduced operational or performance manner and to take full advantage of the system as intended.
9. One (1) days or less to resolve a Serious bug that impacts normal system operation or performance in a substantial manner requiring an immediate fix/resolution to resolve, in order for BJCTA to continue to operate the system and to take full advantage of the system as intended, when such a Serious bug alert is issued by BJCTA, the Contractor shall respond to the BJCTA's warranty alert(s) via a documented written response via email and a phone call to the BJCTA assigned PoC within eight (8) hours.
10. Any warranty problem/fix alerts priority setting/assigned status will solely be status-ed by BJCTA and shall not be contested by the responsible Contractor unless the same alert type for the same alert is incorrectly issued by BJCTA three (3) times or more.
11. Shall alert BJCTA to any known problem/fixes found or made aware of by the Contractor or any of its suppliers to the Contractor within forty-eight (48) hours of becoming aware of any such problem, of any priority status type.
12. If a warranted component/module/App or the like is damaged/vandalized intentionally or unintentionally by BJCTA staff or its ridership, such damaged component/module/App will not be subject to the warranty provisions.
13. Shall provide new replacement components and modules unless pre-approved refurbished components and modules are approved in advance of installation by the BJCTA PoC.

PART 9 - MAINTENANCE

9.1 MAINTENANCE PERIOD

The Contractor shall be responsible to provide all routine and scheduled maintenance, on-call maintenance, and Support Services during a Maintenance Period extending three (3) years following completion of the two (2) year Warranty Period through Final Contract Completion. During this Maintenance Period the Contractor shall continue to correct any problems identified during live operations. This phase is time bound and is three (3) full calendar years of providing maintenance services.

9.2 ON-SITE MAINTENANCE AND SUPPORT REQUIREMENTS

Contractor Support Services Minimum Requirements:

1. Shall provide Routine and Scheduled Maintenance for all FCS components (e.g., TVMs, validators, HTIDs)
2. Routine maintenance on-site visits:
 - a. Unlimited Phone and Remote Support
 - b. Contractor shall provide unlimited phone and remote support between the hours of 8:00 AM and 5:00 PM, Monday through Friday, excluding U.S. Holidays.
3. Contractor shall provide the following services for the FCS:
 - a. Maintain all equipment, hardware, and software supplied, installed, or modified by the Contractor.
 - b. Maintain operational availability of software and any furnished hardware according to the Service Levels described herein.
 - c. Perform scheduled and preventive maintenance.
 - d. Perform remedial maintenance as needed.
 - e. Provide additional application maintenance services.
4. Equipment, hardware, and software maintenance shall, at a minimum, include all manufacturer recommended services in accordance with manufacturers' instruction and schedule. If no manufacturer maintenance instruction or schedule exists, or if the Contractor believes it shall be enhanced, Contractor shall propose a detailed maintenance plan for inclusion in the Support Services Plan.
5. Ongoing Software Support – Contractor shall provide on-going service to address software error corrections, software updates and new releases to the application software, and correction releases of third-party software. This service shall include support for user questions and consultation as well as support for emergency recovery situations. Contractor shall deploy critical and non-critical security pages, operational patches, and service packs as they become available and with BJCTA Approval.
6. Troubleshooting – Contractor shall investigate and diagnose FCS problems that result in unsatisfactory FCS performance and take steps to remedy the problem.
7. Maintaining data structures – Contractor shall defragment files and purge/reorganize databases on a scheduled and as needed basis.
8. Change Management Administration – Contractor shall ensure that all changes to the FCS occur in a controlled manner Contractor shall ensure that all FCS changes are properly authorized, tested and documented prior to implementation in the production environment, in accordance with a structured maintenance methodology accepted by BJCTA. Contractor shall maintain a general awareness of changes to the BJCTA's information infrastructure and have appropriate back out/reversal procedures available as necessary. The scope of the change management portion of the Change Management Services furnished shall include, but not be limited to the activities identified below:
 - a. Informing BJCTA of new software options for third party software – the Contractor shall maintain contact with the BJCTA System Administrator to stay aware of software upgrades and fixes and deliver to BJCTA a plan and schedule for recommended implementation of these upgrades and fixes. The Contractor structured maintenance methodology shall include BJCTA's preference for applying these fixes in scheduled application fix "bundles".

- b. Establishing a segregated test and quality assurance environment – the Contractor shall maintain segregated test and quality assurance environment(s) insulated from the production environment for test of all changes to software prior to introduction to the production environment.
 - c. Controlling software migrations – the Contractor shall establish and enforce procedures to ensure that only approved changes are implemented by implementing the following requirements and actions:
 - a. Approved modification request forms have been received for all changes made to the software
 - b. Access controls prevent more than one retrieval of a module for modification
 - c. Multiple changes to the same module are coordinated.
 - d. There is synchronization of changes so that all modules affected by a modification to a data element or other factors are changed simultaneously.
 - e. Migration of modules is controlled through the approved test and implementation cycle.
 - f. New application versions are thoroughly tested prior to use on the production System,
 - g. The Contractor’s implementation of release upgrades shall be scheduled to minimize downtime.
 - h. Maintaining prior versions of software – the Contractor shall exercise control over software versions, ensuring the proper version of software is migrated and that prior versions are available for roll back in the event of an emergency.
 - j. Testing new software – the Contractor shall maintain a test bed of transactions and known results to verify the integrity of new software releases. The test bed shall be updated to include test data for all new conditions arising out of maintenance or enhancement of the FCS.
 - k. Coaching and User Assistance – the Contractor shall provide technical and second level end-user support to the FCS users, be the focal point for troubleshooting maintenance problems, provide technical support to user department staff at internal/external.
9. Organize and conduct meetings and training sessions for BJCTA personnel on the application. The scope of the training portion of the application support services furnished shall include, but not be limited to:
- a. Serve as a resource for BJCTA staff as related to application FCS functionality.
 - b. Providing technical support to BJCTA staff and/or BJCTA Contractors relative to applications support.
 - c. Researching and taking corrective action on reported software malfunctions.
 - d. Participating in internal and external audits as directed by the BJCTA Manager
 - e. Provide training to BJCTA staff when changes to the system affect operations.
10. Performing other support activities as may be assigned by the BJCTA Manager
- a. The Action Reporting System shall apply to factory and field reliability tests on production equipment. This system shall include failure analysis for both hardware and software modules.
 - b. Developing reliability formulas and calculations with BJCTA.
 - c. Managing system capacity; and
 - d. Maintaining records – the Contractor shall maintain records on application performance and resource usage, user response time, etc. adequate to project needed upgrades to hardware and software based on current performance and expected growth.
 - e. Forecasting upgrade needs – the Contractor shall maintain communication with the BJCTA Manager and user community in regard to plans for FCS expansion and modification, which would impact FCS capacity performance.
 - f. Tracking resource usage – the Contractor shall track such items as database/file sizes, and concurrent users to ensure adequate resources shall be available for the foreseeable future and to take preventive action to minimize application failure due to insufficient resource levels.
 - g. Program Management Plan– Contractor shall update the PMP if processes change during the Support Services Period.

- h. Service Period QA/QC Plan – Contractor shall continue to review and update the FCS operational components of the QA/QC Plan. As system processes change or are refined to adapt to system needs, Contractor shall update the relevant section of the Support Services Period QA/QC Plan and submit to BJCTA for review and Approval.
 - i. Backup, Redundancy, and Business Resumption Plan – Contractor shall update the Backup, Redundancy, and Business Resumption Plan when system processes change due to updates or modifications by the Contractor and submit to BJCTA for review and Approval.
11. Documentation and Manuals – Contractor shall update all documents and manuals when system or procedural changes are made by the Contractor.
 12. Software Design Documentation – Contractor shall update all Software Design Documentation when system changes are made by the Contractor.
 13. Database Documentation – Contractor shall update the Database documentation when system changes are made by the Contractor.
 14. Performance Assurance and Monitoring Plan – Contractor shall update the Performance Assurance and Monitoring Plan when system or procedural changes are made by the Contractor.
 15. Support Services Plan – Contractor shall update the Support Services Plan with system or procedural changes are made by the Contractor.
 16. Contractor shall provide the above listed documentation to BJCTA 60 days prior to the end of the Contract Term for BJCTA review and approval.
 17. Software Updates and Maintenance, the Contractor shall be responsible for all software updates and maintenance for the duration of the Contract Documents and any extensions at no additional cost to BJCTA. All Operating System security updates and patches must be tested and verified by the Contractor in order to ensure that the FCS is current with regard to security patches and updates without impacting revenue operations.
 18. Inventory required to be maintained by the Contractor; The Contractor shall provide a separate spare parts and subassemblies list with optional pricing for individual spare parts and subassemblies.
 19. The Contractor shall make spares available for a ten (10) year period which begins after the completion of System Acceptance. Where original replacement parts are no longer available the Contractor shall notify BJCTA and offer a substitute model which is fully compatible with the existing system as soon as the Contractor is aware that the original parts are no longer available.
 20. Spare parts shall be interchangeable with their corresponding part. All spare parts shall be reconfigured to the latest revision during the Warranty Period. The Contractor shall have available at least two (2) U.S. sources where practicable. The Contractor shall provide a detailed list of all spare parts with manufacturer name, model number, quantities required to be on hand after parts are out of warranty Prior to the end of the Warranty Period, the Contractor shall establish and provide to BJCTA a Spare Parts Catalog, providing price and quantity price information for Spare Parts. The Contractor represents and warrants that the spare parts to BJCTA shall be no less favorable than prices for similar Spare Parts to any other customer of Contractor, under similar quantities and commercial terms.
 21. During the Performance Assurance and Monitoring Plan development and approved by BJCTA. Availability shall, at a minimum, include:
 - a. All equipment shall be fully functional and able to record all types of fare transactions accurately.
 - b. All equipment shall have two-way communication with the primary or secondary Host and are properly exchanging data.
 - c. All transactions are posting to the proper accounts at the proper fare rates in accordance with business rules and approved system design; BJCTA has full and unencumbered access to all system interfaces in accordance with the design, and there is no lost revenue or potential for lost revenue due to software, hardware, or equipment malfunction or error in design, implementation, for fault.

FEDERAL CLAUSES & CERTIFICATIONS

FLY AMERICA

Applicability - all contracts involving transportation of persons or property, by air between the U.S. and/or places outside the U.S. These requirements do not apply to micro-purchases (\$3,000 or less, except for construction contracts over \$2,000).

Contractor shall comply with 49 USC 40118 (the "Fly America" Act) in accordance with General Services Administration regulations 41 CFR 301-10, stating that recipients and subrecipients of Federal funds and their contractors are required to use US Flag air carriers for US 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 US 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. Contractor shall include the requirements of this section in all subcontracts that may involve international air transportation.

CARGO PREFERENCE

Contracts involving equipment, materials or commodities which may be transported by oceans vessels. These requirements do not apply to micro-purchases (\$3,000 or less, except for construction contracts over \$2,000). Contractor shall: a. use privately owned US-Flag commercial vessels to ship at least 50% of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners and tankers) involved, whenever shipping any equipment, material or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for US flag commercial vessels; b. furnish within 20 working days following the loading date of shipments originating within the US or within 30 working days following the loading date of shipments originating outside the US, a legible copy of a rated, "on-board" commercial bill-of-lading in English for each shipment of cargo described herein to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the recipient (through contractor in the case of a subcontractor's bill-of-lading.); c. include these requirements in all subcontracts issued pursuant to this contract when the subcontract involves the transport of equipment, material or commodities by ocean vessel.

ENERGY CONSERVATION

All Contracts except micro-purchases (\$3,000 or less, except for construction contracts over \$2,000) Contractor shall comply with mandatory standards and policies relating to energy efficiency, stated in the state energy conservation plan issued in compliance with the Energy Policy & Conservation Act.

CLEAN WATER

All Contracts and Subcontracts over \$100,000 Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 USC 1251 et seq. Contractor shall report each violation to the recipient and understands and agrees that the recipient shall, in turn, report each violation as required to FTA and the appropriate EPA Regional Office. Contractor shall include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with FTA assistance.

LOBBYING

Construction/Architectural and Engineering/Acquisition of Rolling Stock/Professional Service Contract Operational Service Contract/Turnkey contracts over \$100,000 Byrd Anti-Lobbying Amendment, 31 U.S.C. 1352, as amended by the Lobbying Disclosure Act of 1995, P.L. 104- 65 [to be codified at 2 U.S.C. § 1601, et seq.] - Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying."

Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non- Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient.

ACCESS TO RECORDS AND REPORTS

Applicability - As shown below. These requirements do not apply to micro-purchases (\$3,000 or less, except for construction contracts over \$2,000)

The following access to records requirements applies to this Contract:

1. Where the purchaser is not a State but a local government and is an FTA recipient or a subgrantee of FTA recipient in accordance with 49 CFR 18.36(i), contractor shall provide the purchaser, the FTA, the US Comptroller General or their authorized representatives access to any books, documents, papers and contractor records which are pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor shall also, pursuant to 49 CFR 633.17, provide authorized FTA representatives, including any PMO 5302(a)1, which is receiving FTA assistance through the programs described at 49 USC 5307, 5309 or 5311.
2. Where the purchaser is a State and is an FTA recipient or a subgrantee of FTA recipient in accordance with 49 CFR 633.17, contractor shall provide the purchaser, authorized FTA representatives, including any PMO Contractor, access to contractor's records and construction sites pertaining to a capital project, defined at 49 USC 5302(a)1, which receives FTA assistance through the programs described at 49 USC 5307, 5309 or 5311. A capital project excludes contracts of less than the simplified acquisition threshold currently set at \$100,000.
3. Where the purchaser enters into a negotiated contract for other than a small purchase or under the simplified acquisition threshold and is an institution of higher education, a hospital or other non-profit organization and is an FTA recipient or a subgrantee of FTA recipient in accordance with 49 CFR 19.48, contractor shall provide the purchaser, the FTA, the US Comptroller General or their authorized representatives, access to any books, documents, papers and record of the contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions.
4. Where a purchaser which is an FTA recipient or a subgrantee of FTA recipient in accordance with 49 USC 5325(a) enters into a contract for a capital project or improvement (defined at 49 USC 5302(a)1) through other than competitive bidding, contractor shall make available records related to the contract to the purchaser, the Secretary of USDOT and the US Comptroller General or any authorized officer or employee of any of them for the purposes of conducting an audit and inspection.
5. Contractor shall permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
6. Contractor shall maintain all books, records, accounts and reports required under this contract for a period of not less than three (3) years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case contractor agrees to maintain same until the recipient,

FTA Administrator, US Comptroller General, or any of their authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Re: 49 CFR 18.39(i) (11).

FTA does not require the inclusion of these requirements in subcontracts.

FEDERAL CHANGES

All Contracts except micro-purchases (\$3,000 or less, except for construction contracts over \$2,000) Contractor shall comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between the purchaser and FTA, as they may be amended or promulgated from time to time during the term of the contract. Contractor's failure to comply shall constitute a material breach of the contract

CLEAN AIR

1. Contractor shall comply with all applicable standards, orders or regulations pursuant to the Clean Air Act, 42 USC 7401 et seq. Contractor shall report each violation to the recipient and understands and agrees that the recipient will,

in turn, report each violation as required to FTA and the appropriate EPA Regional Office.

2. Contractor shall include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with FTA assistance.

RECYCLED PRODUCTS

1. All contracts for items designated by the EPA, when the purchaser or contractor procures \$10,000 or more of one of these items during the current or previous fiscal year using Federal funds. The contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

NO GOVERNMENT OBLIGATIONS TO THIRD PARTIES

Applicability - All contracts except micro-purchases (\$3,000 or less, except for construction contracts over \$2,000)

1. The recipient and contractor acknowledge and agree that, notwithstanding any concurrence by the US Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the US Government, the US Government is not a party to this contract and shall not be subject to any obligations or liabilities to the recipient, the contractor, or any other party (whether or not a party to that contract) per- training to any matter resulting from the underlying contract.
2. Contractor agrees to include the above clause in each subcontract financed in whole or in part with FTA assistance. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

Applicability - All contracts except micro-purchases (\$3,000 or less, except for construction contracts over \$2,000)

1. Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 USC 3801 et seq. and USDOT regulations, "Program Fraud Civil Remedies," 49 CFR 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 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, submittal, or certification, the US Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act (1986) on contractor to the extent the US Government deems appropriate.
2. If contractor makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submittal, or certification to the US Government under a contract connected with a project that is financed in whole or in part with FTA assistance under the authority of 49 USC 5307, the Government reserves the right to impose the penalties of 18 USC 1001 and 49 USC 5307(n)(1) on contractor, to the extent the US Government deems appropriate.
3. Contractor shall include the above two clauses in each subcontract financed in whole or in part with FTA assistance. The clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

TERMINATION

Applicability - All Contracts over \$10,000, except contracts with nonprofit organizations and institutions of higher learning, where the threshold is \$100,000

- a. **Termination for Convenience (General Provision)** the recipient may terminate this contract, in whole or in part, at any time by written notice to contractor when it is in the recipient's best interest. Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. Contractor shall promptly submit its termination claim to the recipient. If contractor is in possession of any of the recipient's property, contractor shall account for same, and dispose of it as the recipient directs.

- b. **Termination for Default [Breach or Cause] (General Provision)** If contractor does not deliver items in accordance with the contract delivery schedule, or, if the contract is for services, and contractor fails to perform in the manner called for in the contract, or if contractor fails to comply with any other provisions of the contract, the recipient may terminate this contract for default. Termination shall be affected by serving a notice of termination to contractor setting forth the way contractor is in default. Contractor shall only be paid the contract price for supplies delivered and accepted, or for services performed in accordance with the manner of performance set forth in the contract. If it is later determined by the recipient that contractor had an excusable reason for not performing, such as a setting up a new delivery or performance schedule, may allow contractor to continue work, or treat the termination as a termination for convenience.
- c. **Opportunity to Cure (General Provision)** the recipient in its sole discretion may, in the case of a termination for breach or default, allow contractor an appropriately short period of time in which to cure the defect. In such case, the notice of termination shall state the time in which cure is permitted and other appropriate conditions. If contractor fails to remedy to the recipient's satisfaction the breach or default or any of the terms, covenants, or conditions of this Contract within ten (10) days after receipt by contractor or written notice from the recipient setting forth the nature of said breach or default, the recipient shall have the right to terminate the Contract without any further obligation to contractor. Any such termination for default shall not in any way operate to preclude the recipient from also pursuing all available remedies against contractor and its sureties for said breach or default.
- d. **Waiver of Remedies for any Breach** In the event that the recipient elects to waive its remedies for any breach by contractor of any covenant, term or condition of this Contract, such waiver by the recipient shall not limit its remedies for any succeeding breach of that or of any other term, covenant, or condition of this Contract.
- e. **Termination for Convenience (Professional or Transit Service Contracts)** the recipient, by written notice, may terminate this contract, in whole or in part, when it is in the recipient's interest. If the contract is terminated, the recipient shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.
- f. **Termination for Default (Supplies and Service)** If contractor fails to deliver supplies or to perform the services within the time specified in this contract or any extension or if the contractor fails to comply with any other provisions of this contract, the recipient may terminate this contract for default. The recipient shall terminate by delivering to contractor a notice of termination specifying the nature of default. Contractor shall only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner or performance set forth in this contract. If, after termination for failure to fulfill contract obligations, it is determined that contractor was not in default, the rights and obligations of the parties shall be the same as if termination had been issued for the recipient's convenience.
- g. **Termination for Default (Transportation Services)** If contractor fails to pick up the commodities or to perform the services, including delivery services, within the time specified in this contract or any extension or if contractor fails to comply with any other provisions of this contract, the recipient may terminate this contract for default. The recipient shall terminate by delivering to contractor a notice of termination specifying the nature of default. Contractor shall only be paid the contract price for services performed in accordance with the manner of performance set forth in this contract. If this contract is terminated while contractor has possession of the recipient goods, contractor shall, as directed by the recipient, protect and preserve the goods until surrendered to the recipient or its agent. Contractor and the recipient shall agree on payment for the preservation and protection of goods. Failure to agree on an amount shall be resolved under the Dispute clause. If, after termination for failure to fulfill contract obligations, it is determined that contractor was not in default, the rights and obligations of the parties shall be the same as if termination had been issued for the recipient's convenience.
- h. **Termination for Default (Construction)** If contractor refuses or fails to prosecute the work or any separable part, with the diligence that will ensure its completion within the time specified, or any extension, or fails to complete the work within this time, or if contractor fails to comply with any other provisions of this contract, the recipient may terminate this contract for default. The recipient shall terminate by delivering to contractor a notice of termination

specifying the nature of default.

In this event, the recipient may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. Contractor and its sureties shall be liable for any damage to the recipient resulting from proceeding with the work if the work is terminated. This liability includes any increased costs incurred by the recipient in completing the work.

Contractor's right to proceed shall not be terminated nor shall contractor be charged with damages under this clause if:

1. Delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of contractor. Examples of such causes include acts of God, acts of the recipient, acts of another contractor in the performance of a contract with the recipient, epidemics, quarantine restrictions, strikes, freight embargoes; and
2. Contractor, within 10 days from the beginning of any delay, notifies the recipient in writing of the causes of delay. If in the recipient's judgment, delay is excusable, the time for completing the work shall be extended. The recipient's judgment shall be final and conclusive on the parties, but subject to appeal under the Disputes clauses.

If, after termination of contractor's right to proceed, it is determined that contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if termination had been issued for the recipient's convenience.

- i. **Termination for Convenience or Default (Architect & Engineering)** the recipient may terminate this contract in whole or in part, for the recipient's convenience or because of contractor's failure to fulfill contract obligations. The recipient shall terminate by delivering to contractor a notice of termination specifying the nature, extent, and effective date of termination. Upon receipt of the notice, contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to the recipient all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process. If termination is for the recipient's convenience, it shall make an equitable adjustment in the contract price but shall allow no anticipated profit on unperformed services. If termination is for contractor's failure to fulfill contract obligations, the recipient may complete the work by contract or otherwise and contractor shall be liable for any additional cost incurred by the recipient. If, after termination for failure to fulfill contract obligations, it is determined that contractor was not in default, the rights and obligations of the parties shall be the same as if termination had been issued for the recipient's convenience.
- j. **Termination for Convenience or Default (Cost-Type Contracts)** the recipient may terminate this contract, or any portion of it, by serving a notice of termination on contractor. The notice shall state whether termination is for convenience of the recipient or for default of contractor. If termination is for default, the notice shall state the way contractor has failed to perform the requirements of the contract. Contractor shall account for any property in its possession paid for from funds received from the recipient, or property supplied to contractor by the recipient. If

termination is for default, the recipient may fix the fee, if the contract provides for a fee, to be paid to contractor in proportion to the value, if any, of work performed up to the time of termination. Contractor shall promptly submit its termination claim to the recipient and the parties shall negotiate the termination settlement to be paid to contractor. If termination is for the recipient's convenience, contractor shall be paid its contract close-out costs, and a fee, if the contract provided for payment of a fee, in proportion to the work performed up to the time of termination. If, after serving a notice of termination for default, the recipient determines that contractor has an excusable reason for not performing, such as strike, fire, flood, events which are not the fault of and are beyond the control of contractor, the recipient, after setting up a new work schedule, may allow contractor to continue work, or treat the termination as a termination for convenience.

CONTRACTS INVOLVING FEDERAL PRIVACY ACT REQUIREMENTS

When a grantee maintains files on drug and alcohol enforcement activities for FTA, and those files are organized so that information could be retrieved by personal identifier, the Privacy Act requirements apply to all contracts except micro-

purchases (\$3,000 or less, except for construction contracts over \$2,000)

The following requirements apply to the Contractor and its employees that administer any system of records on behalf of the Federal Government under any contract:

1. The Contractor agrees to comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. § 552a. Among other things, the Contractor agrees to obtain the express consent of the Federal Government before the Contractor or its employees operate a system of records on behalf of the Federal Government. The Contractor understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.
2. The Contractor also agrees to include these requirements in each subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA.

CIVIL RIGHTS REQUIREMENTS

Applicability - All contracts except micro-purchases (\$3,000 or less, except for construction contracts over \$2,000) The following requirements apply to the underlying contract:

The Recipient understands and agrees that it must comply with applicable Federal civil rights laws and regulations, and follow applicable Federal guidance, except as the Federal Government determines otherwise in writing. Therefore, unless a Recipient or Program, including an Indian Tribe or the Tribal Transit Program, is specifically exempted from a civil rights statute, FTA requires compliance with that civil rights statute, including compliance with equity in service:

- a. **Nondiscrimination in Federal Public Transportation Programs.** The Recipient agrees to, and assures that each Third Party Participant will, comply with Federal transit law, 49 U.S.C. § 5332 (FTA's "Nondiscrimination" statute): National origin, (e) Sex, (f) Disability, or (g) Age, and (2) The FTA "Nondiscrimination" statute's prohibition against discrimination includes: (a) Exclusion from participation, (b) Denial of program benefits, or (c) Discrimination, including discrimination in employment or business opportunity, (3) Except as FTA determines otherwise in writing: (a) General. Follow: 1 The most recent edition of FTA Circular 4702.1, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," to the extent consistent with applicable Federal laws, regulations, and guidance, and 2 Other applicable Federal guidance that may be issued, but (b) Exception for the Tribal Transit Program. FTA does not require an Indian Tribe to comply with FTA program-specific guidelines for Title VI when administering its projects funded under the Tribal Transit Program,
- b. **Nondiscrimination - Title VI of the Civil Rights Act.** The Recipient agrees to, and assures that each Third Party Participant will: (1) Prohibit discrimination based on: (a) Race, (b) Color, or (c) National origin, (2) Comply with: (a) Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000d et seq., (b) U.S. DOT regulations, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964," 49 C.F.R. part 21, and (c) Federal transit law, specifically 49 U.S.C. § 5332, as stated in the preceding section a, and (3) Except as FTA determines otherwise in writing, follow: (a) The most recent edition of FTA Circular 4702.1, "Title VI and Title VI-Dependent Guidelines for Federal Transit Administration Recipients," to the extent consistent with applicable Federal laws, regulations, and guidance. (b) U.S. DOJ, "Guidelines for the enforcement of Title VI, Civil Rights Act of 1964," 28 C.F.R. § 50.3, and (c) Other applicable Federal guidance that may be issued,
- c. **Equal Employment Opportunity.** (1) Federal Requirements and Guidance. The Recipient agrees to, and assures that each Third Party Participant will, prohibit discrimination on the basis of race, color, religion, sex, or national origin, and: (a) Comply with Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e et seq., (b) Facilitate compliance with Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order No. 11246, Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note, (c) Comply with Federal transit law, specifically 49 U.S.C. § 5332, as stated in section a, and (d) Comply

with other applicable EEO laws and regulations, as provided in Federal guidance, including laws and regulations prohibiting discrimination based on disability, except as the Federal Government determines otherwise in writing, (2) General. The Recipient agrees to: (a) Ensure that applicants for employment are employed and employees are treated during employment without discrimination on the basis of their: 1 Race, 2 Color, 3 Religion, 4 Sex, 5 Disability, 6 Age, or 7 National origin, (b) Take affirmative action that includes, but is not limited to: 1 Recruitment advertising, 2 Recruitment, 3 Employment, 4 Rates of pay, 5 Other forms of compensation, 6 Selection for training, including apprenticeship, 7 Upgrading, 8 Transfers, 9 Demotions, 10 Layoffs, and 11 Terminations, but Indian Tribe. Title VII of the Civil Rights Act of 1964, as amended, exempts Indian Tribes under the definition of "Employer". (3) Equal Employment Opportunity Requirements for Construction Activities. In addition to the foregoing, when undertaking "construction" as recognized by the U.S. Department of Labor (U.S. DOL), the Recipient agrees to comply, and assures the compliance of each Third Party

Participant, with: (a) U.S. DOL regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. chapter 60, and (b) Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order No. 11246, Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note,

- d. **Disadvantaged Business Enterprise.** To the extent authorized by applicable Federal law, the Recipient agrees to facilitate, and assures that each Third-Party Participant will facilitate, participation by small business concerns owned and controlled by socially and economically disadvantaged individuals, also referred to as "Disadvantaged Business Enterprises" (DBEs), in the Project as follows: 1) Requirements. The Recipient agrees to comply with: Section 1101(b) of MAP-21, 23 U.S.C. § 101 note, (b) U.S. DOT regulations, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs," 49 C.F.R. part 26, and (c) § 26.13(a), (b) DBE Program Requirements. Recipients receiving planning, capital and/or operating assistance that will award prime third-party contracts exceeding \$250,000 in a Federal fiscal year must: 1 Have a DBE program meeting the requirements of 49 C.F.R. part 26, 2 Implement a DBE program approved by FTA, and 3 Establish an annual DBE participation goal, (c) Special Requirements for a Transit Vehicle Manufacturer. The Recipient understands and agrees that each transit vehicle manufacturer, as a condition of being authorized to bid or propose on FTA-assisted transit vehicle procurements, must certify that it has complied with the requirements of 49 C.F.R. part 26, (d) the Recipient provides assurance that: The Recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 C.F.R. part 26. The Recipient shall take all necessary and reasonable steps under 49 C.F.R. part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The Recipient's DBE program, as required by 49 C.F.R. part 26 and as approved by DOT, is incorporated by reference in this agreement. 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 its approved program, the Department may impose sanctions as provided for under 49 C.F.R. part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. § 1001 and/or the Program Fraud Civil Remedies Act of 1986, 31 U.S.C. § 3801 et seq., Exception for the Tribal Transit Program. FTA exempts Indian tribes from the Disadvantaged Business Enterprise regulations at 49 C.F.R. part 26 under MAP-21 and previous legislation,
- e. **Nondiscrimination on the Basis of sex.** The Recipient agrees to comply with Federal prohibitions against discrimination on the basis of sex, including: (1) Title IX of the Education Amendments of 1972, as amended, 20 U.S.C. § 1681 et seq., (2) U.S. DOT regulations, "Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance," 49 C.F.R. part 25, and (3) Federal transit law, specifically 49 U.S.C. § 5332, as stated in section a,
- f. **Nondiscrimination on the Basis of Age.** The Recipient agrees to comply with Federal prohibitions against discrimination on the basis of age, including: (1) The Age Discrimination in Employment Act (ADEA), 29 U.S.C. §§ 621 - 634, which prohibits discrimination on the basis of age, (2) U.S. Equal Employment Opportunity Commission U.S.

EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, which implements the ADEA, (3) The Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 et seq., which prohibits discrimination

against individuals on the basis of age in the administration of programs or activities receiving Federal funds, (4) U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, which implements the Age Discrimination Act of 1975, and (5) Federal transit law, specifically 49 U.S.C. § 5332, as stated in section a,

- g. **Nondiscrimination on the Basis of Disability.** The Recipient agrees to comply with the following Federal prohibitions pertaining to discrimination against seniors or individuals with disabilities: (1) Federal laws, including: (a) Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, which prohibits discrimination on the basis of disability in the administration of federally funded programs or activities, (b) The Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. § 12101 et seq., which requires that accessible facilities and services be made available to individuals with disabilities, 1 General. Titles I, II, and III of the ADA apply to FTA Recipients, but 2 Indian Tribes. While Titles II and III of the ADA apply to Indian Tribes, Title I of the ADA exempts Indian Tribes from the definition of "employer," (c) The Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 et seq., which requires that buildings and public accommodations be accessible to individuals with disabilities, (d) Federal transit law, specifically 49 U.S.C. § 5332, which now includes disability as a prohibited basis for discrimination, and (e) Other applicable laws and amendments pertaining to access for elderly individuals or individuals with disabilities, (2) Federal regulations, including: (a) U.S. DOT regulations, "Transportation Services for Individuals with Disabilities (ADA)," 49 C.F.R. part 37, (b) U.S. DOT regulations, "Nondiscrimination on the Basis of Disability in Programs and Activities Receiving or Benefiting from Federal Financial Assistance," 49 C.F.R. part 27, (c) U.S. DOT regulations, "Transportation for Individuals with Disabilities: (U.S. ATBCB) and U.S. DOT regulations, "Americans With Disabilities (ADA) Accessibility Specifications for Transportation Vehicles," 36 C.F.R. part 1192 and 49 C.F.R. part 38, (e) U.S. DOJ regulations, "Nondiscrimination on the Basis of Disability in State and Local Government Services," 28 C.F.R. part 35, (f) U.S. DOJ regulations, "Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities," 28 C.F.R. part 36, (g) U.S. EEOC, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. part 1630, (h) U.S. Federal Communications Commission regulations, "Telecommunications Relay Services and Related Customer Premises Equipment for Persons with Disabilities," 47 C.F.R. part 64, Subpart F, (i) U.S. ATBCB regulations, "Electronic and Information Technology Accessibility Standards," 36 C.F.R. part 1194, and U) FTA regulations, "Transportation for Elderly and Handicapped Persons," 49 C.F.R. part 609, and (3) Other applicable Federal civil rights and non-discrimination guidance,
- h. **Drug or Alcohol Abuse - Confidentiality and Other Civil Rights Protections.** The Recipient agrees to comply with the confidentiality and civil rights protections of: (1) The Drug Abuse Office and Treatment Act of 1972, as amended, 21 U.S.C. § 1101 et seq., (2) The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970, as amended, 42 U.S.C. § 4541 et seq., and (3) The Public Health Service Act, as amended, 42 U.S.C. §§ 290dd - 290dd-2,
- i. **Access to Services for People with Limited English Proficiency.** Except as the Federal Government determines otherwise in writing, the Recipient agrees to promote accessibility of public transportation services to people whose understanding of English is limited by following: 1) Executive Order No. 13166, "Improving Access to Services for Persons with Limited English Proficiency," August 11, 2000, 42 U.S.C. § 2000d-1 note, and (2) U.S. DOT Notice, "DOT Policy Guidance Concerning Recipients' Responsibilities to Limited English Proficiency (LEP) Persons," 70 Fed. Reg. 74087, December 14, 2005,
- j. **Other Nondiscrimination Laws.** Except as the Federal Government determines otherwise in writing, the Recipient agrees to: (1) Comply with other applicable Federal nondiscrimination laws and regulations, and (2) Follow Federal guidance prohibiting discrimination.
- k. **Remedies.** Remedies for failure to comply with applicable Federal Civil Rights laws and Federal regulations may be enforced as provided in those Federal laws or Federal regulations.

BREACHES AND DISPUTE RESOLUTION

All contracts over \$100,000

Disputes arising in the performance of this contract which are not resolved by agreement of the parties shall be decided in writing by the recipient's authorized representative. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, contractor mails or otherwise furnishes a written appeal to the recipient's CEO. In connection with such appeal, contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the recipient's CEO shall be binding upon contractor and contractor shall abide by the decision. FTA has a vested interest in the settlement of any violation of Federal law including the False Claims Act, 31 U.S.C. § 3729.

Performance During Dispute - Unless otherwise directed by the recipient, contractor shall continue performance under this contract while matters in dispute are being resolved.

Claims for Damages - Should either party to the contract suffer injury or damage to person or property because of any act or omission of the party or of any of his employees, agents or others for whose acts he is legally liable, a claim for damages therefore shall be made in writing to such other party within ten days after the first observance of such injury or damage.

Remedies - Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between the recipient and contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the residing State.

Rights and Remedies - Duties and obligations imposed by the contract documents 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 the recipient 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.

PATENT AND RIGHTS IN DATA

CONTRACTS INVOLVING EXPERIMENTAL, DEVELOPMENTAL, OR RESEARCH WORK (\$3,000 or less, except for construction contracts over \$2,000).

PATENT RIGHTS

a. General. The Recipient agrees that:

Depending on the nature of the Project, the Federal Government may acquire patent rights when the Recipient or Third Party Participant produces a patented or patentable: (a) Invention, (b) Improvement, or (c) Discovery, (2) The Federal Government's rights arise when the patent or patentable information is: (a) Conceived under the Project, or (b) Reduced to practice under the Project, and (3) When a patent is issued or patented information becomes available as described in Patent Rights section A(2), the Recipient agrees to: (a) Notify FTA immediately, and (b) Provide a detailed report satisfactory to FTA,

b. Federal Rights. The Recipient agrees that:

Its rights and responsibilities, and the rights and responsibilities of each Third Party Participant, in that federally funded invention, improvement, or discovery will be determined as provided by applicable Federal laws, regulations, and guidance, including any waiver thereof, and (2) Unless the Federal Government determines otherwise in writing, irrespective of the Recipient's status or the status of any Third Party Participant as a large business, a small business, a State government, a State instrumentality, a local government, an Indian tribe, a nonprofit organization, an institution of higher education, or an individual, the Recipient agrees to transmit the Federal Government's patent rights to FTA as specified in: (a) 35 U.S.C. § 200 et seq., and (b) U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 C.F.R. part 401, and

c. License Fees and Royalties. As permitted by 49 C.F.R. parts 18 and 19:

License fees and royalties for patents, patent applications, and inventions derived from the Project are program income, and (2) The Recipient has no obligation to the Federal Government with respect to those license fees or royalties, except: (a) For compliance with 35 U.S.C. § 200 et seq., which applies to patent rights developed under a federally funded research-type project, and (b) As FTA determines otherwise in writing.

RIGHTS IN DATA AND COPYRIGHTS

- a. **Definition of "Subject Data."** means recorded information: (1) Copyright. Whether or not copyrighted, and (2) Delivery. That is delivered or specified to be delivered under the Underlying Agreement,
- b. **Examples of "Subject Data."** Examples of "subject data": (1) Include, but are not limited to: (a) Computer software, (b) Standards, (c) Specifications, (d) Engineering drawings and associated lists, (e) Process sheets, (f) Manuals, (g) Technical reports, (h) Catalog item identifications, and (i) Related information, but (2) Do not include: (a) Financial reports, (b) Cost analyses, or (c) Other similar information used for Project administration
- c. **General Federal Restrictions.** The following restrictions apply to all subject data first produced in the performance of the Recipient's Project supported by the Underlying Agreement: (1) Prohibitions. The Recipient may not: (a) Publish or reproduce any subject data in whole or in part, or in any manner or form, or (b) Permit others to do so, but (2) Exceptions. The prohibitions of Rights in Data and Copyrights C (1) do not apply to: (a) Publications or reproductions for the Recipient's own internal use, (b) An institution of higher learning, (c) The portion of subject data that the Federal Government has previously released or approved for release to the public, or (d) The portion of data that has the Federal Government's prior written consent for release,
- d. **Federal Rights in Data and Copyrights.** The Recipient agrees that: (1) License Rights. The Recipient must provide a license to its "subject data" to the Federal Government, which license is: (a) Royalty-free, (b) Non-exclusive, and (c) Irrevocable, (2) Uses. The Federal Government's license must permit the Federal Government to take the following actions provided those actions are taken for Federal Government purposes: (a) Reproduce the subject data, (b) Publish the subject data, (c) Otherwise use the subject data, and (d) Permit other entities or individuals to use the subject data, and
- e. **Special Federal Rights in Data for Research, Development, Demonstration, Deployment, and Special Studies Projects.** In general, FTA's purpose in providing Federal funds for a research, development, demonstration, deployment, or special studies Project is to increase transportation knowledge, rather than limit the benefits of the Project to the Recipient and its Third-Party

Participants, therefore, the Recipient agrees that: (1) Publicly Available Report. When the Project is completed, it must provide a Project report that FTA may publish or make available for publication on the Internet, (2) Other Reports. It must provide other reports pertaining to the Project that FTA may request, (3) Availability of Subject Data. FTA may make available to any FTA Recipient or any of its Third-Party Participants at any tier of the Project, either FTA's copyright license to the subject data or a copy of the subject data, except as the Federal Government determines otherwise in writing, (4) Identification of Information. It must identify clearly any specific confidential, privileged, or proprietary information submitted to FTA, (5) Incomplete Project. If the Project is not completed for any reason whatsoever, all data developed under the Project becomes "subject data" and must be delivered as the Federal Government may direct, but (6) Exception. Rights in Data and Copyrights Section E does not apply to an adaptation of automatic data processing equipment or program that is both: (a) For the Recipient's use, and (b) Acquired with FTA capital program funding,

- f. **License Fees and Royalties.** As permitted by 49 C.F.R. parts 18 and 19: (1) License fees and royalties for copyrighted material or trademarks derived from Project are program income, and (2) The Recipient has no obligation to the Federal Government with respect to those license fees or royalties, except: (a) For compliance with 35 U.S.C. § 200 et seq., which applies to patent rights developed under a federally funded research-type project, and (b) As FTA determines otherwise in writing,
- g. **Hold Harmless.** Upon request by the Federal Government, the Recipient agrees that: (1) Violation by Recipient. (a) If it willfully or intentionally violates any: 1 Proprietary rights, 2 Copyrights, or 3 Right of privacy, and (b) Its violation occurs from any of the following uses of Project data: 1 Publication, 2 Translation, 3 Reproduction, 4 Delivery, 5 Use, or 6 Disposition, then (c) It will indemnify, save, and hold harmless against any liability, including costs and expenses of: 1 The Federal Government's officers acting within the scope of their official duties, 2 The Federal Government's employees acting within the scope of their official duties, and 3 Federal Government's agents acting within the scope of their official duties, but (2) Exceptions. The Recipient will not be required to indemnify the

Federal Government for any liability described in Rights in Data and Copyrights Section G (1) if: (a) Violation by Federal Officers, Employees or Agents. The violation is caused by the wrongful acts of Federal employees or agents, or (b) State law. If indemnification is prohibited or limited by applicable State law,

- h. **Restrictions on Access to Patent Rights.** Nothing in this Rights in Data and Copyrights section pertaining to rights in data either: (1) Implies a license to the Federal Government under any patent, or (2) May be construed to affect the scope of any license or other right otherwise granted to the Federal Government under any patent,
- i. **Data Developed Without Federal Funding or Support.** The Recipient understands and agrees that in certain circumstances it may need to provide data developed without any Federal funding or support to FTA. Nevertheless: (1) Protections. Rights in Data and Copyrights Sections A, B, C, and D generally do not apply to data developed without Federal funding, even though that data may have been used in connection with the Project, and (2) Identification of Information. The Recipient understands and agrees that the Federal Government will not be able to protect data developed without Federal funding from unauthorized disclosure unless that data is clearly marked "Proprietary" or "Confidential,"
- j. **Requirements to Release Data.** The Recipient understands and agrees that the Federal Government may be required to release Project data and information the Recipient submits to the Federal Government as required by:
 - 1) The Freedom of Information Act, 5 U.S.C. § 552, (2) Another applicable Federal law requiring access to Project records, (3) U.S. DOT regulations, "Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations," specifically 49 C.F.R. § 19.36(d), or (4) Other applicable Federal regulations and guidance pertaining to access to Project records.

DBE Letter of Intent

Name of proposer/offeror's firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Name of DBE firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

Description of work to be performed by DBE firm:

The proposer/offeror is committed to utilizing the before mentioned DBE firm for the work described above. The estimated dollar value of this work is \$_____.

Affirmation

The before mentioned DBE firm confirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By _____
(Signature) (Title)

If the proposer/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

DBE AFFIDAVIT

State of _____ }
County of _____ }

Before me, a notary public, personally appeared _____, who, being duly sworn, says as follows:

1. I serve as _____ for _____ (the "DBE").
2. The DBE has been certified as a Disadvantaged Business Enterprise by ALDOT, BAA, UCP or DOT.
3. Such certification has not been revoked and has not expired.
4. There has been no change in the minority status of the DBE.
5. Attached hereto is the DBE's most recent DBE certification letter.
6. The foregoing items are true and accurate.

Signature of Affiant

Date

I certify that the affiant is known or made known to me to be the identical party s/he claims to be. Subscribed and sworn to before me this _____ day of _____, 20____.

[SEAL]

Notary Public
My Commission expires _____, 20__.

DBE UNAVAILABLE CERTIFICATION

The undersigned Proposer submits to the Birmingham-Jefferson County Transit Authority (BJCTA) certifies that, on _____, 20__, a representative contacted the following Disadvantaged Business Enterprise (“DBE”) to obtain a Proposal for the following work items.

DBE	Work Items Sought	Form of Proposal Sought (i.e., unit price, materials & labor, labor only, etc.

Said DBE was unavailable for work on this project, or unable to prepare a Proposal for the following reason:

Company

Authorized Signature

Printed Name of Signer

Title of Signer

Date

The foregoing statement is a true and correct account of why the undersigned DBE did not prepare a Proposal on this project.

Disadvantaged Business Enterprise

Authorized Signature

Printed Name of Signer

Title of Signer

Date

DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

The undersigned proposer/offeror has satisfied the requirements of the bid specification in the following manner (please check the appropriate space):

The proposer/offeror is committed to a minimum of 10.5 % DBE utilization on this contract. Provide DBE Information on chart below. Please submit documentation demonstrating good faith efforts.

Name of Proposer/ Offeror's Firm (Subcontractor/Supplier/Service Provider)	DBE?		Phone	State Registration No.	Dates, Best Method of Contact		Description of Work	Dollar Amount of Proposal/ Quote
	Yes	No			Letter	Phone		

Print Name/Title

Signature

Date

Birmingham-Jefferson County Transit Authority
DBE GOOD FAITH EFFORT DOCUMENTATION

The intent of this form is to document the good faith effort attempts made by the apparent low bidder in soliciting DBE firms to meet the DBE project goal. Please note that the project goal will not be waived and the contractor must make efforts to achieve the goal throughout the life of the contract.

Every work type where there is a certified DBE, the apparent low bidder must submit the form as follows:

- 1 available DBE – must contact 1 DBE
- 2-5 available DBEs – must contact 3 DBEs minimum
- 6-7 available DBEs – must contact 4 DBEs minimum
- 8-9 available DBEs – must contact 5 DBEs minimum
- 10 or more available DBEs – must contact 6 DBEs minimum

All information submitted on this form is subject to audit by the DBE Goal Committee

Date Submitted: _____

Contractor Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Contact Person: _____ Telephone Number: _____

Email Address: _____

Project Goal Percentage: _____

Commitment Percentage: _____

Unattained Percentage: _____

I certify that the information contained in this good faith effort documentation form is true and correct to the best of my knowledge. I further understand that any willful falsification, fraudulent statement or misrepresentation will result in appropriate sanctions which may involve debarment and/or prosecution under applicable State and Federal laws.

Proposer/Authorized Representative Signature: _____

Title: _____ Date: _____

DBE GOOD FAITH EFFORT DOCUMENTATION

Work Type Number	Description of Work, Service or Material	DBE Firm Name			
Contact Name (First and Last)	Contact Date	Contact Method	Contact Results	Bid Amount	
1.					
2.					
3.					
Comments:					
Work Type Number	Description of Work, Service or Material	DBE Firm Name			
Contact Name (First and Last)	Contact Date	Contact Method	Contact Results	Bid Amount	
1.					
2.					
3.					
Comments:					
Work Type Number	Description of Work, Service or Material	DBE Firm Name			
Contact Name (First and Last)	Contact Date	Contact Method	Contact Results	Bid Amount	
1.					
2.					
3.					
Comments:					

PROMPT PAYMENT

Applicability - All contracts except micro-purchases (\$3,000 or less, except for construction contracts over \$2,000)

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contract receives from the Recipient. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Recipient. This clause applies to both DBE and non-DBE subcontracts.

INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS

All contracts except micro-purchases (\$3,000 or less, except for construction contracts over \$2,000)

The preceding provisions include, in part, certain Standard Terms & Conditions required by USDOT, whether or not expressly stated in the preceding contract provisions. All USDOT-required contractual provisions, as stated in FTA Circular 4220.1F, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The contractor shall not perform any act, fail to perform any act, or refuse to comply with any request that would cause the recipient to be in violation of FTA terms and conditions.

ADDITIONAL FEDERAL REQUIREMENTS THAT ARE NOT FEDERAL CLAUSES

Full and Open Competition

In accordance with 49 U.S.C. § 5325(a) all procurement transactions shall be conducted in a manner that provides full and open competition.

Prohibition Against Exclusionary or Discriminatory Specifications

Apart from inconsistent requirements imposed by Federal statute or regulations, the contractor shall comply with the requirements of 49 USC 5323(h)(2) by refraining from using any FTA assistance to support procurements using exclusionary or discriminatory specifications.

Conformance with ITS National Architecture

Contractor shall conform, to the extent applicable to the National Intelligent Transportation Standards architecture as required by SAFETEA-LU Section 5307(c), 23 U.S.C. Section 512 and as amended by MAP-21 23 U.S.C. § 517(d), note and follow the provisions of FTA Notice, "FTA National Architecture Policy on Transit Projects," 66 Fed. Reg.1455 ets. eq., January 8, 2001, and any other implementing directives FTA may issue later, except to the extent FTA determines otherwise in writing.

Access Requirements for Persons with Disabilities

Contractor shall comply with 49 USC 5301(d), stating Federal policy that the elderly and persons with disabilities have the same rights as other persons to use mass transportation services and facilities and that special efforts shall be made in planning and designing those services and facilities to implement that policy. Contractor shall also comply with all applicable requirements of Sec. 504 of the Rehabilitation Act (1973), as amended, 29 USC 794, which prohibits discrimination based on handicaps, and the Americans with Disabilities Act of 1990 (ADA), as amended, 42 USC 12101 et seq., which requires that accessible facilities and services be made available to persons with disabilities, including any subsequent amendments thereto.

Notification of Federal Participation

To the extent required by law, in the announcement of any third-party contract award for goods and services (including construction services) having an aggregate value of \$500,000 or more, contractor shall specify the amount of Federal assistance to be used in financing that acquisition of goods and services and to express that amount of Federal assistance as a percentage of the total cost of the third-party contract.

Interest of Members or Delegates to Congress

No members of, or delegates to, the US Congress shall be admitted to any share or part of this contract nor to any benefit arising therefrom.

Ineligible Contractors and Subcontractors

Any name appearing upon the Comptroller General's list of ineligible contractors for federally assisted contracts shall be ineligible to act as a subcontractor for contractor pursuant to this contract. If contractor is on the Comptroller General's list of ineligible contractors for federally financed or assisted construction, the recipient shall cancel, terminate or suspend this contract.

Other Contract Requirements

To the extent not inconsistent with the foregoing Federal requirements, this contract shall also include those provisions attached hereto, and shall comply with the recipient's Procurement Guidelines, available upon request from the recipient.

Compliance with Federal Regulations

Any contract entered pursuant to this solicitation shall contain the following provisions: All USDOT-required contractual provisions, as set forth in FTA Circular 4220.1F, are incorporated by reference. Anything to the contrary herein notwithstanding, FTA mandated terms shall control in the event of a conflict with other provisions contained in this Agreement. Contractor shall not perform any act, fail to perform any act, or refuse to comply with any grantee request that would cause the recipient to be in violation of FTA terms and conditions. Contractor shall comply with all applicable FTA regulations, policies, procedures and directives, including, without limitation, those listed directly or incorporated by reference in the Master Agreement between the recipient and FTA, as may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

Real Property

Any contract entered shall contain the following provisions: Contractor shall always comply with all applicable statutes and USDOT regulations, policies, procedures and directives governing the acquisition, use and disposal of real property, including, but not limited to, 49 CFR 18.31-18.34, 49 CFR 19.30-19.37, 49 CFR Part 24, 49 CFR 5326 as amended by MAP-21, 49 CFR part 18 or 19, 49 USC 5334, applicable FTA Circular 5010, and FTA Master Agreement, as they may be amended or promulgated during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

Access to Services for Persons with Limited English Proficiency

To the extent applicable and except to the extent that FTA determines otherwise in writing, the Recipient agrees to comply with the policies of Executive Order No. 13166, "Improving Access to Services for Persons with Limited English Proficiency," 42 U.S.C. § 2000d 1 note, and with the provisions of U.S. DOT Notice, "DOT Guidance to Recipients on Special Language Services to Limited English Proficient (LEP) Beneficiaries," 70 Fed. Reg. 74087, December 14, 2005.

Environmental Justice

Except as the Federal Government determines otherwise in writing, the Recipient agrees to promote environmental justice by following: (1) Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low- Income Populations," February 11, 1994, 42 U.S.C. § 4321 note, as well as facilitating compliance with that Executive Order, and (2) DOT Order 5610.2, "Department of Transportation Actions To Address Environmental Justice in Minority Populations and Low-Income Populations," 62 Fed. Reg. 18377, April 15, 1997, and (3) The most recent and applicable edition of FTA Circular 4703.1, "Environmental Justice Policy Guidance for Federal Transit Administration Recipients," August 15, 2012, to the extent consistent with applicable Federal laws, regulations, and guidance,

Environmental Protections

requirements for the project. Some, but not all, of the major Federal laws that may affect the project include: The National Environmental Policy Act of 1969; the Clean Air Act; the Resource Conservation and Recovery Act; the

comprehensive Environmental response, Compensation and Liability Act; as well as environmental provisions with Title 23 U.S.C., and 49 U.C. chapter 53. The U.S. EPA, FHWA and other federal agencies may issue other federal regulations and directives that may affect the project. Compliance is required with any applicable Federal laws and regulations in effect now or that become effective in the future.

Geographic Information and Related Spatial Data

Any project activities involving spatial data or geographic information systems activities financed with Federal assistance are required to be consistent with the National Spatial Data Infrastructure promulgated by the Federal Geographic Data Committee, except to the extent that FTA determines otherwise in writing.

Federal Single Audit Requirements for State Administered Federally Aid Funded Projects Only Non-Federal entities that expend \$500,000 or more in a year in Federal awards from all sources are required to comply with the Federal Single Audit Act provisions contained in U.S. Office of Management and Budget (OMB) Circular No. A 133, Audits of States, Local Governments, and Non-Profit Organizations. Non-Federal entities that expend Federal awards from a single source may provide a program specific audit, as defined in the Circular. Non-Federal entities that expend less than \$500,000 in a year in Federal awards from all sources are exempt from Federal audit requirements for that year, except as noted in '3052.21S(a), but records must be available for review or audit by appropriate officials of the Federal and State agencies.

Catalog of Federal Domestic Assistance (CFDA) Identification Number

The municipal project sponsor is required to identify in its accounts all Federal awards received and expended, and the Federal programs under which they were received. Federal program and award identification shall include, as applicable, the CFDA title and number, award number and year, name of the Federal agency, and name of the pass-through entity.

CFDA number for the Federal Transportation Administration

A Recipient covered by the Single Audit Act Amendments of 1996 and OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations," agrees to separately identify the expenditures for Federal awards under the Recovery Act on the Schedule of Expenditures of Federal Awards (SEFA) and the Data Collection Form (SF-SAC) required by OMB Circular A-133. The Recipient agrees to accomplish this by identifying expenditures for Federal awards made under Recovery Act separately on the SEFA, and as separate rows under Item 9 of Part III on the SF-SAC by CFDA number, and inclusion of the prefix "ARRA" in identifying the name of the Federal program on the SEFA and as the first characters in Item 9d of Part III on the SF-SAC.

Federal Certifications

CERTIFICATION AND RESTRICTIONS ON LOBBYING

I, _____, hereby certify
(Name and title of official)

On behalf of _____
(Name of Proposer/Company Name)

- ▶ 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, and 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.
- ▶ If any funds other than federal appropriated funds have been paid or will be paid to any person influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the 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.
- ▶ The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including sub-contracts, sub-grants and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was 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 31 U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). 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.

The undersigned certifies or affirms the truthfulness and accuracy of the contents of the statements submitted on or with this certification and understands that the provisions of 31 U.S.C. Section 3801, et seq., are applicable thereto.

Name of Proposer/Company Name: _____

Type & Print Name: _____

Signature of authorized representative: _____

Date: ____/____/____

Signature of Notary and Seal: _____

GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT)

Instructions for Certification: By signing and submitting this bid or proposal, the prospective lower tier participant is providing the signed certification set out below.

- 1) It will comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 CFR part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 CFR part 180,
- 2) To the best of its knowledge and belief, that its Principals and Subrecipients at the first tier:
 - a. Are eligible to participate in covered transactions of any Federal department or agency and are not presently:
 - 1) Debarred,
 - 2) Suspended,
 - 3) Proposed for debarment,
 - 4) Declared ineligible,
 - 5) Voluntarily excluded, or
 - 6) Disqualified,
 - b. Its management has not within a three-year period preceding its latest application or proposal been convicted of or had a civil judgment rendered against any of them for:
 - (1) Commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction, or contract under a public transaction,
 - (2) Violation of any Federal or State antitrust statute, or
 - (3) Commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making any false statement, or receiving stolen property,
 - c. It is not presently indicted for, or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses listed in the preceding subsection 2.b of this Certification,
 - d. It has not had one or more public transactions (Federal, State, or local) terminated for cause or default within a three-year period preceding this Certification,
 - e. If, at a later time, it receives any information that contradicts the statements of subsections 2.a - 2.d above, it will promptly provide that information to FTA,

GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT

- f. It will treat each lower tier contract or lower tier subcontract under its Project as a covered lower tier contract for purposes of 2 CFR part 1200 and 2 CFR part 180 if it:
 - 3) Equals or exceeds \$25,000,
 - 4) Is for audit services, or
 - 5) Requires the consent of a Federal official, and

- g. It will require that each covered lower tier contractor and subcontractor:
 - (1) Comply and facilitate compliance with the Federal requirements of 2 CFR parts 180 and 1200, and
 - (2) Assure that each lower tier participant in its Project is not presently declared by any Federal department or agency to be:
 - a. Debarred from participation in its federally funded Project,
 - b. Suspended from participation in its federally funded Project,
 - c. Proposed for debarment from participation in its federally funded Project,
 - d. Declared ineligible to participate in its federally funded Project,
 - e. Voluntarily excluded from participation in its federally funded Project, or
 - f. Disqualified from participation in its federally funded Project, and

It will provide a written explanation as indicated on a page attached in FTA's TEAM-Web or the Signature Page if it or any of its principals, including any of its first tier Subrecipients or its Third Party Participants at a lower tier, is unable to certify compliance with the preceding statements in this Certification Group.

Certification

Contractor _____

Signature of Authorized Official _____ Date ____ / ____ / ____

Name and Title of Contractor's Authorized Official _____

BUY AMERICA CERTIFICATION

COMPLIANCE FORM

Certificate for Compliance with Section 165(a)
(Procurement of Steel, Iron, or Manufactured
Products)

The Proposer or offeror hereby certifies that it will comply with the requirements of Section 165(a) of the Surface Transportation Assistance Act of 1982, as amended, and the applicable regulations of 49 CFR Part 661.

Date: _____

Signature: _____

Company Name: _____

Title: _____

NON-COMPLIANCE FORM

Certificate for Non-Compliance with Section 165(a)
(Procurement of Steel, Iron, or Manufactured Products)

The Proposer or offeror hereby certifies that it cannot comply with the requirements of Section 165(a) of the Surface Transportation Assistance Act of 1982, as amended, but it may qualify for an exception to the requirement pursuant to Section 165(b)(2) or 165(b)(4) of the Surface Transportation Assistance Act of 1982, and the applicable regulations of 49 CFR 661.7.

Date: _____

Signature: _____

Company Name: _____

Title: _____

Identify items that are non-compliant in the space below;

_____	_____	_____
_____	_____	_____
_____	_____	_____

NOTICE TO PROPOSERS:

Your bid cannot be considered unless one of the above certifications is signed and returned with the bid. If you submit an incomplete Buy America certificate or an incorrect certificate of non-compliance through an inadvertent or clerical error, you may submit to the FTA Chief Counsel, within ten (10) calendar days of Bid Opening, a written explanation of the circumstances surrounding the submission of the incomplete or incorrect certification (See Instructions to Proposers).

VENDOR REGISTRATION FORM

RFP Number: _____

RFP or IFB Description: _____

Company Name/Vendor: _____

Address: _____

City / State / ZIP: _____

Contact Person: _____

Title: _____

Office Number: _____

Fax Number: _____

Cell Number: _____

Email Address: _____

Website: _____

DUNS: _____

Send to:

Darryl Grayson - Contracts & Procurement Manager
Birmingham-Jefferson County Transit Authority
1801 Morris Avenue – 2nd Floor
Birmingham, Alabama 35203
Direct: (205) 521-0144
Email: dgrayson@bjcta.org



ACRONYMS & GLOSSARY

3G/4G/5G – Generations of Wireless Mobile Telecommunications Networks	EMV – Europay, MasterCard, Visa
ABD – As-Built Document	EN – European Norm (British Standards Institute standard)
ABT– Account Based Ticketing	ESN – Electronic Serial Number
ACH – Automated Clearing House	ETL – Extract, Transform and Load
ADA – Americans with Disabilities Act	FAT – Factory Acceptance Test
AES –Advanced Encryption Standard	FCC – Federal Communications Commission
ADAAG – ADA Accessibility Guidelines	FCS – Fare Collection System
ANSI – American National Standards Institute	FIT – Field Integration Test
APC – Automated Passenger Counter	FMI – Field Modification Instructions
API – Application Programming Interface	fPan – funding Payment Account Number
APTA – American Public Transit Association	FPV – Fare Payment Validation
ASCII–American Standard Code for Information Interchange	FUT – Functional Unit Testing
ATP – Account-Based Transaction Processor	GFCI – Ground Fault Circuit Interrupter
AUT–Application Under Test	GSM – Global System for Mobile communications
AVS – Address Verification System	GTFS-RT – General Transit Feed Specification Real Time GUI – Graphical User Interface
BCPU –Bank Card Processing Unit	HHU – Handheld Unit
BJCTA – Birmingham Jefferson County Transit Authority also known as BJCTA	HTID – Handheld Ticket Inspection Device
BHU— Bill Handling Unit	HTML – Hypertext Markup Language
BO Ops—Back-Office Operations	HTTPS – Hypertext Transfer Protocol Secure
BOCA – Building Officials and Code Administrators	I/O – Input/Output
BOD – Bus Operator Display	IaaS– Infrastructure as a Service
BRT – Bus Rapid Transit	ICD – Interface Control Documentation
BX – The Birmingham Express	IEC – International Electrotechnical Commission
CAC – Common Access Card	IIN – Issuer Identification Number
CAD/AVL – Computer-aided Dispatch/Automatic Vehicle Location system	INCITS – International Committee for Information Technology Standard
CCTV – Closed-Circuit Television	iOS – Operating System for Apple products
CDA – Combined Data Authentication	IP – Internet Protocol
CDMA – Code Division Multiple Access	ISO – International Standards Organization
CDRL – Contract Data Requirements List	JPEG – Joint Photographic Experts Group
CDS – Central Data System	KPI – Key Performance Indicators
CHU – Coin Handling Unit	LCD – Liquid Crystal Display
CIPURSE – An open security standard for transit fare collection systems	LLRU – Lowest Level Replacement Unit
COB - City of Birmingham	LU – Limited Use
COTS – Commercial-off-the-Shelf equipment	BJCTA – Birmingham Jefferson County Transit Authority also known as BJCTA.
CPOS – Compact Point of Sale	MCBF – Mean Cycle Between Failure
CRM – Customer Relationship Management system	MDM – Mobile Device Management
CSC – Card Security Code	MDT – Mobile Data Terminal
CST – Customer Service sales Terminal	MED – Media Encoder/Dispenser
CPU – Currency Processing Unit	MIFARE – A NXP owned series of chips used in contactless smart cards
DBMS – Database Management System	MIL – Master Issues List
DDA – Dynamic Data Authentication	MIL-STD – U.S. Military Standard
DESFIRE – Data Encryption Standard Fast, Innovative, Reliable and Secure	MIMS – Media Inventory Management System
DR – Design Review	MPEG – Moving Picture Experts Group
EDP – Electronic Data Processing	MS – Microsoft
EFT – Electronic Funds Transfer	MTBF – Mean Time Between Failure
EMI – Electromagnetic Interference	MTT – Mass Transit Transaction
	MVP – Minimum Viable Product
	NEC – National Electric Code
	NFC – Near Field Communication

NFPA – National Fire Protection Association
 NTP – Notice to Proceed
 NVM – Non-Volatile Memory
 ODA – Offline Data Authentication
 ODBC --Open Database Connectivity
 OEM – Original Equipment Manufacturer
 P2PE – Point-to-Point Encryption
 PA – Payment Account
 PA-DSS – Payment Application Data Security Standard
 PAN – Primary Account Number
 PAR – Payment Account Reference
 PAT – Production Acceptance Test
 PCI-DSS – Payment Card Industry – Data Security Standard
 PCD – Personal Communications Device
 PDR – Preliminary Design Review
 PDU – Protocol Data Unit
 PII – Personally Identifiable Information
 PIV – Personal Identity Verification
 POC – Point of Contact
 POS – Point of Sale system
 PM – Preventative Maintenance
 PM – Project Manager
 PMP – Project Management Professional
 QA – Quality Assurance
 QC – Quality Control
 QR – Quick Response
 QSA – Qualified Security Assessor
 RAM – Random Access Memory
 RFI – Radio Frequency Interference
 RMS – Revenue Management System
 SAE – Society of Automotive Engineers
 SAM – Secure Access Module
 SAP -System Analysis and Program Development – A software company
 SAT – System Acceptance Test
 SBC – Single Board Computer
 SAV – Stand-alone Validator
 SCADA – Supervisory Control and Data Acquisition
 SIAA – Society of Industrial technology for Antimicrobial Articles
 SED – Smartcard Encoder/Dispenser
 SI – System Integrator
 SIT – System Integration Test
 SKU – Stock Keeping Unit
 SMA – System Monitoring Appliance
 SMA – Software Maintenance Agreement
 Smart MX – Brand of secure smart card controller platforms owned by NXP
 SMMA – System Monitoring and Management Application
 SNMP3 – Simple Network Management Protocol version 3
 SoGR – State of Good Repair
 SQL – Structured Query Language
 SSD – Solid State Drive
 SSL – Secure Socket Layer
 sTVM – simple Ticket Vending Machine
 TDEA – Triple Data Encryption Algorithm
 TLS – Transport Layer Security
 TTY --Teletypewriter
 TVM – Ticket Vending Machine
 UI – User Interface
 UID – Unique Identification Number
 UL – Underwriter Laboratories
 UPS – Uninterruptible Power Supply
 USB – Universal Serial Bus
 UX – User Experience
 VDC – Voltage Direct Current
 VPN – Virtual Private Network