Derived Test Requirements for the New Requirements on Electronic Reports in the VVSG version 1.1

Version 1.1
July 15, 2009

Preliminary Draft

Product Disclaimer

Certain commercial entities, equipment, or material may be identified in the document in order to describe an experimental procedure or concept adequately. Such identification is not intended to imply recommendation or endorsement by the National Institute of Standards and Technology, nor is it intended to imply that these entities, materials, or equipment are necessarily the best available for the purpose.

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1   Introduction

1.1   Background

By authorization of the 2002 Help America Vote Act (HAVA), the Election Assistance Commission (EAC) was given the responsibility for implementing and maintaining the Voluntary Voting System Guidelines (VVSG). As part of the maintenance process for the VVSG, the EAC is updating the VVSG 2005 by modifying and adding some requirements to the guidelines resulting in the VVSG version 1.1. The new and modified requirements are based on the requirements found in the next VVSG developed by the EAC's Technical Guidelines Development Committee (TGDC). However, not all of the requirements found in the next VVSG were included as part of the VVSG version 1.1. The EAC plans to issue the VVSG version 1.1 after receiving and reviewing public comments.

As part of the VVSG update, the EAC asked NIST to develop a set of uniform public test suites for the modified and new requirements, which will be used as part of the EAC's Testing and Certification Program. Test Labs will be able to use these freely available test suites to help determine that modified and new requirements of the VVSG version 1.1 are met by voting systems. Use of the public test suites will produce consistent results and promote transparency of the testing process. The test suites can also assist manufacturers in the development of conforming products by providing precise test specifications. Also, they will help reduce the cost of testing since each test lab would no longer need to develop its own test suites. Finally, a uniform set of public test suites can increase election officials' and voters' confidence that voting systems conform to VVSG version 1.1 requirements covered by the test suites.

1.2   Purpose

The purpose of this document is to develop detailed test procedures for the updated and new security requirements found in the VVSG version 1.1. In this document, detailed test procedures derived from a requirement found in the VVSG version 1.1 are contained in structure known as a derived test requirement (DTR). (See Section 1.5.1 Derived Test Requirement Structure for details). This document contains the set of derived test requirements (DTRs) for the requirements found in the VVSG version 1.1, Volume 1, Section 2.4.4 Electronic Reports. By providing detailed derived test requirements, the following objectives are achieved:

1. In-depth guidance to test laboratories to ensure high quality testing
2. Repeatability from tester to tester as well as test laboratory to test laboratory
3. Predictability of the effort involved for a testing campaign
4. Cost savings by not having to analyze and develop tests for different implementations of a voting system

1.3   Scope

The scope of this document is limited to functional testing of the updated and new security requirements found in the VVSG version 1.1. Testing requirements in VVSG version 1.1 other than updated and new security requirements are outside the scope of this document. Specifically, the derived test requirements (DTRs) found in this document only cover the requirements found in the VVSG version 1.1, Volume 1, Section 2.4.4 Electronic Reports.

1.4   Approach

In developing the set of derived test requirements (DTRs) the following approach was taken:

1. If at all possible, the test laboratory shall test compliance with a VVSG requirement by stimulus → response testing[1] on the voting system. The exceptions to this shall be rare and shall be justified only on the basis of extremely prohibitive cost.
2. The stimulus → response testing shall include nominal, boundary and outlier values as implied by the VVSG requirement and the voting system's interface(s) that implement and enforce the requirement.
3. When stimulus → response testing is not possible given the design of the voting system, the test laboratory shall examine the applicable source code.
4. When performing review of the manufacturer provided documentation, the test laboratory shall focus on gaining an understanding of the voting system and how it implements security. Priority shall be given to identification of potential security concerns based on the review and analysis of manufacturer documents with next priority to substantive inconsistencies. In addition, the test laboratory shall ensure that there is sufficient clarity to the documentation so that the security controls can be appropriately configured.

1.5   Derived Test Requirement Structure

A derived test requirement (DTR) is a structured used to contain detailed test procedures associated with a specific requirement. This section describes the components, nomenclature, and notation used in this document to describe the structure of a derived test requirement (DTR).

A derived test requirement consists of the following components:

1. A requirement is labeled with the literal "RE, " followed by a number based on the section of the VVSG version 1.1 containing the requirement and a title for the requirement to provide traceability back to the VVSG version 1.1. When a requirement is tested by another derived test requirement (DTR), that requirement's derived test requirement (DTR) will contain a reference to the appropriate derived test requirement (DTR).

2. A requirement may have one or more tester activities associated with it. Test activities are the detailed test procedures used to test the voting system for conformance to the VVSG version 1.1 security requirements. When no tester activity is found in a derived test requirement (DTR), it means the requirement was tested under the test procedures of another (DTR) that is specifically referenced in "Analysis" text. The tester activities are labeled with the literal "TE", followed by the requirement label without "RE", followed by period ("."), followed by sequential numbers staring with 1. For example, test activities for requirement RE 7.9.1-A are numbered RE 7.9.1-A.1, RE 7.9.1-A.2, and so on. Each tester activity title is refined based on the associated VVSG version 1.1 requirement title.

3. The label "Analysis:" precedes text that is used to provide additional information related to requirements and tester activities. In general, analysis text follows the associated requirement and tester activities being discussed. For example, analysis text following a requirement may cross-reference the test activities of another requirement that verifies the requirement or provide context of the test activities of the requirement.

1.6   Electronic File Features for Word Versions of the Document

An electronic version of this document was prepared using Microsoft Word and the Word Style feature. The Word Style feature provides the ability to separate text based on the Style associated with the text. The following Styles were used in this document to allow material to be subsetted in or out:

1. "reheader" Style is used to list the requirement title.
2. "teheader" Style is used to list the test procedure title.

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[1] Stimulus → response testing refers to a testing method where an IT system is stimulated by providing some input and the IT system's response/output is observed and analyzed. (See Definitions section)

3. "Test Procedure" Style is used to list the test procedures test laboratories must carry out in order to test the voting system for compliance with VVSG Version 1.1 requirements.
4. "Normal" Style is used for the requirement text and text associated with analysis and rationale. "

1.7 General Testing Assumptions

The tester shall use each DTR to test the voting system under test and when appropriate develop more detailed test procedures and test cases based on implementation dependant characteristics such as specific configuration requirements, specific user account names, specific file names, etc.

The tester shall document test procedures and test cases.

After conducting the tests, the tester shall document the test results with sufficient detail to demonstrate that the test succeeded or failed. In the case of failure, the documentation shall be detailed enough to provide the nature of failure.

The tester may execute the DTRs in any order as long as the precedence requirements specified in individual DTR are met.

The tester shall note the start and end time in date, hours, and minutes when each DTR is executed to help in several ways including but not limited to: reconciling the event log, reconstructing DTR execution sequence, and determining the state of the voting system under test at any given time.

1.8 Testing with Sample Ballots

Some tests in this document require a sample ballot to be used. When the term "Simple Test Ballot" is used, it refers to the sample ballot described in Section 4. When the term "Complex Test Ballot" is used, it refers to the sample ballot described in Section 5. When the term "Enhanced Test Ballot" is used, it refers to the sample ballot described in Section 6.

The following notation is used in describing ballots. A ballot choice on a specific ballot or ballot total is listed under n.m, n is the contest number and m is the voter choice under the selected ballot configuration. Thus, for the Simple Test Ballot configuration, 2.2 means a vote for Bruce Reeder and 3.4 means a vote for Amanda Marracini

1.9 Asterisk Notation (*****)

A series of red asterisks (*****) next to test activities (i.e. all or part of a TE) indicates that the activity is conditional and may not need to be executed based on the implementation under test. In general, the test activities have a condition statement similar to: "If the voting device is an EMS…" or "If the voting system provides role-based authentication…."

2 Definitions

Stimulus → Response Testing: A test method where the IT system is stimulated by providing some input and the IT system's response (output) is observed and analyzed. Also see test method for other form of testing.

Test Case: A fully defined set of input and expected results for a test. A test case is the most detailed and lowest level of test documentation material.

Test Method: Description of one or more tests, procedures by which tests are derived, or a combination of these.

Test Pre-Requisite: System configuration prior to executing a test case or set of test cases. For example, prior to testing that identification and authentication succeeds and fails under appropriate conditions, user accounts with specific user ID and passwords will need to be set up.

Test Procedures: Procedures used to execute a collection of test cases. For example, test procedures typically will consist of executing a set of steps to set test pre-requisite and then steps for each test case as identified with the test case,

Test Results: Set of results for each of the test cases.

3   Electronic Records Derived Test Requirements

RE 2.4.4.1-A (2005) All reports capable of being exported:
The voting system SHALL provide the capability to export electronic reports to files formatted in a non-restrictive, publicly-available format. Vendors SHALL provide a specification describing how they have implemented the format with respect to the manufacturer's specific voting devices and data, including such items as descriptions of elements, attributes, constraints, extensions, syntax and semantics of the format, and definitions for data fields and schemas.

TE 2.4.4.1-A.1 (2005) All reports capable of being exported – Collection of Ballot Images Report:
TE 2.4.4.1-A.1 (2005) All reports capable of being exported – Collection of Ballot Images shall be conducted after the TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

The tester shall generate a collection of ballot images report. The tester shall transfer the "collection of ballot images" report to a file to a removable media. The tester shall take the removable media to a workstation that has software to parse the format specified by the manufacturer. Examples of formats are text files, PDF files, Election Markup Language (EML), or IEEE Voting EDI format.

The tester shall view the Collection of Ballot Images report.

The tester shall verify that the Collection of Ballot Images report contains the date and time TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal was conducted.

Note: Since this is the date and time of all the ballots, this does not provide information that could compromise voter privacy.

The tester shall verify that the Collection of Ballot Images report contains fifteen ballots as listed in Table X-1: Votes for Summary Count Report.

The tester shall verify that for each ballot images in the report there is exactly one match in the voting pattern from Table X-1, including the precinct.

The tester shall verify that the ballot images in the report are not in the same order as cast per Table X-1.

The tester shall verify that the ballot images in the report are not in the reverse order as cast per Table X-1.

The tester shall verify that the ballot images in the report are not in the same cycle as cast per Table X-1. (e.g., vote 2, vote 3, …vote 15, vote 1).

The tester shall verify that the ballot images in the report are not in the reverse cycle as cast per Table X-1. (e.g., vote 13, vote 12, …vote 1, vote 15, vote 14).

The tester shall verify the appropriate ballot image in the report has provisional and challenged next to it as listed for the ballot in Table X-1. The tester shall also verify that each of the two ballots has a provisional category such as "regular provisional," "extended hours provisional," "regular extended hours", etc.

The tester shall verify that each ballot image in the report points to the Simple ballot configuration.

TE 2.4.4.1-A.2 (2005) All reports capable of being exported – Event Log Report:
TE 2.4.4.1-A.2 (2005) All reports capable of being exported – Event Log Report shall be conducted after TE 2.4.4.1-A.1 (2005) All reports capable of being exported – Collection of Ballot Images Report.

The tester shall generate the event log report. The tester shall transfer event log report to a file on a removable media. The tester shall take the removable media to a workstation that has software to parse the format specified by the manufacturer. Examples of formats are text files, PDF files, Election Markup Language (EML), or IEEE Voting EDI format. The tester shall verify that the report is an event log report.

The tester shall view the event log report.

The tester shall verify that the event log report contains the collection of ballot images report contains the date and time TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal was conducted.

Note: Since this is the date and time of all the ballots, this does not provide information that could compromise voter privacy.

The tester shall verify that the Collection of Ballot Images report in the event log report contains fifteen ballots as listed in Table X-1: Votes for Summary Count Report.

The tester shall verify that for each ballot images in the in the event log report there is exactly one match in the voting pattern from Table X-1, including the precinct.

The tester shall verify that the ballot images in the event log report are not in the same order as cast per Table X-1.

The tester shall verify that the ballot images in the event log report are not in the reverse order as cast per Table X-1.

The tester shall verify that the ballot images in the event log report are not in the same cycle as cast per Table X-1. (e.g., vote 2, vote 3, …vote 15, vote 1).

The tester shall verify that the ballot images in the event log report are not in the reverse cycle as cast per Table X-1. (e.g., vote 13, vote 12, …vote 1, vote 15, vote 14).

The tester shall verify the appropriate ballot image in the event log report has provisional and challenged next to it as listed for the ballot in Table X-1. The tester shall also verify that each of the two ballots has a provisional category such as "regular provisional," "extended hours provisional," "regular extended hours", etc.

The tester shall verify that each ballot image in the event log report points to the Simple ballot configuration.

*****TE 2.4.4.1-A.3 (2005) All reports capable of being exported – Tabulator Summary Count Report:
TE 2.4.4.1-A.3 (2005) All reports capable of being exported – Tabulator Summary Count Report is not applicable if the SUT is not a Tabulator or EMS Tabulator.

TE 2.4.4.1-A.3 (2005) All reports capable of being exported – Tabulator Summary Count Report shall be conducted immediately after TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

The tester shall transfer the "Tabulator Summary Count" report to a file to a removable media. The tester shall take the removable media to a workstation that has software to parse the format specified by the manufacturer. Examples of formats are text files, PDF files, Election Markup Language (EML), or IEEE Voting EDI format.

The tester shall view the Tabulator Summary Count report.

The tester shall verify that the Tabulator Summary Count report has the information enumerated in TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

*****TE 2.4.4.1-A.4 (2005) All reports capable of being exported – EMS Tabulator Summary Count Report:

TE 2.4.4.1-A.4 (2005) All reports capable of being exported – EMS Tabulator Summary Count Report is not applicable if the SUT is not an EMS Tabulator.

TE 2.4.4.1-A.4 (2005) All reports capable of being exported – EMS Tabulator Summary Count Report shall be conducted immediately after TE 2.4.4.3-A.1 (2005) EMS tabulator summary count report.

The tester shall transfer the "EMS Tabulator Summary Count" report to a file to a removable media. The tester shall take the removable media to a workstation that has software to parse the format specified by the manufacturer. Examples of formats are text files, PDF files, Election Markup Language (EML), or IEEE Voting EDI format.

The tester shall view the EMS Tabulator Summary Count report.

The tester shall verify that the EMS Tabulator Summary Count report has the information enumerated in TE 2.4.4.3-A.1 (2005) EMS tabulator summary count report.

*****TE 2.4.4.1-A.5 (2005) All reports capable of being exported – EMS Precinct Summary Count Report:

TE 2.4.4.1-A.5 (2005) All reports capable of being exported – EMS Precinct Summary Count Report is not applicable if the SUT is not an EMS Tabulator.

TE 2.4.4.1-A.5 (2005) All reports capable of being exported – EMS Precinct Summary Count Report shall be conducted immediately after TE 2.4.4.3-C.1 (2005) EMS, precinct summary count reports.

The tester shall transfer the "Precinct Summary Count" report to a file to a removable media. The tester shall take the removable media to a workstation that has software to parse the format specified by the manufacturer. Examples of formats are text files, PDF files, Election Markup Language (EML), or IEEE Voting EDI format.

The tester shall view the EMS Precinct Summary Count report.

The tester shall verify that the EMS Precinct Summary Count report has the information enumerated in TE 2.4.4.3-C.1 (2005) EMS, precinct summary count reports.

TE 2.4.4.1-A.6 (2005) All reports capable of being exported: Schema Documentation

The tester shall examine the vendor documentation and verify that it contains the format and schema definitions for the following types of reports:
1. Collection of Ballot Images Report
2. Event Log Report

3. Tabulator Summary Count Report if the SUT is a Tabulator or EMS Tabulator
4. EMS Tabulator Summary Count Report if the SUT is an EMS Tabulator
5. Precinct Summary Count Report if the SUT is an EMS Tabulator

The following steps shall be conducted from two to five times (depending on whether the SUT performs voting machine function, is a Tabulator, or is an EMS Tabulator), once for each type of report listed above, as applicable. The tester shall examine the vendor documentation and verify that it contains the following information for each type of report:
1. Detailed format specification sufficient for some one to write software to read and output the report.
2. Definition, description, and semantics of each field in the report
3. Syntax and format for each field
4. Description of constraints on values in a field. Note that the constraints could depend on other fields and/or could be static or dynamic.
5. Description if the field is always present or is optional and if optional under what circumstances (Note extensions are viewed as an example of optional fields)

RE 2.4.4.1-B (2005) All reports capable of being printed:
The voting system SHALL provide the ability to produce printed forms of electronic reports. The printed forms of the electronic reports SHALL retain all required information as specified for each report type other than digital signatures. The printing of the electronic reports MAY be done from a different component of the voting system that produced the electronic report. It shall be possible to print electronic reports produced by the central tabulator or EMS on a different device.

TE 2.4.4.1-B.1 (2005) All reports capable of being printed – reports:
The tester shall examine the list of manufacturer provided electronic reports and verify that the list contains the following:
1. Collection of Ballot Images Report
2. Event Logs
3. Tabulator Summary Count Report if the SUT is a Tabulator or EMS Tabulator
4. EMS Tabulator Summary Count Report if the SUT is an EMS Tabulator
5. Precinct Summary Count Report if the SUT is an EMS Tabulator

TE 2.4.4.1-B.2 (2005) All reports capable of being printed – print:
Collection of Ballot Images Report printing is tested under the following:
1. TE 2.4.4.2-D.1 (2005) DRE, collection of ballot images report
2. TE 2.4.4.2-C.1 (2005) Tabulator, collection of ballot images report

Event log printing is tested under
1. TE 2.4.4.2-B.3 (2005) Tabulator, summary count report handling – Event Log
2. TE 2.4.4.2-E.3 (2005) Tabulator, collection of ballot images handling – Event Log

Tabulator Summary Count Report printing is tested under TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

EMS Tabulator Summary Count Report printing is tested under TE 2.4.4.3-A.1 (2005) EMS tabulator summary count report.

Precinct Summary Count Report printing is tested under TE 2.4.4.3-C.1 (2005) EMS, precinct summary count reports.

*****TE 2.4.4.1-B.3 (2005) All reports capable of being printed – EMS:
If the SUT is not an EMS, TE 2.4.4.1-B.3 (2005) All reports capable of being printed – EMS is not applicable.

The purpose of TE 2.4.4.1-B.3 (2005) All reports capable of being printed – EMS is to verify that the electronic reports produced at the EMS can be printed on another machine.

Tabulator Summary Count Report printing on another machine is tested under TE 2.4.4.3-A.1 (2005) EMS tabulator summary count report.

EMS Tabulator Summary Count Report printing on another machine is tested under TE 2.4.4.3-A.1 (2005) EMS tabulator summary count report.

Precinct Summary Count Report printing on another machine is tested under TE 2.4.4.3-C.1 (2005) EMS, precinct summary count reports.

RE 2.4.4.1-C (2005) Cryptographic protection of reports:
Voting systems shall digitally sign electronic reports using FIPS approved algorithms with a security strength of at least 112-bits implemented within a FIPS 140-2 level 1 or higher validated cryptographic module operating in FIPS mode.

TE 2.4.4.1-C.1 (2005) Cryptographic protection of reports:
TE 2.4.4.1-C.1 (2005) Cryptographic protection of reports shall be conducted after TE 7.9.1-C.1 (2005) VVPAT, unambiguous interpretation of cast vote: Ballot Image.

The tester shall perform the following activities for each of the five electronic reports[2]:
1. The tester shall obtain an electronic report.
2. The tester shall use the appropriate public key to verify the digital signature on the electronic report.

TE 2.4.4.1-C.2 (2005) Cryptographic protection of reports – FIPS Module:
The tester shall execute the following cryptographic tests for the digital signature cryptographic module used to sign the electronic reports. These tests shall be conducted for each cryptographic module if different cryptographic modules are used to sign different reports.

TE Crypto Module.1 Cryptographic module validation information verification -- Modules
TE Crypto Module.2 Cryptographic module validation environment verification
TE Crypto Module.3 Cryptographic module validation description verification
TE Crypto Module.4 Cryptographic module validation configuration verification
TE Crypto Module.5 Cryptographic module validation algorithm verification
TE Key Size.1 Cryptographic strength – Key Size
TE MAC Size.1 Cryptographic strength – MAC

RE 2.4.4.2-A (2005) Tabulator, summary count report:
Each tabulator SHALL produce a Tabulator Summary Count report including the following information:
   a. Unique identifier of the tabulator;
   b. Time and date of summary record;
   c. The following, both in total and broken down by ballot configuration and precinct:
      1. Number of read ballots;

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[2] The following are five electronic reports: Collection of Ballot Images Report; Event Log report; Tabulator Summary Count Report if the SUT is a Tabulator or EMS Tabulator; EMS Tabulator Summary Count Report if the SUT is an EMS Tabulator; Precinct Summary Count Report if the SUT is an EMS Tabulator.

2. Number of counted ballots;
3. Number of rejected electronic ballot images; and
4. For each N-of-M (including 1-of-M) or cumulative voting contest appearing in any ballot configuration handled by the tabulator:
   I. Number of counted ballots that included that contest;
   II. Vote totals for each non-write-in contest choice;
   III. Number of write-in votes;
   IV. Number of overvotes; and
   V. Number of undervotes.

In producing the Tabulator Summary Count report, the tabulator SHALL assume that no provisional or challenged ballots are accepted.

*****TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal:
TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal is not applicable if the SUT is not a Tabulator.

TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal shall be executed immediately after TE 7.9.3-A.1 (2005) Collection of ballot images record. If the SUT is DRE without VVPAT and thus if the TE 7.9.3-A.1 (2005) Collection of ballot images record is not executed, the tester shall cast the ballots listed in the TE 7.9.3-A.1 (2005) Collection of ballot images record on the DRE using Simple ballot configuration.

The tester shall generate and print the Tabulator Summary Count Report.

The tester shall verify that the printed Tabulator Summary Count Report contains the following information for Precinct A:
1. The tester shall verify that the Tabulator Summary Count Report contains the SUT identifier and this identifier matches the SUT identifier from the physical SUT (e.g., serial number on a voting machine) or otherwise known to the tester (e.g., from SUT configuration).
2. The tester shall verify that the Tabulator Summary Count Report contains the time of report and that time matches the time TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal is conducted.
3. The tester shall verify that the Tabulator Summary Count Report contains read ballot count of six (6).
4. The tester shall verify that the Tabulator Summary Count Report contains counted ballot count of five (5).
5. The tester shall verify that the Tabulator Summary Count Report contains rejected ballot count of one (1).
6. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the presidential race:
   a) The number of counted ballots is zero (0).
   b) Vote totals for 1.1 is zero (0).
   c) Vote totals for 1.2 is zero (0).
   d) There are no write-in votes.
   e) There are no overvotes.
   f) Number of undervotes is six (6).
7. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the representative race:
   a) The number of counted ballots is five (5).
   b) Vote total for 2.1 is three (3)
   c) Vote total for 2.2 is two (2).
   d) Write-in votes are one (1).
   e) Number of overvotes is one (1).
   f) Number of undervotes is zero (0).

8. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the county commissioners race:
   a) The number of counted ballots is five (5).
   b) Vote total for 3.1 is two (2)
   c) Vote total for 3.2 is two (2).
   d) Vote total for 3.3 is two (2).
   e) Vote total for 3.4 is two (2).
   f) Vote total for 3.5 is zero (0).
   g) Write-in votes are zero (0).
   h) Number of overvotes is one (1).
   i) Number of undervotes is three (3).

The tester shall verify that the printed Tabulator Summary Count Report contains the following information for all precincts:
1. The tester shall verify that the Tabulator Summary Count Report contains the SUT identifier and this identifier matches the SUT identifier from the physical SUT or otherwise known to the tester (e.g., from SUT configuration).
2. The tester shall verify that the Tabulator Summary Count Report contains the time of report and that time matches the time TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal is conducted.
3. The tester shall verify that the Summary Count Report contains read ballot count of fifteen.
4. The tester shall verify that the Tabulator Summary Count Report contains counted ballot count of thirteen.
5. The tester shall verify that the Tabulator Summary Count Report contains rejected ballot count of two (2).
6. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the presidential race:
   a) The number of counted ballots is zero (0).
   b) Vote total for 1.1 is zero (0).
   c) Vote total for 1.2 is zero (0).
   d) There are no write-in votes.
   e) There are no overvotes.
   f) Number of undervotes is fifteen.
7. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the representative race:
   a) The number of counted ballots is thirteen.
   b) Vote total for 2.1 is six (6).
   c) Vote total for 2.2 is six (6).
   d) Write-in votes are two (2).
   e) Number of overvotes is one (1).
   f) Number of undervotes is zero (0).
8. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the county commissioners race:
   a) The number of counted ballots is thirteen.
   b) Vote total for 3.1 is six (6).
   c) Vote total for 3.2 is four (4).
   d) Vote total for 3.3 is six (6).
   e) Vote total for 3.4 is five (5).
   f) Vote total for 3.5 is three (3).
   g) Write-in votes are one (1).
   h) Number of overvotes is two (2).
   i) Number of undervotes is three (3).

*****TE 2.4.4.2-A.2 (2005) Tabulator, summary count report -- Provisional:

TE 2.4.4.2-A.2 (2005) Tabulator, summary count report – Provisional is not applicable if the SUT is not a Tabulator.

TE 2.4.4.2-A.2 (2005) Tabulator, summary count report – Provisional is not applicable if the SUT does not include to functionality to accept or reject provisional ballots.

TE 2.4.4.2-A.2 (2005) Tabulator, summary count report -- Provisional shall be conducted after TE 2.4.4.2-A.1(2005) Tabulator, summary count report – Normal.

The tester shall use the SUT interface to reject all the provisional ballots and accept all challenged ballots. Thus, one precinct A ballot will be rejected and one precinct C ballot will be accepted.

The tester shall generate and print the Tabulator Summary Count Report.

The tester shall verify that the printed Tabulator Summary Count Report contains the following information for Precinct A:
1. The tester shall verify that the Tabulator Summary Count Report contains the SUT identifier and this identifier matches the SUT identifier from the physical SUT or otherwise known to the tester (e.g., from SUT configuration).
2. The tester shall verify that the Tabulator Summary Count Report contains the time of report and that time matches the time TE 2.4.4.2-A.2 (2005) Tabulator, summary count report -- Provisional is conducted.
3. The tester shall verify that the Tabulator Summary Count Report contains read ballot count of six (6).
4. The tester shall verify that the Tabulator Summary Count Report contains counted ballot count of five (5).
5. The tester shall verify that the Tabulator Summary Count Report contains rejected ballot count of one (1).
6. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the presidential race:
   a) The number of counted ballots is zero (0).
   b) Vote total for 1.1 is zero (0).
   c) Vote total for 1.2 is zero (0).
   d) There are no write-in votes.
   e) There are no overvotes.
   f) Number of undervotes is six (6).
7. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the representative race:
   a) The number of counted ballots is five (5).
   b) Vote total for 2.1 is three (3)
   c) Vote total for 2.2 is two (2).
   d) Write-in votes are one (1).
   e) Number of overvotes is one (1).
   f) Number of undervotes is zero (0).
8. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the county commissioners race:
   a) The number of counted ballots is five (5).
   b) Vote total for 3.1 is two (2)
   c) Vote total for 3.2 is two (2).
   d) Vote total for 3.3 is two (2).
   e) Vote total for 3.4 is two (2).
   f) Vote total for 3.5 is zero (0).
   g) Write-in votes are zero (0).
   h) Number of overvotes is one (1).
   i) Number of undervotes is three (3).

The tester shall verify that the printed Tabulator Summary Count Report contains the following information for all precincts:

1. The tester shall verify that the Tabulator Summary Count Report contains the SUT identifier and this identifier matches the SUT identifier from the physical SUT or otherwise known to the tester (e.g., from SUT configuration).
2. The tester shall verify that the Tabulator Summary Count Report contains the time of report and that time matches the time TE 2.4.4.2-A.2 (2005) Tabulator, summary count report -- Provisional is conducted.
3. The tester shall verify that the Tabulator Summary Count Report contains read ballot count of fifteen.
4. The tester shall verify that the Tabulator Summary Count Report contains counted ballot count of fourteen.
5. The tester shall verify that the Tabulator Summary Count Report contains rejected ballot count of one (1).
6. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the presidential race:
   a) The number of counted ballots is zero (0).
   b) Vote total for 1.1 is zero (0).
   c) Vote total for 1.2 is zero (0).
   d) There are no write-in votes.
   e) There are no overvotes.
   f) Number of undervotes is fifteen.
7. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the representative race:
   a) The number of counted ballots is fourteen.
   b) Vote total for 2.1 is seven (7).
   c) Vote total for 2.2 is six (6).
   d) Write-in votes are two (2).
   e) Number of overvotes is one (1).
   f) Number of undervotes is zero (0).
8. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the county commissioner race:
   a) The number of counted ballots is fourteen.
   b) Vote total for 3.1 is six (6).
   c) Vote total for 3.2 is four (4).
   d) Vote total for 3.3 is seven (7).
   e) Vote total for 3.4 is six (6).
   f) Vote total for 3.5 is three (3).
   g) Write-in votes are one (1).
   h) Number of overvotes is two (2).
   i) Number of undervotes is three (3).

*****TE 2.4.4.2-A.3 (2005) Tabulator, summary count report – Ballot Configuration:
TE 2.4.4.2-A.3 (2005) Tabulator, summary count report – Ballot Configuration is not applicable if the SUT is not a Tabulator.

TE 2.4.4.2-A.3 (2005) Tabulator, summary count report – Ballot Configuration shall be conducted after TE 2.4.4.2-A.2 (2005) Tabulator, summary count report – Provisional and after all the Electronic Reports related DTR.

The tester shall cast the following additional ballots using the Enhanced ballot configuration

Precinct	All Votes											
A (4)	2.1	2.2	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5
		X	X	X						X		X

	X				X	X		X				X
		X				X	X	X	X			
	X			X			X				X	X	
A Total	2	2	1	2	1	2	2	2	1	2	1	2
Grand Total (4)	2	2	1	2	1	2	2	2	1	2	1	2

The tester shall generate and print the Tabulator Summary Count Report.

The tester shall verify that the printed Tabulator Summary Count Report contains the following information for Precinct A:

1. The tester shall verify that the Tabulator Summary Count Report contains the SUT identifier and this identifier matches the SUT identifier from the physical SUT or otherwise known to the tester (e.g., from SUT configuration).
2. The tester shall verify that the Tabulator Summary Count Report contains the time of report and that time matches the time TE 2.4.4.2-A.3 (2005) Tabulator, summary count report – Ballot Configuration is conducted.
3. The tester shall verify that the Tabulator Summary Count Report contains read ballot count of ten (10).
4. The tester shall verify that the Tabulator Summary Count Report contains counted ballot count of nine (9).
5. The tester shall verify that the Tabulator Summary Count Report contains rejected ballot count of one (1).
6. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the presidential race:
    a) The number of counted ballots is zero (0).
    b) Vote total for 1.1 is zero (0).
    c) Vote total for 1.2 is zero (0).
    d) There are no write-in votes.
    e) There are no overvotes.
    f) Number of undervotes is ten.
7. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the representative race:
    a) The number of counted ballots is nine (9).
    b) Vote total for 2.1 is five (5)
    c) Vote total for 2.2 is four (4).
    d) Write-in votes are one (1).
    e) Number of overvotes is one (1).
    f) Number of undervotes is zero (0).
8. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the county commissioners race:
    a) The number of counted ballots is nine (9).
    b) Vote total for 3.1 is three (3).
    c) Vote total for 3.2 is four (4).
    d) Vote total for 3.3 is three (3).
    e) Vote total for 3.4 is four (4).
    f) Vote total for 3.5 is two (2).
    g) Write-in votes are zero (0).
    h) Number of overvotes is one (1).
    i) Number of undervotes is three (3).
9. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the school board race:
    a) The number of counted ballots is four (4).
    b) Vote total for 4.1 is two (2).
    c) Vote total for 4.2 is one (1).
    d) Vote total for 4.3 is two (2).

    e) Vote total for 4.4 is one (1).
    f) Vote total for 4.5 is two (2).
    g) Write-in votes are zero (0).
    h) Number of overvotes is zero (0).
    i) Number of undervotes is zero (0).

The tester shall verify that the printed Tabulator Summary Count Report contains the following information for all precincts for Simple ballot configuration:

1. The tester shall verify that the Tabulator Summary Count Report contains the SUT identifier and this identifier matches the SUT identifier from the physical SUT or otherwise known to the tester (e.g., from SUT configuration).
2. The tester shall verify that the Tabulator Summary Count Report contains the time of report and that time matches the time TE 2.4.4.2-A.3 (2005) Tabulator, summary count report – Ballot Configuration is conducted.
3. The tester shall verify that the Tabulator Summary Count Report contains read ballot count of fifteen.
4. The tester shall verify that the Tabulator Summary Count Report contains counted ballot count of fourteen.
5. The tester shall verify that the Tabulator Summary Count Report contains rejected ballot count of one (1).
6. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the presidential race:
    a) The number of counted ballots is zero (0).
    b) Vote total for 1.1 is zero (0).
    c) Vote total for 1.2 is zero (0).
    d) There are no write-in votes.
    e) There are no overvotes.
    f) Number of undervotes is fifteen.
7. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the representative race:
    a) The number of counted ballots is fourteen.
    b) Vote total for 2.1 is seven (7).
    c) Vote total for 2.2 is six (6).
    d) Write-in votes are two (2).
    e) Number of overvotes is one (1).
    f) Number of undervotes is zero (0).
8. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the county commissioner race:
    a) The number of counted ballots is fourteen.
    b) Vote total for 3.1 is six (6).
    c) Vote total for 3.2 is four (4).
    d) Vote total for 3.3 is seven (7).
    e) Vote total for 3.4 is six (6).
    f) Vote total for 3.5 is three (3).
    g) Write-in votes are one (1).
    h) Number of overvotes is two (2).
    i) Number of undervotes is three (3).
9. The tester shall verify that the Tabulator Summary Count Report either contains no data on the school board race or contains the following data for the school board race:
    a) The number of counted ballots is zero (0).
    b) Vote total for 4.1 is zero (0).
    c) Vote total for 4.2 is zero (0).
    d) Vote total for 4.3 is zero (0).
    e) Vote total for 4.4 is zero (0).
    f) Vote total for 4.5 is zero (0).
    g) Write-in votes are zero (0).

h) Number of overvotes is zero (0).
i) Number of undervotes is zero (0).

The tester shall verify that the printed Tabulator Summary Count Report contains the following information for all precincts for Enhanced ballot configuration:

1. The tester shall verify that the Tabulator Summary Count Report contains the SUT identifier and this identifier matches the SUT identifier from the physical SUT or otherwise known to the tester (e.g., from SUT configuration).
2. The tester shall verify that the Tabulator Summary Count Report contains the time of report and that time matches the time TE 2.4.4.2-A.3 (2005) Tabulator, summary count report – Ballot Configuration is conducted.
3. The tester shall verify that the Tabulator Summary Count Report contains read ballot count of four (4).
4. The tester shall verify that the Tabulator Summary Count Report contains counted ballot count of four (4).
5. The tester shall verify that the Tabulator Summary Count Report contains rejected ballot count of zero (0).
6. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the presidential race:
   a) The number of counted ballots is zero (0).
   b) Vote total for 1.1 is zero (0).
   c) Vote total for 1.2 is zero (0).
   d) There are no write-in votes.
   e) There are no overvotes.
   f) Number of undervotes is four (4).
7. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the representative race:
   a) The number of counted ballots is four (4).
   b) Vote total for 2.1 is two (2).
   c) Vote total for 2.2 is two (2).
   d) Write-in votes are zero (0).
   e) Number of overvotes is zero (0).
   f) Number of undervotes is zero (0).
8. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the county commissioner race:
   a) The number of counted ballots is four (4).
   b) Vote total for 3.1 is one (1).
   c) Vote total for 3.2 is two (2).
   d) Vote total for 3.3 is one (1).
   e) Vote total for 3.4 is two (2).
   f) Vote total for 3.5 is two (2).
   g) Write-in votes are zero (0).
   h) Number of overvotes is zero (0).
   i) Number of undervotes is zero (0).
9. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the school board race:
   a) The number of counted ballots is four (4).
   b) Vote total for 4.1 is two (2).
   c) Vote total for 4.2 is one (1).
   d) Vote total for 4.3 is two (2).
   e) Vote total for 4.4 is one (1).
   f) Vote total for 4.5 is two (2).
   g) Write-in votes are zero (0).
   h) Number of overvotes is zero (0).
   i) Number of undervotes is zero (0).

The tester shall verify that the printed Tabulator Summary Count Report contains the following information for all precincts for all ballot configurations:

1. The tester shall verify that the Tabulator Summary Count Report contains the SUT identifier and this identifier matches the SUT identifier from the physical SUT or otherwise known to the tester (e.g., from SUT configuration).
2. The tester shall verify that the Tabulator Summary Count Report contains the time of report and that time matches the time TE 2.4.4.2-A.3 (2005) Tabulator, summary count report – Ballot Configuration is conducted.
3. The tester shall verify that the Tabulator Summary Count Report contains read ballot count of nineteen.
4. The tester shall verify that the Tabulator Summary Count Report contains counted ballot count of eighteen.
5. The tester shall verify that the Tabulator Summary Count Report contains rejected ballot count of one (1).
6. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the presidential race:
   a) The number of counted ballots is zero (0).
   b) Vote total for 1.1 is zero (0).
   c) Vote total for 1.2 is zero (0).
   d) There are no write-in votes.
   e) There are no overvotes.
   f) Number of undervotes is nineteen.
7. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the representative race:
   a) The number of counted ballots is eighteen.
   b) Vote total for 2.1 is nine (9).
   c) Vote total for 2.2 is eight (8).
   d) Write-in votes are two (2).
   e) Number of overvotes is one (1).
   f) Number of undervotes is zero (0).
8. The tester shall verify that the Tabulator Summary Count Report contains the following counts for the county commissioner race:
   a) The number of counted ballots is eighteen.
   b) Vote total for 3.1 is seven (7).
   c) Vote total for 3.2 is six (6).
   d) Vote total for 3.3 is eight (8).
   e) Vote total for 3.4 is eight (8).
   f) Vote total for 3.5 is five (5).
   g) Write-in votes are one (1).
   h) Number of overvotes is two (2).
   i) Number of undervotes is three (3).
9. The tester shall verify that the Tabulator Summary Count Report contains the following data for the school board race:
   a) The number of counted ballots is four (4).
   b) Vote total for 4.1 is two (2).
   c) Vote total for 4.2 is one (1).
   d) Vote total for 4.3 is two (2).
   e) Vote total for 4.4 is one (1).
   f) Vote total for 4.5 is two (2).
   g) Write-in votes are zero (0).
   h) Number of overvotes is zero (0).
   i) Number of undervotes is zero (0).

RE 2.4.4.2-B (2005) Tabulator, summary count report handling:
The tabulator SHALL:

a. Transmit the summary count report to the EMS with the other electronic reports;
b. Store the summary count report in the election archive, if available; and
c. Store the summary count report in the voting systems event log.

*****TE 2.4.4.2-B.1 (2005) Tabulator, summary count report handling – EMS:
TE 2.4.4.2-B.1 (2005) Tabulator, summary count report handling – EMS is not applicable if the SUT is not a Tabulator.

TE 2.4.4.2-B.1 (2005) Tabulator, summary count report handling – EMS shall be conducted after TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

The tester shall transmit the electronic records from the SUT to EMS.

The tester shall verify from the EMS that the records include the Tabulator Summary Count Report as listed in TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

*****TE 2.4.4.2-B.2 (2005) Tabulator, summary count report handling – Archive:
2.4.4.2-B.2 (2005) Tabulator, summary count report handling – Archive is not applicable if the SUT is not a Tabulator.

TE 2.4.4.2-B.2 (2005) Tabulator, summary count report handling – Archive is satisfied by procedures such as maintaining printed reports or electronic media.

*****TE 2.4.4.2-B.3 (2005) Tabulator, summary count report handling – Event Log:
TE 2.4.4.2-B.3 (2005) Tabulator, summary count report handling – Event Log is not applicable if the SUT is not a Tabulator.

TE 2.4.4.2-B.3 (2005) Tabulator, summary count report handling – Event Log shall be conducted after TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

The tester shall generate, print and examine the printed SUT event log report and verify that the event log report contains a Tabulator Summary Count Report event and the information in that event log report matches that in TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

RE 2.4.4.2-C (2005) Tabulator, collection of ballot images report:
Tabulators SHOULD produce a report of ballot images that includes:
a. Time and date of creation of complete ballot image report; and
b. Ballot images recorded in randomized order by the DRE for the election. For each voted ballot, this includes:
   1. Ballot configuration and reporting context;
   2. For each contest:
      I. The choice recorded, including undervotes and write-ins; and
      II. Any information collected electronically about each write-in;
   3. Information specifying whether the ballot is provisional, type of provisional ballot, and providing a unique identifier for the ballot.

*****TE 2.4.4.2-C.1 (2005) Tabulator, collection of ballot images report:
TE 2.4.4.2-C.1 (2005) Tabulator, collection of ballot images report is not applicable if the SUT is a DRE since the same requirement for DRE is covered under RE 2.4.4.2-D (2005) DRE, collection of ballot images report.

If the SUT is not a tabulator, TE 2.4.4.2-C.1 (2005) Tabulator, collection of ballot images report does not apply.

TE 2.4.4.2-C.1 (2005) Tabulator, Collection of ballot images report shall be conducted after the TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

The tester shall print the Collection of Ballot Images report.

The tester shall verify that the printed Collection of Ballot Images report contains the date and time TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal was conducted.

Note: Since this is the date and time of all the ballots, this does not provide information that could compromise voter privacy.

The tester shall verify that the printed Collection of Ballot Images report contains fifteen ballots as listed in Table X-1: Votes for Summary Count Report.

The tester shall verify that for each ballot images in the printed report there is exactly one match in the voting pattern from Table X-1, including the precinct.

The tester shall verify that the ballot images in the printed report are not in the same order as cast per Table X-1.

The tester shall verify that the ballot images in the printed report are not in the reverse order as cast per Table X-1.

The tester shall verify that the ballot images in the printed report are not in the same cycle as cast per Table X-1. (e.g., vote 2, vote 3, …vote 15, vote 1).

The tester shall verify that the ballot images in the printed report are not in the reverse cycle as cast per Table X-1. (e.g., vote 13, vote 12, …vote 1, vote 15, vote 14).

The tester shall verify the appropriate ballot image in the printed report has provisional and challenged next to it as listed for the ballot in Table X-1. The tester shall also verify that each of the two ballots has a provisional category such as "regular provisional," "extended hours provisional," "regular extended hours", etc.

The tester shall verify that each ballot image in the printed report points to the Simple ballot configuration.

RE 2.4.4.2-D (2005) DRE, collection of ballot images report:
DREs shall produce a report of ballot images that includes:
   a. Time and date of poll closing; and
   b. Ballot images recorded in randomized order by the DRE for the election. For each voted ballot, this includes:
      1. Ballot configuration and reporting context;
      2. For each contest:
         I.   The choice recorded, including undervotes and write-ins; and
         II. Any information collected electronically about each write-in;
      3. Information specifying whether the ballot is provisional, type of provisional ballot, and providing a unique identifier for the ballot.

*****TE 2.4.4.2-D.1 (2005) DRE, collection of ballot images report:
If the SUT is not a DRE, TE 2.4.4.2-D.1 (2005) DRE, collection of ballot images report is not applicable.

TE 2.4.4.2-D.1 (2005) DRE, collection of ballot images report shall be conducted after the TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

The tester shall print the Collection of Ballot Images report.

The tester shall verify that the printed report contains the date and time when the TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal ended.

The tester shall verify that the ballot images in the printed report contain fifteen ballots as listed in Table X-1: Votes for Summary Count Report.

The tester shall verify that for each ballot image in the printed report there is exactly one match in the voting pattern from Table X-1, including the precinct.

The tester shall verify that the ballot images in the printed report are not in the same order as listed in Table X-1.

The tester shall verify that the ballot images in the printed report are not in the reverse order as listed in Table X-1.

The tester shall verify that the ballot images in the printed report are not in the same cycle as listed in Table X-1. (e.g., vote 2, vote 3, …vote 15, vote 1).

The tester shall verify that the ballot images in the printed report are not in the reverse cycle as listed in Table X-1. (e.g., vote 13, vote 12, …vote 1, vote 15, vote 14).

The tester shall verify the appropriate ballot image in the printed report has provisional and challenged next to it as listed for the ballot in Table X-1. The tester shall also verify that each of the two ballots has a provisional category such as "regular provisional," "extended hours provisional," "regular extended hours", etc.

The tester shall verify that each ballot image in the printed report points to the same ballot configuration as listed in Table X-1.

RE 2.4.4.2-E (2005) Tabulator, collection of ballot images handling:
Tabulators that produce the collection of ballot images report SHALL:
   a. Transmit the collection of ballot images report to the EMS with the other electronic reports;
   b. Store the collection of ballot images report in the election archive, if available; and
   c. Store the collection of ballot images report in the voting systems event log.

*****TE 2.4.4.2-E.1 (2005) Tabulator, collection of collection of ballot images handling – EMS:
If the SUT is not a Tabulator, TE 2.4.4.2-E.1 (2005) Tabulator. collection of ballot images handling – EMS is not applicable.

If the tabulator does not produce ballot images, TE 2.4.4.2-E.1 (2005) Tabulator. collection of ballot images handling – EMS is not applicable.

TE 2.4.4.2-E.1 (2005) Tabulator. collection of ballot images handling – EMS shall be conducted after TE 2.4.4.2-B.1 (2005) Tabulator, summary count report handling – EMS.

The tester shall verify from the EMS that the records include the ballot images as listed in Table X-1.

TE 2.4.4.2-E.2 (2005) Tabulator, collection of ballot images handling – Archive:
TE 2.4.4.2-E.2 (2005) Tabulator, collection of ballot images handling – Archive is satisfied by procedures such as maintaining printed or electronic records.

*****TE 2.4.4.2-E.3 (2005) Tabulator, collection of ballot images handling – Event Log:
If the SUT is not a Tabulator, TE 2.4.4.2-E.3 (2005) Tabulator, collection of ballot images handling – Event Log is not applicable.

If the tabulator does not produce ballot images, TE 2.4.4.2-E.3 (2005) Tabulator, collection of ballot images handling – Event Log is not applicable.

TE 2.4.4.2-E.3 (2005) Tabulator, collection of ballot images handling – Event Log shall be conducted after TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

The tester shall generate, print and examine the printed SUT event log report and verify that the event log report contains a record for each of the cast votes listed in Table X-1 (i.e., the Collection of Ballot Images report).

RE 2.4.4.2-F (2005) Tabulator, electronic records event log record handling:
The tabulator SHALL digitally sign the event log, transmit the signed event log to an EMS, and retain a record of the transmission. The tabulator digital signature shall be generated using a FIPS approved algorithm with a security strength of at least 112-bits implemented within a FIPS 140-2 level 1 or higher validated cryptographic module operating in FIPS mode.

*****TE 2.4.4.2-F.1 (2005) Tabulator, electronic records event log record handling:
If the SUT is not a tabulator, TE 2.4.4.2-F.1 (2005) Tabulator, electronic records event log record handling is not applicable.

TE 2.4.4.2-F.1 (2005) Tabulator, electronic records event log record handling shall be conducted after TE 2.4.4.2-A.1 (2005) Tabulator, summary count report – Normal.

The tester shall transmit the event log from the SUT to EMS.

The tester shall verify at the EMS that the event log includes the following:
1. A Tabulator Summary Count Report as listed in TE 2.4.4.2-B.3 (2005) Tabulator, summary count report handling – Event Log.
2. A Collection of Ballot Images report as listed in TE 2.4.4.2-E.3 (2005) Tabulator, collection of ballot images handling – Event Log.

The tester shall verify the digital signature on the event log at the EMS using the appropriate public key.

The tester shall verify that the SUT retains the event log containing the following:
1. Tabulator Summary Count Report as verified in TE 2.4.4.2-B.3 (2005) Tabulator, summary count report handling – Event Log.
2. Collection of Ballot Images report as listed in TE 2.4.4.2-E.3 (2005) Tabulator, collection of ballot images handling – Event Log.

*****TE 2.4.4.2-F.2 (2005) Tabulator, electronic records event log record handling – FIPS Module:
If the SUT is not a tabulator, TE 2.4.4.2-F.2 (2005) Tabulator, electronic records event log record handling – FIPS Module is not applicable.

The tester shall execute the following cryptographic tests for the digital signature cryptographic module used to sign the event log:

TE Crypto Module.1 Cryptographic module validation information verification -- Modules
TE Crypto Module.2 Cryptographic module validation environment verification
TE Crypto Module.3 Cryptographic module validation description verification
TE Crypto Module.4 Cryptographic module validation configuration verification
TE Crypto Module.5 Cryptographic module validation algorithm verification
TE Key Size.1 Cryptographic strength – Key Size
TE MAC Size.1 Cryptographic strength – MAC

RE 2.4.4.3-A (2005) EMS tabulator summary count report:
Each EMS SHALL produce a Tabulator Summary Count report including the following information:
    a. Identifiers for each tabulator contained in the summary;
    b. For tabulators with public keys:
        1. The public key for each tabulator in the summary and
        2. Signed tabulator summary count report.
    c. Summary ballot counts and vote totals by tabulator, precinct, and polling place.
        1. Precinct totals include subtotals from each tabulator used in the precinct.

*****TE 2.4.4.3-A.1 (2005) EMS tabulator summary count report:
If the SUT is not EMS, TE 2.4.4.3-A.1 (2005) EMS tabulator summary count report is not applicable.

The tester shall load the Tabulator Summary Count Report listed in Table Y-1 that uses the Simple Test Ballot configuration.

Tabulator T1 covers precincts P1 and P2. Tabulators T2 and T3 combine to cover precinct P3.

The tester shall provide the following Summary Count Reports from the tabulators to the SUT.

Note: The table Y-1 has P3 and Total columns that are not fed to the SUT. These columns are provided to verify the calculations done by the SUT.

Note: The table Y-1 contains three numbers of the form n1+n2=n3 in several cells under the T1 column. n1 is the number for precinct P1; n2 is number for precinct P2; and n3 is the total (i.e., the sum of the two numbers).

Note: The tester shall not vote for Contest 1.

TABLE Y-1: SUMMARY COUNT REPORTS FED TO EMS

Information	T1	T2	T3	P3	Total
Device Identifier (from Tabulator)	T1	T2	T3	N/A	N/A
Date and Time of Summary Count Report	DT[3]	DT	DT	N/A	N/A
Number of read ballots	12+8 =20	32	14	46	66
Number of counted ballots	10+7=17	29	12	41	58
Number of provisional ballots	2+1=3	3	2	5	8
Counted ballots for 1.1	0	0	0	0	0
Counted ballots for 1.2	0	0	0	0	0

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[3] DT is the date and time few minutes before this test is conducted.

Information	T1	T2	T3	P3	Total
Counted ballots for Write-Ins for Presidential Contest	0	0	0	0	0
Overvote for Presidential Contest	0	0	0	0	0
Undervote for Presidential Contest	12+8=20	32	14	46	66
Counted ballots for 2.1	6+5=11	14	4	18	29
Counted ballots for 2.2	3+2=5	13	5	18	23
Counted ballots for Write-Ins for Representative Contest	1+1=2	1	3	4	6
Overvote for Representative Contest	2+1=3	2	0	2	5
Undervote for Representative Contest	1+1=2	3	0	3	5
Counted ballots for 3.1	4+2=6	12	5	17	23
Counted ballots for 3.2	3+4=7	8	3	11	18
Counted ballots for 3.3	6+3=9	9	4	13	22
Counted ballots for 3.4	4+2=6	11	2	13	19
Counted ballots for 3.5	2+1=3	10	8	18	21
Counted ballots for Write-Ins for county commissioners Contest	3+4=7	6	4	10	17
Overvote for county commissioners Contest	3+4=7	2	4	6	13
Undervote for county commissioners Contest	1+2=3	4	2	6	9

The tester shall generate and print the Tabulator Summary Count Reports for the three tabulators: T1, T2, and T3.

The tester shall take the generated Tabulator Summary Count Reports to another machine and print them.

The tester shall verify that the printed Tabulator Summary Count Reports contain a report for each of the three tabulators: T1, T2, and T3.

For each of the three, tabulators, the tester shall verify the following from both the printed Tabulator Summary Count Report. Thus, the following steps shall be carried out six times (i.e., three tabulators and two reports per tabulator from two machines):
1. There is a tabulator identifier in the record.
2. There is a public key in the tabulator record.
3. There is a digital signed Tabulator Summary Count Report for the tabulator.
4. The tester shall use the public key in the tabulator record to verify the digital signature on the Tabulator Summary Count Report for the tabulator.
5. The tester shall verify the following for the total in the Tabulator Summary Count Report:
    a) The read ballot count matches the read ballot count in Table Y-1 (e.g., for T1, it is 20)
    b) The counted ballot count matches the counted ballot count in Table Y-1 (e.g., for T2, it is 29)
    c) The rejected ballot count matches the rejected ballot count in Table Y-1 (e.g., for T3, it is 2)
6. The tester shall verify the following for the presidential contest in the Tabulator Summary Count Report:
    a) The total counted ballot count is 0.
    b) The counted ballot count for 1.1 is 0.
    c) The counted ballot count for 1.2 is 0.
    d) There are no write-in votes.
    e) There are no overvotes.
    f) Undervote count matches the undervote count in Table Y-1 (e.g., 20 for T1 and 14 for T3).

7. The tester shall verify the following for the representative contest in the Tabulator Summary Count Report:
    a) The total counted ballot matches the counted ballot count in Table Y-1 (e.g., 12 for T3).
    b) The counted ballot count for 2.1 matches the counted ballot count for 2.1 in Table Y-1 (e.g., for T1, it is 11).
    c) The counted ballot count for 2.2 matches the counted ballot count for 2.2 in Table Y-1 (e.g., for T2, it is 13).
    d) The write-in vote count matches the write-in vote count in Table Y-1 (e.g., for T3, it is 3).
    e) Overvote count matches the overvote count in Table Y-1 (e.g., for T1, it is 3)
    f) Undervote count matches the undervote count in Table Y-1 (e.g., for T2, it is 3)
8. The tester shall verify the following for the county commissioners contest in the Tabulator Summary Count Report:
    a) The total counted ballot matches the counted ballot count in Table Y-1 (e.g., 17 for T1).
    b) The counted ballot count for 3.1 through 3.5 matches the counted ballot count for 3.1 through 3.5 in Table Y-1 (e.g., for T1 for 3.3, it is 9).
    c) The write-in vote count matches the write-in vote count in Table Y-1 (e.g., for T3, it is 4).
    d) Overvote count matches the overvote count in Table Y-1 (e.g., for T1, it is 7).
    e) Undervote count matches the undervote count in Table Y-1 (e.g., for T2, it is 4).

The tester shall verify that the printed Tabulator Summary Count Report for the tabulator T1 also contains records for precincts P1 and P2 contests. Thus, the tester shall carry out the following steps four times (twice for P1 for two reports and twice for P2 for two reports):
1. The tester shall verify the following for the total in the Tabulator Summary Count Report:
    a) The read ballot count matches the read ballot count in Table Y-1 (e.g., for P1, it is 12).
    b) The counted ballot count matches the counted ballot count in Table Y-1 (e.g., for P2, it is 7).
    c) The rejected ballot count matches the rejected ballot count in Table Y-1 (e.g., for P1, it is 2).
2. The tester shall verify the following for the presidential contest in the Tabulator Summary Count Report:
    a) The counted ballot count is 0.
    b) The counted ballot count for 1.1 is 0.
    c) The counted ballot count for 1.2 is 0.
    d) There are no write-in votes.
    e) There are no overvotes.
    f) Undervote count matches the undervote count in Table Y-1 (e.g., for P2, it is 8)
3. The tester shall verify the following for the representative contest in the Tabulator Summary Count Report:
    a) The counted ballot count matches the counted ballot count in Table Y-1 (e.g., for P1, it is 10).
    b) The counted ballot count for 2.1 matches the counted ballot count for 2.1 in Table Y-1 (e.g., for P1, it is 6).
    c) The counted ballot count for 2.2 matches the counted ballot count for 2.2 in Table Y-1 (e.g., for P2, it is 2).
    d) The write-in vote count matches the write-in vote count in Table Y-1 (e.g., for P1, it is 1).
    e) Overvote count matches the overvote count in Table Y-1 (e.g., for P2, it is 1).
    f) Undervote count matches the undervote count in Table Y-1 (e.g., for P1, it is 1).
4. The tester shall verify the following for the county commissioners contest in the Tabulator Summary Count Report:

a) The counted ballot count matches the counted ballot count in Table Y-1 (e.g., for P2, it is 7).
b) The counted ballot count for 3.1 through 3.5 matches the counted ballot count for 3.1 through 3.5 in Table Y-1 (e.g., for P1 for 3.4, it is 4).
c) The write-in vote count matches the write-in vote count in Table Y-1 (e.g., for P2, it is 4).
d) Overvote count matches the overvote count in Table Y-1 (e.g., for P1, it is 3).
e) Undervote count matches the undervote count in Table Y-1 (e.g., for P2, it is 1).

The tester shall verify that that the P3 totals in the two printed EMS Tabulator Summary Count Reports match those for P3 in Table Y-1. Specifically,
1. The ballot totals match:
    a) The read ballot count is 46.
    b) The counted ballot count is 41.
    c) The rejected ballot count is 5.
2. The presidential contest match:
    a) The counted ballot count is 0.
    b) The counted ballot for 1.1 is 0
    c) The counted ballot count for 1.2 is 0.
    d) There are no write-in votes.
    e) There are no overvotes.
    f) There are 46 undrevotes.
3. The representative contest match:
    a) The counted ballot count is 41.
    b) The counted ballot count for 2.1 is 18.
    c) The counted ballot count for 2.2 is 18.
    d) The write-in vote count is 4.
    e) Overvote count is 2.
    f) Undervote count is 3.
4. The county commissioners numbers match:
    a) The counted ballot count is 41.
    b) The counted ballots for 3.1 through 3.5 are 17, 11, 13, 13, 18 respectively.
    c) The write-in vote count is 10.
    d) Overvote count is 6.
    e) Undervote count is 6.

RE 2.4.4.3-B (2005) EMS, report combination for privacy:
The EMS shall be capable of combining tabulator reports to protect voter privacy in cases when there are tabulators with few votes.

*****TE 2.4.4.3-B.1 (2005) EMS, report combination for privacy:
If the SUT is not EMS, TE 2.4.4.3-B.1 (2005) EMS report combination for privacy is not applicable.

TE 2.4.4.3-B.1 (2005) EMS, report combination for privacy shall be conducted after the TE 2.4.4.3-A (2005) EMS tabulator summary count report. The tester shall take the generate

The tester shall combine T1, T2, and T3 Tabulator Summary Count Reports. The tester shall print the combined report (i.e., EMS Tabulator Summary Count Report) on the EMS.

The test shall export the EMS Tabulator Summary Count Report to another machine.

The tester shall print the EMS Tabulator Summary Count Report on the other machine.

The tester shall verify that the two printed EMS Tabulator Summary Count Report contain the same information as the totals in Table Y-1. Thus, the following steps shall be carried out twice. Specifically,

1. The ballots totals are as follows:
   a) The read ballot count is 66.
   b) The counted ballot count is 58.
   c) The rejected ballot count is 8.
2. The presidential contest totals are as follows:
   a) Total counted ballot count is 0.
   b) Counted ballot count for 1.1 is 0.
   c) Counted ballot count for 1.2 is 0.
   d) There are no write-in votes.
   e) There are no overvotes.
   f) Number of undervotes is 66.
3. The representative contest totals are as follows:
   a) Counted ballot count is 58.
   b) Counted ballot count for 2.1 is 29.
   c) Counted ballot count for 2.2 is 23.
   d) Write-in ballot count is 6.
   e) Overvote ballot count is 5.
   f) Undervote ballot count is 5.
4. The board member contest totals are as follows:
   a) Counted ballot count is 58.
   b) Counted ballot counts for 3.1 through 3.5 are 23, 18, 22, 19, 21 respectively.
   c) Write-in ballot count is 17.
   d) Overvote count is 13.
   e) Undervote count is 9.

RE 2.4.4.3-C (2005) EMS, precinct summary count reports:

The EMS SHALL produce a report for each precinct including:
   a. Each tabulator included in the precinct with its identifier;
   b. Number of read ballots;
   c. Number of counted ballots; and
   d. For each N-of-M (including 1-of-M) or cumulative voting contest appearing in any ballot configuration handled by the tabulator:
      1. Number of counted ballots that included that contest;
      2. Vote totals for each non-write-in contest choice; and
      3. Number of write-in votes

*****TE 2.4.4.3-C.1 (2005) EMS, precinct summary count reports:

If the SUT is not EMS, TE 2.4.4.3-C.1 (2005) EMS, precinct summary count reports is not applicable.

TE 2.4.4.3-C.1 (2005) EMS, Precinct Summary Count reports shall be conducted after the TE 2.4.4.3-A (2005) EMS tabulator summary count report.

The tester shall generate and print the Precinct Summary Count Reports on the EMS.

The test shall export the Precinct Summary Count Reports to another machine.

The tester shall print the Precinct Summary Count Reports on the other machine.

The tester shall verify from the two sets of printed reports that the numbers for each of the three precincts: P1, P2, and P3 match those in Table Y-1. Thus, the following steps shall be conducted six times (three precincts and two reports for each precinct):

1. There is a tabulator identifier in the record. (e.g., for P3, tabulator identifier for T2 and T3 shall be present).
2. Number of read ballots for the precinct matches those in Table Y-1 (e.g., 12 for P1 and 46 for P3)
3. Number of counted ballots for the precinct matches those in Table Y-1 (e.g., 7 for P2 and 41 for P3).
4. Number of rejected ballots for the precinct matches those in Table Y-1 (e.g., 2 for P1 and 5 for P3).
5. The following is true for the presidential contest:
   a) Number of total vote count is 0.
   b) Number of ballots for 1.1 is 0.
   c) Number of ballots for 1.2 is 0.
   d) Number of write-in votes is 0.
   e) There are no overvotes.
   f) Undervotes matches those in Table Y-1 (e.g., 12 for P1 and 46 for P3)
6. The following is true for the representative contest:
   a) Number of ballots counted matches those in Table Y-1 (e.g., 10 for P1 and 41 for P3).
   b) Number of ballots for 2.1 matches those in Table Y-1 (e.g., 5 for P2 and 18 for P3).
   c) Number of ballots for 2.2 matches those in Table Y-1 (e.g., 3 for P1 and 18 for P3).
   d) Number of write-in votes matches those in Table Y-1 (e.g., 1 for P2 and 4 for P3).
7. The following is true for the county commissioners contest:
   a) Number of ballots counted matches those in Table Y-1 (e.g., 10 for P1 and 41 for P3).
   b) Number of ballots for 3.1 through 3.5 match those in Table Y-1 (e.g., 3 for 3.3 in P2 and 18 for 3.5 in P3).
   c) Number of write-in votes matches those in Table Y-1 (e.g., 3 for P1 and 10 for P3).

RE 2.4.4.3-D (2005) EMS, precinct adjustment record:

The EMS SHALL produce a report showing the changes made to each contest based on the resolution of provisional ballots, challenged ballots, write-in choices, and the date and time of the report.

*****TE 2.4.4.3-D.1 (2005) EMS, precinct adjustment record:

If the SUT is not EMS, TE 2.4.4.3-D.1 (2005) EMS, precinct adjustment record is not applicable.

TE 2.4.4.3-D.1 (2005) EMS, precinct adjustment record shall be conducted after TE 2.4.4.3-C.1 (2005) EMS, precinct Summary Count Reports such that the EMS has been only fed the Summary Count Reports per Table Y-1.

The tester shall use the EMS interface to accept all the provisional and challenged (i.e., rejected) ballots for precincts P1 and P3, and permanently reject them for precinct P2. This should result in the following ballot summaries.

Note: The following assumptions have been made about voter choices for the accepted provisional ballots.
- Ballot 1(2.1, 3.1, 3.2) – T1
- Ballot 2 (2.2, 3.3, 3.4) – T1
- Ballot 3 (2.1, 3.1, 3.2) – T2
- Ballot 4 (2.2, 3.3, 3.4) – T2
- Ballot 5 (2.1, 3.1, 3.5) – T2

- Ballot 6 (2.1, 3.1, 3.5) – T3
- Ballot 7 (2.2, 3.2, 3.4) – T3

TABLE Y-2: EMS INTERNAL STATE AFTER PROVISIONAL BALLOT ADJUDICATION

Information	T1	T2	T3	P3	Total
Number of read ballots	12+8 =20	32	14	46	66
Number of counted ballots	12+7=19	32	14	46	65
Number of rejected ballots	0+1=1	0	0	0	1
Counted ballots for 1.1	0	0	0	0	0
Counted ballots for 1.2	0	0	0	0	0
Counted ballots for Write-Ins for Presidential Contest	0	0	0	0	0
Overvote for Presidential Contest	0	0	0	0	0
Undervote for Presidential Contest	12+8=20	32	14	46	66
Counted ballots for 2.1	7+5=12	16	5	21	33
Counted ballots for 2.2	4+2=6	14	6	20	26
Counted ballots for Write-Ins for Representative Contest	1+1=2	1	3	4	6
Overvote for Representative Contest	2+1=3	2	0	2	5
Undervote for Representative Contest	1+1=2	3	0	3	5
Counted ballots for 3.1	5+2=7	14	6	20	27
Counted ballots for 3.2	4+4=8	9	4	13	21
Counted ballots for 3.3	7+3=10	10	4	14	24
Counted ballots for 3.4	5+2=7	12	3	15	22
Counted ballots for .5	2+1=3	11	9	20	23
Counted ballots for Write-Ins for county commissioner Contest	3+4=7	6	4	10	17
Overvote for county commissioner Contest	3+4=7	2	4	6	13
Undervote for county commissioner Contest	1+2=3	4	2	6	9

The tester shall obtain precinct Summary Count Reports.

The tester shall verify that the date and time of the report is the date and time TE 2.4.4.3-D.1 (2005) EMS, precinct adjustment record is conducted.

The tester shall verify that the numbers for each of the three precincts: P1, P2, and P3 match those in Table Y-2. Thus, the following steps shall be conducted three times:
1. There is a tabulator identifier in the record. (e.g., for P3, tabulator identifier for T2 and T3 shall be present).
2. Number of read ballots for the precinct matches those in Table Y-2 (e.g., 12 for P1 and 46 for P3)
3. Number of counted ballots for the precinct matches those in Table Y-2 (e.g., 7 for P2 and 46 for P3).
4. Number of rejected ballots for the precinct matches those in Table Y-2 (e.g., 0 for P1 and 0 for P3).
5. The following is true for the presidential contest:
   a) Total ballots is 0.
   b) The number of counted ballots for 1.1 is 0.
   c) The number of counted ballots for 1.2 is 0.
   d) There are no write-in votes
   e) There are no overvotes.
   f) The number of undervotes match those in Table Y-2 (e.g., 8 for P2 and 46 for P3)
6. The following is true for the representative contest:

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a) Number of ballots counted matches those in Table Y-2 (e.g., 12 for P1 and 46 for P3).
b) Number of ballots for 2.1 matches those in Table Y-2 (e.g., 5 for P2 and 21 for P3).
c) Number of ballots for 2.2 matches those in Table Y-2 (e.g., 4 for P1 and 20 for P3).
d) Number of write-in votes matches those in Table Y-2 (e.g., 1 for P2 and 4 for P3).
7. The following is true for the board contest:
a) Number of ballots counted matches those in Table Y-2 (e.g., 12 for P1 and 46 for P3).
b) Number of ballots for 3.1 through 3.5 match those in Table Y-2 (e.g., 7 for 3.3 in P1 and 20 for 3.5 in P3).
c) Number of write-in votes matches those in Table Y-2 (e.g., 3 for P1 and 10 for P3).

RE 2.4.4.3-E (2005) EMS, verify signed records:

For each tabulator producing electronic reports, the EMS SHALL verify the digital signature on the report is correct using the public key associated with the tabulator.

Analysis:
RE 2.4.4.3-E (2005) EMS, verify signed records is tested in TE 2.4.4.3-A (2005) EMS tabulator summary count report.

4   Audit Test Ballot Specification – Simple

This section contains the specification for Simple Test Ballot used in TEs in Section **Error! Reference source not found.**.

Information applicable to whole ballot

Date and Time	2004-nov-02, 7:00 AM to 8:00 PM
State	Maryland
County	Madison
Party Line Voting Method	Enabled for partisan contests

Information applicable to every contest

Full-term or partial-term election	Full-term
Voting Method	Simple vote for N candidate(s) - (i.e. no ranked voting)

- **Contest #1:**

Title of Office	President and Vice-President of the United States
District of Office	United States
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	1
Maximum Write-in Votes Allowed	0

  - o **Candidate #1.1:** Joseph Barchi and Joseph Hallaren / Blue
  - o **Candidate #1.2:** Adam Cramer and Greg Vuocolo / Yellow

- **Contest #2:**

Title of Office	US Representative
District of Office	6th Congressional District
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	1

Maximum Write-in Votes Allowed	1

- o **Candidate #2.1:** Brad Plunkard / Blue
- o **Candidate #2.2:** Bruce Reeder / Yellow

- **Contest #3:**

Title of Office	County Commissioners
District of Office	Countywide
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	2
Maximum Write-in Votes Allowed	2

- o **Candidate #3.1:** Camille Argent / Blue
- o **Candidate #3.2:** Chloe Witherspoon / Blue
- o **Candidate #3.3:** Clayton Bainbridge / Blue
- o **Candidate #3.4:** Amanda Marracini / Yellow
- o **Candidate #3.5:** Charlene Hennessey / Yellow

5   Audit Test Ballot Specification – Complex

This section contains the specification for Complex Test Ballot used in TEs in Section **Error! Reference source not found.**.

The ballot shall be designed such that each paper record is exactly two pages. This may require adding referendum text and/or adding page breaks.

Information applicable to whole ballot

Date and Time	2004-nov-02, 7:00 AM to 8:00 PM
State	Maryland
County	Madison
Party Line Voting Method	Enabled for partisan contests

Information applicable to every contest

Full-term or partial-term election	Full-term
Voting Method	Simple vote for N candidate(s) - (i.e. no ranked voting)

- **Contest #1:**

Title of Office	President and Vice-President of the United States
District of Office	United States
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	1
Maximum Write-in Votes Allowed	0

  o **Candidate #1.1:** Joseph Barchi and Joseph Hallaren / Blue
  o **Candidate #1.2:** Adam Cramer and Greg Vuocolo / Yellow

- **Contest #2:**

Title of Office	Senator
District of Office	Maryland
Partisanship	Partisan

Minimum Votes Allowed	0
Maximum Votes Allowed	1
Maximum Write-in Votes Allowed	1

- o **Candidate #2.1:** Brad Plunkard / Blue
- o **Candidate #2.2:** Bruce Reeder / Yellow

- **Contest #3:**

Title of Office	US Representative
District of Office	6th Congressional District
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	1
Maximum Write-in Votes Allowed	1

- o **Candidate #3.1:** Brad Plunkard / Blue
- o **Candidate #3.2:** Bruce Reeder / Yellow

- **Contest #4:**

Title of Office	County Commissioners
District of Office	Countywide
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	2
Maximum Write-in Votes Allowed	2

- o **Candidate #4.1:** Camille Argent / Blue
- o **Candidate #4.2:** Chloe Witherspoon / Blue
- o **Candidate #4.3:** Clayton Bainbridge / Blue
- o **Candidate #4.4:** Amanda Marracini / Yellow
- o **Candidate #4.5:** Charlene Hennessey / Yellow

- **Referendum #1:**

Title of proposition	PROPOSED CONSTITUTIONAL AMENDMENT C
Wording of proposition	Shall there be amendments to the State constitution intended to have the collective effect of ensuring the separation of governmental power among the three branches of state government: the legislative branch, the executive branch and the judicial branch? a. Article III, Section 6 of the Constitution shall be amended to read as follows: Section 6. Holding of offices under other governments. - Senators and representatives not to hold other appointed offices under state government. --No person holding any office under the government of the United States, or of any other state or country, shall act as a general officer or as a member of the general assembly, unless at the time of taking such engagement that person shall have resigned the office under such government; and if any general officer, senator, representative, or judge shall, after election and engagement, accept any appointment under any other government, the office under this shall be immediately vacated; but this restriction shall not apply to any person appointed to take deposition or acknowledgement of deeds, or other legal instruments, by the authority of any other state or country. No senator or representative shall, during the time for which he or she was elected, be appointed to any state office, board, commission or other state or quasi-public entity exercising executive power under the laws of this state, and no person holding any executive office or serving as a member of any board, commission or other state or quasi-public entity exercising executive power under the laws of this state shall be a member of the senate or the house of representatives during his or her continuance in such office. b. Article V of the Constitution shall be amended to read as follows: The powers of the government shall be distributed into three (3) separate and distinct departments: the legislative, the executive and the judicial. c. Article VI, Section 10 of the Constitution shall be deleted in its entirety. d. Article IX, Section 5 of the Constitution shall be amended to read as follows: Section 5. Powers of appointment.- The governor shall, by and with the advice and consent of the senate, appoint all officers of the state whose appointment is not herein otherwise provided for and all members of any board, commission or other state or quasi-public entity which exercises executive power under the laws of this state; but the general assembly may by law vest the appointment of such inferior officers, as they deem proper, in the governor, or within their respective departments in the other general officers, the judiciary or in the heads of departments.

6　Audit Test Ballot Specification – Enhanced

This section contains the specification for Enhanced Test Ballot used in TEs in Section **Error! Reference source not found.**.

Information applicable to whole ballot

Date and Time	2004-nov-02, 7:00 AM to 8:00 PM
State	Maryland
County	Madison
Party Line Voting Method	Enabled for partisan contests

Information applicable to every contest

Full-term or partial-term election	Full-term
Voting Method	Simple vote for N candidate(s) - (i.e. no ranked voting)

- **Contest #1:**

Title of Office	President and Vice-President of the United States
District of Office	United States
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	1
Maximum Write-in Votes Allowed	0

  - o **Candidate #1.1:** Joseph Barchi and Joseph Hallaren / Blue
  - o **Candidate #1.2:** Adam Cramer and Greg Vuocolo / Yellow

- **Contest #2:**

Title of Office	US Representative
District of Office	6th Congressional District
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	1

| Maximum Write-in Votes Allowed | 1 |

- o **Candidate #2.1:** Brad Plunkard / Blue
- o **Candidate #2.2:** Bruce Reeder / Yellow

- **Contest #3:**

Title of Office	County Commissioners
District of Office	Countywide
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	2
Maximum Write-in Votes Allowed	2

- o **Candidate #3.1:** Camille Argent / Blue
- o **Candidate #3.2:** Chloe Witherspoon / Blue
- o **Candidate #3.3:** Clayton Bainbridge / Blue
- o **Candidate #3.4:** Amanda Marracini / Yellow
- o **Candidate #3.5:** Charlene Hennessey / Yellow

- **Contest #4:**

Title of Office	Local School Board
District of Office	
Partisanship	Partisan
Minimum Votes Allowed	0
Maximum Votes Allowed	2
Maximum Write-in Votes Allowed	2

- o **Candidate #4.1:** Camile Broady / Blue
- o **Candidate #4.2:** Chloe Reese / Blue
- o **Candidate #4.3:** Clayton Wainbridge / Blue
- o **Candidate #4.4:** Amanda Marconi / Yellow
- o **Candidate #4.5:** Charlene Walker / Yellow