SCOPE OF SERVICES

## *1. Websites And Web Services:*

### 1.1. Transitchicago.com Web-site Overview:

Transitchicago.com is the primary website for CTA customers, business partners and other parties. It serves millions of page views each month. It also syndicates service alerts and train arrival predictions to other first-party and third-party platforms, including the Ventra app, digital station signage, Twitter, and Google Maps and Apple Maps.

The website presents essential system- and service-related information, including real-time CTA Train information, maps, route information, schedules/timetables, a trip planning widget, and site-wide behaviors when major events are affecting services. It contains a custom-built, database-driven service alert system, and the CTA Train Tracker service which pulls information from databases inside CTA's network and presents it meaningfully to our customers.

The website also hosts information about current and planned projects to improve and expand service through the CTA's service area. Search functionality is available to search within webpages, news items and our document library. Application Programming Interfaces (API) are available on the site providing pathways for third parties into a variety of data including the back-end databases that power the integrated Customer Alerts system and Train Tracker.

Transitchicago.com also hosts and/or leads people to job openings, bid postings, financial information, promotional materials, and a vast document library containing everything from schedule brochures to ordinances to Freedom of Information Office information to board meeting agendas and minutes.

### 1.2. The Components Of The Transitchicago.com Website:

The transitchicago.com website is composed of four interrelated components:

1. The content management system;
2. The front-end design of that content as presented in a web browser;
3. The Train Tracker system that ingests data from the track system and generates arrival predictions;
4. The application programming interfaces (APIs) that provide service alerts and train arrival predictions to the Ventra app, station signage, and third-party trip planning apps such as Google Maps.

#### 1.2.1. The Content Management System:

The content management system is the database containing the CTA’s public-facing information (e.g., service alerts; press releases; route, station and schedule information) as well as the application that CTA staff uses to revise and organize information in that database. Its feature includes:

- Static pages and page sections
- Various site-wide element control including site navigation, auto-generated sitemap, quick links and page banners

- Additional content tools: News, Events, Photo Galleries, etc.
- Customer Alerts database with archival information and change logs
- Form builder, including customized functionality such as the customer service feedback form, the ability to store responses, and the ability to forward submissions via email
- Transit system content: Stops, routes, Train Tracker mappings, etc.
- Asset management system (images, files. etc.)
- Public document hosting and categorical management
- User management and permissions structure
- Workflow system including approval and advance-scheduled-posting capabilities
- Hosting of web pages that power Digital Messaging Signage posted throughout CTA stations (wide screens showing Customer Alerts, Train Tracker, etc.)
- Ability to push information to third party Web services APIs (including to Twitter and for CTA Updates subscription service)

### 1.2.2. The front-end Design:

The front-end design of the website determines the way that information is presented in web browsers. Its feature includes:

- Trip planning widget which checks against managed list of common queries and rewrites them to yield better results when redirecting them to third-party trip planners
- Auto-generated pages for each bus route and train station with key information about each, often including maps, hours of service, relevant customer alerts and more
- Multiple system status views, including widget form, overview. bus and rail pages
- Active Web page elements such as Customer Alerts, news headline and other objects easily inserted into pages by editors
- Feedback form system with storage of messages received
- Do-It-Yourself transit information display slideshow with weather, customer alerts screens, specialized partner customization

### 1.2.3. Train Tracker:

Train Tracker is a system that imports moment-by-moment data from our rail system and processes it into meaningful arrival/departure predictions.

### 1.2.4. Application Programming Interfaces:

Our APIs make information available in ways that can be incorporated into other websites and apps. The agreement covers two APIs:

- Train Tracker APIs with key management and transaction limit system
- Customer Alerts APIs (which power Ventra App alerts, bus shelter alerts, Digital Advertising Screen alert info and alerts in third-party applications)

### 1.2.5. Additional Active Functionality:

- File hosting for GTFS feed

### 1.3. Ancillary websites:

#### 1.3.1 Chicago Card Application:

The Chicago Card Application was previously a part of CTA's fare system, data from which is now hosted in a legacy mode that allows research into previous transactions and use of the Chicago Card/Chicago Card Plus and related services. This should be maintained in its current form.

#### 1.3.2 School Schedules Website:

Our website at https://schoolservice.transitchicago.com/ enables school administrators to share their schedules with us.

#### 1.3.3 "I Support Local" Microsite:

While technically part of transitchicago.com, the section at transitchicago.com/isupportlocal/ has a separate visual design; it relies on a custom permissions structure to facilitate collaborate with contractors outside CTA; and it includes custom functionality such as business listings (transitchicago.com/isupportlocal/local-spots/). This design and functionality should be maintained.

#### 1.3.4 "Live Well Work Well" Section:

At transitchicago.com/livewellworkwell/, the custom visual design, event listing/calendar functionality, and carousel with permissions for Human Resources access, should be maintained.

### 1.4 Website content summary:

This sitemap provides a summary of the website's most prominent content. Support for this content and these types of content should be maintained.

- **Travel info**
  - Getting around
    - Accessibility
    - Airport transit
    - Brochures
    - Destinations
    - How-to guides
    - Maps
    - Plan a trip
    - Schedules
    - Visitor info

- **Service updates(Opens in a new window)**
  - Alerts & system status

    - CTA Bus Tracker(Opens in a new window)
    - CTA Train Tracker
    - Get updates (subscribe)
    - Planned weekday changes
    - Planned weekend changes
- **More travel info**
    - Bike & ride
    - Lost & found
    - Park & ride
    - Policies & practices
    - Rules of conduct
    - Safety & security
- **More**
    - Business
        - Advertising
        - Bus/Train Tracker for business
        - Buying Plan
        - Construction near us
        - Contract Opportunities
        - Corporate partnerships
        - Disadvantaged Business Enterprise (DBE)
        - Info for school reduced fare admins
        - Filming & photography
        - Procurement info
        - Real estate leasing/sales(Opens in a new window)
        - Small business program
        - Vendor registration
    - Administration
        - Chicago Transit Board
        - Governance & administration
        - Employee portal
        - Equal employment opportunity
        - Finance & budget
        - Freedom of information (FOIA)
        - Meetings, Agendas & Minutes
        - Office of Exec. Inspector General
        - Ordinances
        - Public notices
        - Title VI info
    - About us & more
        - Agency overview
        - Careers
        - Contact us
        - Documents
        - Facts at a glance
        - Gift shop(Opens in a new window)
        - Historical calendars
        - Performance

        - Press releases
        - Ridership reports
        - Send feedback
        - Social media
        - Welcome
- **Fares**
    - Fare information
        - Fare chart
        - Military service pass
        - Passes
        - Reduced/free ride programs
        - Student fares
        - Transit benefits
        - U-Pass
        - Ways to pay
        - Where to buy fare
- **Ventra (farecards/tickets)**
    - What's Ventra?(Opens in a new window)
    - How to use Ventra(Opens in a new window)
    - Find a retail location(Opens in a new window)
    - Get a card(Opens in a new window)
    - Manage account(Opens in a new window)
    - Get the app(Opens in a new window)
    - Quick rides w/contactless bankcards(Opens in a new window)
    - Quick rides w/Pay app on your phone(Opens in a new window)
    - Riding with passes(Opens in a new window)
- **Accessibility**
    - Accessible stations
- **News/projects**
    - News
        - Press releases
        - Public notices
        - Videos (YouTube)(Opens in a new window)
        - Social media
        - Coronavirus info
    - Agency initiatives
        - Anti-harassment campaign
        - "Baby on Board" buttons
        - Be safe on CTA
        - Charter an 'L' train
        - Courtesy campaign
        - Developer Center
        - Environment
        - How we manage delays
        - Heritage Fleet
        - Open Data
        - Performance
        - Planning/expansion

        - Public art
        - Security
    - Improvement projects
        - Red Ahead program
        - Red Line Extension
        - Red & Purple modernization
        - Slow zone elimination
        - Strategies for Blue Line improvements
        - Your New Blue program
        - See all projects...

### 1.5 Requirements Overview:

The contractor is required to:

- Maintain, support and host the current functionality of the abovementioned websites and web services; and
- Provide an hourly rate for the design, development, testing and implementation of future enhancements and new capabilities to the above sites and services utilizing the project management framework approved by the CTA (See Section 4 for details)

## 2. *Scope of Work – Functional:*

### 2.1 Chicago Card Application:

#### 2.1.1. Requirement Summary:

The contractor shall maintain functionality of the archived CCA data.

### 2.2 Transitchicago.com:

The contractor shall maintain all functionality of the current Transitchicago.com (TCDC) site, including CTA Train Tracker database processing and presentation functionality, with demonstrated capacity for future enhancements, new initiatives and new capabilities.

1. Review of transitchicago.com (TCDC) site, hardware, software and network environment, programming code hosted content and features and content management system
2. Develop plan for hosting and maintenance of existing Website and content management system or approved equivalent. Evaluate areas where site function, user interface and content management system could be improved and make recommendations accordingly
3. Host meetings with CTA website managers and other required parties to plan and approve maintenance tasks and the addition of new features
4. Maintain technical documentation detailing website functionality and hosting

5. Provide training on website Content Management System usage
    a. Provide a general website content user's manual for content management
    b. Provide training on an hourly basis as requested
6. Task Orders:
    a. Provide pricing on new task orders to design/host other websites
7. Host website:
    a. Hardware Environment:
        i. Production critical, redundant servers and networking pieces
        ii. 24x7x365 hosting of website
        iii. 24x7x365 support (including ability to rapidly respond to service errors, performance degradation, denial of service or other failures or events that cause services to become unavailable and perform emergency service requests outside of regular business hours)
        iv. N+1 configuration for all components
    b. Bandwidth:
        i. Provide for peak usage of static pages
        ii. Allow for scalable usage capability (site often sees unusually high traffic when major events occur that involve, may affect or do affect CTA services), and sufficient bandwidth to support regular day-to-day use, future growth in demand as well as unusual periods of high site usage.
        iii. Bandwidth limitations/restrictions should not be imposed for regular, non-multimedia hosted content (Web pages and associated content, images, data from APIs and other information feeds, files, documents, etc.)
        iv. Options for multimedia hosting (such as streaming) should be an available option; terms of hosting this type of content should be contractually established

### 2.3 Hosting Facility Requirements:

The hosting facility must:

1. Provide disaster recovery for site failure
2. Meet a minimum of Tier 3 data center standards
3. Physical and system security including cyber security must be documented and presented to CTA for review
4. Provide offsite backup of website content

### 2.4 Reporting:

The Contractor must be able to provide the following:

1. Event - Unscheduled Outage
2. Immediate notification to identified CTA contact list explaining issue
3. Determine root cause within 48 hours
4. Identify options within 48 hours
5. Deploy solution to remediate root cause within two weeks of event
6. Usage Reporting (e.g., via Google Analytics)
7. Change Management Reports
    a) Monthly report listing all changes, notifications, approvals, and status

8. Service Level Management Reports
    a) Monthly report listing all Service Levels and achievement results

2.5 **Change Management:**

1. Any changes to the website will require advance CTA notification and approval
2. Any break/fix changes to the website, if required immediately, will require CTA notification after the fact explaining in detail, the change.
3. Any break/fix changes to the website, if not required immediately, will be treated as a "change" and follow requirements listed in item 1.

3. ***Technical:***

**3.1 Chicago Card Application:**

**3.1.1 Requirement Summary:**

The contractor shall provide the technical platform and hosting solution for the CCA otherwise deliver the archive data. The contractor should propose a solution that best meets the technical requirements of the CCA.

**3.1.2 Current Technical Architecture:**

The CCA is a custom developed application using the Microsoft .NET architectural framework. This framework allows the web solution to be flexible, extendable, maintainable, and scalable. The CCA is hosted off-site by a contracted third party.

**3.1.3 Technical Requirements:**

**3.1.3.1 Standards:**

Maintain current state pending decommissioning after balance transfers, and then make customer/transaction database available for research purposes.

**3.1.3.5 Ownership and Licensing:**

The CTA shall own all software custom developed for this project. CTA also retains ownership of all data in the system regardless of the technical architecture selected for the CCA.

The vendor will be required to present license documentation showing payment for software licenses for commercially available software that is included in the delivered solution.

**3.1.3.6 Maintenance and On-going Support:**
As part of the technical proposal, the vendor will be required to present the maintenance and on-going support plan. For example, include details regarding on-going support to existing CCA and post-customization; telephone support; help desk support; problem reporting and resolution methodology; level of

customer support and service; resolution turnaround time; system availability.

### 3.2 Transitchicago.com website:

#### 3.2.1 Requirement Summary:

The contractor shall provide the technical platform and hosting solution for transitchicago.com (TCDC). The contractor should propose a solution that best meets the technical requirements of TCDC.

#### 3.2.2 Current Technical Architecture:

The current Transitchicago.com site presently operates on Windows servers running IIS to host Web content and a MS-SQL database server. Other servers, including a scripting host, are/may be involved in the configuration.

The site was developed using a combination of Microsoft's .NET Framework and Microsoft SQL Database Server. The current vendor uses the Microsoft Visual Studio package of products for main development, as well as other tools such as Visual Source Safe and IIS and has a custom-made content management system developed for CTA by a vendor.

This environment is currently being transitioned to the vendor's scalable, hosted (''cloud'') environment using current Microsoft technologies.

#### 3.2.3 Technical Requirements:

##### 3.2.3.1 Standards:

- The Web site's current functionality and CMS (or acceptable equivalents with no loss of existing functionality) are to be used.
- Web pages need to be built based on guidelines as set by Federal Section 508 and the Illinois Information Technology Accessibility Act, as well as any other applicable modern Web standards and best practices for accessibility, such as WCAG standards.
- Web pages should be built using the document object model and rely on CSS for layout and formatting specification to ensure maximum compatibility with accessible, assistive software as well as maximum cross-platform and cross- browser compatibility and consistency.
- The site needs to be able to speak to an Simple Mail Transfer Protocol (SMTP) server to deliver messages such as "share this page" e-mails, notifications to site publishers for activities requiring approval and as part of delivering notification to developers for the Train Tracker e-mail system.

##### 3.2.3.2 Performance:

- Speed, reliability, and performance are critical for transitchicago.com.

Daily traffic involves approximately 60,000 visitors, with peak days (such as during the 2011 blizzard with over twice that, with February 2, 2011 alone with nearly 605,000 pageviews). Content is cached for minimal database burden in both the regular content and Train Tracker applications.

- Management of this site requires database and code optimization expertise. The vendor will perform optimization tasks on a frequent basis to maintain service availability at all times, especially during unusually high traffic, common during major weather events and expected during the unlikely event of a civic disaster.
- The website should be designed to maintain 99.5% availability including scheduled maintenance and unexpected outages.
- Information on the website (e.g. account statements and transit history) should be displayed such that it is easily viewed in the web browser, read by screen readers, and printed. Any information presented in visual formats must also, if not able to be sufficiently marked up with descriptive text, then with an alternate text version as a last resort.
- Security is critical. Appropriate protections should be in place to prevent intrusions into databases, software and administrative functionality. Vendor will provide the requested documentations and status reports
- Access to manage the site should be available over a secure connection (mandatory encryption via SSL) through the Internet.

#### 3.2.3.3 Architecture:

Any future upgrades and enhancements to TCDC should maintain the existing capability so that the application can be run on CTA web servers. As long as the system meets business and technical requirements, the CTA will consider custom developed solutions, commercially available packages, or open source solutions. Regardless of architecture, vendors will be expected to include in their proposals all hardware and software infrastructure necessary to operate the solution. The vendor shall include in the proposal new servers that will replace existing equipment, if necessary to maintain continuity of service, and also propose additional equipment that will be needed to accommodate increased capabilities and functionality.

The vendor will provide the CTA with access to the database, to include data schemas; this should allow the CTA to perform system audits, including security audits, ad-hoc reporting and development of custom reports. All source code for custom developed software will be provided to the CTA. The vendor shall also provide to the CTA updated application and network diagrams, along with data schemas whenever any change is made to transitchicago.com.

All vendors should submit detailed information on the proposed system redundancy for hardware and data for the hosted solution. The site should be run on dedicated servers as well as Server instances. The hardware

redundancy includes the backup system for the web servers and the database server(s), the communications links between the servers, and the connection from the web server to the Internet. Hosting vendors should submit disaster recovery plans. The vendor shall provide 24/7 site hosting, customer service, and support. The support should include a specific number of service hours per month. Specify the hourly rate, and the increments of the hours. These hours can be carried forward to the next month if not used. Please complete Appendix G.

#### 3.2.3.4 Ownership and Licensing:

The CTA shall own all software custom developed for this project. CTA also retains ownership of all data in the system regardless of the technical architecture selected for the site.

The vendor will be required to present documentation showing payment for software licenses for commercially available software that is included in the delivered solution.

#### 3.2.3.5 Maintenance and On-going Support:

As part of the technical proposal, the vendor will be required to present the maintenance and on-going support plan. For example, include details regarding on-going support to existing services and post-customization, development work to maintain and enhance site features, etc. telephone support; help desk support; problem reporting and resolution methodology; level of customer support and service; resolution turnaround time; system availability.

All maintenance hours purchased under this agreement will be a rolling block of time, thus it will accrue and roll over month after month; the maintenance hours do not expire. If more work is needed after the allotted time, Americaneagle.com's staff will complete the work at the CTA's favored customer rate of $125 per hour. Large projects may require a separate proposal and additional fees.

### 3.3 Project Management:

#### 3.4.1 General Requirements:

The vendor will assign qualified staff to the project at all times to assure adherence to project schedules. For all individuals working on the project, the vendor shall include the individual's resume with a summary of qualifications and experience. The CTA will review the resumes and determine if the individuals assigned to the project are acceptable. If the vendor desires to substitute individuals after contract award, the Authority shall have discretion of whether to approve the substitution.

### 3.4.2 Project Schedule:

Timing is of critical importance to the CTA. Large projects should be tested; fully functional, in operation and hosting should occur within 60 days after Notice to Proceed. Opportunities to condense this time frame even further should be outlined in proposals. Vendors should also list specific risks (and mitigation tactics) that arise from the schedule constraints. Final approval of the project schedule will be at the sole discretion of the Authority.

In proposals, vendors must submit detailed project plans that include the following milestones, along with detailed tasks, dependencies, resources and deadlines:

- Business requirements finalized
- Technical requirements finalized
- Application architecture designed
- System development complete
- Testing plans complete
- Training complete
- Production data migrated
- System deployed
- Documentation complete

The plans should also include when key project deliverables will be turned over to the CTA. Deliverables must include:

- Project scope
- Project budget
- Project schedule
- Business requirements report
- Technical design report: application architecture and system specifications
- Testing plan (including test scripts  procedures, testing results)
- Deployment plan
- Support plan (including disaster recovery plan)
- Training presentations
- System documentation
- Source code for custom developed software

### 3.4.3 Project Meetings:

Project meetings shall be held as determined by the Authority. All meetings shall be held at a designated CTA facility or via a platform designated by the CTA, and the Authority reserves the right to modify the frequency of the meetings. The vendor shall perform the following tasks before and during each project meeting:

- Prepare the meeting agenda in coordination with the Authority.
- Attend the meeting with appropriate staff and subcontractors.
- Provide status of project schedule, milestones, issues, risks and payment.
- Discussion at the meeting shall include the following items: identification of work items completed and problems that have arisen since the last meeting, discussion of critical path activities, proposed work for the upcoming period, and any other pertinent business.
- Prepare meeting notes and distribute to the team.

**3.4.4 Project Management Tools:**

The vendor shall provide project management tools to successfully manage and execute the project.

**3.4.5 Project Documentation:**

The work specified in this section consists of planning, scheduling, monitoring, and reporting the time and resources of this project using Microsoft Project software (latest version) for Windows, or approved equal by the Authority, to develop and produce all project plans, schedules, and reports. The vendor shall organize, monitor, and report the progress of design, procurement, installation, and testing, and mediate changes or problems that may arise. All records are subject to auditing according to applicable regulations and guidelines.

In each meeting between the vendor and CTA, the vendor shall submit an updated schedule showing any delays due to unforeseen circumstances. The vendor's Project Manager shall have complete authority to represent and act for the vendor. The Project Manager shall have experience in preparing baseline enterprise scale schedules, applying cost and resources to activities, and updating and analyzing progress schedules.

**3.4.6 Project Records:**

The vendor shall provide the Authority with certified copies of timesheets for the personnel assigned to the project.

**3.4.7 Contract Changes:**

When a change to the work, which affects the sequencing, duration and cost of schedule activities, is required, the Contractor shall submit proposed revisions to the schedule network reflecting the impact of the change. Following issuance of a directive to proceed with a change (i.e., Notice of Proposed Change), the vendor shall incorporate changes into the schedule network system as separately identifiable activities on the first update of the progress schedule following issuance of the directive. Such proposed

revisions are made to follow the progress of work and are not to be construed as an approval of extended contract time or related cost.

**3.4.8 Failure to Submit Schedule:**

If the contractor fails to revise or update the project schedules within specified time limits the Authority may choose to withhold approval of the vendor's invoice for the progress payment and may require the Contractor to take such steps as increasing its working force, equipment, shifts, or hours, as may be necessary, until such submittal has been made. Remedies, for failure to submit schedules and revisions, specified in this article, are in addition to, and not in limitation of, other remedies the Authority is entitled.

**3.4.9 Time Extensions:**

Float or slack is not time for the exclusive use or benefit of either the Authority or the Contractor. Extensions of time for performance will be granted only to the extent that equitable time adjustments for the activity or activities affected exceed the total float or slack along the network paths involved. Time extension requests must be submitted with a narrative report supporting the request in accordance with the contract agreement.

**3.4.10 Transition Plan:**

The CTA would like vendors to propose a detailed transition and implementation plan.

**3.4.11 Deployment Plan:**

The deployment plan should include the use of distinct project stages and pilot sites. An example of project stages is below and the vendor should include its proposed methodology for a staged implementation:

- Current State Assessment/ Needs Analysis;
- Propose Business Process Improvement;
- System Design;
- Configuration / Development;
- System Test and User Acceptance Test;
- Implementation / Deployment; and
- Post Implementation Support.

The CTA would like the vendor to recommend a deployment schedule.

**3.4.12 Team Structure:**

In order to have an effective deployment, a well-trained and experienced team should be put into place. The vendor(s) should not only demonstrate experience in relevant industries, including the successful historic (at least

five years of experience) and ongoing hosting and maintenance of at least several other sites of similar or greater size, relevance, usage and availability, but also be able to manage the interests of multiple groups.

To have a successful implementation, the vendor must be able to build a partnership that includes contractors and CTA employees. This team should be representative of all CTA divisions.

In order to achieve this type of deployment, a thorough staffing plan should be developed with the ability to flexibly scale the team committed to CTA projects as needed to complete CTA's business objectives.

### 3.4.13 Training:

The CTA considers training to be a critical and integral part of system implementation efforts. The vendor should be prepared to develop training material and execute courses. For example, Technical and system administration training for data processing personnel; Standard reports, options and user selection features; Technical report generation for users and data processing personnel.

### 3.4.14 Communications:

The vendor will be responsible for ensuring all project milestones and dates are met. The vendor must develop a realistic schedule, a comprehensive work plan, and a project management and communications approach. The CTA will assign a project manager as a point of contact for the organization to work with the vendor's project manager. The vendor will interface with other CTA personnel/subject matter experts based on specific functional issues.

### 3.4.15 Testing:

The vendor must create and execute a test plan that verifies all the design requirements. Success and failure criteria are to be established before the testing occurs. Both the test plan and the success criteria will be subject to CTA approval. Upon test completion the vendor shall provide CTA a report of all results. Final decision on test pass/fail rests with the CTA project manager.

Testing should cover the following areas:

- System Testing: The vendor must ensure all the components of the systems are working properly and meeting business and technical requirements. System testing must also include all reports and integration with other systems. System testing shall be conducted on production systems with artificial data;

- User Acceptance Testing: CTA users of the solution should test the usability of the application and its reports; and
- Stress Testing: The vendor should test the performance limits of all aspects of the design requirements by simulating real transaction volumes on the system.
- Security Testing: The vendor should test the security parameters as per CTA standards.

### 3.4.16 Service Level Agreement:

Vendors must include within their Proposals the service levels to which they will perform, methodology used to measure and report against service levels, and the remedy the vendor will provide the CTA should service levels not be satisfied.

Suggested SLAs for Transitchicago.com are as follows:

1. Uptime of website:
   a) 99.99% uptime over 24x7x365 basis (52 minutes of downtime);
   b) No individual unscheduled downtime shall exceed 10 minutes; and
   c) Monthly unscheduled downtime shall not exceed 15 minutes.
2. Implementation of requested tasks:
   a) New page requests - two weeks;
   b) New site, non-complex, using same templates - three weeks;
   c) New content, complex - 30 days;
   d) New site, complex or migration of existing site - 90 days; and
   e) Reporting requests - one week.

## 4. *Future Enhancements:*

### 4.1. Overview:

As new requirements are identified, the Authority may have the vendor to design, develop, test and implement the new capabilities and functionalities to the existing sites. The vendor shall develop and implement enhancements and new capabilities to the application and adhere to the project management and task-order framework approved by the Authority.

To help facilitate the development and implementation of new capabilities and enhancements to the sites, a standardized Project Plan format is required. This requirement will include the following items:

1. (Concept) Project definition, objective(s) and team set-up.
2. (Initiation) Project definition and requirements; planning, scope and cost/benefit analysis; Scheduling, costs and estimating; Team and communication.
3. (Execution) Ongoing planning; Specifications; Tracking & Control; reviews and testing.
4. (Approval) Test planning and test execution; Completion criteria and checklists.

5. (Delivery) Project completion; Deployment; Close-out activities.

### 4.2. Summary of Enhancements and New Capabilities:

Enhancements and new capabilities can most likely be segregated into one of the following categories. Enhancement items are changes that would typically require 40 hours or less. New capabilities and new initiatives are changes requiring more than 40 hours. The following are some examples of enhancements and new capabilities that CTA anticipates implementing and does not cover an exhaustive list of all the enhancements and new capabilities.

#### 4.2.1. Transitchicago.com website:

See Scope of Work requirements listed in 2.2.

In the future, enhancements might include:

- Enhanced mapping capabilities
- Additions to Train Tracker functionality
- Integration of real-time bus and train information into new products and services
- Overall site design template refinements and updates
- Improvements to CMS for additional browser support
- Additional foreign language integration

**5. *Rollover of Maintenance Hours:***

i. As part of this agreement all maintenance hours currently accrued will rollover for future use by the Chicago Transit Authority.

ii. All maintenance hours purchased under this agreement will be a rolling block of time, thus it will accrue and roll over month after month; the maintenance hours do not expire. If more work is needed after the allotted time, Americaneagle.com's staff will complete the work at the CTA's favored customer rate of $125 per hour. Large projects may require a separate proposal and additional fees.

**6. *Hosting Requirements:***

Vendors must complete this worksheet describing the service levels to be provided during the term of the contract for the hosted solution. These requirements are in addition to, not in lieu of, technical and functional requirements listed in the Scope of Work.

Any exceptions to the requirements listed below should be noted on the Table of Exceptions (Section Hof Technical Proposal Requirements).

**7. *Availability:***

The CTA defines CCA "availability" as having the website and all functions of the application accessible and running properly for designated CTA personnel.

The CCA is to have 99.5% availability each month. This includes unscheduled outages as well as outages planned by the vendor. Scheduled downtime requested by the CTA shall not be included. Actual service levels shall be monitored on a monthly basis and performance reports forwarded to the CTA. In the event actual service levels fall below the target, the CTA shall receive service credits according to the following sliding scale:

| Actual Service Level Falls Below | Monthly Credit Of |
|---|---|
| 99.5% | 15% |
| 98% | 25% |
| 95% | 40% |

### 7.1. Additional parameters:

- If the 99.5% availability metric is not met for three successive months, the CTA shall have the right to terminate the hosting contract.
- For outages planned by the vendor, CTA must receive notice 5 business days in advance.

### 7.2. Operating Metrics:

- The CTA shall be notified within 15 minutes of any unplanned outage.
- All calls into the vendor's support center shall receive a trouble ticket number.
- Incremental backups of data must be made daily; full backups are to be performed weekly. Copies of the full backup should be sent to the CTA
- Restore from backup should take less than 1 hour.

The CTA shall have the right to periodically visit the hosting facility and audit the practices used to maintain the websites.

**Describe the certifications and existing compliance around the data center.**

Americaneagle.com has been a PCI compliant Level 1 service provider for managed hosting since 2007. A PCI auditor performs a week-long on-site audit every August in addition to security-related items that we do throughout the year to meet PCI requirements.

Americaneagle.com also hosts sites that require FISMA federal government compliance, including www.whitehouse.gov when President Obama was inaugurated in January 2009.

Vendor will acquire all necessary licenses and required certification and maintain in compliances status

**Describe the maintenance of your firewall security.**

Americaneagle.com has multiple levels of firewalls within our data centers. It includes the following:

- External firewall pairs that sit in front of the web servers
- SQL firewall pairs that site between the web servers and database servers
- Client VPN firewall pairs used by customer administrators to access their server environment in our data centers
- Site-to-Site VPN firewalls pairs for customers who need this access into their server environment in our data centers
- Americaneagle.com maintains Firewall Configuration Standard documentation and Firewall Port Standard documentation related to our PCI compliance program.
- All firewall changes go through a change control process managed on our Amricaneagle.com corporate intranet
- Firewall rules are reviewed every quarter during our internal quarterly security review meetings that are part of our PCI compliance program.
- All firewall logs are pushed to a centralized log server that is required by PCI compliance for forensics/monitoring purposes.

**Describe your intrusion detection systems.**

- Americaneagle.com uses Snort for intrusion detection. All events are pushed to a Snorby web interface and to a centralized log server for forensics/monitoring.
- All Priority 1 events are immediately sent to Americaneagle.com's server/network/security team for analysis. The event is escalated appropriately from there, including calls to senior Americaneagle.com staff on a 24ll/365 basis if necessary.

**Describe the web security methods and web security sessions enabled.**

- Americaneagle.com trains our developers on secure programming. Training is performed upon hire and also through the use of quarterly programmer meetings where web application vulnerabilities are discussed (OW ASP, other trends we're seeing).
- Americaneagle.com runs vulnerability scans on web sites during development. Upon site launch and following change requests. Identified vulnerabilities are sent to the developer or the server/network department, depending on the issue.
- Americaneagle.com partners with lmperva, a leader in the web application firewall (WAF) market. Americaneagle.com resells the lmperva Cloud WAF product which blocks SQL injection, cross-site scripting and other web attacks before the requests get into Americaneagle.com's infrastructure. lmperva has a web portal where a history of activity toward the site can be viewed and email alerts can also be configured to go to necessary personnel. lmperva also blocks bad bots, keeping a good percentage of garbage traffic away from your web site.

**Describe the physical security features of your data center.**

Americaneagle.com employs biometric thumbprint scanners and closed-circuit cameras throughout our data centers. We also use employee and visitor badges and a visitor log. These processes are audited annually to meet PCI compliance.

**Does your data center have redundant architecture? Explain.**

Americaneagle.com's data centers have multiple levels of redundant architecture:

- A/B power through the use of natural gas generators and UPS systems
- Redundant cooling systems
- Two separate hosting providers
- Network infrastructure including the following:
  - Routers
  - Switches
  - Firewalls
  - Load-Balancers
- Servers:
  - Dual power supplies
  - RAID drives
- VMware:
  - NetApp storage unit in main Chicago data center and duplicate unit in backup Kenosha, Wisconsin data center
  - Vmotion capabilities upon physical host failure
- Configuration:
  - Customers can opt for multiple server configurations for redundancy

**Does your data center share resources with a parent or sister company? Explain.**

Our main Chicago data center is not shared with anyone else. We have a large private cage within the backup Kenosha data center.

**Describe the process for keeping our data secure and whether or not we will be on shared servers with other clients.**

The following would be used to keep your data secure:

- Physical security of the datacenter
- Multiple levels of firewalls
- Web application firewall
- Intrusion Detection Service (IDS)
  - Vulnerability scans
  - Secure programming methods
  - AntiVirus
  - File integrity software
  - Managed security patches (Microsoft, Cisco, etc.)

- Subscription to security bulletins such as sans.org outlining the latest vulnerabilities
- Prolexic DDoS protection for our general datacenter infrastructure

**Describe the scalability features of your data center.**

Americaneagle.com has extensive experience handling large traffic events. We view this as a joint effort between the server/network department along with the developers

We have partnerships and extensive experience with CDN's such as Akamai, Limelight and Imperva.

We have experience optimizing hosting set-ups, caching, and SQL optimization for large traffic sites that include the following:

- www.whitehouse.gov for President Obama's January 2009 inauguration and the first online Presidential Town Hall in March 2009 (joint project with Google)
- Programming/hosting of www.weathertech.com ecommerce site during Super Bowl ad in February 2014
- Programming/hosting of www.metlifestadium.com (Super Bowl host site) during that same weekend in February 2014
- Multiple NFL team sites during the Super Bowl (Chicago Bears in 2007, New York Giants in 2008)
- Ecommerce customer featured in multiple years on Oprah Winfey's "Favorite Things Episode" (her biggest show of the year)
- Ecommerce customers featured on NBC's Today Show and ABC's Good Morning America Other big events such as the www.belmontstakes.com and www.daytona500.com

**Describe the archive and back-up process, procedure and guidelines.**

Our VMware environment is replicated from our main Chicago datacenter to our backup Kenosha datacenter every 4 hours through NetApp SnapMirror replication.

For SQL Server backups, we back up to a local SAN unit in our main Chicago datacenter that is then automatically replicated to an identical SAN unit in our backup Kenosha datacenter every day. We use the following schedule:

- Full SQL backup every Sunday morning
- Differential SQL backups every other morning
- Transaction log SQL backups every 30 minutes

Customers can request a copy of their web site/database at any time to be sent off to them.

We can price out an archive strategy with the customer based on their requirements in terms of how long that backups would be stored.

**Disaster Recovery:**

Our base hosting package includes off-site backups on a daily basis (hot/cold set-up). We can price out hot/warm DR set-ups as well.