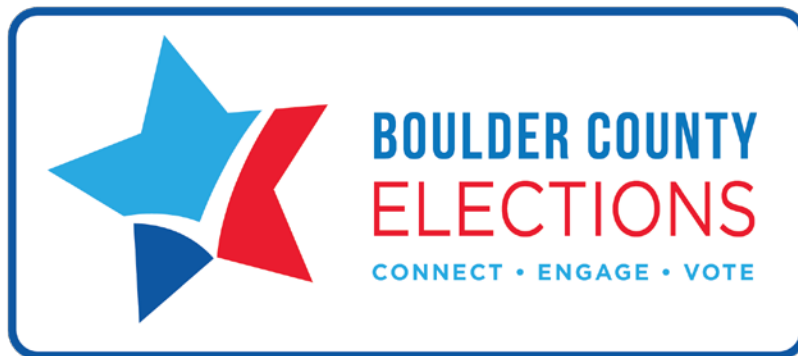




Logic and Accuracy Test Information Packet 2020 Presidential Primary Election



**Boulder County Clerk & Recorder
Elections Division**

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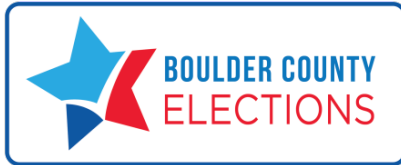
AGENDA
LOGIC AND ACCURACY TEST (LAT)
February 4 - February 7, 2020

Planned Schedule:

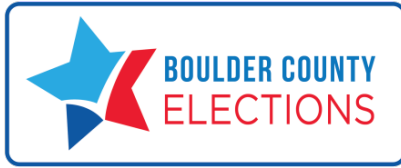
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|-------------------------|--------------------------------------|
| • Tuesday, February 4 | 9:30am – 4:30pm (LAT) |
| • Wednesday, February 5 | 9:30am – 4:30pm (Contingency Day) |
| • Thursday, February 6 | 9:30am – 4:30pm (Contingency Day) |
| • Friday, February 7 | 1:00pm – 3:00pm (LAT Board Sign-Off) |

Common acronyms:

- **CVR:** Cast Vote Record
 - **ICC:** Image Cast Central (Scan Station also referred to as Tabulator)
 - **ICVA:** Image Cast Voter Activation laptop
 - **ICX:** Image Cast X Ballot Marking Device (BMD)
 - **MVW:** Manual Verification Worksheet (To create your record of tally)
 - **RTR:** Results Tally and Reporting (Tabulates results and generates voting reports)
 - **VSPC:** Voter Service Polling Center
1. Storage of personal items (east wing lockers or designated area)
 - The following items are prohibited in the testing area:
Personal belongings, cell phones, cameras, recording devices, memory devices, laptops, food or beverages
 2. Welcome
 - Sign-In
 - Obtain Information Packet
 - Introduction and Overview
 - Testing Board equipment selection review
 3. Information packet contents
 - Agenda
 - Guidelines for Observers (Page 3)
 - Requirements of the LAT (Pages 4 - 5)
 - Test Board Procedures (Pages 6 - 14)
 - Sample MVW (Page 15)
 - Statute and Rule references (Pages 16 - 22)
 4. Testing Board verifies public counter set to zero on applicable devices
 5. Ballot marking and tally
 - One (1) packet of 25 ballots provided to each party test board team
 - Test ballots voted
 - Create a team tally (2-person process) using the MVW

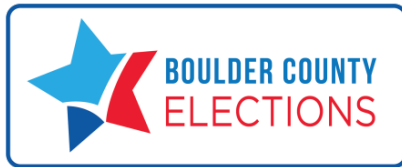


6. Image Cast X (ICX) and Image Cast Voter Activation (ICVA) Test (VSPC Ballot Marking Device)
 - Testing Board validates contest titles and content
 - Mark and print all Testing Board ballots using the ICX including at least one ballot using audio ballot playback and accessible input devices
 - Device qualification form initialed for selected ICX and ICVA, audio and printers
7. Scanner Test (Mail and In-Person ballot counting device)
 - Take manually marked and ICX marked ballots to scanner
 - Inspect for damage or improper markings
 - Improperly marked ballots must be corrected by team prior to scan
 - Process ballots on scanner in separate batches
 - Adjudicate ballots as needed
 - Adjudication is not required on ICX ballots unless there are write-ins
 - Tabulate and verify results against team tally
 - Initial qualification form for selected scanner
8. Prepare Testing Results (optional attendance)
 - Tabulate scanned batches to create cumulative results for the LAT
 - Create cumulative result comparisons
 - Collect, organize and complete test documentation
9. Resetting and sealing of equipment (Test Board - February 4 - 7)
 - Reset and seal ICX and ICVA equipment
 - Reset Scan Stations
 - Reset Results Tally and Reporting (RTR)
10. Completion of testing (Test Board - February 4 - 7)
 - Review test information and results
 - Initial qualification form for RTR station
 - Complete Statement of Qualification
11. Secure storage of all LAT material and ballots



GUIDELINES FOR OBSERVERS AT THE LOGIC AND ACCURACY TEST

- The following items are prohibited in the testing area:
Personal belongings, cell phones, cameras, recording devices, memory devices, laptops, food and beverages
- The LAT test shall be open to representatives of the political parties, the press, and the public to the extent allowable and pursuant to section (CRS 1-7-509(2)(b)). The designated election official may limit the number of representatives from each group because of space limitations. (Rule 11.3.2(b)).
- Each major political party, minor political party, ballot issue committee that has an issue on the ballot, and coordinating entity may designate one person, who shall be allowed to witness all public tests and the counting of pretest votes. (CRS 1-7-509(2)(b))
- If an observer or designee hinders or disturbs the test process, the designated election official may remove the person from the test area. An observer or designee who has been removed from a public test may be barred from future tests. (CRS 1-7-509(2)(b))
- The absence of observers or designees shall not delay or stop the public test. (CRS 1-7-509(2)(b))
- The election official will provide name tags and a sign-in sheet (everyone participating in or observing the test must wear a name tag and must sign-in). A copy of the LAT Information Packet and the Secretary of State LAT Rules will be available for watchers and observers.
- The Logic & Accuracy Testing will take substantially all of the Elections staff time and resources today. Therefore, any questions should be directed to Justine Vigil-Tapia, Elections Coordinator or her designee.



Boulder County Elections

Boulder County Clerk and Recorder

1750 33rd Street, Suite 200 • Boulder, CO 80301

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Requirements of the LAT

Preparation:

- ✓ The county has prepared a test deck that includes every ballot style and precinct in the election
- ✓ The county test deck includes a mark for every voting position for every contest candidate, situations where a voter may choose two or more options, and overvotes and undervotes for each contest (there are zero (0) write-in candidates for this election)
- ✓ Testing board is comprised of registered electors from each major political party
- ✓ Test board members are registered in Boulder County
- ✓ 25 test ballots have been provided to each test board team
- ✓ All ballots are marked "TEST"
- ✓ Test ballots are marked using the instructions printed on the ballot
- ✓ Testing Board has retained a record of the tally (Manual Verification Worksheet)
- ✓ Each type of voting device and each type of ballot is represented in testing
- ✓ Appropriate number of devices were made available for the test
- ✓ Test board members have randomly selected the machines to test

ICX and ICVA Test (Ballot Marking Device)*:

Test Board members completed the following:

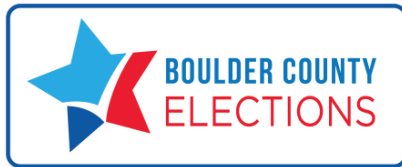
- ✓ Verified that the ICX public counter was set to zero and that the View Session Report on the ICVA had no cards activated
- ✓ Used at least one ICX to mark and print 25 ballots in the same manner he/she manually marked the test ballots (aside from overvotes)
- ✓ Marked at least one ballot using audio ballot playback and accessible input devices

Scanner Test (Mail and In-Person Paper Ballot counting device)*:

Test Board members completed the following:

- ✓ Verified the zero-report generated from the scanner
- ✓ Observed the separate counting of county and member's test ballots on at least one scanner

**Scanner and ICX testing may be done in parallel, when applicable.*



Tabulation:

Test Board members completed the following:

- ✓ Verified the zero-report generated from RTR before tabulating
- ✓ Observed the separate tabulation of all manually marked and ICX marked test ballots
- ✓ Obtained results report and verified that the machine results exactly matched his/her predetermined tally.

Comparison:

Test Board members completed the following:

- ✓ Verified that the results report generated exactly corresponded to the Testing Board member's predetermined tally of the votes.

Storage of test material:

- ✓ All test materials were secured in a sealed metal cage when not in use
- ✓ Each Test Board member verified the seals and initialed the chain-of-custody log
- ✓ If records were opened for inspection, at least two election officials verified the newly attached seals and initialed the chain-of-custody log

Cumulative Results of LAT:

- ✓ All ICX, In-Person, and Mail Ballot results were tabulated together to create cumulative results
- ✓ Tabulation results have been saved for ENR (Election Night Reporting) testing

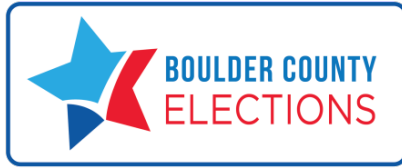
Resetting and sealing of equipment at the end of the test:

- ✓ Testing Board watched the county reset and seal each voting device
- ✓ Testing Board and Clerk verified the documented seal number attached to each voting device

Statement of Qualification:

Testing Board and Clerk signed a written statement attesting to:

- ✓ The qualification of each device successfully tested
- ✓ The serial number of the seal attached to the voting device at the end of the test
- ✓ Any problems discovered, and
- ✓ Any other documentation necessary to provide a full and accurate account of the condition of a given device



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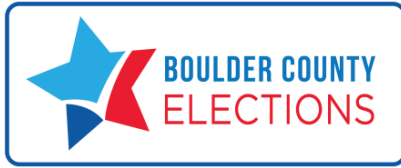
Logic and Accuracy Test (LAT) Test Board Procedures

Purpose of LAT (CRS 1-7-509 and Rule 11):

The purpose of the LAT is to test the compatibility of the election ballots through the scanning and tabulation equipment to confirm that every voting position on the ballot is accurately counted where a properly marked selection is made. It also includes testing the ballot marking devices (ICX).

Testing Board member responsibilities:

- You will be participating in all parts of the LAT, ensuring all requirements are met.
- You will attest to this at the end of the process and document the successful completion of testing.
- No process shall be delayed due to the absence of a test board member.



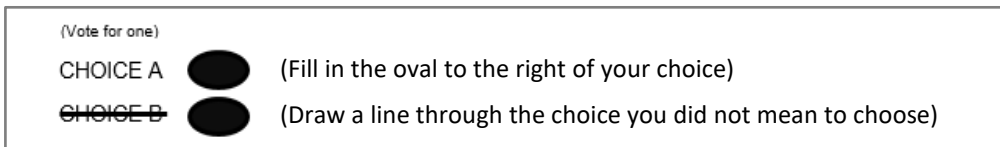
Ballot Marking:

The county has provided a packet of test ballots to each test board team. Test Board team packets include 25 unique precinct district style ballots. This is in addition to the ballots prepared to fulfill the county test deck requirements.

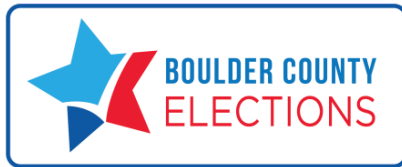
1. Confirm the number of ballots, verify they are all labeled “TEST” and are numbered at the top, 1 through 25 for the Testing Board.
2. When two representatives are sent to participate in the LAT, separate the ballots in half so both participants can mark ballots.
3. Mark your ballots following the instructions printed on the ballots.
 - Use black or blue ink pen and fill in the oval completely; no X or √.
 - Voting for more than the maximum number of allowed choices is considered an Overvote and will not be counted.
 - Voting for less than the maximum number of allowed choices is considered an Undervote.

4. How to correct a mistake:

NOTE: Ballots that are damaged or improperly marked will be reviewed and/or rejected in the scanner portion of testing. Catching and correcting a mistake immediately prevents delays in testing later.



- If a mistake (wrong choice, stray mark, hesitant mark) is made in a contest that you did not intend to vote, make a written note in the contest area to clarify your voting intent and/or request a replacement ballot from staff.
5. Write-In votes: **There are zero (0) certified Write-In choices for this election.**
 - A certified write-in candidate name shall be included on the MVW.
 - Uncertified candidates are counted as an undervote if no other choice is marked.
 - A write-in vote will be counted if you:
 - ✓ Completely fill in the oval provided to the right of the words "Write-in"
 - ✓ Write at least the last name of the certified candidate.
 - ✓ Do not vote for more than the maximum number of allowed choices.
 6. Overvotes on ICX:
 - Hand marked ballots are used for the ICX portion of voting, which does not allow for overvotes. Overvoted contests on the hand marked ballot will be left blank on the ICX and show as “blank contest” on the printed ICX ballot.
 7. When finished marking your paper ballots, verify the ballots are in sequential order (1-25 or 1-10 in upper right corner)
 8. Notify staff that you are ready to create your tally.



Creating the tally:

The county will pair up each member with another individual, provide you with a Manual Verification Worksheet (MVW), and assign you a team number.

Test Board members are then provided a set of MVWs.

- Sheet 1 will include columns to capture votes for ballots 1 through 12, totals for Sheet 1, totals for Sheet 2, and the Grand Total (tally) for each contest option.
- Sheet 2 will include columns to capture votes for ballots 13 through 25, and totals for Sheet 2.

On each sheet of the MVW, use the following procedure to create a tally for your test ballots:

1. Print both participant names on the first page of your MVW and initial subsequent pages.
 - This document will be available to the public so please do not add your signature.
2. Collect and organize the ballots in sequential order, confirm you have the appropriate number of ballots.
3. Starting with ballot #1, Person A reads aloud the ballot number recorded in the top right corner while Person B verifies this on the MVW.
4. Person A reads aloud each contest name and contest selection made, indicating any voting marks that are outside the prescribed voting instructions.
5. Person B will record the selections read aloud by Person A on the manual verification worksheet by making a slash mark for the appropriate contest option read, and will make notation of any abnormal markings as indicated.
 - If a contest has not been voted, a slash mark must be recorded in the “Undervote” row for that contest.
 - For contests that allow more than one selection, you can have more than one undervote.
 - ✓ You can vote for 3, but only mark one selection; you then need to record 2 undervotes for that ballot contest.
 - For contests not included on the current ballot, a slash mark must be recorded in the “Not on ballot” row for that contest.
6. When all ballots have been recorded, team members trade roles to verify the accuracy of the MVW, noting and resolving any discrepancies found.
7. For each MVW set, the team then adds up the selections for each contest option and records this number in the applicable Total field.
 - It is extremely important to validate each other’s calculations.
8. Testing Board Sheet 2 Totals are then transferred to the first Sheet in the column labeled “Sheet 2 Total”, and the team adds the totals from Sheet 1 and Sheet 2 to create the Grand Total (team tally). Calculators are provided.
9. After verification has been completed, teams will give their MVW to an election support staff member.
10. A copy of the MVW is made by support staff, initialed by team members, and then entered onto the electronic cumulative manual verification spreadsheet.
 - By initialing the first page of the MVW, teams are confirming they have verified it to be accurate and that all resolution issues have been identified and recorded.



ICX and ICVA Test (Ballot Marking Device):

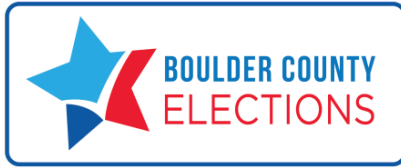
The ICX is a Ballot Marking Device (BMD) that visually displays or audibly presents ballots and allows voters to print a paper ballot. An ICX BMD also provides voting accessibility to voters who may be otherwise unable to mark a paper ballot privately and independently. It includes an audio ballot playback feature with headphones, and can accept adaptive devices for voters with mobility impairments.

You cannot OVERVOTE on an ICX BMD. For ballots containing an OVERVOTE, the team should confirm that no OVERVOTE is possible, and then change the contest to a BLANK CONTEST for reconciliation purposes.

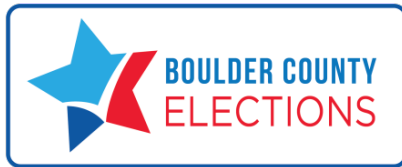
1. Before the start of ICX testing, a “zero” count is witnessed by the Testing Board for verification that the device has been reset and the public counter is at zero. The Testing Board will also confirm there are no voter activation cards reported in the View Session Report on the ICVA.
2. Ballots are organized in numeric order, matching the MVW. This helps members quickly resolve any discrepancies in reconciliation, if necessary.
3. Test ballots are then brought to the selected ICX where participants will:
 - Record the ICX number in the upper right-hand corner of the team MVW
 - Mark and validate the ICX audio and screen content for at least one manually marked test ballot pertaining to their district.
 - Confirm that contests and selections on the ICX Review screen match the paper ballot prior to printing (overvotes reflecting as a blank/unvoted contest).
 - Verify that contests and selections printed from the ICX match the paper ballot (overvotes reflecting as a blank contest).

Additionally, Testing Board members and party participants will:

- Mark and print 25 ballots in the same manner he/she manually marked the test ballots.
- Mark at least one ballot using the audio ballot playback and accessible input device.
- Confirm the accuracy of audio, screen, and printed content for each applicable district style in his/her test packet.



4. Marking while verifying audio and screen content:
 - Person A
 - ✓ Compares audio against the manually marked test ballot to confirm accuracy of titles, choices, and text
 - ✓ Makes the selection on ICX that matches the manually marked ballot selection once audio is verified
 - Person B
 - ✓ Compares audio against the ICX screen to confirm accuracy of titles, choices, and text
 - ✓ Verifies that the ICX selection made matches the manually marked ballot selection
5. Marking a ballot using the audio ballot playback and accessible input device:
 - Person A
 - ✓ Listens to audio instruction and uses accessible input device (paddles) to make ballot selections
 - Person B
 - ✓ Verifies that the ICX selection made matches the manually marked ballot selection
6. Before printing the ballot, the team verifies that the titles and choices displayed on the ICX Review Screen match the manually marked ballot selections and MVW.
7. Once printed, the team verifies the titles and selections of the ICX printed ballot and then initials the manually marked ballot, attesting that the ICX ballot matches the manually marked test ballot and MVW.
8. Team then, in the upper right-hand corner of the ICX ballot, writes in the ballot number that coincides with the manually marked ballot used for testing (1, 2, 3).
9. When all test ballots have been marked and printed on the ICX, the team initials the qualification form confirming that the screen, audio, and printed content is accurate, and that the selected ballot marking device functioned properly during testing.



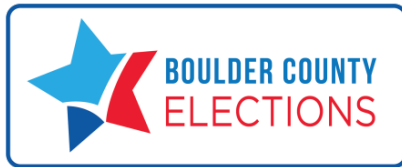
Scanner Test (Mail and In-Person paper ballot counting device):

An ICC scan station is designed to capture an image of a voter's paper ballot, process the image of that ballot and capture the voter's choices. These are referred to as Cast Vote Records (CVRs).

This test ensures properly marked choices are being accurately captured and recorded; we want to make sure that a choice for Candidate A is being recorded as a vote for Candidate A, and not Candidate B and that there is compatibility between the ballots (proper printing and alignment), and the equipment.

An adjudication station provides for the resolution of voter intent as prescribed by the Colorado Secretary of State. Ballots that have been over voted will be flagged and adjudicated per state guidelines.

1. Before the start of any scanner testing, the Testing Board will verify the zero report at each ICC, confirm that the Total Ballots Accepted on the scan screen is set to zero, and verify that there are no batches listed in the Batch Reporting section of the ICC Status screen. They will also verify the zero report and zero count on the RTR tabulation system at this time.
2. The ballots are reviewed by staff to look for damaged and improperly marked ballots that would require manual review or duplication during the election cycle.
 - Damaged ballot: A ballot that is torn, bent, or otherwise mutilated or rendered unreadable, so that it cannot be processed by the ballot scanner. (Rule 1.1.15)
Damaged ballots include:
 - ✓ All ballots that contain a foreign substance that could interfere with the ballot scanner (e.g. food, drink, etc.)
 - ✓ Ballots that are marked in a medium or manner that cannot be detected by a ballot scanner
 - Improper markings include: X's or V's as well as obvious stray marks, hesitant marks, incomplete marks or parts of written notes that are within the target area of a contest option where no other choice has been made.
3. Team ballots (manually marked and ICX marked) are brought to a selected ICC scan station where team records the ICC station ID in the upper right-hand corner of the team MVW and checks that the Batch Size on the scan screen is zero.
4. Team ballots are then processed on the scanner and votes captured.
 - Each set of test ballots are scanned in and saved, to capture and process ballot images
 - Scan count is validated by the team
 - Applicable ballots are adjudicated if needed following state rule and guidelines



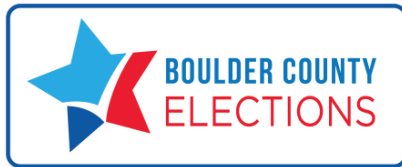
Scanner results tabulated and verified:

The RTR application in the Tally Room tabulates vote records to produce combined election results. This process confirms that votes are accurately tabulated and aggregated by the scanner and tabulation system.

1. Before starting the scanner test, the RTR Election Summary Report showing “0” votes cast is presented to the Testing Board for verification that the system has been set to zero. They also verify that no batch results have been received in RTR.
 - Both team members print their name and date the report, documenting that it has been verified.
2. After tabulation, an Election Summary Report by Tabulator (ICC) will be generated for the isolated tabulation of the team’s test ballots.
 - Separate Election Summary Report is generated for manually marked and ICX marked ballots.
3. The team compares the results report to their team tally (MVW) validating that the results produced by the scanner exactly correspond to the team’s predetermined tally of the manually marked and ICX marked test ballots.
4. When the team concludes the counts to be accurate, both team members print their name and date the results report, attesting to the accuracy of the count and machine.
5. Team members then initial the qualification form for the ICC, attesting to the successful completion of testing for the scanner device.

Discrepancy resolution (in order of escalation):

1. Review for entry and recording errors
 - Review MVW for too few or too many votes captured
 - Review ballots with MVW for incorrect recording and recount if needed
 - Review Adjudication and Audit Marks for resolution differences (if applicable)
 - Review comparison and recount if needed
2. If error is identified as a hardware or software error on single device
 - Validate other tested equipment was not impacted
 - Mark device unsatisfactory, replace and test alternative/new device
3. If error is identified on more than one device and devices are failing in similar fashion
 - Test multiple devices that could reasonably have same error
 - Mark devices unsatisfactory, replace and test alternative/new devices
 - If enough resources are not available for replacement, error shall be corrected and retesting will be completed
4. If error is identified as a software or ballot programming error
 - Alert LAT DEO for correction
 - Correct software or ballot programming error and restart testing from beginning



County Test Deck on Scanners:

The county is required to prepare a test deck of ballots that includes every ballot style and, where applicable, precinct. The county test deck must include a sufficient number of ballots to:

- Mark every vote position for every contest
- Allow for situations where a contest permits an elector to vote for two or more positions
- Include overvotes and undervotes for each contest

In addition to the packets provided to the Testing Board, the county has prepared a deck and tally (MVW) that meets the above requirement.

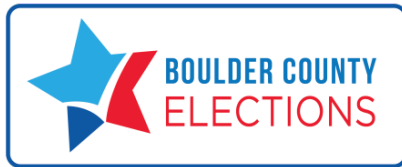
As is required for the Test Board member ballots, the county ballots are counted on one or more scanners, and then tabulated for comparison against the county tally (MVW). The Test Board will oversee this process, and verify the results for accuracy and completeness.

1. The County Test Deck is scanned into one or more ICC scanners, after participant testing is complete.
2. After tabulation, an Election Summary Report by Tabulator (ICC) is generated for the isolated tabulation of the County Test Deck.
3. Results are verified against the predetermined County Test Deck tally.

Prepare Results (optional attendance):

When all individual results have been verified, the county will generate a Cumulative Election Summary Report that includes all tested ballots. The reports will be reviewed with the Testing Board at the end of the LAT.

1. All team MVW and machine count data is entered onto the Cumulative Results Comparison spreadsheet.
2. Cumulative Election Summary Report is generated and total ballot count verified.
3. Statement of Vote Report is generated and inspected to ensure all precincts are included in testing.
4. Cumulative result information is entered and validated in the Cumulative Results Comparison spreadsheet.
5. Testing documentation is collected and organized.
6. Statement of Qualification document is drafted.



Resetting and sealing of equipment:

After testing, the Testing Board must watch the county reset and seal each voting device, as applicable. As part of the Statement of Qualification, the Testing Board and Clerk must attest to the seal number attached to the voting device at the end of testing.

1. Testing Board witnesses the resetting of scan stations and Results Tally and Reporting, verifying that the Total Ballots Accepted on the ICCs is “0” and that the Election Summary Report is regenerated and shows “0” votes cast.
2. Testing Board witnesses the resetting and sealing of the ICX and ICVA equipment, verifying the seals number attached to each device.

Completion of Testing:

After the devices are reset and sealed, the results of all testing are reviewed with the Clerk and Testing Board, along with testing documentation. The Testing Board and the county clerk must sign a written statement attesting to the qualification of each device successfully tested, the number of the seal attached to the voting device at the end of the test, any problems discovered, and any other documentation necessary to provide a full and accurate account of the condition of a given device.

1. Test information and results are reviewed with the Clerk and Testing Board
2. Cumulative results are verified by the Testing Board
3. Testing Board initials the qualification form for the RTR station
4. Testing Board and Clerk completes the Statement of Qualification

Secure storage of all LAT materials and ballots:

The county must keep all test materials, when not in use, in a durable, secure box. Each member of the Testing Board must verify the seals and initial the chain-of-custody log maintained by the county clerk. If the records are opened for inspection, at least two election officials must verify the seals and initial the chain-of-custody log.

Jurisdiction Name

Contests	Ballot 1	Ballot 2	Ballot 3	Ballot 4	Ballot 5	Ballot 6	Ballot 7	Ballot 8	Ballot 9	Ballot 10	Ballot 11	Ballot 12	Sheet 1	Sheet 2	Grand Total (tally)
Primary Presidential Candidate - DEM - Vote for 1															
Undervote	X	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Overvote	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Cory Booker	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Pete Buttigieg	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Tulsi Gabbard	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Bernie Sanders	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Elizabeth Warren	1	1	1	1	1	1	1	1	1	1	1	X	2	0	2
Amy Klobuchar	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Roque "Rocky" De La Fuente III	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Michael Bennet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Marianne Williamson	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Deval Patrick	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Michael R. Bloomberg	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Robby Wells	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Andrew Yang	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Joseph R. Biden	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Tom Steyer	1	1	1	1	1	1	1	1	1	1	1	1	0	3	3
Rita Krichevsky	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
John K. Delaney	1	1	1	1	1	1	1	1	1	1	1	1	0	2	2
Primary Presidential Candidate - REP - Vote for 1															
Undervote	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Overvote	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Matthew John Matern	1	1	1	1	1	1	1	1	1	1	1	1	2	1	3
Robert Ardini	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3
Joe Walsh	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Donald J. Trump	1	1	1	1	1	1	1	1	1	1	1	1	4	4	8
Bill Weld	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3
Zoltan G. Istvan	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3

COLORADO REVISED STATUTES – TITLE 1

1-7-509. Electronic and electromechanical vote counting - testing of equipment required - definition.

1(a) An electronic or electromechanical voting system shall be tested at the conclusion of maintenance and testing. The tests shall be sufficient to determine that the voting system is properly programmed, the election is correctly defined on the voting system, and all of the voting system's input, output, and communication devices are working properly.

(b) The designated election official shall conduct at least three tests on all electronic and electromagnetic voting equipment, including a hardware test, a public logic and accuracy test conducted in accordance with subsection (2) of this section, and a postelection test or audit conducted in accordance with rules promulgated by the secretary of state. Each type of ballot, including mail, provisional, and audio ballots, shall be tested in accordance with rules promulgated by the secretary of state. The tests must ensure that the equipment will correctly count the votes cast for all offices and on all ballot questions and ballot issues and that the voting system will accurately count ballots of all types.

(c) (I) For all partisan elections, the designated election official shall select a testing board comprising at least two persons, one from each major political party, from the list provided by the major political parties pursuant to section 1-6-102.

(II) For all nonpartisan elections, the designated election official or coordinated election official, as applicable, shall select a testing board comprising at least two persons who are registered electors.

(III) Repealed.

(2)(a) A public test of voting equipment shall be conducted prior to the commencement of voting in accordance with this section by processing a preaudited group of ballots produced so as to record a predetermined number of valid votes for each candidate and on each ballot question or ballot issue. The test shall ensure that the system accurately records votes when the elector has the option of voting for more than one candidate in a race. The test shall ensure that the voting system properly rejects and does not count overvotes and undervotes.

(b) The public test shall be open to representatives of the political parties, the press, and the public, subject to the rules promulgated by the secretary of state pursuant to subsection (6) of this section. Each major political party, minor political party, ballot issue committee that has an issue on the ballot, and coordinating entity may designate one person, who shall be allowed to witness all public tests and the counting of pretest votes. If an observer or designee hinders or disturbs the test process, the designated election official may remove the person from the test area. An observer or designee who has been removed from a public test may be barred from future tests. The absence of observers or designees shall not delay or stop the public test.

(c) The testing board shall convene and designate at least one member to represent the board during the testing, sign the necessary reports, and report to the board. The programs and ballots used for testing shall be attested to and sealed by the board and retained in the custody of the designated election official. The absence of a member of the testing board shall not delay or stop the test.

(d) Upon completion of the testing conducted pursuant to this section, the testing board or its representative and the representatives of the political parties, ballot issue committees, and coordinating entities who attended the test may witness the resetting of each device that passed the test to a preelection state of readiness and the sealing of each such device in order to secure its state of readiness.

(e) The testing board or its representative shall sign a written statement indicating the devices tested, the results of the testing, the protective counter numbers of each device, if applicable, the number of the seal attached to each device upon completion of the testing, any problems reported to the designated election official as a result of the testing, and whether each device tested is satisfactory or unsatisfactory.

(3) Notice of the fact that the public test will take place shall be posted in the designated public place for posting notices in the county for at least seven days before the public test. The notice shall indicate the general time frame during which the test may take place and the manner in which members of the public may obtain specific information about the time and place of the test. Nothing in this subsection (3) shall preclude the use of additional methods of providing information about the public test to members of the public.

(4) (a) If any tested device is found to have an error in tabulation, it shall be deemed unsatisfactory. For each device deemed unsatisfactory, the testing board shall attempt to determine the cause of the error, attempt to identify and test other devices that could reasonably be expected to have the same error, and test a number of additional devices sufficient to determine that all other devices are satisfactory. The cause of any error detected shall be corrected, and an errorless count shall be made before the voting equipment is approved. The test shall be repeated and errorless results achieved before official ballots are counted.

(b) If an error is detected in the operation or output of an electronic voting device, including an error in spelling or in the order of candidates on a ballot, the problem shall be reported to the testing board and the designated election official. The designated election official shall correct the error.

(c) A voting device deemed unsatisfactory shall be recoded, repaired, or replaced and shall be made available for retesting unless a sufficient number of tested backup devices is available to replace the unsatisfactory device. The backup device may not be used in the election unless the testing board or its representative determines that the device is satisfactory. The designated election official shall announce at the conclusion of the first testing the date, place, and time that an unsatisfactory device will be retested, or, at the option of the testing board, the designated election official shall notify by telephone each person who was present at the first testing of the date, place, and time of the retesting.

(5) The designated election official shall keep records of all previous testing of electronic and electromechanical tabulation devices used in any election. Such records shall be available for inspection and reference during public testing by any person in attendance. The need of the testing board for access to such records during the testing shall take precedence over the need of other attendees for access so that the work of the testing board will not be hindered. Records of testing shall include, for each device, the name of the person who tested the device and the date, place, time, and results of each test. Records of testing shall be retained as part of the official records of the election in which the device is used.

(6) The secretary of state shall promulgate rules in accordance with article 4 of title 24, C.R.S., prescribing the manner of performing the logic and accuracy testing required by this section.

RULE 1

1.1.15 “Damaged ballot” means a ballot that is torn, bent, or otherwise mutilated or rendered unreadable, so that it cannot be processed by the ballot scanner. Damaged ballots include:

- (a) All ballots that contain a foreign substance that could interfere with the ballot scanner (e.g. food, drink, etc.).
- (b) Ballots that are marked in a medium or manner that cannot be detected by a ballot scanner.

RULE 11

11.3.2 Logic and Accuracy Test

- (a) The county clerk must conduct the public Logic and Accuracy Test no later than the 21st day before election day.
- (b) The county must ensure that the Logic and Accuracy Test is open to the extent allowable in accordance with section 1-7-509(2)(b), C.R.S. The county clerk may limit the number of representatives from each group because of space limitations.
- (c) Preparing for the Logic and Accuracy Test
 - (1) The county must prepare a test deck of ballots that includes every ballot style and, where applicable, precinct. The county test deck must include a sufficient number of ballots to mark every vote position for every contest including write-in candidates, allow for situations where a contest permits an elector to vote for two or more positions, and include overvotes and undervotes for each contest. The county test deck must include at least one write-in vote for each qualified write-in candidate so that all qualified write-in candidate names will appear in the LAT result uploaded to ENR as required by Rule 11.9.3. The county test deck must include ballots printed from a ballot-on-demand printer if a ballot-on-demand printer will be used in the upcoming election, and must include commercially printed ballots.
 - (2) The county must convene a Testing Board of one registered elector from each of the major political parties. Testing Board members must be registered to vote in the county and be sworn in as election judges.
 - (3) The county must provide at least 25 ballots that are clearly marked as test ballots to each Testing Board member.
 - (4) Testing Board members must mark their test ballots following the instructions printed on the ballots and retain a record of the tally.
 - (5) The Testing Board must test the ballots on each type of voting device used in the election and each type of ballot including audio ballots.
- (d) Conducting the Test
 - (1) The county and Testing Board must observe the tabulation of all test ballots, compare the tabulation with the previously retained records of the test vote count, and correct any discrepancies before the device is used in the election.

- (2) The county must reset the public counter to zero on all devices and present zero tapes or summary report to the Testing Board for verification.
- (3) The county must make an appropriate number of voting devices available and the Testing Board may witness the programming of devices necessary for the test.
- (4) The Testing Board and designated election official must count the test ballots as follows, as applicable:
 - (A) Ballot Scanners:
 - (i) The Testing Board must test at least one central count ballot scanner and at least one ballot scanner used at a voter service and polling center, if applicable.
 - (ii) The Testing Board must randomly select the machines to test.
 - (iii) The Testing Board must count the board and county's test ballot batches separately and generate reports to verify that the machine count is identical to the predetermined tally.
 - (B) DREs:
 - (i) The Testing Board must test at least one DRE.
 - (ii) The Testing Board must randomly select the machines to test.
 - (iii) Each member of the Testing Board must separately cast his or her test ballots on the selected DREs. Each Testing Board member must cast at least one of his or her test ballots using the audio ballot playback and accessible input devices.
 - (iv) Each Testing Board member must examine the tabulation tape or report and verify that the DRE results match what the Testing Board member manually marked on his or her test ballots.
 - (C) Ballot Marking Devices (BMDs):
 - (i) The Testing Board must randomly select and test at least one BMD.
 - (ii) At least two members of the Testing Board must use the selected BMD to mark and print at least 25 ballots in the same manner that the testing board member manually marked his or her test ballots. At least two members of the Testing Board must mark at least one of his or her test ballots using the audio ballot playback and accessible input devices.

- (iii) A Testing Board member or county election official must separately scan and tabulate the test ballots marked with and printed from the BMD on one central count or polling location scanner, and generate a results report.
 - (iv) Each Testing Board member must verify that the results report generated from the scanner exactly corresponds to the testing board member's tally of the votes on the manually marked paper ballots comprising his or her test ballots.
- (e) Completing the test
 - (1) The county must keep all test materials, when not in use, in a durable, secure box. Each member of the Testing Board must verify the seals and initial the chain-of-custody log maintained by the county clerk. If the records are opened for inspection, at least two election officials must verify the seals and initial the chain-of-custody log.
 - (2) The county must upload the results from all tested scanners and DREs to the tabulation software, export, and save the tabulation results for the ENR test required under Rule 11.9.3.
 - (3) After testing, the Testing Board must watch the county reset and seal each voting device, if applicable.
 - (4) The Testing Board and the county clerk must sign a written statement attesting to the qualification of each device successfully tested, the number of the seal attached to the voting device at the end of the test, if applicable, any problems discovered, and any other documentation necessary to provide a full and accurate account of the condition of a given device.
 - (5) The county may not change the programming of any voting device after completing the logic and accuracy test for an election, except as required to conduct a recount or as authorized by the Secretary of State.

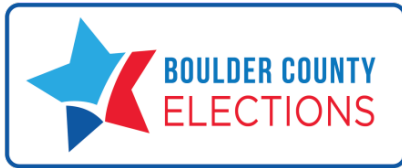
RULE 18

18.5 Ballot Resolution

18.5.1 A resolution board must resolve all blank ballots and ballots with overvotes, write-in votes, and ambiguous markings in accordance with the Secretary of State's Voter Intent Guide.

18.5.2 Resolution of blank ballots. A resolution board must examine blank ballots to determine if the ballot is a true blank ballot or one that has been marked in a manner or medium that was not detected by the voting system.

- (a) Counties without digital resolution capability. If the ballot is truly blank, the resolution board must re-scan the ballot and override the initial rejection setting. If the ballot is marked in a manner or medium that can be discerned by the resolution board but cannot be tabulated by the voting system, the resolution board must duplicate the ballot in accordance with Rule 18.4 and, to the extent necessary, resolve the ballot in accordance with Rule 18.5.
- (b) Counties with digital resolution capability. If the ballot is truly blank, the resolution board must record the ballot as a blank ballot in the voting system's resolution application. If the ballot is marked in a manner or medium that can be discerned by the resolution board but cannot be tabulated by the voting system, the resolution board must resolve the ballot in the voting system's resolution application in accordance with Rules 18.5.2(b) and 18.5.3.

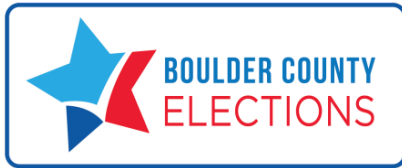


Logic and Accuracy Test Documentation

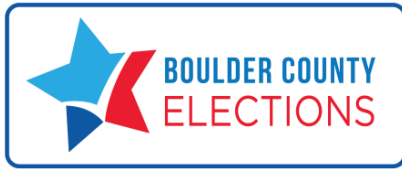
Election Date: March 3, 2020

Logic and Accuracy Test Dates: February 4 – February 7, 2020

Election Title:	
2020 Boulder County Presidential Primary Election – March 3, 2020	
Dominion Database Project Creation Date:	
January 3, 2020	
Test Date(s):	Test Location:
February 4 – February 7, 2020	1750 33 rd St. Boulder, CO

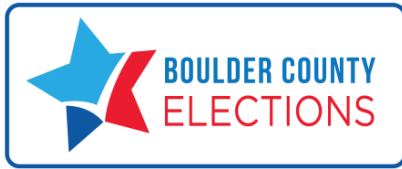


Team #	Entity	Participant Name
1A	Testing Board Democratic Party	Pat Feeser Lynne McNamara
2A	Testing Board Republican Party	Bob Johnson John Guinther
N/A	Boulder County Clerk & Recorder	Molly Fitzpatrick - D
N/A	Boulder County Clerk & Recorder Office LAT Coordinator	Justine Vigil-Tapia - D
N/A	Boulder County Support	Crystal Christman -
N/A	Boulder County Support	Luke Belant - U
N/A	Boulder County Support	Thea Evans - D
N/A	Boulder County Support	Patty Stahl - R
N/A	Boulder County Support	Brad Light -
N/A	Boulder County Support	James Collins - R
6	Boulder County Support	Ann Hansen - D
2A	Boulder County Support	Matt Hansen - D
1A	Boulder County Support	Dave Robertson - R
N/A	Boulder County Support	Iola Freeland - U
N/A	Boulder County Support	Bill Power - u



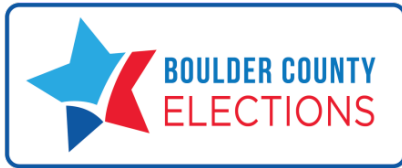
DEVICE DOCUMENTATION – ICVA and ICX

Device ID	Type of Device	Members Testing Device	Satisfactory / Unsatisfactory	Initials	Seal # (Where applicable)	Seal # (Where applicable)	Seal # (Where applicable)
Laptop – ICVA-002 Serial # 3NY97R1	Voter Activation Card Writer	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File			
ICX - 003 RF2GB01VX0F	Ballot Marking Device (BMD)	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File	On File	On File	On File
Image Cast Printer #3	Ballot Printer				On File	On File	On File
Device ID	Type of Device	Members Testing Device	Satisfactory / Unsatisfactory	Initials	Seal # (Where applicable)	Seal # (Where applicable)	Seal # (Where applicable)
Laptop – ICVA-014 Serial # DDDPBS1	Voter Activation Card Writer	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File			
ICX 005 - RF2GA070SYF	Ballot Marking Device (BMD)	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File	On File	On File	On File
Image Cast Printer #5	Ballot Printer				On File	On File	On File



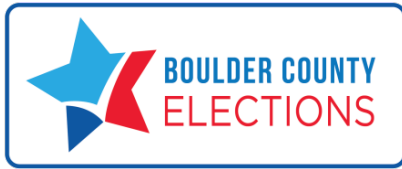
DEVICE DOCUMENTATION – ICC

Device ID	Type of Device	Members Testing Device	Satisfactory / Unsatisfactory	Initials
Scan Station A Serial #3CS9HD2	Central Count Scanner	County Deck		
		Bob Johnson – R	SAT	On File
		John Guinther - R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File
Scan Station B Serial #20G2HD2	Central Count Scanner	County Deck		
		Bob Johnson – R	SAT	On File
		John Guinther - R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File
Scan Station C Serial #22R7HD2	Central Count Scanner	County Deck		
		Bob Johnson – R	SAT	On File
		John Guinther - R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File



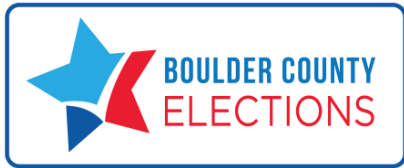
DEVICE DOCUMENTATION – ICC

Device ID	Type of Device	Members Testing Device	Satisfactory / Unsatisfactory	Initials
Scan Station D Serial #224BHD2	Central Count Scanner	DEMOCRATIC TEST BOARD		
		Bob Johnson – R	SAT	On File
		John Guinther – R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File
Scan Station E Serial #21N5HD2	Central Count Scanner	County Deck		
		Bob Johnson – R	SAT	On File
		John Guinther - R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File
Scan Station F Serial #20Y3HD2	Central Count Scanner	County Deck		
		Bob Johnson – R	SAT	On File
		John Guinther - R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File



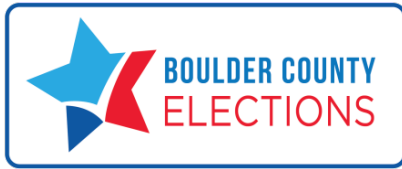
DEVICE DOCUMENTATION – ICC

Device ID	Type of Device	Members Testing Device	Satisfactory / Unsatisfactory	Initials
Scan Station G Serial #22K6HD2	Central Count Scanner	County Deck		
		Bob Johnson – R	SAT	On File
		John Guinther - R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File
Scan Station H Serial #22D2HD2	Central Count Scanner	County Deck		
		Bob Johnson – R	SAT	On File
		John Guinther - R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File
Scan Station I Serial #3CQ8HD2	Central Count Scanner	REPUBLICAN TEST BOARD		
		Bob Johnson – R	SAT	On File
		John Guinther - R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File



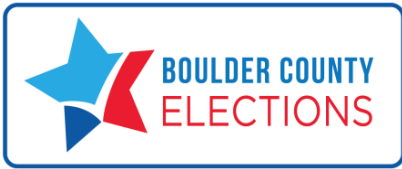
DEVICE DOCUMENTATION – ICC

Device ID	Type of Device	Members Testing Device	Satisfactory / Unsatisfactory	Initials
Scan Station J Serial #2354HD2	Central Count Scanner	County Deck		
		Bob Johnson – R	SAT	On File
		John Guinther - R	SAT	On File
		Pat Feeser – D	SAT	On File
		Lynne McNamara – D	SAT	On File



DEVICE DOCUMENTATION - Adjudication and RTR

Device ID	Type of Device	Members Testing Device	Satisfactory / Unsatisfactory	Initials
Adjudication Workstation	Adjudication (ADJ)	Any team ballots requiring adjudication will be done on Adjudication Station 1. County Test Deck adjudication will be done on Adjudication Stations 2 – 5. Test Board will represent all teams in sign off.		
Adjudication Workstation – 1 Serial #36XNHH2	Adjudication Station	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File
Adjudication Workstation – 2 Serial #FZVLCH2	Adjudication Station	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File
Adjudication Workstation – 3 Serial #JVSMCH2	Adjudication Station	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File
Adjudication Workstation – 4 Serial #9PV0DH2	Adjudication Station	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File
Adjudication Workstation – 5 Serial #36WMHH2	Adjudication Station	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File
Election Management System (EMS)	Results Tally & Reporting (RTR)	All team batches will be tabulated on EMS Station 1. County Test Deck will be tabulated on EMS Station 2. Test Board will represent all teams in sign off.		
EMS Workstation – 1 Serial #1RP7HH2	Results Tally & Reporting	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File



Boulder County Elections
Boulder County Clerk and Recorder

1750 33rd Street, Suite 200 • Boulder, CO 80301
 www.BoulderCountyVotes.org • Phone: (303) 413-7740

EMS Workstation - 2 Serial #JVSHCH2	Results Tally & Reporting	Bob Johnson – R John Guinther - R Pat Feeser – D Lynne McNamara – D	SAT SAT SAT SAT	On File On File On File On File
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**Boulder County Clerk & Recorder Elections Division
Statement of Qualification of Election Devices**

I attest that, to the best of my knowledge, each election device used in the Logic and Accuracy Test (LAT) passed the requirements of the LAT and accurately tabulated all properly marked LAT ballots.

It is the determination of the Logic and Accuracy Testing Board that all devices tested are qualified to be used in the 2020 Presidential Primary Election, March 3, 2020.

Pat Feeser, Democratic
Representative LAT Testing Board

John Guinther, Republican
Representative LAT Testing Board

Lynne McNamara, Democratic
Representative LAT Testing Board

Bob Johnson, Republican
Representative LAT Testing Board

Molly Fitzpatrick
Boulder County Clerk & Recorder

Any problems discovered during testing are described as follows. Additionally, I am reporting any other information or attaching any additional documentation that might be necessary to provide a full and accurate account of the condition of each piece of equipment:

Pat Feeser, Democratic Party Representative of LAT Testing Board:

Lynne McNamara, Democratic Party Representative of LAT Testing Board:

John Guinther, Republican Party Representative of LAT Testing Board:

Bob Johnson, Republican Party Representative of LAT Testing Board:

Molly Fitzpatrick, Boulder County Clerk & Recorder:

Election Summary Report

Closed Primary

Boulder

March 03, 2020

ppf
lme

Summary for: All Contests, All Districts, All Tabulators, All Counting Groups

Precincts Reported: 0 of 240 (0.00%)

Voters Cast: 1,540 of 240,888 (0.64%)

RJJ

President of the United States - DEM (Vote for 1) DEM

J. P. ...
MF

Precincts Reported: 0 of 240 (0.00%)

	Total
Times Cast	770 / 0 N/A
Undervotes	566
Overvotes	1

Candidate	Party	Total
Cory Booker	DEM	5
Pete Buttigieg	DEM	6
Tulsi Gabbard	DEM	3
Bernie Sanders	DEM	8
Elizabeth Warren	DEM	15
Amy Klobuchar	DEM	10
Roque "Rocky" De La Fuente III	DEM	7
Michael Bennet	DEM	14
Marianne Williamson	DEM	9
Deval Patrick	DEM	10
Michael R. Bloomberg	DEM	17
Robby Wells	DEM	12
Andrew Yang	DEM	15
Joseph R. Biden	DEM	18
Tom Steyer	DEM	21
Rita Krichevsky	DEM	16
John K. Delaney	DEM	17
Total Votes		203

	Total
Unresolved Write-In	0

President of the United States - REP (Vote for 1) REP

Precincts Reported: 0 of 240 (0.00%)

		Total
Times Cast		770 / 0 N/A
Undervotes		702
Overvotes		3
Candidate	Party	Total
Matthew John Matern	REP	7
Robert Ardini	REP	8
Joe Walsh	REP	13
Donald J. Trump	REP	18
Bill Weld	REP	9
Zoltan G. Istvan	REP	10
Total Votes		65
		Total
Unresolved Write-In		0

ppk
Smc
ROJ
MF
J. Walsh

Contests	Expected Total	Machine Total	Difference
President - DEM (Vote for One)			
Undervote	566	566	0
Overvote	1	1	0
Cory Booker	5	5	0
Pete Buttigieg	6	6	0
Tulsi Gabbard	3	3	0
Bernie Sanders	8	8	0
Elizabeth Warren	15	15	0
Amy Klobuchar	10	10	0
Roque Rocky" De La Fuente III"	7	7	0
Michael Bennet	14	14	0
Marianne Williamson	9	9	0
Deval Patrick	10	10	0
Michael R. Bloomberg	17	17	0
Robby Wells	12	12	0
Andrew Yang	15	15	0
Joseph R. Biden	18	18	0
Tom Steyer	21	21	0
Rita Krichevsky	16	16	0
John K. Delaney	17	17	0
President - REP (Vote for One)			
Undervote	702	702	0
Overvote	3	3	0
Matthew John Matern	7	7	0
Robert Ardini	8	8	0
Joe Walsh	13	13	0
Donald J. Trump	18	18	0
Bill Weld	9	9	0
Zoltan G. Istvan	10	10	0