

Election Security

Maricopa County

Elections Department

Community Network Meeting

July 30, 2008

Election Security:

- Review of:
 - Election Department Offices
 - Polling places
 - (Early Voting was covered extensively in April)
- In the following areas:
 - Monitoring
 - Physical Access
 - Electronic Access
 - Oversight & Audit

Election Security Defined

- **Monitoring:**
 - What procedures are in place to insure transparency?
- **Physical Access:**
 - What prevents entry?
 - What restricts ability to get to critical materials?
- **Electronic Access:**
 - What is/is not linked to a network or the internet?
- **Oversight & Audit:**
 - Checks and balances
 - Documentation

Election Department Offices



Office Locations & Activities

- **MCTEC:**
 - Ballot preparation, storage, and tabulation
 - Early voting processing
 - Provisional ballot retention & processing
 - Polling place equipment and supply storage & prep
- **Downtown:**
 - Administration
 - Voter registration processing
 - Provisional ballot, Petitions, & \$5 Slip research and processing
- **Mesa:**
 - Poll worker recruitment
 - Provisional ballot research processing



Monitoring: MCTEC

- Surveillance cameras are recording throughout the building 24X7.



Monitoring: MCTEC

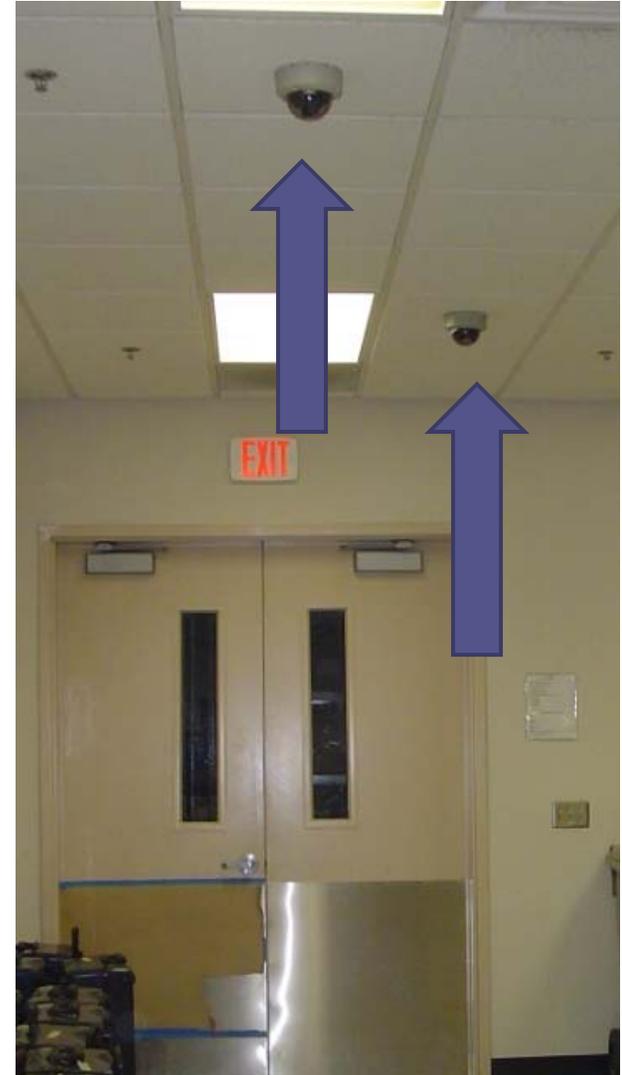
- During election cycle when ballots are in the building there are security guards patrolling the facility.





Monitoring: MCTEC

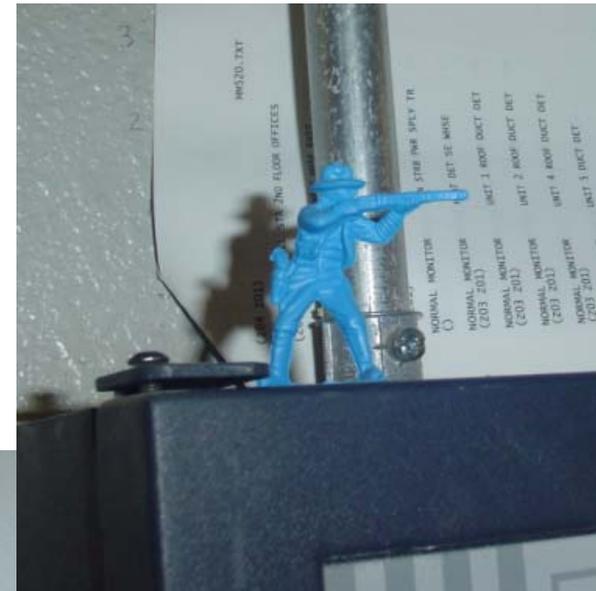
- When voted ballots are present there are 8 cameras (2 shown in the photo) in the tabulation room viewable online 24x7 at:



www.recorder.maricopa.gov

Monitoring: MCTEC

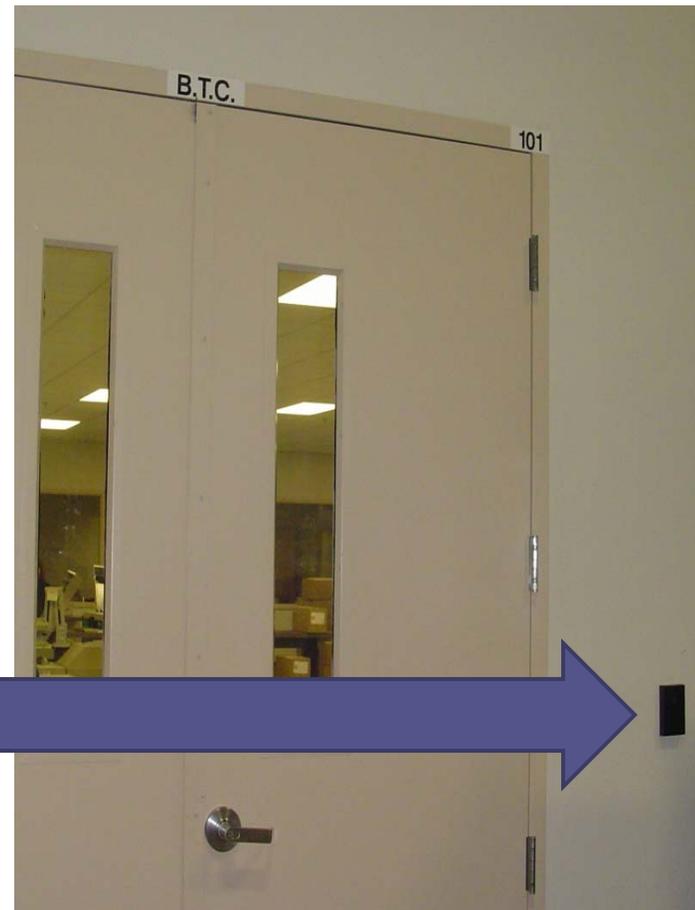
- And, of course, we have snipers strategically poised.
- We hope they are never called upon.





Physical Access: Facility

- All offices have ID badge access for employees only
- Visitors must sign in and wear temporary badge
- Sensitive areas are only accessed via key-card to select staff.





Physical Access: Facility

- Citizen boards who work on election night are also signed in and given temporary badges





Physical Access: Ballots

- Ballots are shrink-wrapped in packages for delivery to the polling place within a caged shelved room.





Physical Access: Ballots

- They are only removed from the cage when they are loaded into the base of the Insight voting machine where they are locked and ready for delivery to the polling place.





Physical Access: Ballots

When the ballots are returned from the polling place on election night they remain in the sealed black ballot bag that the boardworkers placed them in and are shelved in the cage where they remain (unless part of the hand audit) until they are prepped for archive storage.





Physical Access: Provisional Ballots

- When the trucks are unloaded the provisional boxes are unsealed and prepared for processing.





Physical Access: Provisional Ballots

- The provisional boxes are taken directly into the big room at MCTEC where they are readied for processing by citizen boards





Physical Access: Provisional Ballots

- Envelopes containing the ballots remain at the MCTEC facility under surveillance.





Physical Access: Provisional Ballots

- Portions of the 3-part form are detached for processing





Physical Access: Voting Equipment

- The tabulation mechanism of the voting machine is stored separately from the ballot box
- The memory packs (which contain the programming of the election) are stored separately from the machine





Electronic Access

- The memory packs are programmed with the precinct-specific information and are stored in our BTC room
- This area is viewable online

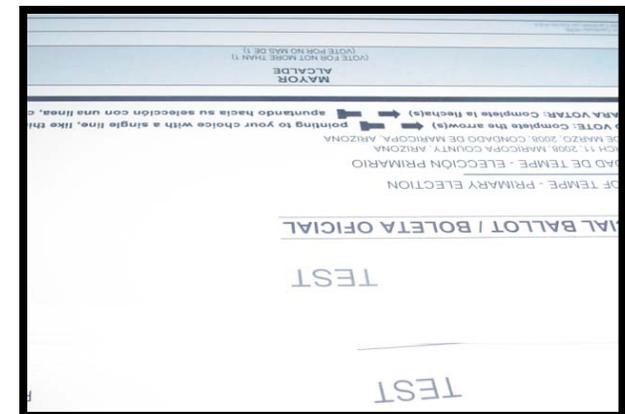




Electronic Access

- The memory packs are only put into the precinct tabulation equipment when they are readied for the Logic and Accuracy test.
- A deck of test ballots is run through **EVERY** machine to be sure it is correctly tabulating before it is sent out to the polling place.

Assigned pack serial number is 7,407	
Precinct 0175	
- COUNTED _____	000
NOT COUNTED _____	000





Electronic Access

- The memory pack is then sealed:





Electronic Access

- The Voting Card Activators are also checked prior to going to the polls:





Electronic Access

- The tabulation equipment is not on a network
- THERE IS **NO** INTERNET CONNECTIVITY TO **ANY** OF THE TABULATION EQUIPEMENT





Electronic Access

- Our system *CANNOT* be hacked into.





Electronic Access

- The Ballot Preparation System is self contained on a single PC.
- It is no longer hooked into a shared printer, we put the printer on wheels due to concerns over linking to a printer across the room...



Former printer cable



Electronic Access

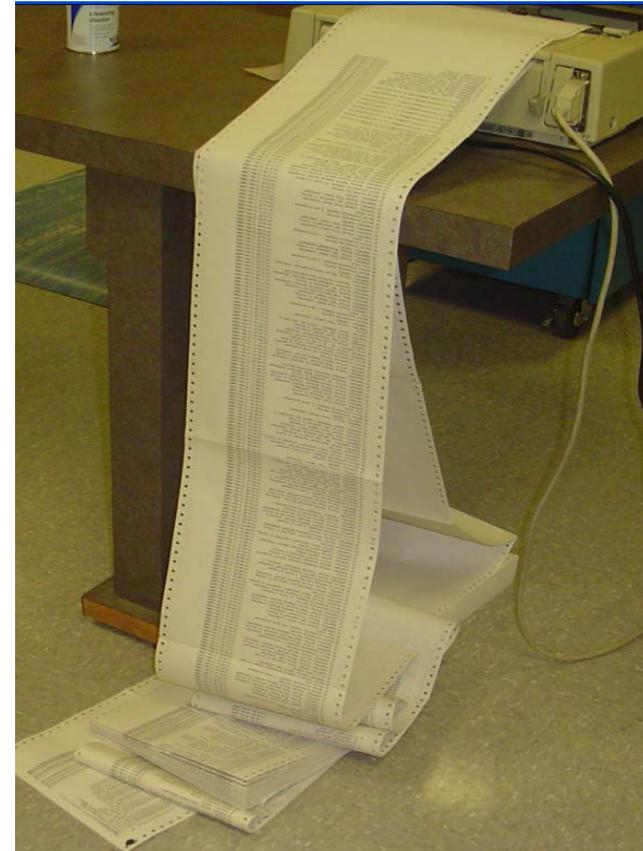


- The concern over shared printers in the tabulation room resulted in purchasing 9 new printers (one for each central tabulator and a spare) at \$2500 each.



Electronic Access

- The printers record all activity on the machines.





Electronic Access

- Each machine is independent of the others.
- To compile results each machine has a designated, serial-coded drive which is used to transfer the data from the tabulation machine to a central PC at 8 PM on Election Night.
- These drives are stored in a locked box in view of the cameras during tabulation.



Oversight & Audit

- The public can view the marking of test ballots and the testing of equipment from the public viewing windows:





Oversight & Audit

- The public can also view tabulation from the bank of windows in our lobby at the MCTEC facility:





Oversight & Audit

- The public can view tabulation online at www.recorder.maricopa.gov

Know more about **Your flag!** [CLICK HERE](#)

Recorded images are now available for viewing and purchasing from 1871 forward.

DIGITAL Recording [Click here for eligibility.](#)

Ballot Tabulation Center Webcasting

[Flash Player Plug-in Required - Click Here to Download](#)

This site is best viewed in 1024 x 768 resolution or greater.

[Disclaimer](#) [Site Map](#) [Account Login](#)

 **Helen Purcell**
Maricopa County Recorder

"If democracy is worth fighting for, then its true value should be measured at the ballot box!"

[Hours & Locations](#) [Recorder's Information](#) [Elections & Voter Information](#) [Media Events](#) [Support](#) [En Español](#) [Voter Assistance Information](#)

[Text Only version of this site](#)

Oversight & Audit

- When there are live ballots in the tabulation room the camera feeds can be viewed on our website:
- Session times out after 30 minutes at a camera, but you can simply log back on.
- There are 8 cameras to view.

Maricopa County Recorder
Helen Purcell
Tuesday, January 29, 2008

Recorder
Elections
Media Events
Support
Hours & Locations
Miscellaneous

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LIVE VIDEO FEEDS FROM BALLOT TABULATION CENTER (BTC)

Currently viewing BTC South View. To see other camera views, please select a button on the interface below.
Your viewing session will expire in: 29:45

January 29, 2008
Early ballot tabulation begins January 29 9:00 am.

BTC South View
BTC North View
BTC Storage Area South View
BTC Storage Area North View
BTC Southwest County Lobby

The Official Website of the Maricopa County Recorder and Elections Department



Oversight & Audit

- There are observers in the tabulation center with viewable access to all processes:
 - Ballot tabulation
 - Early ballot processing
 - Provisional ballot processing
- BUT, for security sake, they do *NOT* have physical access to *ANY* equipment or voting materials.

Polling Places





Monitoring

- It is against state law to have cameras or recording equipment in the polling place while the polls are open.
- The media, and public, can record the procedures at the end of the night after the polls have been closed and the last voter has cast their ballot.





Monitoring

- However, the law allows for party observers to be appointed by the Chair of the party to be present in the polls for the duration of Election Day.
- We offer training to the parties.
- The Voting Section of the Civil Rights Division at the Department of Justice also sends out polling place observers on a regular basis.



Physical Access: Ballots

- When the supplies are delivered to the polling location warehouse staff unpacks and assembles the equipment.
- Ballots are still in their shrink wrap and are locked in the blue ballot box.





Physical Access: Ballots & Equipment

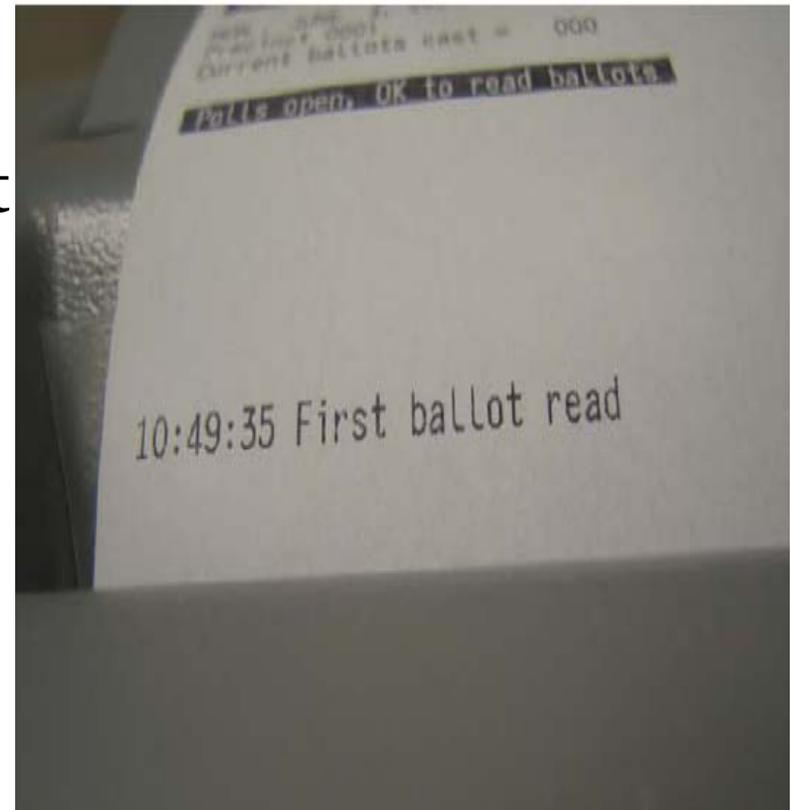
- Boardworkers unlock the voting equipment at the setup meeting and run a totals tape to be sure that no one has tampered with the machine.
- They count the number of ballots and record that on their Precinct Ballot Report.

PRECINCT BALLOT REPORT		TS# 20
~ Place a check mark (✓) in the boxes <input type="checkbox"/> below to indicate you have verified the Seal Numbers ~		
Opening of Polls	PRECINCT#: ACACIA / 0001	
Insight:	<input type="checkbox"/> Memory Pack Seal # 459866	
1) Number of Ballots Received (Per Count at Set-up Meeting)	_____	
2) Number of Additional Ballots	_____	
Edge: Machine# 489562	<input type="checkbox"/> Polls Open/Close Switch Seal # 986574	
	<input type="checkbox"/> Results Cartridge Seal # 89568	
Card Activator Bag: →	<input type="checkbox"/> Card Activator BAG Seal # 986574	
Edge Printer: →	<input type="checkbox"/> Printer Seal # 586985	
Protective Count# _____	Public Count# _____	
Close of Polls ~Upon completion, place this report in the front pocket of the "Signature Roster"~		
Edge: Machine# 489562	Protective Count# _____	Public Count# _____
Edge Qualified Votes	_____	
Edge Provisional Votes	_____	
Edge Total Votes	_____	
3) Printer Bag Seal #	_____	
4) Card Activator Bag Seal #	_____	
Insight:		
5) Number of Names from Poll List	_____	
6) Number of Misread Ballots	_____	
7) Number of Spoiled Ballots	_____	
8) Number of Unused Ballots	_____	
9) Black Bag Seal #	_____	
10) Green Bag Seal #	_____	
11) Red Ballot Box Seal # _____	Seal # _____	
12) Blue Ballot Box Seal # _____	Seal # _____	
13) Number of Names from Provisional Ballot Signature Roster	_____	
We, the members of the election board, certify to the truth and correctness of this Precinct Ballot Report, as shown above, and that each voter whose signature appears on the Official Signature Roster was provided a ballot to vote in this SEPTEMBER 2, 2008 PRIMARY ELECTION.		
	Inspector _____	Judge _____
		Judge _____



Physical Access: Ballots & Equipment

- When the workers return on election morning they run another report to be sure that nothing was tampered with over night.
- When the polls are opened and the first ballot read it is recorded on the paper audit trail:





Physical Access: Ballots

- What prevents a voter from getting a ballot in the mail and then going to vote at their polling place?
- The Signature Roster has an X next to voters who have requested and EV so they would vote a provisional ballot to be sure that they did not vote twice.

EE 85284	<input type="checkbox"/>	9	
987 1000900	EV	0279	
85284	<input checked="" type="checkbox"/>	10	
2001 2000900	EV	0280	
85284	<input type="checkbox"/>	11	
006 1000900	EV	0281	
MICHAEL II 5284	<input checked="" type="checkbox"/>	12	
2002 1000900	EV	0282	
MICHAEL SR 5284	<input checked="" type="checkbox"/>	13	
1989 1000900	EV	0283	
ESPINOZA 5284	<input checked="" type="checkbox"/>	14	
989 1000900	EV	0284	
EAN 85284	<input type="checkbox"/>	15	
1986 1000900	EV	0285	
R 85284	<input type="checkbox"/>	16	
1984 1000900	EV	0286	
S 84	<input checked="" type="checkbox"/>	17	
004 P000900	EV	0287	

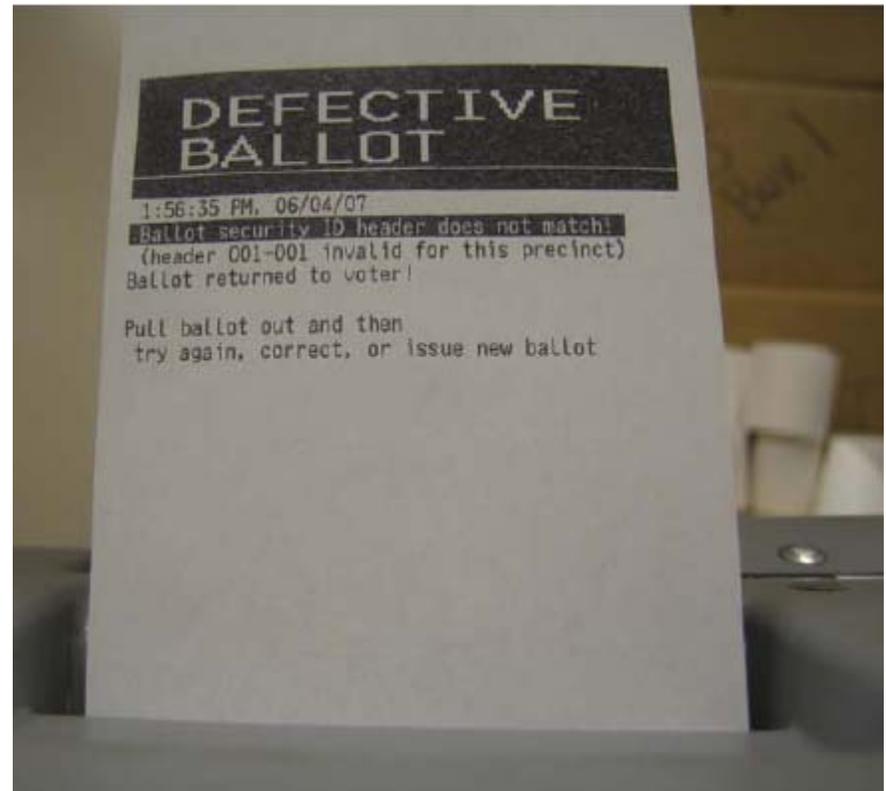
Pre-marked when Roster was printed

Marked by BWs, voter requested EV after Roster file sent to print.



Physical Access: Ballots

- What prevents someone from putting ballots through the machine from another precinct or that they created?
- The tabulation equipment is programmed to read only official ballots for that precinct.





Physical Access: Ballots

- What prevents someone from putting the activator card back into the Edge and voting twice?
- The card is only activated for one cast and it then disabled.
- The machine locks up if the card is re-inserted.
- The card can be *re-activated* and used multiple times for multiple voters.





Physical Access: Ballots

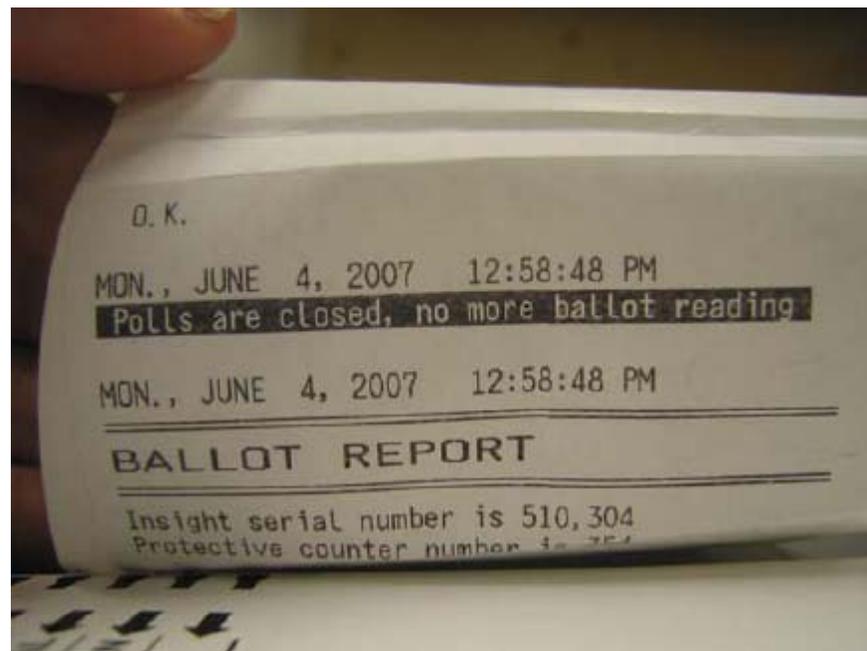
- Extra ballot boxes are used for transporting supplies to the precinct.
- They are then emptied, sealed and prepared to receive Provisional ballots and Early Ballots dropped at the polls.





Physical Access: Ballots

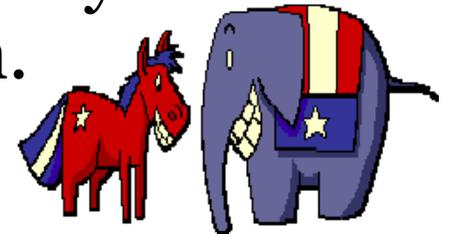
- Once the polls are closed they cannot be re-opened.
- No more ballots can be run through the machine.





Physical Access: Ballots

- After the polls are closed ballots are removed from the ballot box and placed into a sealed black bag for transport to the central receiving site by two workers of **OPPOSITE** party affiliation.



- The Signature Roster and other voting materials are placed in a yellow/green bag and sealed and are delivered at the same time as the ballots and printer from the touch screen.



Physical Access: Ballots

- The end of the night the extra ballot boxes have their deposit slots sealed and are taken to the supply receiving site by two workers of ***OPPOSITE*** party affiliation.





Physical Access: Ballots & Voting Materials

- Ballot boxes and bags as well as the green/yellow bags containing the Signature Rosters and Poll Lists are all sealed prior to leaving the polling place and remain that way during transport





Physical Access: Voting Materials

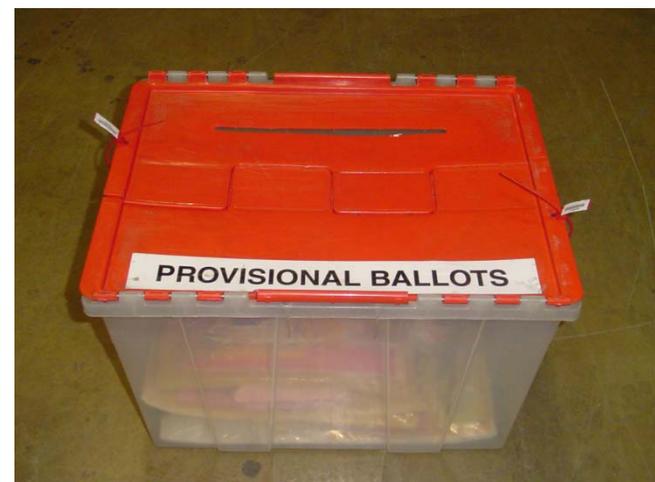
- This includes the printer off of the Edge touch screen voting machine which contains the paper record of votes cast.





Physical Access: Ballots & Voting Materials

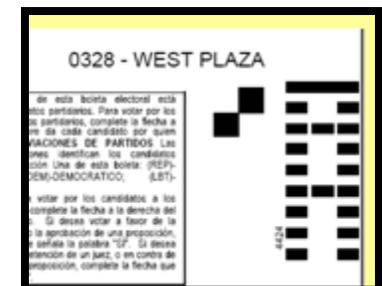
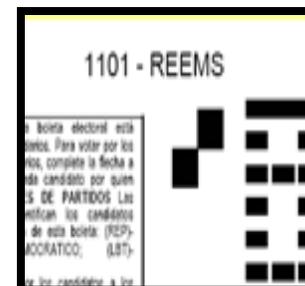
- These seals are present to be sure that if materials were tampered with it would be evident to election officials.
- The Reconciliation Audit would also expose any inconsistencies.





Electronic Access: Insight

- Boardworkers unlock the voting equipment at the setup meeting and run a totals tape to be sure that no one has tampered with the machine after its delivery to the polling place.
- They also check to be sure that the machine is programmed for the correct precinct and that this matches the ballots.





Electronic Access: Edge

- This same report is run on the Edge at the set-up meeting.
- On Election morning before the polls open the board runs it again to be sure no one has tampered with the equipment over night.



MARICOPA COUNTY PRESIDENTIAL PREFERENCE ELECTION FEBRUARY 5, 2008		
BALLOTS COUNTED		
- TOTAL	_____	000
- Democratic	_____	000
- Republican	_____	000
DEM - Democratic Party Candidates For President Of U.S.		
WHITEHOUSE, SANDY	_____	000
RICHARDSON, BILL	_____	000
LYNCH, FRANK	_____	000
KRUEGER, KARL	_____	000
OBAMA, BARACK	_____	000
EDWARDS, JOHN	_____	000
BOLLANDER, PETER 'SIMON'	_____	000
MONTELL, LELAND	_____	000
SEE, CHUCK	_____	000
HUBBARD, LIBBY	_____	000
GEST, LOTI	_____	000
DALEY, ORION	_____	000
CAMPBELL, WILLIAM	_____	000
TANNER, PHILIP	_____	000
KUCINICH, DENNIS J.	_____	000
CLINTON, HILLARY	_____	000
DOBSON, EDWARD	_____	000
HAYMER, TISH	_____	000
LEE, RICH	_____	000
OATMAN, MICHAEL	_____	000
GRAVEL, MIKE	_____	000
VITULLO, EVELYN L.	_____	000
DODD, CHRISTOPHER J.	_____	000
GRAYSON, RICHARD	_____	000
OVERVOTES	_____	000
UNDERVOTES	_____	000
REP - Republican Party Candidates For President Of U.S.		



Oversight & Audit

- All seal numbers, ballot counts, are attested to by the board and signed off on.

PRECINCT BALLOT REPORT		TS# 20
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Card Activator Bag: →	<input type="checkbox"/> Card Activator BAG Seal # 986574	
Edge Printer: →	<input type="checkbox"/> Printer Seal # 586985	
Protective Count# _____	Public Count# _____	



Oversight & Audit

- The number of ballots used, unused, spoiled, along with all applicable seal numbers is recorded for audit after the election.

• ***THIS AUDIT IS DONE FOR EVERY PRECINCT.***

Close of Polls -Upon completion, place this report in the front pocket of the "Signature Roster".

Edge: Machine# 489562 Protective Count# _____ Public Count# _____

Edge Qualified Votes _____

Edge Provisional Votes _____

Edge Total Votes _____

3) Printer Bag Seal # _____

4) Card Activator Bag Seal # _____

Insight:

5) Number of Names from Poll List _____

6) Number of Misread Ballots _____

7) Number of Spoiled Ballots _____

8) Number of Unused Ballots _____

9) Black Bag Seal # _____

10) Green Bag Seal # _____

11) Red Ballot Box Seal # _____ Seal # _____

12) Blue Ballot Box Seal # _____ Seal # _____

13) Number of Names from Provisional Ballot Signature Roster _____

MARICOPA COUNTY
ARIZONA
PRIMARY ELECTION
SEPTEMBER 2, 2008

We, the members of the election board, certify to the truth and correctness of this Precinct Ballot Report, as shown above, and that each voter whose signature appears on the Official Signature Roster was provided a ballot to vote in this SEPTEMBER 2, 2008 PRIMARY ELECTION.

Inspector _____

Judge _____

Judge _____



Oversight & Audit

- These materials are reviewed and audited by MCED staff to ensure that the numbers balance:
 - Voters who signed into the Signature Roster
 - Voters listed on the Poll List
 - Total number of ballots cast on each machine
 - Provisional ballots
 - Spoiled ballots
 - Unused ballots



POLL LIST OF

PLACE PRECINCT LABEL
HERE

In Maricopa County, Arizona

OFFICE USE ONLY

EAGLE TAPE _____

PROVISIONALS _____

MISREADS _____

TOTAL _____

POLL LIST _____

VARIANCE _____

COMMENTS _____

AUDITED BY (INITIALS) _____

Rev. 1/2006

Oversight & Audit



- Per statute we do a hand-count audit of 1% (or 5000 whichever is less) of the Early Ballots Cast and 2% of the precincts (23 precincts for a county-wide election).



Oversight & Audit

- Bipartisan auditors are checked in at the Sheriff's cadet training center:





Oversight & Audit

- Auditors are given lockers to utilize for all personal items.
- No marking devices are allowed into the audit area.



Oversight & Audit

- Auditors are wanded in to ensure top security:



Oversight & Audit

- The auditing rooms are monitored by deputies:



Oversight & Audit

- Early Ballots being delivered in their sealed ballot boxes:



Oversight & Audit

- Party observers verify the batches being audited:



Oversight & Audit

- Auditors check seal numbers with party observers:



Oversight & Audit

- The polling place ballots are delivered along with the sealed printer cartridges from the touch screens:



Ballot bags

DRE printers





Oversight & Audit

- Polling place ballot seals and tag #s are also checked:



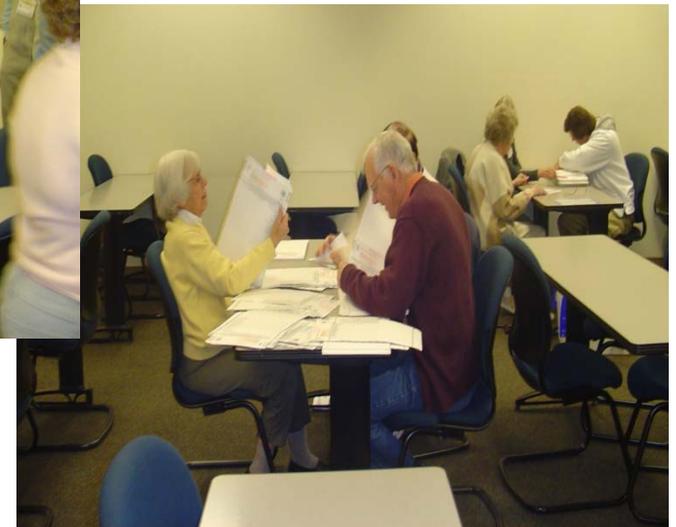
Oversight & Audit

- Auditors count to be sure they have all the ballots:



Oversight & Audit

- The selected races to audit are sorted and counted:



Oversight & Audit

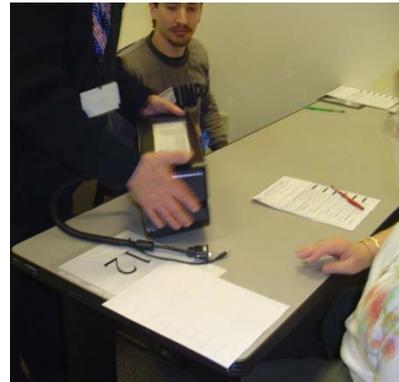
- Printer bags have the seals verified and then removed:



Oversight & Audit



- The printer is opened and the tape removed.
- The tape is unrolled and the ballot count verified with the paper record of votes cast:



Oversight & Audit

- Party observers oversee the record keeping:



The hand audit verified that the machines ALL tabulated with 100% accuracy.



Questions?