

The Board of Elections in the City of New York



Request for Information (RFI) for Voting System Selection for Fall 2009

December 17, 2008

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1.0 Introduction

The Board of Elections in the New York City (BOE in NYC) is issuing this Request for Information (RFI) to vendors of qualified software, hardware and related system services necessary to implement and operate a new Voting System for the City of New York's 2009 Primary and General elections and beyond.

This section provides potential respondents with information on the purpose of this RFI and on the procurement process that is being conducted by the State of New York Office of General Services (OGS).

The BOE in NYC will use information provided by respondents to this RFI to make its selection of a Voting System for the City of New York. Respondents must also have submitted a bid to the State of New York's Office of General Services (OGS). As part of the vendor selection process, the New York State Board of Elections (NYS BOE) will certify voting systems for use in the State of New York. Upon completion of the certification process by NYS BOE, OGS will complete the purchase and contracting for the various county selected systems.

This RFI and the response to this RFI by the BOE in NYC selected vendor will be attached to the OGS contract with the selected vendor and made a part thereof. These attachments will serve as legal commitments by the selected vendor for the software, hardware, and related system services to be rendered.

The Proposer is to submit a separate response to this RFI for its voting solution. An optical scan solution would include both the optical scan components and any disability voting components.

The Proposer is strongly advised to review the volumetric data in the "Volumes of NYC" Tab of the Cost Response Template and to size the proposal to meet the current and probable future volumes of the City of New York.

Detailed descriptions of NYC voting system requirements are provided in Section 5 of this document. A successful response will present comprehensive answers to these requirements. Responses should include information regarding the proposed Voting System and all accessories, consumables, training, maintenance and related services.

The term "Voting System" includes all hardware, software, accessories and consumables of the proposed solution. This includes the proposed EMS, and Pollsite Voting System. The term "Pollsite Voting System" includes all hardware, software, accessories and consumables that are used at the pollsite on Election Day. See the attached Glossary of Terms for definitions of terms used in this RFI.

In conjunction with providing a complete response to this RFI, the Proposer must be prepared to do the following:

1. **On-site Demonstration** - Demonstrate on-site to BOE in NYC the voting system submitted by the Proposer for State certification.
2. **System Changes List** - Submit to BOE in NYC a list of changes required after submission for State certification
3. **Certification** - Make the changes required for State certification to the system demonstrated to BOE in NYC.
4. **Leave Demo** - Leave a copy of the certified voting system (and documentation) with BOE in NYC until the submission of the BOE in NYC voting system order to the state Board.

1.1 Mission of BOE in NYC

The mission of BOE in NYC is to provide for the exercise of the voting franchise by conducting fair and honest elections in New York City. The BOE in NYC (an independent agency) was created by the New York State Election Law, pursuant to the requirements of the NYS Constitution. BOE in NYC is responsible for maintaining the integrity of, and conducting elections proceedings for, over 4.6 million registered voters in New York City, representing the largest city (with its 8.1 million residents) in the United States.

This RFI is a step in the process by which BOE in NYC will select and implement a new Voting System to replace its current fleet of mechanical lever machines for the 2009 Primary and General elections.

1.2 Project Objectives

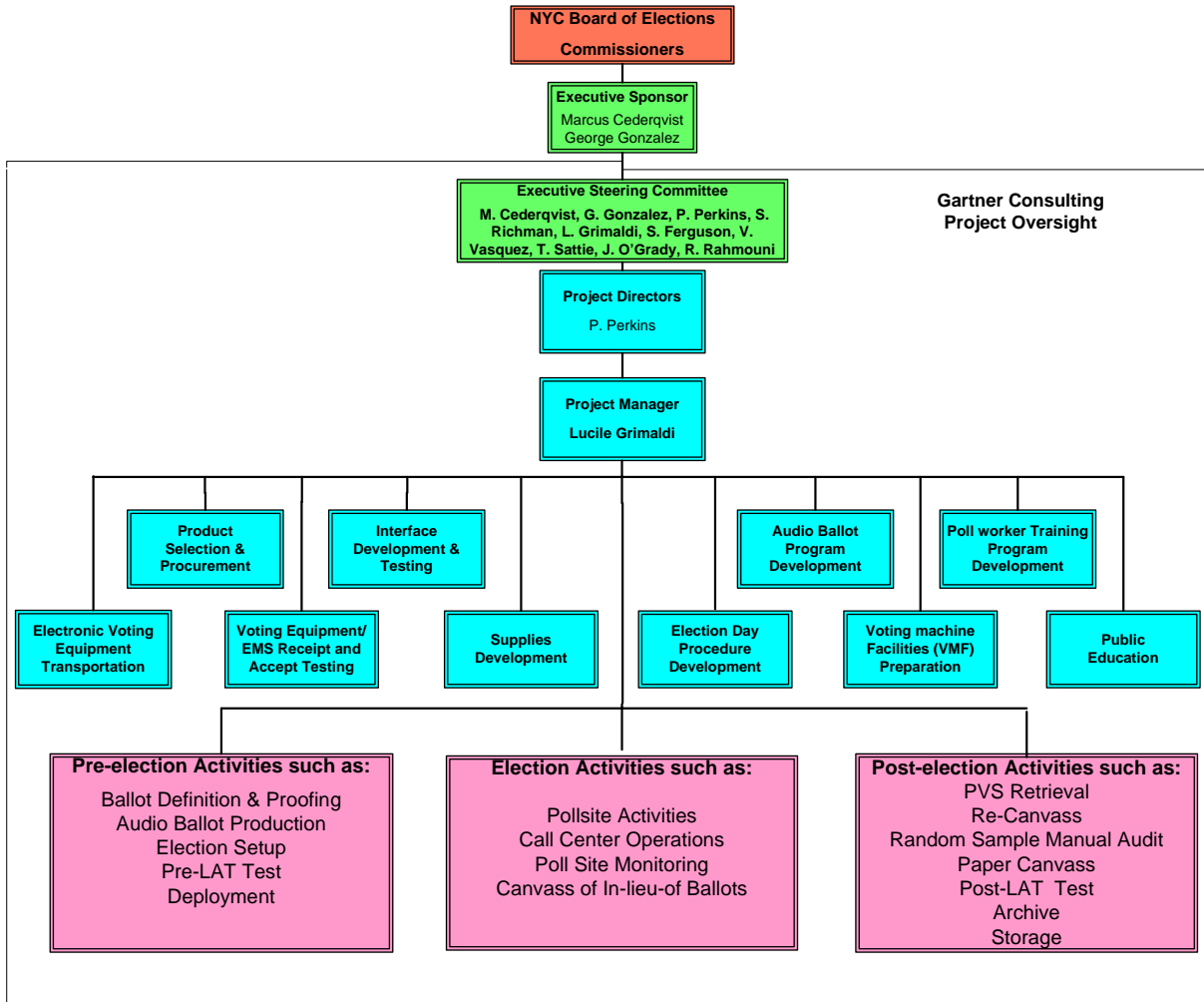
BOE in NYC seeks to accomplish the following goals in fulfilling the federal Help America Vote Act (HAVA) and New York State's Election Reform and Modernization Act (ERMS) mandates:

- 1) **Select System** - Conduct a fair and comprehensive selection of a Voting System that is HAVA-compliant for the 2009 elections and beyond.
- 2) **Implement System** - Implement the new Voting System for the 2009 Elections and beyond.
- 3) **Conduct Training** - Provide training materials & training to relevant BOE staff and pollsite workers.
- 4) **Develop New Procedures** – Develop and document new procedures pertaining to the new Voting System.
- 5) **Update Facilities** - Update Voting Machine Facilities (VMFs) for the year round storage of Pollsite Voting Systems.
- 6) **Conduct Public Education** - Conduct public education regarding the new Voting Systems to ensure public knowledge and confidence in the new system.

1.3 2009 Implementation Organization Chart

The graph below provides an organizational chart of the 2009 Voting System Implementation team. As shown below, Marcus Cederqvist, Executive Director of BOE in NYC, of the is the Project Executive Sponsor, Lucille Grimaldi, Director of Electronic Voting Systems (EVS), is the Project Manager for BOE in NYC, and Gartner Consulting is providing assistance and third party project oversight. The Commissioners of Elections in NYC are the overall Sponsors of the project. The "blue boxes" below outline the Project to plan the election while the "pink boxes" below outline the tasks of conducting the election.

Figure 1. 2009 Implementation Organization Chart



1.4 2009 Voting System Implementation Project Timeline

The chart below provides the 2009 Voting System Implementation project timeline. As noted, the Voting System Selection and Procurement, Acceptance Testing, and the Interface Developing and Testing are scheduled to be completed during 2009. The 2009 Primary election, by which date all systems must be installed, tested, and fully operational, will be held on September 8, 2009.

1.6 Statement of Work

1.6.1 Proposer Project Tasks

The implementation of the proposed voting system for BOE in NYC for the 2009 elections shall include the following tasks:

- 1) **Manufacture & Deliver Voting Systems** – Deliver the requisite Voting System, including services, hardware, software, accessories and any other related components.
 - a) BOE in NYC will subsequently conduct its own testing to ensure that an appropriate Voting System is delivered.
 - b) The selected proposer must provide BOE in NYC with storage specifications for all pollsite voting systems that must be stored and maintained throughout the year on non-election days.
- 2) **Provide Software and Hardware Modifications** – Make modifications needed to meet BOE in NYC requirements to the Proposer's Voting System including modifications discovered during implementation, acceptance testing, or interface development process.
- 3) **Assist in Procedures Development** – Assist in the development new procedures and process documentation for conducting elections using the proposed Voting System.
 - a) Identify the appropriate functional areas and relevant procedures to be affected by the proposed Voting System.
 - b) Determine revisions and/or creation of new procedures as required
 - c) Draft, document, and test new procedures
 - d) BOE in NYC to review & approve new procedures
- 4) **Develop EMS Interfaces** – Develop interfaces between existing BOE systems (S-Elect, Ballot Information Translation System (BITS), Fleet Management System, and Pollsite Management System) and the selected respondent's proposed Voting System in a secure fashion. The Interface must support both election definitions from BOE's current system to your proposed EMS and election results from your proposed EMS to BOE's current system. The current BOE environment and additional details pertaining to the future solution are described later in this document. The "interface" will need to address two possible alternatives:
 - a) *Manual Interface* - Manual interface for sharing data (e.g. CD, DVD, memory card, etc.) between BOE in NYC systems to the selected respondent's Election Management System (EMS). This would include a manual process for sharing ballot data between the BOE in NYC central office and relevant borough locations (either the Voting Machine Facility (VMF) where the proposed pollsite voting machines will be stored or the main borough office).
 - b) *Automated Interface* - Automated interface between current BOE in NYC systems and the proposed EMS via a secure network. This would include a network (e.g. WAN) based interface between the BOE in NYC central office and relevant borough locations (either the Voting Machine Facility (VMF) where the voting machines will be stored or the main borough office). For this purpose, respondents must describe current functionality in their EMS solution to support an automated environment (i.e. is it already built into system or will it require additional development?). A description of the current architecture for this interface must be provided.

- 5) **Conduct Pollsite Visits** - Per New York State Election Law¹, the selected Proposer, in conjunction with BOE in NYC staff, must visit every NYC pollsite (1,370) to verify that the pollsite meets environmental requirements for the proper operation of the proposed pollsite voting system.
 - a) Devise a plan for visiting all poll sites
 - b) Provide report of required modifications for each poll site
- 6) **Conduct Testing** – Assist in the Unit & Integration testing of the proposed system as well as in the User Acceptance testing, Logic & Accuracy testing and Ballot Proofing (text and audio).
- 7) **Provide Training Materials** – Provide training materials for appropriate BOE in NYC staff.
 - a) *For BOE Staff* - Develop training material and plans based on the proposed Voting System. Ensure training material is provided for varying audiences (BOE in NYC general staff, technicians, and trainers). BOE in NYC must approve training materials and plans.
 - b) *For Poll Workers* - Develop training material and plans based on the proposed Voting System. Assist BOE in NYC with the development of specific training materials for pollworkers).
- 8) **Conduct Training** – Train all required BOE in NYC general staff, technicians and trainers.
 - a) *For BOE Staff* - Develop Training Plan including “Train the Trainer” approach. Conduct BOE in NYC staff, technician and trainer training. Assist in the development of new “How to Train” and “Poll Worker” videos.
 - b) *For Poll Workers* - Combine training programs with Pollworker training curriculum. Ensure BOE trainers are able to train at least 30,000 poll workers. Provide Voting System trainers to all poll worker training classes
- 9) **Provide Pre-election Assistance** (on-site & off-site) – Assist in roll out of the proposed Voting System procedures and poll site set up. Verify feasibility and required updates for Voting Machine Facility.
 - a) Provide technical support for any pre-election Voting System setup
 - b) Provide staff assistance for the roll-out and setup of new Voting Systems to poll sites
 - c) Provide Voting Machine Facility feasibility assessment and recommend upgrades for Pollsite Voting System storage
- 10) **Develop Audio Ballot Program**– Train and assist in the development of the Audio Ballot for the 2009 elections.
 - a) Provide training to BOE in NYC staff for audio ballot creation
 - b) Draft and document audio ballot procedures for BOE in NYC staff
 - c) Provide required technical assistance in the configuration of audio ballot
 - d) Provide audio ballot creation services (as required) for the recording of candidate names in Korean, Cantonese and Mandarin and for office, position titles, and instructions in Spanish..

¹ 9 NYCRR Section 6209.1 et seq.

- 11) **Provide (Primary & General) Election Day Assistance** – Assist BOE in NYC and poll site staff with Election Day procedures.
 - a) Verify that appropriate procedures have been developed for areas affected by the proposed Voting System.
 - b) Provide Election Day technical assistance for the BOE in NYC and poll site staff as required.
 - c) Provide Election Day Support – Provide one vendor instructional support person for about every 20 poll sites and one vendor technical support person for every 40 poll sites. There are 1,370 poll sites in the City of New York.
- 12) **Provide Canvas/Re-canvass of the Vote Assistance** – Provide assistance in the development of canvass/re-canvass procedures and provide oversight on the canvass/re-canvass for both the Primary and General Elections in 2009.
- 13) **Provide Post-election Assistance (Primary & General)** – Assist BOE in NYC and poll site staff with post-election procedures.
 - a) Verify that appropriate procedures have been developed for areas affected by the new Voting System
 - b) Provide post-election technical assistance for closing polls and other post-election procedures
 - c) Provide vote tabulation assistance.
- 14) **Provide On-going Support** – Provide day-to-day technical support to the Board of Election staff.
 - a) Provide agreed upon level of phone and on-site support for technical and procedural issues.

1.6.2 BOE in NYC Related Project Tasks

Below is a list of related BOE in NYC tasks required for the implementation of a new voting system. The Proposer is expected to assist BOE in NYC in completing these tasks.

- 1) **Upgrade Voting Machine Facilities (VMF)** – Upgrade existing Voting Machine Facilities to accommodate the selected 2009 Voting System for year round storage and election staging.
 - a) Develop a VMF current state assessment report (completed)
 - b) Determine storage requirements (with assistance from the selected voting system vendor)
 - c) Develop Facilities Assessment Modifications/Relocation Report
 - d) Modify facilities as required
 - e) Develop Final Facilities Assessment Report
- 2) **Determine Poll Site Voting System Transportation** – Contract with a qualified vendor for the transportation of the new poll site voting systems.
 - a) Determine transportation requirements and conduct selection of transportation vendors through a sealed bid process.
 - b) Contract with selected transportation vendors

- 3) **Conduct Public Education** – Conduct a significant public education campaign to assist New York City voters in transitioning from the current lever voting machines to a new voting system. Among it's efforts in this regard are:
 - a) Hiring a Public Information Officer (completed)
 - b) Retaining the services of a communications consulting firm (completed)
 - c) Developing a Communications Plan
 - d) Developing public education materials, commercials, videos and presentations
- 4) **Disaster Recovery /Business Continuity Planning (DR/BC)** – Develop a DR/BCP team and contingency plan for any emergency scenarios that may threaten normal election operations.

1.6.3 Key Dates

The table below outlines the schedule for key action dates. If BOE in NYC finds it necessary to change any of these dates, notification will be accomplished through an addendum to this RFI.

Figure 3. Table 1: Key Action Dates

ACTION		DURATION (weeks)	Finish Date
Phase I	Submit RFI to Vendor Community		
1	Issue Request for Information (RFI)	Issue RFI	Dec 17, 2008
2	Vendor's Develop and Submit Response	RFI + 04	Jan 13, 2009
Phase II	Vendor Selection		
1	Gartner Compile Vendor Responses	RFI + 04	Jan 20, 2009
2	Gartner Assessment	RFI + 05	Jan 27, 2009
3	BOE in NYC Review Responses	RFI + 06	Feb 06, 2009
4	Public Demonstrations (w/Commissioners)	RFI + 07	Feb 13, 2009
5	Conduct Hearing for Public Comment on Voting Systems	RFI + 08	Feb 20, 2009
6	Conduct Vendor Interviews	RFI + 09	Mar 03, 2009
7	Conduct Internal Scoring of Vendor Responses	RFI + 11	Mar 13, 2009
8	NYS BOE Certification	Cert	TBD
9	Review of Vendor-Provided Description of Changes since Submission Vendor Response to RFI	Cert +2	TBD
10	Write Vendor Evaluation Staff Recommendation Report and send to NYC Board of Commissioners for Review	Cert +2	TBD
11	Board of Commissioners Vote on 2009 Voting System Vendor Selection.	Cert +3	TBD
12	Develop Detailed Order of Vendor Equipment and Services (to SBOE)	Cert +4	TBD

2.0 Background

2.1 Introduction

The five (5) Boroughs of the City of New York contain approximately 38% of the registered voters in the State. Current volumes for the City of New York are included in Appendix B, Prices, Costs, Volumes & Subcontractors, of this RFI to ensure that respondents are aware of the processing capacity and performance required to meet the needs of NYC. It is anticipated that some of these volumes will change as a result of implementing a new voting system with capabilities not present in the current lever machines.

2.2 BOE in NYC Background 2002-2008

In October 2002, Congress passed the Help America Vote Act (HAVA), to improve the administration of elections in the United States. In compliance with HAVA, BOE in NYC initially requested vendor demonstrations of new voting machine as early as August 2002.

From 2002-2005 BOE in NYC invited 30 vendors to demonstrate their voting systems. During this time, ten (10) vendors demonstrated more than 15 systems including optical scan, paging Direct Recording Electronic (DRE), and full-face DRE machines. Further, from 2003-2005, BOE in NYC held discussions with the State Legislative & Executive, addressing the urgent need for the enactment of the state's HAVA enabling legislation.

In February 2003, BOE in NYC acting as part of the New York State Task Force participated in the development of the New York State Plan for HAVA Implementation. Subsequently, in April of 2003, BOE in NYC gave testimony before the City Council Committee on Governmental Operations regarding plans, resource needs and phased implementation.

In April 2004, in a continued effort to reach HAVA compliance, BOE in NYC attended Workshops at the Center for Independence of the Disabled in New York (CIDNY) to begin gauging the effectiveness of voting systems to support disabled voters. This effort continues today as BOE in NYC maintains a working relationship with the disabled community to ensure future voting system purchased as part of this RFI will facilitate the needs of disabled voters.

In the spring of 2004, the Project Plan for the HAVA Implementation was developed including organization restructuring, new positions and recruitment, workstream and functional flowcharts. During this time, BOE in NYC developed suggested requirements for the legislative staff regarding future voting machines meeting NYC's needs. The current voting systems requirements are shown in Section 4 of this RFI.

In 2005, BOE in NYC began the development of Work Groups for the Implementation of HAVA including:

- 1) Requirements & Selection Criteria Work Group
- 2) Staff Procedures Work Group
- 3) Election Day Operations Work Group
- 4) Public Information Work Group

In July 2005, New York City adopted the FY'06 Budget which contained additional funding for BOE in NYC for HAVA implementation including:

- 1) Staff expansion for Electronic Voting System (EVS) and Election Day Operations (EDO) Divisions

- 2) Public Education
- 3) City capital funding for new voting machines in addition to federal money

In the summer of 2005, BOE in NYC determined that additional assistance would be required and used the DoITT Project Monitoring & Quality Assurance Contract (PM/QA) contract to acquire Gartner consulting assistance. BOE in NYC and Gartner were engaged in joint efforts for the 2006 & 2007 Ballot Marking Device Implementation.

2.3 Legal Background 2006-2008

On March 1, 2006, due to New York State's non-compliance with the federal Help America Vote Act (HAVA) in drafting voting system standards, creating a statewide voter registration database, and providing fully accessible voting systems for disabled voters, the Department of Justice (DOJ) sued the State of New York. The suit was filed against the State Board of Elections in the U.S. District Court for the Northern District of New York in Albany.

In June 2006, DOJ accepted New York State's plan which postponed HAVA compliance until the 2007 Primary and General elections. New York's plan for compliance in 2006 called for placing one or more accessible ballot marking or vote-by-phone systems in each of New York's 62 counties in 2006, and deferred replacing current lever machines until 2007. The BOE in NYC provided one location in each borough with ballot marking devices that were HAVA compliant based on disabled voters requirements. Approximately 23 machines were used at the five boroughs for the 2006 and 2007 Primary and General Elections.

In December 2007, the federal court ordered that each county in New York State must implement a ballot marking device (BMD) in each poll site for the Fall 2008 elections and the replacement of all lever voting machines in the Fall 2009 elections. Accordingly, BOE in NYC selected and implemented at least one ES&S AutoMark BMD in each poll site for the Primary and General Elections of 2008.

3.0 Current Environment

3.1 Current Functional Environment

3.1.1 Current Organization of BOE in NYC

The following Divisions of the BOE in NYC are intrinsically involved with the conduct of elections:

- 1) *Voter Registration* – Responsible for the maintenance of voter registration records.
- 2) *Candidate Record Unit (CRU)* – Responsible for the maintenance of candidate records and the entry of the candidate in the appropriate contest.
- 3) *Electronic Voting Systems (EVS)* – Responsible for the development, testing and implementation of new electronic voting systems, and the setup and oversight of those systems for each election.
- 4) *Voting Equipment Operation Unit* – Responsible for the testing, deployment, repair and storage of voting machines.
- 5) *Election Day Operations & Poll Worker Management* – Responsible for the conduct of the election on Election Day.

- 6) *Public Information Office* – Responsible for conduct of all communications of the BOE in NYC with the media.
- 7) *General Counsel* – Responsible for providing legal advice and guidance to all elements for the BOE in NYC.

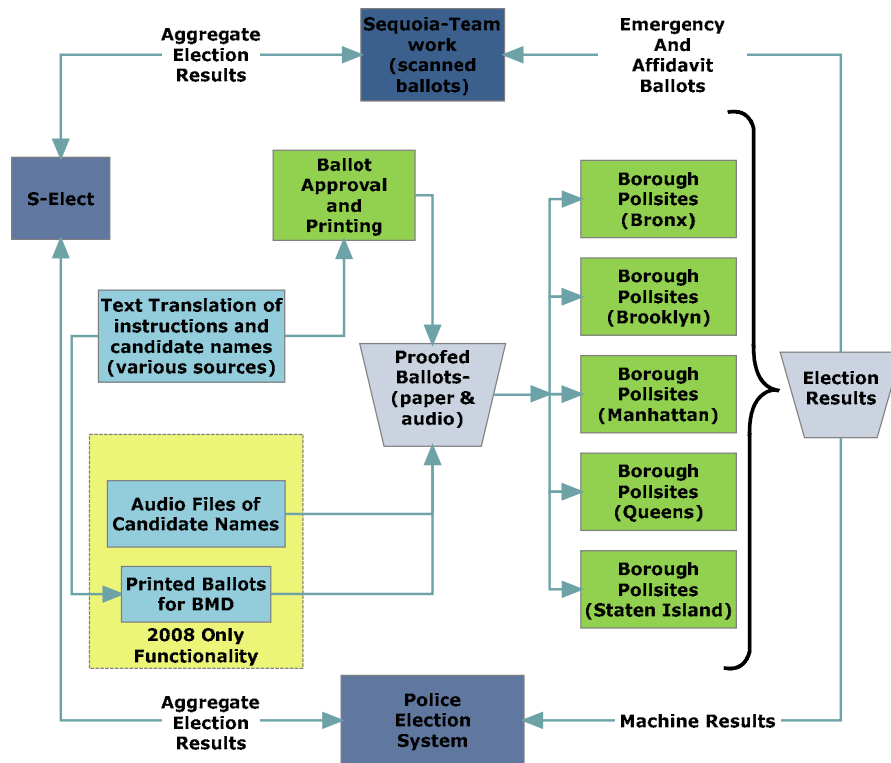
3.1.2 Current BOE in NYC Election Processes & Systems

The current process for conducting elections by the BOE in NYC involves a combination of manual and automated processes as shown in Figure 4 below.

BOE in NYC uses S-Elect, an in-house developed system, to manage all relevant election data (e.g. candidate information, proposition information, Election District information, etc.). Information from S-Elect is then manually transferred via floppy disks or share drives into required applications (e.g. Sequoia’s Teamwork for the eventual scanning of paper ballots such as absentee, military and special presidential ballots) and a contracted print shop (where paper ballots are generated). Once approved, the paper ballots, in the form of ballot strips for the lever voting machines and paper ballots for use as affidavit (i.e. provisional) or emergency ballots are transferred to the poll sites.

For the 2006 and 2007 elections, audio recording of candidate names was stored on the Avante system and used on approximately 23 Ballot Marking Devices (BMDs) provided primarily for disabled voters. In 2008, ES&S AutoMark BMDs were used in every pollsite in the City for both the Primary and General Elections. Election results for non-BMD paper ballots were scanned centrally into Teamwork. BMD paper ballots were manually counted. Election night results were reported to the Police Election System which is managed by the City of New York Police Department (NYPD). The results were also returned to S-Elect for the reporting of the official election results.

Figure 4. BOE of NYC Current EMS Functional Environment



3.1.3 Text Translation and Audio Database

New York State Law requires that all ballots, voting instructions, and other related voting materials are translated into the appropriate language based on the demographics of each Election District. Figure 4 illustrates that currently text translations are used for the paper and machine ballots as well as the display ballots viewed through a Ballot Marking Device. Further, according to HAVA mandates and the DOJ Compliance Agreement with the State of New York, all voting systems must be fully accessible to disabled voters for the 2006 elections and beyond, hence audio options of voting instruction and candidate names must be provided. Section 203 of the Federal Voting Rights Act requires that states provide voting assistance to voters who are limited in their ability to understand English. An audio capability must be provided in multiple languages. BOE in NYC currently provides the following language alternatives:

- 1) **Text Translations** - Electronic text translations of candidates names and voting instructions, for the 2008 election to:
 - a) Chinese
 - b) Korean
 - c) Spanish (Note: For Spanish, the names are not translated from English)
- 2) **Audio Translations** - Audio recordings of candidate names through a 3rd-party service for:
 - a) English (also used for Spanish)
 - b) Korean
 - c) Chinese – Mandarin
 - d) Chinese – Cantonese

3.1.4 Canvassing of Paper Ballots

BOE in NYC currently uses a central count optical scan system in the canvassing of paper ballots, except for BMD ballots which are canvassed manually. The number of paper ballots used varies by election. In a presidential election, the Board typically will canvass 150,000 to 175,000 valid ballots. For BOE in NYC, there are five (5) types of paper ballots:

- 1) **Absentee/Military/Special Ballots** - Those used by qualified voters who do not come to the poll sites, but rather mail or bring their ballots to the BOE.
- 2) **Federal Ballots** - Those used by qualified voters who do not come to the poll sites, but rather mail their ballots to the BOE and can only vote for federal contests.
- 3) **Special Presidential Ballots** - Those used by qualified voters who do not come to the poll sites, but rather bring or mail their ballots to the BOE and can only vote for Electors for President and Vice President of the United States.
- 4) **Standby Ballots** - Are made available at poll sites for two purposes:
 - a) As *Emergency Ballots* in the case of a machine breakdown, or
 - b) As *Affidavit Ballots* (i.e. provisional) when a voter's registration is not indicated in the poll book but the voter is permitted to cast a ballot subject to further validation of eligibility to vote.
- 5) **Ballot Marking Device Ballots** – Those used by qualified voters who come to the poll sites, and poll site choose to use a BMD

3.1.5 Mechanical Lever Machines

BOE in NYC will replace its fleet of 7,700 mechanical lever voting machines pursuant to the above laws and court orders. They are maintained at the Board's five (5) borough Voting Machine Facilities (VMFs). The Board's voting machine technicians perform preventive maintenance activities throughout the year as well as ad hoc repairs as needed. Before each election, the machines are set up, tested, publicly viewed and shipped to the poll sites.

3.2 Current Technical Environment

3.2.1 Current IT Network

The BOE in NYC Executive Office located at 32 Broadway in Manhattan operates on a Local Area Network (LAN) at 100Mbps. Each borough has a BOE office and at least one Voting Machine Facility (VMF). Some of these are co-located.

- 1) **Manhattan, Brooklyn, and Queens** - VMFs are separate from the borough office and connected into the BOE in NYC WAN via a single T-1 line (1.544Mbps). The borough offices are connected through the BOE in NYC WAN via two (2) dedicated T-1 connections.
- 2) **Staten Island and Bronx** – VMFs are co-located with the borough office and are connected into the BOE in NYC WAN via two (2) dedicated T-1 connections.
- 3) **State Board of Elections** – The SBOE maintains a 3 Mbps data link, using a Juniper firewall, to connect to the statewide Voter Registration List (NYSVoter).

3.2.2 Current Election Processing

The BOE in NYC defines the ballots for a given election using S-Elect. The system, custom developed by consultants for BOE in NYC, maintains on-going data such as political subdivisions, offices, parties, candidate history, etc. Subsequent actions regarding the candidates and contests are also recorded in this system. The resulting ballots are grouped into lots (the number of ballot lots varies, usually several hundred) and files are sent to the Board's print vendors who print the paper ballots and strips for mechanical voting machines. The central count optical scan system is setup using data received from the Board's S-Elect system and from the print vendor.

System data is also used to prepare the system to receive the results of the election (votes, number of ballots, etc.). Election results from the tally of lever voting machine totals are received via the Police Election System (PES). The Return of Canvass sheets are transported from the poll sites to police precincts (by NYPD) where preliminary and unofficial results are entered into the Police Election System (by NYPD). The final step is the electronic transmission of these results to the Board's S-Elect system.

After the canvass of paper ballots, paper results are moved from the optical scanning system into the Board's S-Elect system. Finally, S-Elect produces reports of the complete results which are certified by the Commissioners as the official results of the election.

3.2.3 Current Technical Architecture

A description of the current technical architecture is provided below in Table 2, including the server, desktop, and development environments. Accordingly, this is the technical environment where S-Elect resides and any technical interfaces would need to be built to this environment.

Figure 5. Current Technical Architecture Environment

Category	Description
Architecture Standard	All Microsoft
Server OS	Windows 2003 Server Standard Edition
Database	MS-SQL Server 2000 Enterprise Edition Database. The database is relational and the software is ASP.NET
Storage Space	Up to 5 terabytes
Desktop OS	Microsoft NT and XP
Desktop Processors	Pentium 2 or Pentium 4
Server Environment	Everything is MS-SQL Server. Versions: NT, 2000, 2003.
Development Standard	.Net and Visual Studio
Server-Side Language	Visual Basic .Net and C#
Client-side Language	HTML and JScript
Web Browser	MS-Internet Explorer version 6 or greater
S-Elect Specific	Description
S-Elect Server	Microsoft IIS 6 Web Server
S-Elect Reporting	Business Objects Crystal Reports XI

3.2.4 Current IT Staff

IT Staff at BOE in NYC is divided into two categories. This staff will be integral to the implementation efforts of the 2009 voting system for the City of New York.

- 1) EVS (Electronic Voting System Division) Staff – within EVS, there are:
 - a) Eight (8) technical staff members
 - b) One (1) technical Group Manager

This staff is located at the BOE in NYC Executive Office on Broadway. There are no EVS staff members at other borough offices. This group is responsible for operating and maintaining the BOE in NYC's EMS. In the past, they have brought in support staff from a vendor to help with post-election work, future considerations will depend on the chosen vendor.

- 2) MIS (Management of Information Systems Division) Staff – This is a group of IT staff, composed of seven (7) members, specializing in the following areas:
 - a) Two (2) mainframe specialists.
 - b) Four (4) client/server specialists (SQL, .Net, Visual Studio).
 - c) One (1) cross functional person skilled in both platforms.

3.2.5 DoITT Services to BOE in NYC

BOE in NYC is a client of NYC's Department of Information Technology and Telecommunications (DoITT). DoITT provides some services for BOE in NYC, such as providing the storage and hosting services for BOE's website. DoITT also assists BOE in NYC with elections related calls to the NYC 311 Call Center. Further, DoITT provides application storage space to BOE in NYC on the DoITT mainframe servers. DoITT manages all the data circuits and phone systems contracts for BOE in NYC offices with Verizon.

4.0 Response Instructions

4.1 Introduction

The response to this RFI is in two parts:

- 1) Requirements Response
- 2) Cost Response

4.2 Requirements Instructions

The Requirements Response is Section 5 of this RFI. Proposers are to use an electronic copy of this RFI, remove Sections 1-4 and fill-in Section 5. **Do not add rows. Confine your response to the table cell provided for each question.**

4.3 Cost Response Instructions

All costs are to be shown only in Appendix B, Prices, Costs, Volumes & Subcontractors. Proposer is to make entries only in the provide cells that are not "greyed out".

1. Use the Volumes Tab on the spreadsheet to calibrate the capacities and performance requirements for BOE in NYC.
2. Translate these requirements into detailed services, and commodities as shown in the spreadsheet.
3. List all Subcontractors in the Tab provided.
4. Note that Proposers are permitted to offer lower prices to BOE in NYC than those they submitted in their Lot 1 response to OGS/ NYS BOE Contract.

4.4 RFI Response Submission Instructions

4.4.1 Format & Packaging Requirements

All proposal responses must be submitted as shown below:

Response Component	Hardcopy	CD-ROM	Packaging
Section 5, Requirements	Yes	Yes	Package A
Appendix B (Cost Response)	Yes	Yes	Package B - Sealed

Hardcopy format must be 8 ½" X 11" accompanied by CD-ROMs containing soft copies of all document in MS-Office formats. Only items provided on the CD-ROMs will be used to evaluate each response. **One CD-ROM is to contain Section 5 response and a separate CD-ROM is to contain the cost response (Appendix B).**

The functional and technical requirements response (Section 5) must be packaged separately from the cost response, Appendix B, BOE RFI Response Cost Template. **The cost response (Appendix B, Prices, Costs, Volumes & Subcontractors) must be sealed separately.**

BOE of NYC will accept questions and inquiries from all vendors and potential Proposers receiving this RFI. Questions and inquiries must be submitted via email to:

Edward Fraga
Gartner Consulting
212-487-5504
Edward.fraga@gartner.com

Responses to inquiries will be sent periodically by email to all vendors who were sent this RFI.

4.4.2 Delivery Requirements

The package, including hardcopies and the CD-ROM, must be mailed or delivered to BOE according to the information shown below.

RFI Response Due Date & Time: January 13, 2009 at 2 pm EST

RFI Response Delivery to:

The Board of Elections
City of New York
32 Broadway, 7th Floor
New York, New York, 10004
Attn: Lucille Grimaldi
Manager Electronic Voting Systems

E-Mail: LGrimaldi@boe.nyc.ny.us
Phone Number: 212-487-5485
Fax Number: 212-487-5347

5.0 Requirements & Requirements Response

5.1 Administrative Requirements

5.1.1 Proposal Submission

The following section must be completed by two members of the Proposer's Executive Team.

- 1) We affirm that the firm's authorized representatives have read and understand all applicable Federal, State, and local election and information technology laws and regulations.
- 2) We affirm that the firm's authorized representatives have read, understood, and agreed to comply with the requirements of New York State Election Law.
- 3) We affirm that the proposed voting system and functionality provided by the election management system and all voting devices shall comply with all provisions of Federal, State, and local election and information technology laws and regulations, and future modifications to those laws and regulations.
- 4) We affirm that our proposed voting system response to this RFI is true and correct
- 5) We affirm that the proposed costs in our response to this RFI will be valid for contract for 120 days from proposal due date.

Proposal Submission Subcategories	Vendor Response
Describe actions the firm will take to keep the proposed voting system supplied to the BOE in NYC in compliance with all applicable election laws and regulations.	

Print Name/Title:

Signature:

Print Name/Title:

Signature:

5.2 Voting System Design Requirements

As shown in the Glossary, BOE in NYC defines "Voting System" as the total combination of mechanical, electro-mechanical, or electronic equipment, and any ancillary equipment and all software, firmware, and documentation required to program, control, and support the equipment, all of which is used to define ballots, cast and count votes, report and/or display

election results, and maintain and produce any audit trail information. Similarly, we define “Pollsite Voting System (PVS)” as that portion of a Voting System that is intended for use at a pollsite. Therefore, a PVS is both the scanner and the disability device when these are intended to be used in a pollsite. When answering the questions below, describe your scanner related capabilities in the column marked “Precinct Scanner” and your disability voting capabilities in the column marked “Ballot Marking Device”. If your proposed solution is a combined scanner and BMD, and there are shared resources note that fact so that it clear that the resources in total are not over-represented.

5.2.1 Pollsite Voting System Mechanical Characteristics

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
1) Durable Material – Describe how the proposed Pollsite Voting System is composed of durable materials and assembled in a durable fashion.		
2) Durability – Describe how the proposed Pollsite Voting System as a whole is durable and unlikely to fail when used throughout the Election Cycle as a result of use and transportation.		
3) Reliability & Accuracy – Describe how the proposed Pollsite Voting System records the cast ballot reliably and accurately.		
4) Mechanical Modifiability – Describe how the proposed Pollsite Voting System can be easily modified from a mechanical perspective to meet the needs of BOE in NYC.		
5) Storage for Supplies – Describe how the proposed Pollsite Voting System has storage space in or on the System for current and future BOE in NYC Election Day supplies.		

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
<p>6) <i>Clear and Concise Error Messages</i> – Describe how the proposed Pollsite Voting System will provide clear, concise error messages for inspectors, voters and technical staff.</p> <ul style="list-style-type: none"> a) Can the jurisdiction revise error messages to meet their procedures? b) List all Inspector messages in Appendix D-1 c) List all voter messages in Appendix D-2 d) List all technical messages in Appendix D-3 		
<p>7) <i>Visible Messages</i> – Describe how the proposed Pollsite Voting System display provides voters and pollworkers with messages, feedback and instructions. For messages to voters, are messages available in all of the following required languages?</p> <ul style="list-style-type: none"> a) English b) Spanish c) Korean d) Chinese 		
<p>8) <i>Audible Messages</i> – Describe how the proposed voting system audible device provides clear messages, feedback and instructions to voters that require this type of assistance. Are messages available in all of the following required languages?</p> <ul style="list-style-type: none"> a) English b) Spanish c) Korean d) Cantonese Chinese e) Mandarin Chinese 		

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
<p>9) Ease of Adding Languages – Describe how the proposed voting system enables a jurisdiction to add additional languages for voters. What additional languages have been used by other jurisdictions on the proposed voting system?</p>		
<p>10) Ease of Ballot Revision – Describe how the proposed Pollsite Voting System can enable flexibility for last minute ballot changes.</p>		
<p>11) Full-Face Requirements – Describe how the pollsite voting system meets the State New York full-face ballot requirements.</p>		
<p>12) Accessories Required – List the accessories (which are reusable from election to election) that are required to support the pollsite voting system.</p>		
<p>13) Supplies Required – List the supplies (which are used in the election cycle throughout the year) that are required to support the pollsite voting system.</p>		
<p>14) Additional Equipment Necessary – Describe what additional equipment (beside Pollsite Voting System) if any, will be required before, during or after Election Day.</p>		
<p>15) Ink Specifications – Can the Ballot Marking Device mark ballots in colors other than black? If so, which?</p>		
<p>16) Reading of Ballots – If the pollsite voting system is optical scan system, describe the kinds of ballots that the pollsite voting system currently uses, and indicate if the pollsite voting system can be modified to use current BOE in NYC paper ballots.</p>		
<p>17) Device Calibration – Describe the nature and frequency of any requirements to calibrate any part of the pollsite voting system, e.g., screens, ballot counters, audio features, sip and puff features, etc.</p>		

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
<p>18) <i>Environmental Requirements</i> – List the temperature (F) and relative humidity (%) range in which the Pollsite Voting Equipment operates. Add any addition environment constraints.</p>		
<p>19) <i>Voter Review of Choices</i> – Describe the jurisdictions capabilities to control all aspects of the mechanism used by voter to review the ballot including font, color, messages, time, cycles, etc.</p>		

5.2.2 Pollsite Voting System Functionality

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) <i>Ease of Set-up</i> – Describe how the proposed Pollsite Voting System is easily prepared for Election Day.</p> <p>a) Vendors' proposals shall give an estimate of the time required to set up the individual DREs, system controllers, and/or optical scan voting equipment to make them ready for delivery to the polls for each component of the PVS and for both a Primary and a General Election using the Test Script of the State BOE.</p>		
<p>2) <i>Time Required to Prepare Equipment (to Meet BOE in NYC Implementation Time Frame)</i> – Describe the proposed plan for implementing the proposed voting system in time for the September 8, 2009 Primary Election.</p>		
<p>3) <i>Degree of Voting Privacy</i> – Describe how the proposed voting system will enable a voter (including voters with disabilities) to cast his or her ballot in complete privacy and security.</p>		

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>4) Amount of Assistance Required – Describe how the proposed voting system will enable a voter (including voters with disabilities) to cast their ballot with minimal assistance.</p>		
<p>5) Time Required to Cast Votes – Describe how the proposed voting system allows for a reasonable length of time for any voter (including voters with disabilities) to complete and cast his or her ballot.</p>		
<p>6) Ease of Pollsite Voting System Modification & Re-certification – Describe the proposed plan by which the proposed Pollsite Voting System can be modified and recertified (by the NYS BOE) if needed to meet the needs of BOE in NYC for implementation for the September 8, 2009 Primary Election.</p>		
<p>7) Multiple Election Districts – Describe how each proposed Pollsite Voting System can handle multiple Election Districts.</p>		
<p>8) Additional Equipment Necessary – Describe what additional equipment (beside Pollsite Voting System) if any, will be required before, during or after Election Day.</p>		
<p>9) Exception Handling – Describe how the proposed Pollsite Voting System will cleanly and clearly handle any exception while still maintaining the systems data.</p>		
<p>10) Power Outage & Vote Tabulation - Discuss what happens during a power outage or in case of other disasters at the pollsite with focus on the preservation of the vote counts.</p>		

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>11) Audit of Voting Tabulation – Describe how the proposed voting system’s central tabulation hardware and software is capable to efficiently consolidate vote results from each Election District and performing a full audit (i.e. a re-tabulation of the total vote count for purposes of determining the official election results) within a satisfactory time after the election (as determined by the BOE in NYC). Discuss how the process is protected in emergency situations.</p>		
<p>12) Audit Logs – Describe the logging capabilities of the pollsite voting system.</p> <ul style="list-style-type: none"> a) Which components have logging of events? b) What types of events are logged? c) How are logs managed? d) Are the logs circular? e) How is log size controlled? f) What log reports are available? g) Are the audit logs synchronized with the EMS? 		

5.2.3 Election Management System (EMS) Functionality

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) EMS Functionality – Describe the key functions that the EMS performs and what is required to initialize it.</p>		
<p>2) User Friendly – Describe the user-friendliness functionality of the proposed EMS.</p>		
<p>3) Setup of Election – Describe the extent to which the proposed EMS has the flexibility to change the Election Set-up to meet current and future BOE in NYC needs</p>		
<p>4) Data Import – Describe the capabilities of the proposed EMS to allow for different input file formats.</p>		

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>5) Election Setup – Describe the step by step operation of the EMS for the setup of an election. Detail the differences between a primary election and a general election.</p>		
<p>6) Ballot Layout Process (Manual Over-ride) – Describe the capability of the proposed EMS to provide automatic ballot layout functionality, while still allowing manual changes in order to maintain “party integrity” for General Elections.</p> <p>a) Describe the ability of the system to retain previously defined formats for ballot layout.</p>		
<p>7) Language Translation Input – Describe the capabilities of the proposed EMS to input language translations.</p>		
<p>8) Audio Preparation – Describe the capabilities of the proposed EMS to provide an efficient method of preparing the audio ballots.</p> <p>a) Describe the types of voice files that can be used (recorded, synthesized, or both) along with the methods of sharing and storing voice files.</p> <p>b) Is synthesized voice available for both Cantonese and Mandarin Chinese? If not, describe alternatives and what steps you will take to provide synthesized voice for both dialects.</p> <p>c) Since the proposed system cannot be networked, describe how the EMS allows BOE in NYC to verify both audio files and visual ballot elements (both translated and non-translated) within a reasonable timeframe.</p>		
<p>9) Recorded vs. Synthesized - What are the advantages and disadvantages of using recorded voice versus synthesized voice and what is the impact on the voting process?</p>		

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>10) Setting PVS Parameters – Detail the PVS parameters that may be changed through the EMS and the process to do so. (i.e. closing polls, over/under alerts, exception handling & messages, reporting)</p>		
<p>11) Modifications of Instructions – Describe the extent to which the EMS allows the jurisdiction to modify instructions (messages, alerts, etc.) presented on or by the PVS in form and content.</p>		
<p>12) PMD Writing – Describe how the ballot data is written onto the Portable Memory Devices (PMDs).</p>		
<p>13) Write-ins – Describe how a write-in vote is defined in the EMS.</p>		
<p>14) Ballot Proofing – Describe your recommended approach to ballot proofing for BOE in NYC including displayed, printed, synthesized, spoken ballots in English, Spanish, Mandarin Chinese, Cantonese Chinese and Korean and including ballot rotation</p>		
<p>15) Moving from Primary to General – Describe how the proposed EMS can enable the BOE in NYC to move from the Primary to the General Election with a minimum of effort.</p>		
<p>16) Ballot Rotation – Describe the capabilities of the proposed voting system to comply with all ballot rotation requirements of NY State Law and BOE in NYC, including “candidate rotation and “group rotation”.</p>		
<p>17) Last Minute Ballot Changes – Describe the capabilities of the proposed EMS to handle “last minute” ballot changes in an efficient and easy manner.</p>		

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>18) Reporting Capabilities – Describe the capabilities of the proposed EMS to produce standard, custom and ad-hoc reports as required by BOE in NYC. Also list:</p> <ul style="list-style-type: none"> a) All of the files and reports that can be produced and in what format (HTML, XML, XLS, etc.) b) The steps required to produce these files and reports in the various formats c) The version of formats used to produce files (if applicable) d) Any third-party software that BOE will need to use with the proposed software to generate reports 		
<p>19) Error Logs – Describe the capabilities of the proposed EMS to maintain, produce, and print out error logs.</p>		
<p>20) Aids to Manual Re-cavass – Describe how the proposed EMS will aid the BOE in NYC in the efficient conduct of a manual re-cavass.</p>		
<p>21) Control Mechanism for PMD Last Minute Ballot Change – Describe the process for making last minute changes to a ballot that has already been loaded onto a voting system on Election Day.</p>		
<p>22) Automatic Update to EDs Affected by a Ballot Change – Describe if and how the proposed EMS will automatically update all Election Districts affected by a ballot change.</p>		
<p>23) Archival Functionality & Capacity – Describe the archival capability of the proposed EMS and its capacity to meet NYS record retention requirements.</p>		

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>24) Network Topology – The BOE in NYC may elect to operate a system in the future in which the election results of each polling site are transmitted electronically to a Central Office, directly or via a regional collection center.</p> <p>a) Describe all hardware, software, documentation, training, services and supplies necessary to implement and operate the system at each of these locations and to inter-connect them for the purpose of vote tabulation and reporting.</p>		
<p>25) Ease of EMS Modification & Recertification – Describe the proposed plan by which the proposed EMS Voting System can be modified and recertified (by the NYS BOE) if needed to meet the needs of BOE in NYC for implementation for the September 8 2009 Primary Election.</p>		
<p>26) Absentee & Affidavit Voting Results – If BOE in NYC chooses to replace its current central count optical scan system, do you have a central count system that reads the PVS ballots your are proposing? Are you submitting this central count system for NY State certification?</p>		

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>27) Audit Logs – Describe the logging capabilities of the EMS system.</p> <ul style="list-style-type: none"> a) Which applications have event logging? b) What types of events are logged? c) How are logs managed? d) Are the logs circular? e) How is log size controlled? f) What log reports are available? g) Are logs encrypted? h) Are there different logs for system issues vs logs for particular election? 		
<p>28) Ballot Style Number Management – As contests and candidates are added and deleted during the petitioning period and subsequent court challenges, how are ballot style numbers and code channels maintained between previously printed ballots for unaffected pollsites and the ballot definitions for the BMD.</p>		

5.2.4 EMS Server Environment

EMS Server Environment Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Vendor Provided vs Off-the-Shelf – Given NYC volumes, describe the specifications of the EMS server. Can the server be acquired by BOE in NYC directly from the manufacturer or must it be acquired bundled in this procurement?</p>		
<p>2) OS Requirements – Describe the specifications of the EMS Server Operating System software. Can this software be acquired by BOE in NYC directly from the manufacturer or must they be acquired bundled in this procurement?</p>		

EMS Server Environment Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>3) Other Third-Party Application Software – Describe the specifications of the EMS Server other third party software. Can these be acquired by BOE in NYC directly from the manufacture or must they be acquired bundled in this procurement?</p>		
<p>4) Setup and Data Distribution to Boroughs – Describe the EMS portion of the Election setup and the methods of data distribution to the boroughs.</p>		
<p>5) Vendor's System Architecture – Provide a high-level description, and attach a diagram, of the overall Vendor's System architecture that clearly illustrates the proposed components and their interrelationship.</p>		
<p>6) Networking of EMS – As mandated by the State of New York, due to security concerns, any product that counts votes or configures voting systems is not permitted to reside on a network. Therefore, the current and the proposed 2009 Election Management Systems (EMS) must exist as stand alone systems. For the purpose of this RFI, BOE in NYC asks each respondent to provide two (2) EMS configurations (networked and stand alone) in its response in the event that the State of New York determines it is acceptable for EMS systems to reside on a network.</p> <p>a) Follow the current NYS restrictions and assume that no network may be used by the proposed EMS.</p> <p>b) Assume that the NYS BOE will in the future allow for the use of secure network environments for Voting Systems</p>		

5.2.5 Ballot Display

Ballot Display Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Ballot Languages – Describe the language capabilities of the proposed Pollsite Voting System. Which languages are supported? BOE in NYC currently requires English, Spanish, Chinese (Mandarin and Cantonese), and Korean. Can the proposed Pollsite Voting System support additional languages? If so, which ones. Are all instructions and ballot information provided to the voter provided in each of these languages?</p>		
<p>2) Contests vs Font-size Limitations – Describe the capabilities of the proposed Pollsite Voting System to display all BOE in NYC contests, while still maintaining the required font sizes.</p>		
<p>3) Appearance (color, font-size) – Describe the capabilities of the proposed Pollsite Voting System to allow the voter and/or administrator to adjust the ballot appearance.</p>		
<p>4) Ballot Clarity (font) – Describe the capabilities of the proposed Pollsite Voting System to ensure that the ballot is clear and readable to all voters.</p>		
<p>5) Ballot Format & Orientation – Describe the capabilities of the proposed Pollsite Voting System to be flexible to allow BOE in NYC to format ballots in either direction (landscape or portrait), regardless of the election type.</p>		
<p>6) Party Colors & Logos – Describe the capabilities of the proposed Pollsite Voting System to allow for party colors and logos (i.e. party emblem or party graphic)..</p>		
<p>7) Break by Party – Ballot layout must display each party in its own column. Describe how your solution will accommodate this requirement.</p>		
<p>8) Last Minute Ballot Changes – Describe the capabilities of the</p>		

Ballot Display Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>proposed Pollsite Voting System to handle "last minute" ballot changes (candidates on/off the ballot). What lead time do you recommend for the finalization of ballot definitions to allow for preparation of your voting system in time for Election Day?</p>		
<p>9) <i>Ballot Limitations</i> – Describe the following:</p> <ul style="list-style-type: none"> a) Maximum number of columns, rows and ballot positions of the pollsite voting system b) Maximum number of lock-outs on voting machine c) Maximum number of voters each voting machine can accommodate per election d) Maximum number of ballot styles available for use in an election e) Maximum number of pages per ballot f) Maximum number of code channels 		
<p>10) <i>Ballot Layout</i> – Describe the capabilities of the proposed Voting System to support the following;</p> <ul style="list-style-type: none"> a) Support both automated and manual ballot layout design. b) Flexibility to allow modifications and corrections to the ballot layout. Describe which formatting factors can be modified such as ballot layout and orientation. 		
<p>11) <i>Screen Navigation</i> – Describe how a voter navigates through the screen of the pollsite voting system (moves back and forth between screens, between contests, etc.)</p>		
<p>12) <i>Paper Specifications</i> – Describe in detail the requirements for paper to be used as ballots. <i>Can colors other than white be used for ballot paper?</i></p>		
<p>13) <i>Printing Specifications</i> – Describe in detail the requirements for printing ballots to be used with this Pollsite Voting System.</p>		

Ballot Display Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>14) Ink Specifications – Describe in detail the requirements for the ink used to print ballots. Are some ink colors not recognized by the scanner? Are there colors other than black which may be used?</p>		

5.2.6 Election Management Systems (EMS) Specifications

EMS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Data Elements – Provide a list of data elements and database tables for ballot content and ballot layout, include which elements are required and which are not, and include field lengths and character types.</p>		
<p>2) Languages – Indicate if the following languages can be supported within the EMS:</p> <ul style="list-style-type: none"> a) For Text: English, Spanish, Chinese and Korean, b) For Audio: English, Spanish, Mandarin Chinese, Cantonese Chinese, and Korean, <p>What additional languages are supported?</p> <p>If any of these languages are not supported, please describe what steps will be taken to meet this requirement.</p>		
<p>3) Language Experience - Which languages have been used in other jurisdictions? Where, when and to what extent?</p>		
<p>4) Capacities – According to the federal Elections Assistance Commission (EAC), ballot styles are at minimum different from one another in content, and under some definitions they may additionally differ by size of type, graphical presentation, language used or method of presentation (e.g., visual or audio). Define which aspects (such as content, language, rotation or any other aspect) are included in your software as a “ballot style”.</p>		

EMS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>5) Based upon this definition, respond to the following:</p> <ul style="list-style-type: none"> a) What is the maximum number of ballot styles supported by the proposed EMS and for the Pollsite hardware? b) What is the maximum number of translated ballot styles supported by the proposed EMS and for the Pollsite hardware? c) What is the maximum number of contests per ballot style supported by the proposed EMS and for the Pollsite hardware? d) What is the maximum number of candidates per contest supported by the proposed EMS and for the Pollsite hardware? e) What is the maximum number of ED/ADs which are supported by the proposed EMS and for the Pollsite hardware? f) What is the maximum number of political parties/independent bodies that are supported by the proposed EMS? g) What is the maximum number of code channels supported by the proposed EMS? 		
<p>6) <i>Pollsite Voting System Boot Time</i> – What would be the boot-up time for the Pollsite Voting System based on the number of lots, recorded voice for office, candidate names, and instructions, for five languages in keeping with the volumes shown in Appendix A and including all other factors that would affect boot-up time for BOE.</p>		

5.2.7 Pollsite Voting System (PVS) Specifications

PVS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Portability – Describe how the proposed Pollsite Voting System is “portable” in terms of size and weight.</p> <ul style="list-style-type: none"> a) Size/Dimensions of all equipment (including peripherals such as printers, sip & puff devices, etc.) b) Weight for all equipment c) Portability once system is set up at pollsite 		
<p>2) Pollsite Voting System Case – Provide the following information for the proposed Pollsite Voting System Case (if applicable):</p> <ul style="list-style-type: none"> a) Carrying/Packing case design b) Size/Dimensions c) Weight d) Transport aids (e.g. wheels, handles, etc.) 		
<p>3) Multiple Ballot Formats – Describe how the proposed Pollsite Voting System will handle all of the required ballot formats for all New York City Elections, including listing parties across the ballot in the General Election.</p>		
<p>4) Ballot Style Capacity – Indicate the number of ballot styles that each pollsite voting system can support and provide some other measure of memory capacity.</p>		
<p>5) Voting Session Capacity – Indicate the total number of ballots each pollsite voting system can cast in one session before any manual intervention by a pollworker is needed, e.g., to change ink toner, etc.</p>		
<p>6) PMD Capacity – Indicate the storage capacity of the Portable Memory Device.</p>		
<p>7) Capacity Limitations – Indicate any additional capacity limitations that the pollsite voting system has.</p>		

PVS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>8) Counters:</p> <p>a) <i>Public Counter</i> – Describe how the Pollsite Voting System can keep a running total of the number of ballots cast or marked by the device for a given election (divided by party for a Primary).</p> <p>b) <i>Spoiled Ballots</i> – Describe how the Pollsite Voting System can control the number of times a voter can “re-do” a ballot?</p> <p>c) <i>Protective Counter</i> – Indicate if the Pollsite Voting System has a protective counter that keeps a running total by the device over its life, and at what specific event in machine’s process causes the increment of the counter and which component of the PVS is the subject of the counter (i.e. which component, if replaced, resets the counter)</p>		
<p>9) Electrical Requirements – Detail the electrical requirements of the components of the Pollsite Voting System. For each component supply the following:</p> <p>a) <i>Average Load</i> – Describe the average load (in amps) drawn by each component.</p> <p>b) <i>Peak Load</i> – Describe the peak load (in amps) drawn by each component and the circumstances under which the peak load is required.</p> <p>c) <i>Charge Load</i> – Describe the load (in amps) during battery charging.</p>		
<p>10) Heat Requirements – Detail the amount of heat (in British Thermal Units) generated by each device of the PVS during use, storage and charging.</p>		
<p>11) Ventilation Requirements – Detail the ventilation requirements of each device of the PVS during use, storage and charging. List any dangerous chemicals that could be out-gassed during any of these stages.</p>		

5.3 Board Operations Requirements

5.3.1 EMS & Pollsite Voting System (PVS) Maintenance

EMS & PVS Maintenance Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Automatic or Manual Simulation – Describe the capabilities of the proposed voting system to enable automatic and manual testing.</p>		
<p>2) Staff Level of Expertise Required to Maintain & Repair – Describe the suggested staffing levels and skill sets required of BOE in NYC staff to maintain and repair the proposed Pollsite Voting System. Describe the level of such maintenance and repair and what level should remain a vendor activity.</p>		
<p>3) Vendor Support Staff – Describe the process for ensuring all staff members who will provide support for the Proposer’s voting system, both hardware and software functionality will be appropriately trained (and preferably certified) by the Proposer.</p>		
<p>4) Maintenance Routines – Describe the maintenance routines for the Pollsite Voting System.</p>		
<p>5) BOE Repair & Maintenance – Describe the type and extent of repair and maintenance work which will be permissible by BOE in NYC technical staff.</p>		
<p>6) Can Board Become Vendor Independent in Five (5) Years? – Describe the requirements and process by which the BOE in NYC could become vendor independent over a period of time (5 years during the warranty period) for all repairs.</p>		
<p>7) Repair – Describe the requirements and process by which BOE in NYC staff could maintain and repair the proposed Pollsite Voting System.</p>		
<p>8) Replacement – How often do other jurisdictions replace the proposed voting system equipment? List the experience of at least five (5) large jurisdictions.</p>		

EMS & PVS Maintenance Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>9) <i>Storing and Transportation</i> – Describe the storage and transportation requirements for the proposed pollsite voting system:</p> <ul style="list-style-type: none"> a) Environmental requirements b) Electrical/Charging requirements c) Transportation requirements for shipping the device safely to, and from, pollsites d) Recommended Voting Machine Facility storage placement e) Dimensions in the open and closed positions. 		

5.3.2 Pre-Election Set-up

Pre-Election Set-up Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) <i>Setup EMS (Initial input & On-going Updates & Confirmation)</i> – Describe the EMS Setup procedures of the proposed EMS system. Describe the suggested timeframes for these activities.</p>		
<p>2) <i>Do Language Translations & Confirmation</i> – Describe the suggested procedures for language translation and translation confirmation for the proposed EMS system.</p>		
<p>3) <i>Ballot Printing</i> – Describe the suggested procedures for ballot printing for the proposed EMS system.</p>		
<p>4) <i>PMD Production</i> – Describe the suggested procedures for PMD production for the proposed EMS system.</p>		
<p>5) <i>Device Setup & Testing</i> – Describe the capabilities and suggested procedures by which the proposed Pollsite Voting System allows BOE in NYC to set-up and test all required functions in an efficient manner</p>		

Pre-Election Set-up Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>6) Testing the Ballot – Once an election has been setup, describe how all ballots can be viewed or listened to without allowing voting (so as to not disturb the count or configuration) and without requiring individual ballot activation.</p>		
<p>7) Cut-off For Ballot Changes – What lead time (cut-off date) do you recommend for the finalization of ballot definitions to allow for ballot preparation using the proposed voting system?</p>		
<p>8) Pre-Election Supply Packaging & Transporting – Describe the capabilities and requirements of the proposed Pollsite Voting System for the packaging of Election Day supplies, the transport of Pollsite Voting System to pollsites and the protection features designed to prevent damage or loss. Describe recommend transport methods and procedures that are in keeping with State rules and regulations.</p>		

5.3.3 Post-Election Activities & Testing

Post-Election Activities & Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Post-Election Supply Packaging & Transporting – Describe the capabilities and requirements of the proposed Pollsite Voting System for the packaging of Election Day supplies, the transport of Pollsite Voting System from pollsites and the protection features designed to prevent damage or loss. Describe recommend transport methods and procedures consistent with NYS Board rules and regulations.</p>		
<p>2) Receive Machines – Describe the recommended procedures for receipt of Pollsite Voting System at Voting Machine Facilities post-Election.</p>		

Post-Election Activities & Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
3) Read PMDs into EMS – Describe the capabilities and suggested procedures by which the proposed EMS will read PMDs Post-election in an efficient manner.		
4) Produce Reports – Describe the capabilities and suggested procedures by which the proposed EMS will allow BOE in NYC to customize and produce ad-hoc reports		
5) Upload into S-Elect – Describe the capabilities and suggested procedures by which the results from the portable memory devices may be gathered and uploaded into the BOE in NYC S-Elect system.		
6) Canvass /Re-canvass – Describe the procedure you recommend to balance voter and ballot counts at the conclusion of an election (e.g. voters, number of ballots, public counters, rejected ballots, filed voters, no votes, under-votes, etc.) Describe the procedure for both a Primary and a General. How are all relevant numbers maintained for each party in a Primary Election? Describe functions and reports that assist with the procedure.		
7) Central vs Pollsite Scanning –How do you propose handling the ballots currently canvassed by BOE central scanning system?		
8) 3% Manual Audit – Describe the capabilities and suggested procedures by which the proposed new voting system will allow the BOE in NYC to manually count the required 3% of the paper ballots and audit the electronic results against those manual tallies within a reasonable time frame.		
9) Periodic Testing – Describe the capabilities of the proposed voting system to enable periodic testing and provide estimates of the BOE in NYC staffing requirements for this activity. Describe the suggested procedures for this activity.		

Post-Election Activities & Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>10) Election Testing – Describe the process for conducting both manual and automatic testing of the devices in accordance with State rules and regulations (including all disability features and auxiliary components) as follows:</p> <ul style="list-style-type: none"> a) Pre-qualification – Before Election Day during device setup and after last minute changes have been made. b) Election Day – On election day at the open and close of polls c) Post-election – After Election Day through the canvass of the vote. 		
<p>11) Diagnostics – Describe self-diagnostics and testing capabilities of each component of the new voting system.</p>		

5.4 Election Day Operations Requirements

5.4.1 Pollworker Activity

Pollworker Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Pollworker User Friendly – Describe how the proposed Pollsite Voting System will be user friendly in terms of the following.</p> <ul style="list-style-type: none"> a) Operations b) Configuration & size c) Staffing d) Environment (climate control). 		
<p>2) Open Polls – Describe the capabilities of the proposed Pollsite Voting System that enables it to be easily setup (both physically and electronically) by pollworkers on Election Day while still maintaining security. What device, if any is used in the process?</p>		

Pollworker Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>3) Handle Devices/Cards Required – Describe the Election Day pollworker activity during the course of voting. What devices/cards are required and by whom are they handled?</p>		
<p>4) Activate for Voter – Describe the capabilities and procedures that demonstrate the ease with which the proposed Pollsite Voting System can be activated for each voter. What mechanism is used to activate the correct ballot for the voter?</p>		
<p>5) Voter with Disability Readiness – Describe the capabilities of the proposed Pollsite Voting System that make it easy to place the machine into, and return back from, disability readiness for voter with special needs.</p>		
<p>6) Visual & Audio Indications – Describe the capabilities of the proposed Pollsite Voting System that provide clear visual/audibly indication that the current ballot has been cast and the equipment is ready for the next voter.</p>		
<p>7) Read Error Messages – Describe the capabilities of the proposed Pollsite Voting System that provide error messages that are clear and understandable by the average inspector.</p>		
<p>8) Election Day Error Solutions – Describe the capabilities of the proposed Pollsite Voting System that provide simple solutions for correcting Election Day errors. Distinguish between those correctable by Pollworkers and those that would require a Voting Machine Technician.</p>		
<p>9) Close Polls – Describe the capabilities of the proposed Pollsite Voting System that provide easy to close (both physically and electronically) while still maintaining security. What device, if any is used in the process?</p>		

Pollworker Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
10) Reporting – Describe the capabilities of the proposed Pollsite Voting System that provide clear, readable reports for the Poll Worker		
11) Collect PMDs – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for the collection of portable memory devices containing the election results from each pollsite, and the entry of said results into the system’s software, and reporting of same? How long do you estimate the described Election Night procedure will take in NYC?		
12) Handle Supplies – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for the handling of election supplies upon poll closing by pollworkers		
13) Voters per Machine – What is the maximum and typical number of voters that can vote on the proposed voting system in 15 hours on Election Day?		
14) Pollsite Operation Breakdown – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for its ease disassembly and preparation for shipping.		

5.4.2 Voter Activity - Voting Process

Voting Process Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) Voter User Friendly – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that enable it to be user friendly.		
2) Over Voting & Under-voting – Describe how the Pollsite Voting System prevents the voter from over voting and notifies the voter that they are under voting and how the voter can correct his or her ballot. a) Can the under-voting alert be configured to be turned-off?		

Voting Process Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>3) Independency – Describe how the Pollsite Voting System will allow voters with disabilities to completely cast their ballot independently and in privacy.</p>		
<p>4) Voter Verification – Describe how the design of the voter verification feature makes it efficient to use.</p> <p>a) Does the voter review operate in such a manner that the jurisdiction can limit the time or cycles of review in order to ensure voter does not unduly slow the voting process.</p>		
<p>5) Intuitive – Describe how the proposed Pollsite Voting System would be familiar to NYC voters or easy for them to use.</p>		

5.4.3 Voter Assistance Devices

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Font Size Selection – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for font size selection.</p>		
<p>2) Contrast Selection – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for contrast selection</p>		
<p>3) Language Selection – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for language selection.</p> <p>a) Can the voter choose the language?</p> <p>b) Can the choice of language be done both visually and through audio?</p>		

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>4) Audio Function – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System audio function is clear and easy for the voter to use.</p> <ul style="list-style-type: none"> a) Can the volume of the audio ballot be easily adjusted by the voter (higher/lower)? b) Can the speed of the audio ballot be easily adjusted by the voter (faster/slower)? c) Do the audio controls work with both synthesized and recorded audio? d) Do the headsets provided include technology to prevent interference with hearing aids? 		
<p>5) Device Positioning – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that enable it to be positioned in an easy and safe manner to handle all voters.</p> <ul style="list-style-type: none"> a) Can the voter place the keyboard in their lap? b) Does the voting system require re-positioning for voters in wheelchairs? c) Can the voting system be adjusted to avoid glare from ceiling lights? 		
<p>6) Sip & Puff – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that allows the voter to navigate the equipment with a sip & puff device.</p> <ul style="list-style-type: none"> a) Can the voter control navigation (move from contest to contest) as well as selection using sip & puff? b) Can the voter use the display as output and “sip & puff” as input? Can this be done as fast as the voter can see and respond or is it dependent upon the audio speed of the device? 		

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>7) Paddles – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that allows the voter to navigate the equipment with paddles.</p> <p>a) Can the voter control navigation (move from contest to contest) as well as selection using paddles?</p> <p>b) Can the voter use the display as output and “paddles” as input? Can this be done as fast as the voter can see and respond or is it dependent upon the audio speed of the device?</p>		
<p>8) Device Combinations – Ballot Presentation and Cast Modes – List all the ways in which a ballot may be presented (i.e. screen, synthesized audio, recorded audio, printed on paper) and all the ways in which a ballot may be cast (i.e. touch screen, QWERTY keyboard, alpha keyboard, keypad, telephone keypad, sip & puff, rocker paddle, etc.).</p> <p>a) Can every presentation mode be used with every cast mode?</p> <p>b) If not, which combinations cannot be used?</p> <p>c) If so, can the voter vote completely without assistance (including write-ins) using any combination of modes?</p> <p><i>j)</i> If not, which mode combinations require poll worker assistance?</p>		

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>9) Support for Other Assistive Devices – Can the voter use any other two-position switch assistive device (such as a head switch) that has a standard 3.5 mm mono plug interface? Cite a county in which such device has been used in an election.</p>		
<p>10) Voting Tables – Describe the feasibility of using the proposed Voting System in conjunction with ADA² approved Voting Tables.</p> <p>a) Describe which voting table, if any, are recommended for use with your proposed Voting System.</p> <p>b) Describe any additional special needs or considerations for the BOE in using ADA approved Voting Tables.</p>		

² Americans with Disabilities Act

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>11) Write-ins – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that provides the voter with an easy and clear method of casting a write-in vote.</p> <ul style="list-style-type: none"> a) What is the write-in method? <ul style="list-style-type: none"> i) Keyboard? (QWERTY or Alphabetic order?) ii) Keypad? (QWERTY or Alphabetic order?) iii) Paper scroll? b) Explain how write-in voting is accomplished for voters using: <ul style="list-style-type: none"> i) Spanish. ii) Chinese. iii) Korean. c) Explain as an example, how write-in is accomplished for blind, Mandarin Chinese only language voter? <ul style="list-style-type: none"> i) Does voter need to listen and select letters in alphabetic order? Can voter skip through alphabet? d) Explain how “Sip & Puff” and “Rocker Paddle” voters are able to perform a write-in without assistance. 		

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>12) Time to Vote with Disability – Describe the capabilities of the proposed solution in terms of input and output modes for the voter. Give an estimate of the average time to vote using each mode. Indicate if the voter is able to enter a write-in in each mode with complete privacy and without assistance.</p> <ul style="list-style-type: none"> a) Display Output & Touch Input b) Audio Output & Touch Input c) Audio Output & Keyboard/Key Pad Input d) Display Output & Sip & Puff Input e) Audio Output & Sip & Puff Input f) Audio Output & Rocker Paddle Input 		
<p>13) Change Voting Mode – Describe what steps must be taken if a voter wishes to change voting mode (i.e. touch & keyboard vs audio & rocker) after voting has begun.</p>		

5.4.4 Technician Activity

Technician Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Technician User Friendly – Describe how the proposed Pollsite Voting System will be user friendly in terms of the following:</p> <ul style="list-style-type: none"> a) Pollsite Setup – Describe the ease with which voting technicians can setup, test and deploy the proposed pollsite voting system. b) On-site Corrections –The ease with which problems with the new voting system can be diagnosed and repaired at the pollsite. c) Diagnostics – Describe the self-diagnostics and testing capabilities of each component of the new voting system 		

Technician Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
2) Repair/Replacement – Describe the extent to which any component of the new voting system can be repaired and/or replaced.		
3) Tools Required – Describe any special hardware or software tools required for routine maintenance and/or repair of the Pollsite Voting System.		

5.5 Security & Privacy Requirements

5.5.1 Security Strategy & Physical Security

Physical Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) Facilities Assessment for Security – Describe your approach to facilities security assessment. a) How do you propose to perform a facilities security assessment of the five (5) borough voting machine facilities? b) How will you identify any security issues and show how the proposed solution will handle potential problems?		
2) Flexibility to Modify Product for Security – Should BOE in NYC identify security issues with the proposed product, how will you address those issues? Describe the security protections employed during system modification that ensures the integrity of the system.		
3) Ability to Secure Equipment Outside of BOE Facilities – Describe the security features of the proposed voting system which protect it when it is not in a BOE facility (in transport, at pollsite before & after election).		

Physical Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>4) Security Controls on Firmware & Software – Describe the different levels of security that would have to be bypassed in order for a person to gain access to firmware or software code in any proposed voting system component. Describe how each device of PVS can only be programmed by a copy of the EMS authorized by the BOE in NYC.</p>		
<p>5) Component Security – Describe how the various components of the proposed voting system are secured from tampering, access or alteration?</p>		
<p>6) Serial Number Security – Describe how the components of the proposed voting system are secured through the use of physical and electronic serial numbers.</p>		
<p>7) End-to-End Process Security – Describe the proposed approach to assessment and recommendations for process end-to-end security for BOE in NYC.</p>		
<p>8) PVS Locks –</p> <ul style="list-style-type: none"> a) Describe all locks of the PVS. b) Each PVS that tabulates votes must include a lock or locks, the use of which locks all operation of the tabulation element of the PVS and which absolutely prevents (i.e. seals) the alteration of the cumulative count of votes. c) Detail which locks are unique to particular units and which are common across all like devices from the Proposer. 		
<p>9) Voting Device Tamper Prevention – Describe your proposed products ability to preclude tampering or damage related to an election.</p>		

5.5.2 Software Security

Software Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Joint Security Protections Between Current BOE Systems and Proposed System – Describe your proposed approach to ensuring security controls between your proposed voting system and current BOE software applications.</p> <p>a) Describe any data encryption methods used by the proposed Voting System</p> <p>b) What features already exist in your proposed system for file transfer security?</p>		
<p>2) Wireless Security – Describe the protections in the proposed system that ensure that wireless communications components are either not included or how BOE can have certainty that they are disabled. How are ports controlled to prevent the attachment of foreign devices (such as wireless communications devices)?</p>		
<p>3) Modification toward Compatibility with Current BOE in NYC Security Platform – Describe in what ways you will provide or modify a strategy for security between the proposed system and existing BOE systems.</p>		
<p>4) Operating System Access Security – Describe the security features of the proposed EMS and pollsite voting system operating systems.</p> <p>a) In what ways do they prevent unauthorized access?</p> <p>b) Are all unnecessary components of the operating system identified and removed?</p>		
<p>5) System Instance Security – Describe how BOE in NYC will be protected should some part of another county’s voting system find its way to NYC’s instance of the proposed system.</p>		

Software Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>6) Use of SHS for Software Integrity – Describe the extent to which the proposed voting systems will enable the comparison of software installed on the delivered system to certified software, via the use a Secure Hash Signature Standard (SHS) validation program, contained in Federal Information Processing Standards Publication 180-2 issued by the National Institute Standards Technology.</p>		
<p>7) Data Recovery Protection – Describe how the proposed voting system detects and recovers lost data in any component.</p>		
<p>8) Device Interconnection Security –</p> <ul style="list-style-type: none"> a) What protections are provided to prevent the interconnection of foreign devices with components of the proposed voting system (i.e. prevention of USB device attachment to pollsite voting system). b) Ability to connect a projector to demonstration and training machines is desirable. <ul style="list-style-type: none"> i) How would this be controlled? ii) Do you offer training machines? iii) In what ways do they differ from standard machines and are they interchangeable through configuration? Can BOE do these conversions? iv) Are there simulation machines? 		

5.5.3 Voter Privacy

Voter Privacy Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) Ballot Secrecy – Describe how proposed voting system ensures the end-to-end protection of the secrecy of each voter’s ballot.		

5.6 Implementation Services

5.6.1 Interfaces

Interfaces Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) Prior Jurisdiction Interfaces – Describe voting system interfaces that your firm has done for other jurisdictions.		
2) Interface Methodology – Describe your method for developing interfaces from the proposed voting system to other systems.		
3) BOE in NYC interfaces – Describe your approach to creating an interface between the proposed voting system and the current BOE in NYC systems based on the descriptions provided above of these BOE systems and how long do you estimate the effort will require? a) S-Elect b) Fleet Management System c) Pollsite Management System.		
4) Confirmation Reports – Does the proposed system provide a confirmation report of what was sent and what was received especially in downloads from EMS to pollsite voting system?		

5.6.2 Receipt & Acceptance Testing

Receipt & Acceptance Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) EMS Installation, Receipt & Acceptance – Describe your recommended process and services for the installation, receipt and acceptance of the proposed EMS.</p>		
<p>2) Pollsite Voting System Installation, Receipt & Acceptance –</p> <p>a) Procedures – Describe acceptance test procedures.</p> <p>b) Timing – Provide an estimate of time to conduct acceptance testing for a single unit.</p> <p>c) Support – Indicate what vendor support resources are provided during acceptance testing.</p> <p>d) Repair/Replacement – Describe your repair or replacement policy during BOE in NYC testing. State BOE requires that if a PVS leaves BOE custody it must be re-accepted by the State BOE.</p>		

5.6.3 Staff Training

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Training Types – What types of training do you propose (i.e. pollworker, EMS, etc.). Describe your approach to each type of training?</p>		
<p>2) Training Materials – Describe the type and quantity of training materials proposed (including written, video, audio, diagrams and equipment) to meet the needs of BOE in NYC prior to the Primary & General Elections in 2009.</p>		
<p>3) Trainer Certification – Indicate the number and type of training certifications held by the proposed trainers on the proposed voting system.</p>		
<p>4) Trainer Certification Program – Describe the type and number of hours required for a trainer to be certified by the Proposer.</p>		

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
5) Trainee Certification – Indicate the number and type of trainee certifications that will be offered to BOE in NYC staff on the proposed voting system.		
6) Training Board Staff – How do you plan to provide training for the Board's planning, development, managerial, supervisory and training staffs so that they can plan, develop, manage, supervise and train Board staff and pollworkers in the use of new procedures that will result from the use of the proposed new voting system prior to the Primary & General Elections in 2009?		
7) Training EMS – Describe in detail the classes you will provide for Broad technical staff who will be responsible for administering, testing and setting up the proposed voting system's software prior to the Primary & General Elections in 2009.		
8) Training Technicians – Describe in detail the classes you will provide for Voting Machines Technicians responsible for setting up, testing, deploying and maintaining the proposed pollsite voting system prior to the Primary & General Elections in 2009.		
9) Training Pollworkers – When the Board is conducting classes for more than 40,000 pollworkers, how do you plan to provide a corps of qualified trainers to conduct hands-on training directly on the proposed voting system for each pollworker prior to the Primary & General Elections in 2009?		
10) Training Modifications – Indicate the ways in which the vendor would be willing to modify its training program to accommodate the needs of BOE in NYC.		

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>11) Vendor “Train the Trainer” Support – Indicate the types of classes and the number of vendor support staff, and the number of hours or days of monitoring support the vendor will provide to monitor BOE in NYC led training of pollworkers for Election Day:</p> <p>a) Primary in 2009. b) General in 2009.</p>		
<p>12) Ongoing “Train the Trainer” Support - Indicate the proposed levels of support for elections thereafter</p>		

5.6.4 Pollworker Training

Pollworker Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Pollworker Training Plan – Describe your plan for training NYC’s 40,000 pollworkers.</p>		
<p>2) Timing of Training - Pollworkers must be trained as close to an election as possible. How will the Proposer meet this requirement?</p>		
<p>3) Hands-On Training - NYC experience is that training is most effective when trainees have direct hands-on training on the voting system (no more than 6 trainees per machine). How will the Proposer meet this requirement?</p>		
<p>4) Trainer Qualifications - NYC would like the Proposer to provide qualified (certified?) trainers for training for the initial election.</p>		
<p>5) Types of classes - Is training provided in a single session or are there multiple classes (equipment training, procedure training, simulated pollsite training)?</p>		
<p>6) Training Sub-contractor - Will a sub-contractor who is a specialist in training be included as part of the training program?</p>		
<p>7) Training Videos - Will videos be developed on NYC pollworker training and deployed at each training session to ensure training consistency?</p>		

5.6.5 First-Time Support

First-Time Support Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) <i>First-Time Implementation Services</i> – What first-time support services does the Proposer offer?		

5.6.6 One-time Other Services

One-time Other Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) <i>Project Management</i> – The Proposer shall provide the following Project Management Services for the project tasks under their control: <ul style="list-style-type: none"> a) Project Reporting b) Project Scheduling & Planning c) Change Management d) System Implementation e) Data Conversion f) Interface Implementation g) Testing h) Knowledge/Skills Transfer i) Training j) System and Training Documentation k) Notification Process for Delivery of PVS 		
2) <i>Quality Assurance</i> – Describe your proposed quality assurance and testing practices. Explain your internal quality management program. This should include reference to the use of any specific methodologies, as well as the receipt of any quality certifications.		
3) <i>Project Methodology</i> – BOE in NYC expects that Project Management Institute project management and control methodologies, or their equivalent, will be used.		

5.6.7 Public Education Assistance

Public Education Assistance Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) <i>Voter Education Programs</i> – Describe the proposed approach and methodology for participating in voter education.		
2) <i>Voter Education Material</i> – Describe the proposed type and quantity of voter education materials to be provided.		
3) <i>Voter Demonstration Equipment</i> – BOE in NYC has found that dedicated voter demonstration equipment is useful in performing “road shows” to various community groups. Does your proposal include pollsite voting systems dedicated to this purpose? How many?		

5.7 On-Going Support

5.7.1 Warranty Services

Warranty Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) <i>Warranty Start</i> – The warranty period shall start when all components of the voting system are accepted into production and must cover both system function and performance.		
2) <i>Warranty</i> – For each component of the PVS, (including batteries, carts, accessories, etc.) describe the proposed terms of your warranty program and describe how they will meet the needs of BOE in NYC and State OGS Contract.		

Warranty Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>3) Fixes During Warranty – Describe the proposed methodology for reporting and tracking bugs and anomalies discovered during the warranty period. Describe how you will notify BOE in NYC staff that a fix had been developed, was applied, and is ready for testing. Do you track the date of each sub-event (report of problem, initial fix, fix applied, fix tested, fix verified, fix implemented to production, etc.)?</p>		
<p>4) Upgrades During Warranty – Indicate to what extent the cost of system hardware and software upgrades are covered during the warranty period.</p>		
<p>5) Requested Upgrades – Describe the process of providing hardware and software updates for enhancements requested by BOE in NYC during warranty in accordance with the State BOE rules and regulations.</p>		
<p>6) Periodic Upgrades – Describe the process of providing periodic hardware and software updates during warranty including BOE in NYC staff roles and typical timelines.</p>		
<p>7) Warranty Period –</p> <ul style="list-style-type: none"> a) For each component of the PVS, when does the Proposer consider the 5 year guarantee on parts and service to begin? b) BOE in NYC requires that for security reasons, all access for system support be on-site, unless specifically agreed to by BOE in NYC. Whenever remote support is provided, this must be under strict supervision of BOE in NYC. Describe your approach to meeting this requirement. 		

5.7.2 Staff Training

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>8) Ongoing Staff Training Support – Describe available ongoing training support for staff in the following areas:</p> <ul style="list-style-type: none"> a) Refreshing skills of existing staff on existing equipment and processes b) Training new staff on existing equipment and processes c) Training new and existing staff on new processes developed over the life of the EMS and PVSeS. d) Training new and existing staff on upgrades and expanded capabilities over the life of the EMS and the PVSeS. 		

5.7.3 Pollworker Training

Poll Working Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>9) Ongoing Poll Working Training Support – Describe available ongoing training support for pollworkers in the following areas:</p> <ul style="list-style-type: none"> a) Refreshing pollworker skills of existing staff on existing equipment and processes b) Training pollworkers on new processes developed over the life of the EMS and PVSeS. c) Training pollworkers on upgrades and expanded capabilities over the life of the EMS and the PVSeS. 		

5.7.4 Ongoing Support Services

Support Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) <i>Pre-election Number & Skills of Support Staff (On-Site, Off-Site)</i> – Describe the number and skill levels of proposed full-time permanent vendor staff that will support (show on-site and off-site separately) BOE in NYC prior to:</p> <ul style="list-style-type: none"> a) Election Day for the Primary in 2009 b) Election Day for Primary Run-off in 2009 (14 days after Primary) c) Election Day for the General Elections in 2009 d) And for any other Elections that occur for the term of the contract. 		
<p>2) <i>Election Day Support For Pollworkers, & Technicians</i> – BOE in NYC believes that it will need approximately one (1) instructional support person for every 20 pollsites and one (1) technical support person for every 40 poll sites. Describe the number and skill level of proposed full-time permanent vendor staff that will support (show on-site and off-site separately) BOE in NYC on:</p> <ul style="list-style-type: none"> a) Election Day for the Primary in 2009 b) Election Day for Primary Run-off in 2009 c) Election Day for the General Elections in 2009 d) Election Day thereafter 		
<p>3) <i>Repair Due to Trucking</i> – Describe the resources and services you will provide to repair or replace PVS devices damaged during transport to, and from, the poll site.</p> <ul style="list-style-type: none"> a) Will you provide BOE with accounting for these costs to repair should they not be under warranty? 		

Support Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>4) Replacement of Accessories Not Returned on Election Day – Describe the resources and services you will provide to replace accessories such as keys, power cords, extension cords, head phones and rocker paddles that are not returned on Election Day.</p>		
<p>5) Spare Parts & Accessories and Supplies – Indicate if and which spare parts, accessories and supplies must be purchased and kept in inventory at BOE in NYC Facilities. Confirm that all of these items are listed in your OGS Contract Price List.</p>		
<p>6) Help Desk – Describe your Help Desk and the procedures and problem resolution approach proposed for BOE in NYC.</p>		
<p>7) Escalation Procedure – Describe the proposed escalation procedure to handle support calls and assure timely resolution of support and maintenance requests.</p>		
<p>8) Help Desk Reporting – Describe the software used at your Help Desk to track problems reported. Do you agree to provide reports, on request, to BOE in NYC detailing the problems reported and their open/closed status?</p>		
<p>9) Mandated Changes – Describe your provisions for upgrades to the software in a timely manner for changes required by law for the proposed voting system.</p>		
<p>10) Requested Upgrades – Describe the process of providing software updates for enhancements requested by BOE in NYC in accordance with the State BOE rules and regulations.</p>		

Support Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>11) Periodic Upgrades – Provide description of the proposed software enhancement program including schedule of regular software updates in accordance with the State BOE rules and regulations.</p>		
<p>12) Support Contact – Identify one technical support contact that BOE in NYC system administrators can use to directly communicate technical issues.</p>		
<p>13) Maintenance Period – Specify an offer for annual maintenance services for 1, 3 and 5 years after voting system warranty period.</p>		
<p>14) List of Past Upgrades – Provide a list of past software upgrades so that BOE in NYC can discern the history, frequency and scope of change to the proposed voting system.</p>		

5.7.5 Testing

Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Ongoing Testing Support – In addition the “Post-Election Activities & Periodic Testing” and “Receipt & Acceptance Testing” referenced else where in this section, describe the ongoing testing support offered for the following situations:</p> <ul style="list-style-type: none"> a) Problem Detection & Resolution b) Recertification after repair c) Recertification after upgrade d) Periodic Maintenance e) End of Life Processing 		

5.8 Vendor Strength & Experience Requirements

5.8.1 Certification (2002 & 2005)

Certification (2002 & 2005) Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Certification to 2002 Federal Guidelines - Indicate which proposed voting system components are certified to federal 2002 Guidelines. Provide dates and evidence of when software, hardware, and firmware received certification.</p>		
<p>2) Certification to 2005 Federal Guidelines – Indicate which proposed voting system components are certified to federal 2005 Guidelines. Provide dates and evidence of when software, hardware, and firmware received certification.</p>		
<p>3) Certification in Any Other Jurisdiction – Indicate any other jurisdictions where the proposed hardware and software (or similar) has been certified. List the type of certification awarded and any conditions or provisions.</p>		
<p>4) Certification Denied or Decertification – Indicate any other jurisdictions where the proposed hardware and software (or similar) has been refused certification or has been decertified. List the type of certification awarded and any conditions or provisions.</p>		

5.8.2 Reference Jurisdictions

Reference Jurisdictions Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Vendor Voting System References – Provide five (5) references including name & size of jurisdiction, type & number of voting systems, date of first election, contact information including name, title, phone number and email address.</p>	<p>Reference #1:</p> <p>Reference #2:</p> <p>Reference #3:</p> <p>Reference #4:</p> <p>Reference #5:</p>	<p>Reference #1:</p> <p>Reference #2:</p> <p>Reference #3:</p> <p>Reference #4:</p> <p>Reference #5:</p>
<p>2) Current Use – List every jurisdiction where your proposed voting system is currently used. Include in the list the number of registered voters, number of devices and languages used for each of these jurisdictions.</p>		

5.8.3 Election Experience

Election Experience Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) Organizational Capability –</p> <p>a) Describe your organizational capability (e.g., technical, managerial and financial) to successfully provide the requisite products and services to the BOE in NYC for the 2009 Primary, Run-off and General Elections.</p> <p>b) For the 2010 Primary and General Elections?</p>		
<p>2) Qualified and Experienced Staff – Indicate the number of full-time permanent staff dedicated to voting and elections systems in the US. For each such staffer person, indicate number of elections they have supported.</p>		

Election Experience Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>3) <i>Indicate Names & Titles</i> – Indicate the names and titles of staff that will be assigned and the names and numbers of staff that will be dedicated to BOE in NYC for 2009 primary & general elections.</p>		

5.8.4 Litigation

Litigation Subcategories	Vendor Response
<p>1) ³WITHIN THE PAST FIVE (5) YEARS, HAS THE VENDOR, ANY PRINCIPAL, OWNER, OFFICER, MAJOR STOCKHOLDER (10% OR MORE OF THE VOTING SHARES FOR PUBLICLY TRADED COMPANIES, 25% OR MORE OF THE SHARES FOR ALL OTHER COMPANIES), AFFILIATE⁴ OR ANY PERSON INVOLVED IN THE BIDDING, CONTRACTING OR LEASING PROCESS BEEN THE SUBJECT OF ANY OF THE FOLLOWING:</p>	
<p>a) <i>Conviction for a Crime</i> - A judgment or conviction for any business related conduct constituting a crime under federal, state or local government law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing or bid collusion or any crime related to truthfulness and/or business conduct?</p>	<p>Yes or No. If Yes, describe.</p>
<p>b) <i>Criminal Investigation or Indictment</i> - A criminal investigation or indictment for any business related conduct constituting a crime under federal, state or local government law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing or bid collusion or any crime related to truthfulness and/or business conduct?</p>	<p>Yes or No. If Yes, describe.</p>

³ Taken from OGS RFP for Voting Systems.

⁴ "Affiliate" meaning: (a) any entity in which the vendor owns more than 50% of the voting stock; (b) any individual, entity or group of principal owners or officers who own more than 50% of the voting stock of the vendor; or (c) any entity whose voting stock is more than 50% owned by the same individual, entity or group described in clause (b). In addition, if a vendor owns less than 50% of the voting stock of another entity, but directs or has the right to direct such entity's daily operations, that entity will be an "affiliate" for purposes of this questionnaire.

Litigation Subcategories	Vendor Response
<p>c) <i>Unsatisfied Judgment, Injunction or Lien</i> - an unsatisfied judgment, injunction or lien for any business related conduct obtained by any federal, state or local government agency including, but not limited to, judgments based on taxes owed and fines and penalties assessed by any federal, state or local government agency?</p>	<p>Yes or No. If Yes, describe.</p>
<p>d) <i>Civil or Criminal Investigation</i> - An investigation for a civil or criminal violation for any business related conduct by any federal, state or local agency?</p>	<p>Yes or No. If Yes, describe.</p>
<p>e) <i>Grant of Immunity</i> - A grant of immunity for any business-related conduct constituting a crime under federal, state or local governmental law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing, bid collusion or any crime related to truthfulness and/or business conduct?</p>	<p>Yes or No. If Yes, describe.</p>
<p>f) <i>Suspension or Debarment</i> - A federal, state or local government suspension or debarment from the contracting process?</p>	<p>Yes or No. If Yes, describe.</p>
<p>g) <i>Contract Suspension or Termination</i> - A federal, state or local government contract suspension or termination for cause prior to the completion of the term of a contract?</p>	<p>Yes or No. If Yes, describe.</p>
<p>h) <i>Denial of a Lease or Contract Award</i> - A federal, state or local government denial of a lease or contract award for non-responsibility?</p>	<p>Yes or No. If Yes, describe.</p>
<p>i) <i>Administrative Proceeding or Civil Action</i> - An administrative proceeding or civil action seeking specific performance or restitution in connection with any federal, state or local contract or lease?</p>	<p>Yes or No. If Yes, describe.</p>
<p>j) <i>Willful Violation of Law or Regulation</i> - A federal, state or local determination of a willful violation of any public works or labor law or regulation?</p>	<p>Yes or No. If Yes, describe.</p>
<p>k) <i>Imposed Sanction</i> - A sanction imposed as a result of judicial or administrative proceedings relative to any business or professional license?</p>	<p>Yes or No. If Yes, describe.</p>
<p>l) <i>Consent Order</i> - A consent order with the New York State Department of Environmental Conservation, or a federal, state or local government enforcement determination involving a violation of federal, state or local laws?</p>	<p>Yes or No. If Yes, describe.</p>
<p>m) <i>OSHA Notification</i> - An Occupational Safety and Health Act citation and Notification of Penalty containing a violation classified as serious or willful?</p>	<p>Yes or No. If Yes, describe.</p>

Litigation Subcategories	Vendor Response
<p>n) <i>MacBride Fair Employment Principles</i> - A rejection of a bid on a New York State contract or a lease with the State for failure to comply with the MacBride Fair Employment Principles?</p>	<p>Yes or No. If Yes, describe.</p>
<p>o) <i>Citation, Violation Order, Pending Hearing or Proceeding</i> - A citation, violation order, pending administrative hearing or proceeding or determination issued by a federal, state or local government for violations of:</p> <ul style="list-style-type: none"> i) health laws, rules or regulations ii) unemployment insurance or workers' compensation coverage or claim requirements iii) ERISA (Employee Retirement Income Security Act) iv) human rights laws v) federal U.S. Citizenship and Immigration Services laws vi) Sherman Act or other federal anti-trust laws 	<p>Yes or No. If Yes, describe.</p>
<p>p) <i>Voluntary Exclusion from Contracting</i> - Entered into an agreement to a voluntary exclusion from contracting with a federal, state or local governmental entity?</p>	<p>Yes or No. If Yes, describe.</p>
<p>q) <i>MBE/WBEA Decertification, Revocation or Forfeiture</i> - Denial, decertification, revocation or forfeiture of Women's Business Enterprise, Minority Business Enterprise or Disadvantaged Business Enterprise status?</p>	<p>Yes or No. If Yes, describe.</p>
<p>r) <i>MBE/WBEA Violation</i> - A rejection of a low bid on a federal, state or local contract for failure to meet statutory affirmative action or Minority or Women's Business Enterprise or Disadvantaged Business Enterprise status requirements on a previously held contract?</p>	<p>Yes or No. If Yes, describe.</p>
<p>s) <i>Non-responsibility Finding Under Exec Order 127</i> - A finding of non-responsibility by an agency or authority due to the intentional provision of false or incomplete information as required by Executive Order 127.</p>	<p>Yes or No. If Yes, describe.</p>
<p>2) <i>Past Performance Issues</i> – Describe any past issues regarding the performance of your proposed EMS, or voting devices including delivery issues, support services issues, or de-certification issues, etc.</p>	

5.8.5 Manufacturing & Delivery Capacity

Manufacturing & Delivery Capacity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) Manufacturing Site(s) – List the sites, their square footage & address in which manufacture of the proposed voting system shall occur.	Manufacturing Sites:	Manufacturing Sites:
2) Peak Production – Provide the peak production capacity in units per month for each site. Show evidence of when this capacity was reached.	Production in Units per Month:	Production in Units per Month:
3) Initial Delivery – Indicate how soon (in business days) after contract award can delivery of a copy of the proposed EMS and one voting system be delivered to the BOE in NYC	Number of Business Days After Award:	Number of Business Days After Award:
4) Subsequent Deliveries – Indicate how soon (in business days) after award the following numbers of voting systems can be delivered to the BOE in NYC.	+20 Units +50 Units: +100 Units: +500 Units: +1,000 Units: +10,000 Units: +Remainder of Units:	+20 Units +50 Units: +100 Units: +500 Units: +1,000 Units: +10,000 Units: +Remainder of Units:

5.8.6 Summary of Key Proposal Considerations

These are key proposal considerations for BOE in NYC. Each of them has been incorporated into the appropriate proceeding sections. The questions should be answered in the appropriate section, but the question is also shown here to ensure that particular attention is paid to answers to these questions.

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>1) NYC Ballot Formats – Describe how the proposed Pollsite Voting System will handle all of the required ballot formats for all New York City Elections, including listing parties across the ballot in the General Election.</p> <p>(See Section 5.2.7)</p>		
<p>2) Languages Supported – Does the proposed voting system provide text and audio in the following languages: English, Spanish, Mandarin Chinese, Cantonese Chinese and Korean? Can all instructions and ballot information be provided to the voter in each of these languages?</p> <p>(See Section 5.2.1)</p>		
<p>3) Ballot Presentation and Cast Modes – List all the ways in which a ballot may be presented (i.e. screen, synthesized audio, recorded audio, printed on paper) and all the ways in which a ballot may be cast (i.e. touch screen, QWERTY keyboard, alpha keyboard, keypad, telephone keypad, sip & puff, rocker paddle, etc.).</p> <p>a) Can every presentation mode be used with every cast mode?</p> <p>b) If not, which combinations cannot be used?</p> <p>c) If so, can the voter vote completely without assistance (including write-ins) using any combination of modes?</p> <p>d) If not, which mode combinations require pollworker assistance?</p> <p>(See Section 5.4.3)</p>		

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>4) Audio Ballot Creation – Describe your recommended approach to audio ballot creation for BOE in NYC. (See Section 5.2.3)</p>		
<p>5) Ballot Proofing – Describe your recommended approach to ballot proofing for BOE in NYC including displayed, printed, synthesized, spoken ballots in English, Spanish, Mandarin Chinese, Cantonese Chinese and Korean and including ballot rotation. (See Section 5.2.3)</p>		
<p>6) Ballot Cut-off – What lead time do you recommend for the finalization of ballot definitions to allow for preparation of your voting system in time for Election Day? (See Section 5.3.2)</p>		
<p>7) Ballot Activation – What mechanism is used to activate the correct ballot for the voter? (See Section 5.4.1)</p>		
<p>8) Interface - How will you participate in the development of the ballot data extraction procedures from the Board's existing computer systems? How long do you estimate this effort will take? (See Section 5.6.1)</p>		
<p>9) Training Board Staff - How do you plan to provide training for the Board's planning, development, managerial, supervisory and training staffs so that they can plan, develop, manage, supervise and train Board staff and pollworkers in the use of new procedures that will result from the use of the proposed new voting system? (See Section 5.6.3)</p>		

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>10) Training EMS - Describe in detail the classes you will provide for Broad technical staff who will be responsible for administering, testing and setting up the proposed voting system's software.</p> <p>(See Section 5.6.3)</p>		
<p>11) Training Technicians- Describe in detail the classes you will provide for Voting Machines Technicians responsible for setting up, testing, deploying and maintaining the proposed pollsite voting system.</p> <p>(See Section 5.6.3)</p>		
<p>12) Training Pollworkers - When the Board is conducting classes for more than 30,000 pollworkers, how do you plan to provide a corps of qualified trainers to conduct hands-on training directly on your equipment for each pollworker?</p> <p>(See Section 5.6.3)</p>		
<p>13) Pollsite Voting System Boot Time – What would be the boot-up time for the Pollsite Voting System based on the number of lots, recorded voice for office, candidate names, and instructions, for five languages in keeping with the volumes shown in Appendix A and including all other factors that would affect boot-up time for BOE.</p> <p>(See Section 5.2.6)</p>		
<p>14) Support - How do you plan to provide a corps of qualified personnel to provide on-site support at pollsites throughout Election Day, allowing for one (1) support person for approximately forty (40) Election Districts geographic proximity?</p> <p>(See Section 5.7.4)</p>		
<p>15) Opening & Closing Polls - Describe the process for opening and closing polls and what device (if any) is used in these processes.</p> <p>(See Section 5.4.1)</p>		

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
<p>16) PMD Collection - What procedures do you recommend on Election Night for the collection of portable memory devices containing the election results from each pollsite, and the entry of said results into the system's software, and reporting of same? How long do you estimate the described Election Night procedure will take in NYC?</p> <p>(See Section 5.4.1)</p>		
<p>17) Canvass - Describe the procedure you recommend to balance voter and ballot counts at the conclusion of an election (e.g. voters, number of ballots, public counters, rejected VVPATs, fled voter, no vote, under-votes, etc.) Describe the procedure for both a General and a Primary. How are all relevant numbers maintained for each party in a Primary Election? Describe functions and reports that assist with the procedure.</p> <p>(See Section 5.3.3)</p>		
<p>18) 3% Audit - What procedure do you recommend for the required manual tallying of Voter Verified ballot selections and the audit of the electronic results against those manual tallies?</p> <p>(See Section 5.4.1)</p>		

6.0 Appendix A – Glossary of Terms

Term	Type	Description
Absentee Ballot	EAC	Ballot prepared or designed for an absentee voter. Definition of an absentee ballot is jurisdiction dependent.
Acceptance	IT	The designated period following completion of the design, installation, and operation of the statewide voter registration system by the selected respondent. During the acceptance period, the State will evaluate all features and performance of services required to be provided under the contract.
Acceptance Testing	EAC	Examination of a voting system and its components by the purchasing election authority (usually in a simulated-use environment) to validate performance of delivered units in accordance with procurement requirements, and to validate that the delivered system is, in fact, the certified or qualified system purchased.
Acceptance Testing	IT	User testing conducted to verify system/component functionality prior to acceptance and payment by customer. For this project, acceptance testing is the State-required test to validate that the BMD's received by BOE in NYC are fully functional.
Ad-hoc	IT	Unplanned, impromptu.
Affidavit Ballot	NYS	See Provisional Ballot
API	IT	Application Programming Interface
ASCII	IT	American Standard Code for Information Interchange.
Authorized User	IT	Those persons with authorized system security profiles able to access the system.
Ballot Configuration	EAC	Particular set of contests to appear on the ballot for a particular election district, their order, the list of ballot positions for each contest, and the binding of candidate names to ballot positions.
Ballot Counter	EAC	Counter in a voting device that counts the votes cast in a single election or election test.
Ballot Counting Logic	EAC	Software logic that defines the combinations of voter choices that are valid and invalid on a given ballot and that determines how the vote choices are totaled in a given election. States differ from each other in the way they define valid and invalid votes and in their vote-counting procedures.
Ballot Format	EAC	One of any number of specific ballot configurations issued to the appropriate precinct. At a minimum, ballot formats differ from one another in content. They may also differ in size of type, graphical presentation, language used, or method of presentation (e.g., visual or audio). Also referred to as ballot style.
Ballot Image	EAC	(1) Electronically produced record of all votes cast by a single voter. (2) Record of all votes produced by a single voter.
Ballot Preparation	EAC	Selecting the specific contests and questions to be contained in a ballot format and related instructions; preparing and testing election-specific software containing these selections; producing all possible ballot formats; and validating the correctness of ballot materials and software containing these selections for an upcoming election.

Term	Type	Description
Ballot Marking Device (BMDs) aka Electronically-Assisted Ballot Marker (EBM)	EAC	Machines that provide assistance to voters who are visually impaired, who have difficulty reading English or in other cases where a voter has difficulty correctly marking by hand a preprinted paper ballot that is to be counted in optical scan systems. The device marks, or helps to mark selected vote choices on a previously inserted, preprinted paper ballot. The machine then provides audio, tactile, or visual feedback to the voter on what choices they have made on the ballot. The resulting ballots are later tabulated on the same unit that processes ordinary hand-marked paper ballots.
Ballot Production	EAC	Process of converting the ballot format to a medium ready for use in the physical ballot production or electronic presentation.
Ballot Rotation	EAC	Process of varying the order of the candidate names within a given contest.
Ballot Scanner	EAC	Device used to read the data from a paper ballot or ballot card.
Ballot Set	EAC	See "Ballot Image."
Ballot Style	EAC	See ballot format.
Ballot Proofing Process	Voting	The process of reviewing of ballots to ensure their accuracy. The process involves comparisons between the ballots shown in EMS system, on paper printouts, in multiple languages and in audio in multiple languages.
Baseline	EAC	Product configuration that has been formally submitted for national certification, which thereafter serves as the basis for further development; some degree of certification review and testing to be approved for use in federal elections.
Batch Process	IT	The grouping of multiple similar transactions assigned as a batch with a unique batch identifier that is processed as a group.
BPR	IT	Business Process Reengineering.
Candidate Register	EAC	Record that reflects the total votes cast for the candidate. This record is augmented as each ballot is cast on a DRE or as digital signals from the conversion of voted paper ballots are logically interpreted and recorded.
Candidate Inspection	NYS	Pre-election event allowing candidates to view all forms of the ballots used for an election to confirm accuracy.
Canvass	EAC	Compilation of election returns and validation of the outcome that form the basis of the official results by political subdivision.
Re-canvassing	NYS	A second compilation and count of the election returns which serve as the official record of the election returns. Compilation of election returns for validation and approval by the political subdivision of the outcome, which form the basis for the official results.
CASS	IT	Coding Accuracy Support System (CASS) - The process of correcting mailing address list to conform to USPS standards. CASS improves the accuracy of carrier route, five-digit ZIP, ZIP+4, and delivery point codes that appear on mail pieces.
Catastrophic System Failure	EAC	Total loss of function or functions, such as the loss or unrecoverable corruption of voting data or the failure of an on-board battery of volatile memory.
CD	IT	Compact Disc
CD-ROM	IT	Compact Disc – Read Only memory
Certification Testing	EAC	Testing performed under either national or state certification processes to verify voting system conformance to requirements.
Challenged Ballot	EAC	Ballot provided to individuals whose eligibility to vote has been questioned. Once voted, such ballots must be kept separate from other last ballots and are not included in the tabulation until after the voter's eligibility is confirmed. See also provisional ballot. NYS definition differs from EAC definition.

Term	Type	Description
Closed Primary	EAC	Primary election in which voters receive a ballot listing only those candidates running for office in the political party with which the voters are affiliated, along with nonpartisan offices and ballot issues presented at the same election.
CM	IT	Configuration Management.
Commercial Off-the-Shelf (COTS)	EAC	Commercial, readily-available hardware devices ((which may be electrical, electronic, mechanical, etc.; such as card readers, printers, or personal computers) or software products (such as operating systems, programming language compilers, or database management systems, subsystems, components; software, etc.).
Component	EAC	(1) Element within a larger system; a component can be hardware or software. For hardware, a physical part of a subsystem that can be used to compose larger systems (e.g., circuit boards, internal modems, processors, computer memory). For software, a module of executable code that performs a well-defined function and interacts with other components. (2) Individual elements or items that collectively comprise a device, e.g., circuit boards, internal modems, processors, disk drives, and computer memory.
Configuration Identification	EAC	Element of configuration management, consisting of identifying the configuration items for a system and recording their functional and physical characteristics in technical documentation.
Configuration Item	EAC	Aggregation of hardware, software, or both that is designated for configuration management and treated as a single entity in the configuration management process.
Configuration Management	EAC	Discipline applying technical and administrative direction and surveillance to identify and document functional and physical characteristics of a configuration item, control changes to these characteristics, record and report change processing and implementation status, and verify compliance with specified requirements.
Configuration Management Plan	IT	Document detailing the process for identifying, controlling and managing various released items (code, hardware, documentation etc.)
Configuration Status Accounting	IT	An element of configuration management, consisting of the recording and reporting of information needed to manage a configuration effectively. This information includes a listing of the approved configuration identification, the status of proposed changes to the configuration, and the implementation status of approved changes. (Patterned after IEEE Std. 610.12-1990)
COTS	IT	See "Commercial Off-the-Shelf."
Count	EAC	Process of totaling votes.
Cross-party Endorsement	EAC	Endorsement of a single candidate or slate of candidates by more than one political party. The candidate or slate appears on the ballot representing each endorsing political party. Also referred to as cross filing.
Cumulative Voting	EAC	Practice where voters are permitted to cast as many votes as there are offices to be filled. Voters are not limited to giving only one vote to a candidate. Instead, they can put multiple votes on one or more candidates.
Data Accuracy	EAC	(1) Data accuracy is defined in terms of ballot position error rate. This rate applies to the voting functions and supporting equipment that capture, record, store, consolidate and report the specific selections, and absence of selections, made by the voter for each ballot position. (2) The system's ability to process voting data absent internal errors generated by the system. It is distinguished from data integrity, which encompasses errors introduced by an outside source.

Term	Type	Description
Data Integrity	EAC	Invulnerability of the system to accidental intervention or deliberate, fraudulent manipulation that would result in errors in the processing of data. It is distinguished from data accuracy that encompasses internal, system-generated errors.
Database	IT	A set of related files that is created and managed by a database management system (DBMS).
DBA	IT	Database administrator
DBMS	IT	Database management system
Device	EAC	Functional unit that performs its assigned tasks as an integrated whole.
Direct Record Electronic (DRE) Voting System	EAC	Voting system that records votes by means of a ballot display provided with mechanical or electro-optical components that can be actuated by the voter, that processes the data by means of a computer program, and that records voting data and cast vote records in internal and/or external memory components. It produces a tabulation of the voting data stored in a removable memory component and/or in printed copy.
DR	IT	Disaster Recovery
Dress Rehearsal	NYC	A practice session of all Election Day Procedures to prepare for Election Day.
Election Coding	EAC	See "Election Programming."
Election Databases	EAC	Data file or set of files that contain geographic information about political subdivisions and boundaries, all contests and questions to be included in an election, and the candidates for each contest.
Election District (ED)	Voting	The smallest political subdivision in the City of New York. See Precinct.
Election Management System	EAC	Set of processing functions and databases within a voting system that define, develop and maintain election databases, perform election definition and setup functions, format ballots, count votes, consolidate and report results, and maintain audit trails.
Election Programming	EAC	Process by which election officials or their designees use voting system software to logically define the ballot for a specific election.
Firmware	EAC	Computer programs (software) stored in read-only memory (ROM) devices embedded in the system and not capable of being altered during system operation.
FTP	IT	File Transfer Protocol - a communication protocol for transferring data between two computers
Functional Configuration Audit (FCA)	EAC	Exhaustive verification of every system function and combination of functions cited in the vendor's documentation. The FCA verifies the accuracy and completeness of the system's Voter Manual, Operations Procedures, Maintenance Procedures, and Diagnostic Testing Procedures.
Functional Test	EAC	A test performed to verify or validate the accomplishment of a function or a series of functions. For this project, testing performed after Acceptance Test to ensure that the EMS, smart cards, and BMD are properly functioning in the BOE in NYC environment
GB	IT	Billions of Bytes (one byte= one character)
General Election	EAC	Election in which voters, regardless of party affiliation, are permitted to select candidates to fill public office and vote on ballot issues.
GIS	IT	Geographic Information System
GUI	IT	Graphic user interface - a user interface for accessing a program or operating system that is based on graphics (icons and pictures and menus) instead of text

Term	Type	Description
Implementation	IT	The successful design, configuration, development, installation, and operation of the statewide voter registration system as specified in the contract resulting from the system requirements provided under this RFP.
Independent Testing Authority (ITA)	EAC	Deprecated, replaced by Voting System Testing Laboratory. Prior usage referred to independent testing organizations certified by the National Association of State Election Directors (NASSED) to perform voting system qualification testing.
Installation	IT	The delivery and physical setup of products or services requested in this RFP.
Integration Testing	IT	Multi-module and interface testing
Interface	IT	Facilities for passing data between systems or sub-components of a system. For this project, an interface is an extraction of relevant election data from S-ELECT and translation database (and potentially audio data) into EMS. Validation of data done as part of functional testing.
IT	IT	Information technology
LAN	IT	Local area network - generally, the network(s) contained within a single building or campus
Logic and Accuracy Testing	EAC	Testing of the tabulator setups of a new election definition to ensure that the content correctly reflects the election being held (i.e., contests, candidates, number to be elected, ballot styles, etc.) and that all voting positions can be voted for the maximum number of eligible candidates and that results are accurately tabulated and reported.
Lot	NYC	Lot is the ballot definition for all the Election Districts having the same contests in an election; meaning the same political sub-divisions and candidates.
Logical Correctness	EAC	Condition signifying that, for a given input, a computer program will satisfy the program specification and produce the required output.
Marksense	EAC	System by which votes are recorded by means of marks made in voting response fields designated on one or both faces of a ballot card or series of cards. Marksense systems may use an optical scanner or similar sensor to read the ballots. Also known as Optical Scan.
MB	IT	Millions of Bytes (one byte = one character)
Measure Register	EAC	Record that reflects the total votes cast for and against a specific ballot issue. This record is augmented as each ballot is cast on a DRE or as digital signals from the conversion of voted paper ballots are logically interpreted and recorded.
MHz	IT	Mega Hertz (Hertz = a measure of frequency in cycles per second; Mega = million).
NCOA	IT	National Change of Address - a USPS program that tracks mailing address changes
Nonvolatile Memory	EAC	Memory in which information can be stored indefinitely with no power applied. Static RAM, ROMs and EPROMs are examples of nonvolatile memory.
OCR	IT	Optical Character Reader
Open Primary	EAC	Primary election in which voters may vote, regardless of political affiliation. Some states require voters to publicly declare their choice of party ballot at the polling place, after which the poll worker provides or activates the appropriate ballot. Other states allow the voters to make their choice of party ballot within the privacy of the voting booth. Voters are also may be permitted to vote on nonpartisan offices and ballot issues that are presented at the same election.

Term	Type	Description
Optical Scan Voting System	NYS	A voting system in which a voter records his or her vote by placing a mark in a designated voting response field on a paper ballot or card, which is read and tabulated using optical-scan technology or a mark-sense system that reads the paper ballot or card by scanning the ballot and interpreting the marks. Styles include precinct-based and central-count paper-based systems
Over-votes	EAC	Voting for more than the maximum number of selections allowed in a race.
Paper-Based Voting System	EAC	Voting system that records votes using one or more ballot cards or a written list of choices.
Paper-based Voting Systems	NYS	Any electronic or computerized ballot counting system or equipment which tabulates and reports votes cast on paper ballots
Partisan Office	EAC	Elected office for which candidates run as representatives of a political party.
PC	IT	Personal Computer
Physical Configuration Audit (PCA)	EAC	(1) Inspection by a test lab that compares the voting system components submitted for certification testing to the vendor's technical documentation and confirms that the documentation submitted meets the requirements of the Guidelines. Includes witnessing of the building of the executable system to ensure that the release is built from the tested components.
PMI	IT	Project Management Institute
Political Subdivision	EAC	Any unit of government, such as counties and cities, school districts, and water and conservation districts having authority to hold elections for public offices or on ballot issues.
Polling Location	EAC	Physical address of a polling place.
Polling Site	NYS	Facility that is staffed by poll workers and equipped with voting equipment, to which voters assigned to that site come to cast ballots in-person.
Pollsite Voting System	NYS	That portion of a Voting System that is intended for use at a pollsite.
Portable Memory Device.	IT	A device that can be hand-carried which contains electronic memory which can be written and erased.
Precinct	EAC	Administrative division representing a geographic area. Generally, voters in a precinct are eligible to vote in a general election using the same ballot format. In NYC, the term "precinct" is equivalent to the term "Election District".
Primary Election	EAC	Election held to determine which candidate will represent a political party for a given office in the general election. Some states have an open primary, while others have a closed primary.
Primary Presidential Delegation Nominations	EAC	Primary election in which voters choose the delegates to the Presidential nominating conventions allotted to their states by the national party committees.
Provisional Ballot	EAC	Ballot provided to individuals who claim they are registered and eligible to vote but whose eligibility or registration status cannot be confirmed when they present themselves to vote. Once voted, such ballots must be kept separate from other ballots and are not included in the tabulation until after the voter's eligibility is confirmed. See also challenged ballot. In NYC, the term "Provisional Ballot" is referred to as "Affidavit Ballot."
Punch-card Voting System	EAC	Voting system where votes are recorded by means of punches made in voting response fields designated on one or both faces of a ballot card or series of cards.
QA	IT	Quality assurance

Term	Type	Description
Qualification Number	EAC	Changed, replaced by Certification Number for EAC system certification process. A number issued by NASED (National Association of State Election Directors) to a system that has been tested by certified Independent Testing Authorities for compliance with the voting system standards. Issuance of a Qualification Number indicates that the system is qualified for use in federal elections.
Qualification Test Report	EAC	Changed, replaced by National Certification Test Report for EAC certification process.
RAD	IT	Rapid Application Development
RAID	IT	Redundant Arrays of Inexpensive Disk (storage for servers)
Recertification	EAC	National and/or State examination, and possibly retesting of a voting system that was modified subsequent to receiving national and/or state certification. The object of this process is to determine if the modification still permits the system to function properly in accordance with the requirements.
Road Show	NYC	Public education events using 'dummy' data to show BMD functionality.
Runoff Election	EAC	Election to select a winner following a primary or a general election, in which no candidate in the contest received the required minimum percentage of the votes cast. The two candidates receiving the most votes for the race in question proceed to the runoff election.
Scope Creep	IT	Change in the requirements during project implementation.
SDLC	IT	System Development Life Cycle
Simulation Testing	IT	Testing using production-like data, production-like volumes of data, production-like volumes of processes, and front to back simulation of business processes and functions.
Split Precinct	EAC	Precinct containing more than one ballot format in order to accommodate a contiguous geographic area served by the precinct that contains more than one election district.
SQL	IT	Structured Query Language
SRS	IT	Software Requirements Specification
Smart Cards	Voting	Cards that are encoded with the necessary information to activate the Pollsite Voting System for a given voter.
Support Software	EAC	Software that aids in the development or maintenance of other software, for example compilers, loaders and other utilities.
Support Response Time	IT	BOE in NYC defines support response time as the time that elapses between initial BOE in NYC request and acknowledgement and contractor's commencement of resolution.
System	IT	A group of related components that interact to perform a task.
System Reports	IT	Information generated from predefined or parameterized queries that may be presented as printed documents or viewed online.
System Security	IT	The protection of data against unauthorized access.
System Testing	IT	Business function testing across multiple modules (system components).
Tabulation	EAC	See "Count."
Test Cases	IT	Sample business data created/selected for specific testing objectives.
Testing	EAC	Determination of one or more characteristics of an object of conformity assessment, according to a procedure. Testing typically applies to materials, products, or processes.
UAT	IT	User Acceptance Testing

Term	Type	Description
Undervotes	EAC	(1) Occurs when the number of choices selected by a voter in a contest is less than the maximum number allowed for that contest or when no selection is made for a single choice race.
Validation	EAC	Process of evaluating a system or component during or at the end of the development process to determine whether it satisfies specified requirements.
Validation Testing	IT	Inspection/verification of system data.
Vendor	IT	Any successful respondent selected as a result of the procurement process to deliver the products and services requested by this RFP.
Verification	EAC	Process of evaluating a system or component to determine whether the products of a given development phase satisfy the conditions (such as specifications) imposed at the start of the phase.
Vote for N of M	EAC	Ballot choice in which voters are allowed to vote for a limited number of candidates for a single office from a larger field of candidates.
Voter Registration Card (VRC)	NYS	Voter affidavit of registration.
Voter Registration System	EAC	Set of processing functions and data storage that maintains records of eligible voters.
Voting Position	EAC	Specific response field on a ballot where the voter indicates the selection of a candidate or ballot proposition response
Voting System	NYS	The total combination of mechanical, electro-mechanical, or electronic equipment, and any ancillary equipment and all software, firmware, and documentation required to program, control, and support the equipment, all of which is used to define ballots, cast and count votes, report and/or display election results, and maintain and produce any audit trail information.
Voting Station	EAC	Location within the polling place where voters may record their votes. A voting station includes the voting booth or enclosure and the vote-capture and recording device.
Write-in Voting	EAC	To make a selection of an individual not listed on the ballot. In some jurisdictions, voters may do this by using a marking device to physically write their choice on the ballot or they may use a keypad, touch screen or other electronic means to enter the name, depending on the type of voting system in use.

7.0 Appendix B – Prices, Costs, Volumes & Subcontractors

See separate MS-Excel spreadsheet with file name:

“BOE in NYC RFI Fall 2009 App B Prices, Costs, Volumes & Subs v-4 Final”.

This file contains the following Tabs:

7.1 Instructions

7.2 Volumes of NYC

7.3 Subcontractors

7.4 Prices & Costs

8.0 Appendix C – Sample NYC Ballots

See three separate Adobe PDF files named:

8.1 NYC 2001 Dem Primary

8.2 NYC 2002 General Election

8.3 NYC 2003 Rep Primary

9.0 Appendix D – Error Messages

Insert separate Adobe PDF files named:

9.1 Appendix D-1 Inspector Messages

9.2 Appendix D-2 Voter Messages

9.3 Appendix D-3 Technical Messages