



COMMONWEALTH OF PENNSYLVANIA
TEST PROTOCOL
FOR
RE-EXAMINATION OF
SEQUOIA VOTING SYSTEMS
AVC ADVANTAGE 10 AND WINEDS 3.1.074

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1.0 INTRODUCTION

The primary purpose of the re-examination is to confirm that the Dominion Voting Systems AVC Advantage 10 Voting System and WinEDS 3.1.074 meets the requirements of Article XI-A of the Pennsylvania Election Code, sections 1101-A to 1122-A, 25 P.S. §§ 3031.1 – 3031.22. This re-examination is being performed per the direction of the Secretary of the Commonwealth, acting through the Pennsylvania Department of State, Bureau of Commissions, Elections and Legislation. This re-examination will commence on March 6, 2012, at the following location:

Commonwealth Keystone Building
Hearing Room 1
400 North Street
Harrisburg, Pennsylvania

The daily duration of this re-examination will be from 9:00 A.M. until 5:00 P.M. Eastern Standard Time unless a representative of the Secretary of the Commonwealth requests an extension, suspension, or a halt in testing.

1.1 References

The documents listed below were used in the development of the Test Protocol.

- Article XI-A of the Pennsylvania Election Code, sections 1101-A to 1122-A, 25 P.S. §§ 3031.1 – 3031.22
- Federal Election Commission 2002 Voting Systems Standards
- Help America Vote Act (HAVA) of 2002, Public Law 107-252, 42 U.S.C. § 15301 *et seq.*
- Sequoia Voting Systems AVC Advantage 10 System Overview, Version 1.02, dated July 2006

1.2 Terms and Abbreviation

This subsection lists terms and abbreviations relevant to this re-examination

“ADA” – Americans with Disabilities Act

“COTS” – Commercial Off-The-Shelf

“Department” – Pennsylvania Department of State

“DRE” – Direct Recording Electronic

“EAC” – Election Assistance Commission

“EMS” – Election Management System

“Examiner” – The examiner appointed by the Secretary of the Commonwealth to conduct the re-examination

“FEC” – Federal Election Commission

“ITA” – Independent Testing Authority

“PA” – The Commonwealth of Pennsylvania

“Pennsylvania Election Code” - Article XI-A of the Pennsylvania Election Code, sections 1101-A to 1122-A, 25 P.S. §§ 3031.1 – 3031.22

“Secretary” – The Secretary of the Commonwealth

“TDP” – Technical Data Package

“VSS” – Federal Election Commission 2002 Voting System Standards

“VVSG” – Election Assistance Commission 2005 Voluntary Voting System Guidelines

1.3 Background

The Dominion Voting Systems AVC Advantage 10 Voting System and WinEDS 3.1.074 were certified for use in the Commonwealth of Pennsylvania on May 2, 2006, after an examination conducted pursuant to the Pennsylvania Election Code. The Sequoia AVC Advantage 10 and WinEDS have been in use by Pennsylvania counties since their initial certification. Pursuant to section 1105-A of the Pennsylvania Election Code, 25 P.S. § 3031.5, a group of Pennsylvania voters formally requested that the Secretary conduct a re-examination of the Dominion AVC Advantage 10. The Secretary granted the request.

The Test Protocol was developed to ascertain whether the certified electronic voting system complies with the requirements set forth in the Pennsylvania Election Code.

2.0 TEST ITEMS

This section contains detailed descriptions of the items tested during the re-examination, including all software, hardware, and peripherals, both proprietary and COTS, and any test support equipment or materials necessary for test performance. The following diagram illustrates the Dominion AVC Advantage 10 requirements.

2.1 Software

This subsection contains a listing of the software and firmware being evaluated.

Table 2.1 Software

Component Name	Version	Unique Identifier (digital signature or hash value)
Advantage Firmware	10.3.5	TBD
I/O Firmware	10.3	TBD
WinEDS	3.1.074	TBD

2.2 Hardware

This subsection contains a listing of the hardware being evaluated.

Table 2.2 Hardware

Component Name	Model Number	Revision Number	Description
AVC Advantage	D-10	N/A	<p>A Direct Record Electronic voting machine is comprised of the following components:</p> <p><u>Main CPU</u> An embedded AMD Elan SC400 based system running ROM-DOS.</p> <p><u>I/O Processor</u> The original Z80 CPU. It manages I/O devices and communicates via a dedicated serial port with the Main CPU.</p> <p><u>Voter Panel</u> Contains all the selection and display devices for the voter, including: an array of switches to select candidates, write-in module, cast vote switch, and a booth light.</p> <p><u>Operator Panel</u> Contains all the selection and display devices for the maintenance or poll worker, including: switches and LEDs to select and display options, LCD message display, and indicators for power and low battery. As well as a power supply and report printer.</p>
Audio Voting Accessory	Audio Box	Rev C	Optional audio voting interface.

2.3 Peripherals

This subsection contains detailed descriptions of optional equipment used by the system being evaluated.

Table 2.3 Peripherals

Part Name	Model Number	Revision Number	Description
Cartridges	COTS Read/Write PCMCIA card	N/A	PC card memory device used for storing and transporting election information, cast vote records, and audit data.
Desktop Printer	Various	N/A	COTS Printer to print EMS reports

2.4 Test Support Equipment/Materials

This subsection contains detailed descriptions of the test support equipment and materials needed to perform the required testing.

The Examiner will provide a tape measure (to be used in Test Case 1), Test Execution Logs, and a digital camera for test documentation. The re-examination will be video recorded by the Department.

The voting system manufacturer must provide an EMS system currently certified for use in Pennsylvania loaded with the closed primary and general-election definitions (Appendix A). These election definitions are the ballot configurations that will be used throughout the re-examination. The manufacturer is responsible for providing the Department and the Examiner with technical staff to support the re-examination. The manufacturer must provide three precinct-tabulation devices for each voting system being examined. The manufacturer must be prepared to load the firmware for each precinct tabulation device. The Department will also require manufacturer to configure the precinct tabulation devices as they would be in the precinct on Election Day, including seals and locks. The manufacturer must be prepared to print pre-election reports, precinct results reports, audit logs, and post-election reports.

3.0 TEST MATERIALS

This section contains a detailed description of all materials made available to Examiner for the re-examination.

3.1 Technical Data Package

This subsection lists all manufacturer provided documentation that is relevant to the system being tested.

Table 3.1 Documentation

Document Name	Document Number	Version	Issue Date
AVC Advantage 10 System Overview	096050082	1.02	July 2006
AVC Advantage 10 Functional Specification	096050042	1.04	August 2006
AVC Advantage 10 Software Technical Specification	096050012	1.02	July 2006
AVC Advantage 10 Data Dictionary	096050032	1.03	August 2006
AVC Advantage 10 Security Overview	096050072	1.01	January 2006
AVC Advantage 10 Penetration Analysis	096051802	1.01	January 2006
AVC Advantage 10 Validation Test Plan	096050092	1.04	August 2006
AVC Advantage 10 Operators Manual	096050062	1.03	July 2006
AVC Advantage 10 Pollworkers Guide	096050112	1.01	January 2006
AVC Advantage Audio Accessory Poll Worker's/Operator's Manual, Firmware Version 10	096116603	1.00	January 2006
AVC Advantage 10 Maintenance Manual	096050052	1.03	July 2006
AVC Advantage 10 Personnel & Training	096050002	1.01	January 2006
AVC Advantage 10 Configuration Management Plan	096051501	1.01	January 2006
AVC Advantage 10 QA Program	096051402	1.01	January 2006
AVC Advantage 10 Change Specification	096050022	1.00	July 2006

WinEDS Technical Data Package Release 3.1	089351511	1.09	June 2006
WinEDS System Overview Release 3.1	089350011	1.13	May 2006
WinEDS Functional Specification Release 3.1	089350111	1.11	May 2006
WinEDS Software Specification Release 3.1	089350211	1.09	February 2006
WinEDS Security Specification Release 3.1	089350311	1.04	January 2006
WinEDS Penetration Analysis (Appendix B to Security Specification) Release 3.1 Noted 'Available Only By Special Request'	089350311	1.04	January 2006
WinEDS Test & Verification Specification	096051201	1.04	June 2007
WinEDS Operators Manual Release 3.1	089352111	1.03	January 2006
WinEDS Personnel & Training Requirements Release 3.1	089350511	1.04	January 2006
WinEDS Configuration Management Plan Release 3.1	089350611	1.06	February 2006
WinEDS Quality Assurance Program Release 3.1	089351911	1.04	January 2006
WinEDS Sample Reports Release 3.1	089352011	2.07	June 2006
WinEDS Installation Guide Software Release 3.1	none	1.00	February 2006
WinEDS Reference Guide Software Release 3.1	none	6.05	May 2006
WinEDS Change Release Summary Release 3.1	089352411	1.04	January 2006
WinEDS SDK: For Optech 400-C Release 3.1	089351111	1.04	January 2006
WinEDS SDK: For Insight and Eagle Release 3.1	089352311	1.01	January 2006
WinEDS Specification Diagrams Release 3.1	089351611	1.05	February 2006
WinEDS System Database Release 3.1	08935121	1.14	May 2006
WinEDS 3.1 FEC VSS 2002 Trace Matrix	092002-01	04	None-e-file date 9/12/2006
Tally Validation TDP supplement	None	None	None: e-file date 9/12/2006

3.2 Third Party Test Reports

This subsection lists the reports provided by third party entities that are relevant to the system being evaluated and the test engagement.

Table 3.2 Third Party Test Reports

Report Title	Description	Report No.	Issue Date
Change Release Report of the Sequoia AVC Advantage DRE Voting Machine (Firmware Version 10.3.5)	Wyle Laboratories Change Release Report for version 10.3.5	51884-11	09-18-06
Software Qualification Test Report Sequoia WinEDS 3.1.074, Version 1.1	Ciber, Inc. Qualification Test Report for Sequoia WinEDS 3.1.074	CIBER Version 1.1 061018	October 18, 2006

3.3 Previous Test Results

This subsection describes the results of any previous testing performed by the Department that are relevant to the re-examination and the system being evaluated.

Table 3.3 Previous Test Results

Report Title	Description	Revision	Issue Date
Sequoia Voting Systems, Inc. WinEDS Tabulation Software, Version 3.1.074 and Advantage Model D (Firmware 10.3.5; I/O Processor 10.3)	An Evaluation prepared for the Secretary of the Commonwealth of Pennsylvania by Michael Ian Shamos, Ph.D, J.D	---	November 1, 2006

4.0 TEST SPECIFICATIONS

This section contains a detailed description of the procedures to be followed during test setup and preparation.

The re-examination of the voting system will occur in an environmentally controlled room. The room will be configured such that the Department, the Examiner, and the voting system manufacturer have their own independent work areas. The public will be allowed to observe the examination, but may not comment or interact with either the employees of the Department, the Examiner, or the voting system manufacturer, at any time. The manufacturer will be allotted time and space to stage the voting system prior to the re-examination. This time and space will be determined between the Department and the manufacturer in advance of the examination date. Once the manufacturer informs the Department that the voting system is properly set up, the Examiner will provide the manufacturer with the firmware/software for the precinct tabulation device, submitted to the Department from the trusted source. The manufacturer will load the firmware/software on to the required media for installation onto the precinct tabulation device and install the firmware/software onto the precinct tabulation device before commencement of the re-examination. Once each precinct tabulation device is loaded with the firmware/software, the manufacturer will not be allowed access to the internal components of the devices without the consent of the Department or the Examiner. If the re-examination is suspended, the precinct tabulation devices will be secured in a manner to ensure control of the test environment. If, at any point, the Department or the Examiner determines that the control of the test environment has been compromised, all firmware/software will be reloaded on the precinct tabulation devices.

The voting system manufacturer shall set up the precinct tabulation devices as they would be in the precinct on Election Day, minus the locks and seals. The locks and seals will be installed and evaluated at a later time in the re-examination.

The Examiner will maintain photographic and written documentation of the re-examination. This will include, but is not limited to, photographs of the firmware/software installation, test execution notes and observations, photographs of the test setup, and collection of test data. The Department will video record the re-examination.

5.0 TEST PROCEDURES

This section contains a detailed description of the test sequence, test procedures and expected results.

The test cases for this re-examination are contained in Appendix B of this Test Protocol. All steps of the tests cases contain an expected result to provide objective pass/fail criteria. There are no dependencies for execution of the test cases. The test cases have been divided into four main areas for execution: (1) Review; (2) Targeted Functionality; (3) System Integration; and (4) Penetration Analysis. -The Review

area of this re-examination will not be performed on-site during the set dates of the re-examination. The Review area of testing includes documentation review of third-party reports and review of the manufacturer's TDP. All other areas of testing will be performed on-site during the re-examination. The test sequence for this re-examination will be as follows:

Review:

- 1107-A(11), 25 P.S. § 3031.7(11) Suitably Designed, Constructed in Workmanlike Manner of Durable Material, Safely and Efficiently Useable, Capable of Absolute Accuracy
- 1107-A(13), 25 P.S. § 3031.7(13) Record Correctly, Computes and Tabulates Accurately
- 1107-A(14), 25 P.S. § 3031.7(14) Safely Transportable
- 1107-A(15), 25 P.S. § 3031.7(15) Voter May Readily Learn to Operate

Targeted Functionality Test Cases:

- Test Case Identifier: 01 – 1107-A(1), 25 P.S. § 3031.7(1) Voter Secrecy (Regular Voter)
- Test Case Identifier: 01 – 1107-A(1), 25 P.S. § 3031.7(1) Voter Secrecy (ADA Voter)
- Test Case Identifier: 02 – 1107-A(2), 25 P.S. § 3031.7(2) Selection of Candidates and Questions by Voter (Regular/ADA)
- Test Case Identifier: 03 – 1107-A(3), 25 P.S. § 3031.7(3) Straight Party and Pennsylvania Method
- Test Case Identifier: 04 – 1107-A(4), 25 P.S. § 3031.7(4) Straight Party and Write-In
- Test Case Identifier: 05 – 1107-A(5), 25 P.S. § 3031.7(5) Selection of Candidate and Write-in
- Test Case Identifier: 07 – 1107-A(7), 25 P.S. § 3031.7(7) Attempt to Over Vote Contests and Questions (Regular/ADA)
- Test Case Identifier: 10 – 1107-A(10), 25 P.S. § 3031.7(10) Ballot Review and Change (Regular/ADA)
- Test Case Identifier: 16 – 1107-A(16), 25 P.S. § 3031.7(16) Public Counter, No Reopening of Polls, Media Security with Tamper Proof Locks and Zero Proof and Tally Reports

System Integration Test Cases:

- Test Case Identifier: 04, 06, 08, 09, Permanent Physical Record, and Statistical Sample – 1107-A(4), 25 P.S. § 3031.7(4) Enables Voting for Legal Combinations; 1107-A(6), 25 P.S. § 3031.7(6) Permits Voting for as Many Candidates as Entitled, Permits Voting For or Against Questions, Precludes Voting for Unauthorized Candidates or Questions; 1107-A(8), 25 P.S. § 3031.7(8) Precludes Multiple Voting and Tabulating Multiple Votes; 1107-A(9), 25 P.S. § 3031.7(9) Permits Voter at Primary to Vote Only for Candidates in Party of Registration, Any Candidate for Nonpartisan Nomination, and For Any Entitled Question; 1101-A, 25 P.S. § 3031.1 Provides for Permanent Physical Record of Each Vote Cast; and 1117-A, 25 P.S. § 3031.17 Statistical Sample

Penetration Analysis Test Cases:

- Test Case Identifier: 12 – 1107-A(12), 25 P.S. § 3031.7(12) Acceptable Ballot Security Procedures and Impoundment of Ballots

6.0 TEST DATA

This section contains a detailed description of the test election definitions and ballot logic being exercised.

The election definitions being used for this re-examination are provided in Appendix A of this Test Protocol. A predefined set of election parameters are included in the election definitions. Both the general election and the closed primary election definitions provide the voting variations, geographic subdivisions, parties, supported languages and test voting pattern with results being tested. The only languages required for this re-examination are English and Spanish. The Department provided the Spanish translation. Each test voting pattern provides the input method and device. For all Write-In selections, the name will be input as “John Doe.” For multiple Write-In selections, the name will be appended with the character “I” for the number of Write-In selections (*i.e.*, “John Doe I,” “John Doe II,” “John Doe III,” and “John Doe IIII” in a “Vote for Four” contest with four write-ins).

6.1 Data Recording

This subsection contains a detailed description of the procedures to be followed during test execution and data collection.

All test data produced during this re-examination is the property of the Department. The output test data will be collected and stored in an appropriate manner as to allow for data analysis. Actual results from executed tests will be recorded in real-time in Test Execution Logs.

6.2 Data Evaluation

The Examiner will evaluate all test results against the expected results set forth in the test cases provided in Appendix B. The acceptable range for system performance and the expected results is derived from the test designers experience and expertise. If an expected result is not achieved, an evaluation will be performed as to “why” the test or test step did not produce the expected results. This evaluation will consider test error, invalid expectations, and system performance. Failure to achieve the expected results does not constitute a test failure. A test failure only occurs when the “Criteria for Evaluation of Test Results,” as set forth in the test cases, are not achieved for a specific test.

APPENDIX A
ELECTION DEFINITIONS

Election Definition: Pennsylvania Certification Closed Primary Election

Primary Election Description:

A closed primary election for 2 parties in 3 precincts. This election contains 35 contests compiled into 6 ballot styles. Each ballot style contains 15 contests. The voting variations supported in a primary election by the Commonwealth of Pennsylvania are defined in this election. The voting variations are as follows:

- Partisan contest
- Non-Partisan
- Primary Presidential delegation nominations
- Write-In voting
- N of M Contest
- Cross-Party Filed Candidates

This closed primary election was designed to functionally test the handling of multiple ballot styles across geographical subdivisions, support for two languages, and support for common primary specific voting variations.

Configuration:

EMS computer loaded with software certified for use in Pennsylvania to create the following configuration:

Name: Pennsylvania Certification Closed Primary Election

Voting Devices: 1 machine for each precinct

Precincts: Precinct 1, Precinct 2, Precinct 3

Parties: Republican, Democrat

Languages: English, Spanish

Totals Contests: 35

Contests as follows:

Precinct 1 REP	Precinct 2 REP	Precinct 3 REP	Precinct 1 DEM	Precinct 2 DEM	Precinct 3 DEM
<p align="center">President of the United States Vote for One</p> <p>James Collins</p> <p>Alexander P. Bicket</p> <p>Carol Koethen</p> <p>Write-In</p>			<p align="center">President of the United States Vote for One</p> <p>Barry Josey</p> <p>Calvin Marino</p> <p>Write-In</p>		
<p align="center">United States Senator Vote for One</p> <p>Bob Ford <i>Allegheny County</i></p> <p>Colby Lincoln <i>Delaware County</i></p> <p>Write-In</p>			<p align="center">United States Senator Vote for One</p> <p>Oscar Draper <i>Cumberland County</i></p> <p>Carter McGaw <i>Philadelphia County</i></p> <p>Write-In</p>		
<p align="center">Representative in Congress 5th District Vote for One</p> <p>Ben Baker <i>Allegheny County</i></p>		<p align="center">Representative in Congress 10th District Vote for One</p> <p>Cheryl Simon</p>	<p align="center">Representative in Congress 5th District Vote for One</p> <p>Barbara Barret Hicks <i>Montgomery County</i></p>		<p align="center">Representative in Congress 10th District Vote for One</p> <p>William Sullivan</p>

Write-In	York County Lois Koss Erie County Write-In	Clinton Testo Centre County Write-In	Butler County Write-In
Governor Vote for One Dean Lindsey Allegheny County Don Etter Allegheny County Joe Carlton Washington County Edwin Lewis Lancaster County Samuel Lawton Bucks County Write-In		Governor Vote for One Charles Jasen Montgomery County Shirley Henning Luzerne County Write-In	
Lieutenant Governor Vote for One Scott Montes Berks County Saul Currier Lehigh County Arnold Krill Lycoming County Write-In		Lieutenant Governor Vote for One Sherman R. Bucher Philadelphia County Richard V. Suits Cambria County Tabathia Song Allegheny County Kenneth Interlicchio Philadelphia County Write-In	
Representative in the General Assembly 83 rd District Vote for One Harry Rider Cascade Robert Tyrell McNett Write-In	Representative in the General Assembly 84 th District Vote for One Peter Valle Muncy Write-In	Representative in the General Assembly 83 rd District Vote for One R. J. Abbott Shrewsbury Peter F. Saxton Willamsport Write-In	Representative in the General Assembly 84 th District Vote for One Neil Carey Lewis Saul Currier Eldred Write-In
Delegate to the National Convention –5th District Vote for Not More Than Three Gloria Dillion Heather Heidelbaugh Herbert Devine George A. Fisk Doris Shiddles Andre Ninia Brian Getz Chad Snow Diane Rubin		Delegate to the National Convention –5th District Electing 2 Males and 2 Females Vote Not More Than Four Vincent Seymour (M) Committed to Barry Josey Toni Hamilton (F) Committed to Calvin Marino Sam Patel (M) Committed to Barry Josey	

<p>Elizabeth Piazza</p> <p>Write-In Write-In Write-In</p>	<p>Robert Rocco <i>(M) Committed to Calvin Marino</i></p> <p>Renee Cohn Jubelrier <i>(F) Committed to Calvin Marino</i></p> <p>Morton Steele <i>(M) Committed to Calvin Marino</i></p> <p>Mary Burke <i>(F) Committed to Barry Josey</i></p> <p>Nyda E. Hambin <i>(F) Committed to Barry Josey</i></p> <p>Write-In Write-In Write-In Write-In</p>
<p align="center">Judge of the Superior Court Vote for One</p> <p>Richard Maxian <i>Philadelphia County</i></p> <p>Marjorie Hall <i>Delaware County</i></p> <p>Robert L. Linkey <i>Bucks County</i></p> <p>Write-In</p>	<p align="center">Judge of the Superior Court Vote for One</p> <p>Linda Gapp <i>Cumberland County</i></p> <p>Patricia Smallmon <i>Allegheny County</i></p> <p>Write-In</p>
<p align="center">Judge of the Commonwealth Court Vote for One</p> <p>Chris Carpenter <i>Montgomery County</i></p> <p>Write-In</p>	<p align="center">Judge of the Commonwealth Court Vote for One</p> <p>Eugene Ruff <i>Washington County</i></p> <p>Lewis Tese <i>Luzerne County</i></p> <p>Write-In</p>
<p align="center">Judge of the Court of Common Pleas Vote for Not More Than Two</p> <p>Mary L. Daniel <i>Armstrong</i></p> <p>John Roy <i>Clinton</i></p> <p>Jack "Duke" Brodsky <i>McNett</i></p> <p>Jon Young <i>Muncy</i></p> <p>Vic Stabile <i>Gamble</i></p> <p>Write-In Write-In</p>	<p align="center">Judge of the Court of Common Pleas Vote for Not More Than Two</p> <p>Joanne Shollzert <i>Williamsport</i></p> <p>Kerry Jones <i>Williamsport</i></p> <p>Steven Miller <i>Lewis</i></p> <p>Shirley Henning <i>Mill Creek</i></p> <p>Write-In Write-In</p>
<p align="center">County Chief Executive</p>	<p align="center">County Chief Executive</p>

<p>Four Year Term Vote for One</p> <p>Norman Powers <i>Williamsport</i></p> <p>Sandra Reilly <i>McNett</i></p> <p>Write-In</p>			<p>Four Year Term Vote for One</p> <p>Micheal Santarcangelo <i>Fairfield</i></p> <p>Charles Place <i>Gamble</i></p> <p>Write-In</p>		
<p>School Director Region 6 Four Year Term Vote for Not More Than Two</p> <p>Gerald Danson</p> <p>Greg Ortiz</p> <p>Shlomo Archibald</p> <p>Delores DeVan</p> <p>Write-In</p> <p>Write-In</p>			<p>School Director Region 6 Four Year Term Vote for Not More Than Two</p> <p>Douglas Stone</p> <p>Gerald Danson</p> <p>Greg Ortiz</p> <p>Shlomo Archibald</p> <p>Delores DeVan</p> <p>Write-In</p> <p>Write-In</p>		
<p>Commissioner Seat 1 Four Year Term Vote for One</p> <p>Stephen Harrick</p> <p>Write-In</p>	<p>Commissioner Seat 2 Four Year Term Vote for One</p> <p>Steve West</p> <p>Write-In</p>	<p>Commissioner Seat 3 Four Year Term Vote for One</p> <p>William Malicki</p> <p>Gary Klemann</p> <p>Write-In</p>	<p>Commissioner Seat 1 Four Year Term Vote for One</p> <p>George Fisk</p> <p>Write-In</p>	<p>Commissioner Seat 2 Four Year Term Vote for One</p> <p>Tetty Rogiers</p> <p>Write-In</p>	<p>Commissioner Seat 3 Four Year Term Vote for One</p> <p>Arnold Wells</p> <p>Write-In</p>
<p align="center">Referendum A Bond Issue</p> <p>To promote and assure the preservation and improvement of essential rail passenger and freight services to the inhabitants of the state, shall section two of chapter one hundred eighteen of the laws of nineteen hundred seventy-four, authorizing the creation of a state debt in the amount of two hundred fifty million dollars for capital facilities be approved?</p> <p>Yes</p> <p>No</p>					

Spanish

Distrito electoral 1 REP	Distrito electoral 2 REP	Distrito electoral 3 REP	Distrito electoral 1 DEM	Distrito electoral 2 DEM	Distrito electoral 3 DEM
<p align="center">Presidente de los Estados Unidos Vote por uno</p> <p>James Collins</p> <p>Alexander P. Bicket</p> <p>Carol Koethen</p>			<p align="center">Presidente de los Estados Unidos Vote por uno</p> <p>Barry Josey</p> <p>Calvin Marino</p> <p>Por escrito</p>		

Por escrito			
<p align="center">Senador de los Estados Unidos Vote por uno</p> <p>Bob Ford <i>Condado de Allegheny</i></p> <p>Colby Lincoln <i>Condado de Delaware</i></p> <p>Por escrito</p>		<p align="center">Senador de los Estados Unidos Vote por uno</p> <p>Oscar Draper <i>Condado de Cumberland</i></p> <p>Carter McGaw <i>Condado de Filadelfia</i></p> <p>Por escrito</p>	
<p align="center">Representante en el Congreso 5° Distrito Vote por uno</p> <p>Ben Baker <i>Condado de Allegheny</i></p> <p>Por escrito</p>	<p align="center">Representante en el Congreso 10.º Distrito Vote por uno</p> <p>Cheryl Simon <i>Condado de York</i></p> <p>Lois Koss <i>Condado de Erie</i></p> <p>Por escrito</p>	<p align="center">Representante en el Congreso 5° Distrito Vote por uno</p> <p>Barbara Barret Hicks <i>Condado de Montgomery</i></p> <p>Clinton Testo <i>Condado Centre</i></p> <p>Por escrito</p>	<p align="center">Representante en el Congreso 10.º Distrito Vote por uno</p> <p>William Sullivan <i>Condado de Butler</i></p> <p>Por escrito</p>
<p align="center">Gobernador Vote por uno</p> <p>Dean Lindsey <i>Condado de Allegheny</i></p> <p>Don Etter <i>Condado de Allegheny</i></p> <p>Joe Carlton <i>Condado de Washington</i></p> <p>Edwin Lewis <i>Condado de Lancaster</i></p> <p>Samuel Lawton <i>Condado de Bucks.</i></p> <p>Por escrito</p>		<p align="center">Gobernador Vote por uno</p> <p>Charles Jasen <i>Condado de Montgomery</i></p> <p>Shirley Henning <i>Condado de Luzerne</i></p> <p>Por escrito</p>	
<p align="center">Vicegobergador Vote por uno</p> <p>Scott Montes <i>Condado de Berks</i></p> <p>Saul Currier <i>Condado de Lehigh</i></p> <p>Arnold Krill <i>Condado de Lycoming</i></p> <p>Por escrito</p>		<p align="center">Vicegobergador Vote por uno</p> <p>Sherman R. Bucher <i>Condado de Filadelfia</i></p> <p>Richard V. Suits <i>Condado de Cambria</i></p> <p>Tabathia Song <i>Condado de Allegheny</i></p> <p>Kenneth Interlicchio <i>Condado de Filadelfia</i></p> <p>Por escrito</p>	
<p align="center">Representante en la Asamblea General 83.º Distrito Vote por uno</p>	<p align="center">Representante en la Asamblea General 84.º Distrito</p>	<p align="center">Representante en la Asamblea General 83.º Distrito Vote por uno</p>	<p align="center">Representante en la Asamblea General 84.º Distrito Vote por uno</p>

<p>Harry Rider <i>Cascade</i></p> <p>Robert Tyrell <i>McNett</i></p> <p>Por escrito</p>	<p>Vote por uno</p> <p>Peter Valle <i>Muncy</i></p> <p>Por escrito</p>	<p>R. J. Abbott <i>Shrewsbury</i></p> <p>Peter F. Saxton <i>Willamsport</i></p> <p>Por escrito</p>	<p>Neil Carey <i>Lewis</i></p> <p>Saul Currier <i>Eldred</i></p> <p>Por escrito</p>
<p>Delegado a la convención nacional – 5.º Distrito No vote por no más de tres</p> <p>Gloria Dillion Heather Heidelbaugh Herbert Devine George A. Fisk Doris Shiddles Andre Ninia Brian Getz Chad Snow Diane Rubin Elizabeth Piazza</p> <p>Write-In Write-In Write-In</p>		<p>Delegado a la convención nacional – 5.º Distrito Elija 2 damas y 2 caballeros No vote por más de cuatro</p> <p>Vincent Seymour <i>(H) Committed to Barry Josey</i></p> <p>Toni Hamilton <i>(M) Committed to Calvin Marino</i></p> <p>Sam Patel <i>(H) Committed to Barry Josey</i></p> <p>Robert Rocco <i>(H) Committed to Calvin Marino</i></p> <p>Renee Cohn Jubelrier <i>(M) Committed to Calvin Marino</i></p> <p>Morton Steele <i>(H) Committed to Calvin Marino</i></p> <p>Mary Burke <i>(M) Committed to Barry Josey</i></p> <p>Nyda E. Hambin <i>(M) Committed to Barry Josey</i></p> <p>Write-In Write-In Write-In Write-In</p>	
<p>Juez de la corte suprema Vote por uno</p> <p>Richard Maxian <i>Condado de Filadelfia</i></p> <p>Marjorie Hall <i>Condado de Delaware</i></p> <p>Robert L. Linkey <i>Condado de Bucks.</i></p> <p>Write-In</p>		<p>Juez de la corte suprema Vote por uno</p> <p>Linda Gapp <i>Condado de Cumberland</i></p> <p>Patricia Smallmon <i>Condado de Allegheny</i></p> <p>Write-In</p>	
<p>Juez de la corte del estado Vote por uno</p> <p>Chris Carpenter <i>Condado de Montgomery</i></p> <p>Write-In</p>		<p>Juez de la corte del estado Vote por uno</p> <p>Eugene Ruff <i>Condado de Washington</i></p> <p>Lewis Tese <i>Condado de Luzerne</i></p> <p>Write-In</p>	
<p>Juez de la corte de primeras instancias Vote por no más de dos</p>		<p>Juez de la corte de primeras instancias No vote por más de dos</p>	

Mary L. Daniel <i>Armstrong</i> John Roy <i>Clinton</i> Jack "Duke" Brodisky <i>McNett</i> Jon Young <i>Muncy</i> Vic Stabile <i>Gamble</i> Por escrito Por escrito			Joanne Shollzert <i>Williamsport</i> Kerry Jones <i>Williamsport</i> Steven Miller <i>Lewis</i> Shirley Henning <i>Mill Creek</i> Por escrito Por escrito		
<p style="text-align: center;">Jefe principal del condado Término de cuatro años Vote por uno</p> Norman Powers <i>Williamsport</i> Sandra Reilly <i>McNett</i> Por escrito			<p style="text-align: center;">Jefe principal del condado Término de cuatro años Vote por uno</p> Micheal Santarcangelo <i>Fairfield</i> Charles Place <i>Gamble</i> Por escrito		
<p style="text-align: center;">Director de la escuela Región 6 Término de cuatro años No vote por más de dos</p> Gerald Danson Greg Ortiz Shlomo Archibald Delores DeVan Por escrito Por escrito			<p style="text-align: center;">Director de la escuela Región 6 Término de cuatro años No vote por más de dos</p> Douglas Stone Gerald Danson Greg Ortiz Shlomo Archibald Delores DeVan Por escrito Por escrito		
<p style="text-align: center;">Comisionado Puesto 1 Término de cuatro años Vote por uno</p> Stephen Harrick Por escrito	<p style="text-align: center;">Comisionado Puesto 2 Término de cuatro años Vote por uno</p> Steve West Por escrito	<p style="text-align: center;">Comisionado Puesto 3 Término de cuatro años Vote por uno</p> William Malicki Gary Klemann Por escrito	<p style="text-align: center;">Comisionado Puesto 1 Término de cuatro años Vote por uno</p> George Fisk Por escrito	<p style="text-align: center;">Comisionado Puesto 2 Término de cuatro años Vote por uno</p> Tetty Rogiers Por escrito	<p style="text-align: center;">Comisionado Puesto 3 Término de cuatro años Vote por uno</p> Arnold Wells Por escrito
<p>Referéndum a nivel estatal</p> <p>Asunto del bono</p> <p>Para promover y asegurar la preservación y mejoramiento del pasajero férreo esencial y servicios de carga para los habitantes del estado, ¿se</p>					

debe aprobar la sección dos del capítulo ciento dieciocho de las leyes de mil novecientos sesenticuatro, autorizando la creación de una deuda estatal en la cantidad de doscientos cincuenta millones de dólares para instalaciones de capital?

Sí

No

Voting Pattern:

Precinct 1 REP	B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11	B 12	B 13	B 14	B 15	B 16	B 17	B 18	B 19	B 20
President of the United States																				
James Collins	X				X	X		X		X		X		X		U	X	X		X
Alexander P. Bicket		X					X								X				X	
Carol Koethen			X						X		X									
Write-In				X									X							
United States Senator																				
Bob Ford			X				X		X				X		X				X	
Colby Lincoln	X	X		X	X			X		X	X	X		X		X		X		X
Write-In						X											X			
Representative in Congress 5th District																				
Ben Baker	X	X	X	X	U		X	X	X	X		X	X		X	X		X	X	X
Write-In						X				X				X				X		
Governor																				
Dean Lindsey				X			X				X		X			X				
Don Etter			X		X							X			X			X		
Joe Carlton	X					X			X	X				X			X			X
Edwin Lewis		X																	X	
Samuel Lawton							X													
Write-In																				
Lieutenant Governor																				
Scott Montes					X					X						X		U	X	
Saul Currier				X					X					X						X
Arnold Krill	X		X			X	X	X			X	X	X		X					
Write-In		X																X		
Representative in the General Assembly 83rd District																				
Harry Rider	X	X		X		X		X	X		X		X		X		X		X	X
Robert Tyrell			X				X			X		X		X		X				
Write-In					X													X		
Presidential Nomination Delegation																				
Gloria Dillion	X	X		X		X		X	X	X	X		X		X	X		X	X	X
Heather Heidelbaugh		X			X					X		X			X	X			X	X
Herbert Devine		X	X	X			X	X	X	X		X	X	X	X	U			X	X
George A. Fisk	X				X								X						X	
Doris Shiddles			X						X			X								
Andre Ninia							X							X					X	
Brian Getz	X		X	X																
Chad Snow							X							X						
Diane Rubin							X													
Elizabeth Piazza					X															
Write-In						X												X		
Write-In						X												X		
Write-In																		X		
Judge of the Superior Court																				
Richard Maxian					X		X		U		X			X						X
Marjorie Hall		X				X							X		X					X
Robert L. Linkey	X			X				X		X		X				X	X	X		
Write-In			X																	
Judge of the Commonwealth Court																				
Chris Carpenter	X	X	X	X	X	U	X	X	X	X		X	X	X	U	X	X	X	X	X
Write-In										X										
Judge of the Court of Common Pleas																				

Mary L. Daniel	X	X		X		X		X	X	X			X		X	X	U	X	X	
John Roy		X						U		X							U	X		
Jack "Duke" Brodisky	X		X	X	X		X		X	X			X	X		X			X	
Jon Young			X				U				X	X			X					X
Vic Stabile					X									X						X
Write-In						X						X								
Write-In																				
County Chief Executive																				
Norman Powers	X		X	X		X	X	X		X		X	X	U				X	X	X
Sandra Reilly		X			X				X		X				X	X				
Write-In																	X			
School Director Region 6																				
Gerald Danson	X		X	X		X		X		X				X	X	U	X		X	X
Greg Ortiz	X				X		X			X		X	X			U				
Shlomo Archibald		X	X	X	X		X	X	X	X	X		X			X			X	X
Delores DeVan		X				X			X			X		X				X		
Write-In																		X		
Write-In																				
Commissioner Seat 1																				
Stephen Harrick	U	X	X	X	X		X	X	X	X	X	X	X	U	X	X		X	X	X
Write-In						X											X			
Referendum A																				
Yes	U		X	X	X		X	X		X	X	X	X	U	X	U	X			X
No		X				X			X									X	X	

Precinct 1 DEM	B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11	B 12	B 13	B 14	B 15	B 16	B 17	B 18	B 19	B 20
President of the United States																				
Barry Josey	X	U				X					X		X				X		X	
Calvin Marino			X	X	X			X	X	X		X		X	X	X		X		X
Write-In							X													
United States Senator																				
Oscar Draper	X		X	X	X	X		X		X	X		X		X	X		X		X
Carter McGaw		X					X		X					X			X		X	
Write-In												X								
Representative in Congress 5th District																				
Barbara Barret Hicks	X	X	X		X		X		X		X	X		X	X	X		X		X
Clinton Testo				X				X		X			X				X		X	
Write-In						X														
Governor																				
Charles Jasen	X		X	X	X		X				X		X	X	X		X	X		X
Shirley Henning		X				X		X	X			X				X			X	
Write-In										X										
Lieutenant Governor																				
Sherman R. Bucher				X									X							X
Richard V. Suits							X						X					X		
Tabathia Song	X								X					X		X				
Kenneth Interlicchio		X	X		X	X		X			X				X		X		X	
Write-In										X										
Representative in the General Assembly 83rd District																				
R. J. Abbott	X	X		X		X		X		U		X	X	X		X		X	X	X
Peter F. Saxton			X		X				X		X				X		X			
Write-In							X													
Presidential Nomination Delegation																				
Vincent Seymour			U		X		X		X			X	X			X		U	X	X
Toni Hamilton	X	X		X		X		X		X	X		X	X			X			X
Sam Patel					X		X		X	U		X	X		X	X			X	X
Robert Rocco	X	X		X	U	X		X		U	X			X	X	X		X		X
Renee Cohn Jubelrier	X	X		X	U	X		X		U	X			X	X		X			
Morton Steele	X	U		X		X		X			X			X	X		X			

Mary Burke							X		X			X				X			X
Nyda E. Hambin							X					X				X			X
Write-In									X	X									
Write-In										X									
Write-In										X									
Write-In										X									
Judge of the Superior Court																			
Linda Gapp				X				X		X		U			X		X		X
Patricia Smallmon	X	X	X		X	X			X	X		X		X	X		X		X
Write-In							X												
Judge of the Commonwealth Court																			
Eugene Ruff			X	X		X	X	X	X		X		X	X		U		X	X
Lewis Tese	X	X			X					X		X			X		X		X
Write-In																			
Judge of the Court of Common Pleas																			
Joanne Shollzert	X		X	X	X	X		X		X		X		X	X		X	U	X
Kerry Jones	X	X		X	X		X	X	X		X	X		X		X	X	U	X
Steven Miller		X				X				X		U		X		X			X
Shirley Henning			X				X							X		X			X
Write-In										X									
Write-In																			
County Chief Executive																			
Micheal Santarcangelo	X		X	X	X		X	X	X		X		X		X	X		X	X
Charles Place		X				X				X		X		X			X		X
Write-In																			
School Director Region 6																			
Douglas Stone		X		X					X		X		X			X	X		
Gerald Danson	X		X	X			X	X	X	X		X		X	X	X	X		X
Greg Ortiz		X			X					X				X		X		X	X
Shlomo Archibald	X		X		X	X	X			X		X		X	X			X	X
Delores DeVan						X		X				X							
Write-In																			
Write-In																			
Commissioner Seat 1																			
George Fisk	X	X	X	X	X	X	X	X	X	X	X	X	X	U	X	X	X	X	X
Write-In																			
Referendum A																			
Yes	X		X	X	X		X	U			U	X	X	X		X	X	X	X
No		X				X			X	X					X			X	

Precinct 2 REP	B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11	B 12	B 13	B 14	B 15	B 16	B 17	B 18	B 19	B 20
President of the United States																				
James Collins	X	X			X		X		X		X	X	X		X	X		X	U	
Alexander P. Bicket			X			X								X						X
Carol Koethen				X				X									X			
Write-In										X										
United States Senator																				
Bob Ford		X						X		X	X					X		X		X
Colby Lincoln	X		X		X	X	X		X			X	X	X	X		X		X	X
Write-In				X																
Representative in Congress 5th District																				
Ben Baker	X	U	U		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Write-In				X		X														
Governor																				
Dean Lindsey				X			X				X		X			X				
Don Etter			X		X							X			X			X		
Joe Carlton	X					X			X	X				X			X			X
Edwin Lewis		X																	X	
Samuel Lawton							X													
Write-In																				
Lieutenant Governor																				
Scott Montes	X							X			X							X		

Saul Currier		X					X		X				X		X					
Arnold Krill			X	X	X				X			X		X	X			X	X	
Write-In						X					X									
Representative in the General Assembly 83rd District																				
Harry Rider	X	X	X		X	X		X	X	X		X	X		X	X	X			
Robert Tyrell				X			X		X			X			X			X		
Write-In																			X	
Presidential Nomination Delegation																				
Gloria Dillion	X	X	X				X	X		X	U		X	X		X	X		X	
Heather Heidelbaugh	X		X							X	U		X		X	X		X	X	
Herbert Devine	X			X	X		X	U		X	U		X				X		X	
George A. Fisk		X						U				X							X	
Doris Shiddles		X			X												X		X	
Andre Ninia			X									X						X	X	
Brian Getz				X	X								X	X		X				
Chad Snow				X		X						X								
Diane Rubin					X				X						X					
Elizabeth Piazza					X	X									X			X		
Write-In									X											
Write-In									X											
Write-In																				
Judge of the Superior Court																				
Richard Maxian				X						X			X		X			X		
Marjorie Hall		X				X					X			X					X	
Robert L. Linkey	X		X		X		X	X	X			X				X			X	
Write-In																	X			
Judge of the Commonwealth Court																				
Chris Carpenter	X	U	X	X	X	X	X	X	X	X	X	X	X	X	U	X	X	X	X	
Write-In																			X	
Judge of the Court of Common Pleas																				
Mary L. Daniel		X	X	X		X	X	X	X	X	X		X			X		X	X	
John Roy	X	X							X	X				X			X			
Jack "Duke" Brodisky	X		X		X	X			X	X			X	X			X	X	X	
Jon Young				X									X		X	X				
Vic Stabile				X		X						X				X				
Write-In																				
Write-In																				
County Chief Executive																				
Norman Powers	X				X	X		X	X		X		X	X	U		X		X	
Sandra Reilly		X	X	X			X			X		X				X		X		
Write-In																				
School Director Region 6																				
Gerald Danson	U	X		X	X			X	X	X		X		X	X	X		X	X	
Greg Ortiz	U	X	X			X			X	X			X	X					X	
Shlomo Archibald			X	X	X					X	X	X		X	X	X	X		X	
Delores DeVan						X					X		X						X	
Write-In							X										X			
Write-In							U													
Commissioner Seat 2																				
Steve West	X		X	X	X	X	X	X	U	X	X		X	X	X		X	X	X	
Write-In		X										X				X			X	
Referendum A																				
Yes	U		X	X	X	X	X	X	U		X	X	X	X	X	X	X	X	X	
No		X								X									X	
Precinct 2 DEM																				
	B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11	B 12	B 13	B 14	B 15	B 16	B 17	B 18	B 19	B 20
President of the United States																				
Barry Josey	X	X		X		X		X		X	U		X		X		X		X	
Calvin Marino			X		X		X					X			X		X		X	
Write-In								X					X							
United States Senator																				
Oscar Draper	X		X	X			X			X		X	X	X	U		X		X	

Carter McGaw		X			X			X		X					X		X	X	
Write-In						X			X										
Representative in Congress 5th District																			
Barbara Barret Hicks			X	X	X		X	X	X	X		X	X		X		X	X	X
Clinton Testo		X				X					X			X					X
Write-In	X														X				
Governor																			
Charles Jasen	X	X	X		X	X			X	X	X	X	X	X	X		X		
Shirley Henning				X				X		X				X		X		X	
Write-In							X												X
Lieutenant Governor																			
Sherman R. Bucher		X						X						X		X		X	
Richard V. Suits										X									
Tabathia Song			X				X						X						X
Kenneth Interlicchio	X			X	X	X			X				X		X		X		X
Write-In										X									
Representative in the General Assembly 83rd District																			
R. J. Abbott	X	X		X	X	X		X	X	X	X	U		X	X		X	X	X
Peter F. Saxton			X				X			X			X						
Write-In															X				
Presidential Nomination Delegation																			
Vincent Seymour		X		X		X		X			U			X		X		X	
Toni Hamilton	X		X		X	X	X		X	X	U	X	X	X	X	X	U	X	X
Sam Patel		X		X		X		X		X	U			X		X		U	X
Robert Rocco	X		X		X	X	X	U	X	X	U	X	X		X	X	U	X	X
Renee Cohn Jubelrier	X		X		X		X	U	X	X				X		X			
Morton Steele	X		X		X		X		X						X	X		X	X
Mary Burke		X		X										X	X				
Nyda E. Hambin		X		X										X	X				
Write-In											X	X							
Write-In											X	X							
Write-In																			
Write-In																			
Judge of the Superior Court																			
Linda Gapp		X				X		X				X			X			X	X
Patricia Smallmon	X		X	X	X		X		X	X			X	X	X	X			
Write-In										X							X		
Judge of the Commonwealth Court																			
Eugene Ruff	X	X		X	X		X	X	X			X		X	U			X	
Lewis Tese			X			X				X	X		X				X	X	X
Write-In														X					
Judge of the Court of Common Pleas																			
Joanne Shollzert	X	X	X		X	X		X	X	X		X	X	U	X		X		X
Kerry Jones	X	X		X	X	U	X		X				X	U		X	X	X	X
Steven Miller			X				X			X	X			X			X		X
Shirley Henning				X				X			X				X				X
Write-In																			
Write-In																			
County Chief Executive																			
Micheal Santarcangelo	X		X		X	X	X		X			X	X		X	X	X	U	X
Charles Place		X		X				X		X	X			X					X
Write-In																			
School Director Region 6																			
Douglas Stone		X					U		X				X			X			
Gerald Danson		X		X		X	U	X	X	X		X	X		X	X			X
Greg Ortiz	X		X						X	X				X	X				X
Shlomo Archibald			X	X		X		X			X	X		X	X		X	X	X
Delores DeVan	X				X											X	X		
Write-In					X														
Write-In																			
Commissioner Seat 2																			

Tetty Rogiers	X	X	X	X	U	X	X	X	X	X	X		X	X	X	X	U	X	X	X
Write-In													X							
Referendum A																				
Yes	X	X	U	X	U		U	X	X		U	X	U		X	X	U		U	
No						X				X				X				X		X
Precinct 3 REP																				
	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
President of the United States																				
James Collins	X	X		U		X		X		X		X		X		X			X	X
Alexander P. Bicket					X		X			X				X			X			
Carol Koethen			X						X			X						X		
Write-In															X					
United States Senator																				
Bob Ford	U					X			X		X				X				X	
Colby Lincoln		X		X	X		X	X		X		X		X		X	X			X
Write-In			X										X					X		
Representative in Congress 10th District																				
Cheryl Simon		X		X					X		X				X			X	X	
Lois Koss	X		X		X	X	X	X		X		X	X	X		X				X
Write-In																	X			
Governor																				
Dean Lindsey				X			X				X		X			X				
Don Etter			X		X							X			X			X		
Joe Carlton	X					X			X	X				X			X			X
Edwin Lewis		X																	X	
Samuel Lawton								X												
Write-In																				
Lieutenant Governor																				
Scott Montes	X		X			X		X				X	X		X		X	X		
Saul Currier				X						X									X	
Arnold Krill		X			X		X		X					X		X				X
Write-In											X									
Representative in the General Assembly 84th District																				
Peter Valle	X	X	X	X	U	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Write-In								X							X		X		X	
Presidential Nomination Delegation																				
Gloria Dillion	X				X	U	X			X				X		X				
Heather Heidelbaugh	X					U		X	X		X					X			X	
Herbert Devine	X				X	U	X			X					X	X				
George A. Fisk		X			X		X			X			X		X			X		X
Doris Shiddles		X										X			X		X	X		
Andre Ninia		X		X				X				X					X	X	X	
Brian Getz			X					X		X			X							X
Chad Snow			X	X					X	X			X	X	X					
Diane Rubin			X										X						X	
Elizabeth Piazza				X														X		X
Write-In										X										
Write-In																				
Write-In																				
Judge of the Superior Court																				
Richard Maxian			X				X			X	X					X				X
Marjorie Hall					X			X						X					X	
Robert L. Linkey	X	X		X		X			X			X	X				X	X		
Write-In															X					
Judge of the Commonwealth Court																				
Chris Carpenter	U	X	X		X	X	X	X	U	X	X	X	X	X	X	X	X	X	U	X
Write-In				X																
Judge of the Court of Common Pleas																				
Mary L. Daniel		U	X	X	X		X	X	X	X				X			X	X		X
John Roy		U		X					X		X				X				X	
Jack "Duke" Brodisky	X		X		X	X		X		X	X	X	X	X				X	X	

Write-In	4
Undervotes	1
Governor	
Dean Lindsey	5
Don Etter	5
Joe Carlton	7
Edwin Lewis	2
Samuel Lawton	1
Write-In	0
Undervotes	0
Lieutenant Governor	
Scott Montes	4
Saul Currier	4
Arnold Krill	9
Write-In	2
Undervotes	1
Representative in the General Assembly 83rd District	
Harry Rider	12
Robert Tyrell	6
Write-In	2
Undervotes	0
Presidential Nomination Delegation	
Gloria Dillion	14
Heather Heidelbaugh	8
Herbert Devine	13
George A. Fisk	4
Doris Shiddles	4
Andre Ninia	3
Brian Getz	3
Chad Snow	2
Diane Rubin	1
Elizabeth Piazza	2
Write-In	5
Undervotes	1
Judge of the Superior Court	
Richard Maxian	5
Marjorie Hall	5
Robert L. Linkey	8
Write-In	1
Undervotes	1
Judge of the Commonwealth Court	
Chris Carpenter	17
Write-In	1
Undervotes	2
Judge of the Court of Common Pleas	
Mary L. Daniel	12
John Roy	3
Jack "Duke" Brodisky	11
Jon Young	5
Vic Stabile	3
Write-In	2
Undervotes	4
County Chief Executive	
Norman Powers	12
Sandra Reilly	6
Write-In	1
Undervotes	1
School Director Region 6	

Gerald Danson	11
Greg Ortiz	6
Shlomo Archibald	14
Delores DeVan	6
Write-In	1
Undervotes	2
Commissioner Seat 1	
Stephen Harrick	16
Write-In	2
Undervotes	2
Referendum A	
Yes	12
No	5
Undervote	3
Precinct 1 DEM	
President of the United States	
Barry Josey	6
Calvin Marino	12
Write-In	1
Undervotes	1
United States Senator	
Oscar Draper	13
Carter McGaw	6
Write-In	1
Undervotes	0
Representative in Congress 5th District	
Barbara Barret Hicks	13
Clinton Testo	6
Write-In	1
Undervotes	0
Governor	
Charles Jasen	12
Shirley Henning	7
Write-In	1
Undervotes	0
Lieutenant Governor	
Sherman R. Bucher	3
Richard V. Suits	3
Tabathia Song	4
Kenneth Interlicchio	9
Write-In	1
Undervotes	0
Representative in the General Assembly 83rd District	
R. J. Abbott	12
Peter F. Saxton	6
Write-In	1
Undervotes	1
Presidential Nomination Delegation	
Vincent Seymour	8
Toni Hamilton	10
Sam Patel	9
Robert Rocco	11
Renee Cohn Jubelrier	9
Morton Steele	8
Mary Burke	5
Nyda E. Hambin	4
Write-In	5
Undervotes	11

Judge of the Superior Court

Linda Gapp	6
Patricia Smallmon	12
Write-In	1
Undervotes	1

Judge of the Commonwealth Court

Eugene Ruff	11
Lewis Tese	8
Write-In	0
Undervotes	1

Judge of the Court of Common Pleas

Joanne Shollzert	12
Kerry Jones	13
Steven Miller	6
Shirley Henning	5
Write-In	1
Undervotes	3

County Chief Executive

Micheal Santarcangelo	13
Charles Place	7
Write-In	0
Undervotes	0

School Director Region 6

Douglas Stone	7
Gerald Danson	13
Greg Ortiz	6
Shlomo Archibald	11
Delores DeVan	3
Write-In	0
Undervotes	0

Commissioner Seat 1

George Fisk	19
Write-In	0
Undervotes	1

Referendum A

Yes	12
No	6
Undervote	2

Precinct 2 REP**President of the United States**

James Collins	11
Alexander P. Bicket	4
Carol Koethen	3
Write-In	1
Undervotes	1

United States Senator

Bob Ford	7
Colby Lincoln	12
Write-In	1
Undervotes	0

Representative in Congress 5th District

Ben Baker	16
Write-In	2
Undervotes	2

Governor

Dean Lindsey	5
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Don Etter	5
Joe Carlton	7
Edwin Lewis	2
Samuel Lawton	1
Write-In	0
Undervotes	0

Lieutenant Governor

Scott Montes	4
Saul Currier	5
Arnold Krill	9
Write-In	2
Undervotes	0

Representative in the General Assembly 83rd District

Harry Rider	13
Robert Tyrell	6
Write-In	1
Undervotes	0

Presidential Nomination Delegation

Gloria Dillion	11
Heather Heidelbaugh	8
Herbert Devine	8
George A. Fisk	3
Doris Shiddles	4
Andre Ninia	4
Brian Getz	5
Chad Snow	3
Diane Rubin	3
Elizabeth Piazza	4
Write-In	5
Undervotes	2

Judge of the Superior Court

Richard Maxian	5
Marjorie Hall	5
Robert L. Linkey	9
Write-In	1
Undervotes	0

Judge of the Commonwealth Court

Chris Carpenter	17
Write-In	1
Undervotes	2

Judge of the Court of Common Pleas

Mary L. Daniel	13
John Roy	6
Jack "Duke" Brodisky	13
Jon Young	4
Vic Stabile	4
Write-In	0
Undervotes	0

County Chief Executive

Norman Powers	11
Sandra Reilly	8
Write-In	0
Undervotes	1

School Director Region 6

Gerald Danson	12
Greg Ortiz	8
Shlomo Archibald	11
Delores DeVan	4
Write-In	2
Undervotes	3

Commissioner Seat 2	
Steve West	15
Write-In	4
Undervotes	1
Referendum A	
Yes	15
No	3
Undervote	2
Precinct 2 DEM	
President of the United States	
Barry Josey	11
Calvin Marino	6
Write-In	2
Undervotes	1
United States Senator	
Oscar Draper	10
Carter McGaw	7
Write-In	2
Undervotes	1
Representative in Congress 5th District	
Barbara Barret Hicks	13
Clinton Testo	5
Write-In	2
Undervotes	0
Governor	
Charles Jasen	12
Shirley Henning	6
Write-In	2
Undervotes	0
Lieutenant Governor	
Sherman R. Bucher	5
Richard V. Suits	1
Tabathia Song	4
Kenneth Interlicchio	9
Write-In	1
Undervotes	0
Representative in the General Assembly 83rd District	
R. J. Abbott	14
Peter F. Saxton	4
Write-In	1
Undervotes	1
Presidential Nomination Delegation	
Vincent Seymour	7
Toni Hamilton	13
Sam Patel	9
Robert Rocco	13
Renee Cohn Jubelrier	8
Morton Steele	9
Mary Burke	4
Nyda E. Hambin	4
Write-In	4
Undervotes	9
Judge of the Superior Court	
Linda Gapp	7
Patricia Smallmon	11
Write-In	2
Undervotes	0

Judge of the Commonwealth Court

Eugene Ruff	10
Lewis Tese	8
Write-In	1
Undervotes	1

Judge of the Court of Common Pleas

Joanne Shollzert	13
Kerry Jones	11
Steven Miller	8
Shirley Henning	5
Write-In	0
Undervotes	3

County Chief Executive

Micheal Santarcangelo	12
Charles Place	7
Write-In	0
Undervotes	1

School Director Region 6

Douglas Stone	3
Gerald Danson	12
Greg Ortiz	7
Shlomo Archibald	11
Delores DeVan	4
Write-In	1
Undervotes	2

Commissioner Seat 2

Tetty Rogiers	17
Write-In	1
Undervotes	2

Referendum A

Yes	8
No	5
Undervote	7

Precinct 3 REP**President of the United States**

James Collins	9
Alexander P. Bicket	5
Carol Koethen	4
Write-In	1
Undervotes	1

United States Senator

Bob Ford	5
Colby Lincoln	11
Write-In	3
Undervotes	1

Representative in Congress 10th District

Cheryl Simon	7
Lois Koss	12
Write-In	1
Undervotes	0

Governor

Dean Lindsey	5
Don Etter	5
Joe Carlton	7
Edwin Lewis	2
Samuel Lawton	1
Write-In	0
Undervotes	0

Lieutenant Governor

Scott Montes	9
Saul Currier	3
Arnold Krill	7
Write-In	1
Undervotes	0

Representative in the General Assembly 84rd District

Peter Valle	15
Write-In	4
Undervotes	1

Presidential Nomination Delegation

Gloria Dillion	6
Heather Heidelbaugh	6
Herbert Devine	6
George A. Fisk	8
Doris Shiddles	5
Andre Ninia	7
Brian Getz	5
Chad Snow	7
Diane Rubin	3
Elizabeth Piazza	3
Write-In	1
Undervotes	3

Judge of the Superior Court

Richard Maxian	6
Marjorie Hall	4
Robert L. Linkey	9
Write-In	1
Undervotes	0

Judge of the Commonwealth Court

Chris Carpenter	16
Write-In	1
Undervotes	3

Judge of the Court of Common Pleas

Mary L. Daniel	11
John Roy	5
Jack "Duke" Brodisky	12
Jon Young	5
Vic Stabile	3
Write-In	2
Undervotes	2

County Chief Executive

Norman Powers	12
Sandra Reilly	8
Write-In	0
Undervotes	0

School Director Region 6

Gerald Danson	10
Greg Ortiz	7
Shlomo Archibald	16
Delores DeVan	7
Write-In	0
Undervotes	0

Commissioner Seat 3

William Malicki	13
Gary Klemann	6
Write-In	0
Undervotes	1

Referendum A

Yes	12
No	5

Undervote	3
Precinct 3 DEM	
President of the United States	
Barry Josey	7
Calvin Marino	11
Write-In	2
Undervotes	0
United States Senator	
Oscar Draper	11
Carter McGaw	8
Write-In	1
Undervotes	0
Representative in Congress 10th District	
William Sullivan	17
Write-In	2
Undervotes	1
Governor	
Charles Jasen	11
Shirley Henning	7
Write-In	1
Undervotes	1
Lieutenant Governor	
Sherman R. Bucher	7
Richard V. Suits	2
Tabathia Song	3
Kenneth Interlicchio	6
Write-In	1
Undervotes	1
Representative in the General Assembly 84rd District	
Neil Carey	14
Saul Currier	5
Write-In	1
Undervotes	0
Presidential Nomination Delegation	
Vincent Seymour	8
Toni Hamilton	11
Sam Patel	9
Robert Rocco	11
Renee Cohn Jubelrier	9
Morton Steele	8
Mary Burke	5
Nyda E. Hambin	4
Write-In	2
Undervotes	13
Judge of the Superior Court	
Linda Gapp	6
Patricia Smallmon	13
Write-In	1
Undervotes	0
Judge of the Commonwealth Court	
Eugene Ruff	13
Lewis Tese	7
Write-In	0
Undervotes	0
Judge of the Court of Common Pleas	
Joanne Shollzert	13
Kerry Jones	13

Steven Miller	6
Shirley Henning	4
Write-In	3
Undervotes	1
County Chief Executive	
Micheal Santarcangelo	14
Charles Place	5
Write-In	1
Undervotes	0
School Director Region 6	
Douglas Stone	7
Gerald Danson	11
Greg Ortiz	5
Shlomo Archibald	11
Delores DeVan	5
Write-In	1
Undervotes	0
Commissioner Seat 3	
Arnold Wells	19
Write-In	1
Undervotes	0
Referendum A	
Yes	10
No	10
Undervote	0
Precinct 3 Non Partisan	
Referendum A	
Yes	2
No	2
Undervote	1
Cumulative Totals REP:	
President of the United States	
James Collins	30
Alexander P. Bicket	13
Carol Koethen	10
Write-In	4
Undervote	3
United States Senator	
Bob Ford	18
Colby Lincoln	35
Write-In	6
Undervote	1
Representative in Congress 5th District	
Ben Baker	31
Write-In	6
Undervote	3
Representative in Congress 10th District	
Cheryl Simon	7
Lois Koss	12
Write-In	1
Undervote	0
Governor	
Dean Lindsey	15
Don Etter	15
Joe Carlton	21

Edwin Lewis	6
Samuel Lawton	3
Write-In	0
Undervotes	0
Lieutenant Governor	
Scott Montes	17
Saul Carrier	12
Arnold Krill	25
Write-In	5
Undervotes	1
Representative in the General Assembly 83rd District	
Harry Rider	25
Robert Tyrell	12
Write-In	3
Undervotes	0
Representative in the General Assembly 84rd District	
Peter Valle	15
Write-In	4
Undervotes	1
Presidential Nomination Delegation	
Gloria Dillion	31
Heather Heidelbaugh	22
Herbert Devine	27
George A. Fisk	15
Doris Shiddles	13
Andre Ninia	14
Brian Getz	13
Chad Snow	12
Diane Rubin	7
Elizabeth Piazza	9
Write-In	11
Undervotes	6
Judge of the Superior Court	
Richard Maxian	16
Marjorie Hall	14
Robert L. Linkey	26
Write-In	3
Undervotes	1
Judge of the Commonwealth Court	
Chris Carpenter	50
Write-In	3
Undervotes	7
Judge of the Court of Common Pleas	
Mary L. Daniel	36
John Roy	14
Jack "Duke" Brodisky	36
Jon Young	14
Vic Stabile	10
Write-In	4
Undervotes	6
County Chief Executive	
Norman Powers	35
Sandra Reilly	22
Write-In	1
Undervotes	2
School Director Region 6	
Gerald Danson	33
Greg Ortiz	21
Shlomo Archibald	41
Delores DeVan	17

Write-In	3
Undervotes	5
Commissioner Seat 1 REP	
Stephen Harrick	16
Write-In	2
Undervotes	2
Commissioner Seat 2 REP	
Steve West	15
Write-In	4
Undervotes	1
Commissioner Seat 3 REP	
William Malicki	13
Gary Klemann	6
Write-In	0
Undervotes	1
Referendum A REP	
Yes	39
No	13
Undervote	8

Cumulative Totals DEM:

President of the United States

Barry Josey	24
Calvin Marino	29
Write-In	5
Undervotes	2

United States Senator

Oscar Draper	34
Carter McGaw	21
Write-In	4
Undervotes	1

Representative in Congress 5th District

Barbara Barret Hicks	26
Clinton Testo	11
Write-In	3
Undervotes	0

Representative in Congress 10th District

William Sullivan	17
Write-In	2
Undervotes	1

Governor

Charles Jasen	35
Shirley Henning	20
Write-In	4
Undervotes	1

Lieutenant Governor

Sherman R. Bucher	15
Richard V. Suits	6
Tabathia Song	11
Kenneth Interlicchio	24
Write-In	3
Undervotes	1

Representative in the General Assembly 83rd District

R. J. Abbott	26
Peter F. Saxton	10
Write-In	2

Undervotes	2
Representative in the General Assembly 84rd District	
Neil Carey	14
Saul Currier	5
Write-In	1
Undervotes	0
Presidential Nomination Delegation	
Vincent Seymour	23
Toni Hamilton	34
Sam Patel	27
Robert Rocco	35
Renee Cohn Jubelrier	26
Morton Steele	25
Mary Burke	14
Nyda E. Hambin	12
Write-In	11
Undervotes	33
Judge of the Superior Court	
Linda Gapp	19
Patricia Smallmon	36
Write-In	4
Undervotes	1
Judge of the Commonwealth Court	
Eugene Ruff	34
Lewis Tese	23
Write-In	1
Undervotes	2
Judge of the Court of Common Pleas	
Joanne Shollzert	38
Kerry Jones	37
Steven Miller	20
Shirley Henning	14
Write-In	4
Undervotes	7
County Chief Executive	
Micheal Santarcangelo	39
Charles Place	19
Write-In	1
Undervotes	1
School Director Region 6	
Douglas Stone	17
Gerald Danson	36
Greg Ortiz	18
Shlomo Archibald	33
Delores DeVan	12
Write-In	2
Undervotes	2
Commissioner Seat 1 DEM	
George Fisk	19
Write-In	0
Undervotes	1
Commissioner Seat 2 DEM	
Tetty Rogiers	17
Write-In	1
Undervotes	2
Commissioner Seat 3 DEM	
Arnold Wells	19

Write-In	1
Undervotes	0
Referendum A DEM	
Yes	30
No	21
Undervote	9

Cumulative Totals Non Partisan:	
Referendum A	
Yes	2
No	2
Undervote	1

Election Definition: Pennsylvania Certification General Election

General Election Description:

A general election combining presidential year contests, non-presidential year contests, and municipal contests into a single election held in 3 precincts one of which is a split precinct on the “Representative in the General Assembly” contests. This election contains 21 contests compiled into 4 ballot styles (excluding language styles). 15 of the contests are in all ballot styles. The other 6 are split between at least 2 of the precincts with a maximum of 21 different contests spread across the 3 precincts. All voting variations supported by the Commonwealth of Pennsylvania are defined in this election. The voting variations are as follows:

- Partisan contest
- Non-Partisan contest
- N of M contest
- Referendum contest
- Retention Contest
- Straight Party voting
- Write-In voting
- Split Precinct
- Cross-Party Nominated

This general election was designed to functionally test the handling of multiple ballot styles across geographical subdivisions, support for English and Spanish languages, support for all Pennsylvania voting variations, and audio support for English and Spanish.

Configuration:

EMS computer loaded with software certified for use in Pennsylvania to create the following configuration:

Name: Pennsylvania Certification General Election

Voting Devices: 1 machine for each precinct

Precincts: Precinct 1, Precinct 2 split into 2a and 2b, Precinct 3

Parties: Republican, Democratic, Green, Libertarian

Languages: English, Spanish

Totals Contests: 21

Contests as follows:

Precinct 1	Precinct 2a	Precinct 2b	Precinct 3
Straight Party			
Republican			
Democratic			
Green			
Libertarian			
President/Vice President of the United States			
Vote for the Candidate of One Party for President and Vice President or insert the names of candidates			
James Collins			
Arthur Remus			

<p><i>Republican</i></p> <p>Calvin Marino Keith Satterwhite <i>Democratic</i></p> <p>John P. Defazio Louis Denn <i>Green</i></p> <p>June Perkins David Heroux <i>Libertarian</i></p> <p>Write-In</p>	
<p align="center">United States Senator Vote for One</p> <p>Colby Lincoln <i>Republican</i></p> <p>Oscar Draper <i>Democratic</i></p> <p>Eric Sheely <i>Libertarian</i></p> <p>Write-In</p>	
<p align="center">Representative in Congress 5th District Vote for One</p> <p>Ben Baker <i>Republican</i></p> <p>Barbara Barrett Hicks <i>Democratic</i></p> <p>Write-In</p>	<p align="center">Representative in Congress 10th District Vote for One</p> <p>Lois Koss <i>Republican</i></p> <p>William Sullivan <i>Democratic</i></p> <p>Write-In</p>
<p align="center">Governor/Lieutenant Governor Vote for the Candidate of One Party for Governor and Lieutenant Governor</p> <p>Joe Carlton Arnold Krill <i>Republican</i></p> <p>Charles Jasen Kenneth Interlicchio <i>Democratic</i></p> <p>Robert Marsh Theodore Kopp <i>Green</i></p> <p>Write-In</p>	
<p align="center">Representative in the General Assembly 83rd District Vote for One</p> <p>Harry Rider <i>Republican</i></p> <p>R. J. Abbott <i>Democratic</i></p>	<p align="center">Representative in the General Assembly 84th District Vote for One</p> <p>Peter Valle <i>Republican</i></p> <p>Neil Carey <i>Democratic</i></p>

<p>Derek Carlson <i>Libertarian</i></p> <p>Write-In</p>	<p>Write-In</p>
<p style="text-align: center;">Judge of the Superior Court Vote for One</p> <p>Robert L. Linkey <i>Republican</i></p> <p>Patricia Smallmon <i>Democratic</i></p> <p>Write-In</p>	
<p style="text-align: center;">Judge of the Commonwealth Court Vote for One</p> <p>Chris Carpenter <i>Republican</i></p> <p>Eugene Ruff <i>Democratic</i></p> <p>Write-In</p>	
<p style="text-align: center;">Judge of the Court of Common Pleas Vote for Not More Than Two</p> <p>Mary L. Daniel <i>Republican</i></p> <p>Jack "Duke" Brodisky <i>Republican</i></p> <p>Joanne Schollzert <i>Democratic</i></p> <p>Kerry Jones <i>Democratic</i></p> <p>Write-In</p> <p>Write-In</p>	
<p style="text-align: center;">County Chief Executive Four Year Term Vote for One</p> <p>Norman Powers <i>Republican</i></p> <p>Micheal Santarcangelo <i>Democratic</i></p> <p>Write-In</p>	
<p style="text-align: center;">County Controller Four Year Term Vote for One</p> <p>Paul M Bertel-Lincoln <i>Republican</i></p>	

Donna Berke <i>Democratic</i> Write-In		
District Attorney Four Year Term Vote for One		
Franklin Margo <i>Republican</i> Donald Hensley <i>Democratic</i> Write-In		
School Director Region 6 Four Year Term Vote for Not More Than Two		
Gerald Danson <i>Republican/Democratic</i> Shlomo Archibald <i>Republican/Democratic</i> Write-In Write-In		
Commissioner Seat 1 Four Year Term Vote for One Stephen Harrick <i>Republican</i> George Fisk <i>Democratic</i> Write-In	Commissioner Seat 2 Four Year Term Vote for One Steve West <i>Republican</i> Tetty Rogiers <i>Democratic</i> Write-In	Commissioner Seat 3 Four Year Term Vote for One William Malicki <i>Republican</i> Arnold Wells <i>Democratic</i> Write-In
Statewide Referendum Water and Sewer Improvements Bond Referendum		
Do you favor the incurring of indebtedness by the Commonwealth of \$400,000,000 for grants and loans to municipalities and public utilities for the cost of all labor, materials, necessary operational machinery and equipment, lands, property, rights and easements, plans and specifications, surveys, estimates of costs and revenues, prefeasibility studies, engineering and legal services and all other expenses necessary or incident to the acquisition, construction, improvement, expansion, extension, repair or rehabilitation of all or part of the drinking water system, storm water, nonpoint source projects, nutrient credits and wastewater treatment system projects? Yes No		
Retention of Tony Grzanich		
Shall Tony Grzanich be retained for an additional term as Justice of the Supreme Court of the Commonwealth of Pennsylvania? Yes		

No

Retention of Debbie Marks

Shall Debbie Marks be retained for an additional term as Justice of the Supreme Court of the Commonwealth of Pennsylvania?

Yes

No

Spanish

Distrito electoral 1	Distrito electoral 2a	Distrito electoral 2b	Distrito electoral 3
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Partido íntegro

Republicano

Demócrata

Verde

Libertario

Presidente/Vicepresidente de los Estados Unidos

Vote para el candidato de un partido para presidente y vicepresidente o inserte los nombres de los candidatos

James Collins
Arthur Remus
Republicano

Calvin Marino
Keith Satterwhite
Demócrata

John P. Defazio
Louis Denn
Verde

June Perkins
David Heroux
Libertario

Por escrito

Senador de los Estados Unidos

Vote por uno

Colby Lincoln
Republicano

Oscar Draper
Demócrata

Eric Sheely
Libertario

Por escrito

Representante en el Congreso

5° Distrito
Vote por uno

Ben Baker
Republicano

Representante en el

Congreso
10.º Distrito
Vote por uno

Lois Koss

Barbara Barret Hicks <i>Demócrata</i> Por escrito	<i>Republicano</i> William Sullivan <i>Demócrata</i> Por escrito
<p style="text-align: center;">Gobernador/vicegobernador Vote para el candidato de un partido para gobernador y vicegobernador</p> Joe Carlton Arnold Krill <i>Republicano</i> Charles Jasen Kenneth Interlicchio <i>Demócrata</i> Robert Marsh Theodore Kopp <i>Verde</i> Por escrito	
<p style="text-align: center;">Representante en la Asamblea General 83.º Distrito Vote por uno</p> Harry Rider <i>Republicano</i> R. J. Abbott <i>Demócrata</i> Derek Carlson <i>Libertario</i> Por escrito	<p style="text-align: center;">Representante en la Asamblea General 84.º Distrito Vote por uno</p> Peter Valle <i>Republicano</i> Neil Carey <i>Demócrata</i> Por escrito
<p style="text-align: center;">Juez de la corte suprema Vote por uno</p> Robert L. Linkey <i>Republicano</i> Patricia Smallmon <i>Demócrata</i> Por escrito	
<p style="text-align: center;">Juez de la corte del estado Vote por uno</p> Chris Carpenter <i>Republicano</i> Eugene Ruff <i>Demócrata</i> Por escrito	
<p style="text-align: center;">Juez de la corte de primeras instancias No vote por más de dos</p> Mary L. Daniel	

<p><i>Republicano</i></p> <p>Jack "Duke" Brodisky <i>Republicano</i></p> <p>Joanne Schollzert <i>Demócrata</i></p> <p>Kerry Jones <i>Demócrata</i></p> <p>Por escrito</p> <p>Por escrito</p>
<p align="center">Jefe principal del condado Término de cuatro años Vote por uno</p> <p>Norman Powers <i>Republicano</i></p> <p>Micheal Santarcangelo <i>Demócrata</i></p> <p>Por escrito</p>
<p align="center">Contralor del condado Término de cuatro años Vote por uno</p> <p>Paul M Bertel-Lincoln <i>Republicano</i></p> <p>Donna Berke <i>Demócrata</i></p> <p>Por escrito</p>
<p align="center">Procurador del distrito Término de cuatro años Vote por uno</p> <p>Franklin Margo <i>Republicano</i></p> <p>Donald Hensley <i>Demócrata</i></p> <p>Por escrito</p>
<p align="center">Director de la escuela Región 6 Término de cuatro años No vote por más de dos</p> <p>Gerald Danson <i>Republicano/Demócrata</i></p> <p>Shlomo Archibald <i>Republicano/Demócrata</i></p> <p>Por escrito</p> <p>Por escrito</p>

Comisionado Puesto 1 Término de cuatro años Vote por uno	Comisionado Puesto 2 Término de cuatro años Vote por uno	Comisionado Puesto 3 Término de cuatro años Vote por uno
Stephen Harrick <i>Republicano</i>	Tetty Rogiers <i>Republicano</i>	William Malicki <i>Republicano</i>
George Fisk <i>Demócrata</i>	Steve West <i>Demócrata</i>	Arnold Wells <i>Demócrata</i>
Por escrito	Por escrito	Por escrito

Referendum a nivel estatal
Referéndum de bono de mejoramientos de agua y drenaje

¿Está usted a favor de incurrir un endeudamiento por el Estado de \$400,000,000 por subvenciones y prestamos a municipalidades y servicios públicos por el cotos de toda la mano de obra, materiales, maquinaria operacional necesaria y equipo, tierras, propiedad, derechos y servidumbres, planos y especificación, encuestas, calculo de costos e ingresos, estudios de previabilidad, servicios de legales y de ingeniería y todos los gastos necesarios o incidente a la adquisición, construcción, mejora, expansión, extensión, reparación o rehabilitación de todo o parte del sistema de agua potable, agua pluviales, proyectos de recurso sin punto, créditos de nutrientes y proyectos de sistemas de tratamiento de aguas negras?

Sí

No

Retención de Tony Grzanich

¿Debe Tony Grzanich ser retenido por un término adicional como magistrado de la corte suprema del Estado de Pennsylvania?

Sí

No

Retención de Debbie Marks

¿Debe Debbie Marks ser retenida por un término adicional como magistrada de la corte suprema del Estado de Pennsylvania?

Sí

No

Voting Pattern:
 Ballots will be voted and cast with the following pattern. Ballots 3 and 13 will be input using the alternative language option. Ballots 10 and 18 will be input using the ADA audio capability. Ballots 5 and 10 in Precinct 1 and Ballot 10 in Precinct 3 will exercise the Pennsylvania Method for straight party.

The following test pattern will be input for the given precinct:

Precinct 1	B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11	B 12	B 13	B 14	B 15	B 16	B 17	B 18	B 19	B 20
Straight Party																				
Republican	X		X		P	U	U		U		U	U	U	U		U	U	U	U	U
Democratic		X		X						P										
Green																				
Libertarian								X							X					
President/Vice President of the United States																				
James Collins						X			X		X	X					X			U
Arthur Remus																				
Calvin Marino							X						X	X		X		X		
Keith Satterwhite																				
John P. Defazio																				

Louis Denn																			
June Perkins							X											X	
David Heroux																			
Write-In																			X
United States Senator																			
Colby Lincoln							X											X	
Oscar Draper							X				X	X					X	X	X
Eric Sheely							X												
Write-In								X											X
Representative in Congress 5th District																			
Ben Baker							X	X				U				X	X		X
Barbara Barrett Hicks									X			X						X	
Write-In								X									X		
Governor/Lieutenant Governor																			
Joe Carlton								X	X			X	X				X	X	
Arnold Krill																			X
Charles Jasen							X										X		X
Kenneth Interlicchio																			
Robert Marsh																			
Theodore Kopp																			
Write-In							X												
Representative in the General Assembly 83rd District																			
Harry Rider												X	X				X	X	X
R. J. Abbott							X		X										X
Derek Carlson									X							X			
Write-In								X									X		
Judge of the Superior Court																			
Robert L. Linkey							X	X				U				X			
Patricia Smallmon								X	X				X	X			X	X	
Write-In																			X
Judge of the Commonwealth Court																			
Chris Carpenter								X	X				X	X					
Eugene Ruff							X	X					X			X	X		
Write-In													X						X
Judge of the Court of Common Pleas																			
Mary L. Daniel							X					X	X	X			X	X	X
Jack "Duke" Brodsky							X	X				X						X	X
Joanne Schollzert								X	X				X	X	X	X	X		
Kerry Jones								X	X				X	X	X				
Write-In								X	P										
Write-In									U										
County Chief Executive																			
Norman Powers							X	X				X			U	X		X	
Micheal Santarcangelo								X	X			X				X		X	
Write-in																			X
County Controller																			
Paul M Bertel-Lincoln								U				X	X	X			X	U	
Donna Berke									X						X				X
Write-In									X						X				
District Attorney																			
Franklin Margo							X					X			X		X	X	
Donald Hensley								X				X			X				X
Write-In								X				X							X
School Director Region 6																			
Gerald Danson							X	X				X	X	X	U			X	X
Shlomo Archibald							X	X	X			X	X	U	U			X	X
Write-In									X	X								X	
Write-In																		U	
Commissioner Seat 1																			
Stephen Harrick								X	X	X		X	X			X			X
George Fisk							X					X			X				
Write-in																			X

Statewide Referendum																				
Yes			X	U	X						X		X	X	X	U				
No	X	X				X	X	X	X	X		X					X	X	X	
Retention of Tony Grzanich																				
Yes	X	X			X	X		X		X	X	X	X		X			U	X	
No			X	X			X	X						X		X	X		X	
Retention of Debbie Marks																				
Yes		X		X	X	X			X	X	X	X	X		X	U	U		X	
No	X		X				X	X						X	X			X	X	
Precinct 2a																				
	B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11	B 12	B 13	B 14	B 15	B 16	B 17	B 18	B 19	B 20
Straight Party																				
Republican	X	X	X		U	U	U		U	P	U	U	U	U		U	U	U	U	U
Democratic				X																
Green																				
Libertarian								X							X					
President/Vice President of the United States																				
James Collins					X	X	X				X	X				X	X	X	X	
Arthur Remus																				
Calvin Marino									X				X	X						
Keith Satterwhite																				
John P. Defazio																				
Louis Denn																				
June Perkins								X							X					
David Heroux																				
Write-In																				X
United States Senator																				
Colby Lincoln					X		X				X	X		X			X	X		X
Oscar Draper						X			X				X						X	
Eric Sheely								X							X					
Write-In																X				
Representative in Congress 5 th District																				
Ben Baker					X	X	X		X		X			X	U	X	X	X		
Barbara Barrett								X				X							X	X
Hicks																				
Write-In													X							
Governor/Lieutenant Governor																				
Joe Carlton					X		X	X	X			X			U	X	X		X	X
Arnold Krill																				
Charles Jasen						X					X		X					X		
Kenneth Interlicchio																				
Robert Marsh																				
Theodore Kopp																				
Write-In														X						
Representative in the General Assembly 83 rd District																				
Harry Rider					X	X			X					X		X	X			X
R. J. Abbott							X				X	X	X					X	X	
Derek Carlson								X							X					
Write-In																				
Judge of the Superior Court																				
Robert L. Linkey						U	X		X			X	X	X				X	X	X
Patricia Smallmon					X						X				X	X	X			
Write-In								X												
Judge of the Commonwealth Court																				
Chris Carpenter					X	X	X		X		X	X		X		X		U	X	
Eugene Ruff								X					X				X			X
Write-In															X					
Judge of the Court of Common Pleas																				
Mary L. Daniel					X	X	X	X		X		X	X	X			X	X		
Jack "Duke" Brodisky					X	X			X		U		X		X	X				
Joanne Schollzert							X		X	P							X		X	X
Kerry Jones								X		P			X				X			X

President/Vice President of the United States																	
James Collins					X			X	X			X	X		X	X	X
Arthur Remus																	
Calvin Marino					X					X							
Keith Satterwhite																	
John P. Defazio												X		X			
Louis Denn																	
June Perkins						X											X
David Heroux																	
Write-In																	
United States Senator																	
Colby Lincoln						X		X			X	X	X	X	X	X	X
Oscar Draper					X				X						X		
Eric Sheely							X										X
Write-In																	
Representative in Congress 10th District																	
Lois Koss					X		X	X	X		X		X	X		U	X
William Sullivan						X					X				X		
Write-In												X					
Governor/Lieutenant Governor																	
Joe Carlton					X	X		X			X			X		X	X
Arnold Krill																	
Charles Jasen							X				X					X	X
Kenneth Interlicchio																	
Robert Marsh												X		X			
Theodore Kopp																	
Write-In								X				X					
Representative in the General Assembly 84th District																	
Peter Valle					X		X	X	X		X		X		U	X	
Neil Carey						X					X		X				X
Write-In																	X
Judge of the Superior Court																	
Robert L. Linkey					X	X		X			X	X		X	X	X	X
Patricia Smallmon							X	X					X				X
Write-In											X						
Judge of the Commonwealth Court																	
Chris Carpenter					X			X			X		X	X		X	X
Eugene Ruff						X	X		X			X			X		
Write-In										X							
Judge of the Court of Common Pleas																	
Mary L. Daniel					X								U	X	X		X
Jack "Duke" Brodisky					X	X	X	X				X	X	U	X	X	X
Joanne Schollzert						X	X		X	X		U				X	
Kerry Jones							X	X		X						X	
Write-In									P		X	X					
Write-In										U							
County Chief Executive																	
Norman Powers						X		X	X		X		X	X		X	X
Micheal Santarcangelo					X		X				X		X		X		X
Write-in																	
County Controller																	
Paul M Bertel-Lincoln					U		U	X	X		X			X	X	X	X
Donna Berke						X					X		X			X	
Write-In											X						
District Attorney																	
Franklin Margo							X				X		U			X	X
Donald Hensley					X	X		X	X			X		X	X		X
Write-In											X						
School Director Region 6																	
Gerald Danson					X	X	X	X	X		X	X	U	X	X	U	X
Shlomo Archibald					X	X	X	X	X		X	X	U	X		X	X
Write-In										X					X		
Write-In																	

Commissioner Seat 3																				
William Malicki						X	X	X				X	X		X		X	U	X	
Arnold Wells					X				X					X		X				X
Write-in											X									
Statewide Referendum																				
Yes	X				X			X		U		X			X				U	X
No		X	X	X		X	X		X		X		X	X		X	X	X		
Retention of Tony Grzanich																				
Yes	X	X	X		X	X		X	X	X		X	X		X			X	X	
No				X			X	X				X			X			X		
Retention of Debbie Marks																				
Yes		X		X		X		X	X	X	X	X							X	X
No	X		X		X		X		X				X	X	X	X	X	X		

Test Results:

Precinct 1:

Straight Party

Republican	3
Democratic	3
Green	0
Libertarian	2
Undervote	12

President/Vice President of the United States

James Collins	
Arthur Remus	8
Calvin Marino	
Keith Satterwhite	8
John P .Defazio	
Louis Denn	0
June Perkins	
David Heroux	2
Write-In	1
Undervote	1

United States Senator

Colby Lincoln	6
Oscar Draper	11
Eric Sheely	1
Write-In	2
Undervote	0

Representative in Congress District 5

Ben Baker	10
Barbara Barrett-Hicks	7
Write-In	2
Undervote	1

Governor/Lieutenant Governor

Joe Carlton	
Arnold Krill	12
Charles Jasen	
Kenneth Interlicchio	7
Robert Marsh	
Theodore Kopp	0
Write-In	1
Undervote	0

Representative in the General Assembly District 83

Harry Rider	8
R.J. Abbott	7
Derek Carlson	2
Write-In	3
Undervote	0

Judge of Superior Court	
Robert L. Linkey	7
Patricia Smallmon	11
Write-In	1
Undervote	1
Judge of the Commonwealth Court	
Chris Carpenter	8
Eugene Ruff	9
Write-In	3
Undervote	0
Judge of the Court of Common Pleas	
Mary L. Daniel	11
Jack "Duke" Brodisky	10
Joanne Scholzert	9
Kerry jones	7
Write-In	2
Undervote	1
County Chief Executive	
Norman Powers	8
Micheal Santarcangelo	9
Write-In	2
Undervote	1
County Controller	
Paul M. Bertel-Lincoln	8
Donna Berke	8
Write-In	2
Undervote	2
District Attorney	
Franklin Margo	9
Donald Hensley	8
Write-In	3
Undervote	0
School Director Region 6	
Gerald Danson	15
Shlomo Archibald	14
Write-In	7
Undervote	4
Commissioner Seat 1	
Stephen Harrick	13
George Fisk	6
Write-In	1
Undervote	0
Statewide Referendum	
Yes	6
No	12
Undervote	2
Retention of Tony Grzanich	
Yes	11
No	8
Undervote	1
Retention of Debbie Marks	
Yes	11
No	7
Undervote	2
Precinct 2a:	
Straight Party	
Republican	4
Democratic	1

Green	0
Libertarian	2
Undervote	13
President/Vice President of the United States	
James Collins	
Arthur Remus	13
Calvin Marino	
Keith Satterwhite	4
John P. Defazio	
Louis Denn	0
June Perkins	
David Heroux	2
Write-In	1
Undervote	0
United States Senator	
Colby Lincoln	12
Oscar Draper	5
Eric Sheely	2
Write-In	1
Undervote	0
Representative in Congress District 5	
Ben Baker	13
Barbara Barrett-Hicks	5
Write-In	1
Undervote	1
Governor/Lieutenant Governor	
Joe Carlton	
Arnold Krill	13
Charles Jasen	
Kenneth Interlicchio	5
Robert Marsh	
Theodore Kopp	0
Write-In	1
Undervote	1
Representative in the General Assembly District 83	
Harry Rider	11
R.J. Abbott	7
Derek Carlson	2
Write-In	0
Undervote	0
Judge of Superior Court	
Robert L. Linkey	12
Patricia Smallmon	6
Write-In	1
Undervote	1
Judge of the Commonwealth Court	
Chris Carpenter	13
Eugene Ruff	5
Write-In	1
Undervote	1
Judge of the Court of Common Pleas	
Mary L. Daniel	13
Jack "Duke" Brodisky	9
Joanne Scholzert	7
Kerry Jones	6
Write-In	4
Undervote	1
County Chief Executive	
Norman Powers	13
Micheal Santarcangelo	5
Write-In	1

Undervote	1
County Controller	
Paul M. Bertel-Lincoln	11
Donna Berke	7
Write-In	0
Undervote	2
District Attorney	
Franklin Margo	9
Donald Hensley	10
Write-In	1
Undervote	0
School Director Region 6	
Gerald Danson	17
Shlomo Archibald	15
Write-In	5
Undervote	3
Commissioner Seat 2	
Steve West	11
Tetty Rogiers	6
Write-In	1
Undervote	2
Statewide Referendum	
Yes	6
No	12
Undervote	2
Retention of Tony Grzanich	
Yes	15
No	3
Undervote	2
Retention of Debbie Marks	
Yes	15
No	4
Undervote	1
Precinct 2b:	
Straight Party	
Republican	1
Democratic	4
Green	3
Libertarian	1
Undervote	11
President/Vice President of the United States	
James Collins	
Arthur Remus	10
Calvin Marino	
Keith Satterwhite	7
John P. Defazio	
Louis Denn	2
June Perkins	
David Heroux	1
Write-In	0
Undervote	0
United States Senator	
Colby Lincoln	11
Oscar Draper	6
Eric Sheely	1
Write-In	1
Undervote	1

Representative in Congress District 5

Ben Baker	8
Barbara Barrett-Hicks	10
Write-In	1
Undervote	1

Governor/Lieutenant Governor

Joe Carlton	
Arnold Krill	8
Charles Jasen	
Kenneth Interlicchio	8
Robert Marsh	
Theodore Kopp	3
Write-In	1
Undervote	0

Representative in the General Assembly District 84

Peter Valle	10
Neil Carey	9
Write-In	1
Undervote	0

Judge of Superior Court

Robert L. Linkey	11
Patricia Smallmon	8
Write-In	1
Undervote	0

Judge of the Commonwealth Court

Chris Carpenter	9
Eugene Ruff	8
Write-In	2
Undervote	1

Judge of the Court of Common Pleas

Mary L. Daniel	9
Jack "Duke" Brodisky	7
Joanne Scholzert	9
Kerry Jones	8
Write-In	4
Undervote	3

County Chief Executive

Norman Powers	10
Micheal Santarcangelo	8
Write-In	1
Undervote	1

County Controller

Paul M. Bertel-Lincoln	11
Donna Berke	8
Write-In	0
Undervote	1

District Attorney

Franklin Margo	4
Donald Hensley	16
Write-In	0
Undervote	0

School Director Region 6

Gerald Danson	17
Shlomo Archibald	18
Write-In	2
Undervote	3

Commissioner Seat 2

Steve West	13
Tetty Rogiers	6
Write-In	1

Undervote	0
Statewide Referendum	
Yes	9
No	11
Undervote	0
Retention of Tony Grzanich	
Yes	14
No	5
Undervote	1
Retention of Debbie Marks	
Yes	13
No	6
Undervote	1
Precinct 3:	
Straight Party	
Republican	4
Democratic	1
Green	2
Libertarian	2
Undervote	11
President/Vice President of the United States	
James Collins	
Arthur Remus	13
Calvin Marino	
Keith Satterwhite	3
John P. Defazio	
Louis Denn	2
June Perkins	
David Heroux	2
Write-In	0
Undervote	0
United States Senator	
Colby Lincoln	13
Oscar Draper	5
Eric Sheely	2
Write-In	0
Undervote	0
Representative in Congress District 10	
Lois Koss	14
William Sullivan	4
Write-In	1
Undervote	1
Governor/Lieutenant Governor	
Joe Carlton	
Arnold Krill	11
Charles Jasen	
Kenneth Interlicchio	5
Robert Marsh	
Theodore Kopp	2
Write-In	2
Undervote	0
Representative in the General Assembly District 84	
Peter Valle	12
Neil Carey	6
Write-In	1
Undervote	1
Judge of Superior Court	
Robert L. Linkey	14

Patricia Smallmon	5
Write-In	1
Undervote	0
Judge of the Commonwealth Court	
Chris Carpenter	13
Eugene Ruff	6
Write-In	1
Undervote	0
Judge of the Court of Common Pleas	
Mary L. Daniel	9
Jack "Duke" Brodisky	14
Joanne Scholzert	6
Kerry jones	4
Write-In	3
Undervote	4
County Chief Executive	
Norman Powers	13
Micheal Santarcangelo	7
Write-In	0
Undervote	0
County Controller	
Paul M. Bertel-Lincoln	12
Donna Berke	5
Write-In	1
Undervote	2
District Attorney	
Franklin Margo	9
Donald Hensley	9
Write-In	1
Undervote	1
School Director Region 6	
Gerald Danson	17
Shlomo Archibald	18
Write-In	2
Undervote	3
Commissioner Seat 3	
William Malicki	12
Arnold Wells	6
Write-In	1
Undervote	1
Statewide Referendum	
Yes	6
No	12
Undervote	2
Retention of Tony Grzanich	
Yes	14
No	6
Undervote	0
Retention of Debbie Marks	
Yes	10
No	10
Undervote	0
Cumulative Totals:	
Straight Party	
Republican	12
Democratic	9
Green	5

Libertarian	7
Undervote	47
President/Vice President of the United States	
James Collins	
Arthur Remus	44
Calvin Marino	
Keith Satterwhite	22
John P. Defazio	
Louis Denn	4
June Perkins	
David Heroux	7
Write-In	2
Undervote	1
United States Senator	
Colby Lincoln	42
Oscar Draper	27
Eric Sheely	6
Write-In	4
Undervote	1
Representative in Congress District 5	
Ben Baker	31
Barbara Barrett-Hicks	22
Write-In	4
Undervote	3
Representative in Congress District 10	
Lois Koss	14
William Sullivan	4
Write-In	1
Undervote	1
Governor/Lieutenant Governor	
Joe Carlton	
Arnold Krill	44
Charles Jasen	
Kenneth Interlicchio	25
Robert Marsh	
Theodore Kopp	5
Write-In	5
Undervote	1
Representative in the General Assembly District 83	
Harry Rider	19
R.J. Abbott	14
Derek Carlson	4
Write-In	3
Undervote	0
Representative in the General Assembly District 84	
Peter Valle	22
Neil Carey	15
Write-In	2
Undervote	1
Judge of Superior Court	
Robert L. Linkey	44
Patricia Smallmon	30
Write-In	4
Undervote	2
Judge of the Commonwealth Court	
Chris Carpenter	43
Eugene Ruff	28
Write-In	7
Undervote	2
Judge of the Court of Common Pleas	

Mary L. Daniel	42
Jack "Duke" Brodisky	40
Joanne Scholzert	31
Kerry Jones	25
Write-In	13
Undervote	9
County Chief Executive	
Norman Powers	44
Micheal Santarcangelo	29
Write-In	4
Undervote	3
County Controller	
Paul M. Bertel-Lincoln	42
Donna Berke	28
Write-In	3
Undervote	7
District Attorney	
Franklin Margo	31
Donald Hensley	43
Write-In	5
Undervote	1
School Director Region 6	
Gerald Danson	66
Shlomo Archibald	65
Write-In	16
Undervote	13
Commissioner Seat 1	
Stephen Harrick	13
George Fisk	6
Write-In	1
Undervote	0
Commissioner Seat 2	
Steve West	24
Tetty Rogiers	12
Write-In	2
Undervote	2
Commissioner Seat 3	
William Malicki	12
Arnold Wells	6
Write-In	1
Undervote	1
Statewide Referendum	
Yes	27
No	47
Undervote	6
Retention of Tony Grzanich	
Yes	54
No	22
Undervote	4
Retention of Debbie Marks	
Yes	49
No	27
Undervote	4

APPENDIX B
TEST CASES

Test Case Identifier: 01 – 25 P.S. § 3031.7(1) Voter Secrecy (ADA Voter)	
PA ST 25 P.S. § 3031.7 Requirement:	<i>(1) Provides for voting in absolute secrecy and prevents any person from seeing or knowing for whom any voter, except one who has received or is receiving assistance as prescribed by law, has voted or is voting.</i>
Test Objective: To determine if a voters selections using an ADA input device can be observed during the act of voting or once a vote has been cast.	Test Configuration: Precinct tabulation device configured as described for normal election day operation by Pennsylvania procedures and/or the device manufacturer for an ADA voter. A marker is placed 12 feet (measured from the lowest point of the devices voting surface to the floor) directly behind the center of the voting device. From that marker, another marker is placed 12 feet to the right side and the left side. The side distance observation points should be approximately 17 feet. See Step 1000 for a layout diagram. The ADA voter will be positioned in the center of the tabulation device with a site line of 4 feet. See Step 1001.
Test Equipment:	Standard 15+ foot tape measure
Special Procedural Requirements:	Two roles are required for this test case. An ADA Voter role and an Observer role. The ADA Voter will be positioned with a line of site at 48 inches. The observation must be made by an individual between the heights of 68 inches and 71 inches.
Assumptions:	An election is loaded on the device and the polls are open, ready for voting.
Step	Description
1000	<p>Layout Diagram:</p> <p>Verify all measurements.</p> <p><i>Expected:</i> Center measurement is 12 feet and the side distance observation points are approximately 17 feet.</p> <p><i>Actual:</i></p>
1001	<p>ADA Voter Position:</p> <p>Verify all measurements.</p> <p><i>Expected:</i> Center measurement is 12 feet and the side distance observation points are approximately 17 feet with a</p>

	<p>voter line of sight at 48 inches.</p> <p><i>Actual::</i></p>
1010	<p>Observer Role - Activate a ballot for ADA voting.</p> <p><i>Expected:</i> Ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1020	<p>ADA Voter Role - Select the candidate corresponding to the upper most left hand position of the ballot presentation.</p> <p>Observer Role - Attempt to ascertain, both audibly and visually, the voters input from the right most position, the center position, and the left most position.</p> <p>ADA Voter's Role - Use the supplied method to advance the ballot to a cast vote state. The only selection should be the upper most left hand position. All other selections are to be under voted.</p> <p><i>Expected:</i> The Observer cannot determine the Voter's input selections.</p> <p><i>Actual:</i></p>
1030	<p>ADA Voter Role - Select the candidate corresponding to the upper most right hand position of the ballot presentation.</p> <p>Observer Role - Attempt to ascertain, both audibly and visually, the voter's input from the right most position, the center position, and the left most position.</p> <p>ADA Voter's Role - Use the supplied method to advance the ballot to a cast vote state. The only selection should be the upper most right hand position. All other selections are to be under voted.</p> <p><i>Expected:</i> The Observer cannot determine the Voter's input selections.</p> <p><i>Actual:</i></p>
1040	<p>ADA Voter Role - Select the candidate corresponding to the lower most left hand position of the ballot presentation.</p> <p>Observer Role - Attempt to ascertain, both audibly and visually, the voters input from the right most position, the center position, and the left most position</p> <p>ADA Voters Role - Use the supplied method to advance the ballot to a cast vote state. The only selection should be the lower most left hand position. All other selections are to be under voted.</p> <p><i>Expected:</i> The Observer cannot determine the Voter's input selections.</p>

	<i>Actual:</i>
1050	<p>ADA Voter Role - Select the candidate corresponding to the lower most right hand position of the ballot presentation.</p> <p>Observer Role - - Attempt to ascertain, both audibly and visually, the voters input from the right most position, the center position, and the left most position</p> <p>ADA Voters Role - Use the supplied method to advance the ballot to a cast vote state. The only selection should be the lower most right hand position. All other selections are to be under voted.</p> <p><i>Expected:</i> The Observer cannot determine the Voter's input selections.</p> <p><i>Actual:</i></p>
<p>Criteria for Evaluation of the Test Results: The observer must not be able to determine the voter's selection from any observation position or any voter selection surface position.</p>	

Test Case Identifier: 01 – 25 P.S. § 3031.7(1) Voter Secrecy (Regular Voter)	
PA ST 25 P.S. § 3031.7 Requirement:	(1) Provides for voting in absolute secrecy and prevents any person from seeing or knowing for whom any voter, except one who has received or is receiving assistance as prescribed by law, has voted or is voting.
Test Objective: To determine if a voter's selections can be observed during the act of voting, or once a vote has been cast.	Test Configuration: Precinct tabulation device configured as described for normal election day operation by Pennsylvania procedures and/or the device manufacturer. A marker is placed 12 feet (measured from the lowest point of the devices voting surface to the floor) directly behind the center of the voting device. From that marker, another marker is placed 12 feet to the right side and the left side. The side distance observation points should be approximately 17 feet. See step 1000 for a layout diagram.
Test Equipment:	Standard 15+ foot tape measure
Special Procedural Requirements:	Two roles are required for this test case. A Voter role and an Observer role. The observation must be made by an individual between the heights of 5 feet 8 inches and 5 feet 11 inches.
Assumptions:	An election is loaded on the device and the polls are open, ready for voting.
Step	Description
1000	<p>Layout Diagram:</p> <p>Verify all measurements.</p> <p><i>Expected:</i> Center measurement is 12 feet and the side distance observation points are approximately 17 feet.</p> <p><i>Actual:</i></p>
1010	<p>Observer Role - Activate a ballot for regular voting.</p> <p><i>Expected:</i> Ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1020	<p>Voter Role - Select the candidate in the upper most left hand position of the ballot presentation.</p> <p>Observer Role - Attempt to ascertain, both audibly and visually, the voter's input from the right most position, the center position, and the left most position</p> <p>Voters Role - Use the supplied method to advance the ballot to a cast vote state. The only selection should be the upper most left hand position. All other selections are to be under voted.</p> <p><i>Expected:</i> The Observer cannot determine the Voter's input selections.</p>

	<i>Actual:</i>
1030	<p>Voter Role - Select the candidate in the upper most right hand position of the ballot presentation.</p> <p>Observer Role - Attempt to ascertain, both audibly and visually, the voter's input from the right most position, the center position, and the left most position</p> <p>Voter's Role - Use the supplied method to advance the ballot to a cast vote state. The only selection should be the upper most right hand position. All other selections are to be under voted.</p> <p><i>Expected:</i> The Observer cannot determine the Voter's input selections.</p> <p><i>Actual:</i></p>
1040	<p>Voter Role - Select the candidate in the lower most left hand position of the ballot presentation.</p> <p>Observer Role - Attempt to ascertain, both audibly and visually, the voters input from the right most position, the center position, and the left most position</p> <p>Voters Role - Use the supplied method to advance the ballot to a cast vote state. The only selection should be the lower most left hand position. All other selections are to be under voted.</p> <p><i>Expected:</i> The Observer cannot determine the Voter's input selections.</p> <p><i>Actual:</i></p>
1050	<p>Voter Role - Select the candidate in the lower most right hand position of the ballot presentation.</p> <p>Observer Role - Attempt to ascertain, both audibly and visually, the voters input from the right most position, the center position, and the left most position</p> <p>Voters Role - Use the supplied method to advance the ballot to a cast vote state. The only selection should be the lower most right hand position. All other selections are to be under voted.</p> <p><i>Expected:</i> The Observer cannot determine the Voter's input selections.</p> <p><i>Actual:</i></p>
<p>Criteria for Evaluation of the Test Results: The observer must not be able to determine the voter's selection from any observation position or any voter selection surface position.</p>	

Test Case Identifier: 02 – 25 P.S. § 3031.7(2) Selection of Candidates and Questions by Voter (Regular/ADA)	
PA ST 25 P.S. § 3031.7 Requirement:	(2) Provides facilities for voting for such candidates as may be nominated and upon such questions as may be submitted.
Test Objective: To determine if a voter has the ability to select candidates and questions.	Test Configuration: Precinct tabulation device configured as described for normal election day operation by Pennsylvania procedures and/or the device manufacturer.
Test Equipment:	None
Special Procedural Requirements:	None
Assumptions:	An election is loaded on the device and the polls are open, ready for voting.
Step	Description
1000	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1010	<p>Select the first candidate in the first partisan contest excluding a straight party contest.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for the first candidate in the first partisan contest excluding a straight party contest.</p> <p><i>Actual:</i></p>
1020	<p>Use the designated method to advance the ballot to the first “N of M” contest. Select the first “N” candidates in the contest. (e.g. in a Vote for Two contest the first two candidates would be selected).</p> <p><i>Expected:</i> The precinct tabulation device advances to the first “N of M” contest. Once selected the precinct tabulation device displays or provides an indication of a vote for the first “N” candidates in the first “N of M” contest.</p> <p><i>Actual:</i></p>
1030	<p>Use the designated method to advance the ballot to the first “Question” contest. Select the “Yes” option in the contest.</p> <p><i>Expected:</i> The precinct tabulation device advances to the first “Question” contest. Once selected the precinct tabulation device displays or provides an indication of a vote selection for the “Yes” option in the first “Question” contest.</p> <p><i>Actual:</i></p>
1040	<p>Use the designated method to advance the ballot to the second “Question” contest. Select the “No” option in the contest.</p>

	<p><i>Expected:</i> The precinct tabulation device advances to the second “Question” contest. Once selected the precinct tabulation device displays or provides an indication of a vote selection for the “No” option in the second “Question” contest.</p> <p><i>Actual:</i></p>
1050	<p>Use the designated method to advance the “Ballot Review.” Observe the “Ballot Review” to see if the above selections are displayed. Use the designated method to cast the voted selections.</p> <p><i>Expected:</i> The precinct tabulation device advances to the “Ballot Review” screen. After review and ballot is cast successfully.</p> <p><i>Actual:</i></p>
1060	<p>Repeat steps 1000- 1050 from above using an ADA input device.</p> <p><i>Expected:</i> Repeat 1000 _____ Repeat 1010 _____ Repeat 1020 _____ Repeat 1030 _____ Repeat 1040 _____ Repeat 1050 _____</p> <p><i>Actual:</i></p>
1070	<p>Close the polls and print the closed polls report tape.</p> <p><i>Expected:</i> The polls closed and a report is printed.</p> <p><i>Actual:</i></p>
1080	<p>Review the closed polls report to ensure all selections input above are recorded and reported correctly.</p> <p><i>Expected:</i> The closed polls report presents the accumulated totals for the selections input above.</p> <p><i>Actual:</i></p>
<p>Criteria for Evaluation of the Test Results: The intended selections input above are recorded, stored, and reported as input by the tester.</p>	

Test Case Identifier: 03 – 25 P.S. § 3031.7(3) Straight Party and Pennsylvania Method	
PA ST 25 P.S. § 3031.7 Requirements:	<i>(3) Permits each voter, at other than primary elections, to vote a straight political party ticket by one mark or act and, by one mark or act, to vote for all the candidates of one political party for presidential electors and, by one mark or act, to vote for all the candidates of one political party for every office to be voted for, and every such mark or act shall be equivalent to and shall be counted as a vote for every candidate of the political party so marked including its candidates for presidential electors, except with respect to those offices as to which the voter has registered a vote for individual candidates of the same or another political party or political body, in which case the automatic tabulating equipment shall credit the vote for that office only for the candidate individually so selected, notwithstanding the fact that the voter may not have individually voted for the full number of candidates for that office for which he was entitled to vote.</i>
Test Objective: To determine if the voting system supports straight party voting and the Pennsylvania Method.	Test Configuration: Precinct tabulation device configured as described for normal election day operation by Pennsylvania procedures and/or the device manufacturer.
Test Equipment:	None
Special Procedural Requirements:	None
Assumptions:	An election is loaded on the device and the polls are open, ready for voting.
Step	Description
1000	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1010	<p>Select the option for the first party selection of the straight party.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for the first party selection in the straight party contest.</p> <p><i>Actual:</i></p>
1020	<p>Use the designated method to advance through the ballot to each partisan contest. Observe all partisan contests for the indication of a voter selection for all partisan candidates associated with the first straight party selection.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for all the partisan candidates in each contest associated with the first straight party selection.</p> <p><i>Actual:</i></p>
1030	<p>Use the designated method to advance through the remainder of the ballots advancing to the ballot review screen. Observe the selection in the ballot review observing only the partisan contests associated with the first straight party selections are present. Use the designated method to cast the voted ballot.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for only the partisan contests associated with the first straight party selection. After review the ballot is cast successfully.</p>

	<p><i>Actual:</i></p>
1040	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1050	<p>Select the option for the second party selection of the straight party.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for the second party in the straight party contest.</p> <p><i>Actual:</i></p>
1060	<p>Use the designated method to advance through the ballot to each partisan contest. Observe all partisan contests for an indication of a voter selection for all partisan candidates associated with the second straight party selection.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for all the partisan candidates in each contest associated with the second straight party selection.</p> <p><i>Actual:</i></p>
1070	<p>Use the designated method to retreat through the ballot selections to the first “N of M” contest. Select the first partisan candidate that is not the party associated with the second straight party selection. Leave the remainder of the selections under voted.</p> <p><i>Expected:</i> “N” candidates for the party of the second straight party selections should display or provide an indication of the non-selection. The selected candidate should be the only selection displayed or indicated.</p> <p><i>Actual:</i></p>
1080	<p>Use the designated method to retreat through the ballot to the “Straight Party” contest. Observe the selection for the second straight party selection.</p> <p><i>Expected:</i> The second straight party selections should be displayed or an indication given as selected.</p> <p><i>Actual:</i></p>
1090	<p>Use the designated method to advance through the remainder of the ballot advancing to the ballot review. Review the selections in the ballot review to verify that the partisan contests associated with the second straight party selections are present with the exception of the first “N of M” contest. Use the designated method to cast the voted ballot.</p>

	<p><i>Expected:</i> The precinct tabulation device displays or indicates the selection for the partisan contests associated with the second straight party selection for all contests except the first “N of M” contest. The first “N of M” contest displays or indicates the selection of the first candidate that is not associated with the second straight party selection. After review the ballot is cast successfully.</p> <p><i>Actual:</i></p>
1100	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1110	<p>Select the option for the first party selection of the straight party.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for the first party in the straight party contest.</p> <p><i>Actual:</i></p>
1120	<p>Use the designated method to advance through the ballot to each partisan contest. Observe all partisan contests for an indication of a voter selection for all partisan candidates associated with the first straight party selection.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for all the partisan candidates in each contest associated with the first straight party selection.</p> <p><i>Actual:</i></p>
1130	<p>Use the designated method to retreat through the ballot selections to the first “N of M” contest. Select the first partisan candidate that is associated with the first straight party selection. Leave this contest and the remainder of the selections under voted.</p> <p><i>Expected:</i> “N” candidates for the party of the first straight party selections should display or provide an indication of the non-selection. The selected candidate should be the only selection displayed or indicated.</p> <p><i>Actual:</i></p>
1140	<p>Use the designated method to advance through the remainder of the ballot advancing to the ballot review. Review the selections in the ballot review to verify that the partisan contests associated with the first straight party selections are present with the exception of the first “N of M” contest. Use the designated method to cast the voted ballot.</p> <p><i>Expected:</i> The precinct tabulation device displays or indicates the selection for the partisan contests associated with the first straight party selection for all contests except the first “N of M” contest. The first “N of M” contest displays or indicates the selection of the second candidate that is associated with the first straight party selection and an under vote. After review the ballot is cast successfully.</p>

	<p><i>Actual:</i></p>
1150	<p>Repeat steps 1000- 1140 from above using an ADA input device.</p> <p><i>Expected:</i> Repeat 1000 _____ Repeat 1010 _____ Repeat 1020 _____ Repeat 1030 _____ Repeat 1040 _____ Repeat 1050 _____ Repeat 1060 _____ Repeat 1070 _____ Repeat 1080 _____ Repeat 1090 _____ Repeat 1100 _____ Repeat 1110 _____ Repeat 1120 _____ Repeat 1130 _____ Repeat 1140 _____</p> <p><i>Actual:</i></p>
1160	<p>Close the polls and print the closed polls report tape.</p> <p><i>Expected:</i> The polls closed and a report is printed.</p> <p><i>Actual:</i></p>
1170	<p>Review the closed polls report to ensure all selections input above are recorded and reported correctly.</p> <p><i>Expected:</i> The closed polls report presents the accumulated totals for the selections input above.</p> <p><i>Actual:</i></p>
<p>Criteria for Evaluation of the Test Results: The intended selections input above are recorded, stored, and reported as input by the tester. The functionality of selecting a candidate of the same party of the straight party selection registers a vote for that candidate and de-selects all candidates for the straight party vote for that contest.</p>	

Test Case Identifier: 04 – 25 P.S. § 3031.7(4) Straight Party and Write-In	
PA ST 25 P.S. § 3031.7 Requirements:	<i>(4) Permits each voter, at other than primary elections, to vote a ticket selected from the nominees of any and all political parties, from the nominees of any and all political bodies, and from any persons whose names are not in nomination and do not appear upon the official ballot.</i>
Test Objective: To determine if the voting system supports straight party voting and write-in.	Test Configuration: Precinct tabulation device configured as described for normal election day operation by Pennsylvania procedures and/or the device manufacturer.
Test Equipment:	None
Special Procedural Requirements:	None
Assumptions:	An election is loaded on the device and the polls are open, ready for voting.
Step	Description
1000	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1010	<p>Select the option for the first party selection of the straight party.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for the first party selection in the straight party contest.</p> <p><i>Actual:</i></p>
1020	<p>Use the designated method to advance through the ballot to each partisan contest. Observe all partisan contests for a display or indication of a voter selection for all partisan candidates associated with the first straight party selection.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for all the partisan candidates in each contest associated with the first straight party selection.</p> <p><i>Actual:</i></p>
1030	<p>Use the designated method to advance through the remainder of the ballot advancing to the ballot review screen. Observe the selection in the ballot review observing only the partisan contests associated with the first straight party selections are present. Use the designated method to cast the voted ballot.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of the selection for only the partisan contests associated with the first straight party selection. After review the ballot is cast successfully.</p> <p><i>Actual:</i></p>
1040	<p>Activate a ballot for regular voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p>

	<i>Actual:</i>
1050	<p>Select the option for the first party selection of the straight party.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection associated with the first party selection in the straight party contest.</p> <p><i>Actual:</i></p>
1060	<p>Use the designated method to advance to the first partisan contest. Select the write-in option. Input John Doe as the write-in name.</p> <p><i>Expected:</i> The precinct tabulation advances to the first partisan contest and allows the input of the “Write-In” candidate John Doe.</p> <p><i>Actual:</i></p>
1070	<p>Use the designated method to advance to the ballot review screen. Observe the selections associated with the first straight party selection with the exception of the first partisan contest. Use the designated method to cast the voted ballot.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection associated with the first party selection in the straight party contest with the exception of the first partisan contest which should indicate the write-in input of John Doe.</p> <p><i>Actual:</i></p>
1080	<p>Activate a ballot for regular voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1090	<p>Select the option for the first party selection of the straight party.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection associated with the first party selection in the straight party contest.</p> <p><i>Actual:</i></p>
1100	<p>Use the designated method to advance to the first “Question” contest. Select the “Yes” option. Attempt to over vote by selecting the “No” option. Observe the action of attempting to select the second option.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of an attempt to over vote. The precinct tabulation device might disallow the selection and not display any communication.</p> <p><i>Actual:</i></p>
1110	Repeat steps 1000- 1090 from above using an ADA input device.

	<p><i>Expected:</i> Repeat 1000 _____ Repeat 1010 _____ Repeat 1020 _____ Repeat 1030 _____ Repeat 1040 _____ Repeat 1050 _____ Repeat 1060 _____ Repeat 1070 _____ Repeat 1080 _____ Repeat 1090 _____ Repeat 1100 _____ Repeat 1110 _____</p> <p><i>Actual:</i></p>
<p>1120</p>	<p>Close the polls and print the closed polls report tape.</p> <p>Expected: The polls closed and a report is printed.</p> <p>Actual:</p>
<p>1130</p>	<p>Review the closed polls report to ensure all selections input above are recorded and reported correctly.</p> <p>Expected: The closed polls report presents the accumulated totals for the selections input above.</p> <p>Actual:</p>
<p>Criteria for Evaluation of the Test Results: The intended selections input above are recorded, stored, and reported as input by the tester. The functionality of selecting a write-in candidate functions with a straight party selection.</p>	

Test Case Identifier: 05 – 25 P.S. § 3031.7(5) Selection of Candidate and Write-in	
PA ST 25 P.S. § 3031.7 Requirements:	(5) Permits each voter to vote for any person and any office for whom and for which he is lawfully entitled to vote, whether or not the name of such person appears upon the ballot as a candidate for nomination or election.
Test Objective: To determine if the voting system supports the selection of a candidate and a write-in candidate.	Test Configuration: Precinct tabulation device configured as described for normal election day operation by Pennsylvania procedures and/or the device manufacturer.
Test Equipment:	None
Special Procedural Requirements:	None
Assumptions:	An election is loaded on the device and the polls are open, ready for voting.
Step	Description
1000	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1010	<p>Select the option for the first candidate in the first partisan contest.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for the first candidate selection in the first partisan contest.</p> <p><i>Actual:</i></p>
1020	<p>Use the designated method to advance through the remainder of the ballot advancing to the ballot review screen. Observe the selection in the ballot review observing only the first candidate in the first partisan contest is selected. Use the designated method to cast the voted ballot.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of the selection for only the first candidate selection in first partisan contests. After review the ballot is cast successfully.</p> <p><i>Actual:</i></p>
1030	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1040	<p>Select the option for a write-in candidate in the first partisan contest. Use the designed method to input “John Doe.”</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for a write-in candidate.</p> <p><i>Actual:</i></p>

<p>1050</p>	<p>Use the designated method to advance through the remainder of the ballot advancing to the ballot review screen. Observe the selection in the ballot review observing only the write-in candidate in the first partisan contest is selected. Use the designated method to cast the voted ballot.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of the selection for only the write-in candidate “John Doe” in first partisan contests. After review the ballot is cast successfully.</p> <p><i>Actual:</i></p>
<p>1060</p>	<p><i>Activate a ballot for voting.</i></p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
<p>1070</p>	<p><i>Select the option for a write-in candidate in the first “N of M” contest. Use the designed method to input “John Doe” for all selections. Observe any activity to preclude the same input.</i></p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a duplicate vote selection for a write-in candidate. If no indication is provided then trace the ability to adjudicate the vote through the entire system. It may require the EMS component to verify.</p> <p><i>Actual:</i></p>
<p>1080</p>	<p>Repeat steps 1000- 1070 from above using an ADA input device.</p> <p><i>Expected:</i> Repeat 1000 _____ Repeat 1010 _____ Repeat 1020 _____ Repeat 1030 _____ Repeat 1040 _____ Repeat 1050 _____ Repeat 1060 _____ Repeat 1070 _____</p>

	<i>Actual:</i>
1090	<p>Close the polls and print the closed polls report tape.</p> <p><i>Expected:</i> The polls closed and a report is printed.</p> <p><i>Actual:</i></p>
1110	<p>Review the closed polls report to ensure all selections input above are recorded and reported correctly.</p> <p><i>Expected:</i> The closed polls report presents the accumulated totals for the selections input above.</p> <p><i>Actual:</i></p>
<p>Criteria for Evaluation of the Test Results: The intended selections input above are recorded, stored, and reported as input by the tester. The functionality of selecting a candidate and a write-in candidate functions.</p>	

Test Case Identifier: 07– 25 P.S. § 3031.7(7) Attempt to Over Vote Contests and Questions (Regular/ADA)	
PA ST 25 P.S. § 3031.7 Requirements:	(7) If it is of a type that registers the vote electronically, the voting system shall preclude each voter from voting for more persons for any office than he is entitled to vote for or upon any question more than once.
Test Objective: To determine if the voting device allows over voting on contests and questions.	Test Configuration: Precinct tabulation device configured as described for normal election day operation by Pennsylvania procedures and/or the device manufacturer.
Equipment:	None
Special Procedural Requirements:	None
Assumptions:	An election is loaded on the device and the polls are open, ready for voting.
Step	Description
1000	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1010	<p>Select the first candidate in the first partisan “1 of 1” contest excluding a straight party contest.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of a vote selection for the first candidate in the first partisan “1 of 1” contest excluding a straight party contest.</p> <p><i>Actual:</i></p>
1020	<p>Attempt to select the second candidate in the first partisan “1 of 1” contest ensure the contest is the same contest as voted in step 1010. Observe the action of attempting to place a second vote.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of an attempt to over vote. The precinct tabulation device might disallow the selection and not display any communication.</p> <p><i>Actual:</i></p>
1030	<p>Attempt to select the write-in option. Observe the action of attempting to input a write-in.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of an attempt to over vote. The precinct tabulation device might disallow the selection and not display any communication.</p> <p><i>Actual:</i></p>
1040	<p>Use the designated method to advance the ballot to the first “N of M” contest. Select the first “N” candidates in the contest. (e.g. in a Vote for Two contest the first two candidates would be selected).</p> <p><i>Expected:</i> The precinct tabulation device advances to the first “N of M” contest. Once selected the precinct tabulation device displays or provides an indication of a vote for the first “N” candidates in the first “N of M” contest.</p>

	<i>Actual:</i>
1050	<p>Attempt to select the “N +1” candidate in the first “N of M” contest ensure the contest is the same contest as voted in step 1040. Observe the action of attempting to place an over vote.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of an attempt to over vote. The precinct tabulation device might disallow the selection and not display any communication.</p> <p><i>Actual:</i></p>
1060	<p>Use the designated method to advance the ballot to the first “Question” contest. Select the “Yes” option in the contest.</p> <p><i>Expected:</i> The precinct tabulation device advances to the first “Question” contest. Once selected the precinct tabulation device displays or provides an indication of a vote for the “Yes” option in the first “Question” contest.</p> <p><i>Actual:</i></p>
1070	<p>Attempt to select the “No” option in the first “Question” contest ensure the contest is the same contest as voted in step 1060. Observe the action of attempting to place an over vote.</p> <p><i>Expected:</i> The precinct tabulation device displays or provides an indication of an attempt to over vote. The precinct tabulation device might disallow the selection and not display any communication.</p> <p><i>Actual:</i></p>
1080	<p>Use the designated method to advance the “Ballot Review”. Observe the “Ballot Review” to see if the above selections are indicated. Use the designated method to cast the voted selections.</p> <p><i>Expected:</i> The precinct tabulation device advances to the “Ballot Review” screen. After review and ballot is cast successfully.</p> <p><i>Actual:</i></p>
1090	<p>Repeat steps 1000- 1080 from above using an ADA input device.</p> <p><i>Expected:</i> Repeat 1000 _____ Repeat 1010 _____ Repeat 1020 _____ Repeat 1030 _____ Repeat 1040 _____ Repeat 1050 _____ Repeat 1060 _____ Repeat 1070 _____ Repeat 1080 _____</p>

	<i>Actual:</i>
1100	<p>Close the polls and print the closed polls report tape.</p> <p><i>Expected:</i> The polls closed and a report is printed.</p> <p><i>Actual:</i></p>
1110	<p>Review the closed polls report to ensure all selections input above are recorded and reported correctly.</p> <p><i>Expected:</i> The closed polls report presents the accumulated totals for the selections input above.</p> <p><i>Actual:</i></p>
<p>Criteria for Evaluation of the Test Results: The intended selections input above are recorded, stored, and reported as input by the tester. The attempts to select more persons than the vote for and any question more than once are unsuccessful.</p>	

Test Case Identifier: 10 – 25 P.S. § 3031.7(10) Ballot Review and Change (Regular/ADA)	
PA ST 25 P.S. § 3031.7 Requirements:	<p>(10) If it is of a type that registers the vote electronically, the voting system shall permit each voter to change his vote for any candidate or upon any question appearing on the official ballot up to the time that he takes the final step to register his vote and to have his vote computed.</p> <p>If it is of a type that uses paper ballots or ballot cards to register the vote and automatic tabulating equipment to compute such votes, the system shall provide that a voter who spoils his ballot may obtain another ballot; any ballot thus returned shall be immediately cancelled and at the close of the polls shall be enclosed in an envelope marked "Spoiled" which shall be sealed and returned to the county board.</p>
Test Objective: To determine if the voting device allows the voter to review the selections and change a vote selection before casting of the ballot.	Test Configuration: Precinct tabulation device configured as described for normal election day operation by Pennsylvania procedures and/or the device manufacturer.
Test Equipment:	None
Special Procedural Requirements:	None
Assumptions:	An election is loaded on the device and the polls are open, ready for voting.
Step	Description
1000	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1010	<p>Select the first candidate in the first all "1 of 1" contest excluding a straight party contest, the first "N" candidates in all "N of M" contests, and select the "Yes" option in all "Question" contests.</p> <p><i>Expected:</i> The precinct tabulation device allow for the navigation and the voting inputs to be selected as described above.</p> <p><i>Actual:</i></p>
1020	<p>Use the designated method to advance the "Ballot Review." Observe the "Ballot Review" to see if the above selections are indicated.</p> <p><i>Expected:</i> The precinct tabulation device advances to the "Ballot Review" screen. The vote selections can be verified.</p> <p><i>Actual:</i></p>
1030	<p>Use the designated method to retract to the first partisan "1 of 1" contest excluding the straight party contest.</p> <p><i>Expected:</i> The precinct tabulation device navigates to the first partisan "1 of 1" contest excluding the straight party contest.</p> <p><i>Actual:</i></p>

<p>1040</p>	<p>Deselect the first candidate selection and select the second candidate.</p> <p><i>Expected:</i> The precinct tabulation device indicates the de-selection of the first candidate and the select of the second candidate.</p> <p><i>Actual:</i></p>
<p>1050</p>	<p>Use the designated method to advance to the first “Question” contest. De-select the “Yes” option and select the “No” option.</p> <p><i>Expected:</i> The precinct tabulation device navigates to the first “Question” contest and provides an indication of the de-selection of the “Yes” option and a selection of the “No” option.</p> <p><i>Actual:</i></p>
<p>1060</p>	<p>Use the designated method to advance the “Ballot Review.” Observe the “Ballot Review” to see if the above selections are indicated. Use the designated method to cast the voted selections.</p> <p><i>Expected:</i> The precinct tabulation device advances to the “Ballot Review” screen. After review and ballot is cast successfully.</p> <p><i>Actual:</i></p>
<p>1070</p>	<p>Repeat steps 1000- 1060 from above using an ADA input device.</p> <p><i>Expected:</i> Repeat 1000 _____ Repeat 1010 _____ Repeat 1020 _____ Repeat 1030 _____ Repeat 1040 _____ Repeat 1050 _____ Repeat 1060 _____</p> <p><i>Actual:</i></p>
<p>1080</p>	<p>Close the polls and print the closed polls report tape.</p> <p><i>Expected:</i> The polls closed and a report is printed.</p> <p><i>Actual:</i></p>

1090	<p>Review the closed polls report to ensure all selections input above are recorded and reported correctly.</p> <p><i>Expected:</i> The closed polls report presents the accumulated totals for the selections input above.</p> <p><i>Actual:</i></p>
Criteria for Evaluation of the Test Results: The intended selections input above are recorded, stored, and reported as input by the tester. The voter input can be changed by navigating through the ballot after a ballot has been reviewed.	

Test Case Identifier: 16 – 25 P.S. § 3031.7(16) Public Counter, No Reopening of Polls, Media Security with Tamper Proof Locks and Zero Proof and Tally Reports.	
PA ST 25 P.S. § 3031.7 Requirements:	<p>(16) <i>If the voting system is of a type which provides for the computation and tabulation of votes at the district level, the district component of the automatic tabulating equipment shall include the following mechanisms or capabilities:</i></p> <p>(i) <i>A public counter, the register of which is visible from the outside of the automatic tabulating equipment component into which the ballots are entered, which shall show during any period of operation the total number of ballots entered for computation and tabulation.</i></p> <p>(ii) <i>A lock, or locks, by the use of which all operation of the tabulation element of the automatic tabulating equipment is absolutely prevented immediately after the polls are closed or where the tabulation of votes is completed.</i></p> <p>(iii) <i>It shall be so constructed and controlled that, during the progress of voting, it shall preclude every person from seeing or knowing the number of votes theretofore registered for any candidate or question; and it shall preclude every person from tampering with the tabulating element.</i></p> <p>(iv) <i>If the number of choices recorded for any office or on any question exceeds the number for which the voter is entitled to vote, it shall reject all choices recorded on the ballot for that office or question, provided, that if used during the period of voting it may also have the capacity to indicate to a voter that he has improperly voted for more candidates for any office than he is entitled to vote for, and in such case it shall have the capacity to permit the voter to mark a new ballot or to forego his opportunity to make such correction.</i></p> <p>(v) <i>It shall be equipped with an element which generates a printed record at the beginning of its operation which verifies that the tabulating elements for each candidate position and each question and the public counter are all set to zero and with an element which generates a printed record at the finish of its operation of the total number of voters whose ballots have been tabulated, the total number of votes cast for each candidate whose name appears on the ballot, and the total number of votes cast for, or against, any question appearing on the ballot.</i></p>
Test Objective: To determine if the voting device has a public counter, does not allow the reopening of the polls, and supplies a zero proof and tally report.	Test Configuration: Precinct tabulation device configured as described for normal election day operation by Pennsylvania procedures and/or the device manufacturer. This includes all security locks and seals.
Test Equipment:	None
Special Procedural Requirements:	None
Assumptions:	The election media is installed but the polls have not been opened.
Step	Description
1000	<p>Ensure media is loaded but the polls have not been opened. Use the designated method to open polls. If a response is needed to print “Zero Proof” report, select this option.</p> <p><i>Expected:</i> The precinct tabulation device opens the polls and prints a “Zero Proof” report.</p> <p><i>Actual:</i></p>
1010	<p>Activate a ballot for voting.</p> <p><i>Expected:</i> The ballot is presented and vote selections can be input.</p> <p><i>Actual:</i></p>
1020	

	<p>Use the designated method to navigate to the straight party contest. Select the first selection in the straight party contest.</p> <p><i>Expected:</i> The precinct tabulation device navigates to the first straight party contest, allows the input of the first selection, and indicates the first selection was input.</p> <p><i>Actual:</i></p>
1030	<p>Use the designated method to advance the “Ballot Review.” Observe all selections for the party associated with the selection for the first straight party selection are selected. Observe the public counter value being 0.</p> <p><i>Expected:</i> The precinct tabulation device navigates to the “Ballot Review” screen. The public counter is visible and the value is 0.</p> <p><i>Actual:</i></p>
1040	<p>Use the designated method to cast the voted selections. Observe the acknowledgement of “successful” ballot cast if provided, and the public counter incrementing by one.</p> <p><i>Expected:</i> The precinct tabulation device successfully cast the ballot and the public counter is incremented. If the ballot was not cast successfully the test is halted.</p> <p><i>Actual:</i></p>
1050	<p>Close the polls and print the closed polls report tape.</p> <p><i>Expected:</i> The polls closed and a report is printed.</p> <p><i>Actual:</i></p>
1060	<p>Use the designated method to attempt to reopen the polls.</p> <p><i>Expected:</i> The polls cannot be reopened.</p> <p><i>Actual:</i></p>
1070	<p>Place lock on precinct tabulation device per Pennsylvania Procedures to ensure all operation of the tabulation element is prevented.</p> <p><i>Expected:</i> The precinct tabulation device can be secured so that all operation of the tabulation element is prevented.</p> <p><i>Actual:</i></p>
1070	<p>Review the closed polls report to ensure all selections input above are recorded and reported correctly.</p>

	<p><i>Expected:</i> The closed polls report presents the accumulated totals for the selections input above.</p> <p><i>Actual:</i></p>
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<p>Criteria for Evaluation of the Test Results: The intended selections input above are recorded, stored, and reported as input by the tester. The voting device is able to produce a “Zero Proof” and “Tally Report.” The voting device has a visible public counter and the counter increments correctly.</p>
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Test Case Identifier: 04, 06, 08, 09, Permanent Physical Record, and Statistical Sample – 25 P.S. §§ 3031.7(4), (6), (8), (9); 3031.1; and 3031.17 System Integration	
PA ST 25 P.S. § 3031.7 Requirements:	<p><i>(4) Permits each voter, at other than primary elections, to vote a ticket selected from the nominees of any and all political parties, from the nominees of any and all political bodies, and from any persons whose names are not in nomination and do not appear upon the official ballot.</i></p> <p><i>(6) Permits each voter to vote for as many persons for any office as he is entitled to vote for and to vote for or against any question upon which he is entitled to vote and precludes each voter from voting or from having his vote tabulated for any candidate, or upon any question, for whom or upon which he is not entitled to vote.</i></p> <p><i>(8) Precludes each voter from voting or from having his vote tabulated more than once for any candidate for the same office or upon any question, except in districts and for offices where cumulative voting is authorized by law.</i></p> <p><i>(9) Permits each voter at a primary election to vote only for the candidates seeking nomination by a political party in which such voter is registered and enrolled, and for any candidate for nonpartisan nomination, and for any question upon which he is entitled to vote.</i></p>
PA ST 25 P.S. § 3031.1 Requirements:	<i>"ELECTRONIC VOTING SYSTEM" means a system in which one or more voting devices are used to permit the registering or recording of votes and in which such votes are computed and tabulated by automatic tabulating equipment. The system shall provide for a permanent physical record of each vote cast.</i>
PA ST 25 P.S. § 3031.17 Requirements:	<i>The county board of elections, as part of the computation and canvass of returns, shall conduct a statistical recount of a random sample of ballots after each election using manual, mechanical or electronic devices of a type different than those used for the specific election. The sample shall include at least two (2) per centum of the votes cast or two thousand (2,000) votes whichever is the lesser..</i>
Test Objective: This area of testing will focus on the system being able to perform a general and a closed primary from ballot design to reporting of results.	
Test Configuration: The system integration testing will execute a general and a primary election from ballot design through vote accumulation, consolidation and reporting. The election definitions will include all supported voting variations, languages, multiple ballot styles, and ADA voting. Two election definitions will be defined and executed according to a predefined voting pattern. All requirements tested in the targeted functionality testing will be monitored including accuracy throughout system integration testing.	
Test Method: The method for testing these requirements is defined as follows: Provide an election definition that contains multiple ballot styles based on geographical subdivision in both a general election and a closed primary and tests that each vote is counted only once. Two elections will be utilized to perform System Integration Testing: <ul style="list-style-type: none"> • PA Certification General Election • PA Certification Closed Primary Election This test will be performed by evaluating the system from the pre-voting state of loading the media and obtaining pre-voting reports through the post-voting state of accumulation of voted data and printing of post-election reports. All documented steps will be followed to perform this test. <ul style="list-style-type: none"> • Election definition and ballot layout coded prior to test • Print pre-election report for ballot layout, precinct summary, and election summary • Load election media • Install election onto the precinct tabulation device • Open polls and print zero proof report 	

- Vote pre-defined voting pattern
- Closed polls and print results tapes
- Print audit logs
- Perform a 10% statistical sample
- Harvest permanent physical record
- Load election results into EMS
- Print precinct summary and election summary reports
- Collect and analyze all data

Criteria for Evaluation of the Test Results:

All intended selection input by the tester are recorded, stored and reported accurately.

Test Case Identifier: 12 – 25 P.S. § 3031.7(12) Penetration Analysis	
PA ST 25 P.S. § 3031.7 Requirements:	<i>(12) Provides acceptable ballot security procedures and impoundment of ballots to prevent tampering with or substitution of any ballots or ballot cards.</i>
Test Objective: This area of testing will focus on the current documented procedures and configuration to ensure that the physical and access secure measures provide a determined level of security. <i>Depending on the scope of this project this may be performed by a third-party expert.</i>	
Test Configuration: The voting system will be configured as would be for a polling place with all security precautions in place.	
Test Method: The method for testing these requirements is defined as follows: Test steps will be followed to evaluate the physical and access controls and procedures in place for the storage of voted ballots. This test will be performed by evaluating the system to ensure that all access areas and seals and/or locks provide adequate security from external access. The tester will:	
<ul style="list-style-type: none"> • check all seal and/or locks and attempt to open the system • verify that the ballot storage device is secure by attempting to insert and retrieve ballots without removing any seals and/or locks • verify that any needed supplies can be accessed by the poll worker without allowing access to the ballots or internal components of the voting system • verify that the system counter cannot be reset by any unauthorized person at any unauthorized point • attempt to bypass the security environment by various methods such as disabling the printer, removing power, and any other means to try and compromise the votes • exercise verification of password security management at all levels (operating system, application and component) 	
Criteria for Evaluation of the Test Results: All intended access controls are in place and are sufficient.	
Comments:	
Tester Approval: _____ Date: _____ Test Witness: _____	

**Commonwealth of Pennsylvania
State Certification – Review**

List all reports provided by the manufacturer for review to meet the review requirements in the space provided below:

Document I - _____

Document II - _____

Document III - _____

25 P.S. § 3031.5. Examination and approval of electronic voting systems by the Secretary of the Commonwealth

(a) Any person or corporation owning, manufacturing or selling, or being interested in the manufacture or sale of, any electronic voting system, may request the Secretary of the Commonwealth to examine such system if the voting system has been examined and approved by a federally recognized independent testing authority and if it meets any voting system performance and test standards established by the Federal Government. The costs of the examination shall be paid by the person requesting the examination in an amount set by the Secretary of the Commonwealth. Any ten or more persons, being qualified registered electors of this Commonwealth, may, at any time, request the Secretary of the Commonwealth to reexamine any electronic voting system theretofore examined and approved by him. Before any reexamination, the person, persons, or corporation, requesting such reexamination, shall pay to the Treasurer of the Commonwealth a reexamination fee of four hundred fifty dollars (\$450). The Secretary of the Commonwealth may, at any time, in his discretion, reexamine any such system therefore examined and approved by him. The Secretary of the Commonwealth may issue directives or instructions for implementation of electronic voting procedures and for the operation of electronic voting systems.

ITA/ VSTL Reports

Report Title, Version and Date - _____

Report Title, Version and Date - _____

Report Title, Version and Date - _____

25 P.S. § 3031.7 Requirement -

11) Is suitably designed for the purpose used, is constructed in a neat and workmanlike manner of durable material of good quality, is safely and efficiently useable in the conduct of elections and, with

respect to the counting of ballots cast at each district, is suitably designed and equipped to be capable of absolute accuracy, which accuracy shall be demonstrated to the Secretary of the Commonwealth.

Review of Product Safety Test or other similar test

Report Title - _____

Section - _____

Page - _____

Paragraphs - _____

Review of Accuracy Test

Report Title - _____

Section - _____

Page - _____

Paragraphs - _____

25 P.S. § 3031.7 Requirement -

(13) When properly operated, records correctly and computes and tabulates accurately every valid vote registered.

Review of Accuracy Test

Report Title - _____

Section - _____

Page - _____

Paragraphs - _____

25 P.S. § 3031.7 Requirement -

(14) Is safely transportable.

Review of Hardware Environmental Tests

Report Title - _____

Section - _____

Page - _____

Paragraphs - _____

25 P.S. § 3031.7 Requirement -

15) Is so constructed that a voter may readily learn the method of operating it.

Review of Usability Evaluation

Report Title - _____

Section - _____

Page - _____

Paragraphs - _____

Reviewers Signature

Date Completed