

Report to the League of Women Voters of the Austin Area  
On Safeguarding the Vote in Travis County

Election System for the November 2, 2004 Election<sup>1</sup>

## ACCOUNTABILITY

A. Prior to the Election Day:

### #1 Bipartisan or third party monitoring of sensitive election procedures.

Note: Travis County established a Citizen Oversight Committee to observe the Election procedures.

Note: Travis County has both Early Voting and Voting on Election Day. Some of the procedures are the same and some of them are slightly different. Travis County also processes absentee ballots also known as 'voting by mail'.

#### 1. Distribution of ballots:

There were 261 voting precincts in Travis County that required preparation of a different ballot for each of the precincts. Some precincts were split, in that some part of the precinct had the Capital Metro Referendum on it and some did not. This meant more ballots had to be created. Prior to the election, parties, candidates and Capital Metro were asked to come to look at the ballots to correct any errors or spelling of names, etc. The ballot proofing was done in September. eSlate™ (the electronic voting system for Travis County) has the ballot on it and is programmed for each precinct. Overall, ballot preparation takes about a month to prepare what is on each ballot.

Absentee Ballots were printed as needed on the County's computer and mailed to candidates. This saved money and avoided guessing the number of ballots needed.

#### 2. Deployment of the machines to the polling places:

Early Voting has 3 machines: A laptop computer which would be connected to the Voter Registrar's Office, either wireless or modem, a JBC (a judge's booth controller which distributes the access number and keeps a tally of votes) and an eSlate (the device a voter uses to cast his electronic ballot). The judges pick up the JBC and computer for Early Voting. During Early Voting each day the JBC is picked up by the Sheriff's office and taken to the Central location, kept under surveillance and returned by the Sheriff in the morning. The JBC is sealed prior to the election and each night during Early Voting, the eSlates are sealed both before and after the election everyday at Early Voting.

Election Day voting: No laptop is used to connect to the Voter Registrar's office. The JBC is picked up by the Election Judge a day or two before the election and is kept over night. The JBC is sealed. The eSlates are kept inside the voting booths, which are sealed and delivered to the polling places prior to the Election Day. During Early Voting the eSlates are secured and also chained together in a secure location after the polls are closed each day.

#### 3. Testing of Voting Machines:

Prior to the election, each eSlate and JBC was tested for mechanical and technical problems. The testing included the testing of buttons and batteries and "zeroing out" (resetting) all machines to determine that no other votes are cast on the machine for this election. eSlates were zeroed out. JBCs are zeroed out, and then a flash card (called a MBB) is inserted with ballot information placed into JBC. The JBC is sealed with wires and the seal number is coordinated with JBC and the MBB. All this information is documented. All voting equipment used for Early Voting and Election Day was tested at the same time. The machines used for Early Voting were not used on Election Day. A Citizen Oversight Committee was allowed to observe the testing of the machines.

#### 4. Opening and Closing the polls

Poll workers are present and the polls have judges and clerks from both parties working at the polls. The judges are trained in closing and opening procedures.

<sup>1</sup> Criteria came from *Helping America Vote: Safeguarding the Vote*, League of Women Voters of the United States, July 2004 publication.

5. Maintenance and trouble-shooting:

The voting equipment is checked prior to the election and maintained.

Call center: the election workers had a call center to contact. The call center was trained prior to the election to handle problems. The oversight committee was able to observe the training of the workers, but it is unknown whether anyone observed the call center.

6. Counting of Ballots:

The data from the ballots are recorded on a memory card (MBB) in the JBC with a chip backup in the eSlate. The memory card is transferred to a tally machine that makes the final count and the absentee ballots are counted on an optical scan reader and that information is transferred to the tally machine. Absentee ballots are reviewed by a bi-partisan ballot board. The process was open to the Citizen Oversight Committee.

The eSlate system has triple redundancy. There is a flash memory card in the JBC as well as a chip. In addition there is a chip in each eSlate. One of the memory cards failed to properly record on the night of tallying votes from Early Voting, so the counts were taken from the eSlates and a new card (MBB) was generated. This is an example of a built in system for back-up procedures to count the vote.

7. Consideration and Counting of provisional ballots:

There were 333 provisional votes accepted and 788 provisional votes rejected for 2004 Presidential Election. Provisional voters were allowed to vote electronically and a retrieval code is recorded. Once a provisional vote is eligible to be counted, the elections division opens a 10-digit retrieval code. This retrieval code is different from the access code in that the access code cannot be linked to a specific ballot but a retrieval code can. The retrieval code is then used to accept the vote as part of the official tally. This is done by viewing a list of retrieval codes and either checking an accept or reject column.

**# 2 Require tracking and documentation of all procedures, from testing of machines to the handling of the ballots.**

1. No printer: The ballot is programmed and checked in logic and accuracy testing.

2. Voting machine testing procedures.

Before the election all machines are tested. There is documentation of the testing. The opening and closing procedures for the election require that the election judge verify that the machines have not been tampered with. The machines have been sealed, zero-tested and there are paper audit trails to document activities on the machines. The paper audit keeps track of all activities on the JBC during Election Day. In addition, the tally machine, the machine that counts votes on Election Day, runs a paper audit trail of all activities on the machine. Texas requires that DREs are able to print real time, audit logs to record all significant election events. The tally machine is also checked out with sample runs prior to Election Day.

3. Scheduled maintenance of machines.

All eSlates and JBCs are maintained and stored in a secure eSlate room at 5501 Airport Blvd. Maintenance is performed before and after each election. Maintenance includes functional testing of all buttons on all machines, battery testing, cleaning, repairing booths, backing up data from all redundant sources, and resetting equipment. Resetting of equipment occurs after recounts and contests are settled, and backup has been verified.

4. Transfer of memory cartridges to control vote counting office.

The memory cards (MBB) are in the JBC. The JBC is sealed the moment the MBB is inserted into the JBC prior to Election Day. Each MBB has an identifying number which is recorded for every JBC. The JBC seal is never broken until it is delivered to a receiving station after the election. The JBC is transported to a receiving station by the election judge and another poll worker. At the receiving station the JBC seal number is verified with what was previously recorded and the seal is broken. The MBBs

are removed from the JBC and recorded. The MBBs are then delivered in a sealed box by law enforcement officers to the Central Counting Station. At the Central Counting Station the MBBs are recorded and placed into a tally machine to be counted.

5. Trouble shooting of repairs on Election Day.

Poll workers had a call center to contact for trouble shooting. Most could be handled over the phone. If not, there was a van available with a technician to come to the polling place. During the election a few JBCs are available to be replaced. During Early Voting one JBC had almost reached the limit of printing 9,999 random access codes and was pulled. Another JBC had a smoking problem and was replaced.

Emergency procedures were set up if the electronic voting system failed.

One procedure included casting votes on sample paper ballots and having them transferred to an optical scan ballot to be counted, in case a JBC failed at the time of opening of the polls. The emergency procedures are known only to the call center and not to the average trained election judge or poll worker. Once the election judge notifies the call center of the emergency, then the center runs the election judge through the procedures.

Extra JBCs were available if they needed to be replaced during the election. One poll worker accidentally closed the JBC before the poll closed and a new JBC had to be brought in to continue the electronic voting process.

### **#3 Require transparency in the operating and management of voting systems**

1. Conduct logic and accuracy tests in public.

Logic and accuracy tests were open to public viewing. Additional details were open to the Citizen Oversight Committee. Public announcements were made for viewing the tests.

2. Counting of ballots should be open to public scrutiny.

The Ballot Board a bipartisan committee opened and examined absentee ballots before optical scan count. The Citizen Oversight Committee could watch the counting of absentee ballots and tallying of the electronic votes on election night.

3. Procurement should be through bid process open to public scrutiny.

Did not observe this process. The State of Texas has certain standards for procuring electronic voting systems. The state also certifies each electronic voting system before it can be purchased by the county.

4. Reviews and evaluation of equipment should be made open to the public.

Citizen Oversight Committee was able to observe testing of equipment prior to election for Travis County. Review of equipment is available at the State level for the public scrutiny.

5. Use committees of experts and citizens to evaluate and select new voting systems.

This has already been done in Travis County when the electronic voting system was chosen several years ago. A citizen advisory committee was established by the County Clerk to select the equipment. Citizens had the opportunity to participate in the process as well.

## **UNIFORMINTY**

### **#1 Establish statewide practices for the management and operating of voting systems.**

1. Statewide practices for maintenance and administering of voting systems

Some information is in the Election Code.

2. Standards for uniform testing of the voting systems  
The State has established a DRE Working Group. Texas Election Code and Secretary of State's Administrative Rules require testing and retesting of systems before, during and after the election to verify the vote count and ensure accuracy.
3. Mechanics to monitor local compliance  
Unknown
4. Statewide poll closing procedures that are observable, secure and well-documented.  
This would be found in the Texas Administrative Rules.

**#2 Require that all systems, at a minimum, have been state certified and met all federal voluntary voting system standards.**

1. States should require compliance with FIPS standards developed by NIST.  
Any voting system in Texas must meet certification standards. Before any system may be approved, modified or purchase/installed by any of the Texas counties, an Independent Testing Authority (ITA) at the federal level must certify it. The Secretary of State certification process is open and transparent. All agency records produced in connection with certification process are subject to the Texas Open Records Act. In addition post all reports produced by the independent examiners to the website.

Texas also requires all systems have a real time, printed audit log. DREs must be able to print an audit long. They include printing of error messages, operation responses, number of ballots read for a given precinct, completion of reading ballots for the precinct, users logging in and out from the election systems. Any reports being run and any diagnostic of any type being run. (Critics of electronic voting want source code open to public scrutiny).

**TESTING**

**#1 Test every voting machine to ensure that it is operating properly**

1. Perform tests on every voting machine prior to Election Day.  
This is done by Travis County. Batteries, buttons, etc are checked for mechanical malfunctions. Machines are tested to make sure no votes cast from previous elections are still on the machine. This is called a process of "zeroing out" which is a resetting of the equipment.

**#2 Perform uniform, public testing of voting systems**

1. Should include at minimum (1) logic and accuracy testing for electronic and optical scan systems, (2) testing to ensure proper ballot has been loaded in the systems (3) checking to see that paper and optical scan ballots have been properly delivered to the polling places.  
Observed logic and accuracy tests for electronic voting system which included verifying proper ballot in the system. There are no paper ballots in this system, except for absentee balloting. Each absentee ballot was printed separately for the voter in his precinct.
2. On Election Day (and during Early Voting) verify that the number of voters entering the polling place is equal to number of votes cast in the voting place.  
Voters sign a poll list. The number of voters who signed in, is compared to the number of voters who cast ballots. Paper and electronic records were kept. During Early Voting judges were to record the public count on the daily balance envelope and count the number of signatures on a combination form, as well as list the number of access codes issues, voted, expired and cancelled on the daily balancing envelope. On Election night the number of voters were called into the Central Counting Area. This was an additional supplement to the paper (such as the poll list) and electronic records that are generated on Election Day. Voters who did not hit the cast ballot button on the eSlate will cause a discrepancy in the number of votes counted and the number of persons who signed in to vote. (This is

not the election workers problem but the failure of the voter to follow instructions. Enormous effort was made to educate the voters during the election.)

3. Perform parallel monitoring on Election Day and during Early Voting-randomly pull voting machines that have been readied for voting from the polling place on Election Day and test them to verify that they are accurately recording and tallying votes.

A JBC was pulled randomly from the JBC during Early Voting and testing was run on the machine during Early Voting. A "parallel" test was run. On Election Day another site was randomly chosen for parallel testing. Both tests were successful.

### **#3 Verify that the electronic and optical scan systems used are the same as the system that was verified.**

1. Test to confirm that the software being used in an election is the same software that was qualified by an Independent Testing Authority and certified by the state.

Travis County ran a "hash code" test on the system prior to Election Day. This is a digital algorithm that verifies that the software is the same that is certified by the state and in the National Institute of Standard Technology (NIST library. L & A testing (logic and accuracy testing) was rerun immediately after tabulation on Election night. (Hash code testing will be expanded in the future)

## **PHYSICAL PROTECTION OF MACHINES**

**#1 Restrict physical access to all components of voting systems.** Make sure that all voting machines, servers and other computer equipment are secure from unauthorized person. Includes all equipment that defines ballots, cast and confirm votes, report or display election results, maintain and produce any audit trail information.

1. Restrict access to offices and warehouses storing voting machines.

The room where equipment is stored is locked and access limited. The room is also under constant camera surveillance.

The tally machine room has an additional secure code on the door as does some other rooms where the computer programs the ballots. Only five people know this code.

eSlate is kept in covered cases and that is also covered with plastic. Prior to Election Day all eSlates are sealed and at Election Day the seal is broken and at the end of the day a new seal is put on the eSlate.

2. Access to all election facilities should be carefully monitored and controlled.

Access limited to key personnel, locks are on the doors. It is a secure room. Additional procedures include issuing security passes to all visitors who must be accompanied by an authorized person at all times.

3. Should have a documented plan to restrict access.

There are procedures established to restrict access. In addition to the above, the county has restricted access to the programming of the computer that is used to program the ballots and well as to tally the vote count. The computer that is used for programming the ballots and the flash cards on which the ballots are written (MBB) are stored in an eSlate area. The door to this room may only be opened with a pass code. Five people have access to the code. These 5 people, also know the code to disarm the motion sensor to the room, which is activated at all times except when used by authorized staff. The five persons also know the 2 levels of user IDs and passwords to allow them to enter the ballot programming and tabulations software and to program and check the ballot and burn the MBBs. There are 2 persons present anytime the ballot is programmed and tabulation computer is assessed.

4. Election workers, not poll workers, should transport ballots from polling place to election headquarters.

The election judge and another person escort the JBC (which has the ballot information in it) and other election papers to the receiving substation on Election Day. The JBC has been sealed at the end of the Election Day. The JBC is then taken by the Sheriff's office to the central counting station, where the seal is broken. (Since there 261 precincts, the practicality of hiring additional election workers to

take ballots to the election headquarters is not feasible. The county has divided the area into substations to deliver the ballot boxes and checked prior to delivery to the election headquarters.) At the end of Early Voting the poll workers brought the JBC to the central counting station. There were communication lines open during these close out procedures to explain any delays in getting to the stations. This year the delays were caused by long lines at the polls at the time of the closing of the polls both during Early Voting and on Election Day.

5. Neither ballot boxes nor voting machines should be left unattended.

JBCs contain the final count on a memory card (MBB). The eSlate which has a chip in it that contains a backup count is left sealed and chained together at the polling site on Election Day as well as at the end of Early Voting. The eSlates were transported later (within 2 days) back to the election headquarters. They are sealed and cable locked at the polling places after the election.

Once the memory card (MBB) is removed from the JBC it is kept in a secure location. This memory card is what contains the vote count from the precinct that the memory card was assigned.

6. Mechanisms used to end voting at each polling place should be established.

Poll workers are trained on closing procedures. They disconnect the JBC, disconnect the eSlates, close and seal the eSlate booths and verify the numbers and seals.

## **#2 Maintain and operate voting systems in isolation from network and the Internet.**

The eSlate system is not connected to the Internet. It is a stand-alone system.

The tally machine is not connected to an Internet system. It is in isolation. The only part of a system is that during Early Voting the laptop has a wireless modem connection to the Voter Registration list. The wireless modem goes through the County VPN which goes to the Voter Registrar's office. The information is encrypted. This needs to be on-line so that a voter cannot vote twice at Early Voting locations.

## **PREPARATION PRIOR TO ELECTION DAY**

### **#1 Educate voters on the use of all voting equipment both in advance of the election and in the polling place on Election Day.**

Judges, poll workers and community members made every effort to educate voters on the use of eSlate. Early Voting sites had demonstration eSlates. However, because of the number of eSlates needed for election only about 30 sites had demo units on Election Day. This is a cost factor. The county already has over 2000 eSlates for election. There were no spare eSlates for training once Early Voting began. All eSlates had to be used for the election or had been tested prior to the election. The demos for the eSlate have been simplified from the early training system where a JBC and eSlate were required, now all you need is an eSlate.

### **#2 Provide adequate training for all Election Day workers.**

Many classes were set up for training of workers for both Early Voting and Election Day. All election judges were required to take the training. Election clerks did not have to take the training but were encouraged. With 261 precincts and an average of 5-6 workers this required the training of over 1000 election workers. This does not include the training of all the Early Voting workers and the call center workers. This is a massive process. There was special training on how to handle a provisional voter and workers were given various scenarios to run through to understand the process. There were training manuals available to the workers as well.

1. Understanding of security vulnerabilities.

Training includes how to secure the eSlates and JBC and how to open the polls to check that there has been no tampering of the machines.

2. Clear understanding of basic procedures  
Training is well organized on basic procedures. Training includes a class and manual.

## **ON ELECTION DAY**

### **#1 Ensure adequate technical support to poll workers on Election Day**

1. Need independent technical support as well as support from the manufacturer  
At the tallying of the votes, a worker from Hart Intercivic was present to help with the vote counting as well as the technical workers from the Elections Division. In addition the County Clerk's operation staff has been fully trained as technical support.
2. Checklist at each precinct for trouble-shooting.  
Election training manual contains some simple answers to trouble shooting. If more is needed they are to call the call center for more help.
3. Develop in- house expertise- be available by phone or in person  
Call center available and if needed technicians can come on site
4. Communication strategy to guarantee poll workers can access system- e.g. hotline that is adequately staffed.  
This is the call center. Each precinct or Early Voting site was to have a cell phone that they could call the call center. Some phones provided or phones were the poll workers. On Election Day the Elections Call Center paired with the Tax Office Call Center ( where the list of registered voters is kept) to create a super call center. On Election Day over 10,000 calls were handled by the super call center. There were a small number of complaints from a few callers not being able to get through. For the entire election period (Election Day and Early Voting) the Election Division automated voice attendant handled over 13,000 calls.
5. Assess poll workers understanding of the system.  
After the election the Elections Division ask the workers to evaluate their experiences in the field and a survey is also done of the training classes.

### **#2 Provide back-up plan in the event of machine failure.**

Additional DRE machines should be available in the event of machine failure.  
Back-up plans were in place. There were several JBC kept out of circulation in case of machine failure. Almost all of the backups were used and more could be needed in a large election. There was also an emergency procedure for using sample ballots to vote while voters waited for new machines. The sample ballots were used in several precincts as temporary measures. This back-up plan was not known to the judges, but they were told what to do when they contacted the call center. All material that judges had at the election site included sample ballots for this procedure.

## **AFTER ELECTION DAY**

### **#1 Design a routine process that checks for problems that may have occurred but not been visible on Election Day**

The State conducts audit of the election to assure all votes were counted properly and accurately. The canvassing and certifying of the votes requires a number of cross checks. One is taking the tabulation slips from each precinct's JBC and comparing those results with the precinct results of the final canvass that is produced by the tabulation software. Another is to perform several other audits such as signature count versus the number of votes cast. The Commissioners Court also certifies the canvass and the local level and the Secretary of State certifies the national and statewide canvass.

Travis County has duplicate documentation of poll sheets, the election worker keeps one copy (the pink slips).

#### Comments from citizens concerning the election

In some polling places there was not enough privacy in the polling booth. They were either too close to each other and you could view how your neighbor was voting or the poll worker could easily look over your shoulder.

There were some comments that a few poll workers were not professional enough. This is not a result of the training that emphasized professional behavior, but probably a personal joke on the part of a poll worker. A voter, who needed assistance to vote, was jokingly told by the poll worker who was to assist him, that "I hope you vote conservatively." No comments should be made by the workers assisting voters.

There was some confusion about the straight party ticket voting. Instructions on how to vote Straight Party were in the voting booth. Travis County was aware of the problem and issued another press release. Voters must follow instructions and verify their ballot before hitting the "Cast Ballot".

There is still some confusion about the identification needed for first time voters. Did they need a picture ID? The message was sometimes confusing. The info in the training manual could be a little clearer for first time voters and id required and a voter appearing without a voter registration certificate. There appear to be two different standards. Manuals indicate looking for ID with name and address of voter. However, birth certificate and other forms of identification are acceptable under HAVA. This should be clearer.

The JBCs are taken home by the election judges before the Election Day. The reason probably is that there is not enough manpower in the Sheriff's office to deliver to all the polling sites by 6 a.m. on Election Day. The JBC are sealed and tested prior to opening at the polls. Travis County feels confident that they have enough secure procedures to prevent tampering. However, during Early Voting an election judge had his car stolen that contained a JBC. The car and JBC were found. This procedure may need re-examination.

Disabled voters like the accessibility of eSlate.

Voters missed the Capital Metro vote because there was another page on which to vote. Once aware of the problem the Elections Division issued another memo to alert voters. Poll workers at some sites also reminded voters to look for this question on the ballot.

#### **CONCLUSION**

Overall the Travis County system meets most of the procedures suggested by the League of Women Voters of the United States. Some improvements in the system that could be improved are:

- 1) Ensuring Voter privacy at the polls.
- 2) Clearing up confusion about the Voter ID requirements under HAVA.
- 3) Transportation of the JBC in a secured environment to the election site.
- 4) Look at the Ballot design for straight party and referendum questions.

Report prepared by Maria Johnson  
Voters Service Chair  
League of Women Voters of the Austin Area