



Our customers come first.



# City of Philadelphia

## Request for Proposals: Bid #B1903107

### for

## Election System

### Online Submission

Prepared for:  
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Due Date:

December 28, 2018 at 5:00 PM EST

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# Cover Letter

## Company Profile

Dominion Voting Systems Inc. (“Dominion”) welcomes the opportunity to present our voting system, Democracy Suite®1, in response to Request For Proposal issued by the City of Philadelphia for an Election System.

In today’s election market, Dominion sets itself apart with a commitment to customer service and the use of superior technology to provide you with the best tools possible to meet your election needs. With our cutting-edge product, Democracy Suite, Dominion is prepared to equip Philadelphia with the most reliable, transparent, and accurate voting system technology available.

Dominion is a company that has distinguished itself while pursuing excellence in customer service by implementing a technical culture focused on achieving the highest levels of accuracy, reliability and transparency. In 2010, Dominion deepened its roots as a leading company in the elections industry with the acquisition of assets from both Premier Voting Solutions and Sequoia Voting Systems. Today, Dominion’s human resource pool of over 280 employees, consisting of seasoned election veterans and engineering experts has well over 2,000 years of combined elections experience conducting accurate and successful elections with our customers.

Dominion is headquartered in Denver, CO, with office locations in Toronto, ON, Jamestown and Endicott, NY, McKinney, TX, and San Leandro, CA. Dominion is strategically positioned in all 4 U.S. continental time zones to support its customer base of over 1,300 jurisdictions in 33 states. Dominion is one of the largest and most trusted providers of elections technology solutions in the United States and the world. As an example, during the U.S. Presidential Elections in November 2016, roughly 35% of registered American voters cast their ballots using our equipment.

## Local Service & Support

*We measure our success by the success of our customers.*

Dominion’s project team includes key experienced staff, with extensive expertise in system implementation, project management and customer service obtained through years of dedicated work for our customers. The City will also benefit from support by our team in Pennsylvania who have been providing elections services and support in Philadelphia, and throughout the Commonwealth for many years.

From complex implementations in large counties to providing comprehensive support for small counties, Dominion will use leading technology, combined with best practice project management methodologies and a commitment to customer service, to ensure the highest level of customer satisfaction.

## Accuracy, Accountability and Security

Democracy Suite uses advanced image processing and digital scanning technology to provide a high level of transparency and to make auditing simple and efficient. Our marginal mark technology ensures clear voter intent prior to the ballot being cast, giving voters the opportunity to correct an improperly marked ballot.

Additionally, every single ballot in the election is imaged and appended with Dominion's patented AuditMark, a record of how the system interpreted the voter's intent. With this feature, a range of election stakeholders including observers, supervisors, candidates, advocates, and auditors can perform software independent ballot-level auditing. Dominion is the only company to provide the exclusive AuditMark ballot-level audit trail.

Security from both external and internal threats to the voting system is of paramount importance. Democracy Suite's security protocols meet and exceed EAC requirements. All electronic records are digitally signed, all election records and database files are encrypted, and the entire election database is hardware encrypted.

## **End to End Elections Management**

### **Democracy Suite Election Management System**

Democracy Suite powers the entire voting system out of a single comprehensive database, with all the tools needed to simplify and streamline the elections process. All voting channels – whether voting absentee or overseas, accessible voting, or in-precinct voting – are supported and powered by Democracy Suite.

All pre-election and post-election tasks take place out of the same database – from ballot programming to results reporting on Election Night, Democracy Suite is a complete, end-to-end elections solution. Ballots are all created in the same database, the Election Event Designer module. Democracy Suite provides a single, powerful and versatile platform for election management, and is designed to suit the needs and requirements of jurisdictions large, medium, and small.

### **Paper Ballot**

Democracy Suite includes a paper-based optical scan system. Components – precinct and accessible – use or create a paper ballot, and every single ballot in the election is imaged and appended with the AuditMark. The ImageCast optical scan ballot is 8.5" wide and can vary between 11"-22" in length, and can be printed in four colors.

### **Precinct Tabulation**

With over 100,000 units deployed worldwide, Dominion's ImageCast Precinct tabulators have been widely used in elections across North America and internationally for almost a decade. The ImageCast Precinct is a robust, lightweight, and reliable optical scan tabulator.

At only 14lbs, the ImageCast Precinct is Dominion's most compact tabulator, with all the necessary features to meet Pennsylvania requirements. The ImageCast Precinct is designed to be 'plug and play,' making set up simple, efficient, and straightforward for operators. It also features



a user-friendly touchscreen interface for accessing administrative functions and providing voter feedback messages.

In addition, our Central Count Solution, the ImageCast Central, offers a high speed central count system that is accurate and highly scalable to meet all of your needs.

### **Accessible Voting**

Dominion's Democracy Suite was designed to provide a high level of accessibility, enabling all voters – regardless of ability – to vote in a private, independent and confidential manner. One of the most exciting components of the proposed system for Philadelphia is the ImageCast X, a precinct-based ballot marking device that includes accessible voting interfaces.

Fully integrated into the Democracy Suite platform, the ImageCast X takes advantage of commercially available technologies, and is driven by a robust, secure and flexible application developed by Dominion. The use of compact, commercially available hardware makes the ImageCast X a cost-effective and versatile accessible voting solution. It requires less space to warehouse and is more affordable than larger proprietary solutions, while at the same time offering full ADA compliance. The ImageCast X features the latest technological advances in accessible voting technology, providing more options for voters with accessibility needs to vote privately and independently.

### **Flexibility & Sustainability**

Dominion believes that election officials need solutions that can evolve and adapt to changes that may occur due to technological advances or legislative mandates Philadelphia can be confident that we will be a long-term technology partner. Democracy Suite is a modular solution that can be modified, upgraded, or expanded on a component basis, thus preserving each customer's investment.

Dominion's pursuit of ongoing innovation is fueled by the joint efforts of our employees and the wisdom of our customers. Our collaborative approach to innovation is what has made us an industry leader – we are more than an elections vendor, we are a partner.

In addition to working towards enhancing our existing ImageCast product line, moving forward - and, in line with market demand - Dominion will be focusing on leveraging COTS-based technologies for our new product offerings. Increasingly, election officials and voters alike expect to be able to leverage modern, every day technologies. Democracy Suite is leveraging more commercially available off-the-shelf hardware to deliver greater convenience, transparency, and accessibility to voters – as well as sustainability and greater efficiency for election officials – ultimately leading to significant cost-savings for constituents.

In order to continually offer our customers cutting-edge and state-of-the-art technologies, Dominion conducts annual federal certification campaigns, as well as regular state-level certification campaigns. We understand that needs and requirements in Philadelphia will continue to evolve dynamically, and so will our product offering for our Pennsylvania customers.

Elections are Dominion's only business, and, as such, our business is focused on these core values: relevant and timely product innovation, and exemplary customer service. Combined, these values make us the partner of choice for election officials across the United States, and globally.

It is our sincere desire to work with the City of Philadelphia to support the free and fair election process. We are actively pursuing this business opportunity with confidence in our solution - one which will meet and exceed requirements and expectations of election administrators and voters as outlined in the RFP.

As an established election provider in the United States, we have a diverse customer base with jurisdictions in 19 states that have successfully implemented our Democracy Suite system, including in the Commonwealth of Pennsylvania and also in the states of Tennessee, California, Colorado, Louisiana, Nevada, New Mexico, and New York, among others. We are keenly aware of the realities involved and what it takes to make a smooth transition to a new voting system platform and we are prepared to ensure your success.

Being a selected customer support vendor in Pennsylvania for many years, we understand the local, county and commonwealth-wide election landscape. We firmly believe that we have the products, resources and capacity to do the job to your complete satisfaction and provide the best pathway to your continued success.

Please do not hesitate to contact Dominion should you have any questions. We look forward to working with your team to support the democratic process in the City of Philadelphia.

Sincerely,



John Hastings, Regional Sales Manager  
Phone Number: 412-208-5073  
E-mail: [john.hastings@dominionvoting.com](mailto:john.hastings@dominionvoting.com)

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## Section 3 - Proposal

### 3.1 Company Overview

Provide a company overview that includes the following information:

- 1) **Name, street address, mailing address if different, email address, and telephone and facsimile numbers of the Applicant.**

Dominion Voting Systems, Inc.  
1201 18<sup>th</sup> Street, Suite 210  
Denver, CO 80202  
[Sales@DominionVoting.com](mailto:Sales@DominionVoting.com)  
Phone: (866) 654-8683  
Fax: (303) 291-3909

- 2) **Year established (include former firm names and year each applied). Identify the country and state in which the firm was incorporated or otherwise organized.**

Dominion Voting System, Inc. is incorporated under the laws of the State of Delaware, USA and was first incorporated on July 7, 2009.

- 3) **Type of ownership and parent company and subsidiaries, if any. Include dates of any corporate mergers and/or acquisitions including all present and former subsidiaries with dates of all re-structuring since the founding date.**

Dominion Voting Systems, Inc. is a corporation and is wholly owned subsidiary of US Dominion, Inc., which is incorporated under the laws of the State of Delaware, USA. Dominion Voting System, Inc. does not have any subsidiaries.

On July 13, 2018 Dominion Voting was acquired by US Dominion, Inc. US Dominion, Inc.'s ownership is comprised of Staple Street Capital Management L.P. ("SSC"), which owns a controlling interest, as well as the Dominion Voting Systems, Inc. management team. SSC is a U.S.-based limited partnership organized under the laws of the State of Delaware. SSC's primary office location is 1290 Avenue of the Americas, 10th Floor, New York, New York 10104.

- 4) **Address and telephone number of production facility(s) where any of the work is to be accomplished (if different than item a); name, address, and telephone number of the proposed project manager.**

The majority of the implementation services are performed on site at predetermined customer locations. However, Dominion maintains offices in 4 time zones across the

United States that may handle various aspects of the work to be accomplished.  
Dominion's United States office locations include:

Headquarters:

Dominion Voting Systems  
1201 18<sup>th</sup> Street, Suite 210  
Denver, CO 80202  
Phone: (720) 257-5209

Supporting Office Locations:

Dominion Voting Systems  
221 Hopkins Avenue  
Jamestown, NY 14701  
Phone: (347) 527-7528

Dominion Voting Systems  
2010 Redbud, Suite 110  
McKinney, TX 75069  
Phone: (214) 491-5218

Dominion Voting Systems  
1555 Doolittle Drive, Suite 110  
San Leandro, CA 94577  
Phone: (510) 373-0818

Additional North American Supporting Office Location:

Dominion Voting Systems  
215 Spadina Ave, Suite 200  
Toronto, ON M5T 2C7  
(416) 762-8683

**5) A narrative description and organization chart depicting the management of the Applicant's organization and its relationship to any larger business entity.**

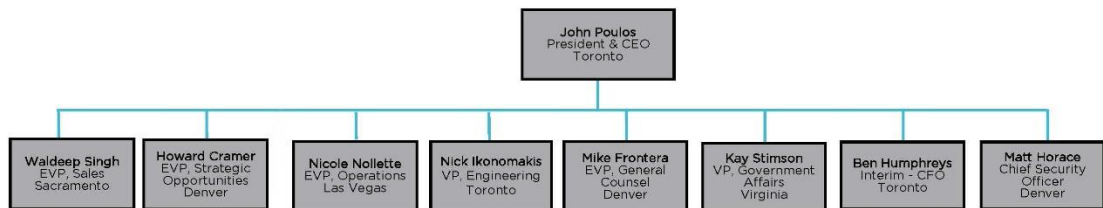
Dominion is a company that has distinguished itself while pursuing excellence in customer service by implementing a technical culture focused on achieving the highest levels of accuracy, reliability and transparency. In 2010, Dominion deepened its roots as a leading company in the elections industry with the acquisition of assets from both Premier Voting Solutions and Sequoia Voting Systems. Today, Dominion's human resource pool of more than 280 employees, consisting of seasoned election veterans and engineering experts has well over 2,000 years of combined elections experience conducting accurate and successful elections with our customers.



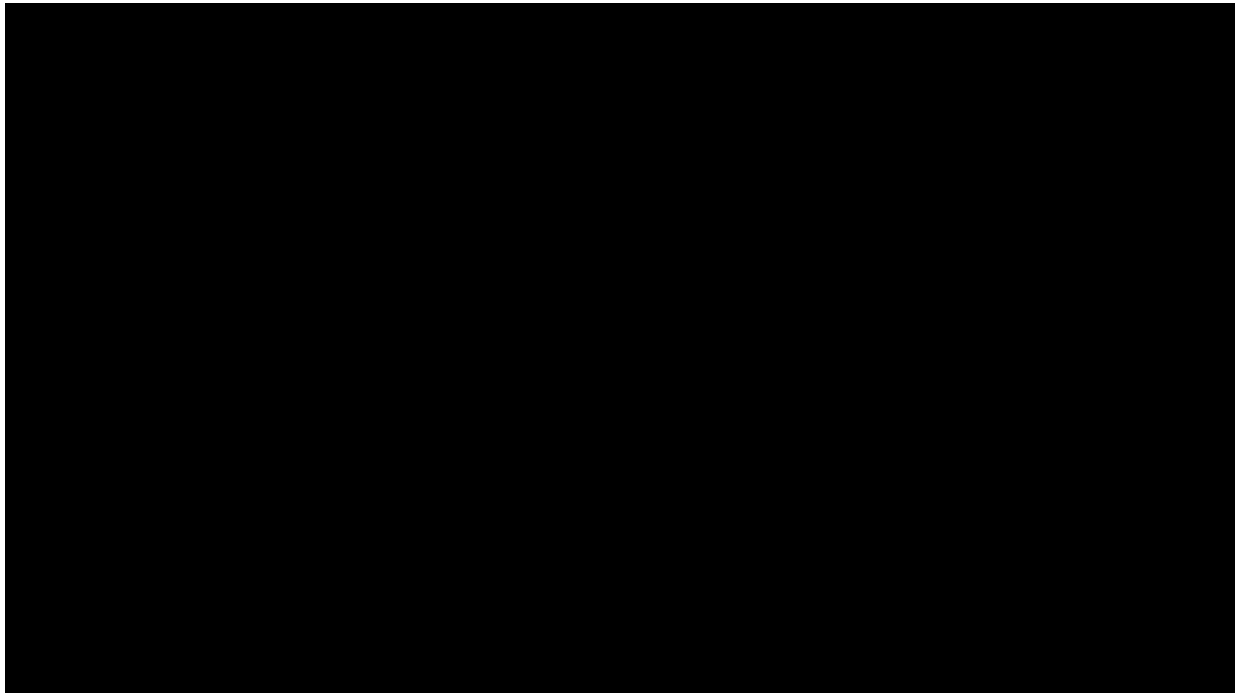
Dominion is headquartered in Denver, CO, with office locations in Toronto, ON, Jamestown and Endicott, NY, McKinney, TX, and San Leandro, CA. Dominion is strategically positioned in all 4 U.S. continental time zones to support its customer base of over 1,300 jurisdictions in 33 states. Dominion is one of the largest and most trusted providers of elections technology solutions in the United States and the world. As an example, during the U.S. Presidential Elections in November 2016, roughly 35% of registered American voters cast their ballots using our equipment.

Below we provide the Executive-level organizational chart for Dominion.

#### Executive Team



- 6) **A description of the overall operations of the Applicant, the number and scope of other projects currently ongoing or set to begin in the near future (the 30 most recent such contracts shall be sufficient; applicants may list more than 30).**













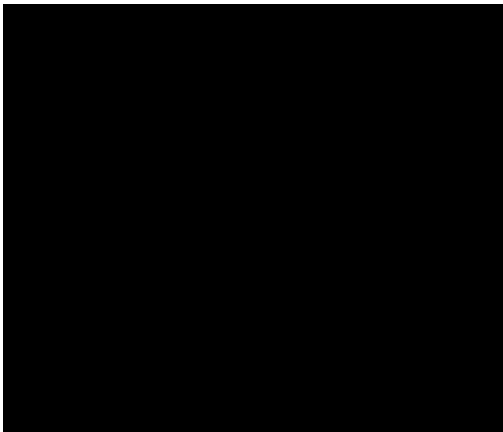






- 7) **Describe any prior operating experience in the Philadelphia region. Specifically, identify (i) all projects in the last five years on which Applicant has worked that are valued at over \$100,000 and located in the City of Philadelphia, (ii) any contracts valued at over \$100,000 entered into with the City of Philadelphia in the last five years; and (iii) any contracts valued at over \$100,000 entered into with any other government entity in the last five years (the 30 most recent such contracts shall be sufficient; applicants may list more than 30).**

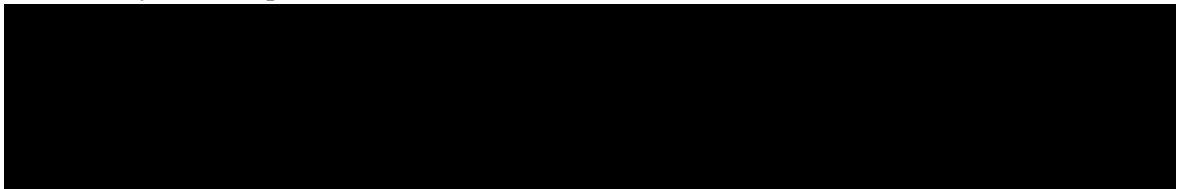
Dominion has not provided election services for the City of Philadelphia in the past 5 years; however, we do have experience as the incumbent elections system provider the following counties:

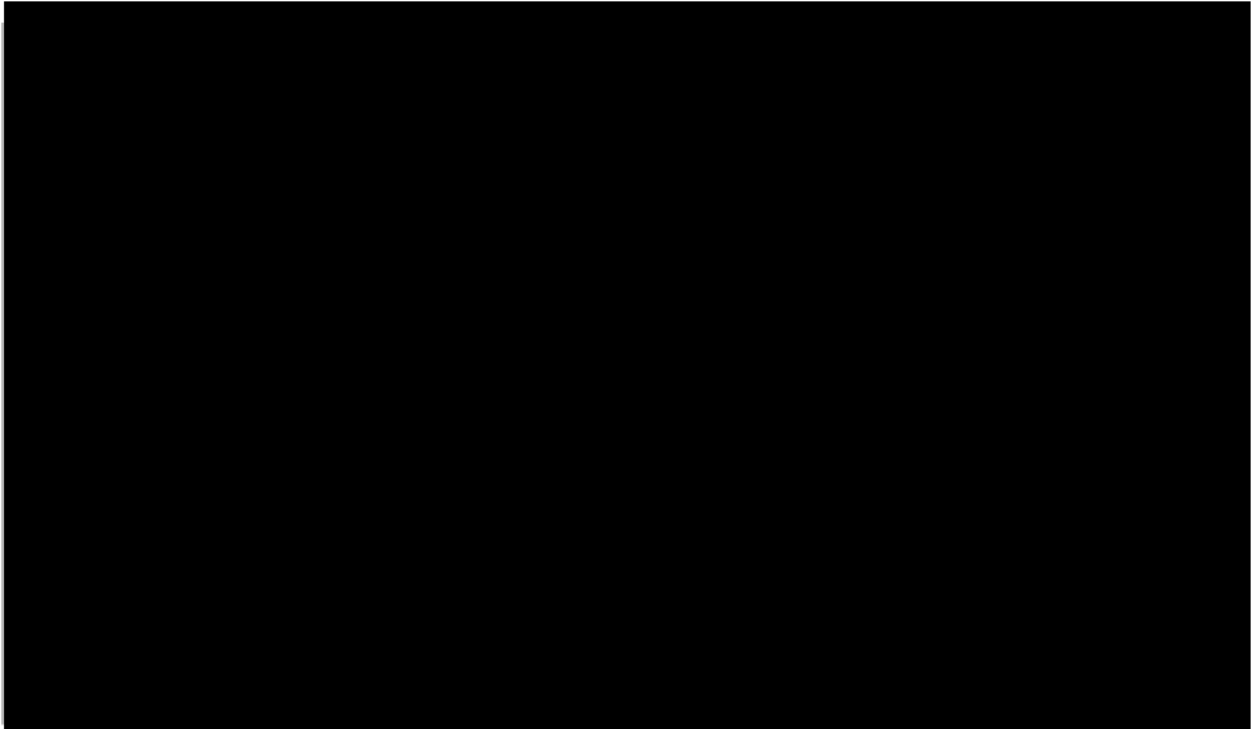


The above noted counties have received ongoing support with regard to legacy elections systems. We are current working with several counties throughout the Commonwealth to implement our newest EAC certified election System Democracy Suite 5.5.

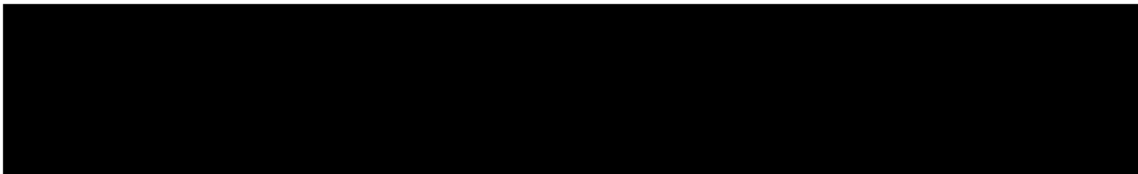
- 8) **Provide, at Applicant's option, any additional information not specifically listed above which demonstrates the qualifications of the Applicant to perform the scope of work specified in this RFP.**

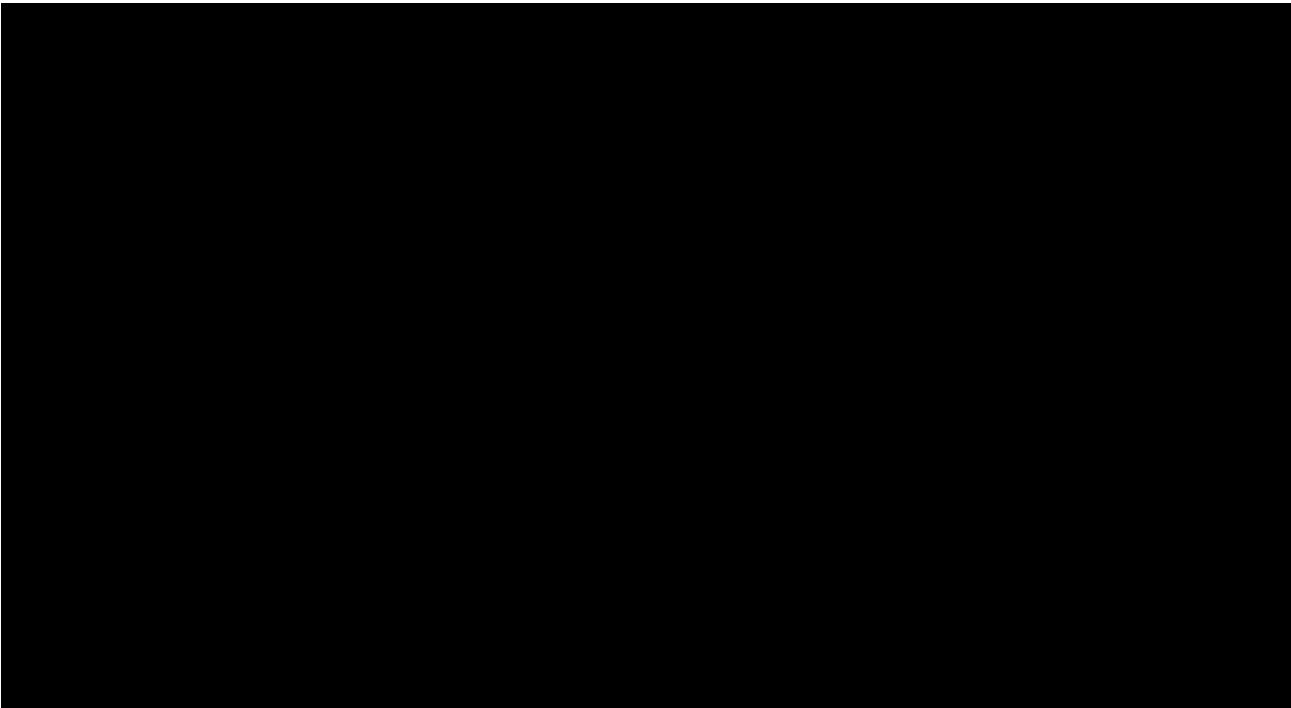
Dominion Voting Systems, Inc. is a company that has distinguished itself by pursuing excellence in customer service by implementing a technical culture focused on achieving the highest levels of accuracy, reliability and transparency in elections since our founding. As an established election provider in the United States, with a diverse customer base of 33 states, out of which jurisdictions in 19 states have successfully implemented our Democracy Suite system. We are providing a snapshot of the reach and diversity of our experience:





- 9) Please list any foreign ownership or investors in either the parent company and/or subsidiaries.

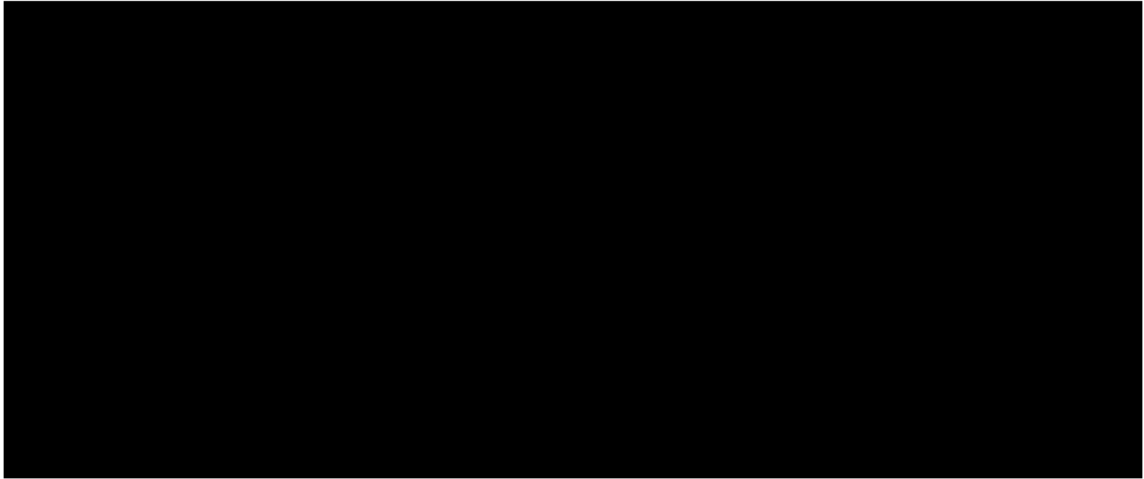




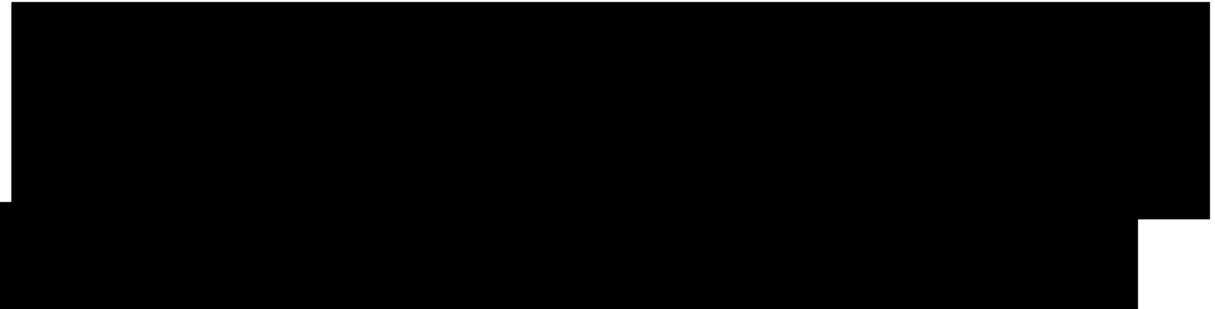
## 3.2 Company Financial Overview

Provide a financial overview of your company, including the following:

- 1) A narrative that demonstrates its financial capacity to undertake and complete the project as proposed in this RFP



- 2) A current audited statement of financial condition, prepared by an independent certified public accountant



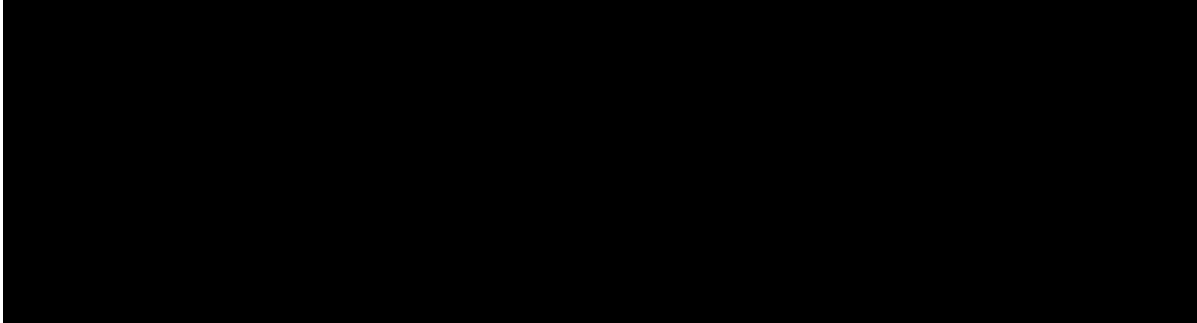
- 3) The company's most recent annual report



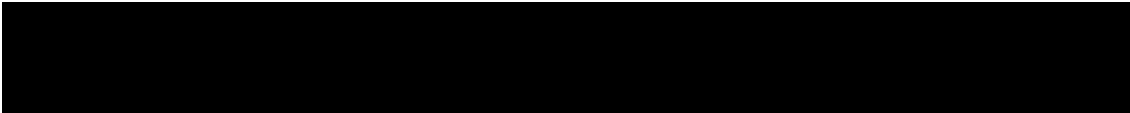
- 4) The latest quarterly financial reports



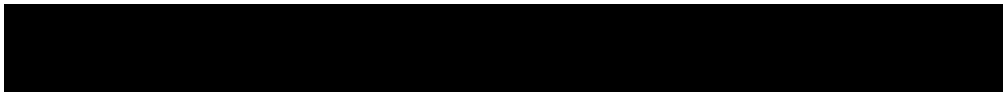
- 5) Financial statements for two (2) prior years prior to the year to which the current audited financial statement applies, prepared by an independent certified public accountant. Financial statements should include, at a minimum, income statements, balance sheets and statements of changes in financial position.

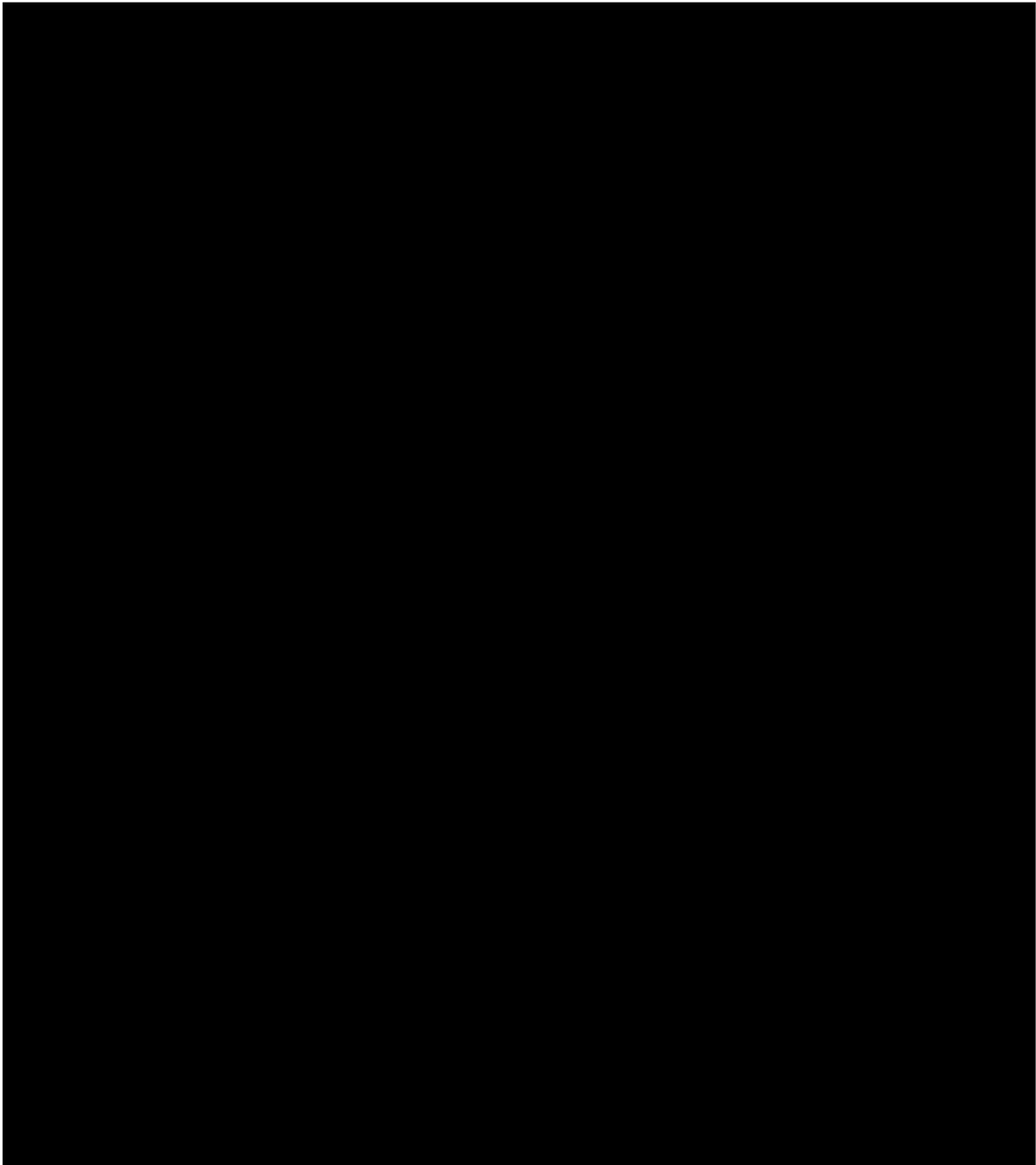


- 6) If the company is a public company, instead of the information requested in paragraphs 2-5 above, submit a copy of the most recent Form 10-K filed by the Applicant with the U.S. Securities and Exchange Commission and copies of all Form 8-Ks filed since the filing of the most recent 10-K.

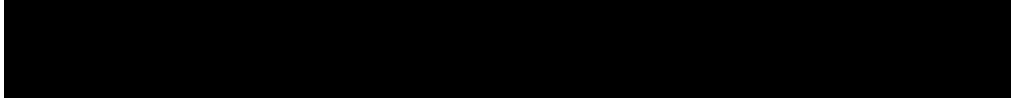


- 7) A bank reference

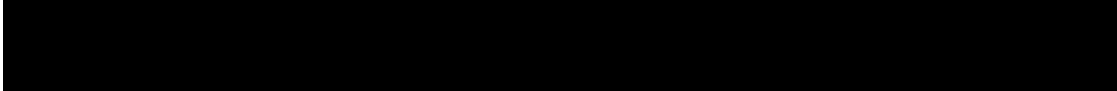




- 8) A statement disclosing any audits of the company by the federal government;

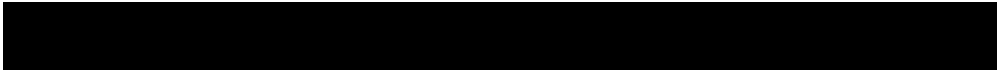


- 9) A statement disclosing any state or federal bankruptcy or insolvency proceeding the company has filed or with which it is otherwise involved;

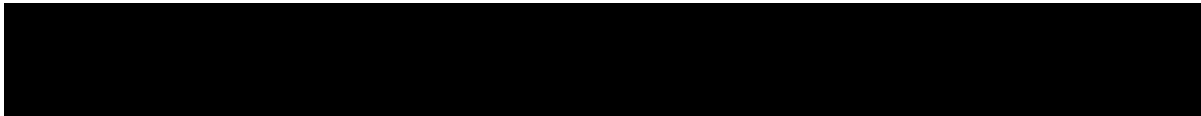


- 10) If the Proposal is submitted by a partnership and/or joint venture, provide full information concerning the nature and structure of the partnership and/or joint venture, including:

- What entity will be guaranteeing contract performance?
- Date of joint venture or partnership.
- Does the agreement between members comprising the joint venture make each jointly and severally liable for contractual obligations of this project?



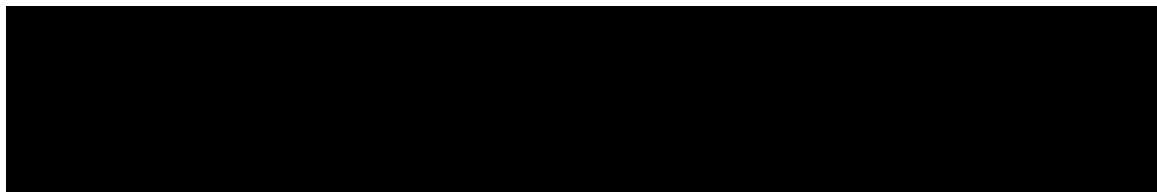
- 11) Any other information not specifically itemized above that it believes to be demonstrative of its financial capacity.



### 3.3 Clients in Comparable Jurisdictions

Describe your experience providing voting machines and/or EPB solutions to clients in jurisdictions comparable to the City of Philadelphia in terms of population size, population density, geographical area, and size of candidate pool.

- 1) For each comparable client engagement, provide the client name, engagement title, cost, start date and completion date. Describe the engagement and the solution implemented.
- 2) Provide references from clients in comparable jurisdictions. All references should include the name, title, telephone number of a contact person.



















## 3.4 Solution Description

Describe the proposed solution, including the following information:

**1) Type of solution: voting machines only, electronic poll books only or both**

Dominion's proposed solution includes voting machines, scanning and tabulation hardware, and associated software and residual items to support the election process.

For the purposes of the Request For Proposal, we are not providing a proposed solution for an electronic poll book.

Additional details regarding our proposed solution is provided in response to the items below.

**2) Model names and numbers**

Hardware associated with Dominion's proposed solution is detailed below for voting in-person voting machines and scanning and tabulation machines:

In-Person Voting Machines		
Model Name	Model Number	Description
ImageCast X		
Ballot Marking Device Printer		

### 3) Date and location of manufacture

Major hardware components associated with our proposed solution are generally considered Commercially Available Off the Shelf products. Below we provide a table detailing the name of each manufacturer and location of manufacturing.

Item Number	Name of Manufacturer	State (or foreign Country) of manufacture
ImageCast Precinct		
ImageCast X		
G1130 (ImageCast Central Scanner) and M402dne (ImageCast X printer)		
Optiplex 7440 (EMS Computer)		


Dominion maintains selling agreements with each of the noted manufacturers to guarantee product availability, including parts and service solutions. As all Dominion equipment is purchased delivered to the client as new, previously unused items, the date of manufacture will vary based on the time of ordering.

### 4) First in-service date

Product array being proposed (ImageCast X, ImageCast Precinct, and ImageCast Central) was first utilized as a cohesive unit in 2017.



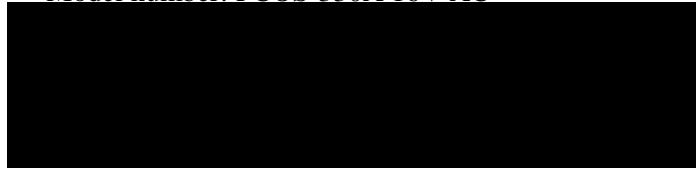
5) **Product specifications**

ImageCast X – Ballot Marking Device	
	
ImageCast X 21” Tablet Specifications	Ballot Marking Device Printer Unit Specs
<div></div>	

## Image Cast Precinct



Model number: PCOS-330A 16V AC



## ImageCast Central





6) **Technical specifications**

Specifications regarding each major hardware item have been provided in response to Question 5 above. We would be happy to provide additional information upon request.

7) **Federal Election Assistance Commission actual or anticipated certification date**

Dominion Voting Systems' Democracy Suite 5.5 was certified by the EAC on September 14, 2018, as evidenced by the certificate provided below.

	<b>United States Election Assistance Commission</b>	
<b>Certificate of Conformance</b>		
<b>Dominion Voting Systems Democracy Suite 5.5</b>		
<p>The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the <i>Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0)</i>. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the EAC <i>Voting System Testing and Certification Program Manual</i> and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.</p>		
Product Name: <u>Democracy Suite</u>		
Model or Version: <u>5.5</u>		
Name of VSTL: <u>Pro V&amp;V</u>		
EAC Certification Number: <u>DVS-DemSuite5.5</u>		
Date Issued: <u>September 14, 2018</u>		
		<p><i>Executive Director</i> U.S. Election Assistance Commission Scope of Certification Attached</p>

8) **Commonwealth of Pennsylvania actual or anticipated certification date**

We are currently working with the Commonwealth regarding Pennsylvania certification of Democracy Suite 5.5 and expect the approval process to be completed in the 4<sup>th</sup> quarter of 2018. Dominion will be happy to provide the necessary approval documents upon the conclusion Pennsylvania testing and approval.

**9) Integrations with solutions offered by other vendors:**

- **If the solution includes voting machines, indicate all EPB solutions the voting machines integrate with**

Dominion has integrated its ImageCast X application with many pollbook providers throughout the U.S. and would be willing to work with the pollbook provider that the City ultimately chooses. We currently have integration in place with Knowink and Votec, and are currently working with Tennex to integrate voter activation features. The pollbook is not required to activate our ImageCast X application as you can use a standard laptop with an off the shelf card activator.

- **If the solution includes electronic poll books, indicate all voting machines that the poll books integrate with.**

Not applicable. For the purposes of this RFP, Dominion is not providing a pollbook solution.

## 3.5 Physical Footprint

### 3.5.1 Number of Machines

The City currently has 3,735 full-face voting machines, serving a population of 1.05 million registered voters. There are 1,692 divisions and 825-850 polling places within the City. (The number of registered voters is dynamic and subject to increase, given the recent population growth within the City of Philadelphia.)

The City anticipates having at least 2 voting machines and 2 electronic poll books for each polling place. The number of machines required for a given polling place may be higher, depending on the size (population) of the division(s) associated with that polling place.

For voting machine suppliers, please provide the following information:

- a) **An estimate of the number of machines required to replace the City's existing machines. Your estimate should be based on queuing theory and replacement rates or other appropriate methodology. Please include the rationale for your estimate.**

Based on the details above, Dominion has provided the following voting machine and tabulation hardware, which is detailed on the Pricing Form in Appendix G:

Item	Total	Methodology
Voting Machines ImageCast X with Ballot Marking Device Printer	2,550	
Central Tabulation ImageCast Central	2 kits	
Precinct Tabulation ImageCast Precinct	1,135	
As detailed, the above estimates are included in our detailed pricing sheets. We are open to discussing the estimated unit totals and applicable cost upon request or in response to the Best And Final Offer phase of the proposal process.		

- b) The amount of space required for an individual voting machine to be fully operational at a polling place. This is the total amount of space required for the machine and any associated equipment or peripherals required to operate the machine at a polling place, e.g. table, stand, scanner.**

The proposed solution for the voting machine consists of the ImageCast X with Ballot Marking Device printer, which is designed as a compact unit that fits onto a standard sized voting booth measuring approximately 6 square feet.

- c) Estimated voter throughput based on space requirements for voting machines at a single polling place.**

Our experience in conducting vote center models in other large jurisdictions throughout the United States indicates the ImageCast X can exceed 125 voters per day per machine. However, the throughput for individual polling places will ultimately depend on a number of factors including the number of voting machines and length and complexity of the ballot. Dominion's proposed solution has the flexibility to layout the ballot in an efficient manner and the intuitive properties of the ImageCast X maximizes efficiency and voter throughput.

- d) For EPB suppliers, please provide the following information:**

**a. An estimate of the number of poll books required to support the City's voting population and number of polling places. Please provide the rationale for your recommendation, e.g. ratio of voters to poll books.**

**b. The amount of space required for each poll book to be fully operational within a polling place. This is the total amount of space required for the machine and any associated equipment or peripherals required to operate the machine at a polling place, e.g. table, stand, scanner.**

**c. Estimated voter throughput based on space requirements for poll books at a single polling place.**

Not applicable. For the purposes of this RFP, Dominion is not providing a pollbook solution.

### **3.5.2 Warehouse/Storage Facility**

**The City plans to secure a new warehouse location for storage of election system hardware and equipment. The City may optionally request the vendor to identify warehouse space to be leased for all necessary components of this solution.**

**Describe the storage facility requirements for the hardware and equipment required for your solution. In addition to square footage, please indicate any requirements regarding climate, security, and electricity.**

**Please provide an estimate of the total square footage required for the complete proposed solution, in addition to square footage required for individual components. The square footage must be sufficient not just for storage of the proposed solution but must also consider the space required for maintenance and setup.**

### **Footprint**

Dominion is confident that the reduced footprint of the voting machines would drastically reduce the square footage required for warehousing the new election system for the City of Philadelphia. Utilizing creative warehousing space saving solutions such as custom designed carts and shelving system similar to other large entities such as [REDACTED]

[REDACTED] Dominion estimates a warehouse space of 15,000 square feet to 20,000 square feet would adequately store the new voting system.

Ultimately the overall footprint of the system will depend on several factors including, but not limited to, total number of machines and residual items purchased and the customized storage solution selected by the City (examples and options provided below).

With consideration of the testing requirement for Philadelphia, additional space may be required depending on the preferred method of preparation and testing. Options can include preparing and testing simultaneously or performing the preparation and testing over a period of time, in which case the voting units could be placed on carts and stored vertically on racks.

For example, in other jurisdictions, election officials run the Pre-Election Logic and Accuracy Test weeks before the election on a small group of voting units at a time in a “Testing Area” similar to the picture below of the [REDACTED] warehouse. [REDACTED] recently implemented the ImageCast X solution, similar to the proposed solution for Philadelphia.

We also work with [REDACTED], and other large entities, to work out the logistics of warehousing and testing elections equipment, including security aspects such as camera placement and badge access doors.





In this Testing Area, [REDACTED] sets up approximately 200 ImageCast X units at a time to test and then once complete, return them to storage racks in order to conserve space (see picture below).





To the left is a picture of the individual carts, which can hold 10 ImageCast X voting units, along with their accompanying printers. These carts are also used to deliver the voting units to the voting locations. While the system is very efficient on space considerations, we would look to work with the City to customize a warehouse, storage and testing solution based on the current election rules.

If all ImageCast X units must be accessible for testing at one time, it makes sense to store them logistically so that they are accessible at one time. We have the ability to offer several commercially available storage and transportation options carts that will efficiently provide for storage in the warehouse and transportation to the voting locations.

The example provided above represents a durable and space efficient option featuring an open front cart on heavy duty casters that is rugged enough to withstand storage and transportation activities. This option offers maximum protection to the voting units against hard jolts and damage which guards against

critical delays, costly damage and time impacting repairs.

Another option includes a cart that can be customized to your specifications. The cart rolls on four sturdy casters and a front door provides for easy access to the voting units. Side handles aid in movement and provide points to secure the units in transport. It can be designed to hold 4 ImageCast X units and their BMD printers.



These carts would be designed to allow two carts to be rolled under an 8 foot long workbench. The carts would be aligned to open, one on one side of the workbench and the other on the other side, placing 4 units would go on one side of the workbench from one cart and the other 4 on the other side of the workbench. A power cord with 8 receptacles would hang over the workbench. All 8 ImageCast X units can be plugged in at the same time allowing the batteries to charge. Below is a picture of a sample workbench.



Using this combination of transportation cart and workbench for the Working Space and Storage Area for the ImageCast X with BMD, it will take 30 square feet of floor space per workbench. There will need to be 30 square feet in addition for aisles and spacing per workbench. A total of 60 square feet per 8 ImageCast X voting units. That is 7.5 square feet per voting unit.

Other options for precincts requiring fewer voting units are pelican cases or rolling cases that can be used to transport 2 ImageCast X voting devices and the accompanying BMD printer. The varying sizes of available pelican cases and rolling bags also allow for customizable foam inserts that can accommodate associated hardware such as the ImageCast Central, scanners, activation stations, and other materials.



There are numerous other transportation cases and carts in a variety of configurations available on the commercial market. For example, working with the [REDACTED] Dominion developed a fully customized all-in-one Election Supply Carrier that held multiple voting units, supplies, and everything needed to set up operations in individual precincts. We would look to work with the City of Philadelphia to create a fully customizable and scalable solution to meet your transportation and storage needs.

### **Environmental Storage Conditions**

For optimal product life, storage limitations should adhere to the following specifications:

#### **ImageCast X**

- Storage Temperature min/max: -20°C ~ 60°C
- Operating and/Storage Conditions (Relative Humidity): From 0% ~ 90% RH noncondensing
- Pack the ImageCast X tablet into its provided packaging box with foam inserts to provide vibration and impact protection.

In order to obtain maximum battery life, periodic maintenance of the internal backup battery is important. It is therefore recommended that the internal back-up battery is charged for at least 12 hours every eight months when the unit is in power off mode/storage. It is equally important to ensure that the internal battery is fully charged before the unit is deployed on Election Day. The Battery Status is indicated using visual indicators once the ImageCast X is powered up.

To charge the battery, connect the unit to a standard 120V, 60Hz AC Power Supply and wait for the device to power up. Insert Technician Smart Card and enter the corresponding PIN. Once the Technician menu is available, select "Power off" and wait for the device to power down.

#### **ImageCast Precinct**

- Storage Temperature min/max: From -25°C - 60°C
- Operating and/Storage Conditions (Relative Humidity): From 20% - 80% RH non-condensing
- Place the tabulator inside the re-sealable bag into the provided packaging box with foam inserts to provide vibration and impact protection.
- Store the packaged tabulator box under conditions specified.
- Alternatively, leave the tabulator on the Ballot Box but place the Ballot Box dust cover over it to keep it free from environmental elements.
- Store the tabulator (and Ballot Box, if applicable) in a dust-free, clean environment.
- Perform periodic charging of the back-up battery module for 12 hours every 9 months.
- The tabulators should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 4 Boxes High)

#### **ImageCast Central**

- Storage Temperature min/max: -40°C ~ 65°C
- Operating and/Storage Conditions (Relative Humidity): From 20% ~ 80% (non-condensing)
- Place the CPU and Scanner in packaging boxes with foam inserts to provide vibration and impact protection.
- Store the packaged CPU and Scanner boxes under conditions specified.
- Store the CPU and Scanner boxes in a dust-free, clean environment.
- The CPU and Scanner units should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes high for CPU and 4 Boxes High for G1130 scanner)

## 3.6 Shipping

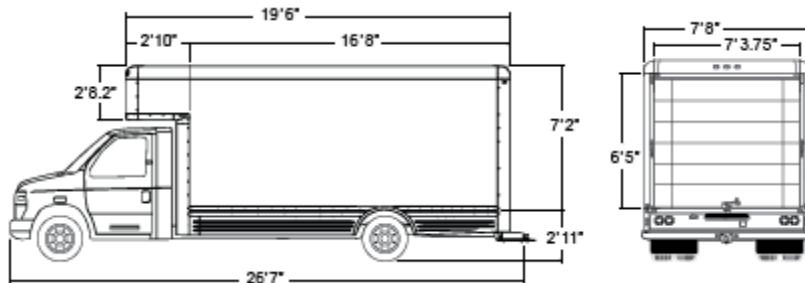
Please describe the shipping requirements for transporting hardware and equipment. Include requirements for initial transport to the City's warehouse and from the warehouse to polling places.

### Drayage & Deployment

Based on direct experience with large entities such as [REDACTED]

[REDACTED] Dominion understands the logistical aspects of deploying elections equipment on a large scale. However, each customer and warehouse has a unique set of circumstances that requires some modification.

The ImageCast X units are put into the storage position and placed along with the accompanying BMD printers and power supply into the transportation cart located right underneath the workbench they were prepared and tested on. The Delivery Label that is printed off of the Democracy Suite laptop in the warehouse is placed on the Transportation Cart. The cart is sealed for security and taken to a holding area in the order that they will be loaded on the trucks.



The Transportation Carts are 42" X 26". In recent times, the drayage companies have been using several different size vans with ramps. Typically they are 16 to 20 feet long. For this example we will use the 20 foot van. Its cargo space is 7' 4" wide by 16' 8" long (88" X 200"). 112 ImageCast X voting devices could be shipped in 14 Transportation Carts on a single van.

This above logistical plan for warehousing and transportation is just an example of how we transportation could work in Philadelphia. We know that warehousing and deployment does not fit into the one size fits all category. As we have done in the past with other large entities such as [REDACTED] we will sit down with you to develop the best solution for you for Philadelphia.



## 3.7 Disposal

**Please describe any services your organization offers for disposal of existing voting equipment.**

Dominion will work with the City of Philadelphia to develop a plan for proper removal. In an effort to observe all individual client needs with consideration of all local, state, and Federal requirements, we coordinate disposal and recycling efforts during the implementation phase.

Dominion's program is beneficial to our customers as Dominion manages the safe removal of the equipment, and also reduces the amount of landfill waste that would otherwise result.

We are happy to work with the City to develop a customized disposal and recycling plan that is in line with the Commonwealth of Pennsylvania's ITP-SEC015 relating to cleaning of electronic media, surplus or recycling of IT resources, reassigning electronic devices, cleaning electronic media, failed media, and chain of custody procedures. Our plan works in conjunction with the phase in of new equipment and properly considers the volume and types of hardware and specific materials to be disposed of and recycled.

## 3.8 Architecture / Infrastructure

### 3.8.1 Architecture Model

**Describe the software architecture of the proposed solution (two-tier or three-tier environment, etc.). Describe each architecture layer and provide a diagram of the system architecture.**

Democracy Suite Election Management System is the only fully integrated voting solution on the market. Democracy Suite has the ability to drive all voting channels that a jurisdiction may utilize.

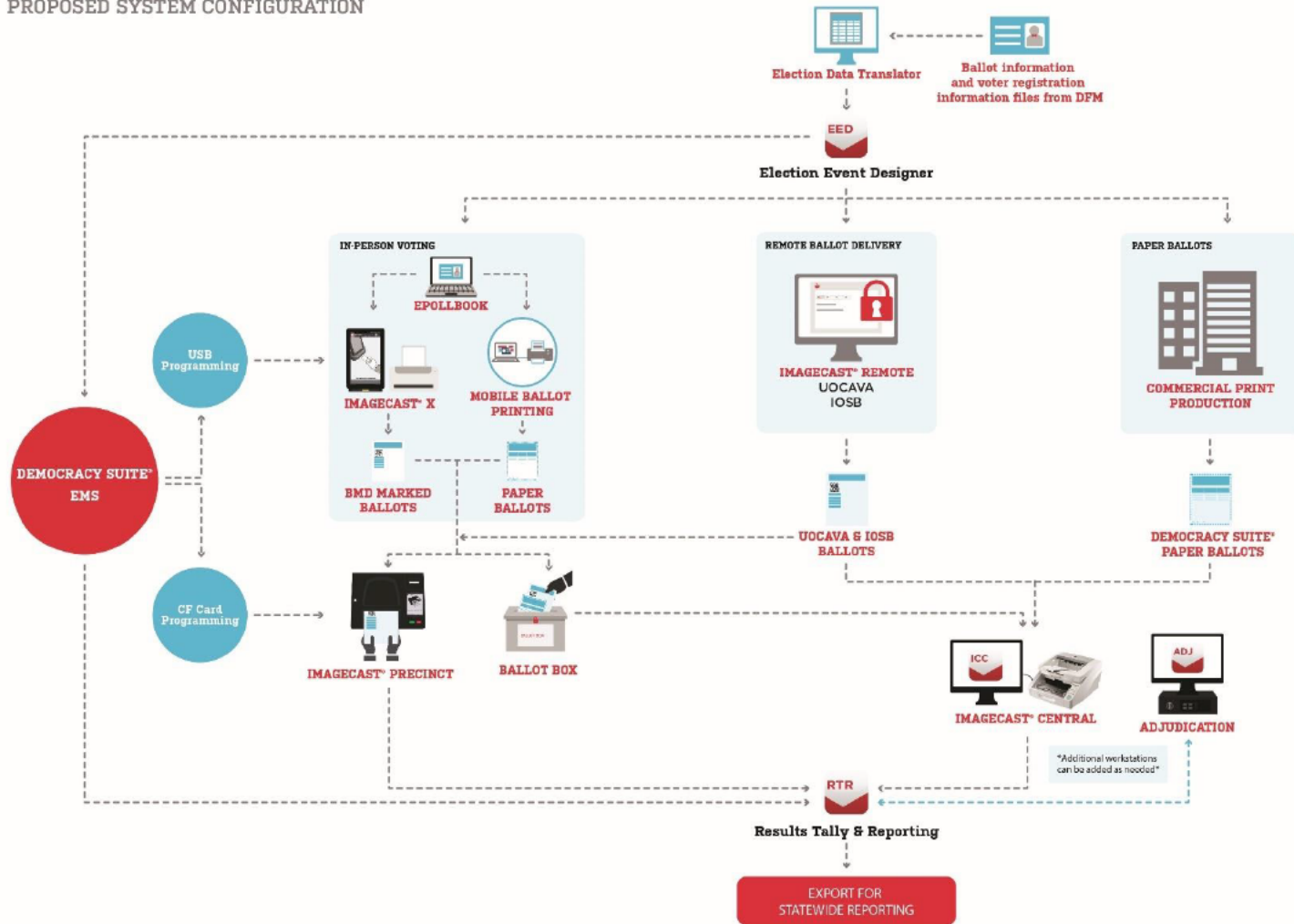
Election info from the voter registration system is transferred to the Election Event Designer module. From there, election officials use the Election Event Designer module to lay out and prepare paper ballots. Once the ballot is laid out, a camera-ready PDF file is produced. Election Event Designer drives the preparation of the election data for the ImageCast X, ImageCast Precinct, and ImageCast Central units. It also prepares the election files for the central scanners and adjudication.

Once ballots are marked and tabulated at Vote Centers or polling stations, centrally scanned ballots are tabulated and imported into the Results Tally and Reporting module. Results Tally and Reporting will output election night consolidated reports, including but not limited to the Election Summary Report.

The following diagrams provides a visual representations of the workflow and the network of Dominion's proposed solution, including all facets of the ballot production and ballot marking process.



## PROPOSED SYSTEM CONFIGURATION



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### 3.8.2 Network Design and Administration

The City Commissioners' Office currently has several private networks that link computers within and across 8 remote transmission centers (RTCs) for election night reporting. The RTCs are located throughout the city; two (2) are central / headquarters locations for election related operations. Election night results are transmitted from RTCs to a designated website owned by the City Commissioners.

The selected Applicant will be expected to manage the City Commissioners' private network(s) for election night reporting.

Prior to implementation of a solution, the selected Applicant may be asked to evaluate the City Commissioners' existing network infrastructure for election night reporting and make a recommendation to either maintain the existing infrastructure, upgrade it or replace it. If an upgrade or replacement is recommended, the Applicant will be responsible for network design and implementation. In any case, the Applicant will be responsible for network administration.

Given the Applicant's potential role in network design and implementation, Proposals must include the following:

**1) Detailed specifications for recommended network setup and related equipment**

Dominion has the ability to have the tabulation, adjudication and scanner workstations connected to servers via a closed local-area network. In fact, a closed, local-area network is the preferred implementation practice as it allows for concurrent scanning, adjudication and tabulation without the need for direct manual transfer of results files and data.

The ImageCast Central workstation is comprised of a Dell all-in-one computer and Canon G-1130 scanner, which is connected to the computer via USB. The Adjudication workstation is comprised of a Dell computer and monitor.

ImageCast Central and Adjudication workstations can be networked together. Up to fifty (50) ImageCast Central workstations and fifty (50) Adjudication workstations can be networked together at the same time. The ImageCast Central scanning stations and Adjudication stations are connected with a Gigabit Ethernet network.

**2) Performance standards (throughput, processing volumes, response times, etc.) that the system will satisfy if installed on the recommended equipment.**

Dominion's products are highly scalable as voting machines (ImageCast X with BMD) and central processing scanners (Canon G1130 scanner for the ImageCast Central

system) can easily be added or redirected to adapt to any changing needs of the City. Below we provide general throughput information

#### **ImageCast Central**

The Canon DR-G1130 is a solid, consistent scanner which can scan ballots 8.5” by 11” and up to 22”. The maximum throughput is 4,000 ballots per hour.

#### **ImageCast X BMD**

Our experience in conducting elections throughout the United States indicates that the ImageCast X has the flexibility to layout the ballot to increase throughput. Dominion believes that an average voter will take the same amount of time to mark and print a ballot as was done previously with Direct Recorder Electronic units, 125 voters per day per machine. Therefore four (4) ImageCast X units per vote center would be sufficient in managing the workflow in a Vote Center.

#### **ImageCast Adjudication Workstations**

For a fully developed adjudication system using 50 workstations, similar to other large entities using the Adjudication functionality, the system can provide an approximate throughput of 3,600 ballots per hour. However, the actual number of Adjudication workstations can be scaled for increased or decreased volume based on the City’s assessment.

### **3) Security measures to minimize vulnerabilities and mitigate risk of security threats**

Dominion implements security protocols that meet or exceed EAC VVSG 2005 requirements. All of Dominion’s security protocols are designed and implemented to stay current with the rapidly evolving EAC security requirements set forth by various iterations of the VVSG. Dominion’s security technology is unprecedented insofar as it takes into account every aspect and every component of the Democracy Suite platform. This includes – but is not limited to – the full encryption of election projects, iButton security keys, Compact flash cards, election data, software applications, elections results files, and data transmission. In addition, Dominion developed a custom ballot authentication system built around an (optional) secure ballot paper stock and in-tabulator authenticators.

Dominion confirms that all data-at-rest will not be stored outside of the continental United States.

Democracy Suite integrates a role-based access control system for all software and hardware components. Each user accessing the system is the member of one of the predefined or custom-made roles. Each role has its own set of permissions, or actions that users of that role are allowed to perform. This access control approach provides authentication and authorization services and can be granular according to the jurisdiction’s needs and organization. Complete user and role membership management is integrated within the Democracy Suite EMS Election Event Designer client module.

The Democracy Suite EMS platform implements role-based user management for provisioning access control mechanisms on each election project. Managing access control policies is integrated within the User Management activity of the EMS EED module. This activity is permitted only for users with administrative privileges.

Democracy Suite utilizes hardware-based security tokens (iButton security keys) in the process of access control for ImageCast tabulators. These password paired hardware tokens contain data encryption information used in the voting process (encryption and signing keys). Without a valid security token, and paired access password, the administrative functions of election tabulators are effectively locked.

All of these activities and controls, and more described below in response to specific section requirements, are integrated within the Democracy Suite platform. Dominion utilizes authentication and authorization protocols that meet EAC VVSG 2005 standards. In addition, Dominion's solution relies on industry-standard security features to ensure that the correct users based on a user role or group are granted the correct privileges. Finally, each jurisdiction is responsible for ensuring that only authorized personnel have access to both the system and tools used for installation and configuration purposes. All back end system, and tabulator operations are continuously and completely logged at all times to maintain a complete record of all election-related processes.

Proper password management relies on multiple activities and controls, namely:

- Input data validation
- Data quality
- Utilization of one-way (hash) cryptography
- Computer generated passwords for greater entropy and protection from dictionary attacks
- Different password strength profiles for different user levels
- Utilization of hardware tokens for storing user credentials (two-level authentication security: something you know and something you have)
- User state machine (initial, active, inactive)

The system does not enforce aging or complexity, but Dominion recommends establishing best practices that meet the City's requirements and are in line with IT policy.

To protect any modification of software by malicious users, the Democracy Suite Election Management System integrates the Microsoft .NET Framework code signing process, within which, Dominion Voting digitally signs every executable and library (DLL) during the software build procedure. After the installation of Election Management software, only successfully verified EMS software components will be available for use. Digital signature verification is performed by the .NET Framework runtime binaries. If a malicious user tries to replace or modify any EMS executables or library files, the digital signature verification will fail and the user will not be able to start the EMS application.

Data generated by the Democracy Suite platform is protected by the deployment of FIPS-approved symmetric AES and asymmetric RSA encryption. The Democracy Suite Election Management System uses these techniques to encrypt election files prior to their use on ImageCast tabulators. Once the polls have been closed, the ImageCast tabulators encrypt all of the results files prior to transmitting them back to EMS.

SHA-256 hashes are used for all data integrity and verification. Should an intrusive process or altering of any file occur, hash values will be, in turn, altered as well. With that said, any presence of an intrusive process will be detected, as the hashes of any altered data will not match the value initially determined.

For communication channels (as well as data storage) a combination of security techniques for data integrity, authenticity and confidentiality is implemented. Democracy Suite integrates AES or RSA encryption algorithms for data confidentiality, along with SHA-256 and HMAC digital signatures for data signing (data authenticity and integrity).

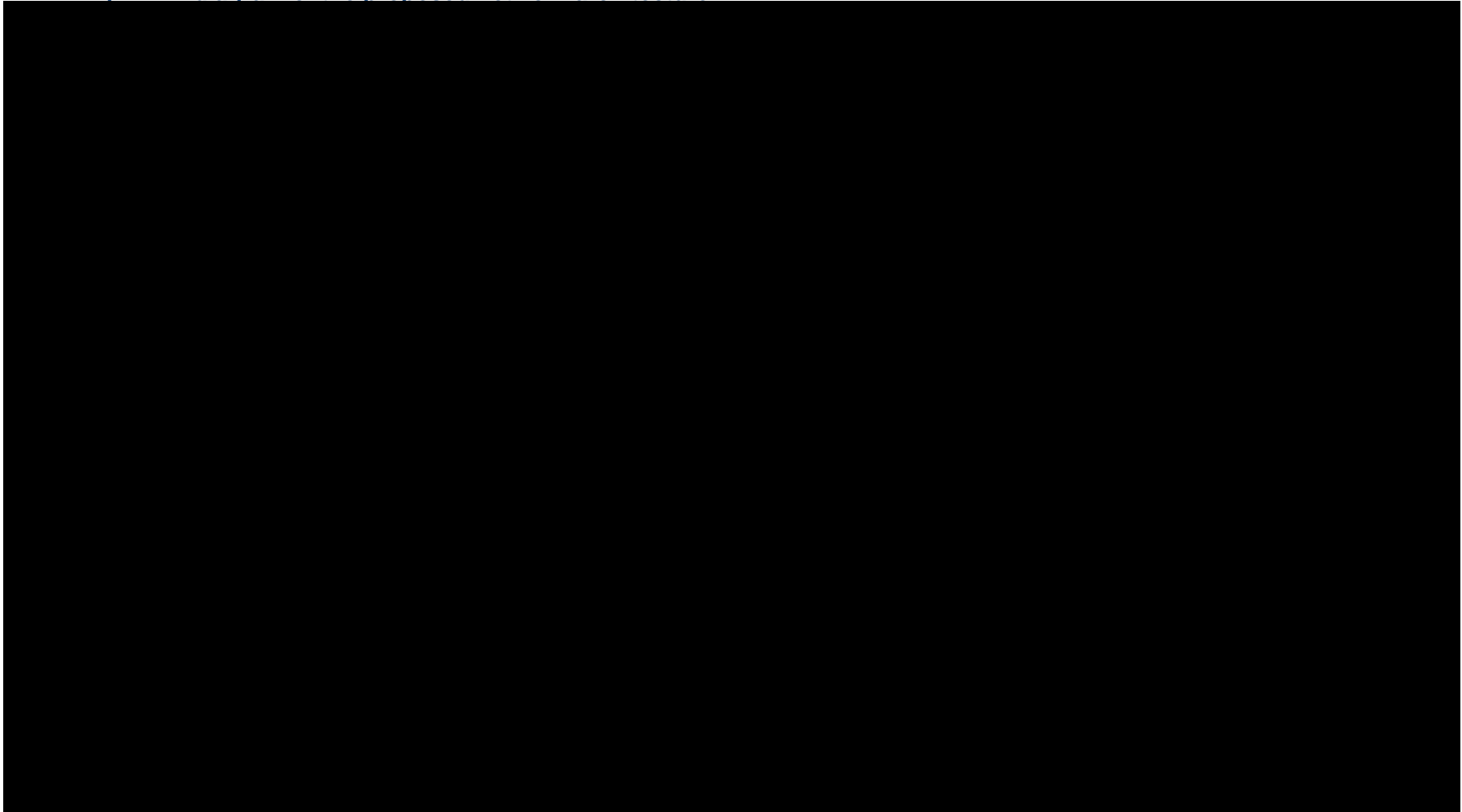
		Mode 1- Symmetric Crypto	
File Type	Storage Place	Confidentiality	Integrity
Election files (ICP) and election database (ICE), DCF (ICP) and MBS (ICE), result files (ICP/ICE)	NAS and Compact Flash	AES-128/256	HMAC (SHA-256)
Reports and Logs	NAS and Compact Flash	AES-128/256	HMAC (SHA-256)
Ballot Images	NAS and Compact Flash	-	HMAC (SHA-256)
Ballot Layout Definition (XML)	NAS and Compact Flash	-	HMAC (SHA-256)
Official Ballots	NAS	X.509 Digital Certificate	
User Credentials	iButton	HMAC (SHA-256)	HMAC (SHA-256)

#### File Type to Security Algorithmic Mappings

From the initial state of the election project, until the deactivation state, the EMS system maintains an activity log within the EMS Database. This activity log contains every action that any of the users have performed within the system and represents a detailed audit log that can be analyzed and printed in the form of an audit report. The audit record information cannot be modified or permanently deleted using the EMS client applications. It can, however, be exported for archiving purposes as part of the record retention policy. Keeping in mind that audit log information can contain a significant amount of information, it is the responsibility of the administrative user to perform

regular archiving of the log. During the voting phase of the election event, ImageCast devices also keep an activity audit log which tracks events happening on the device itself.

4) A diagram of the proposed network architecture.



### 3.9 Technical Qualifications

Indicate whether your proposed solution meets each requirement described in the Technical Requirements Compliance Matrix in Appendix E of this RFP. If configurations, customizations or work-around are required to meet an individual requirement, please explain. Please enter all information directly on the Compliance Matrix worksheet.

Dominion meets the requirements detailed in Appendix E. Responses and additional applicable information has been provided in Appendix E of this proposal package.



## 3.10 Maintenance and Support Model

The City expects that maintenance and support will be furnished on a “turnkey” basis – i.e. the successful Applicant will be contractually responsible for all maintenance and support services for all elements of the System, including but not limited to all software and any data transport services that are required under the contract, and will be the single point of contact for service and support. The City expects that the successful Applicant will guarantee the availability of maintenance and support services for application software, on the foregoing “turnkey” basis, for a minimum of five (5) years from final acceptance of the System.

The Applicant must allow the City of Philadelphia to service and maintain the voting system without voiding any terms of the warranty or violating a licensing agreement.

If the Applicant intends to no longer upgrade the solution, the City has the right to withdraw from upgrade/maintenance agreements. The Applicant must notify the City of end of support/life eighteen months prior to end date.

**Proposals must state whether the Applicant will comply with the foregoing terms.**

Dominion Voting will provide recommended service and maintenance provisions for all components of the voting system as part of Philadelphia’s implementation. This includes maintenance manuals, as well as customer-specific maintenance log(s).

All third party or independent contractors hired by Dominion Voting Systems are permitted to provide service and maintenance to the voting system without voiding any warranty or violating any licensing agreement. Contractors employed by the counties will be required to participate in Technician training classes and successfully be certified by Dominion Voting Systems prior to provision of any service and or maintenance. Individual contractors hired directly by Dominion are thoroughly vetted and background checks are performed, prior to any engagement or assignment.

### 3.10.1 Maintenance

**Describe your maintenance model, which should include the following:**

- 1) **A description of the services for all parts of the solution, including hardware, software, updates to firmware or software, peripherals, and whether solution uses “Commercial-off-the-Shelf”, proprietary products, or a mix of both.**

Dominion offers a preventative maintenance service for the COTS central tabulation hardware. City employees will be trained on maintenance tasks to best upkeep the hardware during the ballot tabulation process. Dominion recommends at approximately 2,000 to 3,000 ballots scanned either wiping the ballot path with a supplied microfiber

cloth, a dust clearing brush, or vacuuming of key locations on hardware. Additionally, Dominion will train the City employees to remove and clean all uptake rollers to manufacturer specifications.

Dominion will conduct Preventative Maintenance on a biennial basis, after one calendar year after delivery or election event, or per contract requirements. Preventative maintenance consists of standard steps and checklists for each type of ImageCast Ballot Marking Devices and accessible voting system component. Preventative maintenance for Dominion's Democracy Suite is designed to minimize all maintenance, and is primarily focused on the mechanical components. Compliance with the requirements set out in the product maintenance guides and warehousing specifications is mandatory. Dominion will be responsible for repairing voting system components and overseeing preventative maintenance during the warranty period.

We will coordinate all repair and maintenance actions with the City or Authorized User. Dominion will track and retain documentation on maintenance and repair activities. The City will be given paperwork stating completion of work performed and status of the Voting System. Warranty and repair parts shall be new. At the conclusion of the warranty period and at the discretion of City officials, responsibility for this function can be transferred to Philadelphia staff (or a suggested third party), who have completed a Dominion technician training course. Dominion can also be contracted to continue to provide preventative maintenance support at our standard service rates. Dominion also offers different, optional extended warranty agreements, which allow the customer to select a plan which meets their specific needs.

## 2) **A proposed service and maintenance schedule.**

Below, we provide the general service and maintenance information and a sample checklist for your review:

### **ImageCast X with BMD**

The ImageCast X is a Ballot Marking Device, meaning it does not store any votes cast data. Log data is viewed and/or downloaded to a removable USB thumb drive from the ImageCast X's administrative menu, accessed with a Technician Smart Card and a PIN.

Dominion typically works with its customers to develop appropriate processes and procedures around equipment maintenance based on your existing operations to suit the new system. The ImageCast X system relies on COTS equipment from leading global manufacturers and as such, the equipment is robust and resilient, and requires little maintenance between election events.

### **ImageCast X – Tablet Battery Maintenance**

In order to obtain maximum battery life, periodic maintenance of the internal backup battery is important. It is therefore recommended that the internal back-up battery is charged for at least 12 hours every eight months when the unit is in power off mode/storage. It is equally important to ensure that the internal battery is fully charged before the unit is deployed on Election Day. The Battery Status is indicated using visual indicators once the ICX is powered up.

To charge the battery, connect the unit to a standard 120 V, 60Hz AC Power Supply and wait for the device to power up. Insert Technician Smart Card and enter the corresponding PIN. Once the Technician menu is available, select “Power Off” and wait for the device to power down.

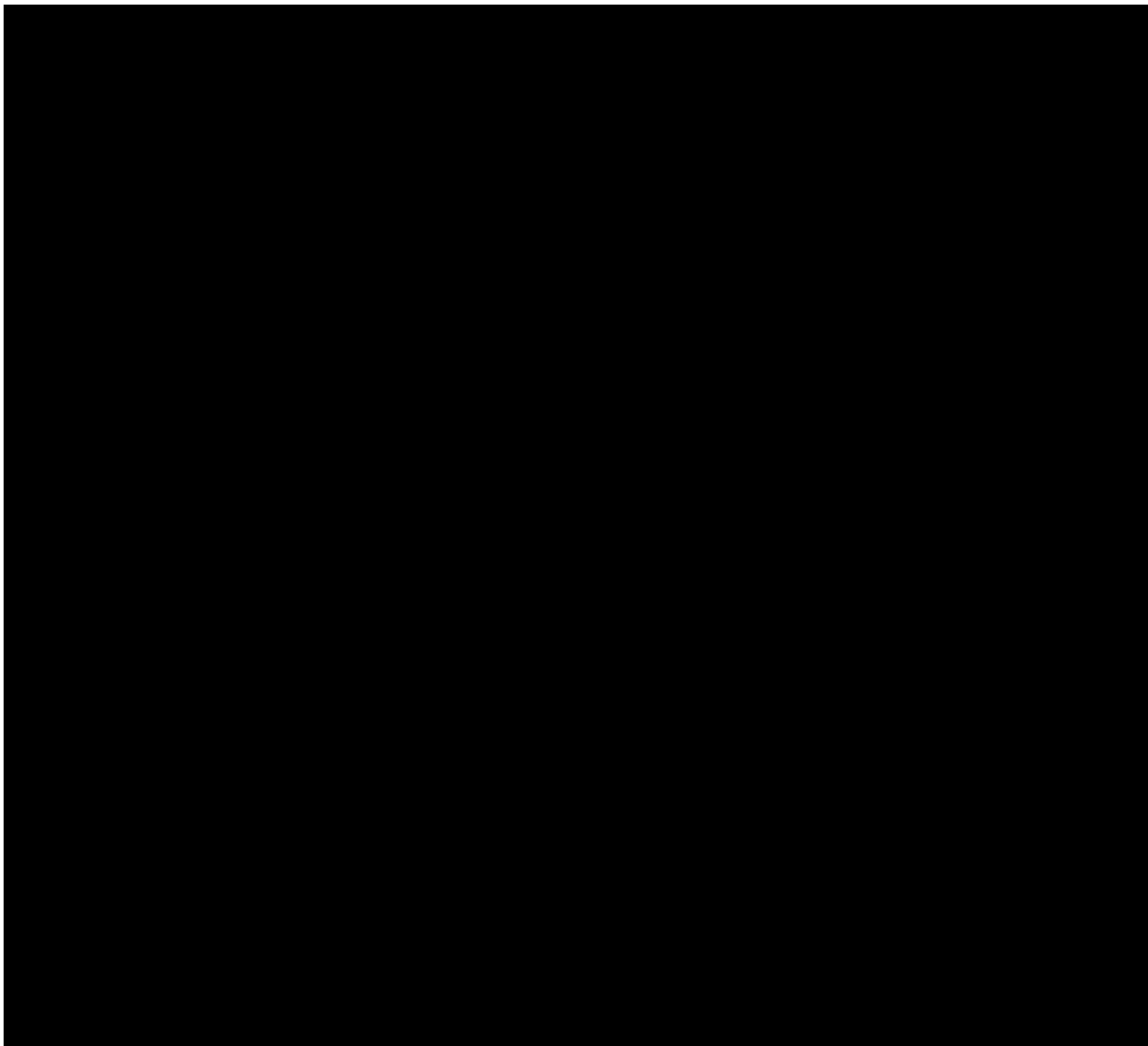
#### Printer cartridge removal/replacement storage

For proper printer cartridge removal, replacement and storage, please consult the manufacturer user guide for the corresponding printer.

HP LaserJet Pro M402dne - <http://h10032.www1.hp.com/ctg/Manual/c04639074>

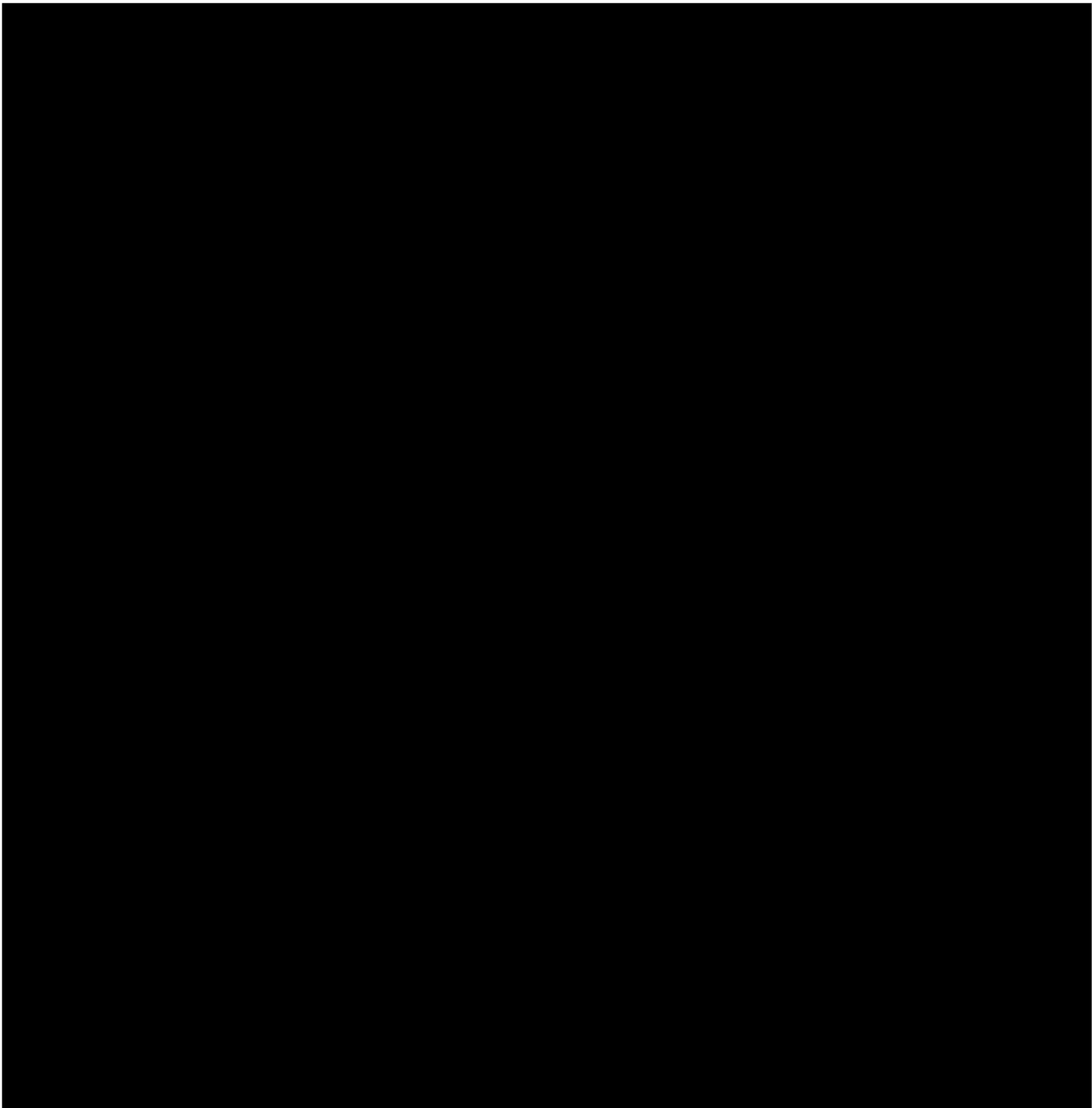
Before each election, Dominion recommends that the ImageCast X tablet go through a screen calibration and diagnostic system testing, which requires approximately 15-20 minutes per ImageCast X tablet.

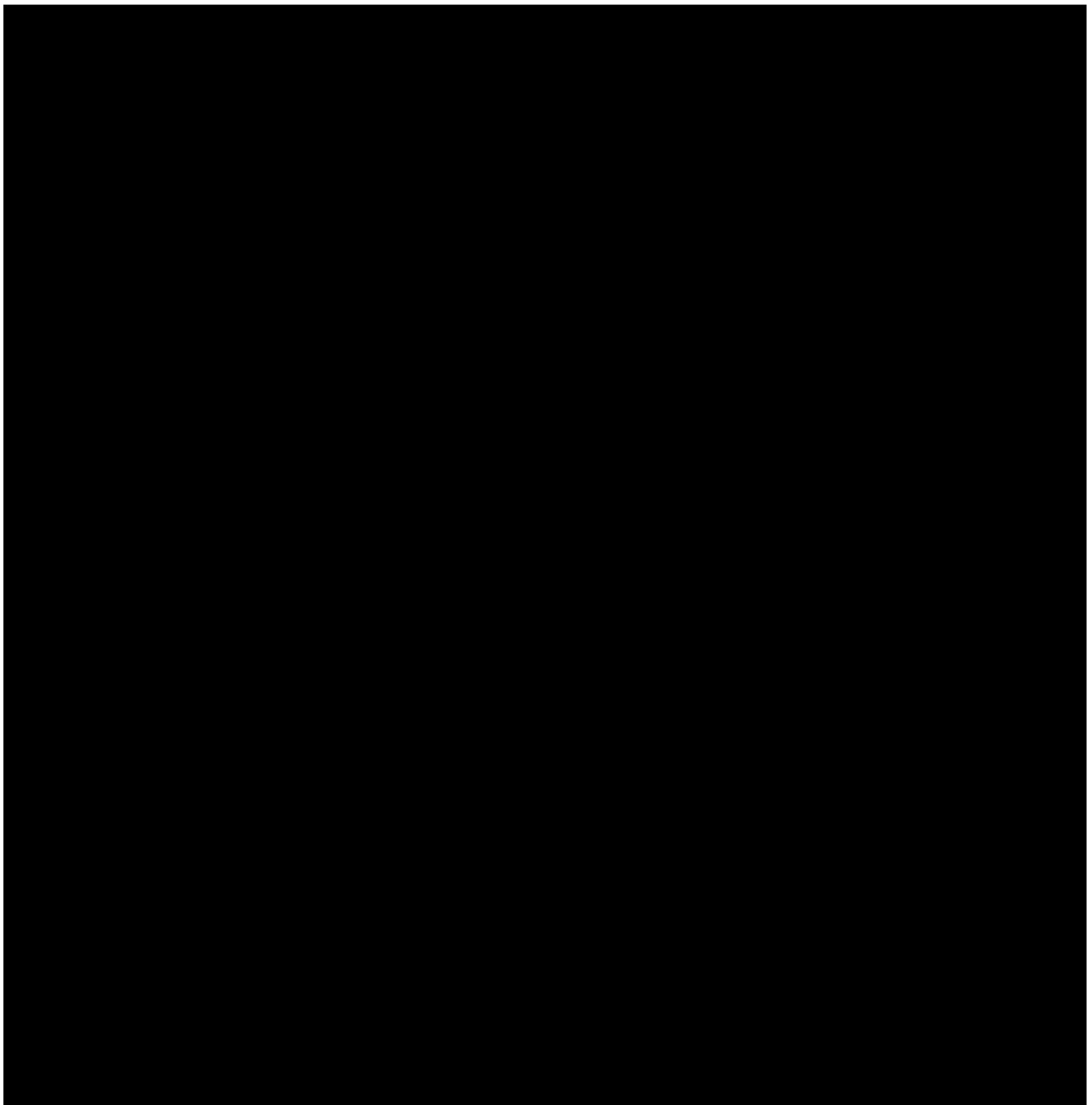
A sample checklist is provided below:



**ImageCast Central**

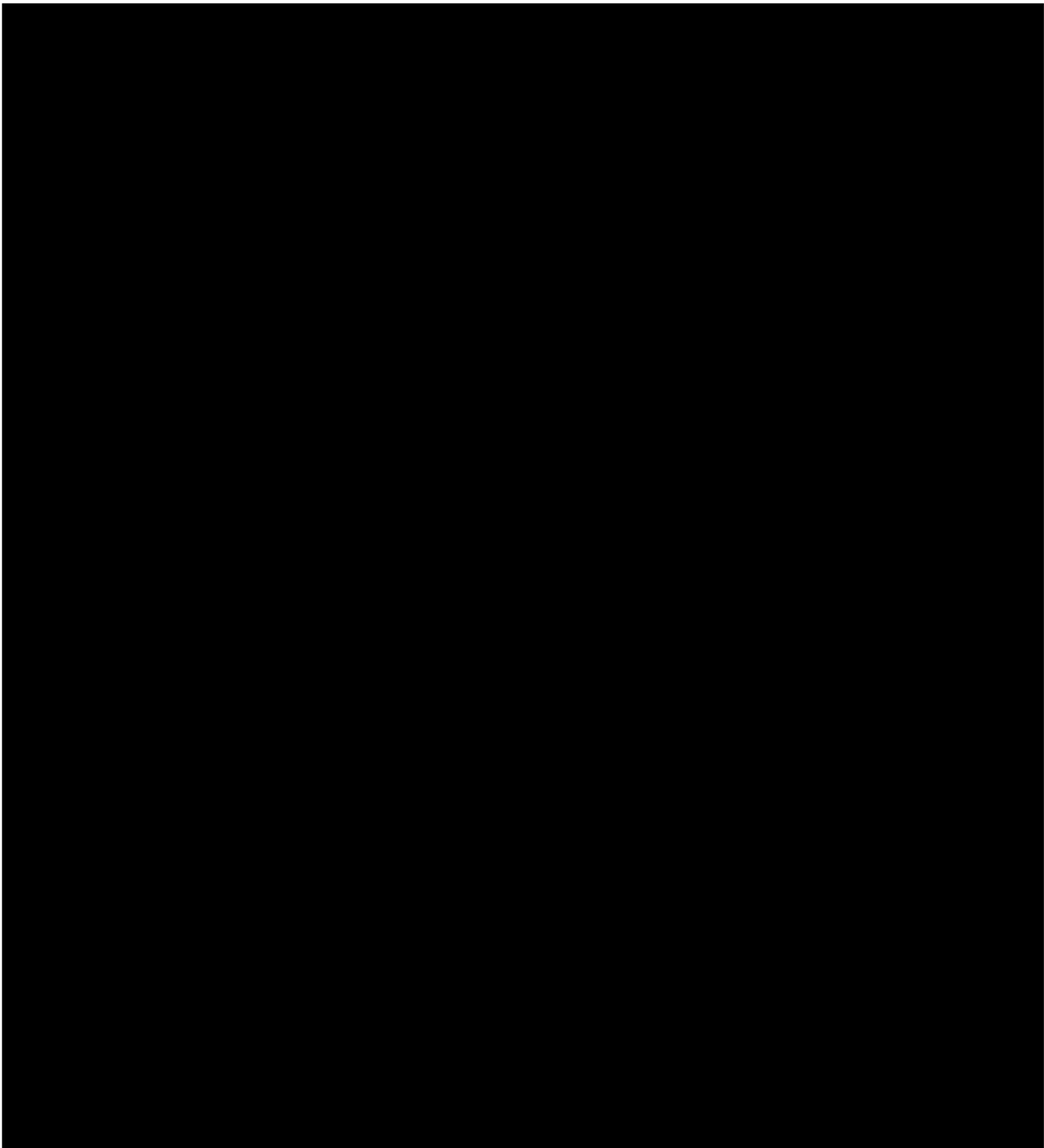
The ImageCast Central utilizes Commercially Available Off-the-Shelf products that would require maintenance intervals typical of any desktop computer or scanner. Below we provide the general preventative maintenance task list that would be performed between elections to ensure functionality and longevity.

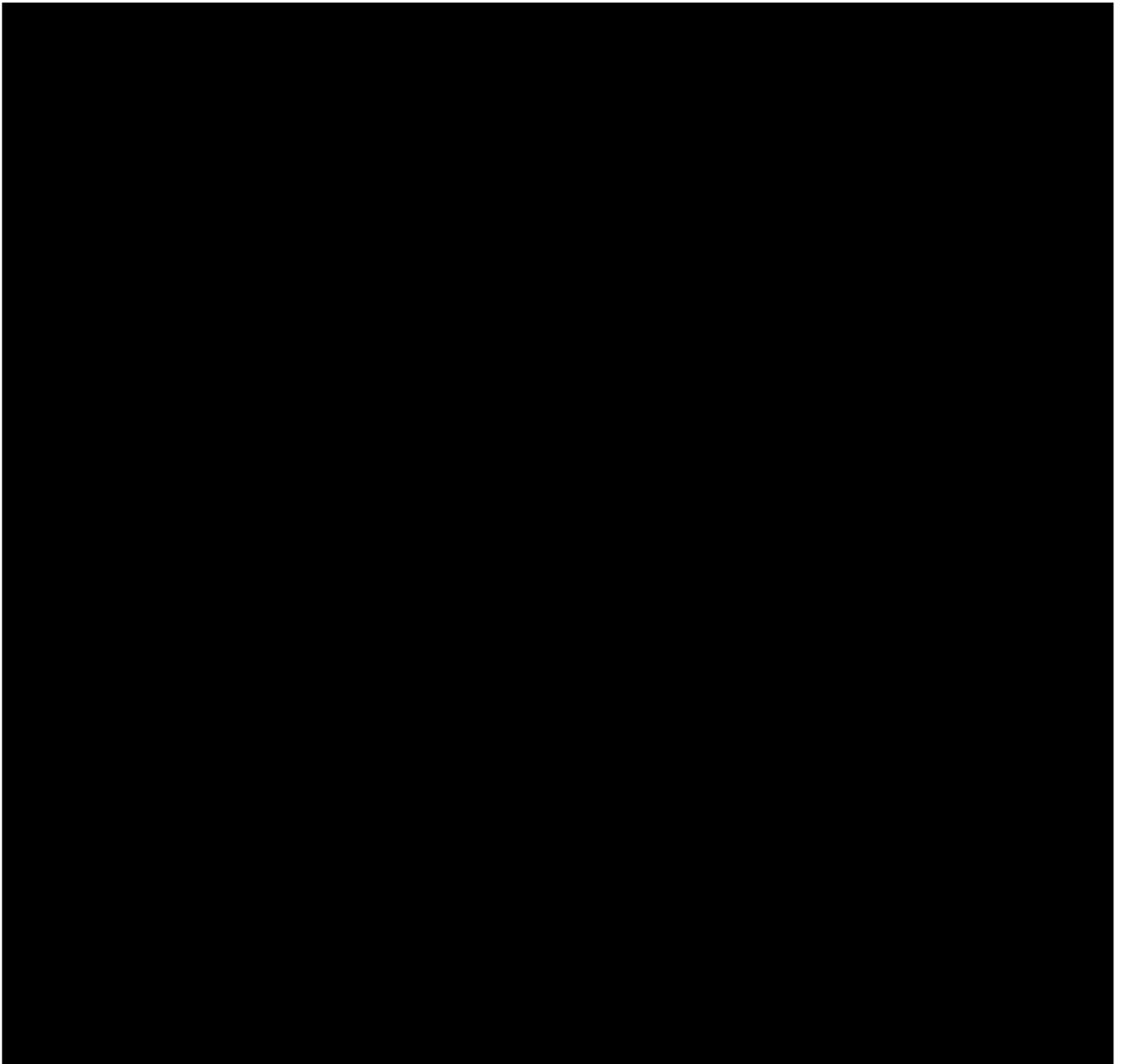




### **ImageCast Precinct**

The ImageCast Precinct is designed for durability and longevity. Below we provide a sample maintenance checklist that should be performed between elections:





Preventive Maintenance Checklist  
6/26/2017

2

**3) Proposed service level agreements, points of contact and escalation procedures.**



Dominion understands that service level agreements will be required, and is prepared to work with the City of Philadelphia to develop mutually agreed upon service levels for this contract.

Dominion has provided Sample Service Level terms for your information below:

## 1. SERVICES SCOPE

	Service	Description
1	Project Management	An assigned project manager will be the primary contact for all project needs. The Dominion Project Manager is responsible for all deliverables and services including, resource planning and coordination, product delivery, issue resolution and support.
2	Training	User and system training covering all products supplied. Training may be provided in person or on-line in advance of the Election.
3	Support Center	General support will be provided via phone and email support. Dominion will track all support and product related issues in our custom ticket tracker tool.
4	Ballot Definition	Customer will provide Dominion with the election data required for ballot production. Dominion will use this data to create proofing ballots for the Customer to review and approve. Upon approval of ballot proofs, final ballot configuration will commence.
5	Machine Programming	Configuration and setup of voting machines with election data to read ballots will follow approval of proofing ballots.
6	Machine Maintenance	Preventative machine maintenance shall be performed prior to shipping and delivery.
7	Onsite Technical Support	Regional onsite support will be provided for Early Voting and Election Day as determined by the contract.

## 2. SERVICE AVAILABILITY AND RESPONSE

- a. Standard hours of all support staff availability are from 8:00 a.m. to 5:30 p.m. Pacific Time, Monday to Friday excluding public holidays.

- b. Support staff is available outside standard hours by mutual agreement of the parties. The City will be given the mobile phone numbers of all members of the implementation team.

<b>Phase</b>	<b>Type of Support</b>	<b>Initial Response</b>	<b>Estimation Response</b>	<b>Resolution</b>
Outside an Election period	On-site, telephone, and video	Up to one business day	Up to 2 business days	Up to 10 to 15 business days
During creation of the Election database and ballots	On-site and telephone	Up to next business day	Up to 2 business days	Up to 3 business days
From ballot mailing to Election Day	On-site and telephone	Up to 12 hours	Up to next business day	Up to 2 business days
On Election Day	On-site	Immediate	60 minutes	Within 1 hour
From Election Day until Election certification	Telephone and video	Up to 12 hours.	Up to next business day	Up to 2 business days
During a recount	If required, on-site	Up to 6 hours	Up to next business day	Up to 1 business day

### **3. ISSUE RESOLUTION PLAN**

a. Contact Details

The Dominion Project Manager will be the primary contact for the Customer for any technical or problem related issue. The Dominion Project Manager will have access to key resources on the Dominion project team as well as product and technical specialists and will be responsible for coordination of all support needs.

b. Tracking

All issues are tracked in Dominion's online trouble ticket system. A Dominion representative will take the service or support request from the customer and open a support ticket. This ticket may be assigned to a specialist for further triage and resolution.

c. Response and Resolution Times

Response and resolution times are measured from the time the incident is opened by the support group.

**Initial Response** is when a ticket is opened and acknowledged by support staff.

**Estimation Response** is when the customer representative that logged the ticket is informed of an estimated resolution time by Dominion.

**Subsequent Responses** is the frequency with which the customer representative that logged the ticket is updated on the resolution status.

**Resolution** is the target time at which point an issue is resolved or a resolution plan is agreed to between the customer representative and Dominion.

d. Issue Escalation

If response times are not achieved during the resolution period, the following Dominion representatives should be contacted in order:

**First Contact:** Project Manager

**Second Contact:** Manager of Client Services or Manager of Sales

**Third Contact:** Director, Customer Relations or Director, Client Services

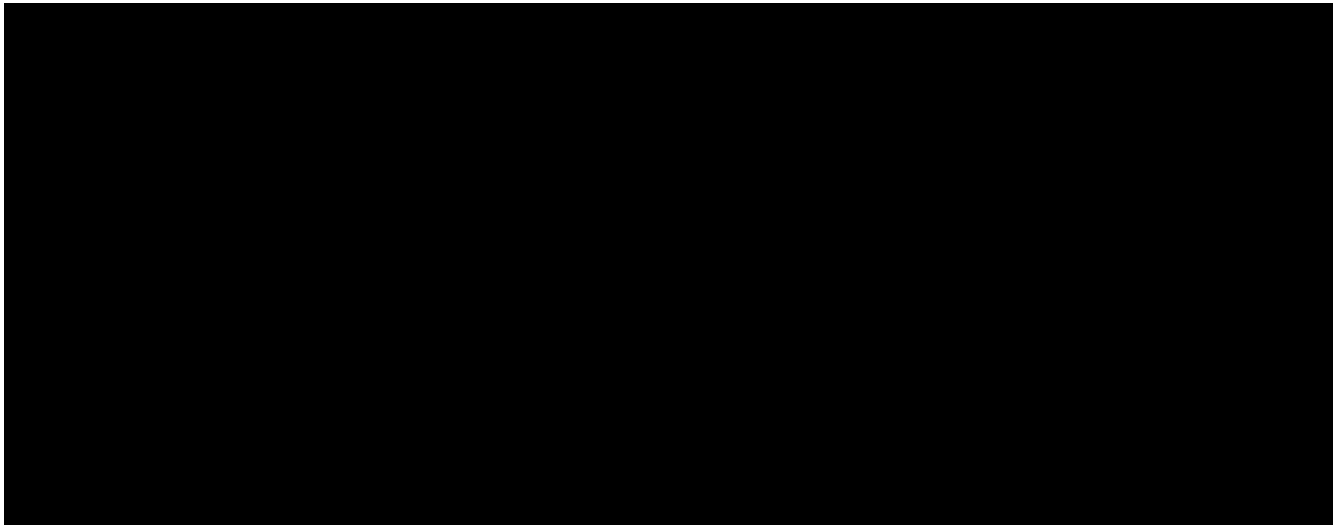
**Fourth Contact:** Executive Vice President, Operations

### 3.10.2 Technical Support

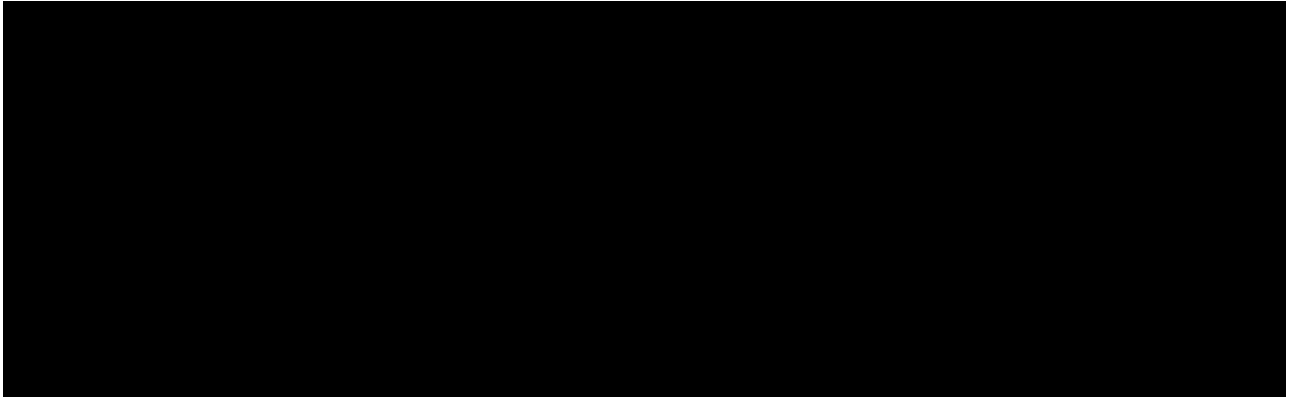
**Describe your support model, which should include the following:**

**1) Problem resolution procedures, including problem severity classifications, response times and “fix” times for each level of severity.**

During the normal course of implementing Democracy Suite, Dominion staff will work closely with customers to establish clear and timely information flow. This communication helps reduce the number of problems and support early identification of problems that require resolution through the Problem Escalation Procedure (PEP). Key to a successful PEP is ownership of a problem. The following table outlines the problem escalation path for the Dominion Team:



The Dominion Project Manager will follow a well-defined and proven PEP process is depicted at a high level in the diagram below, Problem Escalation Procedure, and further details provided in the applicable sections.



Dominion has successfully applied to the proposed PEP to implementations in [REDACTED] and many other Dominion implementation projects. The proposed process has the following key steps:

**Problem Identification** – Customer identifies a problem or Dominion proactively identifies a problem.

**Problem Analysis** – The Dominion Project Manager will work with the individual that identified the problem and Dominion staff to clearly characterize the problem, assess its severity, and determine the initial mitigation strategy. The Dominion Project Manager will describe, document, and log the problem in Dominion’s automated ticket tracking system. Dominion’s Project Manager will notify appropriate Customer/Dominion staff of the severity and risk of the problem.

**Problem Mitigation Plan (PMP)** – The Dominion Project Manager will lead a team to identify the root cause, determine/document mitigation approach, and identify the management point of contact for approval of the PMP.

**Mitigation Execution** – The team will execute the approved PMP and track resolution.

**Problem Escalation** – The Dominion Project Manager will escalate a problem based on exceeding the resolution target time or at their decision.

**Problem Close-Out** – The Dominion Project Manager will document the problem, resolution and lessons learned. They will also close out the item on the problem and risk logs.

Since problems do not always occur during normal business hours, key stakeholders will be provided with emergency contact information that will allow our team to be reached outside of business hours (e.g. evenings, weekends, holidays, etc.) and on an emergency basis.

Dominion Voting Systems' business is built on supporting customers to conduct elections in an error-free, secure and on-time manner. The Dominion team designed our PEP to ensure that we address problems before they have an impact on an election. Higher levels of service are provided during critical periods. Escalation always takes place a position with a wider and deeper pool of resources at his/her disposal, to assist in resolution.

All support request/issues are dealt with according to their priority, which is determined depending on their impact levels. Dominion uses an automated ticket-tracking system. The target resolution time serves as a trigger point for escalation of the problem. The following table characterizes types, severity, and response times.

Phase	Initial Response	Estimation Response	Subsequent Responses	Target Resolution Time
Election Day	Immediate	30 Minutes	30 Minutes	1 Hour
Ballot Programming	2 Hours	6 Hours	Every 4 Hours	8 Hours
Pre-Election Period	6 Hours	8 Hours	Each Business Day	2 Business Days
Non-Election Period	Next Business Day	Next Business Day	Each Business Day	As Agreed

Dominion and its team use a Customer Relations Management system (CRM) database to capture service calls to ensure all issues are resolved effectively. The CRM system tracks service request from the initial point of contact to issue resolution. It provides us with a management control tool as well as a status/historical reporting capability. The CRM

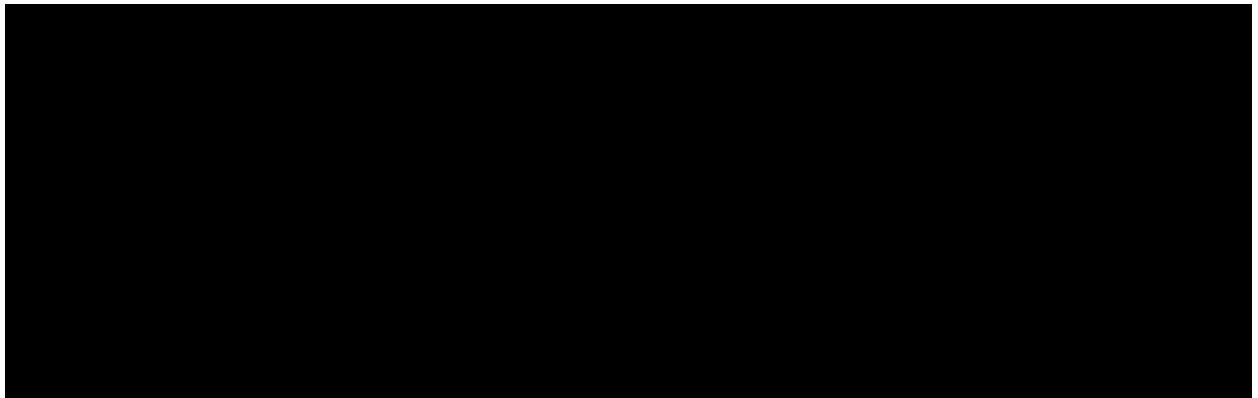
system will also be used to retain/reference repair orders and all other documents reflecting any work performed on any voting system component. Once a call/email is received, a work ticket is created and the initiating party will be contacted by a member of the service team.

Initial contact will be established after notification. At that time, additional troubleshooting instructions may be provided to help the service team better respond to the failure or defect. If the defect or failure cannot be addressed in this manner, a service representative will make the appropriate arrangements for resolution.

During the course the project, Dominion's Project Team works closely with the City of Philadelphia to establish clear and timely information flow. This communication helps reduce the number of problems, and supports early identification of issues that require resolution through the Problem Escalation Procedure (PEP).

**2) Escalation procedures (including on-site service) that will apply where resolution is not immediately achieved.**

The Dominion Project Manager will follow a well-defined and proven PEP process is depicted at a high level in the diagram below, Problem Escalation Procedure, and further details provided in the applicable sections.



Dominion has successfully applied to the proposed PEP to implementations in [REDACTED] and many other Dominion implementation projects. The proposed process has the following key steps:

**Problem Identification** – Customer identifies a problem or Dominion proactively identifies a problem.

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system. Dominion's Project Manager will notify appropriate Customer/Dominion staff of the severity and risk of the problem.

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**Problem Escalation** – The Dominion Project Manager will escalate a problem based on exceeding the resolution target time or at their decision.

**Problem Close-Out** – The Dominion Project Manager will document the problem, resolution and lessons learned. They will also close out the item on the problem and risk logs.

Since problems do not always occur during normal business hours, key stakeholders will be provided with emergency contact information that will allow our team to be reached outside of business hours (e.g. evenings, weekends, holidays, etc.) and on an emergency basis.

Dominion Voting Systems' business is built on supporting customers to conduct elections in an error-free, secure and on-time manner. The Dominion team designed our PEP to ensure that we address problems before they have an impact on an election. Higher levels of service are provided during critical periods. Escalation always takes place a position with a wider and deeper pool of resources at his/her disposal, to assist in resolution.

### 3) **Proposed service level agreements**

As previously detailed, Dominion's Sample Service Level terms are reiterated below:

#### **1. SERVICES SCOPE**

	<b>Service</b>	<b>Description</b>
1	Project Management	An assigned project manager will be the primary contact for all project needs. The Dominion Project Manager is responsible for all deliverables and services including, resource planning and coordination, product delivery, issue resolution and support.
2	Training	User and system training covering all products supplied. Training may be provided in person or on-line in advance of the Election.

3	Support Center	General support will be provided via phone and email support. Dominion will track all support and product related issues in our custom ticket tracker tool.
4	Ballot Definition	Customer will provide Dominion with the election data required for ballot production. Dominion will use this data to create proofing ballots for the Customer to review and approve. Upon approval of ballot proofs, final ballot configuration will commence.
5	Machine Programming	Configuration and setup of voting machines with election data to read ballots will follow approval of proofing ballots.
6	Machine Maintenance	Preventative machine maintenance shall be performed prior to shipping and delivery.
7	Onsite Technical Support	Regional onsite support will be provided for Early Voting and Election Day as determined by the contract.

## 2. SERVICE AVAILABILITY AND RESPONSE

- a. Standard hours of all support staff availability are from 8:00 a.m. to 5:30 p.m. Pacific Time, Monday to Friday excluding public holidays.
- b. Support staff is available outside standard hours by mutual agreement of the parties. The City will be given the mobile phone numbers of all members of the implementation team.

Phase	Type of Support	Initial Response	Estimation Response	Resolution
Outside an Election period	On-site, telephone, and video	Up to one business day	Up to 2 business days	Up to 10 to 15 business days
During creation of the Election database and ballots	On-site and telephone	Up to next business day	Up to 2 business days	Up to 3 business days
From ballot mailing to Election Day	On-site and telephone	Up to 12 hours	Up to next business day	Up to 2 business days
On Election Day	On-site	Immediate	60 minutes	Within 1 hour



From Election Day until Election certification	Telephone and video	Up to 12 hours.	Up to next business day	Up to 2 business days
During a recount	If required, on-site	Up to 6 hours	Up to next business day	Up to 1 business day

### 3. ISSUE RESOLUTION PLAN

#### a. Contact Details

The Dominion Project Manager will be the primary contact for the Customer for any technical or problem related issue. The Dominion Project Manager will have access to key resources on the Dominion project team as well as product and technical specialists and will be responsible for coordination of all support needs.

#### b. Tracking

All issues are tracked in Dominion's online trouble ticket system. A Dominion representative will take the service or support request from the customer and open a support ticket. This ticket may be assigned to a specialist for further triage and resolution.

#### c. Response and Resolution Times

Response and resolution times are measured from the time the incident is opened by the support group.

**Initial Response** is when a ticket is opened and acknowledged by support staff.

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**Subsequent Responses** is the frequency with which the customer representative that logged the ticket is updated on the resolution status.

**Resolution** is the target time at which point an issue is resolved or a resolution plan is agreed to between the customer representative and Dominion.

#### d. Issue Escalation

If response times are not achieved during the resolution period, the following Dominion representatives should be contacted in order:

**First Contact:** Project Manager

**Second Contact:** Manager of Client Services or Manager of Sales

**Third Contact:** Director, Customer Relations or Director, Client Services

**Fourth Contact:** Executive Vice President, Operations

**4) On the ground, in-person support for the following:**

**a) Pre-election support, including:**

- i. Ballot creation assistance and training**
- ii. System set up**
- iii. Pre-election logic and accuracy testing**
- iv. Set up for Election Day voting**

Agreed. Each of the Pre-election Support items are included as part of the services and training programs included in our pricing. Programs will be tailored to the needs of the City of Philadelphia to ensure your specific needs are fully addressed. Dominion has provided extensive training information in response to Section 3.11 below.

**b) Election Day support and troubleshooting assistance, including:**

- i. Answering service calls**
- ii. Tabulation and reporting of results both for the unofficial and official canvass**
- iii. Post-election testing and reporting**
- iv. Post-election audits**
- v. Any possible recounts.**

Agreed. Each of the Election Day and Troubleshooting assistance items are included as part of the services and training programs included in our pricing. Through our work with many other large entities we have the knowledge and personnel to implement staff phone banks, assist with tabulation and reporting, run pot election testing and reporting, perform audits, including Risk-Limiting Audits, and conduct recounts. Our experience has taught us that each entity has different needs and requirements for each of the above items. Therefore, support programs will be tailored to the needs of the City of Philadelphia during the implementation phase to ensure your needs are fully addressed. Additionally, Dominion has provided extensive training information in response to Section 3.11 below, which will provide additional insight into the above items.

**5) In-person support personnel that meet the following criteria:**

- a) Well-trained and certified in the use of the solution**
- b) Conversant in the English language**
- c) Licensed and insured to drive within Pennsylvania**
- d) Have reliable transportation**

**e) Have immediate access to other employees or agents of the Applicant who can provide additional assistance if necessary.**

Agreed. Dominion's personnel meet all of the noted criteria. Our personnel will consist of key individuals with vast knowledge of the election system and direct experience with and experience with administering elections on a large scale. Additionally, all staff is vetted and is required to pass background, security, and drug testing, while meeting any City of Philadelphia required criteria.

Key Personnel are provided below in response to Section 3.15 – Organizational Structure and Resources.

## 3.11 Training Plan

**Provide a training plan that includes all elements and meets all criteria described below.**

Agreed. Dominion has included the cost of training for the City of Philadelphia in the applicable section.

At Dominion, our training methodology focuses on providing election administration staff the necessary knowledge for successful implementation and effective operation of our voting system. We accomplish this through tailored training using various training formats, implementing adult learning principles, and proper course pacing. Training and curriculum particular to the resources, staff and needs of the City will be developed as part of the implementation meetings, and materials will be provided before implementation for both hardware and software functions. Additionally, we understand the requirement that training should be conducted by employees of the applicant; however, in an effort to satisfy all of the requirements of the City's RFP package, Dominion may hire a third party consultant, who qualifies as a disadvantaged business, to assist with certain aspects of the training plan.

### 3.11.1 Training Schedule

**Provide a training schedule that includes:**

- 1) Training for poll workers with the following frequency: 40 dates, consisting of 5 days per location (3 weeknight and 2 weekends, with 3 hour-long sessions on weeknights and 6 hour-long sessions on the weekends). Training should be conducted by employees of the Applicant.**

Agreed. Dominion will customize a training schedule following contract award during the implementation phase. We work closely with our customers to ensure the training program their voting system is in line with their needs, offers complete and comprehensive lessons and materials, and is flexible enough to consider various schedules and availability of key individuals.

Our pricing reflects the costs to cover 40 days of training, including night and weekend sessions. Specific dates and times will be proposed based on direction from the City.

- 2) A minimum of 10 demonstration and trainings for the general public, one in each Councilmanic district. Training should be conducted by employees of the Applicant.**

Agreed. Dominion agrees to provide demonstrations and training sessions to the general public. The curriculum, dates and times will be determined during the implementation phase based on direction from the City.

**3) Extensive training on the solution for designated City staff, as chosen by the Philadelphia City Commissioners. The training sessions must cover the following topics:**

- a) How to design and layout ballots**
- b) Programming of all voting units and devices;**
- c) Tabulating results during the unofficial and official canvass;**
- d) Ensuring accuracy of results;**
- e) Preparing polling places and setting up the solution for election day operation;**
- f) Election Day operating procedures;**
- g) Auditing procedures;**
- h) Conducting a recount;**
- i) Preserving records;**
- j) Printing, designing, and formatting election reports;**
- k) Troubleshooting common issues;**
- l) Safeguarding and preventing tampering and unauthorized access to all parts of the voting system;**
- m) Post-election care, maintenance, and storage**

Agreed. At Dominion Voting Systems our training platforms focus on providing poll workers and election administration staff with the necessary knowledge to implement a voting system that will smoothly and efficiently process voters. We accomplish this through training customization, utilizing various training formats, implementing adult learning principles, and proper pacing within our courses.

Training customization begins with tailoring our courses to a specific jurisdiction's needs. Courses cover both hardware and software, and they detail all phases of the election. One aspect of the customization is utilizing different formats when creating training, including instructor led classes in person, instructor led classes online, and self-paced online eLearning.

In all formats, we base our training on the main principles of adult learning. Adults learn best when material is presented in a variety of ways. To this end, our trainers utilize auditory, visual, and hands-on training techniques. Our classes follow the "Explain, Demonstrate, Do" method. Students hear an explanation of their responsibilities, see it demonstrated, and then have a chance to practice it themselves. For example, our online eLearning presents case studies and step-by-step simulations to enable learners to experience the hardware or software virtually without having to unpack a voting unit.

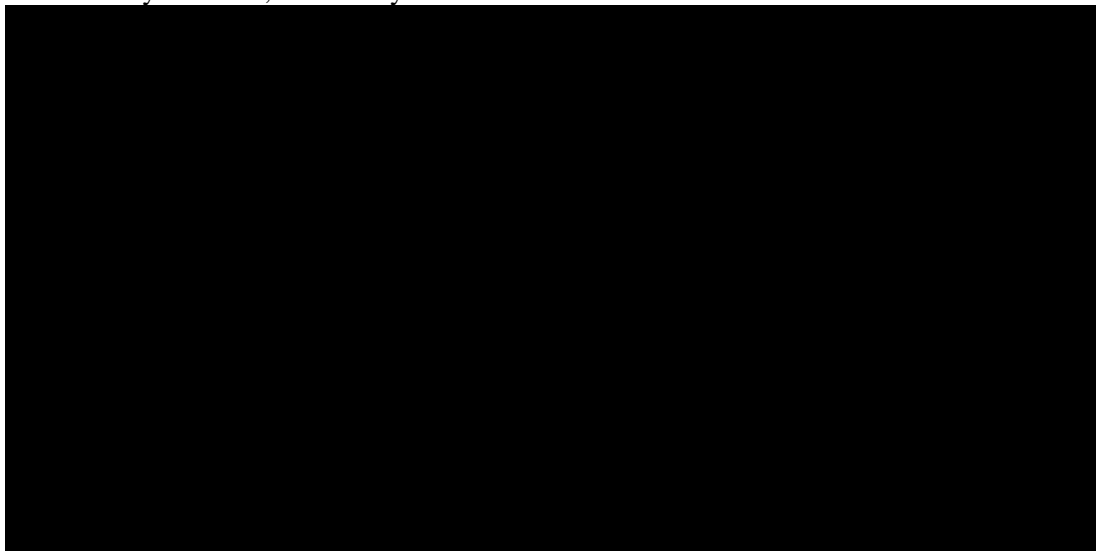
To maximize retention, training classes must be properly divided and paced. In our case, poor retention means an unsuccessful election, which is unacceptable. Our training materials are divided into small, manageable pieces that enable our instructors to cover information without exhausting a student's attention span. Each section of our training lasts no longer than ninety minutes, and then a student's knowledge is thoroughly checked through hands on exercises and progress checks.

Dominion Voting understands that training must support the local jurisdiction's election process. We work in conjunction with election staff to define custom training for each jurisdiction, so it will fit into the normal election process.

We will also work with Philadelphia to create any custom training materials that all parties deem necessary. Any source files or camera-ready images will be available to be given to Philadelphia as needed.

### **Instructional Design**

At Dominion Voting our instructional design follows a Nine Step Model. This model starts with defining what the final student performance is and what the goal of the course needs to be. Once that final performance is defined, we consider performance analysis and identify "What is the least they need to learn?" next we would determine unit identification and unit level exercises, perform a content analysis, define sequencing and delivery methods, and finally validate the course.



This process ensures the course won't flood students with information irrelevant to the final student performance. It also helps with content retention because the information is presented in small, manageable chunks with plenty of progress checks and exercises.

### **Delivery Methodology**

At Dominion Voting we strive for the best customer service in the business and our flexibility to deliver training in multiple formats gives our customers a choice of many different delivery methods for training.

Instructor Led – Training conducted on-site with a certified election systems trainer. These in person classes are structured to provide the students the best opportunity to learn with a face to face trainer. All Dominion Voting Training courses are offered in this delivery method.

Instructor Led Web Based – Instructor led WebEx classes are ideal for customers who need training but onsite training is not possible. These classes are structured with online

instructor led lectures and discussion along with offline homework and lab assignments. Web Based blended classes are offered for any of Dominion Voting's software training courses.

Self-Paced e-learning – Dominion Voting offers a complete library of self-paced e-learning courses which includes both hardware and software training. These courses are designed to deliver training in a unique format while keeping the student engaged and active.

Our online training courses provide step-by-step explanations of the needed information. We use the best eLearning tools such as Captivate and Articulate to create interactive and engaging training. At the end of a course, a student is required to pass an assessment to receive a certificate of completion.

The Respondent shall describe methods available to track which users need training by specific task, whether training has been completed, and when refresher training should be scheduled.

**4) For EPB solutions:**

- a) Programming**
- b) Set up and shut down**
- c) Syncing, exporting, and importing data**

For the purposes of this Request For Proposal, Dominion is not proposing an electric poll book.

**5) 'Train the trainer' training for designated City staff so that they can conduct additional public trainings. Training should be conducted by employees of the Applicant.**

Our Train the Trainer course provides a comprehensive overview for your staff to train Election Day poll workers. This course focuses on teaching trainers to become better at delivering training, covering everything to be included in a poll worker training class. Topics include:

- Training Techniques
- Learning Styles
- Presentation Skills
- Preparing for Election Day
- Opening and Closing the Polls
- Processing Voters
- Assisting Voters with Special Needs
- Managing the Polling Place

### 3.11.2 Training Materials

- 1) Provide a video (in multiple electronic formats for use with DVDs, web, and social media) for poll workers that demonstrates how to setup, operate, and shutdown the voting system and/or EPBS on an election day. The video must be specific to the City's setup and use of the voting system and/or EPBS.
- 2) Provide a video in multiple electronic formats for use with DVDs, web, and social media) for voters that demonstrates how to cast a vote using the voting system. The video must be specific to the City's setup and use of the voting system.
- 3) All training videos must be closed captioned for the visually impaired.
- 4) All training videos must be provided in both English and Spanish.
- 5) Applicant must consent to the publication and use of the videos during any training or demonstration session hosted by the City
- 6) Applicant must consent to the publication and use of the videos on websites hosted by the City.
- 7) Applicant must consent to the publication and use of the videos on publicly available social media platforms.

Agreed. Dominion has created jurisdiction and product specific-videos for various customers across the country. These videos can be produced in multiple electronic formats to best meet the needs of the City of Philadelphia and its constituents. All training videos produced by Dominion will utilize closed captioning for the visually impaired, be produced in both English and Spanish, and will be tailored to meet the specific setup and voting machines being utilized in Philadelphia.

Dominion agrees to provide Philadelphia the consent to use videos in training or demonstration sessions hosted by the City, to post the videos on websites host by the City, and to publish the videos on various social media platforms as directed by Philadelphia.

Dominion has provided links to videos for our products below:

#### **ImageCast X**

<https://www.dropbox.com/sh/p5bi4gl1g9zk68q/AADE0xZgkSp1osgOQ6GcZK5ha?dl=0>

#### **ImageCast Precinct**

<https://www.dropbox.com/sh/9eao0exakatbqy/AADNLgX1eLrmeh6tqOSNH7bwa?dl=0>

#### **ImageCast Central**

<https://www.dropbox.com/sh/musnsxbdxs2ik6d/AABuvTtfG6kZrOVHw1fYVX1Ca?dl=0>

#### **Adjudication**

<https://www.dropbox.com/s/v37m5p4k0nyzwga/ADJ%20Short%20Demo%20v1.mp4?dl=0>

#### **Poll Worker Training Video**

<http://www.dominionvoting.com/training/>

**Username:** DVSVideos

**Password:** TrainingVideos!



## **Voter Education Videos**

<http://www.dominionvoting.com/votereducation>

**Username:** DVSVideos

**Password:** VoterEducationVideos!

### **3.11.3 Testing and Certification**

#### **1) Provide a testing and certification process for current and new employees who will maintain the equipment**

Dominion Voting will provide recommended service and maintenance provisions for all components and maintenance provisions for all components of the voting system as part of Philadelphia's implementation. This includes maintenance manuals, as well as customer-specific maintenance log(s). Training for Philadelphia employees to maintain, set up, warehouse, and deliver equipment will be provided as detailed in the training plan provided in response to Section 3.11.1.

All third party or independent contractors hired by Dominion Voting Systems are permitted to provide service and maintenance to the voting system without voiding any warranty or violating any licensing agreement. Contractors employed by Philadelphia will be required to participate in Technician training classes and successfully be certified by Dominion Voting Systems prior to provision of any service and or maintenance for the city of Philadelphia. Individual contractors hired directly by Dominion are thoroughly vetted and background checks are performed, prior to any engagement or assignment.

### **3.12 Documentation**

**Describe the documentation you will provide, which should include the following:**

#### **1) All system manuals necessary to allow the City to operate the voting system from the start of an election to the auditing of final results, independently of the Applicant's assistance and support. System documentation should include:**

Dominion agrees to provide all system manuals, documentation, training materials and manuals, software and firmware documentation, and any other applicable documentation needed to run and maintain the system from setting up an election to the auditing of final results. All documentation will be searchable and simple to understand for the user.

Documentation is updated in tandem with upgrades in all aspects of the system and certification. Philadelphia will receive updated documentation whenever upgrades or recertification efforts take place.

#### **a) Detailed specification of all implemented functionality**

Agreed. Dominion will provide detailed specifications of any and all implemented functionality of any equipment and systems for the City of Philadelphia.

Details on system functionality and overviews of component performance have been provided in this RFP response.

**b) Architecture model**

Agreed. It is standard practice for Dominion to include an architectural model of system configuration to all of our customers. This model includes applicable models, equipment, servers, and programming details.

Dominion has included a system configuration model in this RFP response.

**c) System consumables and the Applicant's supply chain for those consumables**

Agreed. Dominion will provide a listing of all consumables and the supply chain for each of those consumables. Dominion will also provide pricing details for consumables if purchased through Dominion.

Below Dominion provides a preliminary listing of the expected Consumable Supply Chain for use in Philadelphia.

Consumable Item	Dominion Part Number	Model/Specifications	Supplier/Manufacturer
Compact Flash and iButton Labels (100 Sheets)	118-000052	Blank labels for CF and iButton	Metagraphic Network, Inc.
Fine point black permanent markers (12 pack)	125-000001	Sharpie Marker, Fine Point, Black	Sanford, Also available at most office supply stores
Flash Memory Card 16Gb	123-000268	RiData RDCF16G-233XMCB2-I	RiData
Flash Memory Card 4Gb – SanDisk	123-000119	SCFHS-004G, RDCF8G-233XMCB2-I	Sandisk or RiData
Flash Memory Card 8Gb-SanDisk	123-000296	SDCFHS-008G	Sandisk
Centon 16Gb Flash Memory Card	123-000429	Centon	Centon
ICC iButton Security Key	171-000009	Item assembled by Dominion	Dallas-Maxim
ICC Scanner Cleaning Shets - X10C (30 pack)	141-000004	Canon Cleaning Sheets 2418B002	Canon
Centon USB 8Gb	123-000384	Centon	Centon
Centon USB 16Gb	123-000385	Centon	Centon

ICP Cleaning Sheet	141-000008		Tapecon Inc.
ICP iButton Security Key – Black	171-000009	Item assembled by Dominion	Dallas-Maxim
ICP iButton Security Key – Blue	171-000011	Item assembled by Dominion	Dallas-Maxim
ICP Lithium Battery	117-000512		Totex
ICP Paper Roll (72 foot)	123-000213	Archival thermal paper roll.	Printing Technologies Inc. (PTI)
ICP Paper Roll (96 foot)	123-000229	Archival thermal paper roll.	Printing Technologies Inc. (PTI)
ICP Privacy Folder	125-000018	Secrecy folder.	Metagraphic Networks Inc.
Sip and Puff Mouthpiece – Tube Style (10 pack)	123-000104	Accessibility device.	Enabling Devices
Seal – High Residue Label – 2”-9” Red	136-00043	NovaVision S28-77REAA	NovaVision Inc.
Seal – Non-residue – 1/316” x 4-5/16” – Blue	125-000061	Intab 03-1375	Intab
ICX Toner for BMD Printer	123-000354	HP C226A LaserJet toner cartridge black	HP – Also available at most office supply stores
ICX Activation Cards	123-000330	Advanced Card Systems ACOS6-C6AACSA	Advance Card Systems

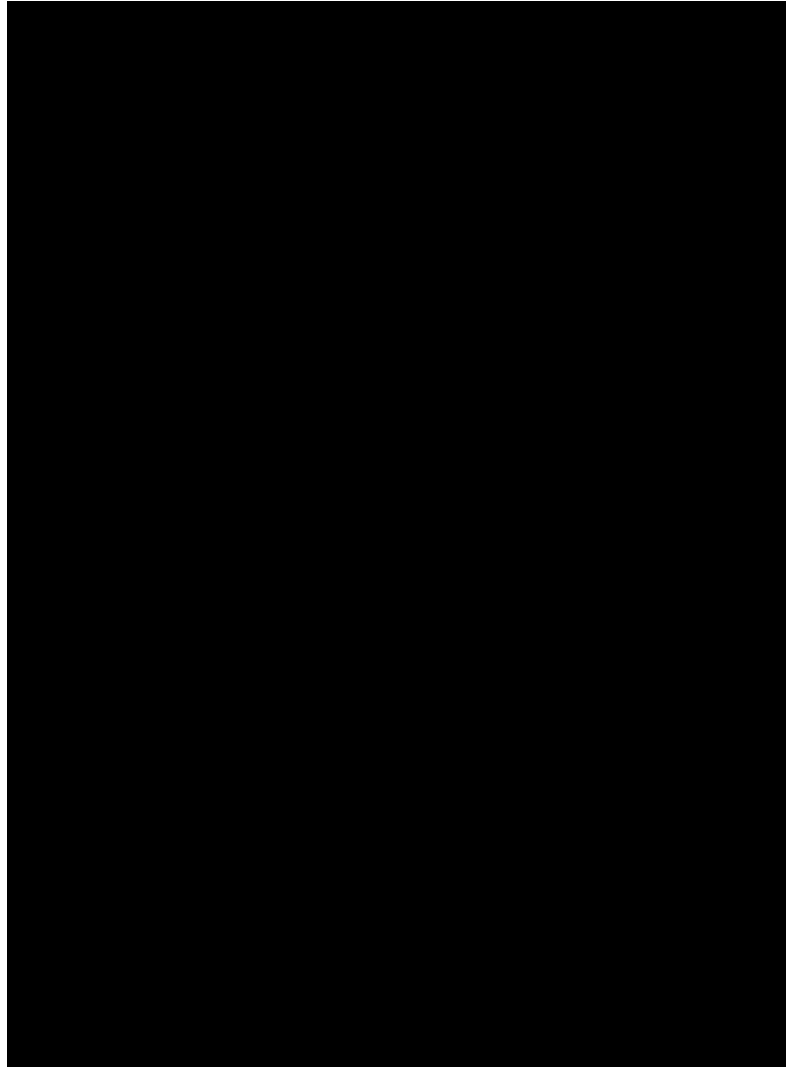
**d) Applicant's repair and maintenance policies and proposed service level agreements**

Dominion and its team use a Customer Relations Management system (CRM) database to capture service calls to ensure all issues are resolved effectively. Once a call/email is received, a work ticket is created and the initiating party will be contacted by a member of the service team.

Initial contact will be established after notification. At that time, additional troubleshooting instructions may be provided to help the service team better respond to the failure or defect. If the defect or failure cannot be addressed in this manner, a service representative will make the appropriate arrangements for resolution. The diagram to the right summarizes this process.

If a failed component is under warranty, a Dominion technician will schedule an onsite visit to repair / rectify the defective or failed component. Where a failed or defective component is not covered by warranty, a request for an on-site visit to assess and repair the failed / defective component may be made. Normal rates will apply.

Dominion will provide ongoing support to City officials and collaborate with other Element Project Managers in the timelines agreed upon by Dominion and the City of Philadelphia in order to ensure proper project oversight and prompt problem escalation.



**e) Applicant's internal quality assurance procedures and any internal or external test data and reports available to the vendor concerning the voting system and/or EPBS.**

As part of our quality assurance initiatives, Dominion Voting tests our equipment to the highest standards in the industry. Our quality assurance and testing plan is multi-layered and designed to complement any testing on the part of the City. Key attributes of the test plan are as follows:

- 1. EAC Certification** – Dominion products are certified as EAC compliant. This is the highest certification standard in the industry and is your assurance that all products have undergone the highest level of testing. Testing reports are available through the EAC
- 2. State Requirements Testing** – Dominion Engineers work to configure the EAC certified platform to meet the Commonwealth of Pennsylvania's specific certification requirements.
- 3. State Certification Testing** – Dominion's team works with the Commonwealth of Pennsylvania to demonstrate compliance of the system with state requirements.
- 4. Acceptance Testing** – Each component of the system is tested for functionality at the customer site. Dominion will provide training and documentation to Fresno officials to assist them in undertaking this task.
- 5. End-to-End Test** – Dominion will work with the City to conduct end-to-end testing. We recommend that this test is completed following EMS training on a project reflecting Election Day requirements. In this test, an election project is created, and a representative sample of tabulators are programmed. Test ballots with known results are prepared and cast. Results are uploaded into the election management system and reports are generated. The results are then compared to the expected outcomes to verify the system is performing properly. This test is performed on site at the customer warehouse.
- 6. Pre-Election Logic & Accuracy Testing** – In advance of all elections, Dominion Voting recommends that Logic & Accuracy Testing of each voting system is tested with final Election Day ballots. This complete end-to-end test provides certainty that the system will perform as planned on Election Day. This test is performed on site at the customer warehouse.
- 7. Automated Test Deck Creation** - The creation of automated, comprehensive test decks is an optional service provided by Dominion to assist customers in conducting Logic & Accuracy testing. Using the Election Day database a series of pre-marked ballots are generated based on a computer algorithm designed to provide the highest assurance of system accuracy. When scanned these decks create known outcomes that can be compared with tabulated results. The elimination of error due to mistakes in hand-marking provides a higher degree of confidence in test results.

**f) Data recovery procedures**

Dominion will provide Philadelphia with a detailed Data Recovery plan. Below we provide a brief, high-level overview of some of Dominion's data recovery procedures.

Dominion maintains a parallel system for every information technology system. The parallel system is kept on standby mode and deployed if needed. All database servers also make scheduled copies of their data to the NAS storage device and can be restored if needed. All equipment used in our systems is based on redundant internal architectures – dual power supplies, RAID disks, etc.

The Dominion head office is in Denver, CO. Should this site be compromised, a variety of disaster recovery plans are in place:

- a. Software and IP are stored in multiple locations.
- b. Technical specifications are stored in multiple sites.
- c. Most service staff are based in the United States, but service personnel are also across North America and Europe. Dominion offices are located in four time-zones for the convenience of our customers.
- d. Fully redundant data center environments one primary and the secondary in hot standby mode, in the case of an issue with the primary data center environment the secondary will assume the primary role.

All Dominion employees utilize the same standardized procedures and collaboration techniques to ensure the most seamless transition in case of accident or other business continuity threat.

**g) A list of all programs that will be executed during the use of the solution, as well as a list of all files storing program data. For each program in the list, the intended function of the program must be identified. For each file storing program data, the associated program must be identified**

Dominion will provide a comprehensive list of all programs that will be used by the solution, in addition to any files storing program data. The list will delineate each intended function for every program. Any file storing program data, will be identified and communicated to Dominion.

**h) A list of all system configuration data required for proper system function. For each configuration data file in the list,**

- i. the intended function of the configuration data must be identified**
- ii. the hardware and/ or software component to which the configuration data is applied must be identified**

Dominion will provide a comprehensive list of all programs that will be used by the solution, in addition to any files storing program data. The list will delineate each

intended function for every program. Any file storing program data, will be identified and communicated to Dominion.

**i) A list of all files that will contain information from the Philadelphia SURE database**

Dominion's Operations and Technical teams will compile a list of all files that will contain information from Philadelphia's SURE database. The list will detail what each file from the SURE database contains.

**j) A file format specification for each file or program.**

Dominion will provide detailed file format specifications for each file and program connected to the Democracy Suite Election Management System and accompanying ImageCast equipment.

**k) Detailed specification of the audit log, including but not limited to:**

- i. A complete definition of the audit log format.**
- ii. For each audit log entry, a precise statement regarding the event that causes said entry to be generated.**

Dominion's system maintains a complete and comprehensive audit of events according to Philadelphia policy, State and Federal requirements.

From the initial state of the election project, until the deactivation state, the EMS system maintains an activity log within the EMS database. This activity log contains every action that any of the users have performed within the system and represents a detailed audit log that can be analyzed and printed in the form of an audit report. The audit record information cannot be modified or permanently deleted using the EMS client applications. It can, however, be exported for archiving purposes as part of the record retention policy. Keeping in mind that audit log information can contain significant amount of information, it is the responsibility of the administrative user to perform regular archiving of the log. During the voting phase of the election event, ImageCast devices also keep an activity audit log which tracks events happening on the device itself.

Available log reports include:

**Election Database Audit Log:** The auditing activity displays this auditing report on the screen of the EMS client applications. The reports found in the Audit Log Report Group are associated with the logon account usernames that have been created within the Election Management System Election Event Designer and Election Management System Results, Tally and Reporting (e.g. Admin, Tech advisor, and RTR Admin.) That is to say, the produced reports will log each action that a specific user performed at a certain point in time. These reports show details such as User Name, Report for Time Period, and Action details. The report is generated in simple text format and can be exported into PDF, HTML or MS Excel format. The created report is stored

on the EMS server and signed using the election project key to ensure its authenticity. Reports are created with the assigned date, and multiple reports can be generated and printed.

**EMS System Logs:** There are three types of EMS system logs, which are system errors, warnings and information. Each EMS application records its own set of log files. These logs account for activities that are not specific to a particular election database. Some of this information is also logged in the Windows Event Viewer.

**Windows Logs:** In addition to the EMS system, the Windows Event Viewer logs information relating to the operating system and computer hardware, including any system errors (i.e. power failures, hardware failures, data errors, etc.).

Election results (including the scanned ballot images and log files) are stored on the compact flash memory cards on each individual ImageCast tabulator. Each file type (result files, ballot images and log files) may be imported into the Results, Tally and Reporting application of EMS together or separately. This allows for the flexible management of results after the election occurs. Since ballot images take a significant amount of time to import, your jurisdiction may decide that they are imported after the results have been completely tallied. Result and log files, however, take only a few seconds to load. All ImageCast log files are visible through the Results, Tally and Reporting application and are stored in the EMS database. In EMS, a directory of audit files is accessed in the graphical user interface and can be printed or stored in a separate location. Operators with Administration privileges can access these files at any time.

Audit log records cannot be deleted nor modified. Users with proper authorization levels can generate and view the audit report. Audit reports cannot be deleted.

**I) A list of all user interfaces. For each user interface in the list a description must be provided, as well as information on what user roles are authorized to access said interface.**

Dominion will provide the City of Philadelphia a comprehensive list of all user interfaces that the Democracy Suite Election Management System and accompanying ImageCast equipment. This list will provide information on what user roles are authorized to access that interface.

Below Dominion has provided a very brief overview of the ImageCast X's user interface options with a concise description.

- **Visual Mode:** Voter navigates their ballot using one of the available accessibility tools and the visual display.
- **Audio Mode:** Visual display can be disabled, and the voter uses headphones to navigate an audio ballot using one of the available accessibility tools.



Visual and Audio Mode: Voter navigates their ballot using one of the available accessibility devices, the visual display, and the audio ballot.

**m) Documentation on the solution's non-functional qualities, including but not limited to Performance, Availability, Reliability, Safety, Security, and Auditability.**

Any documentation relating to the system's non-functional qualities including Performance, Availability, Reliability, Safety, Security, and Auditability will be provided to the City of Philadelphia.

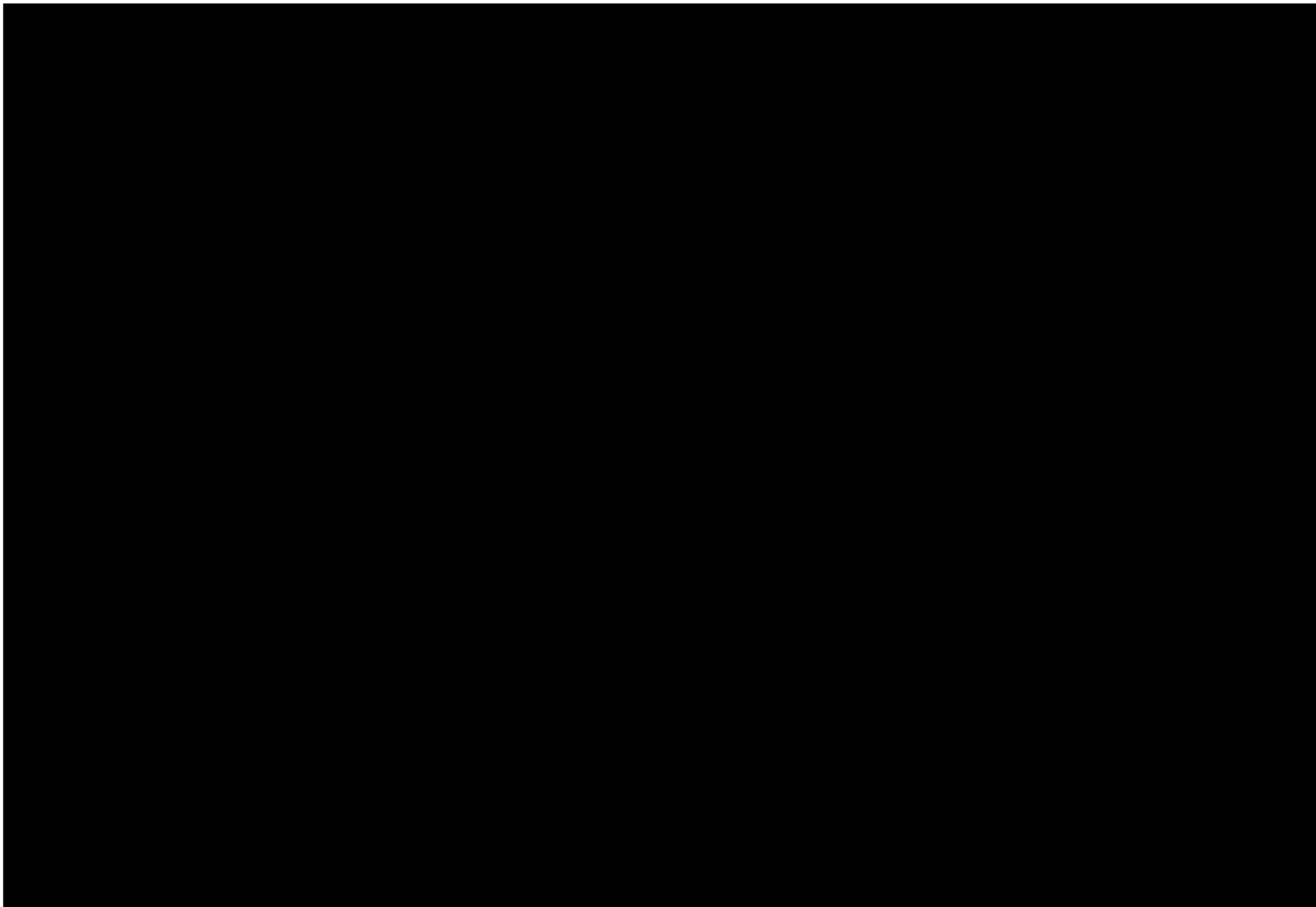
Due to the size of these various files, Dominion will provide them to the city upon request.

**2) A user guide that contains complete instructions sufficient to set up, operate, configure, re-configure, maintenance, and shut down the solution. The user guide must be in a format suitable for use at a polling place such as simple "how to" or "quick reference" guides.**

Dominion will provide user guides that cover the complete instructions on how to set up, operate, configure, re-configure, maintain, and shut down the Democracy Suite and the accompanying ImageCast equipment.

The guides are suitable for polling places and are simple. They utilize simple instructions that focus on a single function or process for each piece of equipment.

Below Dominion has provided a sample quick reference user guide that covers the ImageCast Precinct and Opening the Polls on the unit.



### 3.13 Statement of Work

Provide a Statement of Work for the proposed solution, including:

- 1) **A comprehensive list of deliverables to be provided, in accordance with the Scope of Work described in Section 2 of this RFP.**
- 2) **All assumptions relied upon to develop the work plan and estimate, and all conditions for its fulfillment as proposed, including City responsibilities.**

Dominion is pleased to present our comprehensive solution for election equipment and services for consideration by the City of Philadelphia. Dominion is the election provider for more than 1,200 jurisdictions across 33 states. Dominion has demonstrated our ability to deliver successful, secure and transparent elections through our products, experienced people and sense of partnership. Dominion Voting is fully invested in your success.

Dominion is more than just a vendor or a service provider – we are a company that works with you as a partner. Over the last decade, Dominion has been continuously learning and soliciting feedback from our customer base to ensure that our technology meets not only the needs of our customers, but also the constituents they serve. We know that it has become imperative for elections technology vendors to provide systems that are more efficient, flexible, scalable, sustainable, secure and transparent than ever before – and Dominion is leading the way.

Below we provide a high-level overview of our proposed solution beginning with our Democracy Suite and related Core Technology of the system, followed by a description of optional modules, UOCAVA and Mobile Ballot Printing, that increase efficiency and reduce the costs of election administration.

#### Democracy Suite

At the heart of our complete voting system solution is Democracy Suite, a robust and tested Election Management System that drives all voting channels out of a single comprehensive database; mail-in ballots, in person voting, accessible voting, and Uniformed Overseas Citizens Absentee Voting Act (UOCAVA)/Remote Accessible Vote by Mail(RAVBM). All pre-election and post-election tasks utilize the same database. From ballot layout to results reporting on Election Night, Democracy Suite is a complete, end-to-end elections solution that provides a single, powerful and versatile platform for election management.

Existing functionality and ongoing development of Democracy Suite centers around providing free and fair elections while considering the needs of our customers for easy to use and intuitive products, efficient processes, and accurate and transparent results for all ballots cast.

Democracy Suite is comprised of two modules: Election Event Designer and Results, Tally and Reporting.

#### Election Event Designer

The Election Event Designer (EED) has all the tools needed to build the election project. From the importing of your election data, ballot layout, audio, languages, machine settings to creation of election files for each voting unit, Election Event Designer sets the stage.

We understand that ballot programming is a complex task that requires a high degree of accuracy and control. Dominion has developed tools to make this process more efficient, ensuring accuracy and peace of mind for your election staff. For instance:

- Election definition data may be entered manually, or imported from the voter registration systems using the Election Data Translator utility. The Election Data Translator utility allows the import of the election definition from the City's election files further simplifying the election definition process for Philadelphia.
- Once election data is imported, the City can review the data, make any applicable changes, set up the layout and design of the ballots, and then undergo a final overview of the ballots. At this point, audio components of the election are completed to the specifications and requirements of Philadelphia.
- Templates used for creating custom ballot layouts and options can be reused from election to election, and imported into newly created election databases. Election definition data as well as the templates used for creating elections allow jurisdictions to create uniform, easy-to-read, and space efficient paper ballots.
- Election Event Designer uses the City's geopolitical and election data to calculate the appropriate ballot styles and generate full-sized press-ready ballots in industry-standard PDF format. EMS lays out a variety of import ballot formats and can be used allow for the easy import of translated ballot content in jurisdictions using multiple languages.
- The Election Event Designer allows the City to set up the tabulation, the tallying types (for reporting purposes), and the various election processes required by Philadelphia (test decks, logic and accuracy testing).
- Once Philadelphia has completed all the initial steps of election definition using the Election Event Designer, the system will not allow a significant database change to take place. A designated City election official would have to go back into the system to make those corrections. This safeguarding mechanism ensures strength in our system and provides a system of checks and balances to assure that all election set up processes are transparent and completed correctly.

The Democracy Suite system supports ballot layouts consistent with Commonwealth and Philadelphia guidelines and requirements. The ballot is 8.5" wide, and standard ballot lengths for the ImageCast Central are 11" to 22" ballots. The number of voting positions depends on the ballot style and the length of the ballot. The system can generate and process a 22" double-sided portrait ballot that can accommodate 500 voting positions.

## Results Tally and Reporting

Results Tally and Reporting (RTR) module allows for the upload of results files from in-person and central tabulation equipment. The consolidated results are verified, tabulated and published. RTR offers maximum flexibility to create predefined reports, in addition to a variety of standard Election Day reports including election summary, Statement of Votes Cast, Cards Cast and RCV round by round report. RTR also houses the algorithm for Ranked Choice Voting contests.

Results files may be automatically uploaded to Results Tally and Reporting and consolidated results are available for verification prior to publishing.

An additional efficiency built into the Democracy Suite RTR module is that reports can be generated as ballot processing continues uninterrupted. Under legacy systems, pulling reports causes a disruption to ballot processing. This efficiency enables the City to better respond to the community requests for real time election data; results are instantaneous.

- Once data is uploaded, the City will store all log files, data, and images.
- All data is reviewed, and published, then reported. These checks and balances occur prior to publication, thus reducing errors and increasing transparency.
- Reporting options are highly flexible. The City can choose to complete a normal, standard based report, or on-the-fly election reports that are highly customizable, that can meet any of the needs of the office and its constituents. Democracy Suite has the flexibility to output data in many common file formats such as excel, pdf, html, CSV and XML.

## **AuditMark**

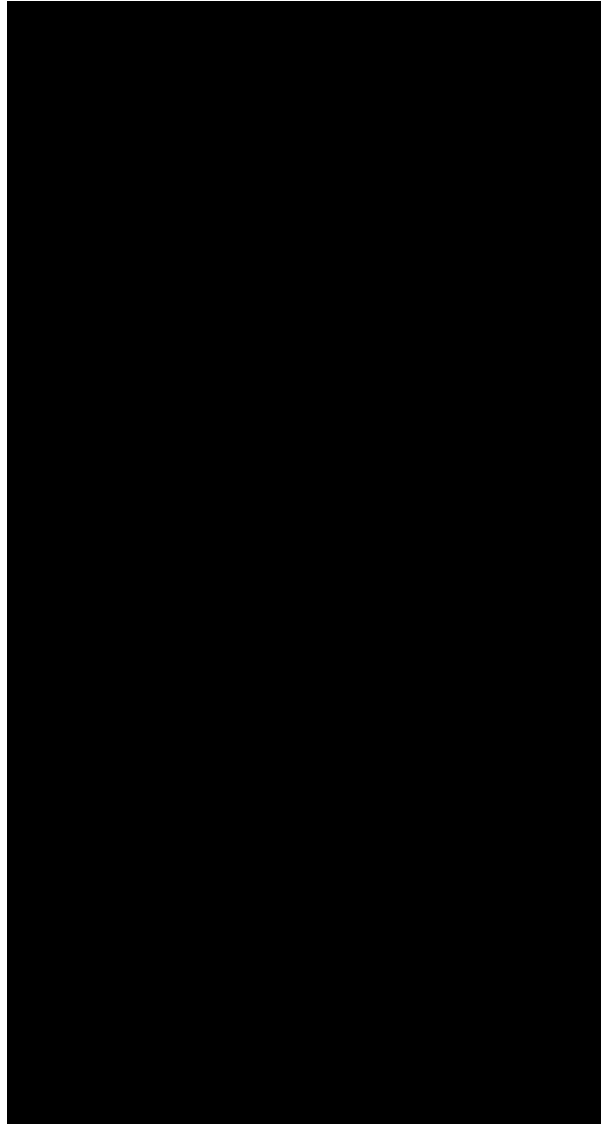
Every single ballot in the election is imaged and appended with Dominion's patented AuditMark, a record of how the system interpreted the voter's selections. This ballot-level audit trail allows election officials and other stakeholders to review not only the ballot images, but also the tabulator's interpretation of each ballot.

Each image is labeled with the tabulator, batch, and sequence number within the batch, which corresponds to the physical ballot in the stack. The AuditMark is appended directly to the image showing how the vote was interpreted at scan time. This AuditMark will also include any adjudications applied to the ballot for voter intent. Even if ballots for a given batch are mixed after scanning, these multiple records provide a way of correlating the digital Cast Vote Record data to the image scanned and finally to the physical paper ballot. While the AuditMark allows ballot-level auditing, it is never tied to the voter.

## Dual Threshold

When a hand-marked ballot is scanned by an ImageCast tabulator – at the precinct level or centrally – a complete duplex image is created and then analyzed for tabulation by evaluating the pixel count of a voter mark. The pixel count of each mark is compared with two thresholds (which are customer configurable, to determine what constitutes a vote).

If a mark falls above the upper threshold, it is determined to be a valid vote. If a mark falls below the lower threshold, it will not be counted as a vote. However, if a mark falls between the two thresholds (known as the “ambiguous zone”), it will be deemed as a marginal mark and the ballot will be flagged for adjudication where a team will review a voter’s intent and the outcome noted in the system.



## Dual Threshold Mark Detection - Marginal Marks



## ImageCast X

Today, voters and election officials are increasingly looking to leverage everyday technologies to improve the voting process and experience. Dominion is listening to our customers, and has designed a touchscreen, in-person Ballot Marking Device that combines the flexibility, efficiency, and simplicity of modern technology, with an underlying platform of security and performance – Democracy Suite. The ImageCast X Ballot Marking Device can support different voting models, including early voting.



In addition to its touchscreen functionality, the ImageCast X Ballot Marking Device was designed as a voting solution for all. The fully ADA-compliant ImageCast X offers several options for voters with accessibility needs to vote in a private and independent manner. It presents the ballot in audio only, visual only, or both audio and visual modes, depending on personal preference.

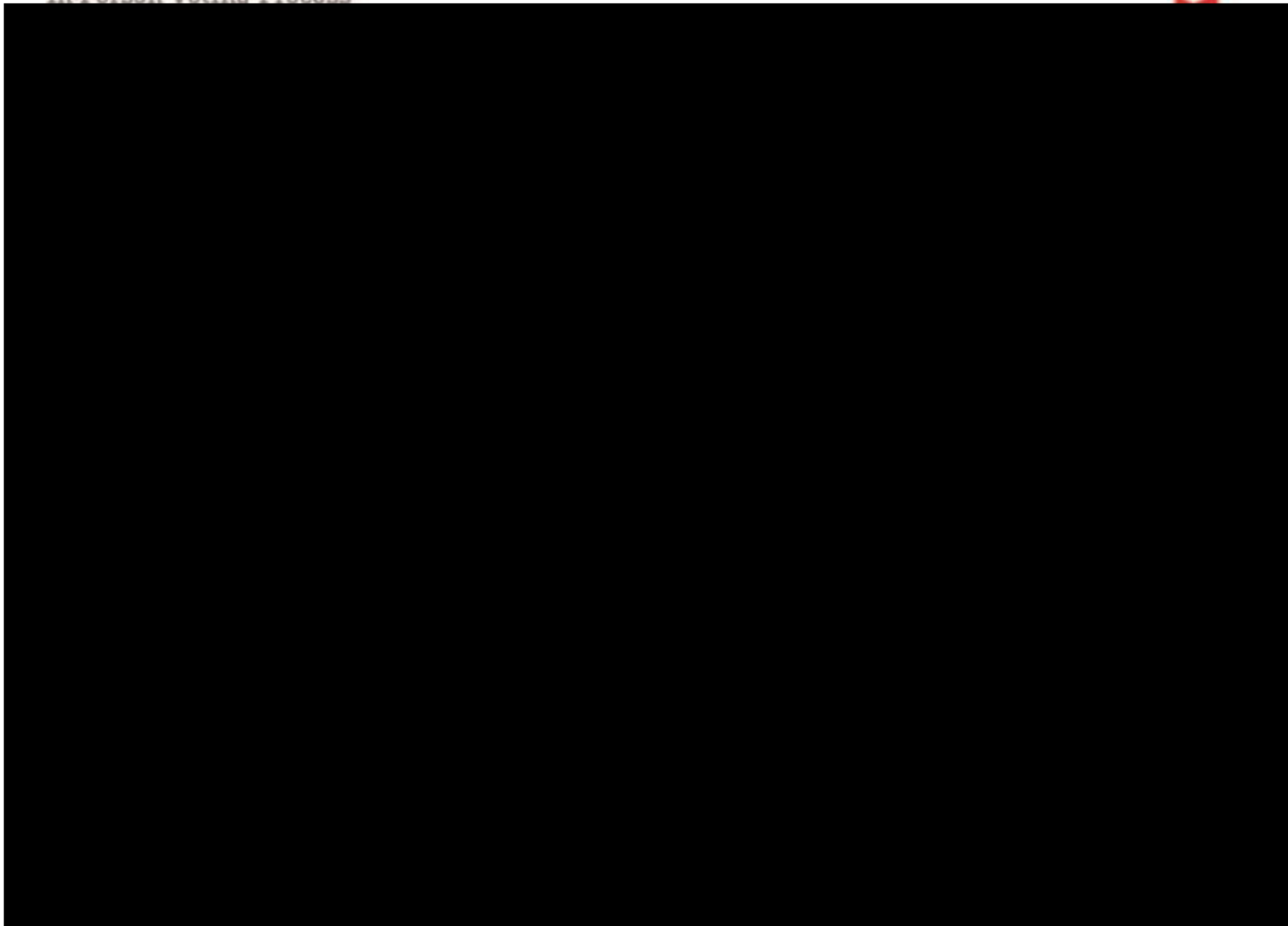
The ImageCast X is compatible with a range of accessibility devices that voters can use to navigate through the ballot and make their selections. The system is compatible with a hand-held controller called the Audio Tactile Interface (ATI), sip and puff device, or paddle device.

Voters make their selections on the ImageCast X, which then prints a paper ballot. The printed choice summary ballot contains a written summary of the voter's choices, as well as a 2D barcode that is read by Dominion's ImageCast Central tabulator. No votes are stored on the ImageCast X touchscreen unit. The ImageCast Central tabulators store and tabulate all votes.

The ImageCast X is comprised entirely of COTS (commercial-off-the-shelf) hardware. The flexibility and ease of use of this device makes it the best option for the changing election landscape.



## In-Person Voting Process



## ImageCast Central

Most central count solutions that exist in the market today are large, expensive, proprietary solutions that are not scalable, efficient, or easy to use or maintain. Dominion ImageCast Central is engineered for simplicity and efficiency.



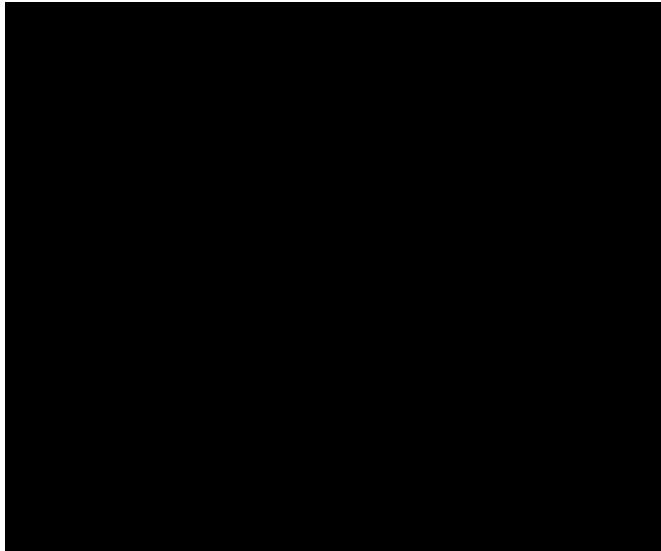
The ImageCast Central can be used to tabulate the results from all voting channels (by mail ballots, ballots marked using the ImageCast X Ballot Marking Device, and ImageCast Remote: UOCAVA/RAVBM ballots. ImageCast Central is designed to simply run ballots until there are none left. The system is extremely scalable; an additional ImageCast Central unit consists of a computer, software, and a scanner. The ImageCast Central is designed to scale based on the largest number of ballots a jurisdiction receives in one day. The sophisticated software evaluates the ballot image. If there is an outstack condition with a ballot, the system sends the image to Adjudication, where human eyes review any issue. The ImageCast Central is an efficient, robust and scalable solution that will meet the needs of Philadelphia at a fraction of the cost of proprietary scanners.

## ImageCast Adjudication

As ballots are being scanned on the ImageCast Central, the Adjudication software allows for the electronic review of outstacked ballot images, in real time. Outstack conditions ranging from overvotes, undervotes, blank ballots, blank major contests and marginal marks to certified write-ins. The Adjudication module allows for the efficient processing of ballots that require resolution of voter intent on a ballot-by-ballot basis. Ballots with write-ins that are tabulated on the ImageCast X Ballot Marking Device, will also be sent through Adjudication for resolution. This system eliminates the need to purchase or print additional ballots, take days to manually adjudicate and re-scan days after the election is over. Simply scan the ballots and adjudicate the ballots on the same day. Adjudication also offers a robust, ballot-level audit trail. Each ballot scanned by the system is appended with an AuditMark.

When a ballot is reviewed in the Adjudication module, and a user makes an adjudication decision, the ballot image is appended with a record of that decision: which user took what action at what time. This allows election officials to ensure that adjudication decisions made by authorized users can be further scrutinized and reviewed, and reversed if necessary, with a clear audit trail of which decisions were made concerning a particular ballot.

Dominion's adjudication module provides increases in both efficiency and functionality that competitors are unable to furnish. While the system focuses on voter intent issues that need to be resolved in adjudication, Democracy Suite and the applicable equipment continuously tabulates ballots. Being able to run and tabulate ballots nonstop allows the City to save time and create efficiencies that other systems do not allow. Our COTS equipment and software allows Dominion to add equipment as the City's needs evolve, while always having a solution that can outperform high-speed proprietary units proposed by our competitors.



## OPTIONAL SOLUTIONS

### ImageCast Remote: UOCAVA/RAVBM

Democracy Suite's ImageCast Remote UOCAVA/Remote Accessible Vote by Mail (RAVBM) offers a secure and efficient means for overseas and military voters as well as voters with disabilities to receive, mark, print and return their ballot to their local elections office. ImageCast Remote UOCAVA/RAVBM ensures the security and transparency of the voting process while preserving the privacy of UOCAVA and Voters with Disabilities.

An accessible ballot is in a readable format and allows for a voter to utilize their individual assistive technology. Fully integrated and supported by Democracy Suite, the ImageCast Remote UOCAVA/RAVBM allows election officials to conduct a seamless election, without the need for a separate database or election project. Ballots returned can be processed on the ImageCast Central, eliminating the need to duplicate ballots or process UOCAVA/RAVBM ballots on a separate system.

### Mobile Ballot Printing

Easily print ballots whenever and wherever needed with Dominion's Mobile Ballot Printing module. Fully integrated with Democracy Suite, the Mobile Ballot Printing module allows jurisdictions to provide "Vote Anywhere" locations in a cost-effective and flexible manner. The ballot for Mobile Ballot Printing is generated out of Democracy Suite with all appropriate watermarks and color. The system is hardware "agnostic," giving you the flexibility to use your existing print hardware or leverage other commercially available off-the-shelf (COTS) printers.

The Mobile Ballot Printing module has a user-friendly interface that presents clear information about ballots available to print and features audit reports to track how many times each ballot style has been printed. Dominion has several certified Oki Data printers to choose from that will best meet the printing needs of Philadelphia. In today's modern era systems, ballots are imaged and have lower print specifications. Having the ability to print as many ballots as needed without worry of additional cost, makes the Mobile Ballot Printing system a natural augmentation to the Philadelphia elections office.



## Risk-Limiting Audit Capability

Democracy Suite at its core produces all necessary data for the City to perform Risk Limiting Audits. A Risk Limiting Audit presumes that the voting system is incorrect and customizes an audit package based on the acceptable risk limits and determines the proper number of ballots for review as an acceptable audit sampling.

Dominion is very proud to have assisted 58 of 64 Colorado counties that utilize Democracy Suite in the **first ever statewide Risk Limiting Audit**. To fulfill each Colorado county's obligation to perform a Risk Limiting Audit, Dominion prepared an export of ballot images, cast vote records, and all data necessary for the ballot manifest, which were integrated with a third party open source module.

## Project Management and Implementation Activities

Dominion provides end-to-end elections services that are customized for individual clients. Above we described the hardware and software included in our proposed solution. Below we provide an overview of the project management and implementation activities.

### Project Initiation & Kick-Off Meeting

The designated Dominion Project Manager and the Dominion Technical Lead will meet with the City to discuss and finalize the following activities:

1. Review project governance structure, project roles and responsibilities
2. Project Management Artifacts Review
  - a. Review and adjust the following with a view to finalize immediately following contract signing:
    - i. Project plan activities, schedule and milestones
    - ii. Issue tracking & escalation plan
    - iii. Risk mitigation plan
    - iv. Communication plan
    - v. Conflict resolution plan
3. Training Plan finalization
  - a. Review and adjust training sessions and schedule
4. Review Architectural & Technical Specifications deliverables

### Requirements Gathering, Gap Analysis & Application Configuration

A key phase in the initial stages of the project implementation will be a gap analysis performed by the Dominion team, and subsequent configuration will be developed and implemented.

Through this thorough analysis, Dominion will identify if there are aspects of system functionality which need to be customized in order to meet the City's statutory requirements. Dominion technology is used in dozens of states across the United States, each with its own set of

particular and unique requirements. Below we describe the steps involved in customizing the system to the City's environment.

The Dominion Voting Democracy Suite Election Management System (EMS) is a highly configurable election system that can be adapted to meet the needs of any jurisdiction. Dominion will work closely with Philadelphia to ensure that the system is deployed in a manner that meets all jurisdiction requirements. The following steps are typically required:

### **Create Election Data Import Bridge**

In this series of steps, Dominion works with the IT professional responsible for the creation and maintenance of the EIMS database to create a bridge that allows the direct import of geopolitical data into the Democracy Suite EMS. This step dramatically increases the speed and accuracy of the creation of the election database within the Democracy Suite EMS. In this way, election divisions, contests, candidate names, propositions and other essential data need not be input twice, reducing the likelihood of user error.

### **Customization of Configurable Options**

During this stage, the City will provide final input and approval on ballot layouts, reports content, and the configuration of the options of the ImageCast voting terminals. This step takes place at the same time as the data import bridge is created and results data export file is created and provided to the IT system managers.

### **End-to-End Test**

All Dominion systems are certified and tested to the highest standards. As a part of our internal quality assurance process, all systems undergo a rigorous operational test prior to release to the customer. This end-to-end test simulates real-election conditions and utilizes Election Day configurations. An election database is created, ballots are produced and cast on the appropriate voting systems, polls are closed, results are transmitted to the Results Tally & Reporting application of the Election Management System, and City reports are generated. Dominion understands that all systems must undergo a rigorous operational test prior to production release.

### **Procurement and Delivery**

Procurement will be conducted in a manner that allows the coordination of supplies and consumables to be shipped directly to the City. During the procurement phase of the project, all of the commercial off the shelf components used in our election system are purchased. Dominion will deliver all required equipment to the City based on the timeline outlined in the project plan.

While it would be preferable for all parties to identify final quantities of all supplies and consumables required for Election Day on the initial contract, provision in the project plan has been made to allow incremental orders to be placed following change management processes. The City always has the opportunity to work with the Dominion Project Manager to place additional orders at any time.

### **Installation & Acceptance Testing**

The City is responsible for User Acceptance Testing, and Dominion will provide an onsite presence to support acceptance testing performed by the City. Acceptance testing involves a visual inspection of the voting platforms, successfully completing a series of internal diagnostics, and successfully tabulating ballots from a sample test election. Dominion provides documentation and training for client technicians, as well as warehouse set-up guidelines for inbound acceptance testing.

### **Preparation for Acceptance Testing**

Dominion will provide guidelines and checklists to the City for acceptance testing and coordinate dates with the staff for software installation. This includes assessing suitability and identifying any modifications required, identifying areas for each process including a secure area for inventory control, preparing necessary acceptance documentation, and ensuring all necessary supplies are available.

### **Installation**

Dominion will configure and install all software including the operating system and application software and set up the solution including all hardware and connections provided as part of the system.

### **Acceptance Testing**

The City's Acceptance Team, with support from Dominion staff, will conduct detailed acceptance testing of the voting equipment. This acceptance testing provides assurance of full product functionality and accuracy. Acceptance testing is an essential part of the Dominion quality assurance process and takes place on-site at the customer location.

#### ***ImageCast X Voting Terminals - System Acceptance Testing:***

1. Physical inspection of equipment
2. Functional testing using provided test materials

#### ***ImageCast Central – System Acceptance Testing:***

1. Physical inspection of equipment
2. Functional testing using provided test materials

#### ***EMS Acceptance Testing:***

1. Utilization of the EMS system to restore or create a simple election project
2. Creation of sample election files and ballots for in-person and ImageCast Central voting system
3. Directly load sample results from voting terminals
4. Create Election Results Reports

### **Training**

Dominion will work closely with Philadelphia to ensure that the training program is customized to meet your specific needs. Dominion will prepare and provide all needed training material, which includes training manuals, quick reference guides, website instructional courses, and technical reference manuals when necessary. Training and curriculum particular to the resources, staff, and needs of the City will be developed as part of the implementation meetings and



materials will be provided before implementation for both hardware and software functions. In addition to formal training, our specialists will work to transfer the required knowledge and skills to relevant City staff, with the objective of ensuring that City staff is empowered to manage all aspects of the system's availability and functionality. Dominion takes pride in our ability to transfer to local officials the skills necessary to conduct even complex elections with autonomy.

## **Election Programming**

The creation of the election database is a critical step in the election implementation. Given the very limited time available between the certification of the final ballot and the distribution of UOCAVA / Mail ballots, it is very important that timelines are appropriately managed. Dominion employs an iterative approach to ballot and report creation, where successive rounds of proofs are provided to election officials as more information becomes available. Using this approach, in many cases ballots have already been approved by the time they are certified, maximizing the time available for pre-election testing and logistics.

The following are the basic steps involved in election programming:

**Final election data provided to programming team** – Final election data is provided to the programming team. This should be provided at the earliest possible date.

**Election Programming Quality Assurance** – On completion of election programming, a back-up of the final data structure is transferred to the Dominion Team for verification and testing. The purpose of this test is to ensure that no unintended errors have impacted the data structure.

**Test decks generated** – On completion of programming quality assurance, the test decks are created for use in Logic and Accuracy testing.

**Ballots and ballot audio generated and approved** - On completion of programming quality assurance, ballots (including audio and paper ballots) are generated. Ballot proofs and electronic ballot image files are generated and provided to the City Officials. The City Officials carefully review each ballot. When City officials are satisfied that the ballots are correct, they initial each ballot, and when they are satisfied that all ballots are correct, they sign-off on their accuracy, and the image files are provided to the printer.

**Ballot printing and distribution** – Ballot printing and distribution are the responsibility of the printer and the City Officials. Dominion will provide a recommended ballot inspection process that should be followed to ensure that all ballots produced are of sufficient quality.

**Memory Media Programming** – Memory media for the ImageCast X and ImageCast Central devices is programmed.

**Receive test ballots from printer** – The receipt of test ballots is the milestone that triggers the beginning of L&A testing.

## **Logic and Accuracy Testing**

City officials and their staff will conduct logic and accuracy testing of voting equipment, using processes, procedures, and support provided by Dominion. The Dominion project team will be available throughout the L&A process available to assist on an as required basis. Training for City officials on the L&A process will take place prior to Logic and Accuracy testing.



## **Election Support**

The Dominion project team will reach an agreement with the City on their specific roles during ballot scanning and Election Night. Dominion's on-site support resource will have the necessary skills to assist the City to ensure the polling location opens in a timely fashion and that the equipment functions properly. In addition, a key role for the on-site support resource is to assist the City with tabulation and results reporting. Dominion's active voting support strategy can be customized to meet the City's specific needs.

## **Post-Election Debrief Meeting**

Within 30 days following election event, Dominion will coordinate a post-election debrief meeting to discuss post-election events and activities with Philadelphia. The debrief meeting is an opportunity to review lessons learned from both Dominion and the City, evaluate success factors and areas for improvement for process enhancement in future election cycles. On completion of these reviews, project documentation and the project plan will be revised to reflect learning from the first election.

## 3.14 Implementation Plan

Provide an implementation plan describing how your organization will implement the proposed solution and provide the services required by this RFP, including:

- 1) **Project management and implementation approach, i.e. the methods by which the Applicant manages projects of the type sought by this RFP. The City reserves the right to implement the project in phases defined by the City.**

Dominion Voting understands that voting system implementations are complex and challenging projects, which rigorous planning and execution. Dominion has successfully completed similar implementations in jurisdictions across the country, including most recently statewide implementation in [REDACTED], and will deploy all tools and expertise available in order to ensure the success of Philadelphia's implementation.

We employ technical and project management experts who have demonstrated unmatched skill in understanding what resources are necessary to complete a project seamlessly and on time. Dominion's service organization will provide the coordination and supervision of all activities required to transition the City to their new Democracy Suite voting system. Dominion's proposed Operations team for Philadelphia not only has considerable experience in providing ongoing support to election officials, but also in implementing new voting technology.

Dominion has designed our project plans based on the following:

- Dominion's project plans adhere to PMBOK standards and practices.
- Plans are developed using MS Project and will be monitored/reported by using MS Project.
- Plans are designed with key milestones (clear tangible deliverables) that are designed to mitigate risk to the extent possible.
- Tasks are focused on accomplishing specific objectives, and duration is listed in days (eight hours constitutes one day).
- The work breakdown structure is a logical progression of steps, activities, and subtasks that lead to tangible work products or deliverables.
- Our plans provide the board of Elections with visibility into the tasks and schedule.
- Our plans incorporate Dominion's prior experience in successfully implementing voting systems.
- Our plans are achievable and will be used to manage to specific deadlines.

Dominion has carefully reviewed the requirements of this RFP and developed draft project plans based on our current understanding of project requirements, and draws on our extensive, real world implementation experience.

Dominion subscribes to a collaborative management approach, where transparency and open communications drive our projects. Dominion's assigned Project Manager will

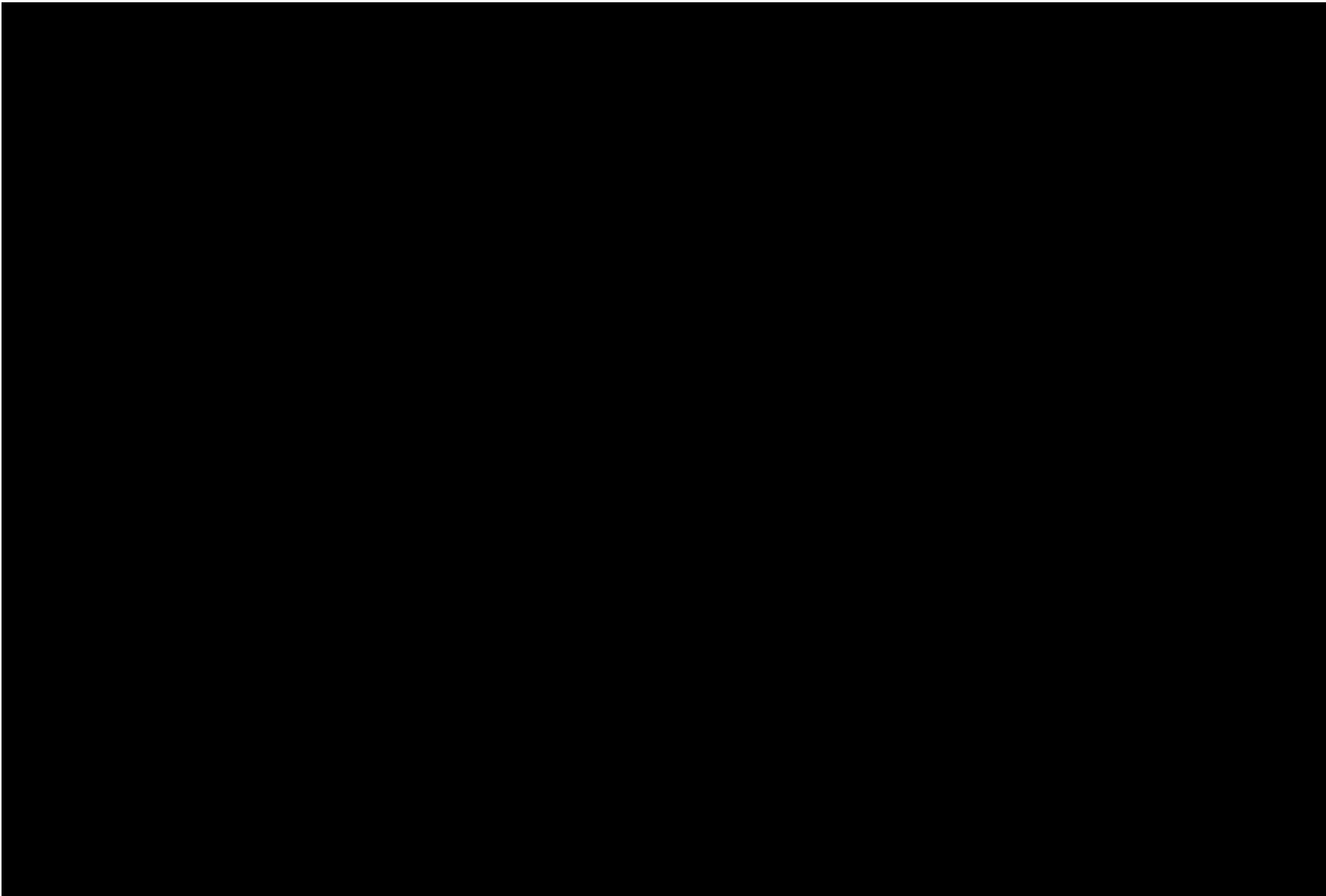
ensure the City Officials are kept abreast of all contract and task activities, performance levels, and any potential issues. Open communication between the City personnel and Dominion will allow issues to be raised, addressed, and mitigated.

**2) Project schedule, identifying all tasks to be performed, role(s) that will perform each task, durations for each task, principal schedule milestones, and overall duration from inception to completion.**

The following pages represent a preliminary Project Plan. The start and finish dates associated with each activity are estimates as we would look to work with the City to customize the implementation schedule with your input. We would be happy to discuss any of the related activities and deliverable estimates in more detail upon request.

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**3) Strategy for conducting a pilot or proof of concept of the proposed solution. Tasks associated with the pilot or proof of concept may be included in the project schedule.**

Dominion has experience with other large entities in setting up a pilot program. Most recently Dominion conducted a pilot for the [REDACTED] for public viewing and interaction with the voting process to establish the action items on our end to deliver the proper pilot materials and people at the time and date desired by the city.

The first step of the interaction will focus on defining the scope of the pilot, establishing the desired equipment and content. Below we provide an outline of the information gathering process:

1. Meet with customer, define scope
  - a. Date / Time
  - b. Location
  - c. Equipment to be used
  - d. Equipment configuration
  - e. Logistics:
    - i. How to access city hall
    - ii. What can and cannot be brought into city hall
    - iii. How to get through security and to the setup location
    - iv. Electrical and space requirements
  - f. Content
    - i. What items does the jurisdiction want to demonstrate?
      1. ImageCast X
      2. Central Count
      3. Adjudication
      4. Ballot layout
    - ii. What type of audience do they expect to have?
      1. Voters
      2. Media
      3. Activists
      4. Public officials
    - iii. What materials do they want to be able to provide to visitors?
      1. Pamphlets

2. Flyers
  3. Contact information
- g. Feedback - How do we collect feedback?
- i. Paper survey and dropbox
  - ii. Follow up survey
  - iii. What questions should we ask?
2. Election Database
    - a. How many ballots should be printed and available?
    - b. What types of ballots should be printed and available (folded / flat)?
    - c. How many languages should be represented in the database?
    - d. How many contests should be represented in the database and of what type?
  3. Staff Experience
 

**Who will be attending from Philadelphia staff:**

    - Poll Worker Division
      - This division is responsible for recruitment and training of Poll Workers.
      - Materials and instructions designed for poll workers in the field such as opening and closing procedures, trouble shooting, and voting procedures.
    - Outreach Division
      - This division is responsible for voter outreach and education.
      - Materials and information that will help coordinators develop educational presentations.
    - Warehouse Division
      - This division is responsible for long-term storage, staging for delivery, and receiving of the equipment after the election.
      - Materials and information on best practices for storage and handling.
    - Management of Information Systems
      - This division is responsible for the Department's IT.
      - Materials and information regarding vote tabulation and reporting, Election setup, and use of ICC and Adjudication workstations.
    - Ballot Distribution Division
      - This division is responsible for processing Vote-By-Mail ballots.
      - Materials and information regarding the use of ICC and Adjudication workstations.
    - Precinct Services Division
      - This division is responsible for securing polling locations and the delivery and retrieval of voting equipment.
      - Materials and information regarding the system footprint, components, and handling of the items.
  4. Voter Experience



- a. What should voters see when they walk in the mock vote center?
  - b. What features should be focused on for the ImageCast X
5. Activist Experience
  - a. What features are activists interested in seeing?
  - b. Which support staff are adequately prepared to speak with activists about the system?
6. Media / Public Official experience:
  - a. What features should be explained to the media and the public officials?
  - b. What support staff are prepared/appropriate to demo/speak with media and public officials?

After determining the scope of the pilot, audience, and desires the City wants to showcase, Dominion creates a customized set of action items to prepare for the event. Action items may include:

1. Setup and Test Database
  - a. Layout paper ballots
  - b. Define language localizations and obtain audio recordings for all tabulators and dynamic audio
  - c. Create election files
  - d. Generate test deck
  - e. Test tabulators
  - f. Test paper ballots
  - g. Produce reports
2. Setup and Test polling place equipment
  - a. Load election files
  - b. Mark ballots on paper
  - c. Mark ballots on ICX
  - d. Tabulate ballots on ICP (regular and ICX)
3. Create and finalize public documentation / presentation
  - a. Finalize with Marketing/Sales
  - b. Review with customer
  - c. Review and dry-run
4. Staff Training
  - a. Conduct staff training
  - b. Establish protocols for working with public, media, elected officials
5. Logistics

- a. Locate hotel within distance of the City facilities
- b. Rent vans for moving equipment
- c. Create travel tickets

**4) A description of how private networks for election night reporting will be setup and managed.**

The Results Tally and Reporting (RTR) application creates an export which is designed specifically for Philadelphia reporting. When the authorized user creates the export out of the RTR application, a Philadelphia-compliant file is created. From the RTR workstation, the results file is typically copied onto an external memory device for upload to the state-wide reporting system on a different computer via the Internet and the City's discretion.

Standard results reports are generated using Server Reporting Services. These reports can be exported in multiple widely used data formats including .xls, .pdf, .xml, .html, .csv, .doc, .tif, txt and ascii.

RTR exports results data in XML by default. In addition, the application can import customized XSLT transformations, thus allowing election results to be presented in any format such as Microsoft Excel Format (.xls) and Comma Separated Value (.csv). W3C defines a language that transforms XML files into more readable formats, such as clear text files, HTML, XHTML, other XML formats, SVGPDF, etc. Any number of XSLT transformations can be defined. When an XSLT transformation is created, it is automatically attached to all transfer points set within the system. This means that, in addition to the XML results file, the system will create other output file formats defined by the XSLT transformations.

**5) A description of how software upgrades, customizations or configurations will be implemented. Describe your software development and implementation methodology, including version control, error correction, pre-delivery testing and de-bugging procedures, and post-installation testing.**

**Upgrades**

Any software changes, upgrades, modifications, updates, patches, etc. are typically included in upcoming full releases of the software. Customers will have ongoing visibility as to which future version of Democracy Suite will include any Philadelphia-specific changes. Once the version is federally certified, in conjunction with the State certification, Dominion will devise an upgrade plan for customers.

Documentation is updated in tandem with software upgrades or updates, and customers receive updated documentation when upgrades or updates take place. Dominion reserves the right to update and reissue updated documentation outside of the context of an upgrade or an update, in order to ensure that customers have the most recent version of all materials.

For any firmware update required, Dominion will provide the necessary firmware files to Philadelphia and review the correct procedures outlined in the documentation and training provided. The assigned Project Manager will ensure all proper communication procedures and documentation is provided to the City and other Element Project Managers.

### **Software Development Methodology**

Within Dominion Voting, information security best practices are fully integrated within the system from initial design, through development, ongoing testing, and deployment. Our dedicated engineers practice a holistic approach to information security that is broken down into two major functionalities:

- Risk identification and assessment
- Risk control

### **Risk identification and assessment**

When defining the security specification of Democracy Suite system, three pre-requisite steps within the risk identification and assessment are performed:

1. Asset Identification: Includes people, procedures, data and information, software and hardware.
2. Information Classification: According to assets' sensitivity and security attributes.
3. Risk Assessment: Includes threat identification and vulnerability assessment.

Dominion considers security to be commensurate with its risks. Information gathered during the above steps drive the decision process for appropriate security mechanisms and controls implementation.

The tangible and non-tangible assets, which exist within the Democracy Suite platform, are identified as:

- Server side computing platforms (both software and hardware).
- Client side computing platforms (both software and hardware).
- Network infrastructure (optional, both software and hardware).
- Tabulation devices (both software and hardware).
- Pre-voting election data.
- Voting election data.
- Post-voting election data.

The qualitative risk assessment dictates all critical information assets have the highest possible security impact on the overall election process and the loss of any of the critical election information assets would cause the election system to fail. The probability of critical election information asset loss depends not only on the architecture and design of the system, but also on the motivation of potentially malicious users. Thus, it is expected that a motive will always exist and therefore, the probability of loss mostly depends on the Democracy Suite system internals.

### **Risk Control**

The quantitative risk assessment clearly identifies possible threats to the system, driving decisions to minimize vulnerabilities through implementing a variety of countermeasures such as deterrent, preventative, corrective and detective controls, such as:

- Deterrent controls reduce the likelihood of a deliberate attack.
- Preventative controls protect vulnerabilities and make an attack unsuccessful or reduce its impact.
- Corrective controls reduce the effect of an attack.
- Detective controls discover attacks and trigger preventative or corrective controls.

NIST, EAC, and VVSG security requirements has led to the deployment of hardened environment characteristics including:

- The Democracy Suite EMS platform is deployed as a private local system. No public network connections are allowed or needed. The EMS platform can be deployed even without local network access, executing all of its components from the single physical hardware device.
- The Democracy Suite EMS platform implements multi-level access control mechanisms based on roles and permissions. Only authenticated and authorized personnel can access and use the system. Implementing proper security procedures and policies within the election organization is outside of Dominion Voting Systems control.
- The Democracy Suite EMS platform uses Self Encrypted Drives as data storage with real time hardware based encryption.
- All data in rest or transport are digitally signed and encrypted using NIST approved algorithms (SHA-256 and AES-256).
- All systems during process of installation follow strict hardening procedures based on the latest vulnerability risks and include regular vulnerability tests with Nessus tool.
- Adjudication is deployed on the EMS client computers and communicates only with EMS through the use of a closed network.
- Communication between the EMS platform and central level ImageCast Central devices (ICC) through the use of a closed network.
- Communication between the EMS platform and precinct level ImageCast X Ballot Marking Device (ICX-BMD) is performed only using the USB flash drives. Democracy Suite ballot counters do not require or have network interfaces.
- Central devices are locked from a functional point of view and only administrative personnel can unlock them using the iButton security key and administrator password.
- ImageCast X devices are locked from a functional point of view and only administrative personnel can unlock them using the smart card and administrator PIN.

6) **Any other project management or implementation strategies or techniques that the Applicant intends to employ in carrying out the work.**

### **Gap Analysis and Application Configuration**

As alluded to in Section 3.13 - Statement of Work, a key phase in the initial stages of the project implementation will be a gap analysis performed by the Dominion team, and subsequent configuration will be developed and implemented. Through this thorough analysis, Dominion will identify if there are aspects of system functionality which need to be customized in order to meet the State's statutory requirements. Dominion technology is used in dozens of states across the United States, each with its own set of particular and unique requirements. Below we describe the steps involved in customizing the system to the City's environment.

The Dominion Voting Democracy Suite Election Management System (EMS) is a highly configurable election system that can be adapted to meet the needs of any jurisdiction. Dominion will work closely with the State to ensure that the system is deployed in a manner that meets all jurisdictional requirements. The following steps are typically required:

#### **Data Conversion and Migration to Democracy Suite EMS**

Dominion has worked with many customers to transition from a legacy voting system to the Democracy Suite platform, and is familiar with migrating data from many different systems to the Democracy Suite EMS. Dominion works with a number of different Voter Registration System vendors to ensure we can import data easily and efficiently.

Election definition data may be entered manually using the Election Event client application, or imported from an Excel spreadsheet using the Election Data Translator utility. Dominion will work with Delaware to ensure that the State's data is formatted correctly so that it can be subsequently imported into Democracy Suite using the Election Data Translator utility. This platform allows for the definition of an entire election within the spreadsheet, and rapid proofing of existing election definition data. Modifications can easily be made within the spreadsheet for any items that are not within the State's export files.

In subsequent elections, election definition data may be exported or copied from prior election databases to speed up the programming process.

#### **Customization of Configurable Options**

During this stage, the State will provide final input and approval on ballot layouts, reports content, and the configuration of the options of the ImageCast voting terminals. This step takes place at the same time as the data import bridge is created and results data export file is created and provided to the IT system managers.

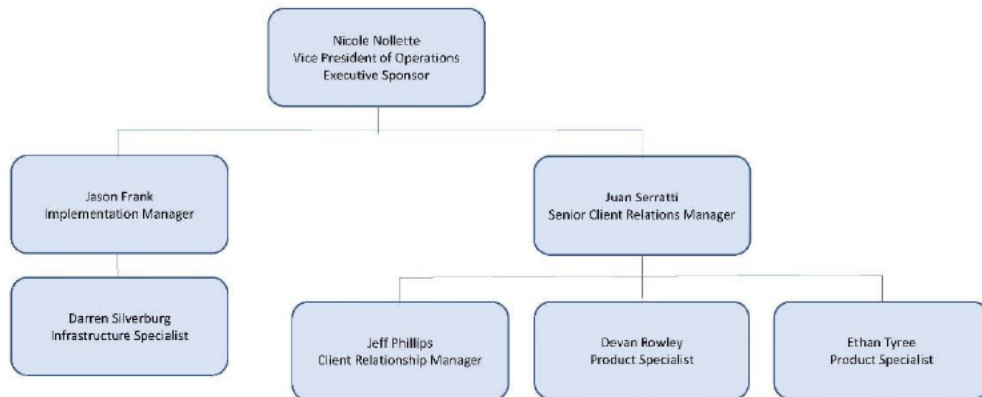
### 3.15 Organizational Structure and Resources

Please provide the following information regarding your organization and the resources that will perform the tasks required under this RFP:

- 1) An organizational chart indicating the delineation of authority, roles and responsibilities for the resources that will perform the tasks required for this project.

Below we provide a high-level organization chart detailing the reporting structure of the proposed Operations team followed by a table defining the roles and responsibilities of the team.

Dominion Operations Organization Chart  
City of Philadelphia



Project Role	Dominion Resource	Project Responsibilities
Executive Sponsor/ Program Management	Nicole Nollette, Vice President of Operations	<ul style="list-style-type: none"><li>• Championing the project</li><li>• Obtains needed budget approval</li><li>• Accepting responsibility for problems escalated by project team and Project Manager</li><li>• Serves as a strong advocate for the project throughout the organization</li><li>• Manages day-to-day resources</li></ul>

Project Manager	Jason Frank, Implementation Manager	<ul style="list-style-type: none"> <li>• Manages overall project</li> <li>• Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget.</li> <li>• Reports project status and progress.</li> <li>• Creates and maintains project task plan, manages scope and change control processes.</li> <li>• Coordinates tasks among all areas of the organization that are involved or impacted by the project.</li> </ul>
Customer Relations Manager	Juan Serratti – Senior Jeff Phillips	<ul style="list-style-type: none"> <li>• Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget.</li> <li>• Coordinates tasks among all areas of the organization that are involved or impacted by the project.</li> <li>• Long term customer support representative</li> </ul>
Technical Leads	Darren Silverburg Infrastructure Specialist	<ul style="list-style-type: none"> <li>• Document technical project requirements</li> <li>• Responsible for development / test environments,</li> <li>• Responsible for troubleshooting technical issues</li> <li>• Technical liaison between the customer and project team</li> <li>• Provide technical support to the project team</li> </ul>
Subject Matter Experts (SMEs)	Devan Rowley. Product Specialist  Ethan Tyree, Product Specialist	<ul style="list-style-type: none"> <li>• Provide professional expertise related to their discipline</li> <li>• Provide mentorship to end users (customer) &amp; DVS personnel</li> <li>• Participate in meetings</li> <li>• Complete project tasks as assigned</li> <li>• Provide training to City staff</li> <li>• New System Installation</li> </ul>

- 2) **Name, job title, and resume of each individual listed in on the organizational chart.**

**Nicole Nollette, Executive Vice President Operations**

Name and Title	Nicole Nollette Executive Vice President Operations
Current Employer (and years with employer)	Dominion Voting Systems: 2 years
Role on this Project	Executive level support and leadership for project
Availability (hours per week or hours per month and specify on-site or off-site hours)	5 hours per month offsite and onsite as needed.
Duration of Involvement (indicate the component/phases and the estimated dates that the person will be on-site)	Throughout the project term.
Customer References: Name Title Company or entity name Address Telephone or e-mail	Joe Gloria, Registrar of Voters Clark County 965 Trade Dr. Las Vegas, NV 89030 (702)455-2846
<b>Prior Experience (provide in the following format)</b>	
<b>Project 1</b>	
a) Application type (specific system and version similar to this RFP project)	Voting System: Democracy Suite 5.4, ICX Prime with VVPAT, ImageCast Central
b) Customer type (city, county, state, fed govt., or corporation)	State of Nevada
c) Number of employees impacted by the project	20
d) Role/responsibility on project	Executive Leadership, support and guidance
e) Prime Contractor or Sub-contractor	Prime Contractor
f) Dates	June 2017 – March 2018
g) Average hours on project per month	5-10 hrs.



Other Experience (provide in the following format)	
<b>"Other" Project 1</b>	
a) Application type (Financial, eBusiness, Voter Registration, etc.)	Voting System
b) Application Software (custom or specify application software products and software version)	Democracy Suite 5.0, ImageCast X Classic with ImageCast Precinct and ImageCast Central 5.0. Democracy Suite – custom software certified by EAC and State of Michigan
c) Customer type (city, county, state, fed govt., or corporation)	State of Michigan
d) Role/responsibility on project	Executive Sponsor, leadership, support and guidance
e) Prime Contractor or Sub-contractor	Prime contractor
f) Dates	April 2017 - Current
g) Average hours on project per month	5 hours
Education, Training, Certifications	B.S., United States Naval Academy MBA, Massachusetts Institute of Technology

### Jason Frank, Implementation Manager

Name and Title	Jason Frank, Implementation Manager – East Region
Current Employer (and years with employer)	Dominion Voting Systems 15 years: Dominion Voting Systems/Sequoia Voting Systems
Role on this Project	Senior Manager, Implementation Specialist
Availability (hours per week or hours per month and specify on-site or off-site hours)	Available during regular state business hours, after hours as needed, upon request or designated by contract. On-site as specified by contract and as needed with 48 hour notice.
Duration of Involvement (indicate the component/phases and the estimated dates that the person will be on-site)	Directly involved in all technical elements and on-site as directed by contract.
Customer References:	Jennifer Redmond, Assistant Director

Name	Wayne County Clerk – Elections Division
Title	2 Woodward Ave, Suite 502
Company or entity name	Detroit, MI 48226
Address	<a href="mailto:jredmond@waynecounty.com">jredmond@waynecounty.com</a>
Telephone or e-mail	(313)224-7557
<b>Prior Experience (provide in the following format)</b>	
<b>Project 1</b>	State of Michigan
h) Application type (specific system and version similar to this RFP project)	Voting System - Democracy Suite EMS, ImageCast X, ImageCast Precinct, ImageCast Central and ImageCast Listener
i) Customer type (city, county, state, fed govt., or corporation)	State, County, Municipality (Home rule)
j) Number of employees impacted by the project	60+
k) Role/responsibility on project	Implementation Manager, Project oversight, State of Michigan Dealer Coordinator, Technical Support
l) Prime Contractor or Sub-contractor	Prime Contractor
m) Dates	2017 - Present
n) Average hours on project per month	200 hours + per month during project implementation
Other Experience (provide in the following format)	
<b>"Other" Project 1</b>	St Lucie County, Florida
h) Application type (Financial, eBusiness, Voter Registration, etc.)	Voting System
i) Application Software (custom or specify application software products and software version)	Democracy Suite, ImageCast Evolution, ImageCast Central, Mobile Ballot Printing, ImageCast Listener & Democracy Suite EMS
j) Customer type (city, county, state, fed govt., or corporation)	County
k) Role/responsibility on project	Implementation Team & Customer Relationship Manager
l) Prime Contractor or Sub-contractor	Prime Contractor

m) Dates	2013-2015
n) Average hours on project per month	120 + during implementation
Education, Training, Certifications	<p>15 years of experience in all aspects of the elections process in numerous states: County staff and poll worker training, County staff technical training, single and multi-jurisdiction tabulation center management, EMS programming, technical support, document creation, customer relationship management, election event and Election Day remote and on-site support. International project implementation team and election support experience in Canada and Mongolia.</p> <p>Internal systems and management training to support company products in customer jurisdictions.</p> <p>12 core CERV (Election Center) classes completed.</p>

### Jeff Phillips, Customer Relationship Manager

Name and Title	Jeff Phillips, Customer Relations Manager
Current Employer (and years with employer)	Dominion Voting – 1 year 8 months
Role on this Project	Customer Relations Manager
Availability (hours per week or hours per month and specify on-site or off-site hours)	Available during regular state business hours after hours as needed, upon request or designated by contract. On-site as specified by contract and as needed with 48-hour notice
Duration of Involvement (indicate the component/phases and the estimated dates that the person will be on-site)	Involved with all implementation and planning. On site as directed by contract
Customer References: Name Title	<p>Diane Noonan - Director</p> <p>Butler County Board of Elections</p> <p>1802 Princeton Rd.</p>

Company or entity name	Hamilton, Ohio 45011
Address	<a href="mailto:noonandj@butlercountyohio.org">noonandj@butlercountyohio.org</a>
Telephone or e-mail	
<b>Prior Experience (provide in the following format)</b>	
<b>Project 1</b>	Scioto Ohio Board of Elections
a) Application type (specific system and version similar to this RFP project)	Voting System – Democracy Suite EMS, ImageCast X, ImageCast Precinct, ImageCast Central
b) Customer type (city, county, state, fed govt., or corporation)	State, County, Municipality (Home Rule)
c) Number of employees impacted by the project	15
d) Role/responsibility on project	Customer Relations Manager
e) Prime Contractor or Sub-contractor	Prime Contractor
f) Dates	2018
g) Average hours on project per month	50
<b>Other Experience (provide in the following format)</b>	
<b>"Other" Project 1</b>	Fairfield Ohio Board of Elections
a) Application type (Financial, eBusiness, Voter Registration, etc.)	Voting System
b) Application Software (custom or specify application software products and software version)	Voting System – Democracy Suite EMS, ImageCast X, ImageCast Precinct, ImageCast Central
c) Customer type (city, county, state, fed govt., or corporation)	County
d) Role/responsibility on project	Customer Relations Manager
e) Prime Contractor or Sub-contractor	Prime Contractor
f) Dates	2018
g) Average hours on project per month	30

Education, Training, Certifications	<p>20 years of election experience in multiple states.</p> <p>County staff and poll worker training, technical support, document creation, customer relationship management, election day planning and managing of on and off-site support.</p>
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### **Darren Silverburg, Infrastructure Specialist**

Name and Title	Darren Silverburg, Infrastructure Specialist
Current Employer (and years with employer)	<p>Dominion Voting Systems</p> <p>12 years: Dominion Voting Systems/Sequoia Voting Systems</p>
Role on this Project	Infrastructure Specialist
Availability (hours per week or hours per month and specify on-site or off-site hours)	Available during regular state business hours, after hours as needed or upon request or designated by contract. On-site as specified by contract and as needed with 48 hour notice.
Duration of Involvement (indicate the component/phases and the estimated dates that the person will be on-site)	Directly involved in all technical elements and on-site as directed by contract.
Customer References: Name Title Company or entity name Address Telephone or e-mail	<p>Jennifer Redmond, Assistant Director  Wayne County Clerk – Elections Division  2 Woodward Ave, Suite 502  Detroit, MI 48226  <a href="mailto:jredmond@waynecounty.com">jredmond@waynecounty.com</a>  (313) 224-7557</p>
<b>Prior Experience (provide in the following format)</b>	
<b>Project 1</b>	State of Michigan

h) Application type (specific system and version similar to this RFP project)	Voting System - ImageCast X, ImageCast Precinct, ImageCast Central, ImageCast Listener & Democracy Suite EMS
i) Customer type (city, county, state, fed govt., or corporation)	State, County, Municipality (Home rule)
j) Number of employees impacted by the project	60+
k) Role/responsibility on project	Infrastructure Specialist, Technical Lead, Election Programmer, Trainer
l) Prime Contractor or Sub-contractor	Prime Contractor
m) Dates	2017 - Present
n) Average hours on project per month	200 hours + per month during project implementation
Other Experience (provide in the following format)	
<b>"Other" Project 1</b>	St Lucie County, Florida
h) Application type (Financial, eBusiness, Voter Registration, etc.)	Voting System
i) Application Software (custom or specify application software products and software version)	Democracy Suite - ImageCast Evolution, ImageCast Central, Mobile Ballot Printing, ImageCast Listener & Democracy Suite EMS
j) Customer type (city, county, state, fed govt., or corporation)	County
k) Role/responsibility on project	Infrastructure Specialist
l) Prime Contractor or Sub-contractor	Prime Contractor
m) Dates	2013-2015
n) Average hours on project per month	120 + during implementation
Education, Training, Certifications	15 years of experience in all aspects of the elections process in numerous states: County staff and poll worker training, County staff technical training, single and multi-jurisdiction tabulation center management, EMS programming, technical support, document creation, customer relationship management, election event and Election Day



	remote and on-site support. International project implementation team and election support experience in Canada and Puerto Rico.
	Internal systems and management training to support company products in customer jurisdictions.

### Ethan Tyree, Product Specialist

Name and Title	Ethan Tyree, Product Specialist
Current Employer (and years with employer)	Dominion Voting Systems – 1 year
Role on this Project	Product Specialist – Software and Hardware
Availability (hours per week or hours per month and specify on-site or off-site hours)	Available during regular state business hours, after hours as needed, upon request or designated by contract. On-site as specified by contract and as needed with 48 hour notice.
Duration of Involvement (indicate the component/phases and the estimated dates that the person will be on-site)	Complete involvement in hardware and software and on-site as directed by contract.
Customer References: Name Title Company or entity name Address Telephone or e-mail	William Shubat Director of Elections – Belmont County 103 Plaza Dr. Suite B St. Clairsville, OH 43950 740-526-0188 <a href="mailto:Belmont@sos.state.oh.us">Belmont@sos.state.oh.us</a>
<b>Prior Experience (provide in the following format)</b>	
<b>Project 1</b>	State of Ohio
a. Application type (specific system and version similar to this RFP project)	Voting System - Democracy Suite EMS, ImageCast X BMD, ImageCast Precinct and ImageCast Central
b. Customer type (city, county, state, fed govt., or corporation)	State and County

c. Number of employees impacted by the project	6
d. Role/responsibility on project	Software and Hardware Support
e. Prime Contractor or Sub-contractor	Prime Contractor
f. Dates	2018 – Present
g. Average hours on project per month	120 Hours + Dependent on resources.
Other Experience (provide in the following format)	
<b>"Other" Project 1</b>	<b>West Virginia</b>
a. Application type (Financial, eBusiness, Voter Registration, etc.)	Voting System
b. Application Software (custom or specify application software products and software version)	Other Vendor
c. Customer type (city, county, state, fed govt., or corporation)	State and County
d. Role/responsibility on project	Software Programming and Hardware Support
e. Prime Contractor or Sub-contractor	Prime Contractor
f. Dates	2012 – 2018
g. Average hours on project per month	160+



Education, Training, Certifications	6 years' experience in across a wide variety of election processes: Hardware repairs and support, Software programming and training, On and Off-site election support, Customer acceptance testing.
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### Devan Rowley, Product Specialist

Name and Title	Devan Rowley, Product Specialist
Current Employer (and years with employer)	Dominion (1 year)
Role on this Project	Product Specialist
Availability (hours per week or hours per month and specify on-site or off-site hours)	Available during regular state business hours, after hours as needed, upon request or designated by contract. On-site as specified by contract and as needed with 48 hour notice.
Duration of Involvement (indicate the component/phases and the estimated dates that the person will be on-site)	Complete involvement in hardware and software and on-site as directed by contract.
Customer References: Name Title Company or entity name Address Telephone or e-mail	Sandy Miller Board Member- Guernsey County 627 Wheeling Ave # 101, Cambridge, OH 43725 smiller@guernseycounty.org
<b>Prior Experience (provide in the following format)</b>	
<b>Project 1</b>	State of Ohio

o) Application type (specific system and version similar to this RFP project)	Voting System - Democracy Suite EMS, ImageCast X BMD, ImageCast Precinct and ImageCast Central
p) Customer type (city, county, state, fed govt., or corporation)	County
q) Number of employees impacted by the project	6
r) Role/responsibility on project	Software and Hardware Support
s) Prime Contractor or Sub-contractor	Prime Contractor
t) Dates	2018-Present
u) Average hours on project per month	120 Hours + Dependent on resources.
Education, Training, Certifications	Hardware repairs and support, Software programming and training, On and Off-site election support.

## 3.16 Pricing Model and Cost Proposal

Provide a fixed price pricing model and Cost Proposal for the solution and services required by this RFP, as identified in Section 2, Scope of Work. Your response should include the following and identify associated costs:

- 1) Lease and purchase options
- 2) Software licensing model
  - a) Include pricing for all requisite software licenses for five years from the date that the solution is received by the City.
  - b) Provide detailed pricing for continued licensing for an additional five years beyond the expiration of the initial five years.
  - c) If the anticipated life cycle of the solution is believed to be greater than ten years, the Applicant must provide detailed pricing estimates for the requisite licensing for software for that time period beyond the expiration of the first ten years.
  - d) The Applicant must allow all software licensing to be transferrable among Pennsylvania counties.
- 3) Hosting options, if applicable
- 4) Network evaluation, design and implementation
- 5) Technical support for five (5) years, including services included, and when and how support costs are incurred. Please indicate when the City will begin to incur support costs (at time of purchase, after implementation, etc.).
- 6) Maintenance for five (5) years. Describe services included, such as repair of machines, software upgrades, support for City employees' maintenance of equipment, and when and how maintenance costs are incurred. Please indicate when the City will begin to incur maintenance costs (at time of purchase, after implementation, etc.).
- 7) Training
- 8) Documentation
- 9) Hardware: indicate costs of all hardware included with the solution
- 10) Any equipment and materials the City will need to purchase. Include any equipment needed to transport the equipment and/or needed at the polling places for use by voters, including tables privacy booths, stands, carts, etc.
- 11) Any additional equipment Applicant recommends, but is not required as part of the solution, including, but not limited to signature pads, bar code scanners, additional printers, etc.
- 12) A milestone payment schedule that defines the timing and amount of payments, and identifying the tasks and deliverables ("milestones") to be completed for each payment

For hardware and equipment (items 9, 10, 11), please provide physical descriptions, model numbers, and part numbers, concerning components such as, but not limited to, laptops, tablet computers, printers, cables, connectors,

servers, internet connectivity, etc. Also indicate whether hardware and equipment must be purchased from Applicant or can be purchased by the City from other vendors. Note that the City requires purchase of Juniper brand products for all network-related equipment.

**The Cost Proposal should be submitted using the template provided in Appendix G or a similar format.**

**Note that the City is not subject to federal, state, or local sales or use taxes or to federal excise tax. The Cost Proposal may not include any such taxes.**

Dominion's detailed pricing proposal is included in Appendix G as required. Please note this is our initial offer and we would be happy to discuss any aspect in more detail upon request or during the Best And Final Offer stage of the RFP process.

## **6.2 Administrative Requirements**

**Applicants are expected to comply with all administrative requirements provided in this section**

### **6.2.1 Mandatory Online Registration and Filing Requirements**

Dominion has completed the mandatory online registration and filing requirements and received the proper confirmation of acceptance.

### **6.2.2 Pre-Proposal Meeting**

Dominion attended the preproposal meeting as required.

### **6.2.3 Addenda to the RFP; Requests for Information; Inconsistencies**

Dominion has thoroughly reviewed the Request For Proposal Documents and routinely checked for any addenda released with regard to this opportunity. Any issued addenda have been downloaded, reviewed, and

### **6.2.4 Proposals Binding**

Dominion has read and understands the provisions stated in Section 6.2.4 regarding binding proposals. However, as there are very unique considerations to a voting system, licensing and services agreement, such as State certification of equipment, closed system networks, software licensing (not work for hire or custom software) and many other items, which Dominion believes requires discussions and further modifications. Therefore, Dominion respectfully reserves the right to negotiate final agreement terms upon award by the City of Philadelphia.

## **6.3 Certification of Compliance with Equal Benefits Ordinance**

Dominion agrees to comply with the Equal Benefits Ordinance.

## **6.4 Local Business Entity or Local Impact Certification**

Based on the required information on Appendix C – Local Business Entity or Local Impact Certification, Dominion is not claiming Local Business Entity Certification and have not completed the Local Business Entity Certification portion of the form. However, we have completed the Local Impact Certification as work will be performed within the City. Additionally, we do plan to hire local personnel for elections support services. We would be happy to provide any additional information as requested by the City.

## **6.5 Tax and Regulatory Status and Clearance Statement**

Dominion has completed the City Tax and Regulatory Status and Clearance Statement as required. The completed form is included in Appendix B of this proposal submission package.

## **6.6 Monitoring; Security**

Dominion agrees to comply with the Monitoring and Security provisions as detailed in Section 6.6.

## **6.7 Reporting Requirements**

Dominion agrees to comply with the Reporting Requirements as detailed in Section 6.7.

## **6.8 Organization and Personnel Requirements**

Dominion has reviewed and understands the Organization and Personnel Requirements and has provided detailed information as part of our proposal response.

## 7.0 Terms and Conditions

Dominion understands that the Standard Terms and Conditions document provided in the RFP is a Template, written broadly to work with different types of vendors and technology. However, there are very unique considerations to a voting system, licensing and service agreement, such as State certification of equipment, closed system networks, software licensing (not work for hire custom software) and many other items, which Dominion believes requires further discussions and modifications. Therefore, Dominion reserves the right to negotiate final agreement terms upon award by the City of Philadelphia.

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# Consent and Authorization Agreement

## Consent and Authorization Agreement PHLContracts.phila.gov

Full legal name of Company: Dominion Voting Systems, Inc.  
Address: 1201 18th Street, Suite 210  
Denver, CO 80202

I represent and warrant that I am authorized to enter into this Consent and Authorization Agreement ("Agreement") on behalf of the company identified above ("Company"). On behalf of Company I represent and warrant that Company has full power and authority to enter into and perform this Agreement. Company agrees as follows:

Company's access to and use of PHLContracts is provided on an "as is" and "as available" basis, and Company is fully and solely responsible for its use of PHLContracts and for any results or consequences of such use. The City of Philadelphia (the "City") makes no warranty or representation, express or implied, with respect to the quality, content, accuracy, completeness, freedom from computer virus, or non-infringement of proprietary rights of PHLContracts.

Company will designate a Seller Administrator. The Seller Administrator will be responsible for the management of Company's account including providing and updating any information required by PHLContracts and creating, managing, and deleting roles for Company's users of PHLContracts.

Company will keep all passwords confidential and will immediately notify the City of any actual or suspected unauthorized use of Company's user accounts, passwords, or PHLContracts.

Company will use a secure browser to access PHLContracts.

The Company will restrict the creation and use of accounts on PHLContracts to individuals authorized to enter into binding agreements on behalf of the Company.

Any individual using Company's account on PHLContracts to submit a quote is authorized by the Company to do so, and the Company shall be bound by any quote submitted through its accounts on PHLContracts.

The Company consents to conduct transactions electronically, including the submission of quotes using the method of submission provided by PHLContracts. A quote submitted through PHLContracts binds the Company to the terms of the quote as if the quote had been signed by a duly authorized representative of the Company.

Delivery of an executed Agreement by electronic scan is as effective as executing and delivering a printed copy of Agreement with an original signature.

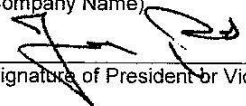
This signature page must be attached to a completed Agreement.

If Company is a corporation, date and sign the Agreement here with original signature, in ink, by (a) President or Vice President of the corporation and (b) Secretary, Assistant Secretary, Treasurer, or Assistant Treasurer of the corporation. If the Agreement is not signed by the President or Vice President and Secretary, Assistant Secretary, Treasurer, or Assistant Treasurer, attach a duly certified corporate resolution authorizing the person signing in place of such officers to execute this Agreement for the corporation.

This 7<sup>th</sup> day of December, 2018

Dominion Voting Systems, Inc.

(Company Name)

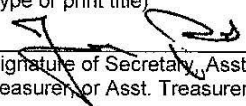
  
(Signature of President or Vice President)

John Poulos

(Type or print name)

President and CEO

(Type or print title)

  
(Signature of Secretary, Asst. Secretary, Treasurer, or Asst. Treasurer)

John Poulos

(Type or print name)

Secretary and Treasurer

(Type or print title)

If Company is a limited liability company, partnership, or sole proprietorship,

date and sign the Agreement here with original signatures, in ink.

This \_\_\_ day of \_\_\_\_\_, 20\_\_\_

(Company Name)

(Signature of Partner or Owner or other duly authorized signer)

(Type or print name)

(Type or print title)

## **APPENDIX A: PROVISIONS REQUIRED BY CHAPTER 17-1400 OF THE PHILADELPHIA CODE**

Dominion has read, understands and agrees to adhere to the Provisions required by Chapter 17-1400 of the Philadelphia Code.

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# APPENDIX B: CITY TAX AND REGULATORY STATUS

## APPENDIX B: CITY TAX AND REGULATORY STATUS AND CLEARANCE STATEMENT

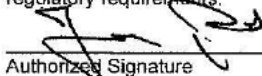
THIS IS A CONFIDENTIAL TAX DOCUMENT NOT FOR PUBLIC DISCLOSURE

This form must be completed and returned with Applicant's proposal in order for Applicant to be eligible for award of a contract with the City. Failure to return this form will disqualify Applicant's proposal from further consideration by the contracting department. Please provide the information requested in the table, check the appropriate certification option and sign below:

Applicant Name	Dominion Voting Systems, Inc.	
Contact Name and Title	John Hastings, Regional Sales Manager	
Street Address	1201 18th Street, Suite 210	
City, State, Zip Code	Denver, CO 80202	
Phone Number	(412) 208-5073	
Federal Employer Identification Number or Social Security Number:		
Philadelphia Business Income and Receipts Tax Account Number (f/k/a Business Privilege Tax) (if none, state "none")	None	
Commercial Activity License Number (f/k/a Business Privilege License) (if none, state "none")*	None	

I certify that the Applicant named above has all required licenses and permits and is current, or has made satisfactory arrangements with the City to become current with respect to the payment of City taxes or other indebtedness owed to the City (including, but not limited to, taxes collected by the City on behalf of the School District of Philadelphia), and is not in violation, or has made satisfactory arrangements to cure any violation, or other regulatory provisions applicable to Applicant contained in The Philadelphia Code.

☒ I certify that the Applicant named above does not currently do business, or otherwise have an economic presence in Philadelphia. If Applicant is awarded a contract with the City, it promptly will take all steps necessary to bring it into compliance with the City's tax and other regulatory requirements.

  
 \_\_\_\_\_  
 Authorized Signature  
 John Poulos, President and CEO  
 \_\_\_\_\_  
 Print Name and Title

December 19, 2018  
 \_\_\_\_\_  
 Date

\* You can apply for a City of Philadelphia Business Income and Receipts Tax Account Number or a Commercial Activity License on line after you have registered your business on the City's Business Services website located at <http://business.phila.gov/Pages/Home.aspx>. Click on "Register" or "Register Now" to register your business.

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## **APPENDIX C: LOCAL BUSINESS ENTITY OR LOCAL IMPACT CERTIFICATION**

Based on the required information on Appendix C – Local Business Entity or Local Impact Certification, Dominion is not claiming Local Business Entity Certification and have not completed the Local Business Entity Certification portion of the form. However, we have completed the Local Impact Certification as work will be performed within the City. Additionally, we do plan to hire local personnel for elections support services. We would be happy to provide any additional information as requested by the City.

**Instructions:** Applicants who seek as a positive factor in the City's consideration of their application that they meet the Local Business Entity or Local Impact criteria as provided in Mayor's Executive Order No. 04-12 should complete this Certification and return it with their application. Applicants providing this Certification should also include in a separate section of their application labeled "Local Business Entity or Local Impact Certification," a statement that the Applicant believes it has met the Local Business Entity or Local Impact criteria "as set forth in the attached Local Business Entity or Local Impact Certification." Check all appropriate certification options that are applicable to Applicant and sign below:

### Local Business Entity Certification

I. During the preceding 12 months, Applicant has filed a Commercial Activity or Business Privilege tax return with the City establishing that Applicant conducted business within the City within the calendar year preceding the filing of the return; and

- Has continuously maintained a valid Commercial Activity or Business Privilege License and all other licenses and permits necessary to conduct business with the City;
- Has continuously occupied an office within the City, where business is conducted; and
- Satisfies at least one of the following requirements (*Check those applicable to Applicant*):

\_\_\_\_ (2) More than 50 of Applicant's full-time employees work in the City at least 60% of the time; or

\_\_\_\_ (3) Applicant's principal place of business is located in the City.

  x   I certify that in the performance of a contract resulting from this RFP, the Applicant named above will employ City residents.

  x   I certify that in the performance of a contract resulting from this RFP, the Applicant will perform the work in the City.

Date \_\_\_\_\_

**John Poulos, President and CEO**

Print Name and Title



# APPENDIX D-1: ANTI-DISCRIMINATION POLICY

In response to Appendix D-1, Dominion has reached out to a local Woman Owned Business Enterprise as detailed on the form below. This form has also been submitted as a separate attachment in our electronic submission.

Wilson500 has provided the WBENC certificate verifying their WBE status. Additionally, they are currently in the application process with the Philadelphia OEO. We will be happy to provide additional information upon request.

DEPARTMENT OF COMMERCE OFFICE OF ECONOMIC OPPORTUNITY (OEO)					
Bid Number or Proposal Title: #B1903107 Election System		Name of Bidder/Proposer: Dominion Voting Systems		Bid/RFP Opening Date: 12/28/2018	
List below ALL MBE/WBE/DBE/DSBEs that were solicited regardless of whether a commitment resulted therefrom. - Photocopy this form as necessary.					
<input type="checkbox"/> MBE <input checked="" type="checkbox"/> WBE <input type="checkbox"/> DSBE <input type="checkbox"/> M-DBE <input type="checkbox"/> W-DBE		Work or Supply Effort to be Performed	Date Solicited	Commitment Made	Give Reason(s) If No Commitment
Company Name Wilson500, Inc. Address 500 Arlington Road Contact Person Corinna Wilson, President Telephone Number 717-797-3407 Fax Number 717-797-3407 Email Address [REDACTED]		Training Component 3.11: Training development; Training videos (Poll Worker; Voter); Coordination of Dominion Trainings (40); Facilitation of Public Trainings (10)	By Phone 12.11.18	By Mail 12.7.18	Yes (If Yes, give dollar amount) Committed Interest to support Amount TBD upon contract award  Amount Committed To Dollar Amount TBD Percent of Total Bid/RFP TBD
			Quote Received YES	NO X	
OEO REGISTRY #	CERTIFYING AGENCY WBENC	Dominion and Wilson500 have a verbal agreement to work together on the Work and supply effort to be performed.  Final work and pricing to be determined upon contract award.			

1. If Bidder/Proposer makes solicitation(s) and commitment(s) with a DBE, Bidder/Proposer shall indicate which class type, M-DBE or W-DBE, is submitted for credit.
2. Attach all quotations to this form.

09/2010



hereby grants

## National Women's Business Enterprise Certification

to

Wilson500, Inc.

who has successfully met WBENC's standards as a Women's Business Enterprise (WBE).  
This certification affirms the business is woman-owned, operated and controlled; and is valid through the date herein.

WBENC National WBE Certification was processed and validated by  
Women's Business Enterprise Council - PA, DE, sNJ, a WBENC Regional Partner  
Organization.

Certification Granted: December 19, 2017

Expiration Date: December 19, 2018

WBENC National Certification Number: [REDACTED]

*Geri Smith*  
Authorized by Geri Smith, President Emerita  
Women's Business Enterprise Council - PA, DE, sNJ



NAICS: 541611, 541820  
UNSPSC: 80101509



## **APPENDIX D-2: ANTI-DISCRIMINATION CONTRACT PROVISIONS FOR NONPROFIT ORGANIZATIONS**

Not applicable. Dominion is not considered a nonprofit organization and therefore, have not completed Appendix D-2. We would be happy to provide additional information upon request.

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## APPENDIX E: TECHNICAL REQUIREMENTS COMPLIANCE MATRIX

For ease of reference, we are providing responses to Appendix E – Technical Requirements, REQ – General tab and REQ – Voting Machines. In addition, Appendix E has been submitted in a separate file with our electronic submission.

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## REQ – General

City of Philadelphia Office of Innovation &  
Technology

Election System RFP

### Technical Requirements Compliance Matrix

#### General Requirements for Voting Machines & Electronic Poll Books

ID	Category	Code	Requirement	Vendor Response	Comments
				Indicate whether the solution meets the requirement	Explain any configurations, customizations or work-arounds
1	Compliance	COMP_1.1	Voting machine solutions must be certified by the U.S. Election Assistance Commission (EAC) and the Commonwealth of Pennsylvania Department of State by the time of Applicant selection. Electronic poll book solutions must be certified by the	MET	The proposed solution is certified by the EAC and the Commonwealth of Pennsylvania Department of State at the time of the applicant selection.

			Commonwealth of Pennsylvania Department of State by the time of Applicant selection.		
2	Compliance	COMP_1.2	The solution must be compliant with Title IV and Title V of the Americans with Disabilities Act. (Please explain how your equipment accommodates voters in wheelchairs, voters with limited or no sight, and voters with limited or no mobility.)	MET	The proposed solution is compliant with both Title IV and Title V of the Americans with Disabilities Act. Dominion has provided details on how the ImageCast product line meets these requirements and accommodates all voters, including those in wheelchairs, voters with limited or no sight, and voters with limited or no mobility.
3	Compliance	COMP_1.3	The solution must comply with common data format standards set	MET	The proposed solution complies with common data format standards set by the EAC and commonly accepted best practices.



by a recognized  
standard  
setting body  
(e.g., IEEE,  
ANSI, NIST,  
EAC) and best  
practices.

## REQ – Voting Machines

City of Philadelphia Office of Innovation & Technology

Election System RFP

### Technical Requirements Compliance Matrix Requirements for Voting Machines Only

#	Category	Req ID	Requirement	Vendor Response	Comments
				Indicate whether the solution meets the requirement	Explain any configurations, customizations or work-arounds
1	Ballot Face	UI_2.1	The ballot face of the voting machines must accommodate a candidate pool of as many as 100 candidates. Please provide a sample ballot that incorporates the candidate pool from the 2015 Primary and General Elections, as shown in Appendix F.	MET	Ballot faces on voting machines can accommodate a candidate pool of up to 100 candidates. Dominion has provided a sample ballot using the guidelines and parameters provided by Philadelphia. We have included this as an appendix to this RFP response.
2	Ballot Face	UI_2.2	Voting machines must allow for ballot on demand, displaying only the ballot for the correct party and split for the specific voter.	MET	
3	Ballot Face	UI_2.3	Only information relevant to the voting process should appear on the ballot.	MET	

4	Ballot Face	UI_2.4	The ballot face must be intuitive and have a familiar look and feel for voters	MET
5	User Interface	UI_2.5	The voting machines must prompt the voter about missing, required information before the voter can proceed to the next step.	MET
6	Ballot Face	UI_2.6	Voting machines must allow for the display of ballots in English and Spanish.	MET
7	Ballot Face	UI_2.7	No single visible interaction time between a user and the voting machine shall require the user to wait for a response for more than 1 second.	MET
8	General	Gen_2.1	The solution must allow ballot and ballot styles to be programmed in house and delivered to voting equipment through secure physical means.	MET
9	General	Gen_2.2	Voting machines must be compatible with electronic poll books certified for use in Pennsylvania elections.	MET
10	General	Gen_2.3	The solution must provide a method to electronically record votes cast by a voter.	MET
11	General	Gen_2.4	The solution must provide a voter-verifiable paper ballot or a voter-verifiable paper record of the votes cast by a voter.	MET

12	Admin	Admin_2.1	The solution should limit administration of the solution to specific terminals using a combination of strong authentication methods.	MET	Two factor authentication is required and managed through customer password and user role management.
13	Admin	Admin_2.2	The solution must allow only users with administrative permissions to set or change user access privileges.	MET	The Democracy Suite Election Management System integrates a role-based access control system for all software and hardware components. Each user accessing the system must be a member of one of the predefined or custom-made roles. Each role has its own set of permissions, or actions that users of that role are allowed to perform. This access control approach provides authentication and authorization services and can be granular according to the jurisdiction's needs and organization. Complete user and role membership management is integrated within the Democracy Suite EMS Election Event Designer client module.
14	Admin	Admin_2.3	Voting machines should have the capability of being activated without the use of electronic poll books	MET	
15	Admin	Admin_2.4	The first time the "open poll" function is activated, the solution shall support a configurable checklist which requires the poll worker to complete the checklist by affirming each item of the checklist independently. Examples of the items comprising the checklist include: the ballot box has been	CUSTOM	Dominion's proposed solution does not provide a configurable checklist for the opening of polls. This functionality can be added during the next iteration of certification.

sealed, the voting screens are in place, ballots have been initialed, etc.

16	Admin	Admin_2.5	The solution shall support an "open of poll" function that will enable access to the set of functions that support poll operations.	MET	
17	Admin	Admin_2.6	When the 'close poll' function is activated, the solution shall provide a configurable checklist which requires the poll worker to complete the checklist by affirming each item on the checklist has been completed.	MET	
18	Admin	Admin_2.7	The solution shall support a "close of poll" function that will disable poll operation functions and provide access to the set of capabilities that support closing of the poll.	CUSTOM	Dominion's proposed solution does not provide a configurable checklist for the closing of polls. This functionality can be added during the next iteration of certification.

19	Audit	AUD_2.1	The solution must be auditable. To that end, the solution must maintain an audit log.	MET	The ImageCast X has an audit log that includes identification of the election file being used, a record of all options entered by the operator (poll worker), as well as the number of voters by precinct and ballot style who have used the system. The audit log is stored in an easily searchable format and is available for download and printing. All audit record entries include a time-and-date stamp. The audit log file is encrypted and digitally signed to protect its integrity. Audit logs from the ImageCast X can be transferred to the Democracy Suite EMS. All ImageCast log files are visible through the Results Tally and Reporting application and are stored in the EMS database. In EMS, a directory of audit files is accessed in the graphical user interface and can be printed. Operators with Administrative privileges can access these files at any time.
20	Audit	AUD_2.2	The solution should provide auditing both locally and at the central office location.	MET	Dominion has developed a Ballot Audit and Review module to assist election officials in performing post-election canvasses including audits and risk-limiting audits. This tool allows for auditing to take place both locally and at the central office location.
21	Audit	AUD_2.3	The solution must support post-election audits as required by current law and provide flexibility to meet additional types of audits as required by directive or legislation.	MET	

22	Audit	AUD_2.4	The audit log must retain time-stamped records of: 1. Any loss of power 2. Any detected system error or deviation from expected system behavior.	MET	
23	Audit	AUD_2.5	The audit log must be printable.	MET	
24	Audit	AUD_2.6	The audit log must be exportable to an external, removable storage device.	MET	
25	Audit	AUD_2.7	The audit log must not be encrypted.		Audit Logs are digitally signed and not encrypted.
				MET	
26	Security	SEC_2.1	The solution must withstand a standard network vulnerability test.	MET	Dominion utilizes a Nessus vulnerability testing tool.
27	Security	SEC_2.2	All information stored in the system should be encrypted using FIPS 140-2 approved encryption.	MET	The Democracy Suite Election Management System was designed to meet the latest EAC VVSG requirements with industry leading FIPS 140-2 compliant security protocols.

28	Security	SEC_2.3	Intrusion detection and control protocols must be in place if any part of the system uses any network connections. If third party testing is done, include name and contact information for such third party and at least one sample test results report from that third party.	MET	Dominion's system does not utilize network connections.
29	Security	SEC_2.4	All portable components in proposed system (laptops, tablets, printers, etc.) must be trackable, recoverable, disposable, and/or wiped if stolen or removed.	CUSTOM	None of our pieces of equipment is connected to the internet, so remote wipe is not possible. All computers are hardened and secured, so in case of any item being stolen, data inside is safe.



30	Security	SEC_2.5	If any component in the proposed system will accept USB or SD card input, the system must identify and prevent foreign self-executing code and how components can be limited to accepting only pre-approved USB or SD card devices.	MET	There are multiple USB ports behind tamper-proof sealed doors that serve as connections to printers, card readers, and results cartridges. The Operating System and hardware are custom designed for voting system operation, and are currently configured specifically for voting purposes only, as opposed to general computer operation. In other words, the ports are currently enabled from a hardware approach to serve only specific and essential voting purposes. Disabling any port would affect essential functionality. Should there be a need to disable any port in hardware, this can be performed.
31	Security	SEC_2.6	The proposed system must detect and prevent any suspicious software behavior in any part of the system.	MET	To protect any modification of software by malicious users, the Democracy Suite Election Management System integrates the Microsoft .NET Framework code signing process, within which, Dominion Voting digitally signs every executable and library (DLL) during the software build procedure. After the installation of Election Management software, only successfully verified EMS software components will be available for use. Digital signature verification is performed by the .NET Framework runtime binaries. If a malicious user tries to replace or modify any EMS executables or library files, the digital signature verification will fail and the user will not be able to start the EMS application.

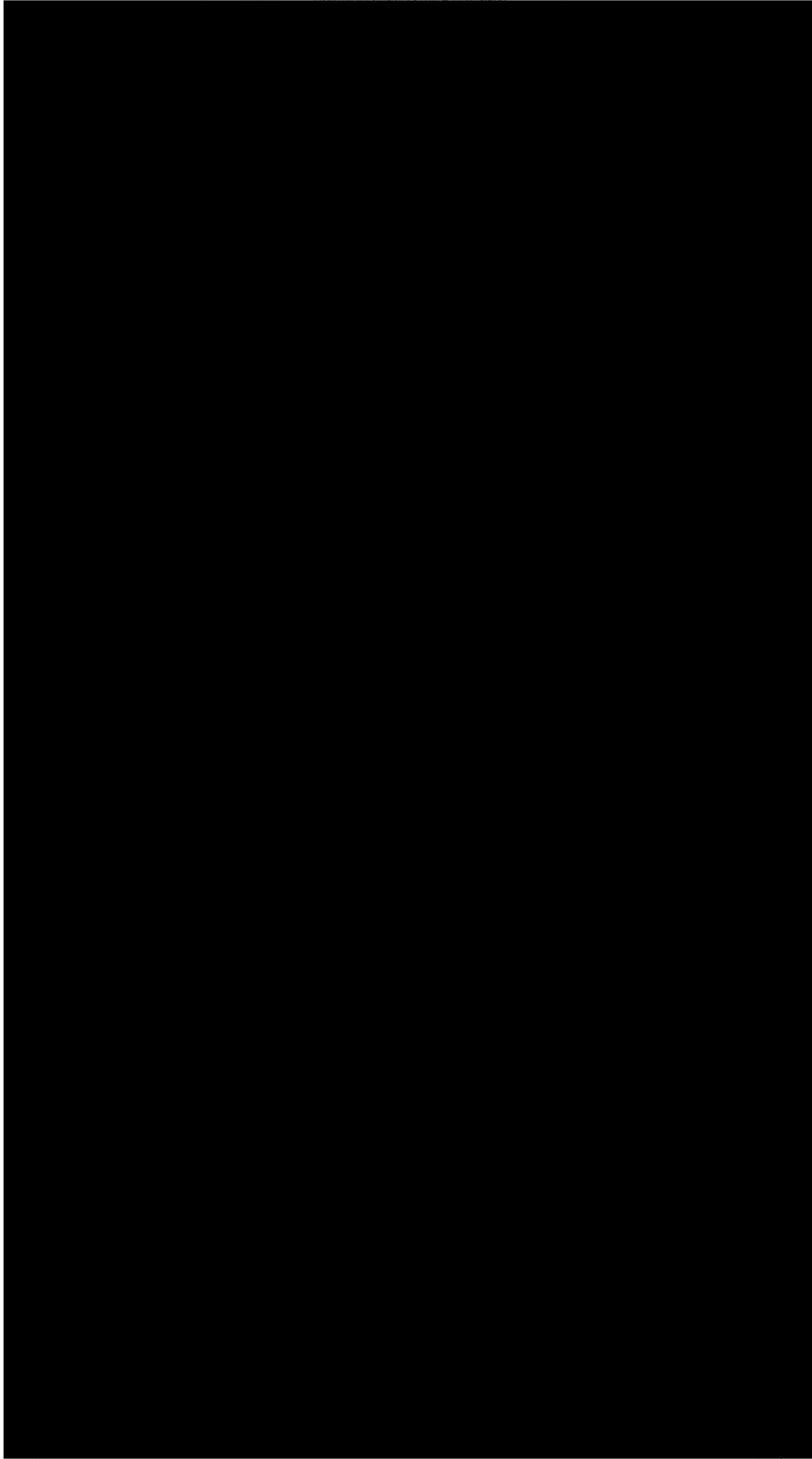
32	Security	SEC_2.7	The solution shall enable a "data cleansing" function which purges all protected information on each component which contains protected data when the device is decommissioned. (Purging means that the data cannot be accessed except through extraordinary forensic methods).	MET	Data can be purged between elections from all Dominion and ImageCast components. Devices will be cleared of data at the discretion and scheduling of Philadelphia representatives in the desire of their choosing. All devices being utilized by Philadelphia that contain sensitive data will be erased in a timely fashion under the strictures set forth by Philadelphia.
33	Performance	PERF_2.1	Voting machines should be able to continue operation after a loss of power and operate on battery power for a significant period of time. Please specify how long s voting machine within your solution will operate on battery power (in hours).	MET	In the event of a power failure, ImageCast tabulator units have an internal Lithium Ion rechargeable battery with a two-hour life. In the case of a power failure that includes a complete power drain, restarting places the unit in "Interrupt" mode, in which the previously stored election data is reloaded when the unit resumes operation. If there is a catastrophic electrical or mechanical damage, the memory cards are inserted into a spare unit. When powered on, the unit resumes operation using the previously stored election data.
34	Reporting	RPT_2.1	The EPBS must enable publishing of election results to a website(s) designated by the City Commissioners. (Please provide an explanation of the process of publishing to the web from the voting machines, frequency of updates, and provide examples of the types of reports that can be published on the web).	PLEASE SELECT	N/A

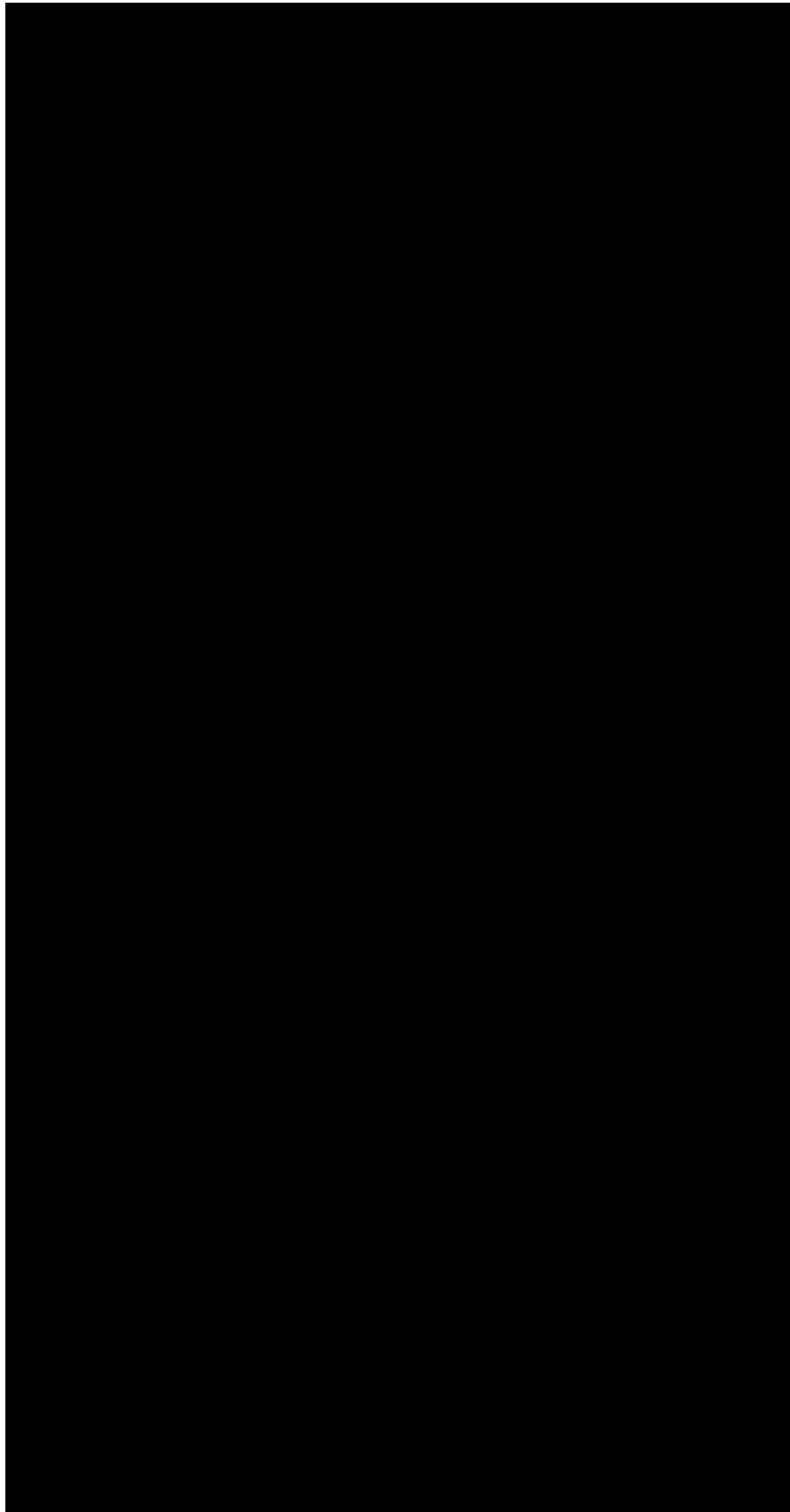
35	Reporting	RPT_2.2	The EPBS must allow for the export of election results to a webserver(s) designated by the City Commissioners at frequent intervals for election night reporting.	PLEASE SELECT	N/A
----	-----------	---------	---	------------------	-----

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## APPENDIX F-1: SAMPLE BALLOT I

Below, Dominion provides ballot samples based on the Ballot Sample in Appendix F-1. We would be happy to discuss additional formats, layout, or other customizable options upon request or during the finalist presentation.



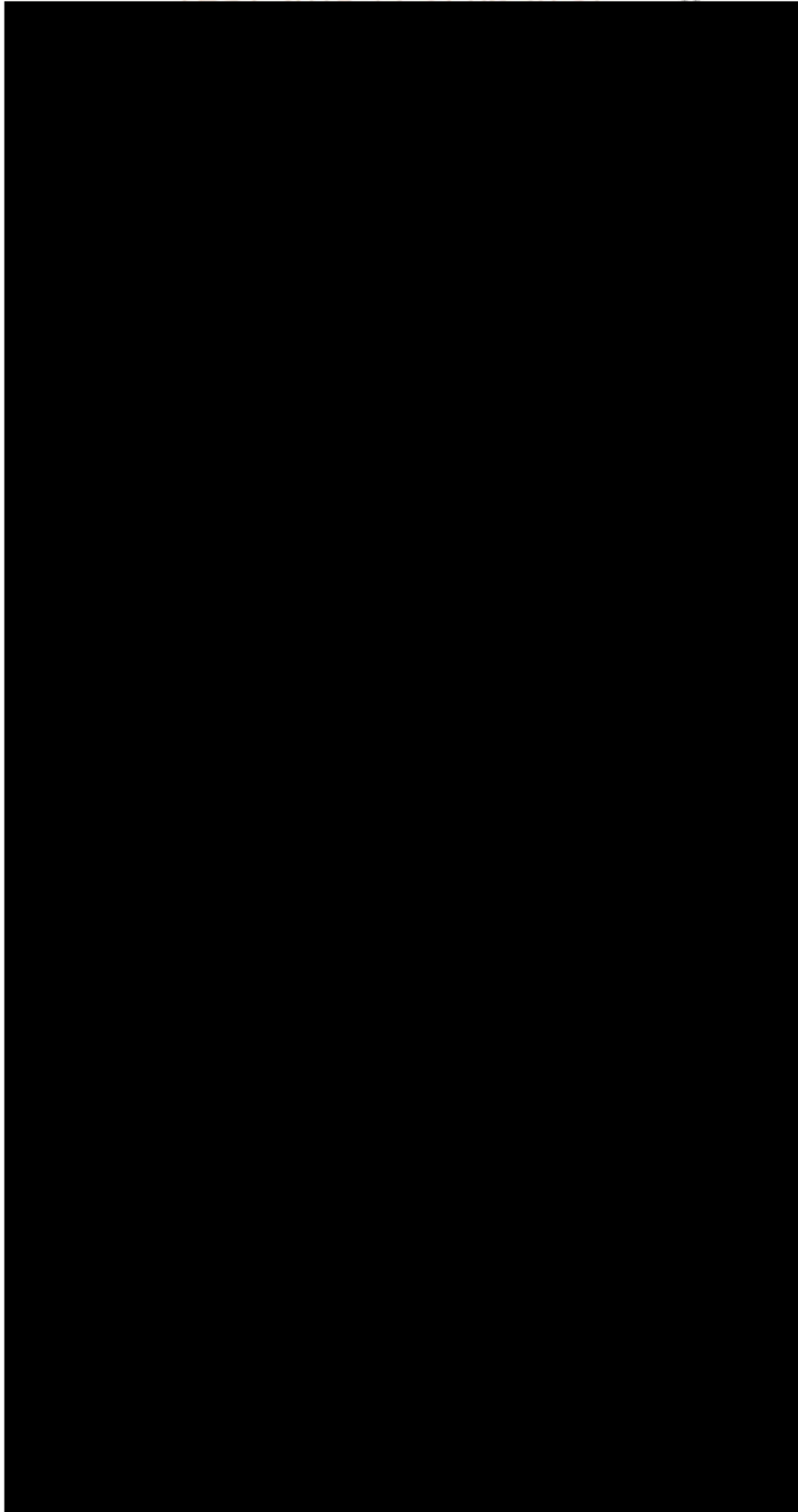


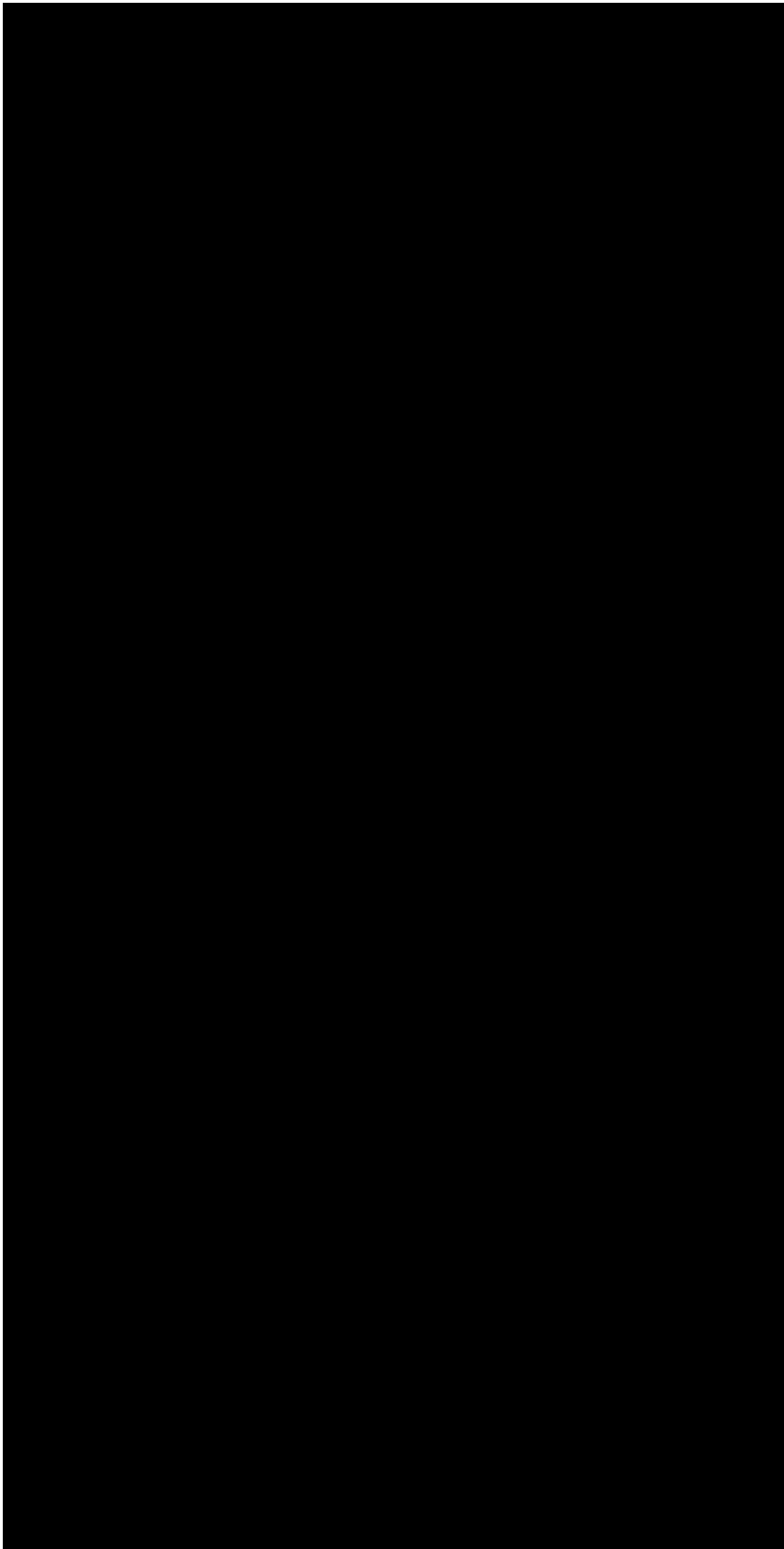
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## APPENDIX F-2: SAMPLE BALLOT II

Below, Dominion provides ballot samples based on the Ballot Sample in Appendix F-2. We would be happy to discuss additional formats, layout, or other customizable options upon request or during the finalist presentation.





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## APPENDIX G: COST PROPOSAL TEMPLATE

Below, we provide the pricing detail following by the purchase and lease payment schedules for your review. These documents have been submitted as separate attachments with electronic copy.

## Offer Sheet



Pennsylvania Voting System Proposal  
City of Philadelphia  
[Person of Contact]  
Registered Voters: 1,025,869 Precincts: 1,692  
Version: 5.5  
ICX BMD

Date:

Product Name	Description	QTY	UNIT PRICE	EXTENSION
<b>Central Scanning Solution: Absentee / Vote By Mail Hardware</b>				
ImageCast Central Kit - G1130	Includes Canon Model DR-G1130, Computer w/ 23" Monitor, Keyboard & Mouse, One 8GB USB Flash Drive & One I-Button, patch cable	2		
			<b>Sub-Total:</b>	
<b>In-Person Voting Solution: Polling Location Hardware</b>				
ImageCast X Kit - Prime BMD		2,550		
ATI Kit - ICX - USB		850		
ImageCast X Prime BMD Bag Kit		2,550		
MBP Kit #3 In-Office High Volume	Includes OKI C931e, Dell e3480 laptop, USB printer cable	1		
ImageCast X Voting Booth - Standard		2,550		
Flash Memory Card 8GB - SanDisk		50		
Smart-UPS 1500VA LCD 120V 1000W		850		
ImageCast X Classic Poll Worker Smart Card		50		
ImageCast X Classic Technician Smart Card		50		
ImageCast X Classic Voter Activation Card		50		
ImageCast Precinct Tabulator - 320C	Includes Tabulator/Scanner, Internal Battery, Printer with Paper Roll, 12 Month Hardware Warranty, 12 Month Firmware Software Application License, Two 16GB Flash Memory Cards, Two I-Buttons	1,135		
ImageCast Precinct Ballot Box - Plastic		1,135		
			<b>Sub-Total:</b>	<b>\$16,187,260</b>
<b>Accessories</b>		<b>Peripherals</b>		

ICP I-Button Technician Key - Blue

50

\$25

\$1,250

Sub-Total:

\$1,250

**Election Management Hardware**

EMS Standard Server Kit	Includes PowerEdge R630 rack server, 24 port switch, 24" monitor, keyboard/mouse, patch cable, Cepstral, Avast.	1
EMS Client Workstation Kit	Includes Dell T3420, 24" monitor, iButton programmer, high speed media reader, patch cable, smart card reader/writer.	7
EMS Adjudication Workstation Kit	Includes Dell T3420, 24" monitor, SQL Server 2016 CAL, cables, Windows 10 Pro.	2

Sub-Total:

**Software**

Democracy Suite Standard (>850k)	1
Adjudication Module (>850k)	1
Mobile Ballot Printing Module (>850k)	1

Sub-Total:

**Implementation**

Days

Product Implementation & Support	20
Project Management & Implementation	30

Sub-Total:

50

**Training**

Days

Training (/day)	15
-----------------	----

Sub-Total:

65

Total Purchase Subtotal

Discount

Year 1 Purchase Total

\$12,463,783

**Annual Licenses**

Democracy Suite Standard Annual License Fee (>850k)	1
Adjudication Annual Software License Fee (>850k)	1
Mobile Ballot Printing Annual Software License Fee (>850k)	1
ImageCast Central Annual Firmware License - G1130	2
ImageCast X Annual Firmware License - Prime	2,550
ImageCast Precinct Annual Firmware License - 320C	1,135

Sub-Total:

\$565,275

**Warranty**

ImageCast Central Annual Hardware Warranty - G1130	2
ImageCast X Annual Hardware Warranty - Prime	2,550
ImageCast Precinct Annual Hardware Warranty - 320C	1,135

Sub-Total:

\$398,475

\*Offer Valid for 30 days



# Payment Schedule



Pennsylvania Voting System Proposal  
 ICX BMD  
 [Person of Contact]  
 Registered Voters: 1,025,869 Precincts: 1,692  
 Version: 5.5  
 ICX BMD

## OPTION 1 - 8 Year MSA Model

Date:

	1	2	3	4	5	6	7	8	TOTAL
	2019	2020	2021	2022	2023	2024	2025	2026	
Managed Service Agreement (MSA)	\$2,641,380	\$2,641,380	\$2,641,380	\$2,641,380	\$2,641,380	\$2,641,380	\$2,641,380	\$2,641,380	\$21,131,037
[Extra Line Item]									\$0
<b>Option 1 - MSA Purchase Total</b>	<b>\$2,641,380</b>	<b>\$2,641,380</b>	<b>\$2,641,380</b>	<b>\$2,641,380</b>	<b>\$2,641,380</b>	<b>\$2,641,380</b>	<b>\$2,641,380</b>	<b>\$2,641,380</b>	<b>\$21,131,037</b>

## OPTION 2 - Outright Purchase Model

Hardware / Software Purchase									
License & Warranty									
[Extra Line Item]									
<b>Option 2 - Hardware Purchase Total</b>	<b>\$12,463,783</b>	<b>\$963,750</b>	<b>\$1,011,938</b>	<b>\$1,062,534</b>	<b>\$1,115,661</b>	<b>\$1,171,444</b>	<b>\$1,230,016</b>	<b>\$1,291,517</b>	<b>\$20,310,644</b>
<b>Variance b/w Purchase Options</b>									



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## **APPENDIX H: BV 17-1400 MANDATORY ELECTRONIC DISCLOSURE FORM**

Please use the attachment entitled 'Appendix H BV 17-1400 Mandatory Electronic Disclosure Form' to disclose any campaign contributions to political candidates and incumbents who are running for, or currently serving in, a local or state-wide elected office anywhere within the Commonwealth of Pennsylvania (federal campaign contributions are not included), any consultants used in responding to the RFP and contributions those consultants have made, prospective subcontractors, and whether Applicant or any representative of Applicant has received any requests for money or other items of value or advice on particular firms to satisfy minority-, woman- or disabled-owned business participation goals from City employees.



### **Mandatory Campaign Contribution Disclosure form**

*"This fillable PDF must be used to complete your financial disclosures. Once you select if you are a "business" or "individual" the appropriate questions will appear. Please answer as completely as possible. Once you complete the question on each page, select "Continue" to go to the next page. You must have Adobe to be able to complete this form. If you do not have Adobe, you can download it by going here: <https://get.adobe.com/reader/>." If you need to complete the form as a business and as an individual, please complete and submit two separate forms.*

**Continue**

### Contribution Disclosure Information

\*Required fields

\* Vendor: Dominion Voting Systems

\* Date: 12/19/2018

\* Is the Applicant an individual or business? ☐ Individual ☒ Business

\* RFP/Bid: #B1903107 Election System

### Business

- \* Has the Applicant made any contributions? ☐ Yes ☒ No
- \* Has the Applicant solicited or served as an intermediary for any contributions? ☐ Yes ☒ No
- \* Has an officer, director, controlling shareholder, or partner of the for-profit Applicant made any contributions? See note below. (Non-profit organizations, please select No.) ☐ Yes ☒ No
- \* Has an officer, director, controlling shareholder, or partner of the for-profit Applicant solicited or served as an intermediary for any contributions? See note below. (Non-profit organizations, please select No.) ☐ Yes ☒ No
- \* Has an affiliate of the Applicant made any contributions? ☐ Yes ☒ No
- \* Has an affiliate of the Applicant solicited or served as an intermediary for any contributions? ☐ Yes ☒ No
- \* Has an officer, director, controlling shareholder, or partner of a for-profit affiliate of the Applicant made any contributions? See Note below. ☐ Yes ☒ No
- \* Has an officer, director, controlling shareholder, or partner of the for-profit affiliate of the Applicant solicited or served as an intermediary for any contributions? See note below. ☐ Yes ☒ No
- \* Has the Applicant or an affiliate of the Applicant reimbursed another individual or business for a contribution that the individual or business has made? ☐ Yes ☒ No
- \* Has an officer, director, controlling shareholder, or partner of a for-profit Applicant, reimbursed another individual or business for a contribution that the individual or business has made? See note below. ☐ Yes ☒ No
- \* Has a political committee controlled by the Applicant or by an affiliate of the Applicant made any contributions? ☐ Yes ☒ No
- \* Has a political committee controlled by an officer, director, controlling shareholder, or partner of the for-profit Applicant, or of a for-profit affiliate of the Applicant, made any contributions? ☐ Yes ☒ No

Reset

Continue

### Notes:

Applicants must disclose all contributions to candidates or incumbents which are attributed to an immediate family member of an officer, director, controlling shareholder, or partner of the for-profit Applicant or the for-profit affiliate of the Applicant. Please disclose the full amount of contribution, although only the amount above \$3,000 will be attributed to the office, director, controlling shareholder, or partner (and, by extension, the applicant business).

### Contributions Disclosure Information

Is the applicant an individual or business? ☐ Individual ☐ Business

Name of Contributor 1:

Relationship to Applicant: Affiliate

Name of Recipient:

Date of Contribution:

Amount of Contribution:

Have you, the Applicant solicited or served as an intermediary for any contributions? ☐ Yes ☐ No

Has a member of your immediate family made any contributions over and above 3,000? ☐ Yes ☐ No

Has a member of your immediate family solicited or served as an intermediary for contributions over and above 3,000? ☐ Yes ☐ No

Is the applicant an individual or business? ☐ Individual ☐ Business

Name of Contributor 3:

Relationship to Applicant: Affiliate

Name of Recipient:

Date of Contribution:

Amount of Contribution:

Have you, the Applicant solicited or served as an intermediary for any contributions? ☐ Yes ☐ No

Has a member of your immediate family made any contributions over and above 3,000? ☐ Yes ☐ No

Has a member of your immediate family solicited or served as an intermediary for contributions over and above 3,000? ☐ Yes ☐ No

Reset

Continue

Is the applicant an individual or business? ☐ Individual ☐ Business

Name of Contributor 2:

Relationship to Applicant: Affiliate

Name of Recipient:

Date of Contribution:

Amount of Contribution:

Have you, the Applicant solicited or served as an intermediary for any contributions? ☐ Yes ☐ No

Has a member of your immediate family made any contributions over and above 3,000? ☐ Yes ☐ No

Has a member of your immediate family solicited or served as an intermediary for contributions over and above 3,000? ☐ Yes ☐ No

Is the applicant an individual or business? ☐ Individual ☐ Business

Name of Contributor 4:

Relationship to Applicant: Affiliate

Name of Recipient:

Date of Contribution:

Amount of Contribution:

Have you, the Applicant solicited or served as an intermediary for any contributions? ☐ Yes ☐ No

Has a member of your immediate family made any contributions over and above 3,000? ☐ Yes ☐ No

Has a member of your immediate family solicited or served as an intermediary for contributions over and above 3,000? ☐ Yes ☐ No



### Consultant Disclosure Information

**\*Required Fields:**

☐ Check here to certify if a consultant(s) was used in the year prior to the application deadline for this contract opportunity. (Click 'Continue' if this does not apply)

List all consultant(s) used in the year prior to the application deadline for this contract opportunity. Please be sure to refer to the definition of Consultant before completing this form.

Reset

Continue

**Vendor Disclosure Information**

**\*Required Fields:**

☐ List all consultant(s) used in the year prior to the application deadline for this contract opportunity. Please be sure to refer to the definition of Consultant before completing this form.

Reset

Continue



### Vendor City Employee Request Disclosure

\*Required Fields

☐ Check here if one or more City employees or officers asked you, the Applicant, any officer, director or management employee of the Applicant, or any person representing the Applicant to give money, services, or any other thing of value (other than contributions) during the two years prior to the application deadline for this contract opportunity. (Click "Continue" if this does not apply.)

**Reset** **Continue**

**Vendor City Employees Participation Advice Disclosure**

**\*Required Fields**

☐ Check here if one or more City Employees or officers gave you, the Applicant, any officer, director or management employee of the Applicant, or any person representing the Applicant advice that a particular individual or business could be used by the Applicant to satisfy any goals established in the contract for the participation of minority, women, disabled or disadvantaged business enterprises during the two years prior to the application deadline for this contract opportunity.

Reset

Continue

**Vendor Signature on Application**

In order for an application to be considered valid, it must be properly signed by the applicant. The Application may not be signed by anyone other than the Applicant or an authorized officer or employee of the Applicant. Applications that are not signed will be rejected. By typing your name and title in the signature space below, you, as the applicant, signify your intent to sign this application. Someone other than the proper signatory may not type in another's signature. All signatories hereby declare and certify that they are the Applicant or are employees or officers of the Applicant duly authorized to execute this Application and make disclosures on the Applicant's behalf; and represent and covenant that, to the best of their knowledge after appropriate inquiry, all of the information and disclosures provided are true and contain no material misstatement or omissions.

If application is being submitted by an INDIVIDUAL, SOLE PROPRIETOR, PARTNERSHIP, LIMITED LIABILITY PARTNERSHIP, LIMITED LIABILITY COMPANY, or any other legally formed entity except a corporation (see below) sign the application here, with a signature by either the Individual, Owner, Partner, Member or Manager. If the application is not signed by the above mentioned, by signing in the Authorized Signatory box provided below, you hereby certify that you are authorized to sign in place of such officers:

Signature of Individual/Owner/Partner/Member/Manager

Authorized Signatory


If application is being submitted by a CORPORATION, sign the application here, with signatures by (a) President or Vice-President of the corporation AND (b) Secretary, Assistant Secretary, Treasurer or Assistant Treasurer of the corporation. If the application is not signed by the above mentioned, you hereby certify that you are authorized pursuant to a certified corporate resolution to sign in place of such officers.

President/Vice President

Secretary/Asst. Secretary/Treasurer/Assistant Treasurer

Authorized Signatory



Save



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## **APPENDIX I: CITY OF PHILADELPHIA'S ADDRESS AND DIGITAL STANDARDS**

Dominion has reviewed the Address and Digital Standards documentation and does not have comment at this time.

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## APPENDIX J: REQUIRED PROJECT DOCUMENTS

Applicants must submit the following documents (collectively, “Project Documents”) as part of their Proposal:

- a) **an implementation plan for the proposed System and/or services that describes in detail (i) the methods, including controls, by which the Applicant manages projects of the type sought by this RFP; (ii) where software is to be developed, customized, and/or implemented as part of the project, the Applicant’s software development and implementation methodology, including, but not limited to, version control, error correction, pre-delivery testing and de-bugging procedures, and post-installation testing; (iii) and any other project management or implementation strategies or techniques that the Applicant intends to employ in carrying out the work;**

Agreed. The above required documentation is provided as part of Dominion’s proposal package. Section 3.10 details our service level agreements and maintenance. Section 3.14 provide a project plan. We would be happy to provide additional information upon request.

- b) **a detailed statement of the work to be performed, in a form that the Applicant considers appropriate and sufficient for incorporation in a contract document;**

Agreed. A statement of work is provided in Section 3.13 of Dominion’s proposal package. This section provides a high-level overview of the hardware, software, and project methodology and activities associated with the items requested by the City of Philadelphia. Similar to the contract phase with other large entities, we would expect to refine the statement of work during the contract negotiation process based on our discussions with the City.

- c) **a detailed project schedule, identifying all tasks and deliverables to be performed, durations for each task, principal schedule milestones, and overall time of completion; and**

Agreed. A detailed project plan is provided as part of Dominion’s proposal package in Section 3.14.

- d) **a milestone payment schedule setting forth the frequency and amount of progress payments and identifying the tasks and deliverables (“milestones”) to be completed for each payment.**

A payment schedule is included as part of Appendix G. A final payment schedule can be tied to the implementation schedule and negotiated as part of the contract award.

**Proposals will be evaluated in part on the adequacy of the proposed Project Documents. The City reserves the right, in its sole discretion, to impose additional or different requirements for Project Documents on any Applicant without notice to other Applicants.**



## Appendix K – Audited Financial Statements

As requested in Section 3.2, Dominion is providing copies of our Audited Financial Statements for 2017, 2016 and 2015, on the following pages.

Please note, Audited Financial Statements are considered Confidential and Proprietary and not for public disclosure. Therefore, each page includes the following disclaimer:

CONFIDENTIAL & PROPRIETARY TRADE SECRET, COMMERCIAL &  
FINANCIAL INFORMATION | NOT FOR PUBLIC DISCLOSURE











































































































## Appendix L - Acknowledgement of Amendments

At the time of shipping, Dominion received reviewed Amendments #1 and #2 from the City of Philadelphia. We respectfully request that by providing the Amendment cover sheets below that our acknowledgement of each released amendment be observed.

**City of Philadelphia  
Procurement Department**

**Amendment No. 1**

**Date: December 17, 2018 Best Value RFP #  
B1903107**

**Deadline for Submitting Proposals: December 28, 2018, at 5:00 PM, Local Time**

---

**It is the sole responsibility of the Applicant to ensure it has received all amendment to the RFP. The Procurement Commissioner may, in the Commissioner's sole discretion, reject any Proposal for which not all the amendment have been acknowledged in PHLContracts.**

---

**NOTICE**

**Procurement Best Value  
REQUEST FOR PROPOSAL # B1903107**

**Election System**

**IS AMENDED AS FOLLOWS:**

Except as expressly amended by this Amendment No. 1, the RFP is unchanged. Except as otherwise defined in this Amendment No. 1, capitalized words and phrases used in this Amendment No. 1 have the meanings assigned to them in the RFP.

**You are hereby notified of the following supplements:**

**Potential Vendors Questions with City of Philadelphia Responses**

PAGE 1 OF 5

**City of Philadelphia  
Procurement Department**

**Amendment No. 2  
Best Value RFP # B1903107**

**Date: December 18, 2018**

**Deadline for Submitting Proposals: December 28, 2018 at 5:00PM Local Time**

---

It is the sole responsibility of the Applicant to ensure receipt of all amendments to the RFP. The Procurement Commissioner may, in the Commissioner's sole discretion, reject any Proposal for which not all amendments have been acknowledged in PHLContracts.

---

**NOTICE**

---

**Procurement Best Value  
REQUEST FOR PROPOSAL #B1903107**

**Election System**

**IS AMENDED AS FOLLOWS:**

Except as expressly amended by this Amendment No. 2, the RFP is unchanged. Except as otherwise defined in this Amendment No. 2, capitalized words and phrases used in this Amendment No. 2 have the meanings assigned to them in the RFP.

You are hereby notified of the following changes to the above-referenced RFP:

1. RFP Section 3.4 – Solution Description: Revised item #7
2. RFP Section 4.2.1 – Eligibility Criteria – Electronic Poll Books:  
Removed criteria regarding certification by Federal Election Assistance Commission
3. Appendix E - Technical Requirements Compliance Matrix: REQ-General tab,  
Requirement COMP\_1.1: Revised certification requirements.



Our customers come first.



# City of Philadelphia

## Request for Proposals: Bid #B1903107 for Election System

### Clarification Questions Received

February 13, 2019

Prepared for:	Trevor Day, Monique Nesmith-Joyner, Jonathan Janiszewski
Address:	1400 John F. Kennedy Blvd. Philadelphia, PA 19107
Prepared by:	John Hastings, Regional Sales Manager
Email:	John.Hastings@DominionVoting.com
Phone:	(412) 208-5073
Due Date:	February 14, 2019

- **Please submit either a) a revised milestone payment plan that clarifies that successful completion of an actual election is a condition of final acceptance by the City or (in the interest of time) b) a commitment to negotiate a revised milestone payment plan that makes the completion of a successful election a condition of final acceptance.**

Dominion has submitted four separate attachments detailing the updated scenarios for consideration, highlighting a variety of different payment options, including outright purchase, finance and per unit rental options. In addition, we have also provided upgrade options, some at no cost, as part of our revised pricing proposals for consideration.

This submission modifies the pricing scenarios to incorporate additional discounts to the overall purchase including discounts to the outright purchase totals as well as ongoing annual licensing and warranty pricing through the term of the respective agreements. Of note, Dominion has eliminated the percentage increases to the annual licensing and warranty for the term of the agreement.

Further, as requested, Dominion will modify the sample SOW and associated Schedule of Compensation based on the final equipment configuration, potential upgrade options and type of finance structure selected by the City. For example, the schedule of compensation would be different for an outright purchase as opposed to a 10-year financing/lease/rental option. Regardless of the payment mechanism chosen, Dominion is committed to negotiate a revised milestone payment plan that makes the certification of the election a condition of final acceptance.

The final Statement of Work (“SOW”) will require both parties to review in detail all aspects of the project including the project plan and associated payment milestones. Please see the sample SOW provided as part of this revised response, which can be used as a template for finalizing a plan with the City of Philadelphia. The sample SOW includes a model Schedule of Compensation that has been utilized in several Dominion installations. Please note this is a sample only and Dominion is committed to negotiate in good faith the final compensation terms based on the final acceptance criteria above.

- **Dominion provided a proposed statement of work beginning on page 95 of its response to the City’s RFP. While the SOW in Dominion’s response provides some of the necessary information, a final SOW will require more detail and a few changes. Below are a few examples of changes, clarifications, or additional information that will have to be made or added before the SOW is finalized after the awarding of the Contract. This list is not meant to be exhaustive:**

Dominion agrees to work with the City to finalize the SOW and has provided an updated sample that has been utilized in similar types of installations. The Revised Statement of Work is included in Appendix 1.

- 1) **The City must be granted the ability to identify aspects of functionality that need to be customized and certain customizations must be made at no cost. For example:**

- a) **In the final paragraph of page 105, Dominion says that it will identify aspects of the system functionality that need to be customized in order to meet the City's statutory requirements. The proposal is silent as to the cost of those customizations. Rather, the City, in addition to Dominion, must be able to determine if the system does not meet the City's statutory requirements. Customizations made in order to meet the City's statutory requirements, or to comply with the requirements of the RFP, should be made at no cost to the City.**

The Dominion system complies with the State of Pennsylvania certification requirements, State election laws, the City of Philadelphia regulations and the RFP requirements (collectively the "Requirements"). As part of the software license, Dominion will make software customizations, at no additional cost to the City, necessary for compliance with any additional requirements that may be deemed necessary to comply with statutory requirements. With the understanding that these software customizations may be subject to State and Federal Certification.

- b) **The "Gap Analysis" section on page 121 should be amended to provide Dominion and the City with the ability to identify aspects of functionality that need to be customized to meet State statutory requirements. Those customizations should also be at no cost to the City.**

Agreed, please see answer to 1 (a) above.

A key phase in the initial stages of the project implementation will be a gap analysis performed by the Dominion team in conjunction with their counterparts with the City of Philadelphia, and subsequent configuration will be developed and implemented. Through this thorough analysis, Dominion and the City of Philadelphia will identify if there are aspects of system functionality which need to be customized in order to meet the State's statutory requirements. Dominion technology is used in dozens of states across the United States, each with its own set of particular and unique requirements, and our software is routinely customized based on customer feedback.

- 2) **The SOW should be amended to give the City the ability to create guidelines and testing criteria. There are a number of areas of the SOW that say that Dominion will develop testing criteria and guidelines for its system without giving the City input:**

- a) **End-to-End Tests and Customization and Configuration Options tests described on page 106 and 107 must be in addition to tests required by the City. The City has a number of acceptance tests that are required prior to acceptance of certain deliverables. In the "End-to-End" test section of the SOW, language should be included to say that this test is "in addition to the tests required by the City's Provider Agreement."**
- b) **The SOW (page 107) also says that "Dominion will provide guidelines and checklists to the City for acceptance testing." The SOW should be**

amended to say that the City may also develop its own guidelines and checklists for acceptance testing.

- c) **“Logic and Accuracy Testing” described on page 108, should include other reasonable tests provided by the City.**

Dominion agrees to the modifications noted above and has provided an updated sample SOW accordingly.

- 3) **The SOW should make clear whether the system is sufficiently accessible to individuals with disabilities. In addition to the accessibility requirements and scoring criteria established in the RFP, Dominion should make clear whether or not they have a plan and voting system that is compliant with all relevant federal and state laws regarding individuals with disabilities, including: The Americans with Disabilities Act and the Help America Vote Act of 2002.**

Agreed. The Dominion system is certified by the Election Assistance Commission and the State of Pennsylvania and is compliant with all relevant federal and state laws regarding individuals with disabilities, including: The Americans with Disabilities Act and the Help America Vote Act of 2002. In addition, Dominion has held a number of User Accessibility Demonstrations to solicit feedback regarding its Accessibility features of our proposed product configuration. This feedback is continuously incorporated in our product design. Dominion is willing to continue these user group sessions with associated organizations within Philadelphia and surrounding jurisdictions as consistent with our core business principles for ongoing product improvements related to accessibility.

- 4) **Dominion’s active voting support strategy should be customized with sufficient detail before the final contract. In the “Election Support” section on page 109, Dominion says that the active voting support strategy (the strategy for providing on-site support with tabulation and results reporting), needs to be developed before the final contract. Can you provide more details on this section.**

Agreed. The revised SOW includes updates to the Election Support Section with sample material. As is customary with other large implementations and election support activities, Dominion and the City will mutually agree on adjustments and customizations of schedules and activities based on the City’s specific needs.

- 5) **A Project Schedule must be developed before the final contract is signed. That final project schedule on page 113, should more clearly establish the milestones that Dominion intends to complete, with the payments for each milestone proportional to the amount of work required and value to the City received. The current version does not identify which tasks are considered milestones and has no cost tied to each task. Please provide a new project and payment schedule with the successful completion of the election as the final payment.**

It is critical for Dominion and the City to jointly work on finalizing a project schedule as part of the SOW process. It would be difficult for either party to draft the project plan in

isolation. A model project plan is included with the sample SOW. Certification of the election will be a milestone for final payment.

**6) Dominion should re-word the SOW to use the active voice whenever possible to remove ambiguity about which party is responsible for which task. For example:**

- a) The first sentence in the Requirements Gathering, Gap Analysis & Application Configuration section on page 105 of the response now says “A key phase in the initial stages of the project implementation will be a gap analysis performed by the Dominion team, and subsequent configuration will be developed and implemented.” A better way to word this sentence may be: “Dominion team will perform a gap analysis as a key phase of the initial stages of project implementation, and will develop and implement subsequent configuration”**

Dominion has provided a Revised Statement of Work to satisfy the requirement above.

**7) Dominion should, as soon as reasonably possible, let the City know which Standard Terms and Conditions provided in the RFP require further discussion and modification. On page 139 of its response, Dominion correctly points out that there are unique considerations in a voting system contract that may require the City to modify some of its standard terms. The final contract (called a “Provider Agreement”) will be negotiated after the award of a contract. The Provider Agreement will be a customized contract for this particular voting system. However, the Provider Agreement will contain many, if not all, of the Standard Terms and Conditions listed in the RFP. If Dominion believes some of those provisions require substantive modifications, it should let the City know as soon as reasonably possible to expedite the negotiation process.**

Dominion would welcome the opportunity to negotiate some of the standard terms of the Provider Agreement but does not believe that the contract requires “substantive modifications,” with the exception of the Performance and Payment Bonds provision.

Below are certain items Dominion would like to review with the City.

**7.4.2 Performance and Payment Bonds**

**7.5 Indemnification and the inclusion of a Limitation of Liability clause.**

**7.9 Acceptance – there are terms that need to take State certification into account, for example 7.9.1 (3) should read “most current State of Pennsylvania certified specifications for the Software,” instead of “most current published specifications for the Software.”**

**7.10 Retainage**

**7.12 Termination for Convenience**



## **Appendix 1 - Revised Statement of Work**

# Statement of Work

## **Background/Goals & Objectives/List of Schedules**

The Customer conducted an RFP to replace its current voting system hardware, software, supplies, maintenance, and support with one that is certified by the Customer's State and meets Customer requirements.

The Implementation period for the System (as defined herein) will be a phased roll-out approach spread over two years. The implementation period will include support for the 2020 elections. After the implementation period is over the standard support period begins.

Each phase of the project has clearly defined technical and business objectives. Once the final phase concludes the results will be a fully integrated voting system platform which will include: the ImageCast<sup>®1</sup> X BMD - Prime (ICX) touch screen, ImageCast Precinct (ICP) tabulator, ImageCast Central (ICC) tabulator and the Democracy Suite Software.

The Following Schedules are attached and form part of this Exhibit 1:

- Schedule A: Escrow Terms
- Schedule B: Product Descriptions and System Pricing
- Schedule C: Draft Implementation Schedule
- Schedule D: Schedule of Compensation
- Schedule E: ImageCast Precinct and ImageCast X Acceptance Testing Checklist
- Schedule F: ImageCast Central Acceptance Testing Checklist
- Schedule G: EMS Acceptance Testing Checklist

## **1. Introduction**

In this agreement, Vendor Support will be provided throughout the life of the contract. This Scope of Services (the "SOW") describes activities and products related to each of the phases of the project.

### **1.1 Definitions**

- 1.1.1 "Acceptance" and variations thereof, means the successful completion and sign-off by the Customer in writing of the acceptance testing performed on each component the System (Dominion Software, Dominion Hardware, and EMS Hardware) as defined in Exhibit B by authorized Customer personnel, after delivery in accordance with estimated deliverable schedules developed and agreed to by the Parties as set forth herein.

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<sup>1</sup> ImageCast<sup>®</sup> is a registered trademark of Dominion Voting Systems Inc.

- 1.1.2 “Agreement” means the Services Agreement executed by the Parties
- 1.1.3 “Dominion Hardware” means the ImageCast system hardware as more specifically described in Schedule B.
- 1.1.4 “Dominion Software” means Democracy Suite and ImageCast software and firmware programs licensed to the Customer by Dominion and any associated documentation as more specifically described in Schedule B.
- 1.1.5 “EMS Hardware” means third party hardware required for operating Dominion Software as used in conjunction with the Dominion Hardware, as more specifically described in Schedule B.
- 1.1.6 “Services” means, collectively, the services, duties and responsibilities described in Article 3 of the Agreement (including this SOW), and any and all work necessary to complete them or carry them out fully to the standard of performance required in this Agreement.
- 1.1.7 “System” means the combination of Dominion Software, Dominion Hardware and EMS Hardware.
- 1.1.8 “Term” shall have the meaning set forth in Article 4 of the Agreement.
- 1.1.9 “Third Party Software” means a commercial software product developed by a Third Party not specifically for, or on behalf of the Customer. For clarity, custom or proprietary Software, including customizations to Third Party Software, developed by or on behalf of the Customer to the Customer’s specifications shall not be considered Third Party Software. Dominion provides Third Party Software to the Customer pursuant to sublicenses or end user license agreements with the owners of such Third Party Software.

## **2. Implementation and Project Management**

Dominion shall assign a Dominion project manager (“Dominion PM”) to oversee the general operations of the project during the Implementation phases. The Dominion PM will be the primary contact for all project needs. The Dominion PM will be responsible for all deliverables and services including, resource planning and coordination, product delivery, issue resolution and all administrative matters such as invoices and payment.

Customer shall assign a Customer project manager (“Customer PM”), who shall be responsible for the Customer’s review, analysis and acceptance of the System components in addition to the coordination of Customer personnel, equipment, vehicles and facilities. The Customer PM shall be empowered to make decisions on behalf of the Customer with respect to the work being performed under this Agreement.

It is expected that the Customer PM and the Dominion PM shall meet with the project committee at least twice a month. And once a week during the 10 weeks before and three weeks following every election. At a minimum the project committee shall include the Director of Elections, the Deputy Director of Elections, The Operations Manager, and the Senior Manager of the Elections Operations Center (Warehouse).

The Dominion PM and Customer PM shall modify the attached implementation plan (the “Implementation Plan”) pursuant to approved Project change control methodology specifying any additional details for all tasks necessary to successfully complete the project, working cooperatively to modify hard and soft deadlines as circumstances warrant. Each task identified will include a start and end date and the responsible parties involved. The Implementation Plan includes, but is not limited to, a detailed Implementation Project Plan created and managed in Microsoft Project, which includes product delivery, deliverables, with implementation, delivery and training dates; The agreed Acceptance Testing Checklists. The working draft Implementation Plan and supporting documents are attached hereto as Schedule C.

Dominion has designed the Customer work plan based on the following:

- Dominion’s work plan adheres to PMBOK standards and practices.
- It is developed, monitored and reported by using MS Project.
- It is designed with key milestones (clear tangible deliverables) that are designed to mitigate risk to the extent possible.
- Tasks are focused on accomplishing specific objectives.
- The work breakdown structure is a logical progression of steps, activities, and subtasks that lead to tangible work products or deliverables.
- Our plan provides Customer with visibility into the tasks and schedule.
- Our plan incorporates Dominion’s prior experience in successfully implementing large-scale, complex voting systems.
- The work plan is achievable and will be used to manage to specific deadlines

The draft Implementation Plan developed for this Agreement represents the current understanding based upon discussions with the Customer. It is understood that the Implementation Plan is a living plan, and the Parties shall modify as mutually agreed to by the Parties. Customer shall have final approval authority over any Implementation Plan changes.

## **2.1 Project Team**

Dominion’s project team includes experienced staff, with extensive expertise in system implementation, project management and customer service obtained through years of dedicated work for our customers. The personnel selected for Customer’s implementation are among Dominion’s most experienced team

members, ensuring that Customer has qualified people to meet their needs and requirements. The Customer will already be familiar with most of the project team, having worked with these individuals over the years. The team will receive executive oversight from the Executive Vice President of Sales and Executive Vice President of Operations throughout the project's lifecycle. The following represents the Dominion organizations chart for the implementation.

- 2.1.1 Dominion Personnel. Dominion must, upon receiving a fully executed copy of this Agreement, assign and maintain during the term of this Agreement and any extension of it an adequate staff of competent personnel that is fully equipped, licensed as appropriate, available as needed, and qualified to perform the assigned Services. Dominion must include among its staff the Key Personnel (as defined in the Agreement) and positions as identified below. The level of staffing may be revised from time to time by notice in writing from Dominion to the Customer and with written consent of the Customer, which consent the Customer will not withhold unreasonably.

Key Personnel are as follows:

- a) Dominion Project Manager – xxxx
- b) Customer Relations Manager – xxxx
- c) Ballot Programmer – xxxx
- d) Product and Operations Specialist – xxxx

- 2.1.2 Dominion Project Manager. The Dominion PM will be appointed and approved by Customer to be dedicated entirely to this project and will be on-site, full-time (consistent with the election schedule and the departments work hours), through the implementation phases. The Dominion PM will be responsible for arranging all meetings, including joint governance visits and consultations between the Parties. The Dominion PM shall have the requisite skills and experience to provide the services required for the implementation including without limitation: elections support, project management, excellent verbal and written communications skills, strong organizational skills to include multi-tasking and time management skills, and ability to manage detail-oriented projects with fixed deadlines. Dominion shall make commercially reasonable efforts to provide a project manager familiar with the election operations and the election rules and regulation of the Customer.

The Dominion PM shall communicate with the Customer as to the status of project including information, milestones, deliverables, procedures and progress on the tasks as set out in this Agreement and advise the Customer forthwith upon the occurrence of any event requiring a material change in such plans, and request Customer's written consent to any such material change. Customer will follow a reciprocal procedure.



- 2.1.3 Customer Relations Manager. The Customer Relations Manager is responsible for managing the day-to-day relationship, administration and technical/product support, assignment of support personnel to the Customer during the Term of the Agreement. Additionally, the Customer Relations Manager provides all administrative support such as invoicing, payment collection. Finally, during the implementation phases, the Customer Relations Manager will work closely and in tandem with the Dominion PM in providing the Services.
- 2.1.4 Product Specialist. Dominion shall provide technical support throughout contract term. This resource is responsible for the installation, operation, repair, and maintenance of all Dominion Hardware and Software, scheduling and supervising resources for all hardware and software related matters. The Product Specialist will provide election support services and customer training, and interfacing directly with customers, co-workers and election officials.
- 2.1.5 System Configuration Manager. Shall work with the Customer's elections staff, as well the Customer's IT staff, to install the certified EMS and adjudication system hardware. As part of this role, the systems configuration manager will evaluate the current environment at the Customer and provide recommendations for any changes required for configuration.
- 2.1.6 Training and Documentation Manager. Will coordinate with Dominion and Customer PM to develop and customize all training documentation and supervise all training related activity, as listed in the training section herein.
- 2.1.7 Election Programmers. Responsible for all aspects of election event definition, including without limitation to following components: Importing of data files into the EMS system, defining election project parameters and assigning templates, assigning tabulators (ICC, tablet, mobile ballot printing), defining ballot structures, creating proofing ballot, creating official ballots, and creating election files and the security keys for the ImageCast.
- 2.1.8 Ballot Printer Certification Manager. Shall conduct activities required to qualify any Customer certified printer.

## **2.2 Change Control Process**

The Customer may at any time request in writing (each, a "Change Request") changes to the Implementation Plan (each, a "Change"). Upon the Customer's

submission of a Change Request, the parties will evaluate and implement all Changes in accordance with this Section 3.4.

2.2.1 As soon as reasonably practicable, and in any case within ten (10) calendar days following receipt of a Customer Change Request, Dominion will provide the Customer with a written proposal for implementing the requested Change (“Change Proposal”), setting forth:

- i. a written description of the proposed Changes to the Implementation Plan;
- ii. a schedule for commencing and completing any additional, or modified Services and the effect of such Changes, if any, on completing any other Services under the SOW;
- iii. any additional Customer resources Dominion deems necessary to carry out such Changes; and
- iv. any calculated increase or decrease in fees resulting from the proposed Changes.

2.2.2 Within ten (10) calendar days following the Customer’s receipt of a Change Proposal, the Customer will by written notice to Dominion, approve, reject, or propose modifications to such Change Proposal. If the Customer proposes modifications, Dominion must modify and re-deliver the Change Proposal reflecting such modifications, or notify the Customer of any disagreement, in which event the parties will negotiate in good faith to resolve their disagreement. Upon the Customer’s approval of the Change Proposal or the parties’ agreement on all proposed modifications, as the case may be, the parties will execute the written Change Proposal (“Change Notice”). If the Change Notice results in a fee increase above the contacted amounts, it will require an amendment to increase the contract amount.

2.2.3 No Change will be effective until the parties have executed a Change Notice. Except as the Customer may request in its Change Request or otherwise in writing, Dominion must continue to perform its obligations in accordance with the SOW pending negotiation and execution of a Change Notice. Dominion will use commercially reasonable efforts to limit any delays or fee increases from any Change to those necessary to perform the Change in accordance with the applicable Change Notice. Each party is responsible for its expenses of processing any Change Request, Change Proposal, and Change Notice.

3. **Source Code Escrow.** Dominion agrees to place the State certified Dominion Software source code (and any subsequent certified upgrades) with an escrow agent following the execution of an escrow agreement containing substantially the same terms as set forth on Schedule A, Escrow Terms.

## **4. System Installation and Configuration**

### **4.1 Storage Recommendations**

#### **4.1.1 ImageCast X:**

- 20°C~ 60°C, 80%RH Max,
- Preferred: +25°C or colder
- Extended temperatures above 45°C will degrade battery performance and life

**4.1.2 ImageCast Precinct.** For the ImageCast Precinct, the corrugated cardboard boxes used for shipping can be used for storage. After preventative maintenance, units are placed in their antistatic bag in the box, and can be stored up to six (6) boxes high. Given the regularity of Customer elections, tabulators will likely not need to be charged in between election events. For best lifetime, the recommended storage conditions are 32°F to 104°F (0°C to 40°C) and Relative Humidity less than 85%, although occasional excursions to -4°F to 140°F (-20°C and +60°C) for less than 24 hours are acceptable.

- A dry, clean environment
- Keeping the battery charged
- Running Maintenance Diagnostics on a regular basis

### **4.2 Delivery**

**4.2.1** Delivery and shipment of the System shall be scheduled as part of the final Implementation Plan pursuant to Section 3.2 herein. The Dominion PM will manage the shipment process through an authorized shipper to ensure delivery meets the implementation schedule.

Dominion shall bear the responsibility for all risk of physical loss or damage to each portion of the System until such portion is delivered to the Customer. The Customer shall provide Dominion with a single location for shipment and Dominion shall not be responsible for shipping to more than one location. To retain the benefit of this clause, Customer shall notify Dominion of any loss or damage within twenty five (25) business days of the receipt of any or all portions of the System and shall cooperate in the processing of any claims made by Dominion. The time frame may be extended upon mutual agreement.

Additionally, Dominion PM will require a written confirmation of receipt of all packages. Damaged packages that are received are subject to the notice provision listed in the paragraph above.



- 4.2.2 Title to the System, or any portion thereof, excluding Dominion Software and Third Party Software, will pass to the Customer upon delivery.
- 4.2.3 Democracy Suite EMS is a highly configurable election system, which has been certified by the Customer's State. Configuration of the EMS will begin initially offsite and completed on site by Dominion system configuration manager. Once the configuration is complete, the EMS servers and software will be ready for the Customer Acceptance Testing procedures. As part of the process, Dominion will import an Acceptance Testing election as specified by the Customer, which shall serve as the basis for all Acceptance Testing procedures. Such test shall cover all functional requirements as well as volume related requirements to the extent they can be replicated or simulated.

## **5. Acceptance Testing and Security**

Dominion shall provide an Acceptance Test Plan (ATP) relying mostly on the acceptance test checklists attached hereto as Schedules E, F and G. The ATP shall identify all tests necessary to demonstrate functional compliance with the hardware and software requirements of this contract.

Dominion and the Customer shall finalize the test plan and procedures prior to the acceptance-testing phase and Customer shall have the final tasks of approval of the ATP, which approval shall not be unreasonably withheld. Dominion shall be responsible for providing all training and training materials required to support the ATP.

A Dominion hardware technician will provide guidelines to the team responsible for the Customer warehouse for inbound acceptance testing. This includes assessing suitability and identifying any modifications required, identifying areas for each process including a secure area for inventory control, preparing necessary acceptance documentation that may arise outside of the agreed acceptance test checklist, or with changed circumstances, and ensuring all necessary supplies are available for work.

A checklist template will be provided to the Customer for printing and distribution during the acceptance test process. For each piece of ballot marking equipment, Customer staff, with necessary assistance or guidance from a of a Dominion technician, but under the supervision of the Customer, will complete the acceptance test for each unit received. Each form will be signed and stored by the Customer with copies made or scanned for Dominion in order to ensure that each component is in proper working order upon receipt and unpacking. The Dominion PM will notify Customer PM if any component is non-compliant in any manner.

In the event that any shipping problems known at the time of receipt, or discrepancies, the Customer will make the Dominion PM aware of the issues resolution. It is recommended that the Customer retains a subset of the equipment packing materials for future shipping needs.

## **5.1 General Acceptance Testing Terms**

Dominion Software or Dominion Hardware. After delivery of Dominion Software or Dominion Hardware, the Customer will conduct Acceptance Testing, according to the agreed terms attached as Schedules E, F and G, or as later modified, of such components. Such acceptance testing shall occur at a time mutually agreed upon by the Parties, but no later than thirty (30) business days after receipt, unless a later date is mutually agreed too.

Rejection. If defects are uncovered during testing that result in an unsuccessful test, the affected system component(s) will be rejected and the Customer will send a notice to Dominion indicating the issues and reason for rejection. Upon receipt of notice, the Dominion will have fifteen (15) business days to repair or replace the affected system component(s).

## **5.2 Acceptance Testing and Transition Training**

### **5.2.1 System Transition Review**

The initial meetings, to be held within 6 weeks of project initiation, will review the current Customer processes and provide information to the Customer on the overall system, related configurations, ballots, reporting, training, etc. Transition meetings will include, but not be limited to the following:

- Ballot Templates
- Reporting
- System Use Procedures
- Configurable System Settings
- Ambiguous Zone Thresholds
- Ballot Printing
- VR System Integration
- Legacy system to Democracy Suite overview
- Other

Dominion shall provide the Customer with an Election Event Database Form for the Customer to complete. This form provides Dominion's programming specialist with preliminary database information to create a sample ballot. Once Dominion's programming specialist has configured Customer's election with the Customer's branding, voting locations, tabulator names, and applicable subdivisions, the first initial ballot draft is produced. The Customer is responsible for submitting their Election Event Database Form within as part of the system transition training. Although Dominion understands that defining the election database is an

ongoing process, Dominion's programming specialist will require a preliminary database to provide the Customer with a sample draft ballot. The Dominion PM will be available for any discussion required throughout all phases of the project.

The Dominion PM will provide Customer staff with the first ballot draft for feedback on ballot layout and design. The first draft ballot consists of fictitious names. Finalized candidate names will be imported upon last day for candidate filing. With feedback from the Customer's Staff, the ballot's layout and design is finalized within subsequent phases. This process ensures that all final ballot design details are applied well before final certification date. Feedback can include adjustments to the spacing of names, layout of contests, ballot headers, and font size.

#### 5.2.2 ImageCast Acceptance Testing.

Acceptance testing utilizes an agreed test project and confirms that the physical and electromechanical components are functioning properly and have not been damaged during transport, and that internal parameters have been programmed correctly. Results of these tests are generated and are left with each device, providing assurance to the Customer.

Customer Acceptance – A representative of Dominion will be onsite to oversee acceptance testing. Acceptance testing shall include the items below. The Acceptance Testing checklists are attached as Schedules E, F and G.

1. Physical inspection of the equipment
2. Functional testing using provided test materials
3. Others items as outlined in the Acceptance testing checklist

#### 5.2.3 ICC Acceptance Testing.

Dominion shall assist the Customer in creating an Acceptance testing log sheet, to be used as a control sheet showing which ICC system have been received, tested and accepted. Acceptance testing for the ICC scanner is simply a matter of confirming that the physical and electromechanical components are functioning properly and have not been damaged during transport, and that certain internal parameters have been programmed correctly. Performing this test will ensure the integrity of the installed firmware within the voting machines. The mutually agreed, initial Acceptance Testing checklist, subject to Customer modification, is attached as Schedule F.

#### 5.2.4 EMS Acceptance Testing.

Dominion shall provide on-site technical support for EMS Acceptance Testing. Dominion outlines below the standard process for EMS Acceptance Testing, which process may be modified by the Customer. The mutually agreed, initial Acceptance Testing checklist, subject to Customer modification, is attached as Schedule G.

#### 5.3 **Local Printing Facilities Certification** Dominion shall provide the following services related to ballot printer certification. Dominion shall provide cost estimates to the printer seeking certification prior to commencing the process.

5.3.1 Provide technical specification requirements for printer certification.

5.3.2 Perform on-site quality control on initial test run of ballots from printers including multiple tabulation sessions.

5.3.3 The certified printing facility must agree to source the paper used for ballots with the ImageCast from a paper manufacturer having met Dominion's technical paper specifications.

### 6. **Training**

#### 6.1 **Training Services**

Training is the primary tool for organizational change integration. The voting system solution will require all levels of election staff and poll workers to learn a new suite of hardware, software, and procedures. Dominion's training materials (documents, presentation, guides, reference cards, web resources, and self-paced learning) all contribute to integrating the new solution into the day-to-day routine of the organization.

Dominion shall prepare training materials including training manuals, website training videos and technical reference manuals. Training and curriculum particular to the resources, staff, and needs of the Customer will be developed as part of the implementation meetings.

##### 6.1.1 Staff Training Outline

- System
  - All Dominion software and hardware components supplied by Dominion (proprietary and COTS)
  - ImageCast Precinct
  - ImageCast Central
  - ImageCast X BMD
  - ImageCast Remote (UOCAVA)
  - Election Night Reporting
- Course types, (Executive, Administrative, Super user, User, Customer Technician)



- Executive
  - Key reports and what the reports mean
- Administrative / Super User
  - Ability to troubleshoot software
  - Reporting
  - Hands on Training
  - Reporting for Admin / super user
- Basic User
  - Hands on Training
- Customer technician
  - Repair and replacement
  - Hands On training
  - Report training understanding for Customer Technician
- Video Training / tutorials

#### 6.1.2 Poll Worker Training

Dominion will work with the Customer in developing Poll Worker training. Content will include Election Day procedures and how to handle special voting situations that may arise. Such a change in voting systems requires a change in polling place forms and procedures and as such, Dominion will provide manuals from previous implementations and will assist in redesigning manuals and procedures accordingly. Customer will be primary author and designer of their training documentation.

In addition, Dominion will assist in the development of Poll Worker literature and training videos. And Dominion will assist in building instruction manual for the Train the Trainer Program. Dominion shall serve as active participants in all of the Customer's Train the Trainer sessions during implementation phases of this contract and provide any necessary feedback on both documentation and presentation. Dominion will also support the Poll Worker trainings, as necessary, to ensure that training equipment is operable and functioning as expected. It is understood that during the implementation phase all election workers will be trained. It is not expected that Dominion will need to support all of those so long as the equipment is operating as expected and knowledge is being transferred.

#### 6.1.3 Documentation

Dominion will prepare and provide, or assist the Customer's office, as the case may be, all needed training material, which includes training manuals, quick reference guides, presentations, and technical reference manuals when necessary. Training and curriculum particular to the resources, staff, and needs of the Customer will be developed as part of

the implementation meetings and materials will be provided before implementation for both hardware and software functions. The Customer is authorized to customize the materials provided as part of the Dominion training program.

#### 6.1.4 Training Schedule & Activities

The following are training curriculums and Dominion resource allocation estimates which the Customer agrees appears reasonable. The real allocation of time may differ depending upon the success of the knowledge transfer activity. The acceptance of this training is at the reasonable discretion of the Customer. The number of attendees is not a limitation, but a suggestion in order to provide the best hands-on training.

Training Class Description	User Category	Sample topics	Days	Students per Class / Number of Classes
ImageCast Precinct Tabulator Operations Training	Customer Administrator Division User	<p>This course provides an introduction to the Dominion Hardware. Topics include:</p> <ul style="list-style-type: none"> <li>• Setup of the ICP</li> <li>• Security, including safeguards to prevent and detect tampering</li> <li>• Opening Polls</li> <li>• Processing Ballots</li> <li>• Closing Polls</li> <li>• Troubleshooting</li> <li>• Acceptance Testing</li> <li>• Performing L&amp;A</li> </ul>	1	15/1
ImageCast ICP / ICP Precinct Tabulator Training	Basic Users - Election department Workers	<p>This course trains poll workers for Election Day responsibilities. Topics include:</p> <ul style="list-style-type: none"> <li>• Preparing for Election Day</li> <li>• Opening and Closing the Polls</li> <li>• Processing Voters</li> <li>• Managing the Polling Place</li> <li>• Results</li> </ul>	1	20/4
ImageCast ICX / Precinct BMD Training	Basic Users - Election department Workers	<p>This course trains poll workers for Election Day responsibilities. Topics include:</p> <ul style="list-style-type: none"> <li>• Preparing for Election Day</li> <li>• Opening and Closing the Polls</li> <li>• System Operations and ballot printing</li> </ul>	1	20/4

Training Class Description	User Category	Sample topics	Days	Students per Class / Number of Classes
		<ul style="list-style-type: none"> <li>Processing Voters</li> <li>Assisting Voters with Special Needs</li> <li>Managing the Polling Place</li> </ul>		
ImageCast Precinct Tabulator Election Day Tech Training	Elections Day Technicians	<p>This course provides familiarity with Dominion hardware and teaches the requirements to support the equipment on Election Day. The major emphasis in this course is on equipment troubleshooting.</p> <ul style="list-style-type: none"> <li>Preparing for Election Day</li> <li>Opening and Closing the polls</li> <li>Processing Voters</li> <li>Assisting Voters with Special Needs</li> <li>Troubleshooting Election Day Problems</li> </ul>	1	20/5
Train The Trainer Poll Worker Training	Poll Workers Trainers	<p>This course is a train the trainer course that covers how to train Election Day poll workers. This course focuses on teaching trainers how to become better at delivering training, along with covering everything to be included in a poll worker training class. Topics include:</p> <ul style="list-style-type: none"> <li>Training Techniques</li> <li>Learning Styles</li> <li>Presentation Skills</li> <li>Preparing for Election Day</li> <li>Opening and Closing the Polls</li> <li>Processing Voters</li> <li>Assisting Voters with Special Needs</li> <li>Managing the Polling Place</li> </ul>	2	20/2
ImageCast Central Operations Training	Customer Administrator, Division User	<p>This course provides an introduction to the Dominion Hardware. Topics include:</p> <ul style="list-style-type: none"> <li>System setup, configuration &amp; scan options</li> <li>Security</li> <li>Opening Polls</li> <li>Scanning ballots and batch management</li> <li>Closing Polls</li> <li>Troubleshooting</li> </ul>	1	5

Training Class Description	User Category	Sample topics	Days	Students per Class / Number of Classes
		<ul style="list-style-type: none"> <li>• Acceptance Testing</li> <li>• Performing L&amp;A</li> </ul>		
ImageCast Central General User Training	General User	Although the proposed solution uses an intuitive Canon X10c scanner, it is important that staff and any temporary election workers have a full understanding of the system. It is recommended that all operators attend a half day class, during which they will have hands on experience loading ballots, scanning, and troubleshooting any issues.	1	10
Democracy Suite EMS (Election Event Designer and Results Tally & Reporting)	Customer Administrator, Elections Staff Personnel Administrative Users	<p>This course introduces election programming, results consolidation and reporting concepts in EMS. Topics include:</p> <ul style="list-style-type: none"> <li>• Overview and components setup</li> <li>• Turning on system and opening application</li> <li>• Application overview</li> <li>• Importing from VR System</li> <li>• Creating and editing contests</li> <li>• Creating and editing ballot layout</li> <li>• Programming voting devices</li> <li>• Creating Audio Files for accessible voting</li> <li>• Opening an election project</li> <li>• Zero reports</li> <li>• Results files</li> <li>• Adjudication status</li> <li>• Validating, Publishing and Reporting</li> <li>• Generating reports and using report filters</li> <li>• Report exporting, saving and printing</li> <li>• Creating the ENR export</li> <li>• Troubleshooting</li> </ul>	5	5
ImageCast Adjudication	Customer Administrator, Elections Staff Personnel	<p>This course provides an introduction to ImageCast Adjudication. Sample topics include:</p> <ul style="list-style-type: none"> <li>• Overview and components setup</li> </ul>	2	10



Training Class Description	User Category	Sample topics	Days	Students per Class / Number of Classes
	Administrative Users	<ul style="list-style-type: none"> <li>• Turning on system and opening application</li> <li>• Setting up the application</li> <li>• Application overview <ul style="list-style-type: none"> <li>○ Administrator</li> <li>○ General user</li> </ul> </li> <li>• Adjudicating ballots</li> <li>• Administering adjudicated ballots</li> <li>• Reporting</li> <li>• Closing/exiting application</li> <li>• Troubleshooting</li> </ul>		

## 7. **Media, Voter Education and Outreach**

Dominion's voter outreach and voter education program is a customizable service. Dominion will work alongside Customer in creating a scope of work tailored to the specific needs and desires of the jurisdiction regarding staff training, voter outreach and education. This collaborative approach to voter outreach could involve any form of voter outreach and educational items that Customer believes would aid in familiarization of voters with Dominion's voting technology, such as public demonstrations of the new voting equipment, a mock election, and how-to-vote resources that can be distributed on the Customer Elections website.

Dominion shall provide support to the Customer through 2019 election, to assist in the development of a communication strategy and support to address the media, voter education and outreach. The following are the media, voter education and outreach objectives.

- Maximize voter familiarity and comfort with the voting systems.
- Assist the Customer in conducting a thorough voter outreach program capable of reaching the diverse elements of the Customer's voting population.

## 8. **Election Services**

### 8.1 **Election Definition**

The creation of the election database, memory cards for tabulators, and the ballot and report packages is a critical step in the election implementation. Given the very limited time available between the certification of the final ballot and the distribution of

UOCAVA / Absentee ballots, it is very important that timelines are appropriately managed. Dominion employs an iterative approach to ballot creation, where efficient rounds of ballot proofs are provided to election officials as information becomes available. In many cases ballots have already been approved by the time they are certified, maximizing the time available for pre-election testing and logistics.

Dominion is familiar with the level of care and attention, and the rigorous proofing that election data receives in the Customer's system. While we are strong advocates of exercising rigor and caution during the ballot production phase, some or all of the iterative steps described below may not be required. This decision will be made by the Dominion project team and the Customer stakeholders following system configuration, end-to-end testing and after completion of a mock election.

Democracy Suite shall have the capability of importing election data from the Customer's election management system to generate ballot layout used to conduct an election. Dominion shall provide election definition services for all elections.

- 8.1.1 Import of data files into the EMS system. Using the data import bridge created during configuration, the Dominion project team will create an initial election database, ballots and reports using approved templates. Dominion staff will review the database for internal consistency, and provide draft proofing packages to the Customer officials for review.
- 8.1.2 Defining election project parameters and assigning templates.
- 8.1.3 Assigning all voting devices and tabulators (ICC, ICX-BMD, UOCAVA, and ICP).
- 8.1.4 Defining ballot structures. As soon as possible following the certification of final election data, the Dominion project team will provide final ballot proofs to the Customer officials. We estimate that this should be complete in approximately two days, but this is dependent on active participation in the iterative process. Ballot proofs must be carefully reviewed and formal approval issued to the Dominion project team before proceeding.
- 8.1.5 Creating proofing ballots. Final ballot PDF images are provided to appropriate Customer officials for provision to a certified printer. Election Project back-ups are uploaded to a secure transfer site for restoration on the Customer election servers. These project back-ups allow Customer officials to create memory cards, and form the results database that will receive results.
- 8.1.6 Creating audio ballots. Dominion recommends the use of machine synthesized audio files for use in the creation of audio ballots. In the event that modifications to the machine synthesized audio is required, time has been set aside for the Customer to undertake this with Dominion's

assistance. Dominion understands the importance the Customer places on the production of accurate, easily understood audio ballots. As part of the initial configuration process, we will determine how to best leverage existing processes, tools and systems to create an audio ballot that meets the Customer's standards. On the conclusion of this step, adjustment to the project plan and schedule may be required to ensure the timely and accurate production and testing of the final accessible voting session

#### 8.1.7 Creating official ballots.

#### 8.1.8 Creating election files and the security keys for the ImageCast.

The Customer shall review and approve, or identify issues to all Dominion deliverables related, with particular attention to ballot proofs and audio files, to such service within two (2) business days of discovery of an issue by the Customer. In the event the Customer discovers an issue, it shall provide written notice to Dominion following the discovery of any issue and Dominion shall rectify the issue at no additional cost to the Customer.

In the event the Customer approves the final ballot proofs and audio files and subsequent to such approval, requests that a change be made to the deliverable, the Dominion may provide the change according to the service pricing identified in the Dominion price resource rate chart.

### 8.2 Ballot Layout

Dominion's Ballot Layout/Generation System must support English, Spanish, Chinese, and Hindi both in written and audio format; and, have the ability to add new languages. The system is capable to add additional languages. The EMS must generate full-sized press-ready ballots in industry standard PDF format. The EMS must have options to control fonts, line weights, and the number of columns, multiple languages, multi-card or double-sided, portrait-style, and colored headers. The ballot is 8.5" wide and can vary between 11"-22" in length.

### 8.3 Logic and Accuracy Test

On completion of election definition and ballot layout, the ballots are generated. Ballot proofs and electronic ballot image files are generated and provided to the Customer. The Customer carefully reviews each ballot. When the Customer is satisfied that the ballots are correct, they initial each ballot, and when they are satisfied that all ballots, audio and reports are correct, they sign-off on their accuracy, and the image files are provided to the printer.

Ballot printing and distribution are the responsibility of the certified printer and the Customer. Dominion will provide a recommended ballot inspection process

that should be followed to ensure that all ballots produced are of sufficient quality. The receipt of test ballots from the certified ballot printer is the milestone that triggers the beginning of Pre-Election Logic and Accuracy Testing ("Pre-LAT"), a simulation of the voting process under which the System will operate.

The Dominion project team will be available to supervise during the Pre-LAT process and available to assist on an as required basis. The voting equipment must be set up and operational by Customer staff. Dominion support staff will oversee the process with Election Officials. It is the responsibility of Customer staff to conduct Logic & Accuracy testing on all vote tabulator equipment that will be used in the election.

Election files are transferred from the EMS to removable memory devices, which are created for each ICX ballot marking device, ICP tabulator and the ICC system. After loading the election files onto the units, Pre-LAT must be performed on all System components before deployment.

Pre-LAT is performed on the ImageCast X-BMD, ImageCast Precinct and ImageCast Central tabulators through the use of ballot test decks. The Customer has purchased a license to the Dominion Automated Test Deck software, which will create test packs for running Pre-LAT with optional marking pattern requirements. The application can be used to access the election database and produce a set of print-ready PDFs and results tables for testing. This provides verification of both the quality of the printed ballots as well as the correctness of each tabulator's programming. After test decks have been scanned and the results report tapes have been verified, test results may be uploaded directly to the EMS Server using EMS Results Tally and Reporting. This results transfer test verifies that all parameters for each tabulator have been correctly configured.

Dominion's responsibility will be to manage and oversee the installation of the production database on the production servers; to manage and oversee the creation of election file data (both for early vote and for in-precinct); to manage and oversee the copying of the vote election file data from the servers onto properly-formatted election cartridges; and to generally ensure the smooth and efficient conduct of the PreLAT support. Dominion shall provide the assistance necessary to assist and enable the Customer to conduct the Pre-LAT regimen including, but not limited to, vote simulations, results, and vote total reconciliation.

Customer officials will conduct Pre-LAT, using processes, procedures, and support provided by Dominion. The Dominion project team will be available throughout the Pre-LAT process available to assist.

Dominion shall also assist the Customer in developing equipment delivery and retrieval strategies, and the dry run testing of the EMS system, and associated voting equipment, high-speed ballot processing and network redundancy.



The skill level of Dominion's support shall include, at a minimum:

<u>Functional Area</u>	<u>Support</u>	<u>Estimated Commitment</u>
EED Database Production (Offsite)	1 Senior DBA	3 weeks
EED Database Quality Assurance (Offsite)	1 QA Leader	2 weeks
EED Database Quality Assurance (Offsite)	1 QA Resource	2 weeks
EED Database Quality Assurance Proofing (Offsite)	1 Temp	1 week
EED Restore and Pre-LAT Support	1 Senior DBA	5 weeks

These support commitment levels are an estimate of the minimum time required for Dominion to meet its obligations under this Agreement and are based upon prior Customer Election experiences.

#### **8.4 Election Week**

A Dominion technician will be onsite for the November 2019 Election and the 2020 elections to provide direct support during Election week (Monday – Thursday of the week of the election). The Dominion technician will also provide technical assistance with election management using EMS server, including:

- Assist in tabulation of election results
- Assist with transfer of results for outside reporting
- Assist with canvass of results
- Assist in creation of special reports

For each Election, Dominion shall facilitate necessary consultations with appropriately skilled Dominion personnel about issues that arise concerning the election equipment or software. Such consultation shall include field technicians with the skill, equipment and transportation necessary to respond to problems at polling places or Remote Distribution Centers.

The skill level of Dominion's support shall include, at a minimum:

<b>Implementation Phases – Onsite Support</b>		
<u>Functional Area</u>	<u>Support</u>	<u>Days Prior to and Including Election</u>
RTR Tally Support	1 Senior DBA	3 Days
RTR Tally Support/Report Generation Support	1 Jr. RTR	3 Days
Call Center Help Desk Support	2 Technicians	3 Days
Warehouse Field Support	3 Technicians	3 Days
Warehouse Admin Support	5 Technicians	3 Days
Warehouse Technical Support	1 Technician	3 Days
ICC Technical Support	1 Senior Technician	2 Days

These support commitment levels are an estimate of the minimum time required for Dominion to meet its obligations under this Agreement and are based upon prior Customer Election experiences. Dominion will provide the resources necessary to complete the tasks necessary for a successful election.

#### 8.4.1 Election Day

The objective of the Election Day services is for Dominion to assist the Customer with monitoring the Election Day deployment.

Dominion shall, on the day of each Election, provide sufficient and appropriate on-site and other support personnel and services for the Customer's Administrative headquarters, Call Center and Remote Distribution Centers. Dominion shall also provide the support necessary to assist and enable Customer to collect, tally, and report election results.

Dominion provides dedicated on-site technical support representative for the Customer's Election Day, located at the Customer's central location. Dominion's support will be available to support the Customer from one hour before poll openings until the election results are completed for the night. Dominion's on-site support representative is responsible for providing technical support related to the Customer's tabulator and accessibility components. Dominion's on-site support will be equipped with a vehicle and a mobile phone ensuring that they are accessible to all election officials.

The Dominion project team will reach an agreement with Customer officials on their specific roles during Early Voting and Election Night. This decision will be informed by the Customer internal support plans, as Dominion staff should be available to provide additional support for issues that cannot be addressed through existing channels.

#### 8.4.2 Election Night

On Election Night, Customer Officials will close polls and produce results tapes for Election Day. Customer workers will be instructed to follow the Customer Manual for closing poll procedures. Once Polls are closed.

Results are tabulated in the RTR software module. A Dominion representative will remain on-site to assist the Customer in the creation of results reports. Once final reports have been generated using RTR, the Dominion representative on-site will create a backup of the Election Event Project. A backup of the Election Event Database, including the tallied results from election night, is created and stored in a separate, secure, and Customer specified location. This is done as a safety precaution; the backup can be used to restore the Election Event Database, with the tallied results, if necessary.

#### 8.4.2.1 Results, Tally and Reporting:

Dominion's ICX, ICP & ICC system shall use the same results, tally and reporting system, meaning one election database for the entire system.

The Results Tally and Reporting module enables election officials to use election data and report in styles and formats required by the Secretary of State.

The Results Tally and Reporting module of the EMS shall provide reports with customizable queries, including the reporting of partial election returns throughout Election night, final unofficial election returns, and Canvass reports.

The EMS system supports multiple reports formats for export including Excel, PDF, JSON and xml. Results Tally & Reporting features a one-click .csv export that can be transferred to the Secretary of State for reporting. The CVR (Cast Vote Record) report is exported using JSON format. This report includes the original and adjudicated records for each mark, for every ballot in the election. In addition, the system is capable of providing cast vote record data to support the Customer's "vote for N" post-election external reporting requirements.

#### 8.4.3 Post-Election

Dominion shall, following each Election, provide to the Customer sufficient and appropriate on-site support necessary for Customer to complete the official canvass and ballot reconciliation, report preparation and final certification.

8.4.3.1 Dominion will assist the Customer in creating procedures for the conduct of the canvass and any necessary audits and recounts. The system shall provide canvass reports including, but not limited to Interim, Semi-Final Official, Final Official, and the Statement of Vote reports.

8.4.3.2 Recount. The system must be able to provide for a manual recount process that would utilize either the physical ballot or ballot image with AuditMark<sup>®2</sup>, Cast Vote Record and EMS statement of votes report. Dominion will assist the Customer in creating procedures for a recount.

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<sup>2</sup> AuditMark<sup>®</sup> is a registered trademark of Dominion Voting Systems Inc.

8.4.3.3 Post-Election Certification. For each Election, Dominion shall provide support to assist and enable Customer personnel to successfully complete the state mandated election results certification.

## **9. Communication and Escalation**

### **9.1 Personnel Availability and Support**

Dominion shall provide the qualified and competent personnel and the hours required by this Agreement in each of the following areas to assist and enable Customer's personnel to successfully complete each Election. The support staff requirements set forth in this agreement and are in addition to the Dominion PM and the Product Specialist. The term "assist and enable," when used in this Agreement, shall mean that Dominion shall impart the requisite information, knowledge and technique necessary for reasonably competent individuals to accomplish the objectives described in the given Special Conditions.

Dominion staff listed shall be available during the following periods of time during the term of this Agreement.

Standard Business Operations	9:30 A.M. to 4:30 P.M. Eastern time, Monday through Friday
15 to 60 days prior to each Election	8:00 A.M. to 6:00 P.M. Eastern time, Monday through Saturday
1 to 14 days prior to and 1 to 21 days following each Election	8:00 A.M. to 8:00 P.M. Eastern time, seven days a week
On each Election.	24 hours per day

### **9.2 Response Time**

During Phase I, the Dominion PM is on-site and available to provide an immediate response to general project related inquiries. For technical matters, the following section represents the response times to be expected.

On each Election and for the 24-hour period immediately preceding each Election and for the 48-hour period immediately following each Election, Dominion shall provide response within thirty (30) minutes of written notice, support personnel on-site in the Customer's office to provide assistance and advice on the use or maintenance of the System.

### **9.3 Help Desk Support**

Timeframe availability: Help Desk support is available during regular business hours (Mon-Fri, 8 am – 5 pm) and 6 am – midnight on Election Day. In addition, support personnel have company cell phones for after-hours support.



Dominion uses an automated ticket-tracking system. The target resolution time serves as a trigger point for escalation of the problem. The following table characterizes types, severity, and response times.

<b>Response &amp; Resolution Time SLAs</b>				
<b>Phase</b>	<b>Initial Response</b>	<b>Estimation Response</b>	<b>Subsequent Responses</b>	<b>Target Resolution Time</b>
<b>Election Day</b>	<b>Immediate</b>	<b>60 Minutes</b>	<b>30 Minutes</b>	<b>1 Hour</b>
Ballot Programming	4	6 Hours	Every 6 Hours	Hours
Pre-Election Day Period	6 Hours	8 Hours	Each Business Day	1 Business Days
Early Voting Period	1 hour	2 hours	1 hour	4 Hours
Non-Election Period (greater than 45 days prior to election)	Next Business Day	Next Business Day	As Agreed	As Agreed

#### **9.4 Tiered Election Day Escalation Procedures**

On Election Day, Dominion's support is divided into 3 Tier groups.

Tier 1 is Customer's Call Center. Customer's Call Center will respond to all poll worker inquires and concerns. Customer's Call Center staff will be trained, experienced and well equipped to handle all types of supports calls. Issues that are not able to be resolved by Tier 1 are escalated to Tier 2.

Tier 2 is Dominion On-Site Support. Dominion's on-site support will resolve all calls that are escalated to them by Customer's Call Center Staff. If Tier 2 cannot resolve the issue over the phone, a Field Serve Representative will be sent to the polling location to further inquire and/or issue a replacement of the equipment. Issues that are not able to be resolved by Tier 2, are escalated to Tier 3.

Tier 3 is Dominion's Field Service Representatives (FSRs). Dominion's FSR are contacted by Tier 2 if a polling location requires an onsite visit. This can mean a replacement of a tabulator. It is the responsibility of Tier 2 to coordinate any onsite support required by a polling location. All Dominion FSRs are trained on the Dominion Hardware to supervise and support the polling locations assigned to their region. Dominion FSRs will oversee and assist tabulator operators run polls effectively from polls open to polls close. This includes, responding to calls and deploying solutions instructed by Dominion's on-site support.

It is the responsibility of Customer to handle all poll worker calls. If Customer Staff is not able to provide the required support to Poll Workers, it is the responsibility of the Customer Staff to contact Dominion's on-site support.

During the course of implementing the Tabulator Solution, Dominion's Project Team works closely with Customer, to establish clear and timely information flow. This communication helps reduce the number of problems, and supports early identification of issues that require resolution through the Problem Escalation Procedure (PEP).

## **9.5 Problem Escalation Procedures**

- 9.5.1 Problem Identification – Customer identifies a problem, or Dominion proactively identifies a Dominion problem.
- 9.5.2 Problem Analysis – The Dominion PM will describe, document, and log the problem in Dominion's automated ticket tracking system. The Dominion Vendor Delivery Manager will notify appropriate Customer/Dominion staff of the severity and risk of the problem.
- 9.5.3 Problem Mitigation Plan (PMP) –The Dominion PM will lead a team to identify the root cause of a problem, determine mitigation approach, and identify the management point of contact for approval of the PMP.
- 9.5.4 Mitigation Execution – The Project Team will execute the approved PMP and track resolution. The Dominion PM will monitor the problem on a daily or weekly basis during mitigation execution.
- 9.5.5 Problem Escalation Process – The Dominion PM will escalate a problem, based on exceeding the resolution target time, or at the Dominion PM's discretion. Since problems do not always occur during normal business hours, key stakeholders will be provided with emergency contact information, which will allow our team to be reached outside of business hours (e.g. evenings, weekends, holidays, etc.), and on an emergency basis. Customer shall have authority to directly contact the Contractor's executive sponsor as part of the escalation process.
- 9.5.6 Problem Close-out – The Dominion PM will document problem, resolution, and lessons learned. The Dominion PM will also close out the item in the problem and risk logs when resolution confirmed by the Customer.

## **9.6 Multiple Contact Method**

### **9.6.1 Scheduled Project Updates (In-Person Meetings)**

The Dominion PM will be dedicated to the Customer's account and be available for on-going interaction with the Customer's Project Manager. The Dominion PM will meet with Customer on a regular basis, to review the project implementation status, any concerns, and escalation points. In these meetings, Dominion's project team and the Dominion PM will

provide a full update on the project status, to the Customer's Project Manager and Project Team. In addition to scheduled meetings, the Dominion PM and Project Team will be available for any ad hoc meetings that shall be required to co-ordinate specific activities and address concerns. Dominion PM will be available and committed to participate in all regular meetings with Customer concerning this Agreement. The Dominion PM will be responsible for responding to and managing the resolution of issues raised Customer in a timely manner.

#### 9.6.2 Telephone/Email

Customer will have direct contact with Dominion PM and Customer Relations Manager through the life of the project. Customer Staff will be provided with Dominion's key team members' email address and telephone numbers to ensure inquiries are addressed in a timely manner. The Customer Relations Manager will schedule regular calls and/or meetings can be scheduled by the Project to facilitate Task Communication with Customer.

### 9.7 Tracking and Reporting – Warranty Procedures

Dominion utilizes its Customer Relations Management System (CRMS) to oversee repair and maintenance issues. This is the same ticket tracking system that is used for problem escalation. The CRMS tracks a service request from the initial point of contact to issue resolution. It provides Dominion with a management control tool as well as a status/historical reporting capability. The CRMS will also be used to retain/reference repair orders and all other documents reflecting any work performed on any voting system component. Once a call/email is received, a work ticket is created and the initiating party will be contacted by a member of the service team. Initial contact will be established after notification. At that time, additional troubleshooting instructions may be provided to help the service team respond to the failure or defect. If the defect or failure cannot be addressed in this manner, a service representative will make the arrangements for resolution.

Dominion utilizes a variety of extensive forecasting activities, product road mapping and the stocking of required inventory to ensure the availability of commercially available hardware items. Dominion maintains warehouses in San Leandro, CA, Jamestown, NY and McKinney, Texas, with an inventory of all parts and supplies, and can respond quickly should a need arise. These long term supply models are developed through a number of different techniques which include, but are not limited to:

- The purchasing and monitoring of safety stock inventories to permit fast response to customer requests on active material. Forecasts based on

historical and projected fallout rates are developed for each potential replacement part to determine the appropriate inventory stocking level.

- Last time buys for end of life material stocking are generated by analyzing historical fallout rates to determine appropriate purchase levels through the life of the product as well as appropriate succession planning for next generation material.
- Quarterly business reviews are held with strategic partners which includes the manufacturers of ImageCast third-party components (printers, scanners, displays, laptop, servers, etc.). This strategic alliance ensures a seamless supply chain transition as products develop from generation to generation.
- Detailed product road mapping activities are reviewed on a monthly basis both internally and externally to assess lines of supply. These activities ensure that Dominion has proactive transition plans which include:
  - access to new and developing product to permit early testing and succession planning as well as backward compatibility
  - advanced buying opportunities for new product or end of life material to ensure component availability
  - development and training of Dominion personnel for repair activity which includes analysis of component stocking levels for replacement inventory
  - implementation of Dominion quality standards at OEM sites in advance of product supply to ensure quality standards are met.
  - consistent and methodical review of supply lines for each product.

## **10. Dominion Hardware Warranty Services**

**10.1 Warranty, Repair Services and Parts.** Warranty and repair parts shall be new. Dominion will track and retain documentation on maintenance and repair activities, and will coordinate all repair and maintenance actions with the appropriate staff at Customer. The Customer will be given paperwork stating completion of work performed and status of the Voting System. In order to achieve the best possible level of service for our customers, Dominion addresses warranty, repair, and maintenance in a comprehensive and effective manner as characterized by the following:

- Engineering – Key components are designed with redundancy.
- Readiness – Dominion’s technicians are well trained, experienced, and have spare systems available to ensure required timelines can be met.
- Tracking and Reporting – Dominion will utilize an automated ticket tracking system to manage repair and maintenance tickets. This is the same ticket tracking system that is used for problem escalation.

**10.1.1 Third-Party Products.** The warranties herein do not apply to any Third-Party Products. However, to the extent permitted by the manufacturers of Third-Party Products, Licensor shall pass through to Licensee all warranties such manufacturers make to Licensor regarding the operation of such Third-Party Products.



10.1.2 Dominion Hardware Warranty Terms. Dominion warrants that when used with the hardware and software configuration purchased through or approved by Dominion, each component of Dominion Hardware will be free of defects that would prevent the Dominion Hardware from operating in conformity in all material respects with its Specifications. The Dominion Hardware Warranty shall remain in effect during the term of the Agreement or any extension thereof.

10.1.3 Dominion Hardware Warranty Services. If any Dominion Hardware component fails to operate in conformity with its specifications during the warranty period, Dominion shall provide a replacement for the Dominion Hardware component or, at Dominion's sole option, shall repair the Dominion Hardware component, so long as the Dominion Hardware is operated with its designated Dominion Software and with third party products approved by Dominion for use with the Dominion Hardware. The following conditions apply to the Dominion Hardware warranty services:

- i. Dominion shall bear the costs for shipping the repaired or replaced Dominion Hardware components or parts to the Customer.
- ii. The following services are not covered by this Agreement, but may be available at Dominion's then current pricing.
  - a. Replacement of consumable items including but not limited to batteries, paper rolls, ribbons, seals, smart cards, and removable memory devices, Canon scanner rollers, disks, etc.;
  - b. Repair or replacement of Dominion Hardware damaged by accident, disaster, theft, vandalism, neglect, abuse, or any improper use;
  - c. Repair or replacement of Dominion Hardware modified by any person other than those authorized in writing by Dominion;
  - d. Repair or replacement of Dominion Hardware from which the serial numbers have been removed, defaced or changed.

10.1.4 No Other Warranties. DOMINION DISCLAIMS ALL OTHER WARRANTIES, AND REPRESENTATIONS, WHETHER WRITTEN, ORAL, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY BASED ON A COURSE OF DEALING, COURSE OF PERFORMANCE OR USAGE OF TRADE.

## **10.2 Maintenance Log.**

Dominion shall maintain a maintenance and repair log for each incident Dominion received written notice from Customer of the repair of an item of Dominion Hardware, the date, time, and duration of all maintenance work performed on Dominion Hardware by Dominion, and a description of the cause for the work, either by description of the error, defect or malfunction or as regular maintenance and diagnostic reports of correction, adjustments, or updates. This log shall be maintained and provided to authorized Customer personnel upon request. In addition, the information in the log shall be aggregated into a management report which shall be provided on a monthly basis to the Customer.

## **10.3 Responsibilities of the Customer**

- 10.3.1 The Customer shall notify Dominion by notice to the Dominion PM immediately following the discovery of any error, defect or nonconformity in the Dominion Software.
- 10.3.2 The Customer, upon detection of a reported error, defect or nonconformity in the Dominion Software, shall, if requested to do so by the Dominion, promptly submit to the Dominion such data which Dominion reasonably requests in order for Dominion to reproduce operating conditions similar to those present when the error occurred, or the defect or nonconformity was discovered.
- 10.3.3 The Customer shall promptly provide written notice to the Dominion PM of any material Dominion Hardware failure, by unit serial number and component, and thereafter allow Dominion full and free, yet appropriately supervised, access, at a time mutually agreeable to Dominion and the Customer, to said Dominion Hardware (and other necessary election data and election-related materials) required to repair the Dominion Hardware back to working condition. Customer will allow Dominion to use such machines, communications facilities, and other Dominion Hardware (except as normally supplied by Dominion), consistent with the Customer's normal business practices and within Customer security policies, at no charge, which, in the reasonable opinions of the Customer and Dominion, are necessary in order to enable Dominion to perform the Dominion Hardware and Dominion Software services required pursuant to this Agreement. Except in an emergency, the Customer's representative(s) shall be on the premises during Dominion's performance of Dominion Hardware and Dominion Software services.

**Schedule A**

Escrow Terms

SAMPLE

## Schedule B

### Product Descriptions and System Pricing

#### 1. Democracy Suite (EMS) Software description

Democracy Suite is an Election Management System (EMS) that supports all ImageCast voting channels: early votes, vote by mail votes, Election Day votes from touchscreen ballot marking devices (TSBMD) and Scanner, and Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) votes, from a single comprehensive database.

The Democracy Suite EMS will be hosted exclusively on the Customer's internal network, on an isolated network segment that will not be connected to either the Customer WAN or the Internet. The minimum system requirements are as follows and included in equipment specified to be purchased by Customer:

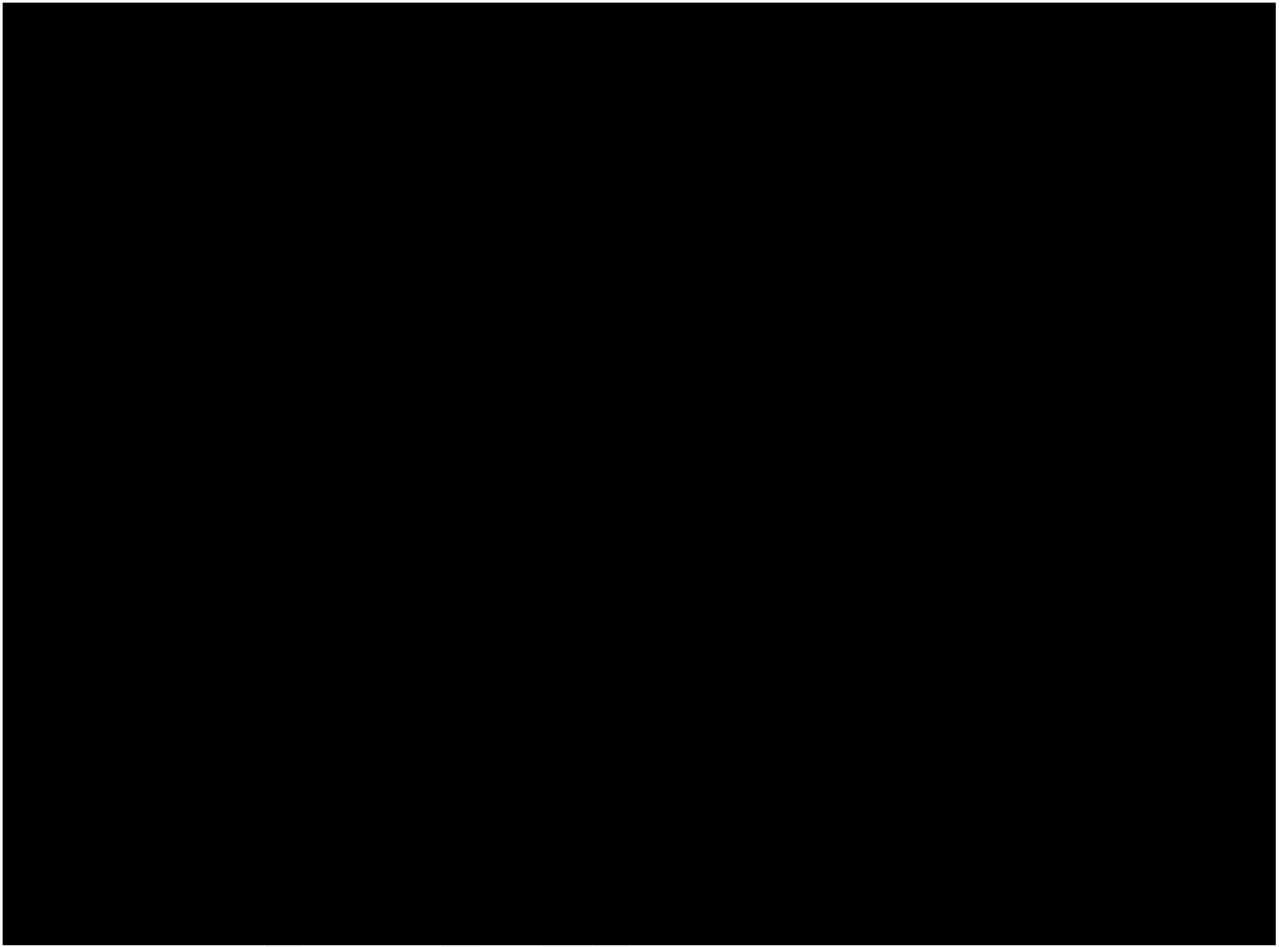
- All EMS Data Center server components utilize new generation quad core XEON CPUs
- EMS Data Center server components utilize FB DIMM ECC memory
- EMS Data Center servers are connected to the Gigabit LAN network using Cat6 cables provided by Dominion
- TCP/IP network protocol used for data input/output and inter-process and inter-module communication

From a logical point of view, the EMS system implements interfaces into the ImageCast ballot counting and marking platform using the binary election files specifications. These logical interfacing entities are defined by Dominion and are used for communications between Democracy Suite platform components.

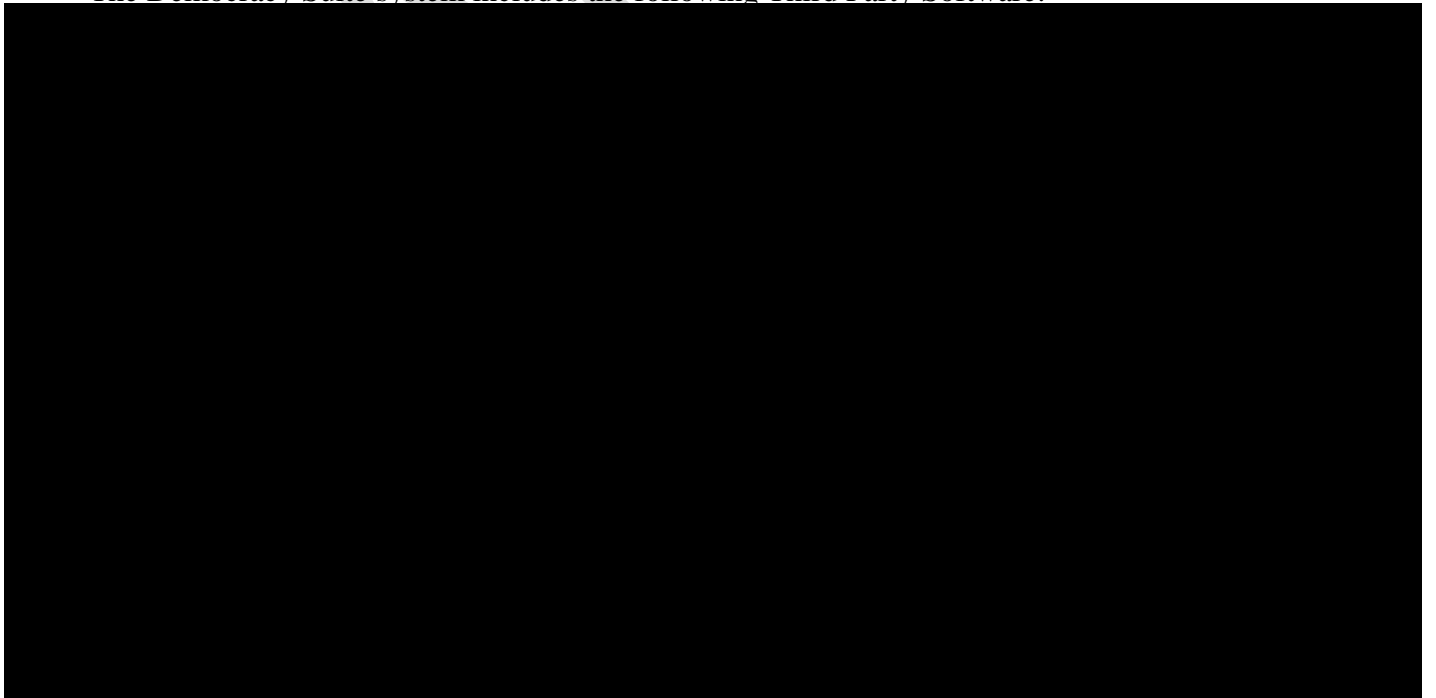
The structure of the election files, as well as the content of the iButton security keys, is bit-level sensitive with regards to accuracy and precision. This means that a single bit change can influence system behavior. The structure of these interfacing entities is dependent on the election domain business logic implemented within the system. Therefore, within the EMS EED application, election files and iButton security keys can only be created when the election project is in the "ballot generated" state.

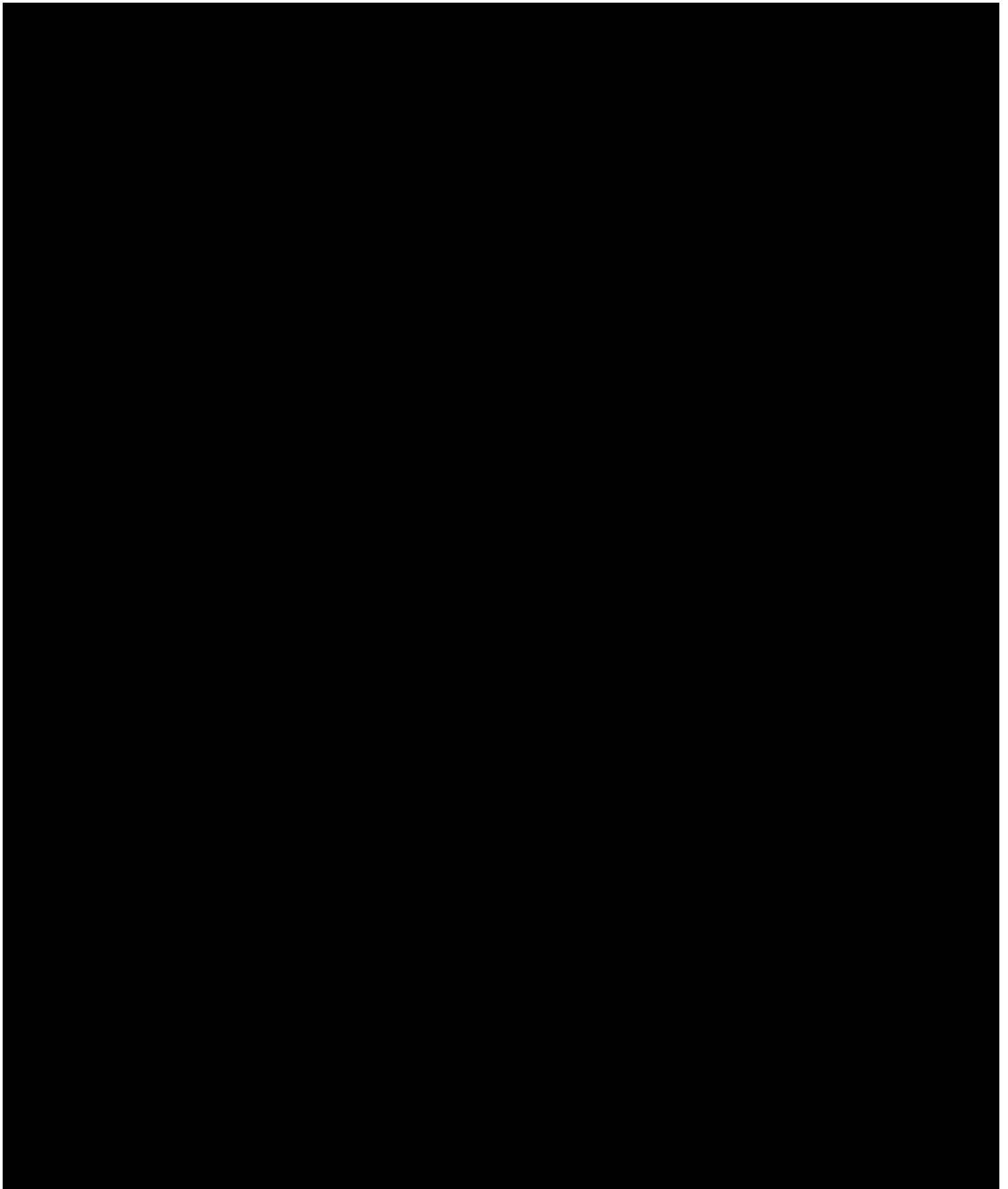
From an accuracy point of view, CRC checks are implemented. From a security point of view, election files utilize [REDACTED]





The Democracy Suite system includes the following Third Party Software:





The Democracy Suite EMS consists of the following Dominion Software modules:

1.1 Election Event Designer (EED). EED application is used for the definition and management of election event. EED contains all ballot content utilized to define election projects. Each election project is represented as an instance of the election domain database with associated set of election project file. The definition of the election project can be initiated by importing the election data through the Election Data Translator (EDT) module from external systems that contain the necessary relational data to build a ballot or by defining election project entities without importing external data. It is important to note that an election project initiated through EDT can be further modified within the EED Client Application. The EED module can generate two types of paper ballots:

- Proofing ballots – ballots produced to allow election project stakeholders to proof ballot content and styling. These ballots cannot be processed by the ImageCast as they don't have proper ballot barcodes. These ballots are overprinted with the text "Proofing Ballots – date/time"
- Official ballots – represent production ready, press ready ballots in PDF format with barcodes and without any overprinting.

1.2 Results Tally and Reporting (RTR). RTR application is used for the tally, reporting and publishing of election results. For the RTR module, inputs represent encrypted and signed election result files, log files and scanned ballot images with Dominion's patented AuditMark, produced by the ImageCast Precinct and Central tabulators (PNG and TIFF images). Outputs represent a variety of election result reports, as well as auditing information (XML, HTML, CSV, MS Excel and PDF formats).

The program uploads the result files into the results tally module, and consolidated results are verified, tabulated, and published. Once the vote data is uploaded into the result tally module, the flow of results to the public and media can be controlled.

RTR allows election officials to review the results before releasing them, and the system provides a number of reporting methods, including but not limited to summary and precinct-level (Statement of Votes Cast) result reports. In addition to the static, pre-defined reports found in most reporting systems, RTR summary and precinct-level reports use the Microsoft SQL Server reporting services engine to offer maximum flexibility to user. These reports feature a variety of configurable options and filters, including detailed breakdowns of provisional ballots cast, ballots cast during early voting, on Election Day, and by mail.

1.3 Adjudication. The adjudication module is used to review and adjudicate ImageCast ballot images. The application uses tabulator results files and scanned images to allow election administrators to electronically adjudicate ballots requiring review based on exception criteria. Exceptions include overvotes,

undervotes, blank contests, blank ballots, write-in selections, and marginal marks. After a ballot is adjudicated, the ballot image is appended with a record of that decision including the user's name, action taken by the user, and date and time of the action. This adjudication AuditMark is appended to the ballot image under the original AuditMark, which was manifested during tabulation.

- 1.4 Audio Studio (AS). Audio studio uses [REDACTED], to automatically generate audio ballots for the ImageCast X Ballot Marking Device. The Customer also has the option to import human-recorded audio, with or without the use of Audio Studio. Pronunciation may be modified using the [REDACTED]er application. The system outputs audio ballots (PNG images, SPX audio files and XML definition files), definition reports (XML, Excel or HTML files), and election definition files required to program the ImageCast X.
- 1.5 Automated Test Deck (ATD). ATD is an application used to create test decks for running Pre-Logic and Accuracy Test with marking pattern requirements. The application can be used to access the election database and produce a set of print-ready PDFs and results tables for testing.

## **2. EMS Hardware description, including third-party software components.<sup>3</sup>**

<sup>3</sup> All equipment is subject to change dependent upon product availability. An equivalent model, certified by the State, may replace products that are end of life.



**3. ImageCast X -Prime Touchscreen Ballot Marking Device (ICX-BMD) - *included in the Dominion Hardware warranty***

- 3.1 Application: ImageCast X-Prime BMD is a touchscreen in-person voting device and ballot marking device. Voting sessions are initiated on the tablet by either a smart card or the entry of a numeric code based on activation. The ballot is loaded directly onto the standalone device. All voting activity is performed at the tablet, including accessible voting. Accessible voting interfaces connect to the tablet via an Audio Tactile Interface or ATI. For all modes of voting, after the voter reviews the ballot selections, a paper ballot is created for the voter from a printer in the voting booth. The printed ballot contains a written summary of the voter's choices, as well as a 2D barcode which is read by Dominion's ImageCast Precinct or Central tabulator. No votes are stored on the ImageCast X-BMD unit. All votes can be tabulated and stored both the ImageCast Central and Precinct Tabulators.
- 3.2 Components: ImageCast X-Prime BMD is composed of a 21.5" Avalue touchscreen, Android OS 4.4.4, DC 19V input, HP LaserJet Pro M402dne laser printer, 6' cable. 5 smart cards, 8GB flash drive, audio tactile interface (ATI) with USD cable and headphone set.

**4. ImageCast Precinct Tabulator (ICP) – *included in the Dominion Hardware warranty***

ImageCast Precinct Scanner and Tabulator is an optical scan ballot tabulator used to scan marked paper ballots, interpret voter marks on the paper ballot, communicate these interpretations back to the voter and upon voter acceptance, deposits the ballot in the ballot box. The ImageCast consists of the following:

- 4.1. Two (2) optical imaging scanners for creating a duplex scanned image of each side of the ballot. Ballots can be fed in all four (4) orientations.
- 4.2. Linux Operating System.
- 4.3. Two SD memory cards ports for storage capabilities. Two (2) 8GB SD memory cards will be provided and located behind two securable doors (Administrator Door and Pollworker Door).
- 4.4. An interactive electronic display in the form of an ultra-high contrast graphical color 5.7" LCD screen, and a built-in touch screen for administration purposes.
- 4.5. An internal 3" thermal printer and one (1) 3" paper roll for generating reports.
- 4.6. One (1) administrative security key (iButton) used with an integrated receptacle (physically attached to the top of the unit and electrically connected to the motherboard) used for a variety of verification and security tasks such control, data confidentiality and integrity functions.
- 4.7. A motorized paper feed mechanism for detecting and moving the ballot within the scanner. Ballots used with the ImageCast must be 8.5" wide by a variable length (11", 14", 17" and 22"). The paper feed mechanism is physically capable of moving

the ballot forward into the machine, across image sensors, enabling complete image capture of both sides of the ballot.

- 4.8. Power supply module uses 120 Vac, 60 Hz, one phase power. It has a power consumption of 0.07 Amps at 120 Volts AC.
- 4.9. An internal battery which is rated to provide six (2.5) hours of normal use in the absence of AC power. In addition to internal 2.5 hours battery an internal 6 hours battery option is also available. There is also a connection for an external 12VDC SLA battery.
- 4.10. Patented functionality known as the AuditMark. For each ballot scanned and accepted into the unit, a corresponding ballot image is created and stored for audit purposes. The image consists of two parts described below.
  - The top portion of the image contains a scanned image of the ballot.
  - The bottom portion consists of a machine-generated text showing each mark that the unit interpreted for that particular ballot. This is referred to as the AuditMark.

**5. ImageCast Molded Plastic Ballot Box - *included in the Dominion Hardware warranty***

A textured molded plastic ballot box per ImageCast Precinct unit. The ballot box is made of a three (3) compartments, custom designed for use with the ImageCast Precinct.

**6. ImageCast Central Scanner (ICC) - *included in the Dominion Hardware warranty***

The ImageCast Central Scanner consists of a commercial off-the-shelf digital scanners configured to work with the ImageCast Central Software for high speed ballot tabulation. Each ImageCast Central Scanner includes the following components:

- 6.1. Canon DR-G1130 high speed document scanner
- 6.2. ImageCast Central Software
- 6.3. DELL AIO 7450 Computer 24" Touchscreen
- 6.4. iButton Security Key
- 6.5. iButton Programmer and iButton Key Switch & Cat5 RJ 45 Cables used with Democracy Suite to transfer security and election information to the iButtons for use with the ICC.
- 6.6. Patented functionality known as the AuditMark. For each ballot scanned and accepted into the unit, a corresponding ballot image is created and stored for audit purposes. The image consists of two parts described below.
  - The top portion of the image contains a scanned image of the ballot.
  - The bottom portion consists of a machine-generated text showing each mark that the unit interpreted for that particular ballot, known as the AuditMark.



7. **Card Activation Reader/Writer for the ICX.** ACR - 39U Smartcard Reader/Writer.
8. **Voting Booths for the ICX.** H: 60 3/4" x W 35" x D 35". Aluminum grade for voting booth frame.
9. **Transportation Bags for the ICX.** ICX Prime nylon storage and carrying case.
10. **System Security Description**

Dominion implements security protocols that meet or exceed EAC VVSG 2005 requirements. All of Dominion's security protocols are designed and implemented to stay current with the rapidly evolving EAC security requirements set forth by various iterations of the VVSG. Dominion's security technology is unprecedented insofar as it takes into account every aspect and every component of the Democracy Suite platform. This includes – but is not limited to – the full encryption of election projects, iButton security keys, memory cards, election data, software applications, and elections results files. In addition, Dominion developed a custom ballot authentication system built around an (optional) secure ballot paper stock and in-tabulator authenticators.

Democracy Suite integrates a role-based access control system for all software and hardware components. Each user accessing the system is the member of one of the predefined or custom-made roles. Each role has its own set of permissions, or actions that users of that role are allowed to perform. This access control approach provides authentication and authorization services and can be granular according to the jurisdiction's needs and organization. Complete user and role membership management is integrated within the Democracy Suite EMS Election Event Designer client module.

The Democracy Suite EMS platform implements role-based user management for provisioning access control mechanisms on each election project. Managing access control policies is integrated within the User Management activity of the EMS EED module. This activity is permitted only for users with administrative privileges.

Democracy Suite utilizes hardware- based security tokens (iButton security keys) in the process of access control for ImageCast Precinct tabulators. These password paired hardware tokens contain data encryption information used in the voting process (encryption and signing keys). Without a valid security token, and paired access password, the administrative functions of election tabulators are effectively locked.

All of these activities and controls, and more described below in response to specific section requirements, are integrated within the Democracy Suite platform. Dominion utilizes authentication and authorization protocols that meet EAC VVSG 2005 standards. In addition, Dominion's solution relies on industry-standard security features to ensure that the correct users based on a user role or group are granted the correct privileges. Finally, each jurisdiction is responsible for ensuring that only authorized personnel have access to both the system and tools used for installation and configuration purposes. All



back end system, and tabulator operations are continuously and completely logged at all times to maintain a complete record of all election-related processes.

#### 10.1 Password configurations

Proper password management relies on multiple activities and controls, namely:

- Input data validation
- Data quality
- Utilization of one-way (hash) cryptography
- Computer generated passwords for greater entropy and protection from dictionary attacks
- Different password strength profiles for different user levels
- Utilization of hardware tokens for storing user credentials (two-level authentication security: something you know and something you have)
- User state machine (initial, active, inactive)

The system does not enforce aging or complexity, but Dominion recommends establishing best practices that meet Customer's requirements.

#### 10.2 Authentication configuration

To protect any modification of software by malicious users, the Democracy Suite Election Management System integrates the Microsoft .NET Framework code signing process, within which, Dominion digitally signs every executable and library (DLL) during the software build procedure. After the installation of Election Management software, only successfully verified EMS software components will be available for use. Digital signature verification is performed by the .NET Framework runtime binaries. If a malicious user tries to replace or modify any EMS executables or library files, the digital signature verification will fail and the user will not be able to start the EMS application.

#### 10.3 Encryption configurations for both data at rest and data in motion

Data generated by the Democracy Suite platform is protected by the deployment of FIPS- approved symmetric AES and asymmetric RSA encryption. The Democracy Suite Election Management System uses these techniques to encrypt election files prior to their use on ImageCast tabulators. Once the polls have been closed, the ImageCast tabulators encrypt all of the results files.

SHA-256 hashes are used for all data integrity and verification. Should an intrusive process or altering of any file occur, hash values will be, in turn, altered as well. With that said, any presence of an intrusive process will be detected, as the hashes of any altered data will not match the value initially determined.

For communication channels (as well as data storage) a combination of security techniques for data integrity, authenticity and confidentiality is implemented.

Democracy Suite integrates AES or RSA encryption algorithms for data confidentiality, along with SHA-256 and HMAC digital signatures for data signing (data authenticity and integrity).

		Mode 1- Symmetric Crypto	
File Type	Storage Place	Confidentiality	Integrity
Election files (ICP) and election database (ICE), DCF (ICP) and MBS (ICE), result files (ICP/ICE)	NAS and Compact Flash	AES-128/256	HMAC (SHA-256)
Reports and Logs	NAS and Compact Flash	AES-128/256	HMAC (SHA-256)
Ballot Images	NAS and Compact Flash	-	HMAC (SHA-256)
Ballot Layout Definition (XML)	NAS and Compact Flash	-	HMAC (SHA-256)
Official Ballots	NAS	X.509 Digital Certificate	
User Credentials	iButton	HMAC (SHA-256)	HMAC (SHA-256)

File Type to Security Algorithmic Mappings

#### 10.4 Logging/Auditing capabilities

From the initial state of the election project, until the deactivation state, the EMS system maintains an activity log within the EMS Database. This activity log contains every action that any of the users have performed within the system and represents a detailed audit log that can be analyzed and printed in the form of an audit report. The audit record information cannot be modified or permanently deleted using the EMS client applications. It can, however, be exported for archiving purposes as part of the record retention policy. Keeping in mind that audit log information can contain a significant amount of information, it is the responsibility of the administrative user to perform regular archiving of the log. During the voting phase of the election event, ImageCast devices also keep an activity audit log which tracks events happening on the device itself. Logs are exportable in text format.

#### 10.5 Physical security

Dominion recommends that Customer continue to implement best practices to secure the Customer's voting system. Dominion's offices across the continent all have 24 hour security, restricted/logged access and are alarmed.

## 10.6 Personnel security

Dominion employees are subject to federal criminal background checks. In addition, state requirements often include additional checks, which Dominion personnel always submit themselves to, in accordance with the law.

## 10.7 Secure Development Process

All products in the Democracy Suite platform follow best software development practices, including additional source code quality and security procedures. All software programs satisfy recommended coding standards, as well as code styling guidelines as required by EAC VVSG standards. Automated code review processes are in place, that verifies compliance with industry accepted coding standards for programming languages used. In addition, proper system and software hardening procedures are clearly defined and regularly tested. Testing is performed on the lower source code level using code analysis tools, and on the system level using Nessus vulnerability testing tool. Data integrity and confidentiality is also implemented according to NIST defined and FIPS validate procedures and algorithms.

## Schedule C

### Draft Implementation Schedule

ID	Task Name	Duration
<b>1</b>	<b>Project Initiation</b>	
2	Kick-off Meeting Schedule	1 day
<b>3</b>	<b>Project Management Artifacts</b>	<b>41 days</b>
4	Develop Project Charter	7 days
5	Review Project Statement of Work	7 days
6	Project Plan Updates	7 days
7	Issue Tracking & Escalation Plan Review	2 days
8	Risk Mitigation Plan Review	2 days
9	Communication Plan Review	2 days
10	Conflict Resolution Plan Review	2 days
11	Customer Warehouse Environment Review	1 day
<b>12</b>	<b>Schedule Project Review Meetings</b>	<b>1 day</b>
13	Project Meeting - Set up bi-weekly meetings	1 day
14	Executive Reviews - Set up monthly meetings	1 day
<b>15</b>	<b>Other Project Initiation &amp; Planning Deliverables</b>	<b>30 days</b>
16	Training Plan Creation	5 days
17	Development and finalization of test plans	1 day
18	Finalize Test to Production Plan	10 days
19	System Architectural and Technical Specifications Review	10 days
<b>20</b>	<b>Gap Analysis &amp; Application Configuration</b>	<b>31 days</b>
21	Review existing environment and requirements	2 days
22	Propose Application Configuration plan	14 days
23	Review configuration/customization	1 day
24	Configuration plan implementation	14 days
<b>25</b>	<b>System Documentation</b>	<b>17 days</b>
26	Update and finalize system administrative documentation	15 days
27	Update and finalize user documentation	15 days
28	Create Acceptance Test checklist and procedure	2 days
<b>29</b>	<b>Voter Outreach Sessions</b>	<b>383 days</b>
30	Voter Outreach Quarter 1 sessions scheduled	1 day
31	Voter Outreach Quarter 2 sessions scheduled	1 day
32	Voter Outreach Quarter 3 sessions scheduled	1 day
<b>33</b>	<b>Hardware Procurement and Printer Certification</b>	<b>30 days</b>
34	Election Management System (EMS) Hardware Order	30 days
35	EMS servers	30 days
36	EMS workstations	30 days
37	Adjudication workstations	30 days
38	Accessories (keyboards, monitors, etc.)	30 days
39	ImageCast X (ICX) In-Person Voting Terminal Orders	30 days

ID	Task Name	Duration
40	ICX BMD Prime terminals and printers - EV	30 days
41	ICX BMD Prime terminals and printers - Training	30 days
42	ICX Accessible Voting Peripherals (ATI, cables)	30 days
43	<b>ImageCast Precinct 2 (ICP2) Vote Tabulator Orders</b>	<b>30 days</b>
44	ICP2 vote tabulator order	30 days
45	ICP voting booth	30 days
46	<b>ImageCast Central (ICC) Hardware Order</b>	<b>30 days</b>
47	Canon G1130	30 days
48	Dell all-in-one PC	30 days
49	ICC Accessories (iButtons, iButton programmer, etc.)	30 days
50	ImageCast Central Adjudication Order	30 days
51	<b>Consumables</b>	<b>30 days</b>
52	Seals, Ballot Pens, CF card labels, ICC rollers, Other Supplies and Consumables	30 days
53	<b>Ballot Printer Certification</b>	<b>30 days</b>
54	Prequalification of Ballot Printer	10 days
55	Ballot Printer Certification	10 days
56	Ballot Printer Quality Assurance Training	10 days
57	<b>System Installation and Configuration</b>	<b>45 days</b>
58	<b>Delivery of Voting Equipment to Customer</b>	<b>15 days</b>
59	EMS Server Received	15 days
60	ImageCast X (ICX) Tabulator Hardware Received	15 days
61	ImageCast Central (ICC) Hardware Received	15 days
62	ImageCast Precinct 2 (ICP) Tabulator Hardware Received	15 days
63	Accessible Voting Solution Hardware Received	15 days
64	Consumables Delivery Received	15 days
65	<b>EMS Server &amp; Workstation Installation &amp; Acceptance</b>	<b>5 days</b>
66	Configure and Install EMS Server	5 days
67	Complete EMS Acceptance Test	5 days
68	EMS Acceptance & Workstation Sign-off	1 day
69	<b>ImageCast X BMD Prime (ICX) In-Person Voting Terminals Acceptance Testing</b>	<b>10 days</b>
70	ICX Setup	10 days
71	Complete ICX Acceptance Testing	10 days
72	ImageCast X Acceptance Sign-Off	1 day
73	<b>Accessible Voting Solution Acceptance</b>	<b>10 days</b>
74	Acceptance Voting Setup	10 days
75	Accessible Voting Acceptance Testing Complete	10 days
76	Accessible Voting Solution Sign-off	1 day
77	<b>ImageCast Precinct (ICP) Vote Tabulator Acceptance Testing</b>	<b>10 days</b>
78	Complete ICP Acceptance Testing	10 days
79	ImageCast Precinct Acceptance Sign-Off	1 day
80	<b>ImageCast Central (ICC) Installation for Absentee Ballots</b>	<b>5 days</b>



ID	Task Name	Duration
81	ICC and Adjudication Terminal Setup	5 days
82	ICC and Adjudication Acceptance Testing Complete	5 days
83	ICC & Adjudication Terminal Acceptance Sign-off	1 day
84	<b>Documentation and Training</b>	<b>58 days</b>
85	Documentation	1 day
86	Delivery of User Guides, Manuals, QRGs & L&A Checklist	1 day
87	Election Management System (EMS)	1 day
88	ImageCast X BMD Prime (ICX)	1 day
89	ImageCast Central (ICC)	1 day
90	ImageCast Precinct 2 (ICP2)	1 day
91	Accessible Voting Solution	1 day
92	<b>Equipment Hardware Operational Training</b>	<b>23 days</b>
93	Finalize training materials and presentations	7 days
94	ImageCast X BMD Prime (ICX) Operator Training	1 day
95	ImageCast Precinct (ICP) Operator Training (2 Sessions)	1 day
96	ImageCast Central/Adjudication Training	1 day
97	Equipment Maintenance Training	1 day
98	Staff training (setting up vote centers)	3 days
99	Election Management System (EMS) Software Training	3 days
100	Results Tally & Reporting (RTR) Training	1 day
101	<b>2019 Election Project Creation and Election Event Milestones</b>	<b>383 days</b>
102	<b>November 2019 General Election</b>	<b>383 days</b>
103	Certification of Ballot – candidate names, referenda	0 days
104	Last day for the Customer to certify candidates	0 days
105	Last day to file a Declaration of Intent to be a write-in	0 days
106	<b>Ballot Programming</b>	<b>30 days</b>
107	<b>Preliminary Election Database Configuration</b>	<b>30 days</b>
108	Submit Election Database Form to Customer	30 days
109	Customer Completes Election Database Form	30 days
110	Review Ballot for Content (excluding candidate names), Layout and Design	30 days
111	Deliver Feedback on Draft Ballot Layout and Design to Dominion	30 days
112	Customer approves ballots	30 days
113	Test deck generated	30 days
114	<b>Audio</b>	<b>353 days</b>
115	Record Audio & Proofing	5 days
116	Re-records / edits	2 days
117	Touch Screen Proofing (w/Audio)	2 days
118	Final Proof and Sign Off	1 day
119	<b>Cartridge Creation</b>	<b>10 days</b>
120	Create/ Vote Sim	2 days
121	Create/ Test E2P Precinct	2 days

ID	Task Name	Duration
122	Create Official Precinct	4 days
123	Ballot Printing	15 days
124	Logic & Accuracy Testing	31 days
125	Mini Pre-Lat	1 day
126	Create test setup	1 day
127	Install most recent election software version	1 day
128	Assign Machines	1 day
129	Complete Test Plan	1 day
130	Sign off on database	1 day
131	Precinct Pre-Lat	19 days
132	Dominion Technical Oversight Support During Logic & Accuracy Testing (if required)	14 days
133	Conduct Logic & Accuracy Test	14 days
134	Logic & Accuracy Signoff of Successful Completion	1 day
135	Voting Equipment Deployed for Election Readiness	5 days
136	Election Week	12 days
137	Provide Election Day On-Site & Call Center Support	1 day
138	ICC Absentee Ballot Support	3 days
139	Reports, SOV and Audit	10 days
140	Post Election	23 days
141	Pre-Certification	6 days
142	Post Election Debrief	23 days
143	Review Key Findings with Customer	23 days
144	Update Best Practices Based on Lessons Learned	23 days
145	Signoff on Successful Election Project	23 days

**Schedule D**  
**Schedule of Compensation**

ID	Payment Invoice Event (with date estimates <sup>4</sup> )	Payment Amount
1	<p>Project Management, Project Initiation, Training &amp; Documentation</p> <ul style="list-style-type: none"> <li>• Project Kickoff (3/13/19) (See SOW “Project Management and Implementation Priorities”)</li> <li>• System &amp; Application Configuration: (3/13/19) (See SOW “Requirements Gathering, Gap Analysis &amp; Application Configuration”)</li> </ul> <p>Invoice Date: 3/13/19</p>	
2	<p>Delivery of EMS and Central Count Equipment. Due upon acceptance:</p> <ul style="list-style-type: none"> <li>• Training Plan &amp; Documentation Creation (4/15/19) (“Project Management and Implementation Priorities” and “Training”)</li> <li>• ImageCast Central – Qty: [TBD] (4/18/19) (See SOW “ImageCast Central”)</li> <li>• Server Environment: EMS Application, workstations and Servers (4/18/19) (See SOW Sections “Election Event Designer” and “Results Tally and Reporting”)</li> </ul> <p>Invoice Date: (4/18/19)</p>	
3	<p>Delivery of Precinct Equipment. Due upon acceptance:</p> <ul style="list-style-type: none"> <li>• ImageCast X with BMD Printer – Qty: 5000 (5/24/19) (See SOW Section “ImageCast X”)</li> <li>• ImageCast X Audio Tactile Interface – Qty: 5000 (5/24/19) (See SOW Section “ImageCast X”)</li> <li>• ImageCast X Card Activation Reader/Writer – Qty: 5000 (5/24/19) (See SOW Section “ImageCast X”)</li> <li>• ImageCast X Transportation Bags – Qty: 5000 (6/10/19) (See SOW Section “ImageCast X”)</li> </ul> <p>Invoice Date: 5/24/19</p>	
4	<p>Final Canvas November 2019 (11/27/19) (See SOW Section “Post-Election Debrief Meeting”)</p> <p>Invoice Date: 11/27/19</p>	
	<i>Subtotal</i>	

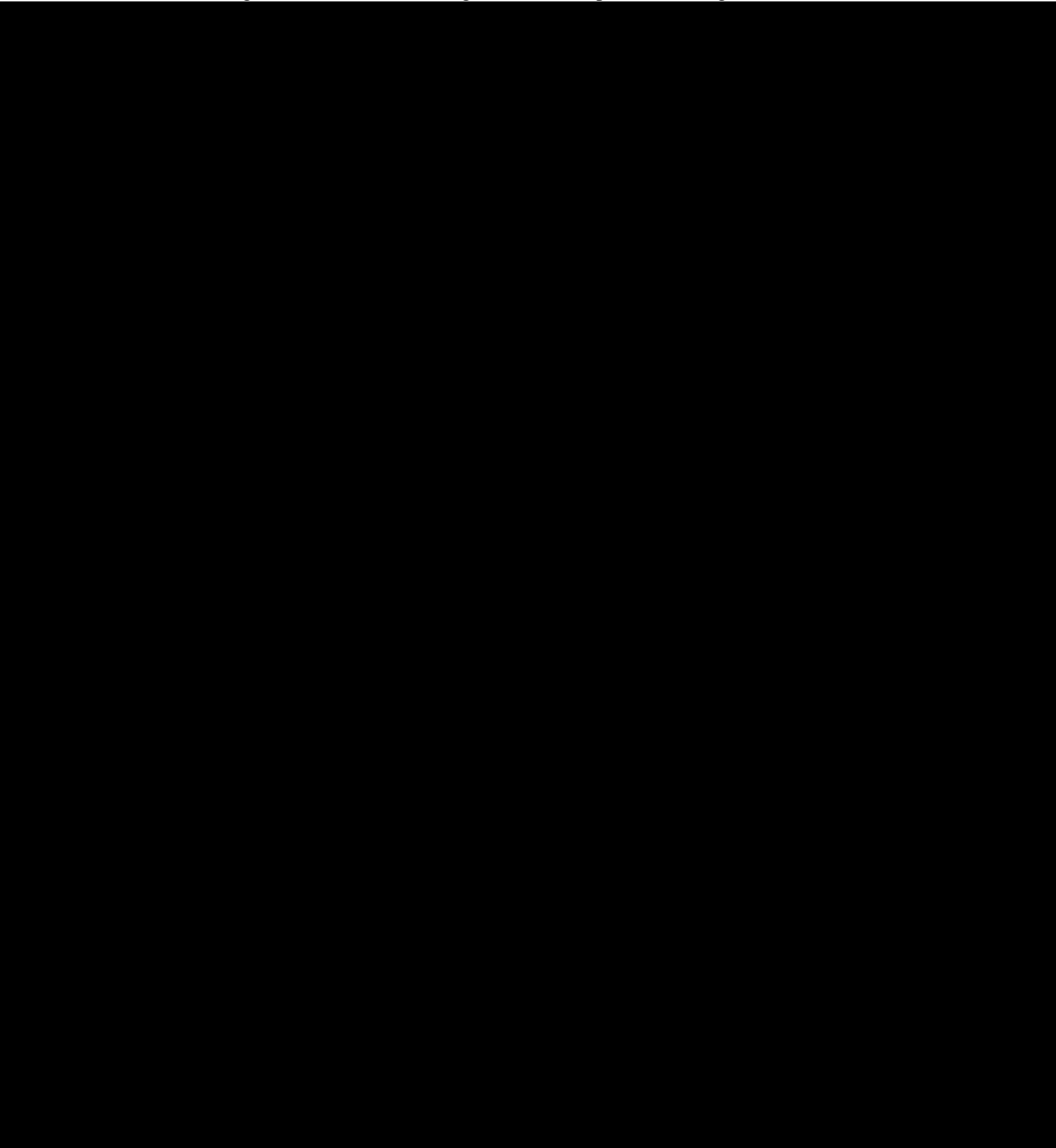
<sup>4</sup> Specific delivery quantities and dates may change subject to changes in circumstances. No changes will be made without prior approval of the City.

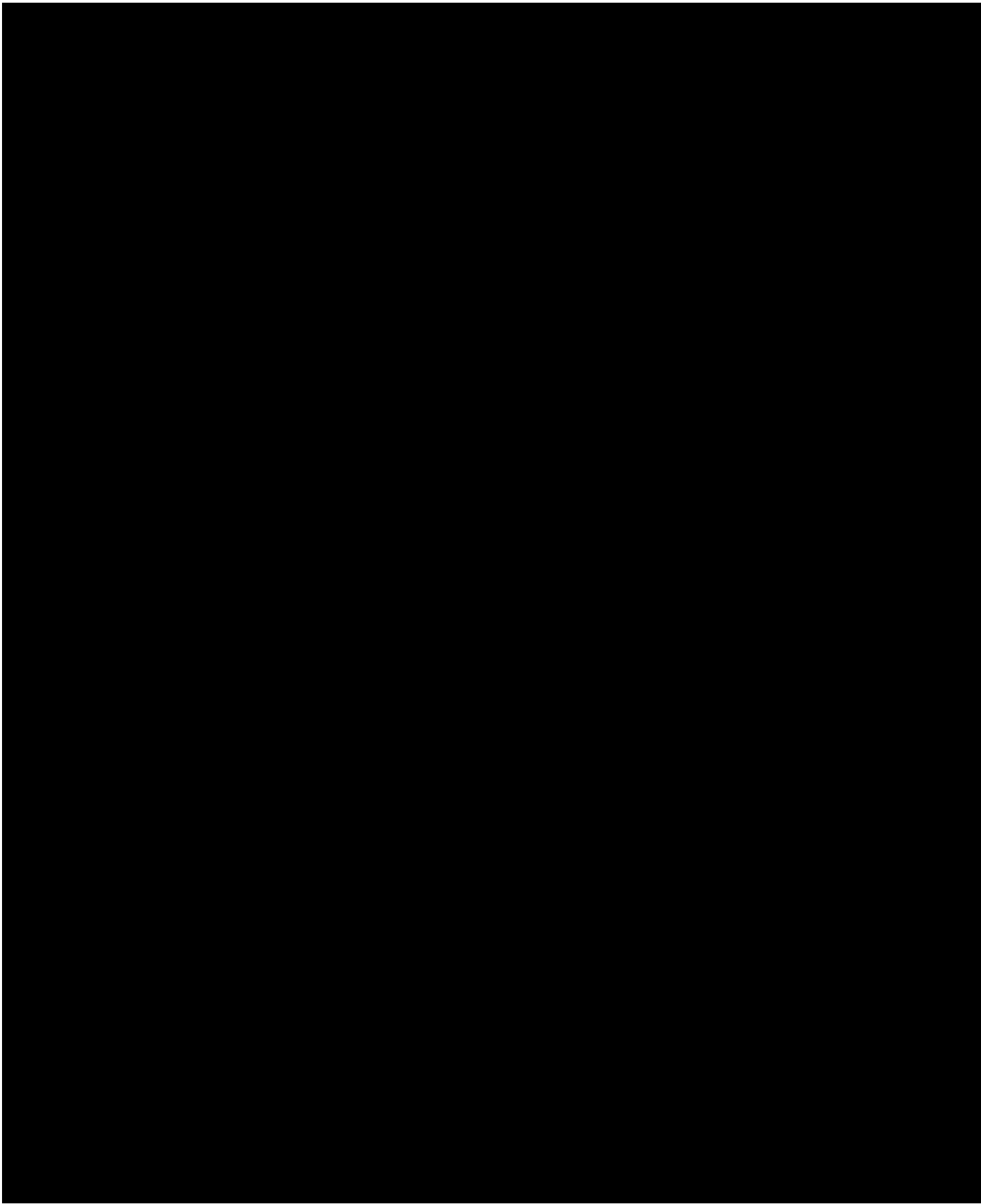


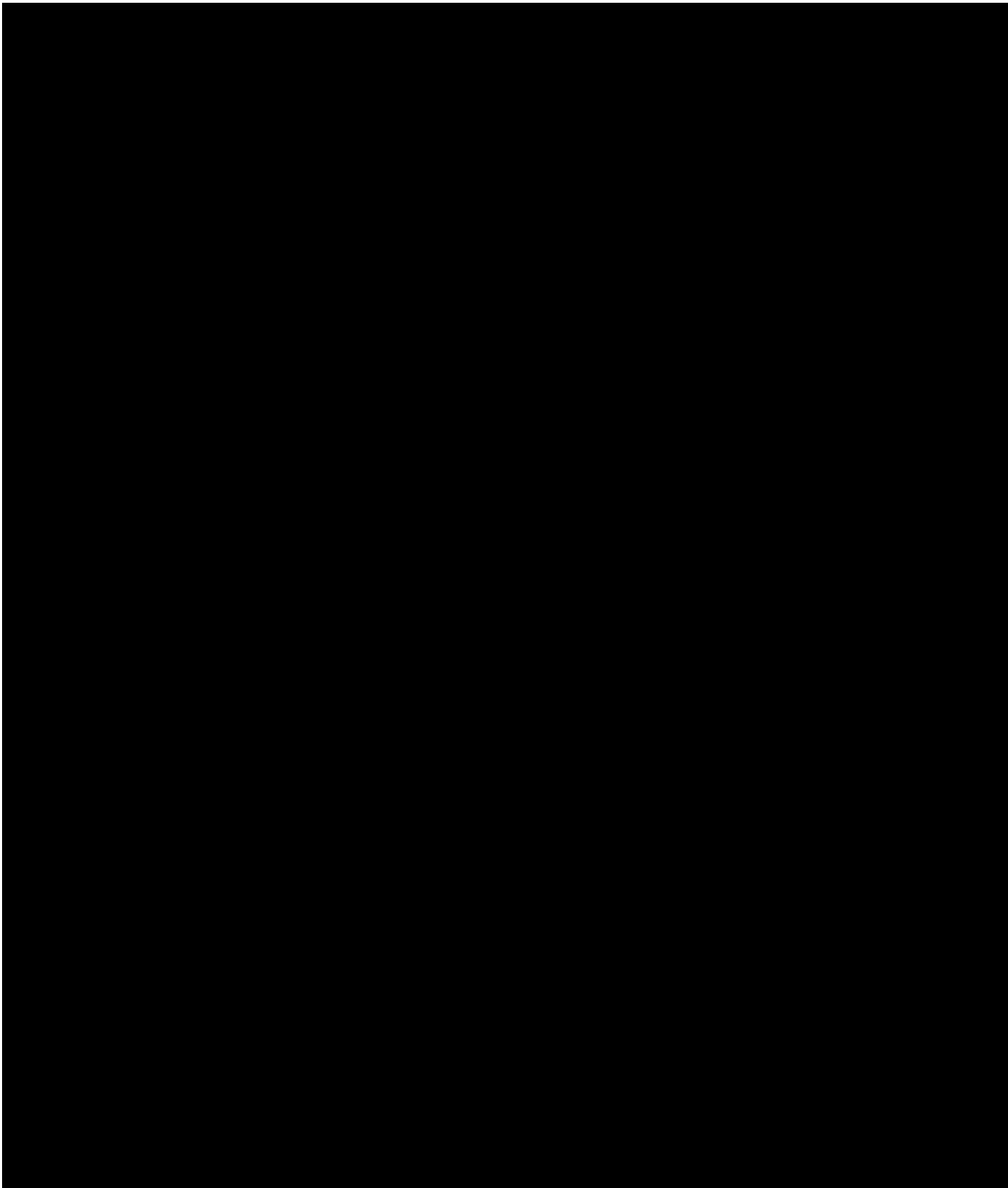
ID	Payment Invoice Event (with date estimates <sup>4</sup> )	Payment Amount
5	Annual software license, extended warranty and post implementation support services (Mar 1, 2020)	
6	Annual software license, extended warranty and post implementation support services (Mar 1, 2021)	
7	Annual software license, extended warranty and post implementation support services (Mar 1, 2022)	
8	Annual software license, extended warranty and post implementation support services (Mar 1, 2023)	
9	Annual software license, extended warranty and post implementation support services (Mar 1, 2024)	
10	Annual software license, extended warranty and post implementation support services (Mar 1, 2025)	
11	Annual software license, extended warranty and post implementation support services (Mar 1, 2026)	
12	Annual software license, extended warranty and post implementation support services (Mar 1, 2027)	
	<i>Subtotal</i>	
	<b>AGREEMENT TOTAL</b>	<b>STBD</b>

To the extent this Agreement is extended for an additional year pursuant to Article [5], [Section (c)] of this Agreement, Dominion reserves the right to increase the annual software license, extended warranty and post implementation support services fees up to five percent (5%) of the previous year's fee. The increase would begin on May 1, 2028 if extended

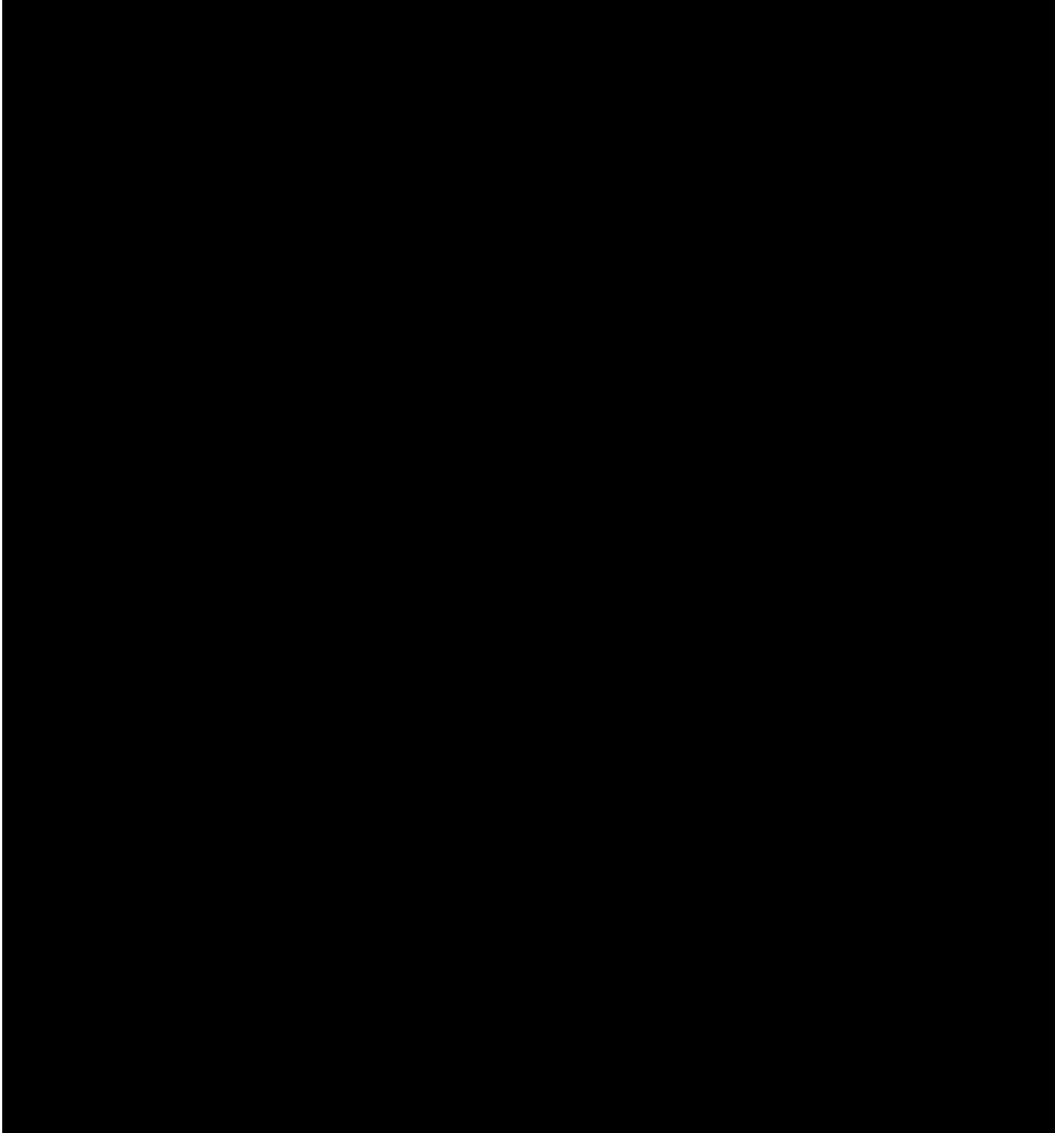
**Schedule E**  
ImageCast Precinct and ImageCast X Acceptance Testing Checklist







**Schedule F**  
ImageCast Central Acceptance Testing Checklist



## **Schedule G**

### **EMS Acceptance Testing Checklist**

#### **Pre-Voting Phase**

1. Open the EMS Election Event Designer application
2. Create the Election Project
3. Import District Data
4. Import Contest and Office Data
5. Import Candidates, Choices, and Party Data
6. Import Template Keywords
7. Generate Ballot Types
8. Create Proofing Ballots
9. Create (Official) Ballots
10. Import Polling Places
11. Define Tabulators, Assign Precinct to Tabulators
12. Import DCF/MBS Files
13. Define Configuration Files
14. Generate Election Files
15. Program Memory Card
16. Program iButton Security Key
17. Create EMS Results Tally & Reporting User

#### **Post-Voting Phase**

1. Open the EMS Election Event Designer application
2. Open Project
3. Load Result Files
4. Preview Result Files
5. Validate and Publish Result Files
6. Create Reports



Our customers come first.



## City of Philadelphia

### Request for Proposals: Bid #B1903107 for Election System

#### UPDATED PRICING, SAMPLE MATERIAL, and APPENDICES

Prepared for:	Joyce Spindler and Gayle Rugerri Office of Innovation and Technology
Address:	1234 Market Street, 18 <sup>th</sup> Floor Philadelphia, PA 19107
Prepared by:	John Hastings, Regional Sales Manager
Email:	John.Hastings@DominionVoting.com
Phone:	(412) 208-5073
Due Date:	January 22, 2019 at 5:00 PM EST

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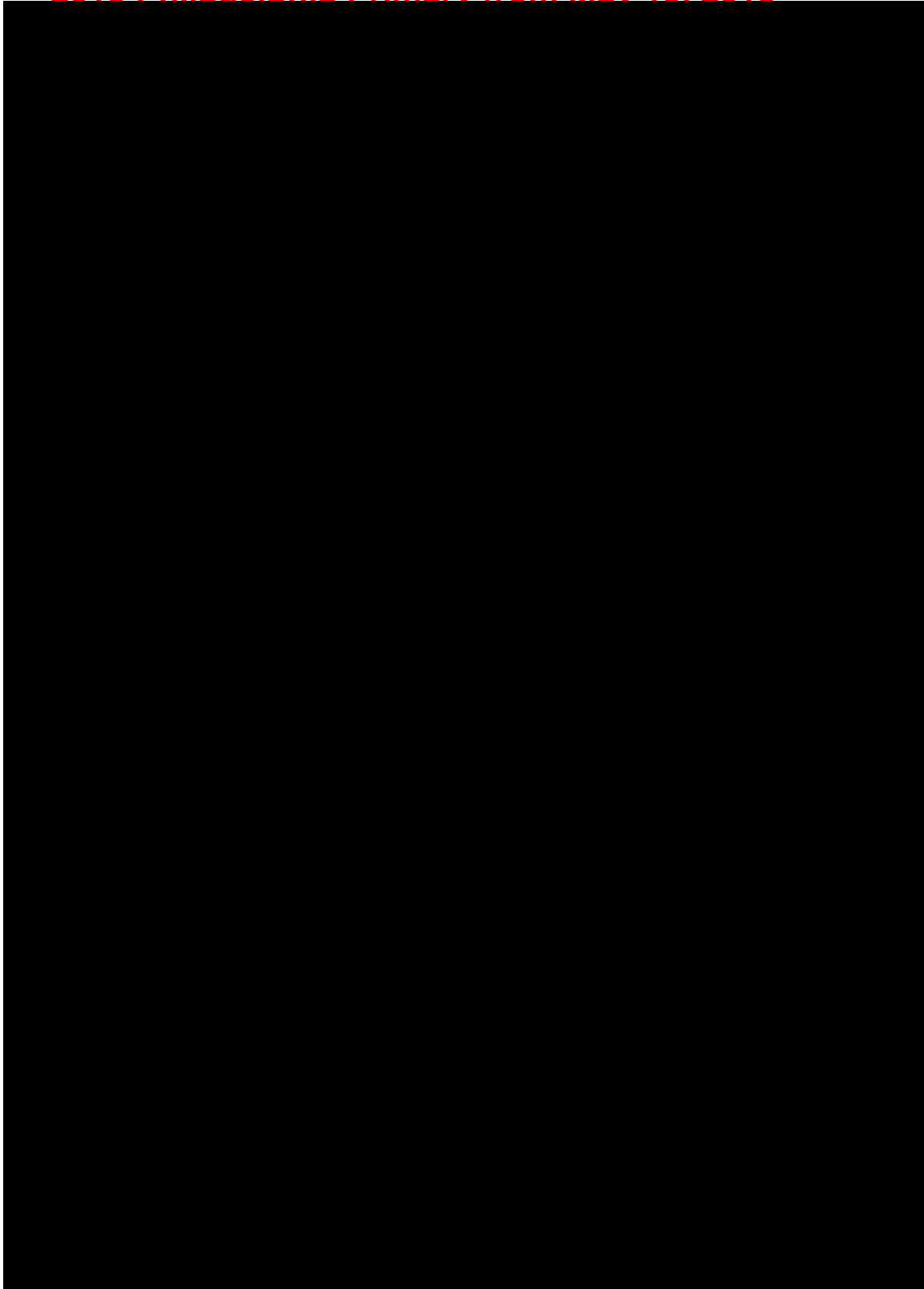
1. Sample 2015 Primary and General Election Ballots for the ICX _____	4
<i>2015 Philadelphia Primary from May 19, 2015</i> _____	5
<i>2015 General Election from November 3, 2015</i> _____	12
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3. Appendices _____	23
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<i>Appendix B: 2018 Revenue Statement</i> _____	25
<i>Appendix C: Pricing Discount</i> _____	26
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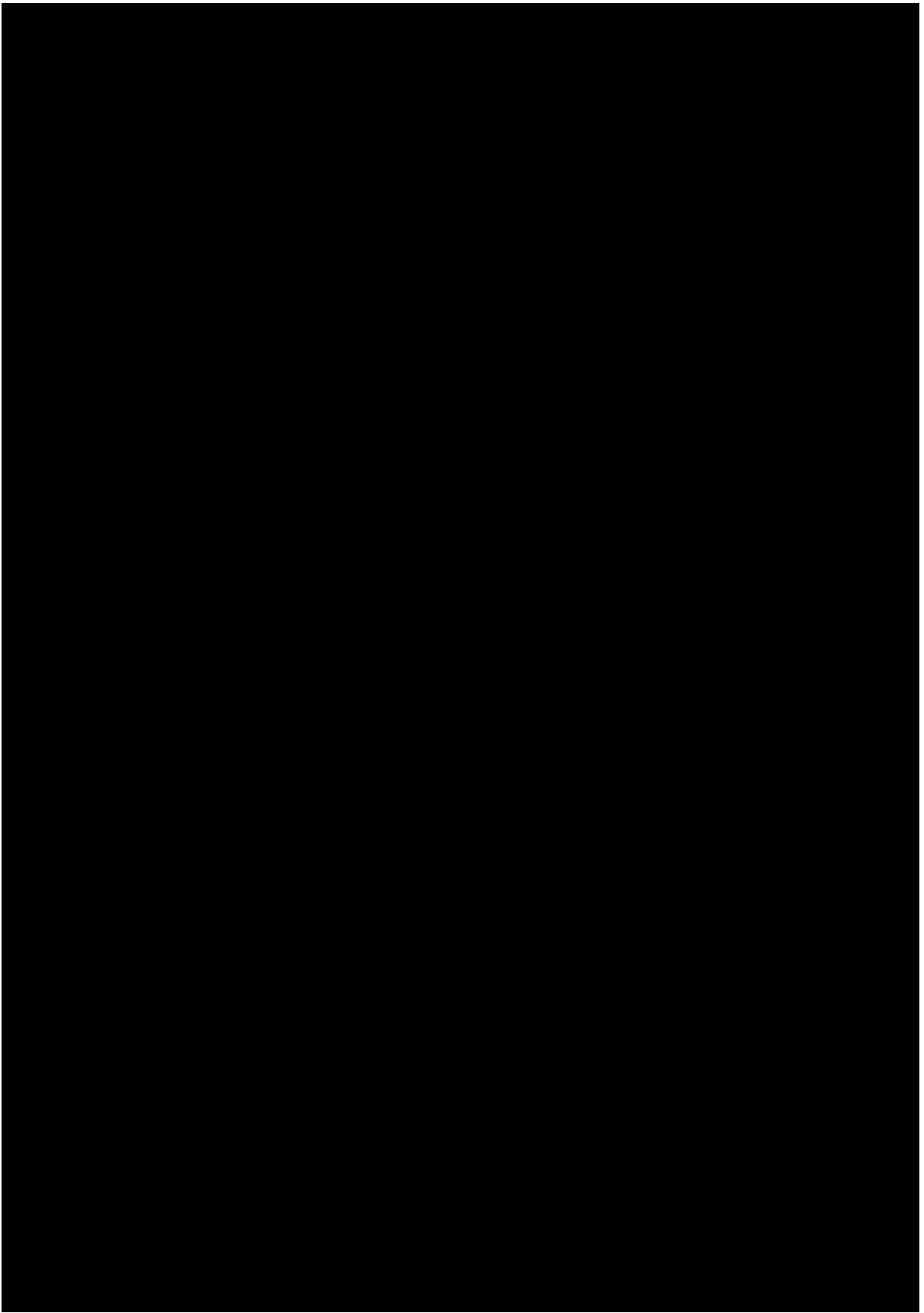
# 1. Sample 2015 Primary and General Election Ballots for the ICX

Below we provide sample ballots of Philadelphia’s 2015 Primary and General Elections as they would appear on the ImageCast X in portrait mode. Although the Election Event Designer will allow for customizations to use 2 or 3 column layouts, the samples below reflect 7 and 10 pages, or clicks, to navigate the entire ballot.

Dominion Voting is happy to provide additional information or perform an in-person demonstration of the voting process for the City’s 2015 Primary and General upon request.

## 2015 Philadelphia Primary from May 19, 2015







































## 2. Updated Pricing for 3, 5, and 10-year options

As a supplement to this response document, Dominion has provided separate files detailing the 3, 5, and 10-year pricing options for each of the solutions presented. We would be happy to discuss any aspect of our pricing in more detail or work with the City to adjust pricing and payment options to better suit the City's budgetary allotments.

### 3. Appendices

During the demonstration, we took note of several follow-up items that were discussed. As a result, we have provided some additional information regarding our offering to clarify any points and details that were presented during the demonstration period.

Appendices include:

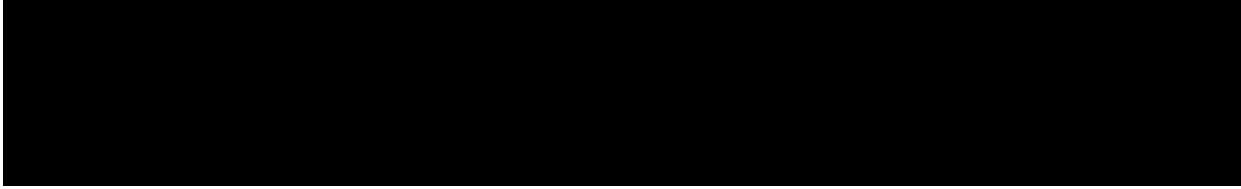
- ImageCast X BMD Throughputs
- 2018 Revenue Statement
- Pricing Discount
- Dedicated Team Implementation
- Minority and Women Owned Business Participation
- Voting Booth and Privacy Screen Pricing
- Development Roadmap

## Appendix A: ImageCast X BMD Limitations and Throughputs

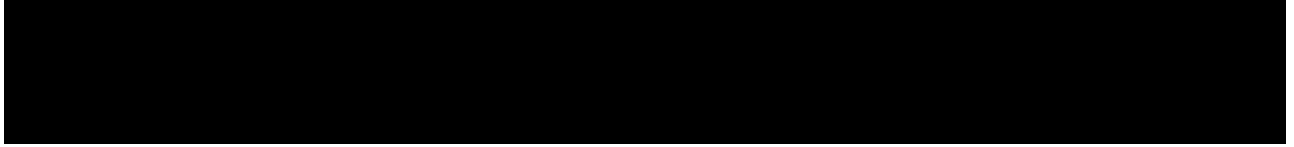
Our extensive experience conducting elections in other large jurisdictions indicates the ImageCast X has similar throughput capabilities as paper voting or voting on a full-face style electronic voting machines.

Dominion believes a voter using the ImageCast X can realistically make their ballot selections in 90 seconds or less based on the City of Philadelphia's 2015 Primary and 2015 General election sample ballots. These times may vary based on a number of factors, primarily familiarity with the ImageCast equipment.

## Appendix B: 2018 Revenue Statement



## Appendix C: Pricing Discount





## Appendix D: Dedicated Team Implementation

Dominion stands by our commitment to meet all of the implementation and staffing requirements specified in our RFP response. As is customary with many of our large-scale customers, we will work with the City to customize the implementation timeline and utilize a mix of well-seasoned elections staff and local talent to meet appropriate staffing levels and mutually agreed upon project plan milestones.

## Appendix E: Minority and Women-Owned Business Participation Statement

Dominion agrees to work with and utilize registered and certified disadvantaged businesses in the City of Philadelphia as discussed during the demonstration. Dominion will finalize details of the agreement during contract negotiations and work with the proper City entities to identify qualified providers who are certified under Philadelphia's disadvantaged business framework. Per our discussion during the demonstration, we are open to using Minority and Women owned businesses that the City recommends and suggests, including, but not limited to, our COTS product purchases, ballot paper, etc.

## Appendix F: Voting Booths vs. Privacy Screens Pricing

Below Dominion has provided list item pricing and sample picture for both voting booths and privacy screens as requested by the City of Philadelphia during the demonstration period.

- Voting Booth: [REDACTED]/unit



- Privacy Screen: [REDACTED]/unit



Dominion is happy to discuss each option and the impact on pricing upon request.

## Appendix G: Future Options

The City of Philadelphia will have ongoing visibility as to which future versions and certification iterations of Democracy Suite and the accompanying components of the voting solution including any Philadelphia-specific upgrades or updates. The City is entitled to any software modifications that are certified by the State of Pennsylvania so long as the software license agreement is in effect.

Dominion is constantly working with Commercial-off-the-Shelf equipment providers, such as Canon and Dell, to ensure visibility regarding end-of-life components and available replacements. This is done in conjunction with managing ongoing state and federal certification campaigns, to ensure that Democracy Suite remains fully operational and available to customers. Where possible, Dominion strives to integrate any new product offerings and enhancements to the currently certified system version to prevent having to replace certain infrastructure components.

Some of the items on our development roadmap includes an ImageCast X that displays ballots in landscape mode and an ImageCast Precinct scanner/tabulator with a larger more user-friendly user display. Dominion is happy to work with Philadelphia to determine what will best meet their election needs moving into the future to develop an upgrade roadmap that ensures Philadelphia's elections are performed in the most efficient, accurate and user-friendly manner while setting an example as the most state of the art system on the market today. These future product offerings can be discussed as part of the overall solution presented to the City and timelines for completion can be committed to during a best and final offer phase or contract negotiation phase.

Additional details are provided below:

## ImageCast X in Landscape

The ImageCast X in landscape mode will provide all of the intuitiveness of our current ImageCast X, but allow up to 5 columns to be displayed on one screen. Based on the samples provided below, this landscape view can reduce the number of pages for the 2015 sample ballots to 3 or 4 clicks depending on the overall number of contests and candidates.

|||||













## ImageCast Precinct 2

The ImageCast Precinct is currently being upgraded as the ImageCast Precinct 2, which includes a larger more user-friendly display, offers faster throughput for ballots and includes enhanced user functionality and security features.





Pennsylvania Voting System Proposal  
City of Philadelphia  
Lisa M Deeley, Chairwoman, Commissioner  
Registered Voters: 1,025,869 Precincts: 1,692  
Version: 5.5  
ICX BMD - Scenario 2

Date:

Product Name	Description	QTY	UNIT PRICE	EXTENSION
Central Scanning Solution: Absentee / Vote By Mail Hardware				
ImageCast Central Kit - G1130	Includes Canon Model DR-G1130, Computer w/ 23" Monitor, Keyboard & Mouse, One 8GB USB Flash Drive & One I-Button, patch cable	2		
			Sub-Total:	
In-Person Voting Solution: Polling Location Hardware				
ImageCast X Kit - Prime BMD		3,735		
ATI Kit - ICX - USB		1,692		
MBP Kit #3 In-Office High Volume	Includes OKI C931e, Dell e3480 laptop, USB printer cable	1		
ImageCast X Voting Booth - Standard		3,735		
Smart-UPS 1500VA LCD 120V 1000W		1,692		
ImageCast Precinct Tabulator - 320C	Includes Tabulator/Scanner, Internal Battery, Printer with Paper Roll, 12 Month Hardware Warranty, 12 Month Firmware Software Application License, Two 16GB Flash Memory Cards, Two I-Buttons	1,868		
ImageCast Precinct Ballot Box - Plastic		1,868		
ImageCast X Classic Poll Worker Smart Card		35		
ImageCast X Classic Technician Smart Card		35		
ImageCast X Classic Voter Activation Card		50		
			Sub-Total:	\$24,644,010

Peripherals			
Accessories			
ImageCast X Prime BMD Bag Kit		3,735	
Flash Memory Card 8GB - SanDisk		50	
ICP I-Button Technician Key - Blue		50	
Sub-Total:			
Election Management Hardware			
EMS Standard Server Kit	Includes PowerEdge R630 rack server, 24 port switch, 24" monitor, keyboard/mouse, patch cable, Cepstral, Avast.	1	
EMS Client Workstation Kit	Includes Dell T3420, 24" monitor, iButton programmer, high speed media reader, patch cable, smart card reader/writer.	7	
EMS Adjudication Workstation Kit	Includes Dell T3420, 24" monitor, SQL Server 2016 CAL, cables, Windows 10 Pro.	2	
Sub-Total:			
Software			
Democracy Suite Standard (>850k)		1	
Adjudication Module (>850k)		1	
Mobile Ballot Printing Module (>850k)		1	
Sub-Total:			
Implementation		Days	
Product Implementation & Support		20	
Project Management & Implementation		30	
Sub-Total:		50	
Training		Days	
Training (/day)		15	
Sub-Total:		65	
Total Purchase Subtotal			
Discount			
Year 1 Purchase Total			
Annual Licenses			
Democracy Suite Standard Annual License Fee (>850k)		1	
Adjudication Annual Software License Fee (>850k)		1	
Mobile Ballot Printing Annual Software License Fee (>850k)		1	
ImageCast Central Annual Firmware License - G1130		2	
ImageCast X Annual Firmware License - Prime		3,735	
ImageCast Precinct Annual Firmware License - 320C		1,868	
Sub-Total:			
Warranty			
ImageCast Central Annual Hardware Warranty - G1130		2	
ImageCast X Annual Hardware Warranty - Prime		3,735	
ImageCast Precinct Annual Hardware Warranty - 320C		1,868	
Sub-Total:			
Annual Fees Subtotal			
Annual Fees Discount			
Annual Fees Total			\$1,241,532
*Offer Valid for 30 days			



## Pennsylvania Voting System Proposal

City of Philadelphia

Lisa M. Deeley, Chairwoman, Commissioner

Registered Voters 1,025,869 Precincts 1,692

Certified Version Democracy Suite 5.5-A

ICX BMD - Scenario 2

Date 2/14/2019

### Option 1 - Outright Purchase Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	Totals
Hardware/Software Purchase									
License & Warranty									
<b>Total</b>	\$ 17,299,762.00	\$ 1,241,532 00	\$ 1,241,532 00	\$ 1,241,532.00	\$ 1,241,532 00	\$ 1,241,532.00	\$ 1,241,532.00	\$ 1,241,532.00	<b>\$ 25,990,486.00</b>

### Option 2 - 10 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	Totals
MSA	\$ 3,132,091.00	\$ 3,132,091 00	\$ 3,132,091 00	\$ 3,132,091.00	\$ 3,132,091 00	\$ 3,132,091.00	\$ 3,132,091.00	\$ 3,132,091.00	\$ 3,132,091.00	\$ 3,132,091.00	\$ 31,320,910 00
<b>Total</b>	\$ 3,132,091.00	\$ 3,132,091 00	\$ 3,132,091 00	\$ 3,132,091.00	\$ 3,132,091 00	\$ 3,132,091.00	\$ 3,132,091.00	\$ 3,132,091.00	\$ 3,132,091.00	\$ 3,132,091.00	<b>\$ 31,320,910.00</b>

### Option 3 - 5 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	Totals
MSA	\$ 6,919,905.00	\$ 4,095,993 00	\$ 4,095,993 00	\$ 4,095,993.00	\$ 4,095,993 00	\$ 23,303,877.00
<b>Total</b>	\$ 6,919,905.00	\$ 4,095,993 00	\$ 4,095,993 00	\$ 4,095,993.00	\$ 4,095,993 00	<b>\$ 23,303,877.00</b>

### Option 4 - 3 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	Totals
MSA	\$ 8,649,881.00	\$ 5,998,967 00	\$ 5,998,967 00	\$ 20,647,815.00
<b>Total</b>	\$ 8,649,881.00	\$ 5,998,967 00	\$ 5,998,967 00	<b>\$ 20,647,815.00</b>



Pennsylvania Voting System Proposal  
City of Philadelphia  
Lisa M Deeley, Chairwoman, Commissioner  
Registered Voters: 1,025,869 Precincts: 1,692  
Version: 5.5  
ICX BMD - Scenario 1

Date:

Product Name	Description	QTY	UNIT PRICE	EXTENSION
Central Scanning Solution: Absentee / Vote By Mail Hardware				
ImageCast Central Kit - G1130	Includes Canon Model DR-G1130, Computer w/ 23" Monitor, Keyboard & Mouse, One 8GB USB Flash Drive & One I-Button, patch cable	2		
			Sub-Total:	
In-Person Voting Solution: Polling Location Hardware				
ImageCast X Kit - Prime BMD		1,868		
ATI Kit - ICX - USB		1,692		
MBP Kit #3 In-Office High Volume	Includes OKI C931e, Dell e3480 laptop, USB printer cable	1		
ImageCast X Voting Booth - Standard		1,868		
Smart-UPS 1500VA LCD 120V 1000W		1,692		
ImageCast Precinct Tabulator - 320C	Includes Tabulator/Scanner, Internal Battery, Printer with Paper Roll, 12 Month Hardware Warranty, 12 Month Firmware Software Application License, Two 16GB Flash Memory Cards, Two I-Buttons	1,868		
ImageCast Precinct Ballot Box - Plastic		1,868		
ImageCast X Classic Poll Worker Smart Card		25		
ImageCast X Classic Technician Smart Card		25		
ImageCast X Classic Voter Activation Card		25		
			Sub-Total:	\$17,642,400

Peripherals		
<b>Accessories</b>		
ImageCast X Prime BMD Bag Kit		1,868
Flash Memory Card 8GB - SanDisk		50
ICP I-Button Technician Key - Blue		50
<b>Sub-Total:</b>		
<b>Election Management Hardware</b>		
EMS Standard Server Kit	Includes PowerEdge R630 rack server, 24 port switch, 24" monitor, keyboard/mouse, patch cable, Cepstral, Avast.	1
EMS Client Workstation Kit	Includes Dell T3420, 24" monitor, iButton programmer, high speed media reader, patch cable, smart card reader/writer.	7
EMS Adjudication Workstation Kit	Includes Dell T3420, 24" monitor, SQL Server 2016 CAL, cables, Windows 10 Pro.	2
<b>Sub-Total:</b>		
<b>Software</b>		
Democracy Suite Standard (>850k)		1
Adjudication Module (>850k)		1
Mobile Ballot Printing Module (>850k)		1
<b>Sub-Total:</b>		
<b>Implementation</b>		
Product Implementation & Support		Days 20
Project Management & Implementation		30
<b>Sub-Total:</b>		50
<b>Training</b>		
Training (/day)		Days 15
<b>Sub-Total:</b>		65
<b>Total Purchase Subtotal</b>		
<b>Discount</b>		
<b>Year 1 Purchase Total</b>		
<b>Annual Licenses</b>		
Democracy Suite Standard Annual License Fee (>850k)		1
Adjudication Annual Software License Fee (>850k)		1
Mobile Ballot Printing Annual Software License Fee (>850k)		1
ImageCast Central Annual Firmware License - G1130		2
ImageCast X Annual Firmware License - Prime		1,868
ImageCast Precinct Annual Firmware License - 320C		1,868
<b>Sub-Total:</b>		
<b>Warranty</b>		
ImageCast Central Annual Hardware Warranty - G1130		2
ImageCast X Annual Hardware Warranty - Prime		1,868
ImageCast Precinct Annual Hardware Warranty - 320C		1,868
<b>Sub-Total:</b>		
<b>Annual Fees Subtotal</b>		
<b>Annual Fees Discount</b>		
<b>Total Annual Fees</b>		<b>\$922,275</b>

*\*Offer Valid for 30 days*





## Pennsylvania Voting System Proposal

City of Philadelphia

Lisa M. Deeley, Chairwoman, Commissioner

Registered Voters 1,025,869 Precincts 1,692

Certified Version Democracy Suite 5.5-A

ICX BMD - Scenario 1

Date 2/14/2019

### Option 1 - Outright Purchase Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	Totals
Hardware/Software Purchase									
License & Warranty									
<b>Total</b>	\$ 12,530,833.00	\$ 922,275 00	\$ 922,275 00	\$ 922,275.00	\$ 922,275 00	\$ 922,275.00	\$ 922,275.00	\$ 922,275.00	\$ 18,986,758.00

### Option 2 - 10 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	Totals
MSA											
<b>Total</b>	\$ 2,291,444.00	\$ 2,291,444 00	\$ 2,291,444 00	\$ 2,291,444.00	\$ 2,291,444 00	\$ 2,291,444.00	\$ 2,291,444.00	\$ 2,291,444.00	\$ 2,291,444 00	\$ 2,291,444.00	\$ 22,914,440.00

### Option 3 - 5 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	Totals
MSA						
<b>Total</b>	\$ 5,012,333.00	\$ 2,989,862 00	\$ 2,989,862 00	\$ 2,989,862.00	\$ 2,989,862 00	\$ 16,971,781.00

### Option 4 - 3 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	Totals
MSA				
<b>Total</b>	\$ 6,265,417.00	\$ 4,368,254 00	\$ 4,368,254 00	\$ 15,001,925.00



Pennsylvania Voting System Proposal  
City of Philadelphia  
Lisa M Deeley, Chairwoman, Commissioner  
Registered Voters: 1,025,869 Precincts: 1,692  
Version: 5.5  
ICX BMD - Scenario 3

Date:

Product Name	Description	QTY	UNIT PRICE	EXTENSION
Central Scanning Solution: Absentee / Vote By Mail Hardware				
ImageCast Central Kit - G1130	Includes Canon Model DR-G1130, Computer w/ 23" Monitor, Keyboard & Mouse, One 8GB USB Flash Drive & One I-Button, patch cable	2		
			Sub-Total:	
In-Person Voting Solution: Polling Location Hardware				
ImageCast X Kit - Prime BMD		5,603		
ATI Kit - ICX - USB		1,692		
MBP Kit #3 In-Office High Volume	Includes OKI C931e, Dell e3480 laptop, USB printer cable	1		
ImageCast X Voting Booth - Standard		5,603		
Smart-UPS 1500VA LCD 120V 1000W		1,692		
ImageCast Precinct Tabulator - 320C	Includes Tabulator/Scanner, Internal Battery, Printer with Paper Roll, 12 Month Hardware Warranty, 12 Month Firmware Software Application License, Two 16GB Flash Memory Cards, Two I-Buttons	1,868		
ImageCast Precinct Ballot Box - Plastic		1,868		
ImageCast X Classic Poll Worker Smart Card		50		
ImageCast X Classic Technician Smart Card		50		
ImageCast X Classic Voter Activation Card		75		
			Sub-Total:	\$31,649,450

Peripherals		
Accessories		
ImageCast X Prime BMD Bag Kit		5,603
Flash Memory Card 8GB - SanDisk		50
ICP I-Button Technician Key - Blue		50
Sub-Total:		
Election Management Hardware		
EMS Standard Server Kit	Includes PowerEdge R630 rack server, 24 port switch, 24" monitor, keyboard/mouse, patch cable, Cepstral, Avast.	1
EMS Client Workstation Kit	Includes Dell T3420, 24" monitor, iButton programmer, high speed media reader, patch cable, smart card reader/writer.	7
EMS Adjudication Workstation Kit	Includes Dell T3420, 24" monitor, SQL Server 2016 CAL, cables, Windows 10 Pro.	2
Sub-Total:		
Software		
Democracy Suite Standard (>850k)		1
Adjudication Module (>850k)		1
Mobile Ballot Printing Module (>850k)		1
Sub-Total:		
Implementation		
Product Implementation & Support		20
Project Management & Implementation		30
Sub-Total:		50
Training		
Training (/day)		15
Sub-Total:		65
Total Purchase Subtotal		
Discount		
Year 1 Purchase Total		
Annual Licenses		
Democracy Suite Standard Annual License Fee (>850k)		1
Adjudication Annual Software License Fee (>850k)		1
Mobile Ballot Printing Annual Software License Fee (>850k)		1
ImageCast Central Annual Firmware License - G1130		2
ImageCast X Annual Firmware License - Prime		5,603
ImageCast Precinct Annual Firmware License - 320C		1,868
Sub-Total:		
Warranty		
ImageCast Central Annual Hardware Warranty - G1130		2
ImageCast X Annual Hardware Warranty - Prime		5,603
ImageCast Precinct Annual Hardware Warranty - 320C		1,868
Sub-Total:		
Annual Fees Subtotal		
Annual Fees Discount		
Annual Fees Total		\$1,318,144

\*Offer Valid for 30 days



## Pennsylvania Voting System Proposal

City of Philadelphia

Lisa M. Deeley, Chairwoman, Commissioner

Registered Voters 1,025,869 Precincts 1,692

Certified Version Democracy Suite 5.5-A

ICX BMD - Scenario 3

Date 2/14/2019

### Option 1 - Outright Purchase Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	Totals
Hardware/Software Purchase									
License & Warranty									
<b>Total</b>	\$ 21,402,471.00	\$ 1,318,144.00	\$ 1,318,144.00	\$ 1,318,144.00	\$ 1,318,144.00	\$ 1,318,144.00	\$ 1,318,144.00	\$ 1,318,144.00	\$ 30,629,479.00

### Option 2 - 10 Year Managed Service Agreement (MSA) Model

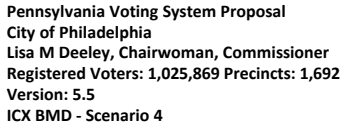
Description	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	Totals
MSA	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 36,592,340.00
<b>Total</b>	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 3,659,234.00	\$ 36,592,340.00

### Option 3 - 5 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	Totals
MSA	\$ 8,560,988.00	\$ 4,849,552.00	\$ 4,849,552.00	\$ 4,849,552.00	\$ 4,849,552.00	\$ 27,959,196.00
<b>Total</b>	\$ 8,560,988.00	\$ 4,849,552.00	\$ 4,849,552.00	\$ 4,849,552.00	\$ 4,849,552.00	\$ 27,959,196.00

### Option 4 - 3 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	Totals
MSA	\$ 10,701,235.00	\$ 7,203,824.00	\$ 7,203,824.00	\$ 25,108,883.00
<b>Total</b>	\$ 10,701,235.00	\$ 7,203,824.00	\$ 7,203,824.00	\$ 25,108,883.00



Date:

Product Name	Description	QTY	UNIT PRICE	EXTENSION
Central Scanning Solution: Absentee / Vote By Mail Hardware				
ImageCast Central Kit - G1130	Includes Canon Model DR-G1130, Computer w/ 23" Monitor, Keyboard & Mouse, One 8GB USB Flash Drive & One I-Button, patch cable	2		
		Sub-Total:		
In-Person Voting Solution: Polling Location Hardware				
ImageCast X Kit - Prime BMD		7,470		
ATI Kit - ICX - USB		1,692		
MBP Kit #3 In-Office High Volume	Includes OKI C931e, Dell e3480 laptop, USB printer cable	1		
ImageCast X Voting Booth - Standard		7,470		
Smart-UPS 1500VA LCD 120V 1000W		1,692		
ImageCast Precinct Tabulator - 320C	Includes Tabulator/Scanner, Internal Battery, Printer with Paper Roll, 12 Month Hardware Warranty, 12 Month Firmware Software Application License, Two 16GB Flash Memory Cards, Two I-Buttons	1,868		
ImageCast Precinct Ballot Box - Plastic		1,868		
ImageCast X Classic Poll Worker Smart Card		50		
ImageCast X Classic Technician Smart Card		50		
ImageCast X Classic Voter Activation Card		100		
		Sub-Total:		\$38,650,900

Peripherals		
Accessories		
ImageCast X Prime BMD Bag Kit		7,470
Flash Memory Card 8GB - SanDisk		50
ICP I-Button Technician Key - Blue		50
Sub-Total:		
Election Management Hardware		
EMS Standard Server Kit	Includes PowerEdge R630 rack server, 24 port switch, 24" monitor, keyboard/mouse, patch cable, Cepstral, Avast.	1
EMS Client Workstation Kit	Includes Dell T3420, 24" monitor, iButton programmer, high speed media reader, patch cable, smart card reader/writer.	7
EMS Adjudication Workstation Kit	Includes Dell T3420, 24" monitor, SQL Server 2016 CAL, cables, Windows 10 Pro.	2
Sub-Total:		
Software		
Democracy Suite Standard (>850k)		1
Adjudication Module (>850k)		1
Mobile Ballot Printing Module (>850k)		1
Sub-Total:		
Implementation		
Product Implementation & Support		Days 20
Project Management & Implementation		30
Sub-Total:		50
Training		
Training (/day)		Days 15
Sub-Total:		65
Total Purchase Subtotal		
Discount		
Year 1 Purchase Total		
Annual Licenses		
Democracy Suite Standard Annual License Fee (>850k)		1
Adjudication Annual Software License Fee (>850k)		1
Mobile Ballot Printing Annual Software License Fee (>850k)		1
ImageCast Central Annual Firmware License - G1130		2
ImageCast X Annual Firmware License - Prime		7,470
ImageCast Precinct Annual Firmware License - 320C		1,868
Sub-Total:		
Warranty		
ImageCast Central Annual Hardware Warranty - G1130		2
ImageCast X Annual Hardware Warranty - Prime		7,470
ImageCast Precinct Annual Hardware Warranty - 320C		1,868
Sub-Total:		
Annual Fees		
Annual Fees Discount		
Annual Fees		\$1,462,391

\*Offer Valid for 30 days



## Pennsylvania Voting System Proposal

City of Philadelphia

Lisa M. Deeley, Chairwoman, Commissioner

Registered Voters: 1,025,869 Precincts: 1,692

Certified Version: Democracy Suite 5.5-A

ICX BMD - Scenario 4

Date: 2/14/2019

### Option 1 - Outright Purchase Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	Totals
Hardware/Software Purchase									
License & Warranty									
<b>Total</b>	\$ 25,213,447.00	\$ 1,462,391.00	\$ 1,462,391.00	\$ 1,462,391.00	\$ 1,462,391.00	\$ 1,462,391.00	\$ 1,462,391.00	\$ 1,462,391.00	\$ 35,450,184.00

### Option 2 - 10 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	Totals
MSA	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 42,212,460.00
<b>Total</b>	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 4,221,246.00	\$ 42,212,460.00

### Option 3 - 5 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	4 2022	5 2023	Totals
MSA	\$ 10,085,379.00	\$ 5,622,610.00	\$ 5,622,610.00	\$ 5,622,610.00	\$ 5,622,610.00	\$ 32,575,819.00
<b>Total</b>	\$ 10,085,379.00	\$ 5,622,610.00	\$ 5,622,610.00	\$ 5,622,610.00	\$ 5,622,610.00	\$ 32,575,819.00

### Option 4 - 3 Year Managed Service Agreement (MSA) Model

Description	1 2019	2 2020	3 2021	Totals
MSA	\$ 12,606,724.00	\$ 8,396,089.00	\$ 8,396,089.00	\$ 29,398,902.00
<b>Total</b>	\$ 12,606,724.00	\$ 8,396,089.00	\$ 8,396,089.00	\$ 29,398,902.00