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# Capital Area Transportation Authority

## Radio Project

### Request for Proposal # 2013-102

#### SCHEDULE OF ACTIVITIES

RFP Released:	February 27, 2013
Pre-Proposal Meeting (optional):	March 11, 2013, 9:00A.M. Eastern Standard Time(EST), CATA Admin Office, 4615 Tranter Street, Lansing, MI 48910
Deadline for Written Questions Due:	March 21, 2013, Noon
CATA's Responses released by:	March 27, 2013
Number of Proposals & Due Date:	Submit six (6) proposal copies including one original and electronic formats explained on page 47 to CATA Purchasing Manager address listed on page 5; by 1:00pm EST, April 9, 2013
Orals/Interview(s) (Optional):	Optional
Proposed Date to Begin Contract Development:	May 17, 2013
Proposed Contract Signature/Award Date:	May 24, 2013
Proposed Contract Start Date:	June 1, 2013
Kick-off Meeting at CATA	Within 1 week of contract start date
Progress Meetings:	On-going, weekly/monthly as required

**Issued On February 27, 2013**

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\*Please also refer to the following separate .pdf Files:

Attachment A – CATA Radio Project RFP Photos and Diagrams 02.27.13.pdf

Attachment B – CATA Radio Project RFP Inventory 02.27.13.pdf

Attachment C –CATA Radio Project RFP Pricing Index 02.19.13.pdf

\* Attachment A – Photos and Diagrams, is available on the CATA Website: [www.cata.org](http://www.cata.org)

Attachment B – Raido Inventory, and Attachment C – Pricing Index, may be downloaded in Excel format at: <ftp://ftp.cata.org>

## **SECTION 1: PROCUREMENT PROCESS**

### **1-A Issuing Office**

This Request for Proposal (“RFP”) is issued by Capital Area Transportation Authority (“CATA”), 4615 Tranter Street, Lansing, MI 48910.

**All RFP responses and communications regarding this project during the procurement process must be addressed to CATA’s Purchasing & Contracts Manager:**

Beverly Anderson  
Purchasing & Contracts Manager  
Capital Area Transportation Authority  
4615 Tranter Street  
Lansing, MI 48910  
Fax: (517) 394-3733  
E-mail: [banderson@cata.org](mailto:banderson@cata.org)

### **1-B Project Management**

The person designated to perform as CATA’s Project Manager **AFTER AWARD** of the Project is named below. This person is not to be contacted by respondents prior to award. The only CATA contact during the RFP process is CATA’s Purchasing & Contracts Manager named above.

Mr. Dwight (Dave) Smith  
Director of Operations  
Capital Area Transportation Authority  
4615 Tranter Street  
Lansing, MI 48910

### **1-C Project Oversight**

The oversight of this CATA Project is the responsibility of the CATA Project Manager named in Project Management Section above.

The Contractor will be required to work with CATA staff and service agencies as directed by CATA throughout the duration of the Contract and attend Progress Meetings as required by the CATA Project Manager.

### **1-D Incurring Costs**

The proposer shall bear all costs associated with the preparation and submission of its proposal. CATA is not liable for any cost incurred by any party prior to signing of a contract

with that party and then only upon written authorization from CATA to proceed with the project.

### **1-E Contract Term**

The term of the proposed contract will commence approximately June 1, 2013 and continue for a period of five (5) years, until May 31, 2018, including extended maintenance.

### **1-F Contract Extension**

CATA reserves the right to extend the term of any contract resulting from this RFP for up to one year. Any extension will be in writing.

### **1-G Type of Contract**

This is a fixed fee contract plus cost of replacement/expansion hardware and associated maintenance. CATA reserves the right to expand or decrease service/use of the contract as conditions require. The contract will state a pre-agreed maximum total price.

### **1-H Questions/Changes to the RFP**

It is the desire of CATA to provide the same information to all interested parties to insure fairness and impartiality in the procurement process. To that end, CATA will not respond to telephone inquiries or personal visits. Visitation by respondents or their representatives may be made to CATA only at the pre-proposal meeting, if held. All questions are to be submitted in writing. ***Submit written questions via e-mail to the CATA Purchasing & Contracts Manager at the e-mail address indicated in Section I above no later than the date and time indicated on the Schedule of Activities above.*** Any changes made to this RFP, in response to the questions or concerns raised in any scheduled pre-proposal meeting or through correspondence received by CATA prior to the pre-proposal meeting, will be put in writing to all firms attending any scheduled pre-proposal meeting or otherwise indicating an interest in this project by the date stated on the above *Schedule of Activities* page.

### **1-I Pre-Proposal Meeting**

See *Schedule of Activities* page above for date and time of any Pre-Proposal Meeting scheduled for this RFP. Any such meeting will be held the CATA Administrative offices, 4615 Tranter Street, Lansing, MI 48910, unless otherwise stated. The purpose of this meeting is to discuss with prospective contractors the work to be performed and to answer questions about this RFP. The pre-proposal meeting is for information only; Contractor attendance is not mandatory. However, interested Contractors are strongly encouraged to attend as no other inspection visit requests prior to award will be honored.

### **1-J Proposals**

To be considered for award, each respondent must submit a complete response to the RFP, using the designated format (if any) and accepting the requirements of Sections II and III below. Proposals are to be submitted only to the CATA Purchasing Manager. No other distribution of proposals is to be made. An official authorized to bind the respondent to the proposal must sign the proposal in ink. Submission of a proposal shall bind the respondent to all provisions of the proposal, including costs, for a period extending not less than one hundred eighty (180) days following the Proposal Due Date, which is stated in the Schedule of Activities above. Submit the number of proposal copies per the directions indicated on the *Schedule of Activities* page above. Proposals, including price sheets, must be submitted to CATA by the time and date set as the Proposal Due Date indicated on the *Schedule of Activities* page above. The respondent is solely responsible for the timely delivery of the proposal to CATA. Except as provided below, late proposals will not be considered.

Late proposals which are received after the Proposal Due Date may be considered, if the respondent establishes to CATA's satisfaction within five (5) days of the Proposal Due Date that the delay was due to an independent event outside the control of respondent, such as acts of God or the public enemy, war, national emergency, labor strikes, the failure of the U. S. Postal Service to deliver first-class, registered, or certified mail within five (5) days, or the failure of a national courier service recognized by CATA to deliver as guaranteed or specified. CATA will require documentation to excuse late delivery, including, but not limited to, signed statements or affidavits, postmarks, original postal receipts, courier receipts, and shipment tracking logs in a form satisfactory to CATA. All proposals submitted in response to this RFP will become the property of CATA and will not be returned to the respondent.

### **1-K Acceptance of RFP Content**

The contents of this RFP, its attachments, and the proposal as it is consistent with the RFP will become contractual obligations if a contract ensues. Failure of the successful respondent to accept these obligations may result in elimination of the respondent from the selection process. CATA further reserves the right to interview the key personnel assigned by the successful respondent to this project and to recommend reassignment of personnel deemed unsatisfactory by CATA.

### **1-L Economy of Presentation**

Each proposal should be prepared simply and economically, providing a straightforward, concise description of the respondent's ability to be creative and to meet the requirements and objectives of this RFP. Emphasis should be on completeness and clarity of content.

### **1-M Primary Contractor Responsibilities**

The selected contractor will be required to assume responsibility for all services offered in its proposal whether or not the contractor performs them. Further, CATA will consider the selected respondent to be the sole point of contact with regard to contractual matters,

including payment of any and all charges resulting from the contract. If any part of the work is to be subcontracted, the prime contractor must provide a complete description of work subcontracted and descriptive information about the subcontractor's organization, capabilities and Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE) status. The prime contractor is totally responsible for adherence by the subcontractors to all provisions of the contract. CATA must review and approve in writing all subcontractors. All subcontractors must be included in the initial proposal with descriptions of the firms' qualifications and the qualifications of the key individuals assigned to this project.

## **1-N Other Duties Assigned by CATA**

Because of the nature of this project, CATA is unable to determine all possible work components and tasks to be completed. The Contractor may be asked to provide additional service that has not been outlined in this RFP. When additional duties beyond those outlined in this RFP and in the Contractor's proposal are identified, CATA and the Contractor will discuss the Contractor's ability to complete this work. If CATA determines the Contractor should conduct the additional work, contractor will provide request for Task Order describing the work to be done and all associated costs. A written task order will then be issued by CATA.

## **1-O Selection Criteria**

Responses to this RFP will be evaluated using a "best value" approach. CATA will select the proposal that is most advantageous to it and that presents CATA with the best overall value when both price and technical factors are considered. Technical factors and price are of equal importance. The following factors should be addressed in the respondent's proposal and are listed in descending order of importance:

### **Method of Approach to the Statement of Work as described in the proposal.**

Quality of information submitted in the proposal based on completeness, relevance, conciseness and organization of materials presented.

**Capability and qualifications of the prime firm and all subcontractors.** This addresses distribution of staff time to the project, the respondent's past record of performance on similar assignments (such as control of costs, quality of work and ability to meet schedules). The prospective primary contractor will also be evaluated on its past experience in managing subcontractor relationships.

**Capability and qualifications of the key individuals.** This addresses key individuals from the primary contractor and any named subcontractors, including previous work on similar projects, technical experience, education and training.

**Understanding of the background, objectives and statement of work.** As stated in the proposal and demonstrated by the written description of the project in the proposal. While respondent may return to CATA our own document with

each element checked indicating they understand and agree, we expect a separate written executive summary that communicates understanding of the project in the respondent's own words.

**Demonstrated ability to complete the project on time and on budget.**

Respondents must demonstrate experience, ability and willingness to work with CATA to develop and follow thru on a detailed work plan, and provide evidence of successful engagements elsewhere with other customers on similar projects

**Explanation of Contractors Quality Control/Quality Assurance System.**

This element relates to quality related policies and practices the respondent has in place that help assure a successful project outcome, quality of work, customer satisfaction and protocols for handling complaints, problems, defects, DOA's returns, etc. It also includes elements of ongoing preventive maintenance and support to minimize system downtime and response guarantees during outages.

**Cost.** This element relates to cost of product, installation, and ongoing maintenance viewed as both a cost per phase or element and as a total cost of ownership.

CATA reserves the right to accept proposals as originally submitted. However, it may evaluate all proposals to identify responsible firms submitting proposals responsive to this RFP and the needs of CATA. Those firms, on an equal basis, may be asked to make oral presentations to CATA or engage in further discussions/negotiations regarding their proposals and offered the opportunity to submit a best and final offer.

Each prospective prime contractor should make every effort to include Small and Disadvantaged Business Enterprises in this project.

## **1-P Oral Presentation**

Respondents may be required to make oral presentations of their proposals. These presentations provide an opportunity for the respondent to clarify the proposals through mutual discussion. This is not a time to simply review the contents of the proposal but to present to CATA your approach to this project and the uniqueness of the respondent's team in meeting the requirements of this RFP. Key members of the respondent's project team, including a representative from each subcontractor, must be part of the presentation. If held, the presentations will be on the date indicated on the cover of this RFP. **A maximum of 30 minutes will be allowed for each presentation, followed by 30 minutes for questions and answers.**

## **1-Q Independent Price Determination**

By submission of a proposal, the respondent certifies, or, in the case of a joint proposal, each party thereto certifies as to its own organization, that in connection with this proposal:

- The prices in the proposal have been determined independently and without consultation, communication, or agreement for the purpose of restricting competition as to any matter relating to such prices with any other respondent or with any competitor.
- Unless otherwise required by law, the prices that have been quoted in the proposal have not been knowingly disclosed by the respondent prior to award directly or indirectly to any other respondent or to any competitor.
- No attempt has been made or will be made by the respondent to induce any other persons or firm to submit or not submit a proposal for the purpose of restricting competition.
- Each person signing the proposal certifies that she/he:
  - Is the person in the respondent's organization responsible within that organization for the decision as to the prices being offered in the proposal and has not participated (and will not participate) in any action contrary to the requirements indicated in the bullets above.
  - Is not the person within the respondent's organization responsible for the decisions as to the pricing being offered in the proposal but has been authorized, in writing, to act as an agent for the persons responsible for such a decision and certifying that such persons have not participated (and will not participate) in any action contrary to the requirements indicated in the bullets above.

## **1-R Contract Pricing and Payment Schedule**

Payment for any contract entered into as a result of this RFP will be made not more than monthly upon receipt of the contractor's billing statement for the preceding month, along with the receipt and acceptance of the progress report and proof of work completed. Proposals are to include the following:

- A completed cost spreadsheet (Use attached Pricing Matrix spreadsheet) for the system, maintenance, spare parts and all elements as being proposed.
- Travel charges shall be included in the proposed costs
- All charges including missing elements identified by the Contractor.
- Break down by type of equipment and service

NOTE: CATA is not able to provide any advanced payments. All payments must correspond with some form of deliverable which can be documents, designs, equipment, installation, commissioning, etc.

## SECTION 2: STATEMENT OF WORK

### 2-A Background

The Capital Area Transportation Authority (“CATA”) is the regional public transportation provider for the Greater Lansing area. Specifically, CATA currently provides transit service to the Cities of Lansing and East Lansing, the Townships of Lansing, Delhi, and Meridian and Ingham County. Future expansion of service might require coverage throughout both Eaton and Clinton counties, the tri-county area that CATA is authorized to operate within. CATA operates over 30 fixed bus routes and demand-response services in the rural Ingham area, as well as in Delhi and Meridian Townships and the Cities of Mason and Williamston. CATA also provides a demand-response service designed to meet the needs of persons with disabilities, called Spec-Tran. CATA provided 11.8 million passenger trips in Fiscal Year 2011. Over 3 million of those rides occurred on MSU campus that year.

CATA’s main radio repeater is a new cell tower installed at the Tranter St. location in 2011. The tower height is 140ft. with two antennas attached at varying heights. **(See Attachment “A” for photos and diagrams)**

CATA currently provides services with a fleet of two hundred and fifty-two (252) radio equipped vehicles, both operated by CATA directly and contracted to other providers. The size of CATA’s fleet is subject to change from time to time. For the purpose of this Request for Proposal (RFP) these vehicles have been categorized in the following manner:

Maintenance Service Vehicles	14 Vehicles
Transport and Supervisor Vehicles	23 Vehicles
Small Vans – Contracted	49 Vehicles*
Mid-sized bus – Contracted	20 Vehicles*
Mid-sized bus – Directly Operated	38 Vehicles
Special Service Bus – Directly and Contracted	3 Vehicles
Large Bus – Directly Operated	96 Vehicles
Large Bus – Contingency Vehicles	9 Vehicles

\*Contractor vehicles are maintained by the contractor. Reprogramming, when necessary, trouble shooting and some minimal assistance may be required. **(See Attachment “B” for complete Inventory)**

Radio communications for all 252 vehicles are routed through three different CATA locations, CATA Admin location,( 4615 Tranter St., Lansing, MI 48910), Dean Transportation, (4812 Aurelius Rd., Lansing, MI 48910) and the CTC - CATA Transportation Center, (420 South Grand, Lansing, MI 48933), utilizing the 140 foot tower on site, one (1) Motorola Quantar and two (2) Motorola MTR 2000 repeaters, three (3) Zetron model 452 trunking controllers, five (5) control stations and four (4) remote adapters.

In addition, thirty-two (32) handheld mobile radio units are utilized in various departments, including security and maintenance with this quantity subject to change from time to time. There are also three (3) radios in the Network Operating Center (NOC) used for recording/logging. Recording is to a Nortel CallCopy system.

The primary means of dispatch is via a Trapeze Novus computer aided dispatch system. The need is to have a radio system to allow voice communications with this voice system to be interfaced to Trapeze and also to offer a back-up to the CAD system.

## 1. CATA Dispatch Operation

A. The system is set up to dispatch to three groups of buses:

1. Normal CATA bus service on predetermined routes, referred to as Fixed Route.
2. CATA On-demand buses (Paratransit)
3. Dean Transportation (subcontractor) On-demand buses (Paratransit)

**Desired operation** as originally intended is for the dispatchers to talk to only one particular bus at a time or a preselected group. The bus or buses to be dispatched are to be selected on the Trapeze Novus CAD System and the radio in the bus (or buses) being activated. All other bus radios (as not selected by Dispatch) should not hear conversations not intended for them. During normal operation, a bus driver is expected to request permission to talk to the dispatcher by pushing a button on the Trapeze mobile terminal, which would then send a request to talk message to the dispatcher who would initiate communications when ready. In the event of a failure of the Trapeze Novus system to be usable to initiate a request to talk, the driver may request permission to talk to the dispatcher by pushing a button on the mobile radio. As multiple dispatches could occur simultaneously plus private calls the operation needs to support a minimum of four voice channels plus an open channel for emergency.

B. Trapeze Novus expected features to support the radio operation include:

1. Multiple contact closures (minimum of three) at each mobile terminal to be enabled by the dispatcher and expected to be utilized by the mobile radio and dispatch control station to select the channel of operation on demand.
  - a. REST CHANNEL – Used for Private Calls/Emergency

- b. TALK CHANNEL A – Assigned for TRANSIT Dispatcher
  - c. TALK CHANNEL B – Assigned for PARA TRANSIT
  - d. TALK CHANNEL C – Assigned for Contract Bus TRANSIT  
(Dean)
  - e. TALK CHANNEL D – Other CATA Services including Security & Maintenance. Each of which should be configured on their own talk group.
  - f. CONTROL CHANNEL (if required for a trunking solution)
2. Novus CAD is able to select a particular bus or group of buses to communicate with.
  3. The Novus CAD shall also have the ability to operate a radio remotely and make a private call to allow audio monitoring operation via an in place hidden (covert) omni-directional microphone.

## 2. General

### A. Dispatch Communications with bus fleet

1. CATA utilizes a Trapeze Novus data over cellular network (GPRS) computer aided dispatch (CAD) system to send/receive text and control messages between dispatch and its transportation fleet.
2. CATA utilizes an analog UHF voice radio system to augment the CAD capability by providing voice communications to augment the data system.
3. There are a total of seven dispatch positions at the CATA facility divided as follows: Fixed Routes – 3 and Para Transit – 4.

B. Almost all communications with the buses is completed with the Trapeze Novus system to reduce the need for voice interaction and the associated distraction to drivers and passengers.

C. The Trapeze Novus system was to have controlled the radios via audio channel control. However, due to failures and limitation of the solution and the way in which this control was designed, the control has been bypassed and the radio system today currently operates in an open channel mode, and not per our original desired operation.

### D. Radio Sites

1. CATA uses one main radio repeater site to support its service area coverage of buses with three UHF channels and a Zetron LTR trunking controller.
  - a. 140' Cellular monopole on CATA property (lease arrangement with cell company)

- 
- b. 10' x 10' Locally constructed equipment shelter
  - c. On-site backup power generator
  - d. Two UHF 8-dipole Omni-directional antennas (top and at 50' side mount)
    - (1) Lower antenna is not functional due to transmission line or antenna failure
    - (2) The location of the antennas on the monopole cannot be changed without authorization of monopole owner
  - e. Dedicated AC power for system
  - f. Minimal external site ground system
  - g. Monopole itself is grounded via the cellular company ground system
2. CATA also utilizes a secondary radio repeater site located at the WFMK radio station tower owned and operated by State Communications as a community repeater currently utilizing LTR in the UHF band. State Communications also operates a community DMR repeater on the same tower, although CATA has no current agreement to use that repeater.
- a. All CATA mobiles radios currently support LTR. Some newer radios may support DMR.
3. The primary CATA Dispatch Operation is located at the CATA operations center.
- a. Dispatch is via fixed mobiles operating with internal building antennas.
    - (1) Paratransit has three (3) operator locations using desk sets connected to mobiles in the same room
    - (2) Fixed Route has two (2) operator locations using mobiles adjacent to the CAD stations
    - (3) Antennas for these mobiles are located in the ceiling near the radios
    - (4) Portable radios for communications via the LTR community repeater at the WFMK radio station tower site.
  - b. Only two channels are in operation today at the CATA tower though they are trunked utilizing a LTR controller which is also located at the shelter

- 
- c. A third repeater is being used as a test channel on the lower antenna
  - 4. A secondary dispatch location exists at the contractor position, Dean Transportation. This dispatch position utilizes two (2) mobile radios and one handheld and also has access to the Trapeze Novus CAD system.
  - 5. Novus CAD access can be granted to any authorized user from any location via Remote Desktop Services (RDS) access. This access, for instance, is currently granted to Supervisors running laptops in their vehicles equipped with cellular data service.
- E. Existing mobiles and portables are analog UHF narrowband and many are expected to need replacement as some are analog only and others Motorola Mototrbo. **(See Attachment "B" for Inventory)**

F. Logging/Recording

CATA records all three (3) vehicle/dispatcher radio talk channels using 3 radios located in our Network Operating Center (NOC) equipped with analog audio outputs and attached to a local DC power supply. Voice is recorded to a Nortel CallCopy solution.

G. System Issues

1. The voice repeated systems have no mobile coverage issues even after being narrowbanded though only two analog repeated channels are possible with one antenna due to channel/frequency spacing. Other problems include:
  - a. Lower antenna or transmission line is damaged and not useable.
  - b. Interface with Trapeze Novus system was designed to create a closed mic system by controlling audio channels on the vehicles. This was reverted to an open mic system because the onboard control system did not assure drivers could communicate with dispatch in all Trapeze Novus system failure scenarios.
2. The main equipment shelter for the repeaters needs some rework to bring it up to commercial radio system standards as primarily related to transmission line support, entry, surge protection and grounding.
3. The antenna systems need to be verified for proper operation with at least one antenna (lower) required to be totally replaced, including the transmission line.
4. Three new sets of UHF channel pairs have been acquired for use thus there are today six UHF channel pairs licensed and spaced to allow antenna combining.

### **3. CATA Existing Channels**

- A. Call Sign - WCFG507
- B. Repeater Transmit Frequencies
  - 1. 452.700 (new)
  - 2. 452.675 (new)
  - 3. 452.375 (new)
  - 4. 461.4875
  - 5. 461.3875
  - 6. 461.7625
- C. Mobile/Portable Transmit Frequencies
  - 1. 457.700 (new)
  - 2. 457.675 (new)
  - 3. 457.375 (new)
  - 4. 466.4875
  - 5. 466.3875
  - 6. 466.7625

### **4. Electronic Communications Channels (WFMK Tower)**

- A. Call Sign - WCFG507
- B. Repeater Transmit Frequencies
  - 1. 461.900 WNNG539
  - 2. 464.300 WPXK904
  - 3. 461.275 WPYS419
- C. Mobile/Portable Transmit Frequencies
  - 1. 466.900
  - 2. 469.300
  - 3. 466.275

## 5. Existing Repeater System Site Information at CATA Tower

Antenna 1:	Today used for transmit and receive via a duplexer	140' Height
Antenna 2:	Not currently used other than for testing as there may be a failure in the transmission line or antenna	50' Height

## 2-B Objectives of the Project

### 1. Radio System Requirements Overview

CATA desires to develop a new/replacement radio repeater system to serve its bus transportation services. The anticipated system shall consist of a minimum of five simultaneous UHF voice channels. Initial modeling suggests a level of coverage to support CATA with portable on the hip operation utilizing the existing single tower site.

In addition to the voice radio system CATA operates a Trapeze Novus computer aided dispatch system utilizing the commercial cellular wireless network to provide the needed air interface to the associated mobile terminal in each bus. During normal, non-Trapeze Novus CAD system failure, the CAD system is expected to control the mobile radio remotely from dispatch.

### 2. Repeater Site

CATA operates an existing tower site with a custom built shelter. This site seems to be missing an adequate ground system, cable bridge and entrance panel for transmission lines. The proposer is requested to confirm site grounding and include necessary upgrades as a part of their statement of work.

### 3. Interface to Radio Dispatch Console System

The current dispatch center uses RF Control stations to interface to the LTR Trunked System. Control stations are located in closets in the dispatch area and Local Control Desk sets are located in the dispatch areas. New Control Stations are expected to replace the old ones and new Desk Sets compatible with the control stations to replace the old ones. The desk sets shall have the ability to control all functions of the control stations and offer a display to the dispatcher of the calling mobile or portable. If compatible desks are not available, control stations shall be located at all operator positions. The Trapeze Novus computer aided dispatch system may interface to either the control stations or to the desk sets.

#### 4. Eaton & Clinton County Expansion

CATA may expand operations into Clinton and Eaton counties in coming years. The new radio system must have expandability to provide coverage in those areas. Provide a description of how this expansion can be accomplished with the proposed systems.

#### 5. General

- A. The intent of the new system infrastructure shall be to provide a digital UHF trunked, or if feasible, a conventional repeater platform to support the CATA field terminal units consisting of mobiles and portables.
- B. The design, components and elements used for systems shall be commercial grade providing appropriate protection for security, redundancy, selectivity, interference, intermodulation, etc., providing a high level of performance and safety. This includes but is not limited to the following:
  1. Commercial power failure shall not interrupt radio system operation thus all control stations and repeaters shall be provided a UPS for a minimum of 20 minutes run-time until generator provides power.
  2. Power and antenna systems shall be protected against surges with appropriate surge protection devices at the entry point to any buildings.
  3. System components shall provide grade specifications including but not limited to:
    - a. Frequency stability
    - b. Selectivity, IM rejection and sensitivity for receivers
    - c. RF power and spurious and harmonic emissions for transmitters
- C. Sites to be utilized to provide enhanced coverage for CATA systems have been chosen and are expected to be utilized by the successful Contractor. Prospective Contractors shall provide predictions and maps that indicate the signal level and coverage area of their design and provide a testing plan to measure and document the signal level and coverage area.
- D. All radios installed within the CATA facility shall make use of antennas placed external to the building to thus move radio frequency energy away from the operators. (In-ceiling antennas or mobile antennas at the radio are not acceptable.)
- E. CATA's ability to record/log vehicle/dispatcher talk channels to our Nortel CallCopy system should be maintained. A replacement may be priced as an option if recommended.

## 6. Coverage Requirements

- A. See Testing/Certification Requirements under Statement of Work
- B. Base station antennas systems as specified by proposers
- C. Mobile antennas: 0dB, ¼ wave or Bus type antennas (Sinclair Excalibur ST421 or similar)
- D. Portable antennas: Heliflex on the hip

## 7. General Radio System Requirements

### A. General RF Specifications

- 1. Programmable Frequency — 450 - 470 MHz
- 2. Bandwidth — 12.5 kHz
- 3. Channel Spacing — 12.5 kHz
- 4. Antenna Impedance — 50 Ω
- 5. Power Source — 100 to 130 VAC, 47 to 63 Hz or -48 VDC
- 6. Temperature — -30° to +60°C
- 7. 19-inch rack mountable

### B. Transmitter Specifications

- 1. Digital
- 2. Spurious and Harmonic Emissions — ≥60 dB
- 3. FM Hum and Noise — ≤ -40 dB
- 4. RF Power — ≥40 W
- 5. Duty Cycle — 100%

### C. Receiver Specifications

- 1. Adjacent Channel Rejection — ≥65 dB
- 2. Sensitivity (12 dB SINAD) — ≤.35 μV
- 3. Intermodulation Rejection — ≥75 dB
- 4. Spurious and Image — ≥75 dB

## **8. Base Station Antennas**

- A. Separate transmit and receive antennas preferred using transmitter combining and receive multi-couplers and preamplifiers.
- B. Proposers shall provide detailed information on the antenna system proposed.
- C. Proposers shall provide performance data relative to the proposed design
- D. New antennas should be installed for all systems
  - 1. Antennas must be operational across the frequencies employed
  - 2. Power input must not exceed Contractor specification
  - 3. Rated wind Velocity —  $\geq 100$  mph
- E. Antenna system shall be placed at the licensed height
- F. Contractor shall work with owner to provide information relative to antennas and mounting as owner is responsible for all tower structures

## **9. Comprehensive Turn-key Responses**

- A. For CATA radio system infrastructure responses, the Contractor shall provide a complete turn-key proposal and system including:
  - 1. New multi-channel UHF repeated and potentially trunked radio system plus necessary training and warranty.
  - 2. Upgrades to physical aspects of the repeater site relative to antennas, transmission line, grounding and power to improve reliability of the site.
  - 3. All necessary mobiles, portables and fixed station equipment for the operation.
  - 4. All necessary interfacing to existing Trapeze Novus CAD system (mobiles and dispatch) that is required. Trapeze requires all changes to their provided hardware including interfaces and software changes to be provided by Trapeze to not void product warranties. It is anticipated that Contractor will need to subcontract Trapeze as a partner for this project. A place for this cost is provided in the pricing form.
  - 5. The Contractor shall work with Trapeze to assure compatibility with the proposed system of new mobiles, portables and control stations.
  - 6. Backup DC power system for repeater system offering up to 20 minutes operation as a backup generator is in place.
  - 7. All needed installation, testing, commissioning and training.

- B. All programming, software licensing and software options for equipment provided shall be included.
- C. Proposals shall include all necessary systems design, equipment/hardware, installation, software, reprogramming of existing radios, installation management, licensing support, warranty, maintenance, acceptance testing, and commissioning.
- D. A four (4) year extended maintenance plan shall be offered to begin after the first full year of warranty, covering years two (2) through five (5).
- E. Defined portables and mobiles for UHF system programmed and ready for operation.
- F. All radio system FCC authorizations and licensing changes as required.

## **10. Radio System Upgrade Expected Outcome**

The dispatcher is to be in control of all normal communications and generally will only talk to one particular bus at a time or a group of buses as defined by dispatcher via Novus. The bus or buses being dispatched is (are) selected on the Trapeze Novus Dispatcher CAD screen and via GPRS connected Novus terminal in the bus being activated. The radio in the bus will be directed to a particular channel and only the bus or buses while all other bus drivers would not hear the conversation. Each time a bus driver presses his/her PTT button the radio at dispatch will indicate which bus is transmitting.

A bus driver may request permission to talk to the dispatcher by pushing a soft button on the Trapeze Novus data terminal that alerts the dispatcher to the request. The dispatcher originates the channel as described.

In the event of a failure of the Trapeze Novus CAD system the driver shall be able to request and initiate a conversation from the driver to dispatch by pushing a button on the mobile radio which directs the radio to an open channel via a private call to dispatch and allows the communication to occur. (This feature is only used when the driver needs to communicate and the CAD is not working.)

As multiple dispatches could occur simultaneously, the operation needs to support a minimum of three voice channels plus an open channel for emergency and backup communications. The radio system is anticipated to operate as multichannel conventional or trunked and most likely digital TDMA or FMDA.

- A. Trapeze Novus expected features to support the radio operation include:
  - 1. Three (3) controlled contact closures at each mobile terminal to be enabled by the dispatcher and expected to be utilized by the mobile radio via the dispatch control CAD station to select the channel of operation or make a private call via the mobile radio.

- a. TALK CHANNEL A call-up (previously open speaker and mic)
  - b. TALK CHANNEL B call-up (previously open speaker and mic)
  - c. COVERT MIC ENABLE/PTT (previously same)
  - d. PRIVATE CALL to Dispatch (new command)
2. Trapeze Novus is able to send a command and provide contact closure to:
- a. Choose a particular bus or group of buses to communicate with as it does today
  - b. Tell radio via I/O to set up a private call to dispatch as a pre-command for the covert mic (This is a new command for Novus CAD)
  - c. Tell radio to transmit via rear connector for covert mic
- B. The radio system is expected to offer the following features:
1. Multi-channel operation and the capability of its channels being selected via dry contact closures at the mobile stations. (Use of Binary Coded Decimal to choose four possible channels.)
  2. Front panel programmable button at both the mobile and dispatcher locations to select channels of operation and private call.
  3. All radios programmable for private call via a predetermined channel.
  4. All radios to have an emergency channel to be selected via a remote contact closure from hidden button (simultaneous with command to Trapeze).
  5. Capable of being interfaced to a PTT handset that would switch operation from speaker and remote microphone to handset via the handset hook switch and remote Novus CAD control.
  6. All control stations, mobile and portable radios will have a front panel display that shows the calling radio ID.

## 11. Summary Project Objectives

- A. Provide an update to the present radio system.
- B. Develop a radio system interfaced to the Trapeze Novus CAD by subcontracting for services from Trapeze.
- C. Improve function of existing system through integration to other technologies, best quality preventive maintenance practices and a through and rapid response to all problems during installation and ongoing maintenance.

- D. Retain recording/logging capability
- E. Design with expandability to provide coverage in Eaton and Clinton counties.
- F. Provide training to key users of the system on a reoccurring basis to assure appropriate use and understanding of system functions.
- G. Provide one year full parts and labor warranty and four years extended maintenance.
- H. Provide for purchase or expansion, replacement or spare units and equipment and ongoing system maintenance.
- I. Secure “guaranteed” response time to a system failure.

## **2-C Further Requirements and Specifications**

### **1. Proposal Content**

- A. Proposals must demonstrate understanding and compliance with the following:
  - 1. The project as outlined shall be considered turn-key with all necessary parts, work and programming to offer a complete and operational system.
  - 2. Develop a new CATA Radio System utilizing multiple UHF repeaters located at the equipment shelter on the bus transportation garage property and providing needed voice channels plus any needed control channel capacity. A conventional or trunking system design is possible if the proposed system provides adequate channel availability for the required groups and necessary control.
  - 3. The following channels/groups will be used:
    - a. REST CHANNEL – Used for Private Calls/Emergency
    - b. TALK CHANNEL A – Assigned for TRANSIT Dispatcher
    - c. TALK CHANNEL B – Assigned for PARA TRANSIT
    - d. TALK CHANNEL C – Assigned for Contract Bus TRANSIT  
(Dean)
    - e. TALK CHANNEL D – Other CATA Services including Security & Maintenance. Each of which should be configured on their own talk group.
    - f. CONTROL CHANNEL (if required for a trunking solution)  
(Could also be used for Security or Maintenance)

- 
4. Provide, program, install and commission replacement and/or upgrade of all mobile and portable radios to operate with proposed repeater system infrastructure.
  5. In addition, thirty-two (32) handheld mobile radio units are utilized in various departments, including security and maintenance, with this quantity subject to change. There are also three (3) radios in the Network Operating Center (NOC) used for recording/logging.
  6. Work closely with Trapeze Novus personnel and system to interface radios thus providing the needs as outlined:
    - a. Mobile radios in buses to always allow voice communications with dispatch (private call, selected channel, home channel and emergency).
    - b. Normal operation will be to allow Trapeze Novus dispatcher to select bus and channel.
    - c. Wired interface to be designed/tested between mobile radios and Novus CAD mobile terminal.
    - d. Emergency button on radio and from Novus to elect emergency operation.
  7. Interconnect and program radio terminals to interface with CATA's Trapeze Novus computer aided dispatch (CAD) system minimally providing the following radio system features:
    - a. Voice service (no-encryption required)
    - b. Subscriber unit emergency button display/operation
    - c. Subscriber terminal ID display
    - d. Covert Mic monitoring in the buses. Mics will provide adequate levels and quality for both driver voice and covert voice operation.
    - e. Data I/O terminal input on mobile radio to be programmed to accept contact closure(s) to select up to a minimum of two preselect channels, a private call and emergency button closure at the bus.
    - f. Trapeze Mobile Data unit shall provide contact closure signal(s) to the mobile radio to change talk groups or other means to limit hearing radio traffic and limit keying of the mobile radio except when the dispatcher sends a data message to authorize.
    - g. Means shall be provided for driver and dispatcher to initiate voice communications if there is a failure of the Trapeze Novus CAD data system.

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- h. Mobiles to return to preselected home channel (REST CHANNEL) of operation when in idle state.
      - i. Mobiles to be interfaced to a PTT handset/cradle for normal voice operation and to allow access to a covert microphone for monitoring.
    - 8. Provide backup battery power system for all radio systems at the repeater site.
    - 9. Provide for recording/logging of dispatcher/driver talk channels utilizing existing Nortel CallCopy system or replacement if applicable.
  - B. Proposal pricing for all project elements shall use the pricing matrix form provided with this RFP:
    - 1. Final design of system as required and proposed.
    - 2. Replacement or programming of existing mobile radios, portable radios, dispatcher radios and repeaters.
    - 3. Upgrade to repeater site including antenna systems, grounding, power distribution, and system programming
    - 4. Commissioning of upgraded radio system and cutover to new system which will require evening installation when buses are not in operation.
    - 5. On-site training:
      - a. Operation of the installed systems
      - b. Subscriber radio programming
      - c. General operations maintenance support of:
        - (1) Radio system infrastructure
        - (2) Interface of radio system in buses
        - (3) Interface of radio system at dispatch to CAD
    - 6. Four (4) year extended maintenance after first year full warranty covering years two (2) through five (5).
    - 7. Removal, inventory, and return to CATA of unused radio systems, antennas and transmission line after need for these systems is completed.

## 2. Base Station Site Selection and Development

- A. CATA's repeater system is located behind the main CATA facility at 4615 Tranter St. in Lansing, MI. This site is expected to be used for the upgraded base station system. **(See Attachment "A" for tower and shelter photos and diagrams)**

- B. Proposers shall provide propagation projections for the proposed design.
1. The proposer is to develop and offer illustration of anticipated coverage with minimums that show at least 95% of the service area covered for mobile operation with a reliability of 95% or better, and if less, illustrate the locations less than 95% coverage.
  2. Propagation projections shall also include percent of coverage for exterior portable operation (talk-back and talk-out).
  3. Propagation projections shall include detailed information as to how they were developed and thus the losses calculated.
- C. Upgrade the equipment shelter, antenna and tower system as follows:
1. Install ice bridge and transmission line entrance panel.
  2. Confirm the existence or absence of a ground system for shelter and, if absent or inadequate, install a ground system for shelter consisting of a buried #2 solid wire with six 10" ground rods placed 36" away from shelter perimeter.
  3. Two #2 solid wires bonded to ground ring at 24" separation and rising to a copper ground bar placed below the entry panel on the outside of the shelter.
  4. Install a #2 solid wire halo around the perimeter of the inside of the shelter mounted off the wall ~3" with insulators and 6" below ceiling. This halo to bond to the internal ground bar at entrance panel and cut into two portions roughly half way around the room.
  5. Bond all metallic items on the walls of the shelter to this wire halo including door, door frame, air conditioner, grills, electric panels, conduits and any other devices.
  6. Provide and install new lower antenna system and transmission line on tower at a higher location for better range of operation.
  7. Validate operation of backup generator and AC power distribution within shelter with upgrade to current NEC standards including grounding.

### **3. Eaton and Clinton County Coverage**

- A. CATA may soon need coverage in Eaton and Clinton counties. Proposers shall provide an explanation of how the proposed system can be expanded to cover those areas including:
1. Overview of hardware, installations, etc. that may be required to accomplish expansion.
  2. Typical costs, especially those that may be unique to proposers solution.

3. Necessary conditions, risks, considerations, etc. that CATA should be aware of and including possible existing tower site and coverage.

#### 4. Subscriber Radios

CATA is requesting as an initial purchase requirement all commercial grade radios, both mobile and portable where quantities are shown in the pricing sheet.

#### 5. Mobiles and Control Stations

A. RF specifications for all mobiles and control stations must be consistent with commercial grade field terminal equipment and meet the requirements of the system design. The proposer will choose field terminal units based on transit service application with parameters as described.

##### B. Frequency of Operation

1. 403 – 470 MHz (+/- 1.0 ppm)

##### C. Modes of Operation

1. Narrowband Analog Conventional
2. TDMA or FDMA Digital

##### D. Mobile units should meet or exceed the following:

1. Mobile Operating Voltage Range 10.9 to 16.3 VDC
2. Control Station Voltage Range 120VAC 60 Hz
3. Operating Temperature Range -30°C to +60°C
4. RF Output Power Range 10 to 30 watts
5. Frequency Stability  $\pm 1.0$ ppm
6. TX Spurious Emissions  $\geq -60$ dBc
7. RX Sensitivity (5% BER)  $\leq .3\mu$ V
8. RX Selectivity (12.5 kHz)  $\geq -65$ dB
9. RX Spurious & Image Rejection  $\geq -75$ dB
10. RX Audio Output  $\geq 3$ W rms.
11. Mil Spec 810C, 810D, 810E and 810F environmental minimums

E. The proposer will provide complete specifications for each type of terminal unit proposed.

F. Mobile field terminal units will be used in and public service applications. The following describes the requirements for these units. The proposer may, at their discretion, point out other features of their proposed field units that will improve communications or the operational experience for the Customer.

1. Single piece upper tier radio with telephone type handset/earpiece(no trunk mount required)
  - a. Two Line X 8 Character (minimum) Display
  - b.  $\geq 512$  Talk Groups/channels
  - c.  $\geq 30$  Zones
  - d. Volume Control
2. Private call button
3. Emergency button
4. Internal Speaker
5. Handset with holder and PTT on all buses
6. PTT microphone on maintenance and service vehicles
7. Mobile Antennas as required

G. Control Station terminal units will be used in and public service applications. The following describes the requirements for these units. The proposer may, at their discretion, point out other features of their units that will improve communications or the operational experience.

1. Standard Desk Microphone with PTT base
2. Internal Speaker

## 6. Portables

A. Portable - RF specifications for all portable units must be consistent with commercial grade field terminal equipment accordingly, and meet the requirements of the system design. The proposer will choose field units based on commercial applications with parameters as described later in the portable section.

B. Frequency of Operation

1. 403 – 470 MHz (+/- 1.0 ppm)

C. Modes of Operation

1. Narrowband Analog Conventional

2. TDMA or FDMA Digital
  3. Digital Trunking
- D. Portable units should meet or exceed the following:
1. Operating Temperature Range    -30°C to +60°C
  2. RF Output Power Range            1 to 4 watts
  3. Frequency Stability                ±1.0ppm
  4. TX Spurious Emissions            ≥ -75dBc
  5. RX Sensitivity (5% BER)         ≤ .25μV
  6. RX Selectivity (12.5 kHz)        ≥ -60dB
  7. RX Spurious & Image Rejection   ≥ -75dB
  8. RX Audio Output                  ≥500 mW rms.
  9. Mil Spec 810C, 810D, 810E and 810F for the following environments:  
    Temperature, Shock, Rain, Humidity, Vibration' Dust & Sand.
- E. Portable field terminal units will be used in public service applications. The following describes the requirements for these units. The proposer may, at their discretion, point out other features of their proposed field units that will improve communications or the operational experience for the Customer.
1. Rugged housing with:
    - a.                    Two Line X 8 Character (minimum) Display
    - b.                    ≥ 512 Talk Groups/channels
    - c.                    ≥ 30 Zones
    - d.                    Volume Control
    - e.                    Button for Emergency Alert
  2. Scan and Priority Scan
- F. Each radio to be supplied with:
1. Emergency button
  2. Battery charger
  3. Battery capable of a full 8 hour shift use assuming 1 hour talk/7 hour listen
  4. Belt hook

## **7. Terminal Programming**

- A. The following basic equipment shall be supplied:
  - 1. Windows® based software for programming radios
  - 2. Cables to connect proposed mobiles, control stations and portables
  - 3. Trunked and conventional personalities
  - 4. Software for proposed mobiles, control stations and portables
- B. The following services shall be offered:
  - 1. Programming of all new and existing terminals to operate on described channels and talk groups
  - 2. Operator training

## **8. Training**

- A. CATA selected technical staff, train-the-trainer staff, and the CATA dispatch personnel may require training related to the radio system being proposed and operation of field terminal units on the new system. A line item has been placed in the Pricing Sheet for this requirement.
  - 1. System orientation programs shall be offered by the system Contractor for CATA management personnel on the operation of the major system components and operational changes of the radio console.
  - 2. Multiple system orientation programs that accommodate the schedules of CATA dispatch personnel shall be offered by the system Contractor on the operation of the major system components and operational changes of the radio console.
  - 3. Multiple orientation programs shall be provided for CATA radio users to accommodate the schedules of train the trainer personnel.
- B. The location of the training and orientations shall be at the CATA facility.

## **9. Contractor Installation and Component/System Testing**

- A. CATA Radio System – Promptly after delivery to the site of all hardware and software, modules and/or components, and relevant documentation, Contractor shall, at a time and date agreed to by CATA, commence to install said equipment and software. Most vehicle installations will need to be done at night.
- B. Equipment – All equipment shall be delivered to CATA at 4615 Tranter St., Lansing, MI. Proposers must offer installation pricing for this equipment as described.

- C. Component and Systems Testing and Notification of Readiness – Before installation, Contractor shall promptly and successfully conduct all of its own testing procedures on all hardware and software. Contractor shall provide written notice that the system has been installed and all components have been tested and are ready for Acceptance testing.

## **10. Project Certification/Acceptance Testing**

- A. After Contractor's successful completion of its system testing procedures, Contractor shall successfully conduct its certification testing procedure on the system delivered hereunder to determine whether all such hardware and software together operate in a manner meeting Contractor's certification criteria.
- B. CATA's Project Certification testing shall begin within fifteen (15) business days following its receipt of Contractor's written notice of successful completion of the installation of the system and all of its tests and training in connection therewith has been completed. The tests shall be conducted on the CATA site in order to determine whether (1) the system performs in accordance with the functions, specifications, and description established by the CATA and Contractor documents; (2) the system can be effectively utilized in the CATA's business environment; (3) the documentation for the system is thorough, understandable, and instructive so as to impart reasonably clear guidance for the system's use; and (4) the system meets all functional requirements as described in this RFP, especially the tests described in Section 17.
- C. New Radio System Infrastructure Requirements. During the test(s), CATA shall also evaluate the system's ease of use and the support provided by the Contractor. The certification test shall be successful if the equipment operates successfully in compliance with these specifications for a total of thirty (30) consecutive days. Written notification shall be furnished to the Contractor if any item or function is determined unacceptable to CATA. The Contractor shall then have three (3) days to correct or replace the defective item and notify CATA that all such errors have been remedied. CATA shall have three (3) additional CATA working days to recommence the aforesaid certification test. This process shall be repeated if necessary until the equipment meets the aforesaid 30-consecutive-day test, and CATA notifies the Contractor in writing of Project Certification.

However, if the test results are not accepted hereunder within 120 CATA working days after Contractor's initial written certification to CATA of the readiness of the certification testing, CATA shall have the right and option, following ten (10) days' advance written notice to Contractor (during which period the Contractor shall have the right to cure by full performance of the certification test obligations), to declare Contractor to be in default, and CATA may exercise any or all of its full spectrum of remedies, including but not limited to cancellation and rescission of this agreement. Upon contract cancellation by CATA due to the Contractor's

- breach or default, CATA shall have the right to return the system at the Contractor's sole cost (Contractor being fully responsible to perform all services necessary for the shipping thereof). Contractor shall promptly refund to CATA the full amount of any payments made to the Contractor pursuant to these specifications less the amount of any depreciation, based on a five-year period. CATA reserves the right to apply the aforesaid testing and acceptance procedure to subsequent installations and new releases of equipment and software.
- D. Upon successful completion of every element of the certification test, CATA shall execute a written notice of certification of that portion of the system. This expectation of step by step certification is a result of the fact that cutover to the new system is expected on a channel by channel basis.
- E. The aforesaid termination and remedy provisions are complementary to other provisions covering similar matters in the contract documents.

## **11. Cutover Plan**

The proposer shall offer a cutover plan with the details to be worked out with CATA to insure its success. One such detail is addressing the question of whether vehicles will temporarily have to have 2 radios installed simultaneously. One cutover option may be as follows:

- A. Install the new radio system with necessary antenna(s)
- B. Make necessary programming changes and interfaces to the Trapeze system
- C. Conduct all testing, commissioning and certifications on the new system to gain acceptance
- D. Cutover to the new system to allow modification to other channels/systems
- E. Proceed to do necessary changes/modifications to existing systems
- F. Conduct final testing, commissioning and certifications on all systems
- G. Remove, inventory, and return to CATA unused hardware and complete final programming

## **12. Post-Project Certification**

CATA shall operate the complete system of all channels in the normal course of their business operation for a total thirty (30) consecutive days following certification and acceptance of the system. CATA shall verify that the system satisfies the System Acceptance Test, warranty maintenance standards, and adequate training of CATA staff for the operation of the system under normal business operation. If any item is unacceptable to CATA, CATA shall provide written notification to the Contractor. The

Contractor shall cure the unacceptable item by full performance within ten (10) calendar days. CATA reserves the right to extend the time period to cure. The thirty (30) consecutive day period may be repeated or re-started depending on the severity of the unacceptable item. That determination shall be at the sole discretion of CATA.

### **13.A 30-day System Reliability Period**

- A. A 30-day reliability period is required for the new radio system.
- B. The 30-day period shall begin upon completion of system functional testing and upon loading of the majority of the system users for normal operational use of the system.
- C. In the case of any major system failure, the reliability test period shall stop and be restarted from zero after correction of the issue.
- D. In the case of minor system failures, the test shall be suspended and shall continue once the system issue is corrected.
- E. Details of these requirements shall be the subject of negotiation with the selected Contractor.

### **14. One Year Warranty and Warranty Start**

- A. The warranty period shall not begin until successful completion of the reliability test period. Successful completion of this system reliability testing shall be a part of the final acceptance criteria.
- B. An understanding of these requirements shall be restated in the detailed design for review.
- C. All costs associated with delivering to and from CATA any software and/or hardware required as the result of malfunctioning equipment shall be provided at no expense to CATA. Such cost items shall include but not be limited to the following: troubleshooting, transportation, packaging, crating, delivery, installation, de-installation, component handling, and insurance.
- D. Contractor must provide support on all hardware and software components 24 hours per day, 7 days a week. Contractor must provide one toll-free telephone number to call for all hardware and software maintenance/support problems.
- E. For security purposes, the system shall be password access-protected. In addition, any modems attached to the equipment shall be password access-protected and shall dial back to the Contractor's support personnel having requested access to CATA's equipment.

- F. Any individual item of equipment covered by this procurement experiencing more than three failures for reasons not external to itself during the warranty period shall be replaced with a new item meeting specifications, at no cost to CATA. If the item is considered to be critical, the Contractor shall replace it within twenty-four (24) hours after receipt of notification from CATA. A new warranty period for the item identical in length and terms to the foregoing warranty period shall commence on the date of replacement of any such item.

## **15. Acceptance**

- A. The following steps are required to be completed by the selected Contractor to obtain acceptance for the radio system. As each RF subsystem may have different system components the Contractor shall assume that each subsystem shall be tested individually to characterize its performance and compliance to the requirements of the RFP.
- B. Inspection and inventory of all equipment and inspection of the installation of all system equipment.

## **16. Extended Maintenance Options After Initial Warranty**

- A. At CATA's option, after expiration of the warranty period, Contractor shall provide to CATA extended maintenance, additional support, hardware purchase options, and enhancements in connection with all hardware and software in accordance with the following provisions:
1. Proposers should quote an optional year-by-year system and equipment support and maintenance plan that would commence on the next day following the last day of the warranty period. Payments during and for said support and maintenance period shall be due and payable on a monthly/quarterly basis. If purchasing such a plan in advance would provide for a discounted cost, the cost of an advance purchase option should also be proposed.
  2. The equipment covered in the extended maintenance support portion of this agreement is the hardware, software, firmware, and documentation included in the purchase agreement as updated with improvements or modifications furnished to CATA under the provisions of this specification. During the maintenance term, Contractor shall supply CATA with any and all updates, enhancements, improvements, programming changes or modifications to the equipment at no additional charge to CATA.
  3. Contractor must provide a complete description of its routine and preventive maintenance schedule, clearly indicating who is responsible for what items.
  4. Preventive maintenance shall be scheduled as frequently as is recommended by the manufacturers of the equipment's various components. CATA shall schedule preventive maintenance with the Contractor and any subcontractors

involved. In no case shall preventive maintenance be scheduled to put any aspect of the system out of operation without CATA's prior approval.

5. On a time and materials basis selected Contractor shall correct or replace the equipment or provide the services necessary to remedy any, malfunction, or other problems in connection with the hardware, software, etc. Calls reporting problems shall always be made to the Contractor. When return calls are made (either to gather more data or to prescribe corrective actions), the first such return call shall arrive from a person trained and qualified to diagnose and resolve the general type of difficulty reported within four (4) hours of the report of trouble, not counting hours outside the maintenance hours herein set forth. In any event, Contractor's initial response to remedy errors, malfunctions, or problems, whether identified by CATA, another user of comparable equipment, or any other person, shall not exceed four (4) hours.
6. Contractor, when attempting to resolve a problem of substantial difficulty or magnitude, shall use its best efforts to proceed with diligence and good faith to affect a remedy in a timely and efficient manner.
7. Contractor shall dispatch a Field Engineer to CATA upon request by the Contract Manager. The Field Engineer must arrive on site within four (4) hours from the time the call was placed by the Contract Manager. The Field Engineer dispatched must be trained and certified on all of the installed systems.
8. In the case of an emergency service request by the Contract Manager, the Field Engineer must arrive on site within two (2) hours from the time the call was placed.
9. Contractor must have duplicates of all of CATA's software and documentation locally available. This shall be delivered and on site at CATA Within four (4) hours of request by the Contract Manager or if required by the dispatched Field Engineer.
10. Contractor shall maintain, at Contractor's cost, a set of spare parts and modules for use during the contracted warranty or maintenance period.
11. In the case of an emergency request, the above system software and documentation shall be delivered and on site within two (2) hours of request by the Contract Manager or if required by the dispatched Field Engineer.
12. Contractor shall attach a schedule of the activities necessary for the proper functioning of their equipment (a recommended maintenance schedule), the titles and frequencies of any reports that CATA shall be expected to produce for the Contractor, and the types and probable extent of the activities with which CATA shall be expected to assist the Contractor in remedial maintenance efforts.

13. CATA shall have—Without penalty or any cost or charge—the right to cancel maintenance or change maintenance time periods on the equipment by giving the Contractor thirty (30) days written notice prior to such change. CATA shall be refunded any maintenance fees for periods that have not been completed.
14. Contractor shall in good faith support and resolve problems with connectivity to the equipment in accordance with the maintenance and support provisions of this document. If Contractor determines the problem lies with other manufacturers' equipment, then the Contractor shall work cooperatively with CATA and such other manufacturers to identify and resolve the problem.
15. Contractor must provide CATA with new versions of the standard equipment at then-current rates, upon CATA's request and when made generally available. Contractor shall include how then-current rate will be determined, i.e., cost analysis, price analysis, x% under MSRP, and what source is used for the baseline.
16. If any communication circuits, equipment, or software are needed specifically for maintaining or monitoring the system, these circuits and components shall be identified in detail, with cost estimates.
17. Contractor must provide CATA with a monthly allowance of a minimum of four (4) hours of remote telephone non-warranty support at no additional charge during the twelve months following final acceptance. The allowance may be used for assistance and advice on the operation and functions of the equipment, for help with diagnostics and other problem determination procedures, and for advice and assistance in problem situations.

## 2-D CATA Responsibility

CATA will provide the following after contract award:

1. Updated vehicle and radio inventory
2. Access to appropriate CATA facilities and vehicles
3. Information related to other technologies requiring interface with any component of the radio system.

## 2-E General Requirements

**Timeliness:** The services of the successful respondent are to commence upon execution of the contract and shall be undertaken and completed so as to assure project completion by **March 31, 2014**, including installation, testing and full system acceptance.

**Meetings:** The successful respondent (Contractor) shall meet with the CATA project manager and/or Consultant(s) during the project at least bi-weekly during the implementation of this contract. These sessions may be conducted over the telephone, in

person, or via e-mail, as determined by the CATA Project Manager. The Contractor shall make immediate phone calls to the CATA Project Manager if any significant problems are encountered during the project.

**Progress Reports:** The successful respondent shall provide written progress memos to CATA's Project Manager immediately after each meeting. These reports will identify work accomplished, problems encountered during the past period, methodology and timeline for resolving these problems and the activities planned for the upcoming period. The reports can be faxed, mailed or e-mailed to the Project Manager.

**Project Reports:** The Contractor will provide to the Project Manager the following reports:

- A. Detailed design document before the installation of the system begins
- B. Routine updates on work performed
- C. Complete training package by both paper and electronic form
- D. Full documentation package of the installed system

## 1. Applicable Standards

### A. General

1. All electrical equipment shall be compliant with FCC part 15 Class A, and approved under FCC Part 68.
2. All equipment approved (as applicable) shall meet or exceed the latest standards of the Federal Communications Commission (FCC), Telecommunications Industry Association (TIA), National Electrical Manufacturers Association (NEMA), Radio-Electronics-Television Manufacturers Association (RETMA), and Institute for Electrical & Electronic Engineers (IEEE), or other agency, when applicable.
3. All installation of electrical and grounding shall meet applicable National Fire Protection Association (NFPA), National Electrical Code (NEC), and Electrical Industries Alliance (EIA) requirements.
4. All radio products should conform to FCC, TIA/EIA, and other applicable standards.
5. The Contractor shall provide additional system components typically and reasonably required to make the system operational even though not specifically indicated in Drawings, Appendices, or Specifications, including but not limited to cable, connectors, connecting accessories, adaptors, power supplies, mounting adapters, cover plates and closure panels, relays and

switches, terminal blocks, grounding hardware, and related connector and termination hardware required by but not supplied with the equipment.

## **B. National Electric Code (NEC)**

1. The NEC Article 250 focuses on the general building/facility grounding, while Article 810 describes specific requirements related to radio and television equipment. Article 780 describes the power system for critical equipment.
2. Article 250 states that all ground electrodes shall be bonded together to form the “grounding electrode system.” This Article goes into great detail as to how this system should be accomplished by referring to multiple areas of the code. Generally the ground described in this article is used to form the basic ground for the structure, though if the copper water line entering the building is within 5’ as described, then this is an alternative solution for a building structure ground.
3. NEC Article 250 further describes the size and type of conductors to be used and also describes the minimum resistance of electrodes. Article 250-92 has an extensive description of the means of installing the grounding conductors. Minimum size of conductors is described. Though #6 copper is listed as the smallest conductor for inter electrode connections, the use of #2 is recommended by the EIA and is most commonly found in commercial locations.
4. Article 250-115 says how ground conductors shall be connected to ground electrodes especially as related to underground connections, while Article 250-117 describes how the connection is to be protected against physical damage.
5. Article 250-155 discusses the need for all noncurrent-carrying metal parts of fixed, portable, and mobile equipment to be grounded with no less than a #6 copper or #4 aluminum cable.
6. Article 800 provides guidance for the grounding of communications circuits with specific guidance for the cable entrance points. It is further stated in Article 810 that masts and metal structures supporting antennas shall be grounded. Article 810 defines a means of grounding the tower/antenna system. Earlier, Article 250-8 states that all ground electrodes shall be bonded together to form the “grounding electrode system.”
7. The NEC Article 800-40 states how cables entering a building shall be grounded, which equates to the placement of a ground bar at the inside of the entrance panel. Per NEC Article 250-81, this point must be bonded to the building ground.

8. NEC Article 780 gets into the specifics of how critical systems should have their power sources backed up and how these various systems are to be identified with COPS labeling.

### **C. National Fire Protection Association (NFPA) 1221**

1. Chapter 5.8 is the grounding section for Emergency Response Facilities, which references the need to follow NFPA 70, Article 647 for all sensitive electronic equipment. This is the reason the electronic equipment in dispatch and the equipment room must be connected to the bonded grounding bar in these two spaces.
2. Further, Chapter 6 (6.6) requires all communications conductors to be installed in accordance with NFPA 70 Section 5.6 and 4.9. It should be noted, NFPA 70 is the National Electric Code, 2005 Edition which is referenced above.

### **D. EIA/TIA**

1. The Electronic Industries Association / Telecommunications Industry Association (EIA/TIA) has established a set of mechanical standards for steel communications towers that includes grounding. The EIA/TIA-222F standard was the standard in place at the time the tower was specified, though 222G is now highly recommended.
2. This same EIA/TIA standard requires all transmission cables leaving the tower to be grounded to the tower (which shall be done by the Contractor) and for these cables to be grounded as they enter the building plus just inside the building with the lightning arrestors. To enable this ground, a ground bar is being requested on the outside of the building immediately below the entrance panel. Per EIA/TIA-222, this ground base must be connected with a ground cable to the tower (generally underground to the tower ground array).

### **E. NEC Article 800-40**

1. The NEC Article 800-40 states how cables entering a building shall be grounded, which equates to the placement of a ground bar at the inside of the entrance panel. Per NEC Article 250-81, this point must also be bonded to the building ground.

### **F. Proposer/Contractor Grounding and site Standards/Guidelines**

1. If a manufacturer or Contractor publishes a grounding standard/guideline then reference should be made to same in the proposal.
2. All manufacturer installation guidelines shall be reviewed with consultant and followed by installers.

## 2. Grounding

### A. Equipment Racks and Devices

1. The equipment racks shall be individually grounded with a minimum of #6 AWG green wire to the appropriate grounding bus bar within the electronics equipment room.
2. All other devices shall be grounded as per manufacturer's instructions.
  - a. Rack mounted equipment to rack grounding bar which in turn is bonded to the master ground bus.
  - b. Free standing equipment with a #6 AWG to master ground bus.

### B. Tower

1. A communications tower shall have its own dedicated ground electrode array as per EIA/TIA-222, though as per NEC Article 810, this ground array shall be bonded to the building ground electrode system. It should be noted that tower manufacturers typically provide a grounding kit with all needed materials to meet the latest EIA/TIA-222 standard, which today is "G." G requires a minimum of six 10' ground rods all interconnected and with each tower leg having a connection to the ground ring. These ground rods shall be placed a minimum of 10' separation from each other.
2. Outside of the building, the NEC standard requires all metallic devices to be bonded together at their ground points, especially the tower, power transformer, and HVAC units. This includes fences, LP tanks, cable bridges, light posts, etc.

### C. Grounding Specifications

1. Primary (Generator) and Secondary (DC Backup) Power.
  - a. The radio system being proposed shall be operable from owner provided 120VAC power via standard 20A circuits with the number of circuits as required by the successful radio systems Contractor.
  - b. All electronic systems shall be powered by an uninterruptable power system consisting of a -48vdc battery system backed up by a local generator.
  - c. Batteries shall offer a minimum of 15 minutes of full load operation and capable of being fully recharged in 12 hours.
  - d. Generator will be provided by CATA via another contract.

- e. The uninterruptable power system shall provide isolation from the power mains at the site via battery charger/converters.
  - f. AC power circuit breakers will be provided by others for each power supply / converter such that a failure minimally impacts the DC power system.
  - g. DC distribution shall be established to all major parts of the system with separate breakers.
  - h. The battery systems shall be designed with an 8 year typical life assuming the shelter temperature does not exceed 76 degrees F.
2. The AC power mains system will offer a dedicated surge protection system.
  3. The battery and charging system should be mounted in a separate rack or if room allows in the microwave rack.
    - a. The charging system shall be capable of maintaining battery charge without over charging.
    - b. The charging system and shall be capable of charging the battery system to 100% in less than 12 hours once the backup system has activated and powered the equipment for 20 minutes at full load.
    - c. Redundancy shall be offered to insure a single point of failure does not occur. 1+n charger/converters shall be offered with sufficient capacity to meet the local need.
  4. A generator provided by CATA is currently installed onsite capable of powering the all CATA equipment at the site for a minimum of 72 hours with either a local source of fuel or natural gas with back up of a temporary fuel source.

#### **D. Grounding and Bonding**

1. The City's site civil contractor shall insure the main ground bus on the inside of the equipment shelter/room and on the exterior of the shelter/room has a minimum of two #2 solid cables to the external ground ring of the equipment shelter/room.
2. A Polyphaser or equivalent surge protection device (SPD) for each transmission line shall be installed within 18 inches of the inside entry panel shall be grounded to the provided ground bus.
3. All cable trays/ladders used to support transmission lines and other telecommunications cables inside the equipment room/shelter shall be bonded to the ground bus as provided by the successful Contractor

4. External cable bridges when employed shall be mounted at 10 feet above the ground and support posts ground bonded via dedicated exothermic welded #2 cables to external ground ring via support posts with welded interconnecting tie.
5. External cable bridges shall be held back 4"-6" from tower and from shelter with no attachment to either.
- 6.

#### **E. Equipment Racks/Cabinets**

1. Equipment racks shall be offered a layout with the shelter that offers a minimum 3' of access to the front and rear of each rack.
2. The repeater/radio/microwave system hardware shall be mounted in standard 19" equipment racks.
  - a. The racks shall be appropriately secured and grounded per current industry standard guidelines though no less than a single #6 AWG cable per each rack to a ground bus consisting of a ground bar or 2/0 ground cable using irreversible connections.
  - b. If shelter makes use of a concrete floor directly on the earth, then racks/cabinets shall be elevated above the floor using pressure treated or synthetic wood a minimum of 1.5" thick.
  - c. All two post racks shall be physically mounted to the floor.
  - d. Four post cabinets do not have a requirement to be fastened to the floor.
3. The equipment rack shall allow the installation of power distribution panels to provide equipment power to the station electronics.
4. A minimum of two 120VAC 20A power circuits will be provided to each rack/cabinet.
  - a. Power outlets to be wired with individual neutrals per each outlet.
  - b. Outlets to be 120VAC 20A twist lock.
5. The equipment racks shall provide space for the repeater, microwave, RF components, and other supporting electronic equipment.
6. Enough racks shall be provided to insure no one rack has more than 80% of its space occupied with equipment thus allowing for future growth and surge capacity.
7. No rack mounted equipment shall be closer than 3' to any electrical panel or switch per the NEC.

## **F. Transmission Lines**

1. The transmission line used shall use the appropriate size of cable necessary to meet ERP and loss demands.
2. Each transmission line shall be one complete line with no couplers or additional connectors from the antenna low loss jumper to surge protection device inside the building room or shelter.
3. A single ½" flexible low continuously shielded loss jumper cable no longer than 10 feet in length connects the surge protector to the internal system components.
4. All exterior connections shall be weather proofed per manufacturer's recommendations.
5. The transmission line shall be fastened to the cable mounting hardware of the tower using the appropriate clips or hangers according to the manufacturer's recommendations. Tape is not an acceptable fastening method nor is simple twisted wire.
6. Ground kits on all transmission lines shall be installed per manufacture's recommendations but no less than at the antenna and very 75' along the tower plus as the line exits the tower.
7. The transmission line shall be supported across the ice bridge using hangers and/or clips per the manufacturer's recommendations.
8. A ground kit shall be installed near the cable entry port prior to entering the building or shelter. The ground cable shall be attached to the exterior ground bar.
9. After entry into the building or shelter, a surge protection device (Polyphaser or equivalent) shall be installed Within 18 inches of the entry panel.
10. The transmission line surge protection shall be grounded to the existing ground bus near the entry panel using #6 ground wire and the rated irreversible ground lugs.

## **2-F Detailed Work Plan**

Within 30 working days of the award of the contract, the Contractor will submit to CATA's Project Manager, for discussion, review and approval, an adjusted technical work plan including the following:

- A. Detailed description and drawings of the proposed solution including discussion Contractor has completed with Trapeze.
- B. The Contractor's final project organization structure.

1. The Contractor's (and subcontractors) detailed manning table with names, titles, addresses, telephone numbers, fax numbers, e-mail addresses and any other critical information, by task if appropriate.
2. Within one week following the submittal of the detailed work plan, the Contractor's representative will meet with CATA's Project Manager to review the components of the work plan and to finalize the direction of the project.

## **1. Summary of Requirements**

- A. Successful Contractor shall be expected to complete a detailed design and associated review by CATA and its consultant(s) prior to any construction or ordering of materials to be conducted after award and before work is allowed to begin.
- B. The detailed design submitted shall minimally, though not limited to:
  1. Detailed description of site layouts within CATA provided shelter
  2. Updated propagation analysis using selected sites
  3. Network block diagrams including radio systems
  4. Wiring interconnect diagrams for buses (mobile to Trapeze terminal)
  5. Description of any required Trapeze reprogramming to affect changes
  6. List of main components including radio, network, UPS, etc.
  7. Antenna heights, types and models
  8. Preliminary acceptance test plan
  9. All FCC concerns/issues
  10. Cutover/transition plan for:
    - a. New system
    - b. To-be-relocated systems
  11. Plan for final implementation and anticipated timeline
  12. Commissioning plan including drive test for coverage

## **2. Radio Console Interfacing and/or Replacement**

- A. The contractor shall develop a plan for the needed work to interface or replace the radio desk sets including all necessary interface hardware.
- B. The contractor shall insure all channels are recorded/logged

### **3. FCC Licensing**

- A. The contractor shall assist CATA in all FCC licensing for the conversion to the new UHF frequencies and any licensing modifications required enhancing system operation as proposed.
  - 1. CATA has already obtained the UHF frequencies

### **4. Materials**

- A. All materials and products provided shall be new and unused, with full manufacturer warranties.
- B. Materials and products shall be based on the functional and performance requirements in this document.
- C. Proposer shall provide additional system components typically and reasonably required to make the system operational even though not specifically indicated in Drawings, Appendices, or Specifications, including but not limited to cable, connectors, connecting accessories, adaptors, power supplies, rack mounting adapters and shelves, cover plates and closure panels, relays and switches, remote antenna mounts, terminal blocks, and related connector and termination hardware required by but not supplied with the equipment.

### **5. Interface to CATA Provided Towers and Shelters**

- A. Contractors should assume use of the planned sites/towers.
- B. The selected Contractor shall be required to provide support for this process as part of their responsibilities if other sites are recommended.
- C. Contractor shall work with CATA by providing needed information as to antenna loading and power requirements at the sites.

### **6. Project Management**

- A. The Contractor shall appoint their Project Manager who shall be the main point of contact regarding the project for the CATA Project Manager and their Consultant(s).
- B. The Project Manager is responsible for the following:
  - 1. The successful completion of the contract in a timely manner.
  - 2. The work and performance of all employees and subcontractors (including Trapeze) that have been hired by the Contractor.
  - 3. Completing and submitting all required submittals and documentation.

4. Attending all project coordination meetings as may be required by CATA and/or their Consultant(s). Contractor is responsible for taking minutes of these meetings and distributing copies to all participants. At a minimum, there is expected to be a kickoff meeting and a closeout meeting.
5. Coordinating with CATA and/or their Consultant(s) to ensure smooth flow of work and on-time project completion.
6. Providing a bi-weekly written progress update report to CATA and Consultant(s).
7. Reporting all unexpected conditions and problems that may result in delay or expense to the CATA Project Manager and/or Consultant(s) immediately upon discovery.

## **7. Implementation Plan/Schedule**

- A. The Contractor must develop a realistic implementation plan that shall include at least the following elements:
  1. Significant tasks
  2. Start date, finish date, and duration of each task
  3. Responsibilities
  4. Dependencies
  5. Deliverables
- B. When accepted and approved by CATA, the implementation plan shall be the documentation for measuring contract performance and progress, and as such, shall become a contract document to which the Contractor shall adhere. The Contractor shall provide an initial Implementation Plan with their proposal submission with the expectation that if awarded this plan will be routinely updated.

## **2-G Proposal Requirements**

### **1. Preparation of Proposal**

- A. Proposers shall submit their Proposals in both hard copy and electronically on CD or flash drive. Hard copy submissions must consist of five (original and four copies) binders or hard bound documents complete with required submittals plus any additional information included by the Proposer. Electronic submissions must include all required submittals and should be in PDF format. Electronic copies should be submitted via CD or flash drive and included in package with hard copies. No e-mail submissions shall be accepted. Attachment C – Pricing Matrix and Attachment B – Radio Inventory may be downloaded in Excel format at:

- <ftp://ftp.cata.org>. Attachment A – Photos and Diagrams, is available on the CATA Website at: [www.cata.org](http://www.cata.org).
- B. The Proposer must submit with their Proposals all catalogs, drawings, specifications, descriptive information, and other details of equipment or materials included in its submission, including manufacturer and model number in this specification, so that the CATA Project Manager and/or their Consultant(s) may determine the merits of the various designs. Failure to comply may be cause for rejection determination of non-response. Equipment data sheets and other external documents included with the hard copy submission should be included as part of the electronic copies on CD or flash drive if possible and practical. However, if it is not possible or practical to include them electronically, an informational note should be placed into the electronic submission advising that they appear in the hard copies but not in the electronic copy.
- C. Submittals must contain the signature of an authorized agent empowered to bind the Proposer in a contract. The original hard copy submission must contain original signatures and be labeled accordingly.

## **2. Required Submittals with Proposal Response**

- A. Contractors should submit their documents with tabs identified by the numbers listed below.
1. Letter of Transmittal (limited to one page)

Briefly state that the Proposer is in receipt of all RFP materials, attachments and amendments, understands the service to be provided and a positive commitment to perform the services as defined in the RFP. A designated agent empowered to contractually bind the firm shall sign each Proposal and any clarification to the Proposal.
  2. Executive Summary

Summarize the proposed solution including the design concepts employed, major components utilized, coverage provided, solution advantages and ongoing support. This should be limited to three pages.
  3. Trapeze Novus Interface

A detailed explanation of exactly how the Proposer's solution will interface with the Trapeze Novus system both in the back office and on the vehicle as applicable. This should also include evidence that a partnership or subcontractor relationship with Trapeze to assure cooperative effort in this element has been established. Trapeze requires all changes to their provided hardware including interfaces and software changes to be provided by them to not void product warranties. It is anticipated that Contractor will need to

subcontract Trapeze as a partner for this project. Cost for this work to be included in the pricing form.

4. Firm Experience

Include a description of the organization submitting the Proposal, including its size, organization, legal status (corporation or partnership, etc.), major type of activity or areas of work, and examples of at least five (5) similar projects Proposer has completed in the last five (5) years. Identify the individual(s) in your firm who are anticipated to be involved in key roles if your firm is selected and briefly explain that person's role and relevant background and experience.

5. References

Provide at least three (3), preferably five (5), references of recent clients that have completed a similar project. The reference must include the name, telephone number, address, and e-mail address of a person who may be contacted and who has direct knowledge of your firm's capabilities and past performance. Also include a brief description of the project, including the total cost, start and completion dates.

6. Statement of Compliance for Insurance

Provide a Statement that Proposer shall meet all insurance requirements as stated in "Appendix A – CATA Standard Terms & Conditions" if selected as an equipment and services provider.

7. Implementation Plan and Schedule

The Proposer shall provide an implementation plan and schedule that includes at least the following:

- a. Major Tasks
- b. Start date, finish date, and duration of each task including delivery dates for hardware, installation tasks, etc.
- c. Responsibilities (Contractor and owner/agency)
- d. Dependencies
- e. Deliverables

8. Response to Statement of Work

The Proposer must include a point-by-point response for each numbered and lettered item in this Request for Proposal. The Proposer should indicate understanding and compliance or take exception and explain the reason for each item. Additional system descriptions and/or

drawings that further describe the capability of the Proposer's offering are encouraged.

#### 9. Details of proposed solution

A detailed narrative of the solution provided including but not limited to design philosophy, site construction, Radio Frequency (RF) design, backhaul, alarm and monitoring capability, etc.

#### 10. Block diagram of proposed solution

Include block diagrams of the system proposed including all major system components, components to be relocated and interconnection to existing systems.

- a. Radio repeater system and controller
- b. Mobile interface to handset/cradle system
- c. Mobile interface to Trapeze Novus terminal
- d. Dispatch interface to Trapeze Novus dispatch console

#### 11. Breakdown of Costs

- a. The Proposer must provide a complete breakdown of costs using provided pricing matrix spreadsheet. No other pricing formats shall be accepted. A cost for each sub-item shall be included for all equipment if stated. If an item is to be furnished at no charge, the item shall be marked "No Cost" or "0." Items not included in the spreadsheet may be added to the spreadsheet by the Proposer.
- b. Cost of mobiles and portable as defined in pricing sheet.
- c. Cost for up to 4 years of extended maintenance beyond warranty.
- d. Cost for training and description of planned offering.
- e. In addition to the total system cost any other non-defined costs

#### 12. Additional Work

Include a list of items including hourly installation costs to be charged to CATA in the event additional work that could not be reasonably anticipated is required beyond the scope of service stated, change orders must be submitted and approved before any such work is authorized.

#### 13. Quality Control/Quality Assurance System

Describe Proposers quality related policies and practices in place that help assure a successful project outcome, quality of work, customer satisfaction and protocols for handling complaints, problems, defects, DOA,s returns, etc. It also includes elements of ongoing preventive maintenance and support to minimize system downtime and response guarantees during outages.

#### 14. Exceptions

Exception to any item of any part of any section of this Request for Proposal must be clearly identified as exceptions. The stated exceptions and any alternatives offered must be included in the Proposer's response. Submission of a Proposal indicates acceptance by the Proposer of the conditions contained in this Request for Proposal, unless clearly and specifically noted in the Proposal submitted and confirmed in the contract between CATA and the Proposer selected. CATA may decide to accept or reject any of the alternatives.

#### 15. Specifications

Include specification sheets for elements included in the proposal including all major infrastructure stations, combiners, multi-couplers, transmission line, antennas, field terminals, power systems, accessories, etc.

#### 16. Alternate Solutions (if any)

Provide information concerning any alternate solutions to be considered by CATA. Any alternate proposal should be marked as alternate though if an entirely different solution is offered then solutions shall be a separate proposal.

#### 17. Terms and Conditions

Provide any terms and conditions to be considered by CATA.

### **3. Proposal Format and Submission Requirements**

- A. The original and five (5) bound copies of the proposal shall be submitted. Binders are acceptable. All proposal text shall also be electronically submitted on CD or a flash drive included in each package with the hard copy.
- B. All electronic formats should be in PDF format except the Compliance Matrix and Pricing Matrix should be completed and provided both MS Excel and PDF formats. Attachment B - Radio Inventory and Attachment C - Pricing Index may be downloaded in Excel format at: <ftp://ftp.cata.org> and Attachment A – Photos and Diagrams is available on the CATA Website: [www.cata.org](http://www.cata.org).
- C. Proposal pricing shall include cost breakdown in the format provided in the Price Matrix spreadsheet accompanying this

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- D. Proposals shall be reviewed for compliance with the specifications and criteria within the RFP and any addendums.
- E. Proposals shall also be reviewed for completeness, organization, clarity, and conciseness. Extraneous information that is not responsive to the RFP is discouraged.
- F. Proposal organization shall be as follows:
1. Letter of Transmittal
  2. Executive summary (limited to three pages) describing the Respondent's understanding of CATA's stated problem and project objectives.
  3. Firm experience on similar projects – up to 3 examples for the prime and each sub-contractor.
  4. Provide an organizational chart of the Respondent and all Sub-Contractors, if applicable.
  5. The name and telephone number of person(s) in the Respondent's organization authorized to negotiate/expedite the proposed contract with CATA.
  6. Qualifications of the Primary Contractor and each sub-contractor.
  7. Qualifications of the key individuals from each firm assigned to the project.
  8. List of references
  9. Implementation Plan and Schedule
  10. Response to Statement of Work
  11. Details of proposed solution
  12. Block diagram of proposed solution
  13. Breakdown of Costs on Price Matrix spreadsheet.
  14. Include cost proposals based on hourly rates and materials used per proposal requirements. If applicable, list of any work that is to be sub-contracted and a description of the qualifications of the Prime Contractor and each Sub-Contractor on the team. Include all shipping costs, travel and expenses. Note that CATA is tax exempt.
  15. Statement describing "Guaranteed" response time to dispatch or trunked system failure.
  16. A description of the Respondent's Quality Control/Quality Assurance Program.
  17. Statement of Compliance for Insurance per Section 3, Appendix A.

18. Demonstration/Proof of Proposer's Financial Stability
19. List of Certified DBE firms to be involved in the project.
20. Statement of Agreement with CATA Standard Terms & Conditions and the RFP.
21. Statement of compliance and agreement to continue compliance with Federal and State laws and regulations, including regulations of the Federal Transit Administration ("FTA") and the Michigan Department of Transportation ("MDOT").
22. Executed/Signed "Buy America," "Lobbying," and "Debarment, Suspension and other responsibility matters" certificates per Section 3, Appendix F.
23. Additional Information and Comment – include any other information that is believed to be pertinent but not specifically asked for elsewhere.
24. Exceptions
25. Specifications
26. Alternate solution details (if any)
27. Terms and Conditions

## **SECTION 3: COMPLIANCE REQUIREMENTS**

### **3-A FTA and MDOT Required Clauses**

The Contractor will comply with all relevant procurement and contract requirements of the Federal Transit Administration (“FTA”) and the Michigan Department of Transportation (“MDOT”). See for example FTA Best Practices procurement Manual, Appendix A.1 and FTA Circular 4220.1F.

The website address of the Federal Transit Administration is [www.fta.dot.gov](http://www.fta.dot.gov).

The website address of the Michigan Department of Transportation is [www.michigan.gov/mdot](http://www.michigan.gov/mdot).

The Contractor shall furnish to CATA upon request, certificates of compliance with all such laws, rules and regulations. The Contractor shall, at its own expense, be responsible for obtaining all necessary permits and licenses required for performance of the Contract.

All contractual provisions required by MDOT or mandated by FTA as set forth in FTA Circular 4220.1F, are hereby incorporated by reference. The Contractor shall not perform any act, fail to perform any act or refuse to comply with any CATA requests which would cause CATA or the Contractor to be in violation of FTA or MDOT terms and conditions.

### **3-B Small and Disadvantaged Business Enterprises**

Small and Disadvantaged Business Enterprises (“DBE”) are encouraged to bid on this project. Any applicable DBE firm’s certifications must be included in the proposal. Cost Proposals must list the amount and activity of service provided by the DBE firm, as applicable. Information on becoming certified as a Disadvantaged Business Enterprise is available from Michigan Department of Transportation (“MDOT”) at the following website address: <http://mdot270.state.mi.us:8080/UCP/HomePageServlet>.

### **3-C Compliance with Laws**

The Contractor shall comply with all federal, state, and local laws, ordinances, rules, regulations, and orders, including, but not limited to:

1. Motor Carrier Safety Act, 1963 P A 181, as amended.
2. Motor Bus Transportation Act, 1982, P A 432, as amended.
3. Rules and Regulations of the Department of Transportation may promulgate to accomplish the purpose of 1990 P A 339.

4. Motor Safety Carrier Regulations, being 49 CFR, Parts 387, 390-393, 395-397, and 399 including appendices C, D, E, and G.
5. Drug-Free Workplace Act of 1988.
6. Procedures for Transportation Workplace Drug Testing Progress, 49 CFR 40.
7. Physical Qualification Requirements of 49 CFR 391.41 to 391.49.
8. Debarment Certification per 49 CFR 29; Appendix D must be signed by Respondent and included in proposal submittal.
9. Surface Transportation Assistance act of 1982 ("Buy America Act"); Appendix E must be signed by Respondent and included in proposal submittal.
10. Lobbying Disclosure Act of 1985; Appendix F must be signed by Respondent and included in proposal submittal
11. Non-Discrimination Clause per 49 CFR, Part 26.
12. Prohibition of Discrimination per 1976 P A 453, Public Acts of 1976.

Upon request, Contractor shall furnish to CATA certificates of compliance with all such laws, rules and regulations. The Contractor shall, at its own expense, be responsible for obtaining all necessary permits and licenses required for performance outlined in this RFP.

Information regarding the regulations listed above may be obtained from the Federal Motor Carrier Safety Administration at [www.fmcsa.dot.gov/rulesregs/fmcsr/fmcsrguide.htm](http://www.fmcsa.dot.gov/rulesregs/fmcsr/fmcsrguide.htm).

### **3-D Additional Standard Terms and Conditions**

1. Davis-Bacon and Anti-Kickback. The following clauses apply to all Project bidding documents and contracts involving construction or demolition:
  - (a) Federal Wage Requirements For Construction Contracts.
    - (1) This procurement is subject to the Davis-Bacon Act, 40 USC § 3141, *et seq.*, and to the Copeland Anti-Kickback Act, 18 USC § 874, and to the regulations promulgated thereunder ("the Acts"). CONSULTANT must comply with the provisions of the Acts, which are incorporated herein by reference, including, without limitation, in the payment of prevailing wages in the area in which the work is performed and in its subcontracting practices. The contract between CONSULTANT and CATA shall contain in its body or as an attachment the full clause set forth in the

Department of Labor regulations at 29 CFR 5.5(a). In the event that the final contract fails to include in its body, or as an exhibit, the required clause, then CONSULTANT agrees and stipulates that the omission shall be deemed a clerical mistake and that the contract shall be reformed, without objection by CONSULTANT for any reason, to include said clause as if present from the inception of the contract. Construction contracts valued at \$2,000 or less are exempt from this provision.

- (2) If the amount of the construction contract exceeds \$100,000, then this procurement is subject to the Contract Work Hours and Safety Standards Act, 40 USC § 3701, *et seq.* The contract between CONSULTANT and CATA shall contain, in its body, or as an attachment, the full clause set forth in the Department of Labor regulations at 29 CFR 5.5(b). In the event that the final contract fails to include, in its body, or as an exhibit, the required clause, CONSULTANT agrees and stipulates that the omission shall be deemed a clerical mistake and that the contract shall be reformed, without objection by CONSULTANT, for any reason, to include said clause as if present from the inception of the contract.
- (3) Construction contracts include contracts for alterations, repairs, including painting and decorating, as well as those for actual construction.

2. Clean Water.

- (a) CONSULTANT agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 USC 1251 *et seq.* CONSULTANT agrees to report each violation to CATA and understands and agrees that CATA will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.
- (b) CONSULTANT also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

3. Seismic Safety. CONSULTANT agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. CONSULTANT also agrees to ensure that all work performed under this Contract including work performed by a

subconsultant is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the Project.

4. Energy Conservation. CONSULTANT agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.
5. Recovered Materials. CONSULTANT agrees to comply with all requirements of Section 6002 of the Resource Conservation and Recovery Act ("RCRA"), as amended (42 USC 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.

### **3-E Ownership**

All original documents, calculations, and work product produced by CONTRACTOR, whether produced on paper or electronic media or otherwise in performance of this Agreement, shall be the property of CATA. CONTRACTOR shall have the right to retain a copy of such documents, calculations, and work product. CONTRACTOR shall make available to CATA copies of all CONTRACTOR correspondence, notes, and other papers relating to the work, upon request of CATA. All works of original authorship created in the scope of this Agreement are "works made for hire", as that term is used in connection with the U.S. Copyright Act. To the extent that by operation of law CONTRACTOR retains any intellectual property rights to any work product, CONTRACTOR hereby irrevocably assigns and licenses to CATA all right, title, and interest in such work product, including copyrights and patents, and agrees to execute such assignments and licenses as may be required in the opinion of CATA's legal counsel to confirm this provision. The work product produced by CONTRACTOR in the performance of services under this Agreement is intended for use by CATA solely for the purpose intended. Any use or reuse of such work product by CATA for any purpose other than its intended purpose shall be at the sole risk of CATA and without any liability or responsibility of CONTRACTOR. To the extent that the work product produced by CONTRACTOR contains standard design or construction details or other standardized material previously developed by CONTRACTOR in its professional architectural, engineering, and planning practices, then CONTRACTOR shall have the right to reuse any such material on other projects for other clients or persons without the prior knowledge or permission of CATA and without the payment of any compensation to CATA, provided that the reuse or continued use of such material contains no CATA identifying information or confidential information.

### **3-F News Releases**

News releases pertaining to this RFP or the services, study, data, or project to which it relates will not be made without prior written CATA approval, and then only in accordance with the instructions from CATA's Executive Director.

### **3-G Audit and Inspection of Records**

In the case of all negotiated contracts, and contracts for construction, reconstruction, or improvement of facilities and equipment which were entered into under other than competitive bidding procedures, the Contractor agrees that the grantee, the Comptroller General of the United States, or any of their duly authorized representative shall, for the purpose of audit and examination, be permitted to inspect all work, materials, payrolls, and other data and records, and accounts with regard to the project. Further, the Contractor agrees to maintain all required records for at least three (3) years after grantees make final payments and all other pending matters are closed.

### **3-H Complaints or Protests**

CATA's Procurement Protest Procedures are available from CATA's Purchasing & Contracts Manager.

### **3-I Request For Proposal Signature Certification Page**

**REQUEST FOR PROPOSAL SIGNATURE CERTIFICATION PAGE**

1. At least one proposal copy must be signed with an original handwritten signature executed in ink and returned with your proposal for your proposal to be considered.
2. By signing this RFP Signature Certification Page, the Respondent certifies that she/he is authorized to sign and submit this response on behalf of the submitting vendor named below. Respondent further acknowledges that she/he is responsible for reviewing and acknowledging any addendums (if any) that have been issued for this solicitation in a timely manner for use in the vendor’s response to this solicitation.

Completion of ALL of the following information is required:

Check category that indicates business structure of Respondent:

Individual or Proprietorship

Partnership or Joint Venture with \_\_\_\_\_

If Partnership or Joint Venture are you the Prime Contractor? (Please check one)  Yes or  No

Corporation

The below named individual, submitting and signing this response, verifies that he/she is a duly authorized officer of the company and that his/her signature attests that all information set forth in the Request For Proposal including all specifications, Addenda (if any), Terms and Conditions, and FTA Certifications contained in and pertaining to this RFP are understood and accepted. *Furthermore if Respondent is a Partnership or Joint Venture, a completed RFP Signature Certification Page from an authorized representative of each party is required.*

By: \_\_\_\_\_ Date \_\_\_\_\_  
Original Signature of Respondent

Print/Type Name \_\_\_\_\_ Title \_\_\_\_\_

Respondent Company Name \_\_\_\_\_

Street Address \_\_\_\_\_

City, State, ZIP \_\_\_\_\_

Respondent Phone# \_\_\_\_\_ Respondent Fax# \_\_\_\_\_

Respondent e-Mail Address \_\_\_\_\_

Federal Employer Identification  
Number/SSN \_\_\_\_\_

### 3-J Contractual Terms and Conditions

#### CAPITAL AREA TRANSPORTATION AUTHORITY

##### **NON-CONSTRUCTION STANDARD TERMS AND CONDITIONS OF PROCUREMENT**

A. THE FOLLOWING TERMS AND CONDITIONS WILL BE A PART OF THE CONTRACT AWARDED.

1. **CHANGES.** CATA, at any time, by a written order, and without notice to the sureties, may make changes within the general scope of this contract, in (a) drawings, designs or specifications where the supplies to be furnished are specifically manufactured for CATA in accordance therewith; (b) method of shipment or packing; and (c) place of delivery. If any such change causes an increase or decrease in the cost of, or the time required for performance of this contract, whether changed or not changed by such order, an equitable adjustment shall be made by written modification of the contract. Any claim by the Contractor for adjustment under this clause must be asserted within thirty (30) days from the date of receipt by the Contractor of the notification of change; provided that CATA, if it decides that the facts justify the action, may receive and act upon any such claim if asserted prior to dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes." However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.
2. **TERMINATION FOR DEFAULT.** CATA, by written notice, may terminate the contract awarded on the basis of this proposal, in whole or in part, for failure of the Contractor to perform any of the provisions hereof. In such event, the Contractor shall be liable for damages, including the excess cost of reprocurring similar supplies or services, provided, that if (a) it is determined for any reason that the Contractor was not in default or, (b) the Contractor's failure to perform is without his control, fault or negligence, the termination shall be deemed to be a termination for convenience under the following Paragraph 3.
3. **TERMINATION FOR CONVENIENCE.** CATA, by written notice, may terminate the contract, awarded on the basis of this proposal, in whole or in part, when it determines it is in the best interest of CATA. If this contract is for supplies and is so terminated, the Contractor shall be compensated in accordance with its auditable cost incurred at the time of notification of termination. To the extent that the contract is for services and is so terminated, CATA shall be liable only for payment in accordance with the payment provisions of the contract for services rendered to the effective date of termination.
4. **ADDITIONAL INFORMATION.** The Contractor shall promptly furnish any additional information requested by CATA relative to the equipment it proposes.
5. **SUPPLIER RESPONSIBILITY.** No advantage shall be taken by the Contractor or its Subcontractor in the omission of any part or detail which goes to make the equipment complete and operable for use by CATA. In case of any variance, this

specification shall overrule Contractor or Subcontractor specifications. The Contractor shall assume responsibility for all materials used whether the same is manufactured by the Contractor or purchased ready made from a source outside Contractor's company. In the case of the replacement of a Subcontractor, the Contractor must, within five (5) working days, notify CATA in writing of the replacement and provide name, address, telephone number, and the type of service.

6. DELIVERY. Service and/or equipment will be delivered to Capital Area Transportation Authority, 4615 Tranter Street, Lansing, Michigan 48910. The Authority will assume custody of all property at one of its other locations, if so directed, in writing by CATA. Invoices shall be furnished with the delivery of each item. CATA reserves the right to inspect all deliveries or services before acceptance.
7. BREACH OF CONTRACT. If the Contractor shall fail, refuse or neglect to comply with the terms of these contract conditions, such failure shall be deemed a total breach of contract and the Contractor shall be subject to legal recourse by CATA, plus costs relating to failure to comply.
8. DISPUTES (AFTER BID AWARD). Except as otherwise provided in the contract, any dispute concerning a question of fact arising under the contract which is not disposed of by Contractor shall be decided by CATA in writing, with a copy mailed or otherwise furnished to the Contractor. The decision of CATA shall be final and conclusive unless within ten (10) days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to CATA a written appeal addressed to the Executive Director for the determination of such appeal, which shall be final and conclusive, unless determined by a court of competent jurisdiction to have been fraudulent or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending a final decision of the dispute, the Contractor shall proceed diligently with the performance of the contract and in accordance with CATA's decision.
9. DELIVERY EXTENSION AND DELAYS. CATA reserves the right to extend, postpone or reschedule delivery in case the delivery of service equipment, under this contract, shall be necessarily delayed because of strike, injunction, civil disturbance, government controls, or by reason of any cause or circumstance beyond the control of the Contractor, as detailed in writing by the Contractor, the time of completion or a delivery shall be extended by a number of days to be determined in each instance by CATA.
10. INSTALLATION. If specified, the Contractor shall install and place in operation, subject to approval by CATA, the equipment at the Contractor's expense within thirty (30) days from issuance of a notice to install issued by CATA.
11. INSTALLATION EXTENSION AND DELAYS. CATA reserves the right to extend, postpone, or reschedule installation in case the installation of equipment under

this contract shall be necessarily delayed because of strike, injunction, civil disturbance, government controls, or by reason or cause or circumstances beyond the control of the Contractor. The time of completion or installation shall be extended by a number of days to be determined in each instance by CATA.

12. ASSEMBLY. If required, the Contractor shall assemble the equipment of the installation.
13. ACCESSORIES. The Contractor shall furnish all accessories required to permit CATA to operate the equipment as contemplated by the Authority. Accessories shall be included in the bid price.
14. TRAINING. The Contractor shall properly train CATA personnel in the operation and maintenance of the equipment.
15. SERVICE MANUAL AND WIRING SCHEMATIC. If specified, the Contractor will provide at least one copy of a service manual and at least one copy of a wiring schematic for individual components and other schematics and drawings.
16. WARRANTY. The Contractor shall describe its policy or warranty(s) both on workmanship and material as applying to the equipment, along with the method or adjustment, and shall be further subject to warranty requirements of CATA as set forth in the following Paragraph 17.
17. CATA WARRANTY. The Contractor agrees that the supplies or services furnished under this contract shall be covered by the most favorable warranties the Contractor gives any customer for such equipment and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to CATA by any other clause of this contract. The Contractor shall state the warranty and supply with its bid.
18. INSURANCE. The Contractor shall place and maintain with responsible insurance carriers the following insurance. The Contractor shall deliver to CATA, upon request, certificates of insurance which shall provide thirty (30) days' written notice to be given to CATA in the event of cancellation. Contractor shall require all Subcontractors to maintain adequate insurance coverage.
  - (a) Workers' Compensation and Employer's Liability Insurance.
    - (1) Workers' Compensation in compliance with the applicable state and federal laws.
    - (2) Employer's Liability. Limit \$1,000,000.
  - (b) Commercial General Liability Insurance, including Professional Liability, Blanket contractual, XCU Hazards, Broad Form Property Damage, Completed Operations, and Independent Contractor's Liability, all applicable to Personal Injury, Bodily Injury and Property Damage to a combined single limit of \$1,000,000 each occurrence/claim, subject to a

\$2,000,000 annual aggregate for Professional Liability, Completed Operations and Personal Injury other than Bodily Injury.

- (c) Automobile Liability Insurance, including owned, hired and non-owned automobiles, Bodily Injury and Property Damage, to a combined single limit of \$1,000,000 each occurrence.

19. INDEMNIFICATION. In addition to the protection afforded by any policy of insurance, the Contractor agrees to indemnify and save harmless CATA, the Michigan Department of Transportation ("MDOT"), the Federal Transit Administration ("FTA"), and all officers, agents, and employees thereof:

- (a) From any and all claims by persons, firms, or corporations for labor, materials, supplies, or services provided to the Contractor in connection with the Contractor's performance of the contract; and
- (b) From any and all claims for injuries to or death of any and all persons, for loss of or damage to property, for environmental damage, degradation and response, and cleanup costs, and for attorney fees and related costs arising out of, under, or by reason of the Contractor's negligent performance of the contract.

CATA will not be subject to any obligations or liabilities by Subcontractors of the Contractor or their Subcontractors or any other person not a party to this contract without its specific consent and notwithstanding its concurrence in or approval of the award of any contract or subcontract or the solicitation thereof.

20. ACCEPTANCE OF MATERIAL - NO RELEASE. Unless CATA otherwise agrees in writing, acceptance of any portion of the material prior to final acceptance shall not release the Contractor from liability for faulty workmanship or materials or for failure to fully comply with all of the terms of this contract. CATA reserves the right and shall be at liberty to inspect all materials and workmanship at any time during the manufacturing process, and shall have the right to reject all materials and workmanship which do not conform with the contract requirements and specifications; provided, however, that CATA is under no duty to make such inspection and no inspection so made shall relieve Contractor from any obligation to furnish materials and workmanship in accordance with the contract requirements and specifications.

21. FINAL ACCEPTANCE. Upon final acceptance by CATA of all work to be performed by the Contractor, CATA will so notify the Contractor in writing. The date of final acceptance shall commence the warranty period.

22. LIQUIDATED DAMAGES. If the Contractor fails to deliver the requirements by the date as set forth in the bid documents scheduled for delivery, CATA shall be paid damages for each consecutive calendar day thereafter until the goods are delivered, unless a completion date is extended by CATA in writing. Inasmuch as the amount of such damages will be extremely difficult to ascertain, the Contractor agrees to compensate CATA the sum of \$\_\_\_\_\_ per

day, which sum is hereby agreed upon, fixed and determined by the parties hereto as the liquidated damages that CATA will suffer by reason of said delay and default and not as a penalty; and CATA shall have the right to deduct such sum from any amounts which may otherwise become due under contract.

23. NO ASSIGNMENT OF CONTRACT. Contractor may not assign or transfer any interest in the contract without the prior written consent of CATA.
24. DEFECTIVE WORKMANSHIP AND MATERIAL. When and as often as CATA determines that the work done or being done under the contract or the kind of quality or materials supplied in connection therewith are not fully and completely in accordance with any requirement of the contract documents, it may give notice of such noncompliance to the Contractor in writing and the Contractor shall immediately upon receipt of such notice do all things required to remedy such noncompliance without additional cost to CATA. If the Contractor fails to comply with such written notice, then CATA, upon written notice to the Contractor, shall deduct the cost of repair, replacement or correction of defective or damaged work from the compensation due or to become due to the Contractor.
25. WAIVER OF BREACH. The waiver by either party hereto or any breach of any provision of this contract by the other party shall not operate or be construed as a waiver of any subsequent breach of the same or any other provision of this contract by either party hereto.
26. OWNERSHIP OF DOCUMENTS. All original documents, calculations, and work product produced by CONTRACTOR, whether produced on paper or electronic media or otherwise in performance of this Agreement, shall be the property of CATA. CONTRACTOR shall have the right to retain a copy of such documents, calculations, and work product. CONTRACTOR shall make available to CATA copies of all CONTRACTOR correspondence, notes, and other papers relating to the work, upon request of CATA. All works of original authorship created in the scope of this Agreement are "works made for hire", as that term is used in connection with the U.S. Copyright Act. To the extent that by operation of law CONTRACTOR retains any intellectual property rights to any work product, CONTRACTOR hereby irrevocably assigns and licenses to CATA all right, title, and interest in such work product, including copyrights and patents, and agrees to execute such assignments and licenses as may be required in the opinion of CATA's legal counsel to confirm this provision. The work product produced by CONTRACTOR in the performance of services under this Agreement is intended for use by CATA solely for the purpose intended. Any use or reuse of such work product by CATA for any purpose other than its intended purpose shall be at the sole risk of CATA and without any liability or responsibility of CONTRACTOR. To the extent that the work product produced by CONTRACTOR contains standard design or construction details or other standardized material previously developed by CONTRACTOR in its professional architectural, engineering, and planning practices, then CONTRACTOR shall have the right to reuse any such material on other projects for other clients or persons without the prior

knowledge or permission of CATA and without the payment of any compensation to CATA, provided that the reuse or continued use of such material contains no CATA identifying information or confidential information.

27. EXCUSES FOR FAILURE TO PERFORM OR DELAYS. The Contractor will not be in default by reason of any failure in the performance of this contract, if such failure arises out of causes beyond the control and without the fault or negligence of Contractor. Such causes may include, but are not limited to, acts of God or the public enemy, acts of the government either in its sovereign or contractual capacity, fires, floods, and strikes. But in every case, a failure to perform must be beyond the control and without the fault or negligence of the Contractor or its Subcontractors. An excusable delay will permit the Contractor an extension of time for such reasonable period as may be mutually agreed upon between the parties.
- B. TERMS INCLUDED IN CONTRACTS FUNDED IN WHOLE OR PART BY FTA, MDOT, OR OTHER GOVERNMENTAL AGENCY.
1. NONDISCRIMINATION.
- (a) Compliance with Regulations. Contractor shall comply with Federal Regulations relative to nondiscrimination of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, and Title 23, Code of Federal Regulations, Part 710.405(b), as they may be amended from time to time (hereinafter referred to as the Regulations), and with Executive Order 11246 titled Equal Employment opportunity, as amended by Executive Order 11375, and as supplemented by Department of Labor Regulation (41 CFR 60) which are herein incorporated by reference and made a part of this contract. Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, Contractor agrees to comply with any implementing requirements FTA may issue.
- (b) Nondiscrimination. With regard to the work performed by it during this contract, Contractor shall not discriminate on the grounds of race, color, sex, disability, or national origin in the selection and retention of Subcontractors, including procurement of materials and leases of equipment. Contractor shall not participate either directly or indirectly in discrimination prohibited by Section 21.5 and Part 710.405(b) of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (c) In connection with the performance of services under this contract, Contractor agrees to comply with the State of Michigan provisions for "prohibition of discrimination in state contracts" as set forth in Appendix A dated March 19, 1998, a copy of which is attached hereto and made a part hereof.

- (d) This provision B.1 (a)-(d) will be included in all subcontracts relating to this contract. Further, each contract which Contractor signs with a Subcontractor must include the following assurance:

The Contractor, Subrecipient, or Subcontractor shall not discriminate on the basis of race, color, national origin, creed, disability, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of US DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

2. DBE REQUIREMENTS. Contractor will carry out the applicable requirements of the Michigan Department of Transportation's Disadvantaged Business Enterprise ("DBE") program and 49 CFR 26, including, but not limited to those requirements set forth in Appendix B, attached hereto and made a part hereof.
3. CONTINGENT FEES. The Contractor warrants that it has not employed or retained any company or person, other than a bonafide employee working solely for the Contractor, to solicit or secure this contract and that it has not paid or agreed to pay any company or person, other than a bonafide employee working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts or any other consideration, contingent upon or resulting from the award or making of this contract. For breach or violation of this warranty, CATA shall have the right to annul this contract without liability.
4. RECORDS/AUDITS. The Contractor shall maintain complete and accurate books, documents, papers, accounting records, and other evidence with respect to allowable costs incurred and manpower expended under this contract. All such records shall be maintained on the basis of generally-accepted accounting principles and shall be clearly identified and readily accessible. The Contractor shall provide access during regular business hours to authorized representatives of CATA to such data and records, and the right to inspect and audit all data and records of the Contractor relating to its performance under the contract, and to make transcripts therefrom as necessary to allow inspection of all work data, documents, proceedings, and activities related to this contract for a period of four (4) years from the date of final payment under this contract. In the event of a dispute as to allowable costs or any other issue under this contract, Contractor will thereafter continue to maintain such records until the dispute has been resolved.
5. CONFLICT OF INTEREST. The Contractor certifies that, to the best of its knowledge, no CATA employee or office of any public agency interested in this contract has any pecuniary interest in the business of the Contractor and that no person associated with the Contractor has any interest that would conflict in any manner or degree with the performance of this contract.

6. INTEREST OF MEMBER OF CONGRESS OR DELEGATES TO CONGRESS. No member of Congress or delegates to the Congress of the United States shall be admitted to any share or part of the contract, or to any benefit arising therefrom. This shall not be construed to prevent any such person from owning stock in a publicly owned corporation.
7. DEBARMENT AND SUSPENSION. Contractor agrees to comply, and assure the compliance by each of its Subcontractors at any tier, with the provisions of Executive Orders Nos. 12549 and 12689, "Debarment and Suspension," 31 U.S.C. § 6101 note, and U.S. DOT regulations on Debarment and Suspension at 49 CFR Part 29. Contractor shall furnish the Certificate of Compliance, as set forth in Appendix C, as a term and condition of the procurement.
8. MDOT AND FTA TERMS. All contractual provisions required by MDOT or mandated by FTA as set forth in FTA Circular 4220.1F, dated November 1, 2008, as amended, are hereby incorporated by reference. Anything to the contrary notwithstanding, all FTA mandated terms or MDOT mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this contract. Contractor shall not perform any act, fail to perform any act, or refuse to comply with any CATA requests which would cause CATA to be in violation of the FTA terms and conditions.
9. COMPLIANCE WITH LAWS. The Contractor shall at all times observe and comply with all laws, ordinances, and regulations of the state, federal, local, and city government which may, in any manner, affect the performance of the contract.
10. CLEAN AIR.
  - (a) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 USC 7401, *et seq.* If state or local air pollution regulations are in force, the more restrictive criteria shall govern. The Contractor and any subcontractors or suppliers must submit evidence to CATA that the governing air pollution criteria will be met. Violations shall be reported to the Regional Office of the Environmental Protection Agency. The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.
  - (b) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.
11. BUY AMERICA PROVISIONS. This procurement is subject to the FTA's Buy America Requirements in 49 CFR 661. *The attached certificate, entitled "Buy America" Provision (Appendix D), must be completed and submitted with the proposal as a term and condition of the procurement. Failure to fill out the certificate completely and return it with the proposal will render your proposal*

*non-responsive*. A waiver from the Buy America Provision may be sought by the bidder if grounds for a waiver exist. Section 165a of the Surface Transportation Act of 1982 permits FTA participation on contracts only if steel and manufactured products used in the contract are produced in the U.S.A.

12. CERTIFICATION REGARDING LOBBYING. This procurement is subject to the Federal Transportation Administration Lobbying requirements. The attached certificate, entitled Certificate Regarding Lobbying (Appendix E), must be signed and returned as a term and condition of the procurement.
13. PREVAILING WAGE. Contractors must comply with the provisions of the Davis-Bacon Act, 1931 P A 403, as amended, as to payment by the contractor of wages prevailing in the area in which the work is performed.
14. BID BOND. As security for the acceptance of any construction contract, each bid submitted for award of a construction contract shall be accompanied by a bidder's bond or certified check in the amount of five percent (5%) of the bid drawn payable to the CATA. Such bid deposits of all bidders will be held by CATA until all bids submitted shall have been evaluated, and the bids have either been rejected in whole or in part, or the award of the Contract or Contracts has been made. The bid deposit of the successful bidder will be held until the Contract is duly executed. Bid deposits will be returned to unsuccessful bidder(s) upon award of the Contract. If the successful bidder to whom the Contract has been awarded refuses to execute the Contract within ten (10) calendar days, after Contract award, the amount of its bid deposit shall be forfeited to and retained by CATA as liquidated damages for such neglect or refusal, and ITP may proceed to place the order with another company.
15. PROTESTS. Any protests shall be filed timely in accordance with the CATA Procurement Protest Procedures dated July 13, 2007. These Procedures are available from the CATA Purchasing & Contracts Manager and the CATA CEO/Executive Director, at the following address: Capital Area Transportation Authority, 4615 Tranter Street, Lansing, MI 489109.
16. PERFORMANCE & PAYMENT BONDS. The successful bidder on a construction contract shall furnish at its own expense performance and payments bonds. These bonds shall be furnished to CATA within ten (10) calendar days after contract award. Bond requirements are as follows:

A performance bond for construction contracts shall be payable to CATA in the amount of 100 percent (100%) of the full contract amount as a guarantee of good faith on behalf of the Contractor that the Contractor will perform all of its obligations under the contract.

A payment bond shall be payable to CATA in the amount of 100 percent (100%) of the full amount of any construction contract to assure payment as required by law of all persons supplying labor and material in the execution of work provided for in the contract.
17. Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by

reference in the Master Agreement between CATA and FTA, as they 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.

18. The Purchaser and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Purchaser, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.
19. FEDERAL CHANGES.  
Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between CATA and FTA, as they 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.
20. NO OBLIGATION BY THE FEDERAL GOVERNMENT.
  - (a) CATA and Contractor acknowledges and agrees that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to CATA, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.
  - (b) The Contractor agrees to include the above clause in each subcontract financed in whole or in part with the Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provision.
21. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS.
  - (a) The Contractor acknowledges that the provisions of the Program Fraud Civil Rights Act of 1986, as amended, 31 U.S.C. § 3801 *et seq.* and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, or may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges

that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

- (b) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under authority of 49 U.S.C. § 5307, the Federal Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, or the applicable Federal law to the extent the Federal Government deems appropriate.
- (c) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

C. MISCELLANEOUS.

1. COMPUTATION OF TIME. In computing a period of time prescribed by these conditions, the following rules apply:
  - (a) "Day" means days of the week (e.g., Monday through Friday), not business days.
  - (b) The day of the act or event after which the designated period of time begins is not included.
  - (c) The last day of the period is included, unless it is a Saturday, Sunday, or legal holiday. In that event, the period runs until the end of the next day that is not a Saturday, Sunday or legal holiday.
2. NOTICE. All notices and other communications required under this Contract shall be given in writing, signed by an authorized representative, and be personally delivered or delivered by overnight courier or certified mail (return receipt requested) to the addresses set forth below:

To CATA:

Ms. Sandra L. Draggoo  
CEO/Executive Director  
Capital Area Transportation Authority  
4615 Tranter Street  
Lansing, MI 48910

With a copy to: Dan W. Chandler, Esq.  
Chandler, Bujold & Chandler, PLC  
2855 Coolidge Hwy., Suite 109  
Troy, MI 48084

To Contractor: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

With a copy to: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 3. JURISDICTION. This Contract will be governed by the internal laws of the State of Michigan without reference to its choice of law rules. Exclusive jurisdiction and venue of any suit, action or claim relating to this contract will be in the Ingham County Circuit Court or the Federal District Court for the Western District of Michigan.
  
- 4. This contract constitutes the entire contract between the parties and supersedes all negotiations, commitments, and previous contracts and may be modified only by a further written contract which is executed by a duly authorized officer of each of the parties.

**APPENDIX A**  
**PROHIBITION OF DISCRIMINATION IN STATE CONTRACTS**

In connection with the performance of work under this contract, Contractor agrees as follows:

1. In accordance with Act 453, Public Acts of 1976, Contractor hereby agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or as a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, or marital status. Further, in accordance with Act No. 220, Public Acts of 1976 as amended by Act No. 478, Public Acts of 1980, Contractor hereby agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of a disability that is unrelated to the individual's ability to perform the duties of a particular job or position. A breach of the above covenants shall be regarded as a material breach of this contract.
2. Contractor hereby agrees that any and all subcontracts to this contract, whereby a portion of the work set forth in this contract is to be performed, shall contain a covenant the same as hereinabove set forth in Section 1 of this Appendix.
3. Contractor will take affirmative action to insure that applicants for employment and employees are treated without regard to their race, color, religion, national origin, age, sex, height, weight, marital status or a disability that is unrelated to the individual's ability to perform the duties of a particular job or position. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
4. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, age, sex, height, weight, marital status or disability that is unrelated to the individual's ability to perform the duties of a particular job or position.
5. Contractor or its collective bargaining representative will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representative of the Contractor's commitments under this appendix.
6. Contractor will comply with all relevant published rules, regulations, directives, and orders of the Michigan Civil Rights Commission which may be in effect prior to the taking of bids for any individual state project.
7. Contractor will furnish and file compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission, said forms may also elicit information as to the practices, policies, program, and employment statistics of each subcontractor as well as Contractor itself, and said Contractor will permit access to its books, records, and accounts by the Michigan Civil Rights Commission and/or its agent, for purposes of investigation to ascertain compliance with this contract and relevant with rules, regulations, and orders of the Michigan Civil Rights Commission.
8. In the event that the Civil Rights Commission finds, after a hearing held pursuant to its rules, that Contractor has not complied with the contractual obligations under this Agreement, the Civil Rights Commission may, as part of its order based upon such findings, certify said findings to the Administrative Board of the State of Michigan, which Administrative Board may order the cancellation of the contract found to have been violated and/or declare Contractor ineligible for future contracts with the state and its political and civil subdivisions, departments, and officers, and including the governing boards of institutions of higher education, until Contractor complies with said order of the Civil Rights Commission. Notice of said declaration of future ineligibility may be given to any or all of the persons with whom Contractor is declared ineligible to contract as a contracting party in future contracts. In any case before the Civil Rights Commission in which cancellation of an existing contract is a possibility, the contracting agency shall be notified of such possible remedy and shall be given the option by the Civil Rights Commission to participate in such proceedings.
9. Contractor will include, or incorporate by reference, the provisions of the foregoing paragraphs (1) through (8) in every subcontract or purchase order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission, and will provide in every subcontract or purchase order that said provisions will be binding upon each subcontractor or seller.

**APPENDIX B****ASSURANCES THAT RECIPIENTS AND CONTRACTORS MUST MAKE  
(EXCERPTS FROM US DOT REGULATION 49 CFR § 26.13)**

- A. Each financial assistance agreement signed with a DOT operating administration (or a primary recipient) must include the following assurance:

The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any US DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of US DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR Part 26 and as approved by US 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 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.).

- B. Each contract Contractor signs with a subcontractor must include the following assurance:

The contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of US DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

**POLICY #204****DISADVANTAGED BUSINESS ENTERPRISE POLICY**

The Capital Area Transportation Authority ("CATA") is committed to a policy of non-discrimination in the conduct of its business, including the procurement of goods and services. CATA will take affirmative action to assure maximum practical opportunity for participation of Disadvantaged Business Enterprise ("DBE") in the performance of contracts financed in whole or in part with funds from the United States Department of Transportation, the Federal Transit Administration ("FTA"), the Michigan Department of Transportation ("MDOT"), or other state and federal agencies with DBE programs.


The Executive Director of CATA will annually set an overall goal or goals as a "level playing field" for the amount of DBE participation that can reasonably be expected in the absence of discrimination. This goal will be based on demonstrable evidence of ready, willing, and able DBEs that are available to participate in government assisted contracts. Affirmative action shall be consistent with sound procurement principles and applicable law.

This Policy Statement will be executed by the Executive Director and the Board Chair of CATA, and then circulated to all Department Directors, and Department Managers within the organization and circulated to contracting organizations, the state offices which administer programs, and DBE organizations. The Executive Director will give public notice of DBE goals, how the goals were determined, and contact information for public comment.

CATA's Purchasing Manager shall be the DBE liaison for CATA and will be responsible for administering the program. The DBE liaison will report to the Assistant Executive Director and shall have direct access to the Executive Director, as necessary. The DBE liaison will work with all directors and department managers to insure the effective functioning of CATA's DBE program.

The efforts and results of the entire staff will be reported to the Board through the Development Report of the Executive Director.

  
\_\_\_\_\_  
Sam Singh, Board Chair

  
\_\_\_\_\_  
Sandra L. Draggoo, CEO/Executive Director

Adopted: 2/9/84  
Amended: 6/27/84  
11/14/84  
3/15/89  
10/19/05

**APPENDIX C**  
**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,**  
**INELIGIBILITY AND VOLUNTARY EXCLUSION**  
**INSTRUCTIONS FOR CERTIFICATION**

1. By signing and submitting this proposal, the prospective Participant is providing the certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective Participant knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective Participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective Participant learns that its certification was erroneous when submitted or had become erroneous by reason of changed circumstances.
4. The terms "covered transaction", "debarred", "suspended", "ineligible", "primary", "lower tier covered transaction", "participant", "person", "primary covered transaction", "principal", "proposal", and "voluntarily excluded", as used in this clause, have the meaning set out in the Definitions and Coverage sections of rules implementing Executive order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective Participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective Participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion-Lower Tier Covered Transaction", without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A Participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from covered transactions, unless it knows that the certification is erroneous. A Participant may decide the method and frequency by which it determines the eligibility of its principals. Each Participant may, but is not required to, check the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a Participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a Participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

49 CFR 29, Appendix C, includes attached Certification of Primary Participant Regarding Debarment, Suspension, and Other Responsibility Matters

**CERTIFICATION OF PRIMARY PARTICIPANT REGARDING  
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS**

The Primary Participant (applicant for an FTA grant to cooperative agreement or potential contractor for a major third party contract), \_\_\_\_\_, ("CONTRACTOR"), certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
2. Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for 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; violation of federal or state antitrust statutes, or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;
3. Are 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 enumerated in paragraph 2 above of this Certification; and
4. Have not within a three year period preceding this application/proposal had one or more public transactions (federal, state, or local) terminated for cause or default.

(If the Primary Participant (applicant for an FTA grant, or cooperative agreement, or potential third party contractor) is unable to certify to any of the statements in this Certification, the Participant shall attach an explanation to this Certification).

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential contractor for a major third party contract), \_\_\_\_\_, 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 USC §§ 3801, et seq., are applicable thereto.

Date: \_\_\_\_\_

By: \_\_\_\_\_

Signature and Title of Authorized Official

The undersigned chief legal counsel for Contractor, \_\_\_\_\_, hereby certifies that the Contractor has authority under federal, state, and local law to comply with the subject assurances and that the Certification above has been legally made.

Date: \_\_\_\_\_

By: \_\_\_\_\_

Signature of Contractor's Attorney

Name, Address, and Phone  
of Contractor's Attorney: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Appendix D

### "BUY AMERICA" PROVISION

This procurement is subject to the Federal Transit Administration "Buy America" Requirements in 49 CFR Part 661.

The "Buy America" Certificate below **must** be completed and submitted with your bid/proposal. A bid/proposal which does not include the Certificate or where both certificates are signed will be considered non-responsive.

A waiver from the "Buy America" provision may be sought by Capital Area Transportation Authority if grounds for the waiver exist.

In order to qualify as a domestic end-product, the cost of components produced in the United States must be 100% American made.

CERTIFICATE ONE:

#### BUY AMERICA CERTIFICATE

The bidder hereby certifies that it **WILL** comply with the requirements of section 165(a) of the Surface Transportation Assistance Act of 1982, but it may qualify for an exception to the requirement pursuant to Section 165(b)(2) or (B)(4) of the Surface Transportation Assistance Act and regulations in 49 CFR Part 661.7.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

CERTIFICATE TWO:

#### BUY AMERICA CERTIFICATE

The bidder hereby certifies that it **CANNOT** comply with the requirements of section 165(a) of the Surface Transportation Assistance Act of 1982, but it may qualify for an exception to the requirement pursuant to Section 165(b)(2) or (B)(4) of the Surface Transportation Assistance Act and regulations in 49 CFR Part 661.7.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

